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> "There are no ancient gentlemen but gardeners. . . They hold up Adam's profession."
> —*Hamlet*, v. 1.

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VOL. LI.—No. 2,827. SATURDAY, JANUARY 4, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Variation and Modification.

[Photo: Maull and Fox.

PROFESSOR I. BAYLEY BALFOUR, M.D., D.Sc., LL.D., F.R.S., V.M.H.

Regius Keeper of the Royal Botanic Gardens, Edinburgh.

Studying carefully the very vexed question of the causes of variation, which are recognised by some authorities to be, so far as present knowledge goes, inscrutable, while others consider them to be due entirely to environmental influence, it has appeared to us that it would simplify matters to recognise that variations fall really into two quite distinct categories, which we would differentiate as "sports proper" and "induced variations." To the former class must be allotted those sudden, and often wide departures from the normal type, of which there are so many examples in both the animal and vegetable kingdom, and which we may typify by the Niata cattle, the Ancon sheep, the Turnspit dog, and many pigeons in the one kingdom, and by a large number of wild abnormal ferns in the other. In these cases it must be borne in mind that not only have the first examples appeared with markedly different features from their immediate progenitors, but this difference is so thoroughly pervasive that they are capable of producing true progeny for indefinite periods with little or no tendency to reversion. This class, i.e., "sports proper," it is utterly impossible to impute to change of environment, or any known cause, they originate fully developed as regards their peculiar characters, under precisely the same environmental conditions as their immediate unmodified and contemporaneous relatives. The abnormal plants are found closely intermingled with their normal progenitors, and under natural conditions which indicate long-continued environmental stability. On the other hand, with the second proposed class of "induced varieties" there is no doubt whatever that plants when subjected for generations to checking, or, on the other hand, stimulating influences, are liable in time to alter in sympathy therewith. It is only reasonable to assume that the reproductive gemmules, adopting for the sake of argument the pangenetic theory, would participate in the effect of outside influences on the plant's development. We may indeed indicate a recognised instance of this kind of modification in the altered type of humanity seen in the United States, where pure-blooded descendants of European type have undoubtedly approached, under climatal influences, the native North American facial type in comparatively few generations. This fact establishes the possibility of inheritance of acquired characters so far as such characters are induced by environmental conditions, and there is little or no doubt that plants are subject to vary on similar lines, but, and this is the essential point of difference between the classes, only by gradation. This gradation may, however, be assisted, i.e., the gradational steps may be lengthened by the artificial stimulus of high culture, and under such circumstances it is conceivable that a sort of tension may be set up in the constitution of a plant so stimulated, which would find expression by inheritance in the progeny in the shape of marked variation. It is, however, to be assumed that in these cases the variations would be of a nature responsive to and sympathetic with the artificial environment, and to this extent the theory of sympathetic variation is doubtless justified. An instance of this kind is seen in M. H. de Vilmorin's experiments with the wild cabbage, which, in a very few generations, showed a marked and fixed approach to the highly specialised varieties known to horticulture, and, it may be observed, that all, or nearly all, of these varieties represent extra development of foliage, exhibited in various ways, the cauliflower and broccoli alone showing a variation in the inflorescence, which was probably a sport proper originally. This means that the foliage of the original weed was not only capable, as is natural, of developing more freely when manured and protected than when exposed to wild and more or less starved conditions, but that its seed shared in the increased vigour, and yielded progeny of a leafier character, and so on from generation to generation on an ever-increasing scale. In this class, therefore, we should not look for that indefinite variation or variations in all directions which Darwin considered as a part of the evolutionary scheme. It is solely induced by stimulation in a certain direction, viz., stronger growth, and naturally follows that line throughout, unless a really sportive tendency sets in, when it is quite an open question what would occur. In the fern tribe, for instance, several very dwarf varieties have originated from spores of robust forms, and this, under the stimulus of glass culture and shade, which naturally tends to increase the area of frondage. The dwarfs are, moreover, congested, imbricate, and compact, precisely such characters as the advocates of responsive variation, as the only variation arising, would impute to long-continued Alpine exposure, the exact opposite of the actual one. We have, however, now, we think, said enough to indicate the essential difference between the two classes of variation, which we submit for consideration to those interested in this branch of evolutionary study.

Professor Isaac Bayley Balfour, M.D., D.Sc., LL.D., F.R.S., V.M.H.—As Regius Keeper of the Royal Botanic Gardens of Edinburgh, and Professor of Botany at the Edinburgh University, Professor Bayley Balfour has rendered such splendid service in the cause of botanical science that it gives us exceptional pleasure to present our readers with his portrait. The son of John Hutton Balfour, who occupied the chair of botany at the Edinburgh University from 1845 to 1879, Professor Bayley Balfour displayed quite early in life a strong predilection for scientific botany, and he pursued his botanical studies with such remarkable success that in 1879, when in his 26th year, he was appointed Regius Professor of Botany at the Glasgow University. This position he occupied until 1884, when he was appointed Sheridan Professor of Botany at the University of Oxford. Professor Bayley Balfour remained at Oxford until 1888, when he returned to Edinburgh to fill the positions he now occupies. This brief statement will suffice to indicate that he has devoted a considerable period of his life to educational work, and judging from the results, Professor Bayley Balfour has achieved an immense amount of success in the performance of the duties associated with the important positions he has held at Glasgow, Oxford, and Edinburgh. In other directions Professor Bayley Balfour has shown a considerable amount of activity in the cause of science. He was, for instance, a member of the Transit of Venus expedition to Rodriguez in 1874, and in 1880 he explored the Island of Socotra, and among his other finds was Begonia socotrana, which has played so important a part in the creation of the valuable race of winter-flowering begonias that cultivators now have at their disposal. During the comparatively long period of which he has been Regius Keeper of the great national gardens at Edinburgh, he has devoted unremitting attention to their improvement, and has been so eminently successful in his work of reorganisation that their value for purposes of the study of scientific botany and their attractions to the general public have been enormously increased. Professor Bayley Balfour was one of the first sixty botanists and horticulturists selected by the Council of the Royal Horticultural Society to receive the Victoria Medal of Honour, a distinction well deserved, for both his administrative and educational work has been of immense value not only to Scotland but to the whole world.

The Study of Cryptogamic Botany.—Under the will of the late Professor Thomas Barker, the Manchester University has received a legacy of £40,000. This large sum is to be devoted to the foundation of a Chair of Cryptogamic Botany, and the provision of scholarships for assisting students in botany and mathematics in the prosecution of their studies.

Lucky Gardeners.—The late Mr. Cowan, of Ross Hall, Paisley, left legacies to Mr. Robert Pringle, the head gardener, and to each of his under gardeners. Mr. Pringle receives £10 for each year he has been at Ross Hall, and the under gardeners £5 for each year of service.

The "Gardeners' Magazine," 1908.—With the issue of December 28 last we completed the fiftieth volume of the Gardeners' Magazine in folio form, and this, while the most bulky of the series, is, we venture to suggest, the most attractive, interesting, and useful. In this opinion we are supported by the many expressions of approval from our readers, and the very large accession of new subscribers during the past twelve months. The Gardeners' Magazine, however, dates further back than half a century, for it was founded in 1833, and has therefore completed its seventy-fifth year, and is the oldest of all the horticultural journals. In making reference to these interesting facts we have no intention of dwelling upon the past history of the journal, with its unbroken success. We are now more concerned with the present than with the past, and we are desirous of specially directing the attention of our readers to the leading features of the journal during the current year, as set forth in another page. An examination of these will show that its interest, its usefulness, and its attractions will be fully maintained by an amplification of features that have in past years received a full share of attention, and that the new features will import much freshness to its pages, and greatly enhance the popularity enjoyed. It is not necessary we should recapitulate the features set forth elsewhere, but we would direct attention to the special arrangements we have made for describing and illustrating the more important of the many beautiful gardening districts in the United Kingdom. We believe that this feature will not only prove of much interest to all who are concerned with gardening, but that the many finely executed illustrations will be of much value to those concerned with the formation and improvement of garden-scenery. The present is, we need hardly say, an exceptionally good time for those interested in horticulture to become subscribers, and as we are anxious to be useful to the largest possible number, we shall much appreciate the kindness of those readers who bring the present issue before such of their friends as are not already subscribers.

White Lilac has been somewhat less plentiful than is usual during the Christmas and New Year's festivities, and has, consequently, been comparatively high in price. This decrease has been due to the weather having been less favourable in France, as in England, to the ripening of the wood. The variety chiefly grown at Vitry, near Paris, whence large supplies of white lilac are sent to Covent Garden, is Charles X., the flowers of which, when developed in the open, are rich mauve-pink. When the plants are forced in a structure from which the light is excluded the flowers become white.

Electric Plant Culture.—The electric culture installation lately set up in the gardens of the Royal Botanic Society in Regent's Park by Mr. B. H. Thwaite has been working provisionally for some weeks. A committee has now been formed to take charge of the experiments, and at a meeting held a few days since the course of procedure was arranged. The committee includes Mr. J. R. Diggle, chairman of council: Dr. W. Cooke Adams, Professor Bottomley, M.A., Ph.D., of King's College; Mr. G. Gordon, V.M.H., editor of the Gardeners' Magazine; Mr. P. H. Cragg, Mr. J. Green, Mr. J. H. Witty, Mr. Thwaite, and Mr. Bastin. A control house has been arranged, where the same kinds of plants will be grown for comparison under precisely the same conditions, but without electric light. The committee have arranged for regular observations, and the results obtained will be compared and tabulated day by day. The houses will be open so that Fellows and visitors to the gardens will have ample opportunities of seeing the work carried on in its various stages.

Royal Gardeners' Orphan Fund.—The twenty-first annual festival of this charity will take place at the Hotel Cecil on Tuesday, May 12. The president of the fund, the Duke of Bedford, K.G., has kindly consented to preside.

Potato Sets.—In the course of an address on horticultural matters at West Clandon, the other evening, Mr. Alexander Dean, V.M.H., referred to the trials of potatoes that had been made at Chessington, under the auspices of the Surrey Education Committee. Three plots were devoted to a trial of Surrey, Scotch, and Irish seed, each consisting of six rows containing twenty-six tubers. The produce from these were, he stated, as follows: Surrey seed, 91lb.; Scotch seed, 365lb.; and Irish seed, 407lb. Mr. Dean said that as yet the authorities had not been successful in assigning a reason for the great difference in the result from English seed as compared with Irish and Scotch seed, but he had little doubt that the difference in climatic condition was an important factor.

Tropical Cockroaches at Kew.—The tropical plant houses at Kew are, according to a note contributed by Mr. W. Watson to the current issue of the "Kew Bulletin," infested with cockroaches which are only prevented from doing a great deal of damage to the plants by constant trapping. At least three species are injurious, namely, Blatta orientalis, Linn., B. (Periplaneta) americana, Linn., and B. (P.) australasiæ, Fab., the second being the largest and the third by far the most abundant. Their haunts are dry holes and corners about the stages and hot-water pipes, the sheathing bases of palm, banana and pandanus leaves, and among the crocks in large plant-pots and tubs. They are in hiding during the day, but at night they come out and run or fly about among the plants, devouring flowers and leaves like rabbits. Such plants as eucharis, crinum, and alpinia, when in flower, have little chance in the palm house, where the cockroaches are most abundant; they also find out the ripening bananas and soon devour them. They are as clever as mice in scenting food and more clever in learning what to avoid in the shape of a trap or poison. Jars with a little treacle at the bottom will trap them for a few weeks, then the bait must be changed to beer, linseed oil, or sugar and water, otherwise the cockroaches cease to be attracted.

South-Eastern Counties Daffodil Show.—We are pleased to learn From Mr. F. Herbert Chapman, the honorary secretary, that the Kent, Surrey, and Sussex Daffodil and Spring Show Society is steadily increasing in popularity and strength, and regarded with much favour by lovers of spring flowers throughout the three counties that form the sphere of its activities. The annual exhibition for the current year has been fixed and will be held at the Great Hall, Tunbridge Wells, on April 15.

The Gardeners' Magazine Almanack.—With this issue we present our readers with a double-page almanack for the current year. This has been prepared with special reference to usefulness, and contains the dates of all the principal horticultural exhibitions and meetings that had been arranged at the time of going to press.

SINGLE ROSES FOR BORDERS

Both in writing and speaking appreciatively of either of the several groups of roses, it is too much the practice to endeavour to exalt the merits of the group at the expense of one or more of the others. If the desire be to direct prominent attention to the hybrid teas, more often than not a comparison is instituted between them and the tea-scented, on the one side, and the hybrid perpetuals on the other, in such manner as to endeavour to show their great superiority over both groups. They may be better for certain purposes than either of the others, but it does not consequently follow that they should alone be grown. In like manner, few writers who hold the single-flowered roses in high estimation can make reference to their favourites without endeavouring to show that double roses are so wanting in refinement that those who prefer them to the singles must be deficient in taste. On the other hand, the champions of double roses now and again declare the single roses to be so flimsy and ephemeral as to be hardly worthy of a place in the garden.

It is, in my opinion, a great mistake in directing attention to one section to speak or write of them in such manner as to suggest that the varieties included in it are alone worth growing. All sections of roses are more or less beautiful, and the best course in giving advice to budding rosarians is to describe the leading characteristics of the varieties forming the several sections, and direct attention to the purposes for which they are best adapted. With this grounding in knowledge the tyro will be able to give free play to his taste in making selections, without the risk of filling his garden with roses that are not suitable for the purposes for which they are required, or not in accordance with his taste.

As a case in point, I would mention that I have a great liking for the single varieties, and probably no one could more greatly admire the charms of a well-flowered dog rose than myself. At the same time, I do not allow my admiration of the elegance which characterises the single roses to prevent my appreciating the merits of the double varieties. Of the two groups I consider that in which the double varieties have a place is the most generally useful. There are, however, now so many beautiful single roses available that a selection should have a place in all gardens in which roses are grown to any considerable extent. The flowers of the finest of the single varieties are exquisitely beautiful both in form and colour, and present so pleasing a contrast to the double flowers as to be invariably much admired. To obtain a full measure of enjoyment from them it is not advisable to attempt the formation of a collection, but rather to have a small selection, in which none but the very best are included.

Less than twelve varieties will suffice for the majority of gardens, and I would suggest that where the garden is large enough to admit of a considerable area being devoted to single roses, several plants of each variety be grown. The single roses that, in my opinion, can be the most strongly recommended for beds and borders are the following: The Copper and Yellow Austrian briers, with bright red and rich yellow flowers respectively, are most desirable. These fine single roses are seldom seen in perfection owing to their being grown as standards, and severely pruned. Grown in bush form, with but little pruning, they make a strong growth, bloom profusely, and produce large richly coloured flowers. Belle Fleur, introduced by Mr. G. Prince a few years since, has a vigorous habit, and produces a profusion of crimson flowers; it is bright and effective, and particularly good in the autumn. Irish Beauty, Irish Elegance, and Irish Glory are three single hybrid teas, raised by Messrs. A. Dickson and Sons, of Newtownards, possessing much merit, being vigorous in growth and free and continuous in flowering. Irish Beauty has white flowers; Irish Elegance, illustrated herewith, was awarded the gold medal of the National Rose Society in the autumn of 1905, and has flowers of various shades of apricot, and orange-red buds; and Irish Glory has flowers of a pleasing shade of silvery-pink. Maharajah, raised by Messrs. B. R. Cant and Sons, of Colchester, is a very distinct hybrid perpetual with large flowers of a deep crimson hue. Mrs. O. G. Orpen, a lovely damask rose, with large and exquisitely beautiful blush-pink flowers; Macrantha, a handsome strong-growing species, with large flesh-pink flowers; Morgenrot, a distinct variety of German origin, robust in growth, and bearing a profusion of bright crimson flowers; Paul's Single White, a beautiful white variety, makes a large bush when not unduly restricted, and is extremely beautiful. Royal Scarlet, which also was introduced by Messrs. Paul and Son, is one of the most effective of single roses, the flowers being brilliant scarlet, and freely produced in clusters. Rosa sinica Anemone may be described as one of the most beautiful of single roses, but requires a wall, except in very favoured districts and on warm soils; the flowers are large, finely formed, and of a pleasing pink hue.

A BEAUTIFUL SINGLE-FLOWERED HYBRID TEA ROSE, IRISH ELEGANCE.

Rich orange-red in bud stage, and varying shades of apricot when expanded.

It may be added that the three hybrid teas raised at Newtownards are well adapted for growing in beds on the lawn, one variety in each. Viator.

Trees and Shrubs for Towns.

Our American friends are discovering the need for a careful selection of trees and shrubs for planting in towns where closely-set dwelling houses and factory make the atmosphere smoke laden. It has been found that the linden, ash, and sycamore, the Virginian creeper, wistaria and laburnum are most immune from ill effects of smoke in America.

SEEDLING CARNATIONS.

When raising seedling perpetual or tree carnations it is interesting to note the variation in colour and growth, and also the tendency of some seedlings to follow the parents in some characteristic or other, while some will show a distinct break away from either parent. It is instructive, as well as interesting, to watch progress from cross fertilisation to the flowering of the seedling, but the work requires the patience of a disciple of Izaak Walton, for there is a large element of uncertainty as to the results of one's labours, but perhaps it is this that gives zest to one's endeavours in this interesting work.

I selected the variety Mrs. T. W. Lawson, fertilising it with its own pollen, as being likely to give some seedlings of interest. From the first batch three were selected for further trial, these eventually being reduced to two, a large scarlet and a fancy variety. The scarlet variety was again crossed with a seedling from Apollo and C. A. Dana, the resultant seedlings producing several fancies, scarlets, and also whites and bright salmon colours. One of the fancies is a cream ground suffused with apricot and pink, a very beautiful blend of colour, and quite distinct from any fancy that I am acquainted with. The flowers have non-bursting calyces, are produced on long stems, and the plants come into flower quickly.

Harry Fenn, crossed with the pollen of Mrs. Brooks, gave a variety of colours, the plants generally partaking of the Mrs. Brooks habit; among the seedlings we had whites, salmon-scarlets, whites suffused with pink, cerise, and a white with markings of pink and purple—a novel blend of colour. All this batch produced flowers on long stems, and with good calyces. A seedling of two generations from Mrs. T. W. Lawson, and crossed with its own pollen gave us the greatest variety of colours, including some almost yellow selfs, but no dark colour or crimson shades. The flowers were mostly of Lawson shape and build, with good stems, and non-bursting calyces. The best, or those that showed the best points that tree carnations should possess, have been crossed again, and I am looking forward to the time when, early in the year, these seedlings will bloom.

The English variety, Mermaid, fertilised with its own pollen produced seedlings which, although not giving much variety of colour, produced much larger blooms than the parent, and a much better and freer habit of growth. The variety Mermaid crossed with the variety Daheim gave nearly all shades of pink, the only evidence of Daheim in the crosses being a stronger growth and habit. Daheim fertilised with Fair Maid pollen produced seedlings with very little evidence of any relationship with Fair Maid, but one seedling had blooms rather novel in colour, being a clear pink with short purple lines on the petals.

Seedlings raised from Fair Maid, crossed with Daheim, gave very little evidence of influence from the latter variety, all the resultant seedlings showing the characteristics of Fair Maid. A union between the variety America and Fair Maid gave seedlings of exceptionally vigorous growth, partaking of Fair Maid, while the colour and shape of blooms more resembled America.

From another cross between Daheim and Fair Maid I have a batch of seedlings to flower in the spring. Among all the seedlings flowered during the past two seasons there has only been one crimson, and this was a seedling from Daheim. Others from this batch are in bud and opening their blooms, and, so far, promise to give a greater variety of colours.

We have not yet attained to perfection in any one variety, and probably never will, but this should not deter anyone from striving after that ideal, nor yet from trying to raise another 30,000 dollar variety.

Poltimore Gardens. T. H. SLADE.

CYCLAMEN.

During the dull winter months a house filled with well-grown cyclamen is most attractive. There has been a marked improvement of late both in the colours and substance of the flowers, and as some varieties produce flower stems a foot or more in length they are very useful for cutting. The various shades of salmon, salmon-pink, and the delicate rose tints are very useful for this purpose, as they show up so well at night.

Cyclamen are by no means difficult to grow, but constant attention must be given them in their early stages if the finest results are to be obtained. Sowing the seed requires special consideration both as to the time and the manner. Many err in placing the seed pans in too high a temperature, others in sowing the seed too thickly and allowing the seedlings to become overcrowded while young. The cultivator must, in a measure, be guided by the means at his command as to the time of sowing, but it is a great mistake to hurry the small plants on during the dull months, and then allow them to receive a check just at the time when they ought to be making their growth.

We grow from five hundred to seven hundred plants annually. The seed is sown, or rather dibbled in the soil during the early part of September, the pans containing the seed being afterwards stood on the greenhouse shelf and carefully watered until the young seedlings appear through the soil. By this time the days are getting short, and the nights cold, and the pans are therefore removed to a warmer temperature of about 50 degrees at night. The plants are, however, still kept near the glass, where all the light possible at this dull season can be afforded them. About the middle of November the seedlings should be strong enough for pricking off, so they are carefully lifted and transferred to other pans or boxes, allowing them to stand about two inches apart. We consider this far better than potting them off singly at this early stage, as less watering is needed, and the plants are not so liable to damp off. There is also an economy in space, as all the room in the houses is needed at this time of the year.

By the first week in February the plants will have become sturdy, and be carrying four or five leaves. A slight hot-bed is then made up for them, the surface of this being covered with leaf-soil that has been passed through a half-inch sieve. The plants are then potted singly in small pots, and stood on the leaf-soil. The gentle heat arising from the hot-bed soon induces them to make fresh roots, and in the course of about a month they may be transferred into large 60-sized pots. If a day temperature of about 60 degrees be maintained, and the night temperature is not allowed to fall below 55 degrees, the plants will make sturdy growth. By the latter part of March many of the pits that have been used for forcing asparagus, French beans, potatoes, and the like, may not be required, so that if a slight hot-bed is made up in them, the surface being covered with leaf-soil or other material, as before advised, the plants could be transferred thereto. As the sun will by this date have attained greater power, the plants will need shading in bright weather for a few hours in the middle of the day, but the material used must not be too heavy, otherwise the foliage will become flabby.

When the 60-sized pots are filled with roots the plants should have their final shift, this time into those of 32-size. The nights will now be warmer, and ventilation may be afforded at all times, provided the weather is favourable. Here the plants have a slight bottom heat from the time they are first potted until they come into bloom, but at no time is there a close atmosphere. Some advocate standing the plants on a bed of ashes, but we prefer the fermenting material covered with soil, over which we dust a good sprinkling of soot each time the plants are moved. In this way we are never troubled with worms stopping up the drainage.

By the end of September or early in October the plants are in bloom, and they are removed to the greenhouse; they are sturdy, and have their pots well filled with roots. Many of them carry from fifty to sixty expanded blooms, and others developing so as to keep up a succession of flowers until the following March, when they must give place to other subjects.

Soil, potting, watering, and temperature all play such important parts in the production of plants that it is necessary to consider each separately. The staple here is a stiff loam bordering on clay, therefore to this is added amply half-decayed leaf-soil and sufficient old mortar rubble and sand to keep the whole sweet and porous; in this the roots ramble freely, soon reach the sides of the pots, when, if care be taken in watering and a suitable temperature is afforded them, growth is rapid and healthy. It is astonishing the quantity of flowers a well-grown cyclamen plant is capable of producing, and the length of time the flowers will last if kept in a suitable temperature and a fairly dry atmosphere.

The varieties of cyclamen are now very numerous, and the strains so much improved that one would scarce think they were the same as those grown half a century ago. There is the feathered form known by the name of Pioneer, of which there are various colours; the crested forms, the Papilios, or butterfly forms, and the giganteum strains. We have a cyclamen with a deep canary coloured cresting, the lower portion of the petals being of a clear ivory-white, while others are beautifully shaded with pink or salmon. These, however, appear to require a rather higher temperature to expand their flowers properly in, therefore should be grown in the warmest portion of the house. The markings on the foliage of some cyclamen is so remarkable that even were no flowers produced they are worthy of cultivation for this alone, but having extra fine flowers they are doubly attractive.

H. C. PRINSEP.

Buxted Park Gardens.

Another Sweet Pea Daniel Come to Judgment.—This time it is Mr. Horace J. Wright, late secretary N.S.P.A., and now firmly established in business as a seed merchant, with a marked penchant for sweet peas. In his recently issued catalogue—a publication unique in its way, and of much artistic and other merit—Mr. Wright recommends sweet pea growers to "use 7lb. of superphosphate per square yard." Now, what can this mean? Does it mean that Mr. Wright is also opening business in artificial manures, or is it simply a joke on the part of the printer man? I strongly suspect that it is a case of "sparing the rod and spoiling the yard," but perhaps an explanation will now be forthcoming.—E. J. K.

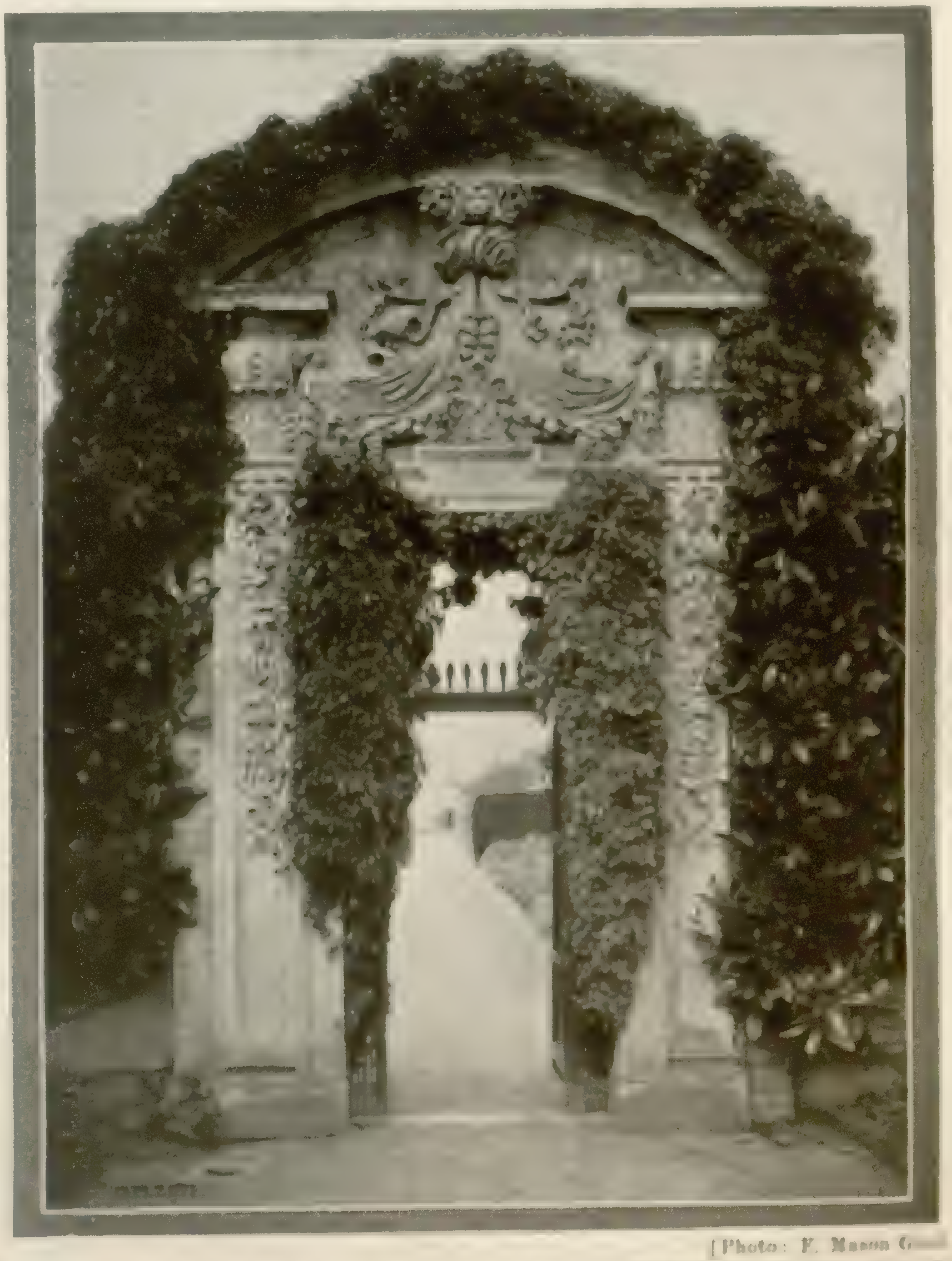
GARDEN GATES.

Throughout the whole history of architecture the part played by the door, or, to speak more broadly, the entrance, has been one of the utmost importance. Great architects of all nations and civilisations, from those of ancient days to our own times, have expended upon the doorway their highest efforts, and have contrived often to make it a thing of beauty and meaning. It is, however, to other nations than our own that we must go to find it taking the most prominent place, as do the marvellous gateways of China and Japan. Here we are too apt to regard the doorway as merely a hole in the wall or hedge through which to proceed to the other side, and too often fail altogether to grasp either its meaning or its many possibilities.

The door, at the same time the warder of the secrets within and the friend through whose offices we gain access to them, should emphasise the importance of its position, and suggest in its character and construction the nature of those secrets; in fact, that it should embody the feeling of that which it guards, cannot be too strongly insisted on. It should strike the keynote of the subsequent harmony, and (like the overture of an opera) create for us the atmosphere into which we are presently to step. Who has not felt, at some time or other, the influence of the "doorway." The welcoming, friendly aspect of some— the forbidding gloom of others, through which we effect what we feel to be a grudgingly-accorded entrance. Yet how few appear to realise that those few moments spent beneath the frown of an inhospitable doorway may strike a feeling into the heart of the visitor far removed from that intended by the host. Let your door be a hospitable one, setting forth the kindly feelings of those within. Let it wear a look of welcome for the wished-for guest.

From the first sight of an entrance or approach to a domain of either noble or simple dimensions we usually take our cue as to what lies on the further side, and, in these latter days, when the cult of "the garden beautiful" is striven after in an ideal manner, to an extent hitherto unknown, it behoves one and all to see to it that the threshold of the pleasaunce is suitably and artistically ordered. What a delightful thing it is to stand before a quaint old gate of some Tudor design, carried out simply in oak and silver-grey with age, and to picture to oneself flagged paths, smiling borders, an old sun-dial, and quaint stone seat, all redolent with the perfume of lavender, and then to open the same door and find the conjured picture true. How much more grateful one is for the peace of the old garden, because of the introduction effected by the gate, and how disappointed one would have been had the doorway proved an invitation to an imagined promised land that had no existence except in our thoughts.

One pauses, involuntarily, a moment before stretching out the hand that will make the unknown ours, to sketch in our mind's eye a picture of what we feel should be on the further side, basing our view, unconsciously perhaps, on the idea which the gate and its setting suggests to us. For the formal style of gardening which it has become the custom to term the Italian garden, nothing can be more fitting than a handsome gateway, such as that at Swallowfield Park, near Reading, of which an illustration is given herewith, or some specimen of beautiful wrought-iron, of which exquisite gates are now and again to be seen. For the wild garden such an entrance would be totally out of keeping. Here the structure should be of wood, and simplicity should be the dominant note. What is known by the misleading title of "rustic work" should be absolutely prohibited, since this is overlaid with such a profusion of trivial detail, in the shape of short, curved sections of wood, either with the bark adhering, or barked and varnished, that it effectually banishes all sense of repose from its surroundings. The appearance of the gate leading to the wild gardens should be unpretentious, and should denote durability. A modest wicket, set perhaps in an ivied wall, jewelled with bright green moss, with a colony of tall foxglove spires and a spray of flowering eglantine showing on the further side, just sufficiently hinting of what lies beyond whets one's curiosity still further.



[Photo: F. Mason Good.

FINE GATEWAY INTO FLOWER GARDEN, SWALLOWFIELD PARK, READING.

For the kitchen garden the gates should, if possible, harmonise with the particular section into which they lead, but, if they are visible from the garden proper, fine wrought-iron work may be used with advantage. The Queen's Vine-gate at Sandringham, with its beautifully modelled bunches of grapes and vine foliage, affords an excellent example. Where the kitchen garden lies apart nothing can be more pleasing than wooden Elizabethan doors, leading where the wide herbaceous borders, bright with many old-fashioned flowers, edge the broad walks and the sweet scent of herbs fills the air.

Of the inartistic qualities of the ordinary villa gate we are all too painfully aware. On its brightly-painted surface often appears some such title as The Cedars, when the only tree in sight is a miserable, stunted specimen of the araucaria in the middle of the grass plot. Still more ludicrous are the massive iron gates, hung between stone pillars surmounted by rampant lions, with no other moral support than a few feet of neat drive, terminating in a "desirable villa residence."

S. W. FITZHERBERT.

Hippeastrums. — The hippeastrums are of immense value for flower production during the earlier months of the year. A batch of these may now be selected for starting into growth, choosing those bulbs which have been thoroughly ripened and have been given a long season of rest. Previous to starting, the bulbs should be thoroughly examined, as there is always a certain quantity of decayed and decaying material at the crown. If not already done this should be carefully removed, as it often contains the insects or the larvæ of insects which injure the plants. To make certain there is no insects in hiding, the bulbs should be washed with a weak solution of soft soap, to which a little sulphur has been added, after which, when the bulbs are dry, they may be dusted with tobacco powder. Keep a watchful eye on those still at rest, as the crowns of the bulbs are easily injured by damp; not only does this apply to hippeastrums, but to all other bulbs and tubers which are stored and are at rest. In the house in which amaryllis are resting a temperature between [illegible] and [illegible] degrees, and a dry atmosphere should be maintained.—B. CROMWELL.

ROSE COLOURS.

The subject of rose colours is seldom, if ever, sufficiently considered; we find pinks of utterly different shades grown closely together in beds and borders, carmine-blooming climbers proudly nailed to red brick walls, and, alas! scarlet pelargoniums used, summer after summer, beneath crimson standard hybrid perpetuals. Is it true that English men and women have no sense of colour? I trust not. Rather is it that rose lovers become so enthusiastic over the beauty of different varieties that they forget, or ignore, the fact that individual perfections can destroy one another's loveliness when juxtaposed.

To take, for example, two roses that positively "shriek at each other," as the French say—L'Ideal and Reine Marie Henriette; here we have two exquisite flowers, of rarely delightful tints; use either of these roses by itself on a lawn, massing white violas beneath, and the eye of any artist will be grateful. Use either up the walls of a white brick or stone house, or to cheer the leaden surface of a gray building, and every ray of sunshine will linger lovingly on the blossoms that are warm-tinted already. I once saw a garden in which a Reine Marie Henriette rose grew luxuriantly up a square-sided white-painted wooden pillar, encircled for a yard's space by a rockery mound that concealed the rose's base; the rockery was itself encircled by a round pond, or white stone basin of water, where water lilies of pink and white flourished, and beside which rose arrowheads, foxgloves, rosy phloxes, and white spiræas, herbaceous and shrubby. The rose was grandly shown off by these surroundings.

Then, again, no artistic vision will be satisfied to rest at once upon both yellow and apricot, or buff roses: the two latter may safely be combined with any others of true copper tint, but clear yellow, be it of the lemon or amber shade, light or deep, will always make the apricot hues look lifeless, dull, and "muddy." By the bye, maroon roses, toning to black-purple, such as Sultan of Zanzibar, Xavier Olibo, etc., are most harmonious with apricot ones of the Madame Falcot type. Even white roses need careful placing. I remember the funereal appearance of a gray stone house over which climbed a rampant Aimée Vibert, and in whose front garden a cedar tree cast depressing shade. Not until plenty of golden euonymus bushes, variegated vincas, and clumps of Solidago altissima had been added to the borders, and a crimson Longworth Rambler and an Ards Rover had been trained up the walls did the dwelling lose its cemetery-suggesting gloom. Ards Rover was chosen advisedly, because the house faced east, and this hardiest of hybrid perpetuals was to be relied on, even under this misfortune, to blossom well on through autumn.

The common error in planting pink roses is, of course, the mingling of salmon colours with the pink that used to be called "carnation." La France is a most refined shade, yet contains bluish shadings that make it spoilt utterly in effect if a salmon, cerise, or coral-pink rose is beside it; with deeper pinks, such as Marie Verdier, or Paul Neyron, it does not clash, though personally I consider it dulled by their greater brilliance. Surely a rose of very delicate colour should have that beauty shown off to best advantage? La France, among white roses, is able to win highest appreciation.

Many of the old-fashioned crimson roses have the disadvantageous habit of turning purplish as soon as opened; there are innumerable modern scarlet-carmine varieties that bud, bloom, and even fade without doing this, and these should be chosen in preference. I may just mention John Stuart Mill as a magnificent clear red rose, and Tom Wood as one in whose petals the deepest shadings to the red are brown rather than bluish.

Nature can, however, do wonders in blending tints; of this the popular hybrid tea Madame Abel Chatenay is an example, for the petals are a charming combination of deep salmon and carmine-rose.

M. H.

REX BEGONIAS.

Since the introduction of Begonia Rex, which is a native of Assam, and was much prized on its first appearance, many very fine varieties and a few hybrids have been raised, and each season varieties more beautiful and noble than their predecessors are introduced. Nevertheless, for some unaccountable reason, these begonias do not gain the admiration they deserve; but as all plants have their ebb and flow of favour, we must await the turn of the tide.

Although the Rex begonias can be, and often are, grown charmingly in pots, it is when planted out in a naturally and artistically formed rockwork, associated with ferns, which add grace and elegance to their colour and beauty, that they are seen to greatest advantage. The broad leaves, distinct and handsome, beautifully nerved in the one; bright rose, silvery-white associated with rich carmine in another; elongated, laciniated, thickly bespangled with bright crimson hairs over a broad silvery zone in yet another, inadequately describes these ornamental begonias.

My object, however is not to dilate on the beauty of these begonias, but to give a short account on their successful culture as rock plants. Their propagation is a very easy matter; they strike easily and freely from cuttings; portions of the leaves also root readily, and this is the method more generally employed, as a number of plants can be raised from one leaf.

Any time during the summer, from May onwards, is a suitable time for increasing stock, choosing leaves which are firm, as these will not damp off quickly. Pots or pans well drained, and partially filled with a mixture of peat, leaf-mould, and sand, with half an inch of silver sand on the surface, should be prepared. Portions of the leaves, each about an inch square, and a part of the rib in it, should next be inserted in the soil to one-third their depth below the surface. Only give sufficient water to just moisten the sand, for if too much is given there is a liability to damping. Provide an ordinary stove temperature, and place the pans on a shelf away from the range of the syringe, where they are lightly shaded. In a month's time they will be rooted and throwing up shoots from the base.

When well established pot each plantlet in light sandy soil, and when well rooted in these pots they can be safely planted out in their permanent quarters in the fernery, along the sides of the corridor path, or fronting the stages of the plant house and conservatory.

Although of easy culture some little consideration must be given in choosing a position for planting out. Shade is beneficial when the sun is powerful, but too much shade, with insufficient air, causes long flabby growth, and reduces the beautiful colouring. When arranging the plants in the fernery give the shadier positions to the ferns, planting the begonias in the light and open spaces. The pockets in which they are to be planted should be drained, and filled with compost similar to that in which they are growing in pots. Plenty of space must be allowed as they are quick growers. During the growing season well supply them with water, and syringe them overhead each day, though this is best done in the afternoon, when the house is closed.

When once established these begonias will last for years, but it is necessary either to replace them at intervals with young stock, or the old plant must be lifted and replanted in fresh soil, removing at the same time such of the old stems as are not required.

The flowers of some varieties are in themselves handsome, and freely produced. The different kinds offer an excellent means of practice for the young hybridist, as they cross freely, and very little difficulty is found in raising seedlings.

The light silver and white foliaged kinds give an elegance in the fernery unsurpassed by any other plants. They are suitable to varied temperatures, from the heat of the stove to that of the greenhouse. Insects, as a rule, are of little trouble, and thrips, which sometimes attack the plants, can be kept under by frequent syringings.

The original Rex variety, which has a bright green ground banded with white, is now easily surpassed in beauty. A few of the best varieties are: Arthur Malet, bright red with silver sheen, midrib and veins purple; Comtesse de Montesquion, delicate silver foliage, a beautiful variety; Gemmatum, pea green, reddish-brown veins, shot with rose; Lady Annesley, silver surface, centre blue, with broad silver-grey zone; Mrs. F. Sander, a very beautiful variety, velvety chocolate-brown, silver-white margin, suffused rosy-crimson. Other desirable varieties are Conspicum, Madame Schwarz, Prince Mallenstein, Princess Charles of Denmark, President Deviolaine, punctatissima, and Marie Louise.

W. H. CLARKE,
Aston Rowant, Oxon.

Forcing Freesias.—It cannot be too widely known that freesias must be grown in a comparatively cool house to obtain the best results from them. Any attempt at forcing is generally attended by weak and elongated foliage and an absence of flowers. An ordinary greenhouse suits the plants well, and if they are kept near the light nice dwarf floriferous stuff is assured. I remember a traveller for a well-known firm of nurserymen once telling me that he had been sent off, post haste, down the country to inspect a large batch of freesias, which an excellent customer had quite failed to flower. On his arrival he found the plants in a cucumber house—and the mystery was solved. Fortunately, he had taken a dozen well-bloomed plants with him, and these convinced the customer of the error of his ways.—E. J. K.

Potting Old Spiræas.—The man who, instead of throwing spiræas away after forcing them, planted them out in a spare plot in the kitchen garden, laid by a very valuable reserve, which may now be drawn upon. These home-grown spiræas are often quite good enough for conservatory decoration, but when any doubts are felt on this head, they may go into old rhubarb pots, tubs, or boxes to give cut flowers and foliage. Those who have much decorating to do in spring know well how valuable spiræa foliage then is; the flowers of bulbs are forthcoming in thousands, but many bring no foliage with them. I remember once, when foreman, horrifying the chief by packing a corner of one of the vine borders with old spiræas—but the vines suffered no harm, and the spiræas gave heaps of flowers and foliage which we could make raids on as desired.—E. J. K.

TRESCO ABBEY; ISLES OF SCILLY.

THE ISLES OF SCILLY.

The Gardens of the Hesperides.

About forty miles west of Penzance and some five and twenty miles west of Land's End there lies, on the bosom of the broad Atlantic, a group of about a hundred and fifty islands of varying size, collectively known as the Isles of Scilly. Rugged and rocky they nevertheless yield a wealth of flowers every season, contributing thereby in no small measure to the pleasure of many thousands in the populous centres of England.

They are of entrancing interest, these Western islands. Lovers of Ancient Greece will remember them as the Hesperides, and students of Roman history will not forget, they are the Siluræ Insulæ, while those who find a keen delight in legend and romance—and who does not?—will know full well that the Isles of Scilly are but the remains, the peaks, so to speak, of that wonderful land of Lyonnesse that sank beneath the wave at the bidding of Merlin and engulfed the armies of Mordred.

To the horticulturist whose time is chiefly spent in and around London, amid the greatest rush and bustle of modern life, the Isles of Scilly offer a very hearty welcome. Although one may stay at St. Mary's for four days without any possible chance of a letter or a newspaper from the mainland, there is no need to be dull. The only communication with the great world may be a telegram from Covent Garden, posted up in a window in Hugh Town, giving the current prices of daffodils and suggesting that there is a demand for larger supplies of Scilly White, Soleil d'Or, Emperor, or some other of the several varieties so extensively grown wherever there is room or sufficient soil to cultivate them.

"Scilly's Rocky Shore."

Despite their rocks, and in addition to their romance, the Isles of Scilly are particularly fortunate. They lie full in the way of that branch of the Gulf Stream that does so much for us as a country. They have an equable climate, and, but for winds, a very genial one also. Winter, in the Scillies is a period of time, not a distinct season of the year, for spring merges into summer, a long summer into autumn, and autumn into a very early spring. The light is clear, and the air sweet and invigorating, indeed, a short sojourn in the Scillies is as good as a sea voyage, without its attendant evils, once you get there. Unfortunately not a few who cross from Penzance to see "the flowers that bloom in the spring" are sorry for themselves, even before the Wolf Light tells that half the journey is done. There is no doubt at all that the prospects of mal de mer keep many people from visiting the Scillies, were it not so then Baring-Gould's words would soon become true; he writes, "with its amount of sunshine, with its equable temperature, and its air charged with ozone, I believe Scilly will be the sanatorium of the future."

Crossing to Tresco Abbey.

For myself, as mal de mer has not hitherto claimed me for a victim, I borrow a line from Dr. Watts, and say of the Scillies:

"I have been there and still would go."

When crossing during a rather dirty passage last spring my only companion on the bridge was a gentleman whose knowledge of the islands is both broad and large; his kindnesses were many, and in his position of agent to T. A. Dorrien-Smith, Esq.—the Lord of the Isles, Mr. Maggs was able to afford me considerable information and facilities.

The largest of the Isles of Scilly is St. Mary's, and it is the residential and business centre of the Archipelago, and it is here that one is landed from Penzance. A trip to either of the other islands means another voyage. There are boats in plenty, and plenty of handy, skilful men to ply them, but even when the trip is only across the piece of clear water that is sheltered by the islands of Samson, St. Mary's, Bryher, Tresco, and St. Martin's, there is no fun in the prospect when the weather is so rough that the fishing fleet lies sheltered behind the pier in St. Mary's harbour. But one night the fishing fleet disappeared, and the next morning was sufficiently promising, so, in charge of Tom Jenkin, we sailed across the intervening two miles in almost record time. The "we" consisted of my namesake, of cypripedium, nepenthes, and Penang fame; an Anglo-Malayan friend who came from Carlisle; a keen amateur horticulturist and his wife, from the borders of Epping Forest; two ladies from far off Kimberley, and the writer all anxious to see the horticultural wonders and treasures of Tresco Abbey.

In the absence of T. A. Dorrien-Smith Esq., we were welcomed by his head gardener, Mr. John Jenkin, whom the Lord Proprietor had kindly asked to show us everything himself, personally. And here I may state that a large portion of the Tresco Abbey Gardens is always open to the public, Sundays excepted, and at one entrance there is a notice as follows:

To the Garden.

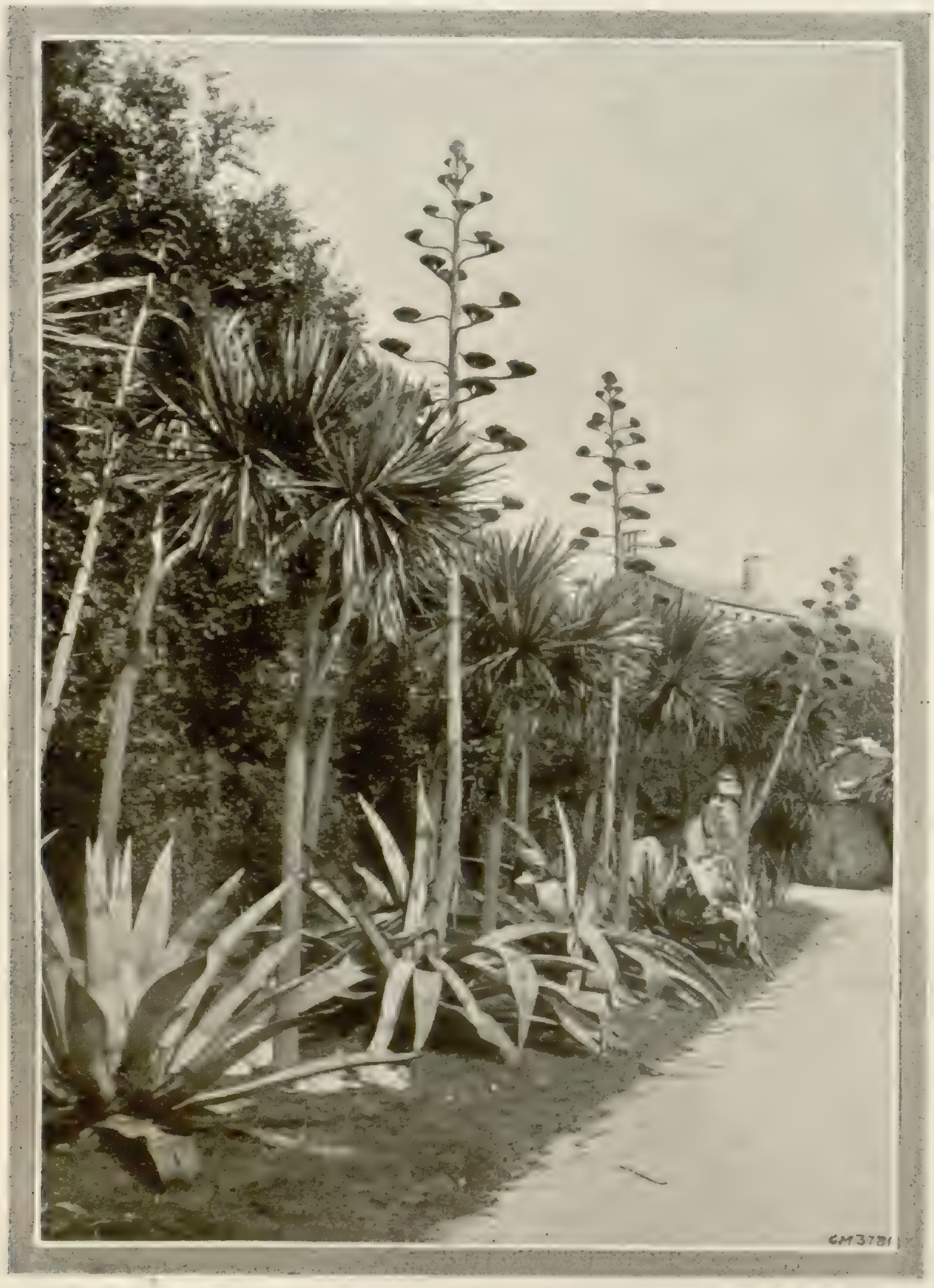
All persons are welcome to walk in these gardens, but are requested to keep to the main walks, and not go up to the house nearer than the under terrace in front, and to abstain from picking flowers or fruit, scribbling nonsense, and committing such like nuisances.

Enter then, if it so please you, and welcome.

N.B.—The gardens are open (for the islanders) from 2 to 5. Children must not come by themselves.

Chains, bars, or round stones mark the walks which are not to be used."

After signing the visitors' book one passes on to view the tennis lodge, an interesting building with its front supports consisting of figure-heads of old wooden ships that have been wrecked on the islands. They represent ships of many nations and of many sizes.



TRESCO ABBEY: PART OF THE AGAVE WALK.

Tree Ferns and Palms.

Close by one has the first real suggestion of the great interest this fine garden contains. In a sheltered opening amid big pittosporums is a colony of tree ferns, chiefly Dicksonia antarctica, Cyathea dealbata, and Alsophila australis, with masses of the low-growing Lomaria magellanica, and big specimens of Asplenium Nidus-avis. Hard by is Chamærops humilis, Corypha australis, big masses of the variegated New Zealand flax, and such rare conifers as Podocarpus andina, and the strong growing P. Totara, as well as the elegant Araucaria Bidwilli. The only shelter the tree ferns and palms receive is a screen of coarse tiffany strung from tree to tree along the windward side during the early spring. Indeed, the wind is the only trouble at Tresco, but the Island of Bryher to the westward breaks the fury of the west and south-west gales, and the higher ground on the Island of Tresco, planted with pines, curves round the back of the gardens and affords kindly shelter. In addition, hedges are planted wherever a wind break is needed, and these hedges are chiefly of Escallonia macrantha and Berberis Darwini, both evergreen and both beautiful when in flower.

Metrosideros robustus, quite a good sized tree, must be a blaze of glory when it carries hundreds of its flaming bottle-brush spikes of flowers in July; it is perfectly at home. Its near companion is Edwardsia microphylla, the New Zealand laburnum, rising 30ft. high, and bearing, the first week in April, a profusion of its yellow flowers. Another interesting shrub in full bloom at the same time is the Californian Nuttallia cerasiformis, bearing a plenitude of drooping racemes of small white flowers. The Tasmanian shrub Anopterus glandulosus, with rose-tinted, lily-of-the-valley-like flowers was of more than passing interest because it is rarely seen except as a greenhouse plant, but almost every step of the way during a delightful tour of the Tresco Gardens reveals plants that are seldom seen outside Kew, Cambridge, or other botanical institutions. Here is Erica codonodes 20ft. high., and Correa magnifica, and C. Brilliant, with their dazzling flowers taking quite an ordinary position in the borders.

Rock Garden and Agave Walk.

The gardens at Tresco Abbey occupy a crescent-shaped sloping site, with the Abbey on a rocky eminence that rises a little beyond a fresh-water lake. The Abbey is built of stone, and is set in the midst of a natural rock garden that has been improved by art. On what may be called the garden side of the house the rocks are piled up in great masses, and between them succulent plants of many kinds find a comfortable home; indeed, I doubt whether anywhere in the United Kingdom one could find such great breadths of species and varieties of gaily flowered mesembryanthemums, such masses of Aloe arborescens, and such big opuntias. Aloe ferox, A. ciliaris also do well, but to give the names of half the succulent plants that are so evidently at home here would be to compile a lengthy list. In May and June the mesembryanthemums alone would be worth going to Tresco to see.

The Agave Walk runs along one of the upper terraces, and its double row of Agave americana and A. a. variegata, all giant specimens, provide a scene that is unique in the British Isles. The plants are never protected, but they thrive amazingly. Mr. Jenkin says that over a hundred specimens have flowered during the past twelve years. All these have been replaced for, as readers are well aware, when Agave americana blooms it dies in the effort. But there is always abundance of stock from which to draw to fill up the gaps thus made. Formerly the terrace steps, crowned with a figure head of Neptune, were adorned with big agaves, but this is not so now.

The Old Abbey Garden.

Within the Tresco Gardens are the remains of the ancient Abbey of St. Nicholas, at one time an important religious establishment attached to the monastery of Tavistock. In this enclosed spot there remains but a couple of arches of the ancient building, but there are gravestones to show that even in comparatively modern times the little burial ground was used by the islanders. Now a splendid old dracæna, many branched, rises majestically and each year it flowers abundantly. Near by, as seen in the picture, is a plant of the rare Dracæna indivisa vera, with very broad leaves. Masses of Agapanthus umbellatus adorn this spot, and other interesting subjects are the Belladonna lilies, antholyzas, clivias, irises, and others of somewhat similar character.

Another enclosed garden close to the old Abbey ruins is a paradise for the plants grouped under the rather comprehensive title of Cape Bulbs. Ixias are a great success, and nerines, vallotas, babianas, sparaxis, tritonias, montbretias, etc., etc., flourish in a way that makes one envious.

The little formal flower garden is another of the many interesting enclosed portions that go to make up this "Kew with the roof off." Here are eleven big old specimens of Dracæna indivisa, and underneath them and around them are beds of daffodils carpeted with oxalis. Zonal pelargoniums are left out all the year round, and only removed when a new style of planting is to be adopted. If they grow over high for bedding, all that is necessary is to cut them back from time to time, and when they grow too woody they can be placed in the borders. Lapagerias clothe the lower walls, and Iris fimbriata and I. tingitana flower in borders edged with Lithospermum prostratum.

The Long Walk.

That the gardens are terraced has already been suggested. The walks are mostly at right angles to each other, and so one obtains striking views along these, and almost every one shows distinctive vegetation. The Long Walk is a place to linger long in, for on either side are the choicest trees and shrubs, with here and there a common one, planted apparently to enable the visitor to recognise at least some of the subjects. So many Cape, Australian, and New Zealand plants alter so much in general appearance when growing freely as at Trescoe, as compared with the pot-grown plants one has become more or less familiar with, that the Long Walk is a long series of surprises. The giant Eucalyptus globulus, 45ft. high, are readily recognisable, and Araucaria excelsa, 35ft. high, is as symmetrical as any small plant seen in Covent Garden; but Psoralea pinnata, 16ft. high, and in bloom, assumes a new aspect. Eurya latifolia has flowered out of doors here. Fuchsia cordata, Bucklandia populnea, with its big red stipules; Tetranthera californica, Clethra arborea, 20ft. high; Acacia longifolia, great bushes full of flower; Pittosporum Colensoi or tenuifolium, as fragrant as a huge flask of Eau de Cologne; Entelia arborescens; fine examples of the popular palm Trachycarpus excelsa; Griselinia lucida, a big plant; and the old favourite Sparmannia africana, are just a few of the inhabitants of this walk. Buddleia globosa and B. variabilis, Senecio grandifolius, and grand old hydrangeas are also to be found here among a host of plants drawn from many lands, and that keep in perfect health in this wonderful climate and under the care of Mr. Dorrien Smith and Mr. Jenkin.

The Dracæna Avenue.

It is quite impossible to do justice to Tresco Gardens in the space at command, or give an adequate idea of its extent and arrangement. For practically all Himalayan, Cape, and New Zealand plants it is a paradise, and to many Mexican, Californian, Mediterranean, Chinese, and Japanese subjects that need greenhouse culture in most parts of the country the gardens offer a comfortable home.

The dracænas, D. indivisa and D. Draco, are one of the features of the gardens, and one walk passes under an avenue of much branched specimens. The ground beneath is covered with hydrangeas, pegged down, and these in their season flower grandly and produce a mass of bloom.

The Glass Department.

There are glass-houses at Tresco, but these are chiefly devoted to the culture of choice fruits such as peaches, grapes, and nectarines, and to tomatoes. Everything is well-cared for, and would attract considerable attention in a garden where the outdoor occupants were of less interest. Freesias are grown in quantity, in beds out of doors, and in frames; others are in boxes and pots, but all of them are regarded as hardy plants to be dealt with after the fashion of daffodils. The secret of success is fresh air, and a thorough drying off after flowering.

It is an easy matter to keep salads and choice vegetables supplied in quantity the year round at Trescoe, with the aid of frames and the fine sunlight that seems never to fail, or at any rate, is never obscured by a fog. The needs of the kitchen and table are by no means forgotten at Tresco, and in this department Mr. Jenkin is as much at home as in the Long Walk.

The Giant Puya.

I think it was at one of the Old Drill Hall Shows that a huge spike of Puya chilensis was exhibited from the Tresco Abbey Gardens, and created no small stir by reason of its size and the beauty of its peacock-blue flowers. The spike came from a huge mass of this bold plant growing in a sheltered corner, a corner many yards across, which it has taken complete possession of. It is really only one plant, but as the stems have bent downward and outward they have been layered, and so a magnificent specimen has been produced. It first flowered at Tresco about forty-six years ago, and now, as then, it is one of the show plants in a garden that overwhelms one with its variety and its surpassing interest.

Charles H. Curtis.

*** A second article on the horticultural features of the Scilly Isles will be published in our next issue (January 11). This will be devoted to the great flower-growing industry, and will be fully illustrated.

TRESCO ABBEY: OLD ABBEY RUINS AND DRACÆNA INDIVISA VERA.

WALL FERNS.

Ferns may be roughly classed under two categories, those which grow in the chinks of rocks, and those which grow in more or less deep soil. Among the former class naturally we find a number which are adapted to inhabit the chinks and crevices of old walls, filling the interstices of the brickwork or masonry, or revelling in the deposits of leaf-mould and of past generations of themselves, which have found a lodgment in their angles, and recesses, or accumulated on their tops.

Their presence in such situations is, of course, largely determined by the climate, the amount of rainfall, and the absorptive nature of the wall materials, since it is evident that, elevated as they are from the soil proper, and exposed, as they must be to drying winds, a long-continued period of drought would involve great risk of their entire extermination. Nature, however, has gifted many of these rock and wall-loving ferns with a really remarkable power of survival under such trying conditions as would simply bake and dessicate the greater number of the fern tribe if similarly exposed.

The little Ceterach (C. officinarum), for instance, may be noted in periods of drought to present the most forlorn and shrivelled appearance possible, its little green fronds being curled up, and only their rusty brown backs visible. So it may remain for weeks, and if we pull one out of the wall it will come away with some of the mortar, literally as dry as a bone. Plunge it, however, into a pail of water, give it a thorough soaking, and, lo! the little fronds swell and flatten out, the rusty scales modestly retire into the background, and in a few hours the plant is entirely resuscitated, a process which, of course, in Nature, is effected by the first thorough drenching with rain.

TRESCO ABBEY: VIEW DOWN THE LONG WALK.

So great, indeed, is the resistant faculty of the Ceterach in this direction that I once found a plant or two of C. officinarum crenatum in Asia Minor, put them into an envelope, and into a breast pocket, where they were only discovered some months later, after my return, and yet, treated as above suggested, overnight, they were ready to pot up next morning, and resumed growth as if nothing had happened.

The common Polypody (P. vulgare), a wall, roof, and tree bark tenant, can also withstand drought for long periods, but this has a stout fleshy rootstock to help it, which the Ceterach and other "resurrection" ferns, as they may be termed, do not possess as a stand-by. Among native wall ferns the common Hartstongue figures prominently in many places, and is peculiar in the fact that it is the only one of the wall persuasion which is equally at home in such positions and in the soil proper. Naturally, it can never attain its full size unless it has ample soil accommodation, but none the less does it make pretty and thoroughly healthy plants, under conditions where it has absolutely nothing but old mortar to root in, and not much of that.

The various native Spleenworts (Aspleniums) are all wall lovers, and in their case such a situation constitutes a measure of protection for them, since their comparatively small size would render their survival impossible in soil conditions in which the soil-loving species, like Lastreas, Lady ferns, and Shield ferns assume comparatively gigantic dimensions. The Bladder ferns and the Oak and Beech ferns also affect rocks and walls, though not averse to forming dense colonies on shallow deposits of leafy soil and their own debris, where they are protected by rocky conditions beneath from invasion by the larger species named.

In damp climates, such as we get in Devon and elsewhere, we may find the stone dykes, formed of rough layers of stone facing, and backing of solid earthen mounds, to be full of seedlings of many species lining the chinks and crevices, since these naturally form capital nurseries for the youngsters, independent of their subsequent aspirations, but, as might be expected, it is the wall ferns proper which here "gae to the wall" in a different sense, the robuster ones crowding them out by virtue of the ample supply of soil within the dyke, in lieu of a restricted one. Obviously as regards the culture of wall ferns, a chief essential of success is thorough drainage, and equally obvious is it that when planting them, whether in Wardian case or rockery, or merely in pot or pan, the wall conditions should be, as nearly as possible, imitated, and chinks provided in which the ferns can nestle as if at home. The soil should be loose and rubbly, but they should be planted firmly, and watered until they start growth, as, however drought-resisting they may be, they only resuscitate by virtue of their roots being active, and kept so by moist conditions until established. The species we have in view are, first of all, the several spleenworts, the little maidenhair spleenworts, Asplenium trichomanes, of which there are several prettily crested and plumose varieties, Asplenium t. cristata, ramo-cristata, and incisum; the Black Maidenhair Spleenwort (A. adiantum nigrum), a fern on quite different lines, and larger, of which there is a heavily tasselled form, grandiceps; the lanceolate Spleenwort, and Sea Spleenwort (A. lanceolatum and marinum).

The bladder ferns we do not recommend, their fronds are too apt to go brown quite early in the season. The oak and beech ferns form pretty masses, but require loose leafy mould and room to spread; they are not at home in mere chinks, nor is the common polypody. These last three, indeed, do best in shallow pans in peaty sandy soil, and of the beautiful varieties of the last-named, P. v. cambricum and a dozen and more others, grand specimens can be made, and of such a size as rather to take them out of our proper wall fern category altogether.

Chas. T. Druery, V.M.H., F.L.S.

LABURNUM CARAMANICUM.

This is a rather rare type of legume from Asia Minor that for a long time was known as Podocytisus caramanicus, and which is now finding its way into private collections on the slow but sure principle. It is an attractive shrub that never appears likely to make a tree, the height of the tallest specimen I have seen was six feet, and the girth of the entire plant was 10 feet. The habit is that of a spartium, or Cytisus scoparius, but more diffuse, the branches being very slender, densely twiggy, and the top of the main stems is a thicket of growths. It flowers freely during the summer months, bearing small but pretty erect spikes of yellow flowers that recall Coronilla glauca in shape and size.

In common with most leguminous shrubs it has a tendency to get thin at the base, and on this account is not to be recommended for specimen grouping, but planted in thickets in broad shrubberies, grouped freely in the larger types of rock gardens, and where garden and park meet, it is very attractive. Quite young plants should be chosen for the plantation; they will not bloom freely till the second year, but will literally cover themselves with flowers afterwards.

G. B. Mallett.

CULINARY PEAS.

Culinary peas are highly esteemed from the time the earliest crops can be secured until the latest are over. The means for producing very early crops under glass are within the reach of the few only, and obviously on this account the practice cannot be generally followed, and for this reason it will not be now dealt with, but the method of raising early batches for transplanting in the open is more commonly available.

Sowing Under Glass.

There was a time when the early peas were invariably sown in November in the open, but they often suffered severely from bad weather, vermin, birds, and slugs, and consequently were uncertain. This practice is now comparatively seldom followed, nor is it necessary since early varieties of peas have been so greatly improved. Those who have the accommodation of suitable pits, or early peach houses, etc., in which to raise early crops, need not trouble about the old practice.

TRESCO ABBEY: THE DRACÆNA AVENUE.

For these early crops under glass the seeds may be sown in January, thinly, in four-inch pots, and placed in gentle heat, keeping the seedlings in a light position near the glass until they are an inch or so in height, when they should be placed in a cool pit, and be hardened before being planted in the open. A mild day, when the soil is in a suitable condition, should be taken advantage of for this operation, and a carefully prepared and sheltered south or west border, if available, should be made use of. Trenches of convenient depth and width should be cut out, at the same distance apart as the height of the variety to be planted. Carefully turn the plants from their pots, place them in position, and make the soil firm about them. Should the soil be in any way unsuitable make use of some moderately fine and dry material that has been prepared for the purpose. Complete the operation by protecting the rows of plants with sprays of laurel, spruce, etc. When the earliest crops are sown in the open, sheltered borders similar to those recommended for crops that have been raised under glass should be found for them.

Preparing for Main Crops.

Plots may be suitably prepared for main and late crops by being trenched and heavily manured during the autumn or early winter months. Farmyard or stable manures when employed in this manner for peas are best when only in a partially decomposed state, more especially if the soil is of a heavy description. It has been said that manures of this kind are of little or no nourishing value to peas; be this as it may, our crops have little or no other manurial aid than that derived from material of this kind, and their quality invariably leaves nothing to be desired. When preparing for seed sowing land treated in this way should have several inches of its surface well broken over when it is in a tolerably dry state. The drills should be taken out to the depth of from three inches to four inches, and eight inches in width, and for peas of from five feet to six feet in height they should be at least six feet asunder, those for dwarf-growing varieties being correspondingly closer together.

Some advantages may be gained by placing the rows further apart than the distances recommended, the intervening spaces being planted with dwarf crops, such as cauliflower or turnips, but this mode of management is not in all cases convenient.

Sowing in the Open.

Errors are still made, notwithstanding all that has been written about it, by sowing the seeds much too thickly; much harm both from the haulm becoming crowded and because the roots starve each other. In sowing, therefore, pains should be taken to avoid overcrowding.

It is a good plan, particularly in cases where the soil is light and porous, to sow the crops that furnish the midseason and late supplies in trenches. By adopting this practice the roots of the plants are preserved in a cooler and more moist medium than they would otherwise be. They can also be more conveniently supplied with water and liquid manure should assistance of this description be necessary, but whether assistance, in the form of liquid manures, are or are not needed depends greatly upon the tilth of the land. Where there has been an inadequate supply of manure applied much may be done to rectify the defects by a discriminate use being made of these liquids.

Mulching.

The necessity for mulching is another matter that depends greatly upon circumstances. On heavy, deeply cultivated, and well manured land benefit is seldom reaped from it, provided the surface of the soil is frequently and properly stirred. It is only in very dry seasons that mulching works good under these conditions, while in wet ones it does mischief. Difficulties about its employment, therefore, thus sometimes arise, at least, with some of us who are not good weather prophets. In the case of dry, porous, or shallow soils it is different, and upon them mulchings of short manurial litter is more often beneficial.

Successional Varieties.

As a rule, a good supply of peas, from crops sown outdoors. can be maintained throughout the season by fortnightly sowings made from January to July. It will be understood that to accomplish this entails the selection of suitable varieties, but it is not necessary, or really desirable, that a great number of varieties be used. A better practice is to sow sufficient successional crops of a comparatively few approved ones. Tall growers give the longest supply of pods, and the pods should be regularly gathered as the peas become fit for use, because if left later they not only become unfit for the table but also work much injury to the remainder of the crop by distressing the plants.

We maintained an excellent supply of peas last season without an interruption until the second week in November, from successional sowings of the following tall kinds, viz., William the First, Gradus, Thomas Laxton, Veitch's Prestige, Main Crop, The Gladstone, and Autocrat. The earliest crops of William the First and Gradus were sown under glass, and subsequently planted out. Owing to the cold nature of our soil and our low situation we sow a hardy variety, viz., William the First, for the first crop, though it may not always be necessary to use it in the dining-room.

T. COOMBER.

The Hendre Gardens.

THE ELDER-LEAVED VALERIAN.

The true valerians are practically unknown to English gardens, the most probable reason (in respect of the majority) being a lack of every good feature that should welcome them there. From that which is undoubtedly bad, one or two species stand out as superlatively good, and one of these—Valeriana sambucifolia—can surpass many hundreds of border plants valued to-day. This species is a vigorous hardy perennial five feet high, whose leaves are elegantly lobed as its name implies, and whose flowers, in light airy masses of pink and white, maintain a display of three months' duration. Viewed from a distance the plant recalls the white galega, the sheaf-like habit and all-white "cap" of flowers being identical; closer inspection reveals a shade of pink, and the foamy, clustered flowers, minute individually, but a source of admiration collectively, are of an entirely different type.

There is room for such plants as this in the best stocked garden in the land, particularly is this the case where the soil is poor. One can grow the elder-leaved valerian in the poorest of poor soils, and get a good return in flowers that would be difficult with other plants. Cuttings of the young shoots root readily in spring, and pieces of the root will grow if there is a bud or two left intact.

G. B. MALLETT.

Sowing Scabious Seeds.—The sweet scabious is often far from a success in the flower garden, autumn finding the plants at the zenith of their flowering season. To have a good early display of bloom there is no plan to beat that of sowing seeds in heat now, or, at least, before the end of January. A high temperature is not wanted, something about 50 degrees to 55 degrees, and when the seedlings are up they may have even less heat. What the plants want is a long growing season, and when they have this they are generally thoroughly satisfactory.—E. J. K.

THE EUCOMISES.

The great natural order of the Liliaceæ is one of the most prolific in genera, species, and varieties of all bulbous or tuberous plants, and as we think of the various flowers which are broadly grouped among those it includes, we are struck with surprise at the differences which exist within the order. There are few, who, looking at the spikes of the eucomises, would imagine these to be classed with the Liliaceæ, for, assuredly, they are far removed in appearance from the true lilies, which are so queenly in their beauty. But, as we look more closely at them, we realise that there are others in the order still further removed than they, and we see in their structure the affinity which exists. But this note is not intended to be one on the botany of the eucomis, and is designed mainly to advance the claims of the genus to a still greater recognition at the hands of the grower of flowers who cares for other things besides gay colouring and great masses of bloom with little individual character.

I can hardly imagine that there is anyone with sufficient temerity to venture to urge the claims of the eucomis to the suffrages of the gardener because of its colour, for the blooms are not even pure white, and the fascination of the plant lies rather in its singular appearance, its habit, and in its wax-like blooms, although they can only be said to be "whitish." Yet one has seen them employed with striking results in stands of hardy flowers at shows, and some northern exhibitors in particular have been frequently complimented upon their fine spikes of the eucomis. Yet their presence in prize stands of hardy flowers has not passed unchallenged; for it is true that these flowers are not among our truly hardy plants, and that their reputation for hardiness is far from being above reproach. It is whispered, moreover. that some of these exhibited spikes are not from the open, but that they owe their quality to the shelter of the frame or the greenhouse. This may be, so far as regards these individual spikes, but the writer knows of even Scottish gardens where Eucomis punctata has survived and flowered regularly for many years in the open without any protection, although, it is well to say, these gardens were not in the colder parts but in more favoured regions.

Although this is the case, the would-be cultivator of eucomises will be prudent should he not place too much reliance upon their hardiness, but will best show his wisdom by covering the place his plants occupy with some ashes or dry litter in winter, especially for the first winter after planting, as that is the time of trial in ordinary seasons. They ought always to have a sandy soil, made rather rich, however, by adding some good old manure. Choose a sheltered position and plant,either in autumn or in spring, at a depth of five inches.

There are a few species only offered by the trade, and of these one of the best known is E. punctata, which affords us a tuft of long, very ornamental leaves, prettily spotted. From the centre of these rise stout spikes of flowers a foot or more in height, the succulent-looking stems being spotted, and the spikes of bloom of considerable length, and surmounted by a little tuft of small leaves. The flowers are of a dull white, and spotted with rose.

Another good species is E. regia, a handsome one, and if well grown, finer than its sister flower, in some respects, although its blooms are not so white and have a tinge of green about them. We rarely meet in gardens with any besides these two, but E. undulatifolia is not to be despised, as its long leaves are prettily waved along the margins. Another, called E. amaryllidifolia, is said to have greenish flowers, like the last-named, but it has not come under my observation in any garden I have seen.

One more point about the eucomises may be mentioned, and that is the sweet, honey-like odour they possess, which attracts a multitude of small flies or gnats in summer when they are in bloom. Bees do not appear to be attracted by it in the least.

These eucomises are propagated by division, and, while autumn is recommended by some for the operation, one questions its expediency at that season. Spring is more suitable, as the young plants have a chance of becoming well established ere the coming winter.

S. ARNOTT.

SEEDING OF ROOT CROPS.

The past season, though unfavourable to many garden crops, has not, on the whole, been especially so to vegetables, a fact that has of late been amply demonstrated in the excellent produce staged at exhibitions.

On the other hand, it is seldom that such waste of material from seeding, or as it is generally termed, "bolting," occurred as has been the case this year. Late sown and normally grown crops suffered but little, but those raised early, in heat, and planted out in May, with the object in view of having fine produce from July onwards, were, in many cases, complete failures, owing to premature seeding. Leeks and celery, the latter especially, are, when early sown, always regarded as somewhat risky crops, because of their tendency to "bolt," and this is often ascribed to want of water at the roots at some period of growth. This, however, can scarcely have been the cause this year, as at no period in early summer was the soil sufficiently dry to produce any injurious effects upon the most moisture-loving forms of vegetation.

Though referring principally to root crops, some others, as parsley, raised in warmth and planted out in due course, displayed a similar disposition to run to seed rather than produce normal growth. This crop, though of less consequence than the others mentioned, is, nevertheless, one of much importance in northern gardens, while the ease with which it is cultivated makes it very popular with all classes. Apropos to this may be mentioned the unwonted spectacle that for some months past has been witnessed in many parts of Scotland, of whole fields of turnips and mangolds having run to seed, the tall, gaunt, and now almost bare stems presenting a very strange appearance, and, of course, it represents a very serious loss to the grower. In many instances the plants started this abnormal growth direct from the seedling stage, hence no bulb worthy of mention was formed, while in others it set in at a rather later stage, and although bulbs are in evidence, they are of little value. In the south-western districts of Scotland the evil, though present, is not so bad; but throughout the Lothians and still more inland districts, as viewed from the road or railway, the impression might easily be formed that every plant had thus departed from its proper course. The reason assigned for this unusual state of matters by agriculturists is the very sudden spell of hot weather which occurred in July, succeeding a cold ungenial spring, and the equally sudden relapse that followed the heat wave.

JAMES DAY

Galloway House, Garlieston.

ROOM AND WINDOW PLANTS IN WINTER.

With a practically unlimited supply of plants in stove and greenhouse to draw upon, the problem of keeping rooms and windows attractively furnished with flowering and foliage plants becomes a comparatively easy one; but when the plants used in the adornment of the room have to be grown in the room itself things are much more complicated. Then it is not a case of taking away a plant directly it becomes unsightly and bringing in another to take its place; instead of this, we must either make the most of what we have or buy more. As window and room gardeners are not, as a rule, in a position to be constantly buying more, it follows that they must make the most of what they have, and it is to help them in doing so that these lines are penned.

Atmospheric Moisture.

First it may be well to emphasise the need of buying suitable plants, as there are very many beautiful subjects, both flowering and foliage, which are quite unsuitable for growing in an ordinary room, be that room never so warm or never so light. Heat and light, though highly important, are not all that a plant requires; humidity in the atmosphere is almost, if not quite, as essential, and this humidity a plant in a room rarely or never obtains. More especially is this the case in winter, when fires are kept constantly burning, as these dry up what little humidity there may be in the air, besides ofttimes distributing leaf-choking smoke and dust. If owners of room plants were to consult the wishes of their protégés, they would keep a kettle of water boiling when a fire was burning.

Dusty Foliage.

Next in importance to humidity in the atmosphere, I would place freedom of the foliage from dust. It should always be remembered that the entire surface of a leaf is covered with minute mouths, stomata, through which the plant breathes; the leaves are, in effect, the lungs of the plant, and to keep a plant in good health we must see that its lungs are not blocked. To this end all large-leaved plants should be sponged once a week in winter, at least, when a fire is kept going in the room. There is nothing better for this purpose than a little tepid water, brought to the colour of milk by lathering a little soft soap in it. Plants with finely cut foliage, or any which for various reasons cannot be sponged, should be cleaned by syringing them with warm water. It is not, however, advisable to syringe plants that are in flower, as wetting spoils the blossoms; in such a case much, if not all, of the dust may generally be removed by blowing the leaves vigorously with a dry syringe. Where a syringe is not numbered among the possessions and a bicycle is, use the bicycle pump.

Watering.

But paramount above all in the care of room plants is watering; it is not too much to say that plants are either made or ruined by the manner in which watering is carried out. Folk cannot get over the idea that plants require a certain quantity of water at a certain time, and at regular periods. Nothing could well be further from the truth. Once the fact is grasped that a plant should only have water when it needs it, progress will have been made in the art of plant growing. Even in a warm room very few plants require watering more often than twice or thrice a week in winter, while in a cold room the majority will go a week or a fortnight in winter without water, and derive benefit rather than harm by so doing. If any doubt whatever is felt as to whether a plant wants water, give it the benefit of the doubt, and withhold the water. Warm water, or that which is quite hot, is better than cold water in winter; it suits the plants better, and less of it is required.

Draughts and Stagnant Water.

Another important point is to not leave water in the bottoms of vases or other receptacles which hold the plants; not only are very offensive smells engendered by this practice, but the lower roots of the plants are liable to rot off through standing constantly in the stagnant water. All receptacles should be emptied periodically, and if at the same time the surface soil in the pots is lightly stirred up with a pointed stick, much will have been done to ensure that thorough aeration of the soil without which plants cannot for long thrive. As a final word of advice, I would warn readers of the danger of exposing plants to cold draughts. E. J. Kingshome.

SOME BIG CHRYSANTHEMUMS IN PARIS.

Although I have known Paris for over thirty-three years it was not till 1896 that I paid my first visit to a chrysanthemum show there. Like most English chrysanthemum growers I had long entertained the idea that we were far ahead of the French in the matter of big bloom culture for show. I was not disappointed. But since the year 1900, when the National Chrysanthemum Society took over a fine lot of blooms to exhibit there, and when Mr. W. Wells also staged a remarkable collection, a very marked improvement has taken place.

It must not be forgotten that French taste decrees that the general artistic aspect of a show is of far more importance than the enormous size of a few individual flowers, and that what we usually put first the French put last. There is, however, notwithstanding this, a good number of capable big bloom growers, and the flowers that some of them stage would compete very severely with many of those put up by our big growers. M. Calvat, the Marquis de Pins, M. Dubuisson-Foubert (little more than twenty-two years of age), M. Charvet, M. Paul l'Abbe, M. Pecquenard, and one or two others would astonish some of our growers if they could be induced to come over and bring some of their best flowers to our exhibitions.

In going round the Paris show one afternoon for the special purpose of noting the names of a few of the finest blooms, I took note of the following as being worthy of high commendation: F. S. Vallis in large numbers. Mme. Paolo Radaelli, mostly good, one bloom being awarded the second prize in the class for the biggest bloom in the show, the first prize going to the one previously named. W. R. Church was shown in enormous flowers, and was uniformly fine. General Hutton was as big as anyone could wish. Pres. Viger, Mermaid, Marquis Visconti - Venosta, all monsters. Le Bouvier and Chrysanthemiste Montigny, two varieties not so well known here as in France, also belong to the big brigade. J. H. Silsbury, Sapho, Mme. René, Oberthur, Australia, Mr. T. Carrington, Miss Alice Byron, Mrs. T. W. Pockett, Lieut.-Colonel Ducroiset, Souvenir du Bailleul were all flowers that would have required a good deal of beating at any of our leading shows in England. C. Harman Payne.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

INTRODUCTORY.—In the writing of orchid calenders I always feel it my duty to impress upon my readers the fact that there are so many differences in positions, conditions of local surroundings, and also in the facilities provided for the cultivation of orchids, that however expert the writer may be, the advice given cannot possibly be applied to all cases. Therefore, those in charge of plants must use their own discretion in adopting any fresh methods, and I would especially warn them against a material departure from any methods of culture which have been found successful. Should some other method be advocated, I would advise cultivators to try a few of the plants first, and, if found successful, the remaining plants may, in due course, be brought under the new treatment if considered desirable.

PREPARATORY WORK.—With the turn of the days the work in the orchid houses will increase with great rapidity, and preparations should be made at the present time to facilitate the various operations being carried out without delay. While the weather remains open a supply of sphagnum moss should be obtained, for it often happens that there is a prevalence of frost when repotting is commenced, and, it being then impossible to obtain supplies, work is delayed unless the needful supplies have been obtained beforehand. The moss should be carefully picked, washed, and put ready for use. If stored in a cool, damp place, and turned over once or twice a week, it keeps in good condition for a long time. Peat should also now be pulled and made ready for use. We usually have sufficient pulled at this season to last through the potting season. The bracken roots should be preserved, for there is nothing more useful for drainage purposes for practically all kinds of orchids. Care should be observed to have these roots properly dried. If there is the least particle of green woody or sappy substance remaining in them when used for drainage, fungoid growth appears, according to my experience, on them, and this quickly spreads to the potting compost, often leading to undesirable results. The use of leaves as a constituent of orchid composts has been general in orchid collections during the past four or five years, with varying results. Some, who have had the longest experiences with it, have demonstrated its desirability by the results obtained. Others experience have been exactly the reverse. As one who has used leaves with success I must include them under composts to be prepared at the present season. If leaves have not already been gathered they may be easily secured, where they have been blown together in heaps. Dry oak or beech leaves are the best. These, when secured, should be placed in a bag and dipped into a copper or boiler of boiling water; this will destroy all insect life and fungoid growth. The leaves should then be carefully dried again and chopped ready for use. Loam, which is desirable for many of the terrestrial species of the orchid genus, should also be selected and made ready; good fibrous turfy loam, with the fine soil removed, is the best for the purpose. This should be stored in a place where it may become warmed and ready for use when required.—H. J. Chapman, Oakwood, Wylam-on-Tyne.

STOVE PLANTS.

TEMPERATURES.—We usually endeavour to have a season of rest in the stove by reducing the temperature during the shortest days of the winter, or in other words from about the middle of November till early in February. During this period we maintain, when the frosts are severe, a night temperature of 65 deg, with an advance in daytime of 5 to 10 deg. Careful attention must be paid to syringing, which ought to be done only in dry bright weather and during the forenoon. As much artificial heat is required to maintain the temperatures, the damping of paths and borders must be done when necessary for preventing an excessive dryness of the atmosphere.

COMPOST FOR POTTING.—A supply of good fibrous loam and peat is essential for stove plants. Because of the liberal waterings they require throughout their growing season, their potting compost must be of the best possible quality to ensure its remaining sweet and the roots continuing in a healthy condition. A supply of charcoal, lime rubble, silver sand (coarse), and broken oyster shells will also be required for incorporating with the soil.

BEGONIA GLOIRE DE LORRAINE.—Stock plants of Gloire de Lorraine as they have done flowering should have the old flower stalks removed, and the stems cut down to within nine or twelve inches of the surface, and placed in an intermediate stove near the glass to start them into growth and thus ensure an early supply of cuttings.

POINSETTIAS. — As these are removed from their flowering quarters place them in a dry position to ripen the wood preparatory to resting. A temperature of about 50 deg. is sufficient. They must, however, be carefully examined at intervals of a few days, and be watered when necessary to prevent excessive dryness, and on no account allow the shrivelling of the bark to take place.

GLOXINIAS.—If an early display of flowers of these beautiful flowering plants is wished for select tubers that ripened earliest, and place on a shelf near the glass where light is abundant, in a temperature of from 50 to 55 deg. In the case of the earliest batch we succeed best by allowing the tubers to remain in the pots in which they were grown last year, and give them a top dressing of rough fibrous peat, loam, and cow manure (dried) in equal parts. This is given when the plants are making new growth. As the flower buds appear a further assistance is given, bonemeal or liquid manure being used.

WATERING.—Careful attention must be given to watering, for stove plants are at this season liable to injury when applied in excess. When the soil has been moderately dry, sufficient water should be given to well moisten the whole of the ball. It is essential to use water not colder than the temperature of the structure in which the plants are growing.—JOHN DONOGHUE, Bardon Hill Gardens, Leeds.

FRUITS UNDER GLASS.

STRAWBERRIES.—The earliest batch will most probably have been put in the early vinery that was started the first week in December. Those selected should have had the most prominent crowns, and been the best-rooted plants. If any small side growths appear these should be removed to throw the strength into the centre crown. These being the first to give fruit early they should have the best of attention in the way of watering and keeping them close to the glass. For early fruiting they are best started in a bed of fresh oak or beech leaves (to secure strong root action), and given a medium top temperature, increasing this as the trusses appear so as to elongate the flowering shoots somewhat. This is important, as the trusses can then be staked and the fruits kept from damage by watering. When they reach this stage they are best placed on a shelf in a house where there is a temperature of 60 to 65 deg., where they can get a little air when the weather is favourable. Weak liquid manure may also be given to help them throw out the flower stems. If a good succession is required put another batch in a month later. If the soil has been washed away from the crowns a little top-dressing may be given. It is as well to dip the plants in some insecticide if they have to stay in the vinery, on account of red-spider and other insects.

CUCUMBERS.—A sowing of these should be made singly, or two seeds be put in a clean, small 60-sized pot; place in a brisk heat in a box of leaves covered over with some glass, till the seeds germinate. At this time of the year it is as well to sow a few extra seeds to ensure enough plants. As soon as they are in rough leaf put the seedlings on a shelf near the glass in a brisk temperature, but away from draughts. Shift them on into 54-sized pots as they become rooted, remembering that a small shift is preferable at this time of the year, because the soil remains saturated if there is little root action, and this will bring on mildew. Telegraph is still one of the best varieties to grow, especially for early fruiting.

FRUIT-ROOM.—Grapes will have been cut and bottled; white bottles are preferable to black ones, as they allow one to see whether the portion of stem cut with the bunch is in water or not. If charcoal is placed in the bottle there is no need to change the water. Care should be taken not to make any dust in the room, as this may adhere to the skin of the grape, and cannot be blown off, especially if the room is at all damp. A temperature of 45 degrees is sufficient. Examine the bunches occasionally, and remove all decayed berries.

POT VINES.—Those that were started in November will be showing bunches, and the temperature should not be allowed to fluctuate much; 65 to 70 degrees at night, and 70 to 75 degrees by day affords sufficient heat. The vines will be plunged in a bed of leaves, and probably with pipes under this, and until the roots are well in action 65 to 70 degrees is ample bottom heat. A thermometer should be placed in the leaves. The selection of bunches should be deferred as long as possible; select the best and as evenly as possible up the rod. Do not hurry to tie down the shoots, as this stops the flow of sap, and crooked shoots and poor bunches may result. Stopping should also be left till the shoots have two or three leaves, so as to draw the sap up into the bunches. Air should be given on all favourable occasions, if only for a short time, to sweeten the house. When watering thoroughly soak the soil. If there is not much room for water place a piece of zinc round the pots about six inches wide; this will allow for plenty of water, and will also enclose the top-dressing later on.

EARLY VINERY.—This, started the first week in December, will have vines nearly bursting; instead of using much fire heat it is better to close the house a month sooner and apply no fire heat till the buds begin to burst, as the growths come away stronger, more evenly, and better. As soon as the buds burst raise the temperature to 60 degrees at night and 65 to 70 degrees by day. Permanent vines cannot be rushed like pot vines, and must be treated to give returns for a number of years. Excessive fire heat is one of the greatest evils in grape culture. Close the house with as much sun heat as possible, and well syringe the walls and paths. If the border was in good condition when the house was started no water should be given till growth begins, when it should have a sufficient quantity to soak it through. The water should be given out of tanks in the house or else be slightly warmed. The shoots should be well advanced before being tied up. Sometimes vines are most erratic in breaking, through bad planting, cold border, or bad drainage, but no doubt notes were taken the previous year as to their behaviour. If a few strong shoots get ahead the weak ones will fail and a gap in the rod will result.

LATE VINERIES.—All pruning should be finished at the turn of the year, for with lengthening days the vines will want to start. Cut off all old back spurs, and put some styptic over the cut. If the outside borders are well drained and lie warm they do not necessarily require to be covered up in ordinary weather, but the recent heavy rains may have made the borders very wet. If this is so the borders should be covered up with some long stable litter and have old glazed lights placed on the top of this to keep off the rain, but not to exclude sun and air. We have found this protection necessary for the first time in eleven years. Have inside borders top-dressed and cleaned; when taking off the old top soil do not disturb the young roots. Artificial manures should be used sparingly in top-dressing, especially on the young roots; loam mixed with mortar rubble, wood ashes, and bonemeal is good material.

MELONS.—Seeds should be sown as for cucumbers. Hero of Lockinge and Blenheim Orange are excellent varieties for early crop.—A. B. WADDS, Paddockhurst Gardens.

A MILD CHRISTMAS DAY.

Christmas found us with an unusual quantity of bloom and berries in the garden. Pear trees were in bloom, and strawberries are colouring their fruit under a handlight in the kitchen garden, besides carrying a quantity of green fruit the size of walnuts. Double and single anemones, St. Brigid varieties, were in full flower in the herbaceous border, and with a light placed over them will doubtless keep blooming all the winter, being perfectly hardy, and easily raised from seed, they are allowed to flower where they are sown, thinning the seedlings when they are large enough to handle.

Rose Frau Karl Druschki gave some nice blooms, and it is one of the best of autumn roses; Madame Lambard was also in flower. Mignonette, antirrhinums, primroses, polyanthus, and Stenactis speciosa were in flower, and snowdrops could be seen coming up through the grass, and a few were unfolding their white petals; tritomas still look gay amongst the pampas grass, but the wet weather spoilt these in the autumn. Physalis Alkekengi, or winter cherry, was still one mass of colour in the beds, and these are indispensable for winter decoration for mansion and church, keeping fresh for a considerable time. A pretty sight was, and is, the strawberry tree, Arbutus Unedo, the red, round berries hanging amongst the clusters of white blossom; whether it is owing to the wet dull summer, or other atmospheric conditions, this tree has not been seen here to better advantage before; on Christmas Day it was one mass of red and white.

Escallonia macrantha had still some flowers open, and this makes a splendid shrub for the lawn, the foliage always being a healthy dark green. Of climbers, Chimonanthus fragrans, Ceanothus Gloire de Versailles, and Jasminum nudiflorum were very bright. Choisya ternata does well here, but owing to wet sunless weather it has not bloomed in such profusion as it generally does; it is perfectly hardy, and stood 20 degrees of frost last winter without any protection whatever, although it is planted on an elevated exposed position open to the east and west winds. It will thrive in either peat or sandy loam and leaf-mould, and can be easily increased by layering. It has a great objection to being constantly shifted, as the roots are very coarse, therefore, it should be planted in a permanent position. It also makes a good plant for covering walls, and it blooms very freely, the flowers being sweet-scented and the foliage a bright green.

Hydrangeas planted outside in a large bed have just gone out of flower, and most of the varieties are quite hardy, and come here both blue, pink, and white; these are among the most beautiful of summer or autumn flowering plants, and these also stood 2 degrees of frost last season without protection outside. Large plants in tubs are placed in a cool structure in the spring.

In secluded places the furze was to be seen in full bloom; by the way, this makes a splendid hedge, but is frequently cut at the wrong time of the year, and so little blossom is seen on this fine shrub in early spring.

A. B. WADDS.

Paddockhurst Gardens, Sussex.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

The last meeting of the old year was held on the last day of the year. There was a small exhibition, and the people who foregathered were more eager to offer good wishes than to do business or take horticulture seriously.

FLORAL COMMITTEE.

Winter-flowering plants were extensively displayed by Messrs. James Veitch and Sons. Chelsea, and the group included Calceolaria Burbidgei, Moschosma riparium, Luculia gratissima, Leonotus Leonurus, Jacobinia chrysostephana, J. coccinea, Coleus thyrsoideus with its blue spikes of bloom, winter-flowering begonias in great beauty and variety, and the pretty and interesting Pavonia kermesina. A group of Dracæna Doucetti with the more yellow-leaved D. Dallieri, was submitted by Messrs. Hugh Low and Co., Bush Hill Park, Enfield; both are good dracænas. This firm had also a batch of Euphorbia jacquiniæflora, a group of cyclamen, Otaheite oranges, and a fine lot of winter-flowering carnations.

The splendid bunches of zonal pelargoniums set up by Messrs. H. Cannell and Sons, Swanley, were a fine show, and the varieties Arabic, King Victor, Kingswood, The Mackintosh, Hibernia, Sir Thomas Hanbury, and Lucania were particularly good in colour, size, and form. Berried plants were a leading feature of the considerable display made by Messrs. Wm. Cutbush and Son, Highgate. In their group they had batches of pernettyas, the various colours being grouped together, with these were Otaheite oranges, ardisias, Hamamelis arborea, Adonis amurensis, Iris alata, I. histrioides, Sternbergia hyemalis, and daphnes. In another group the Highgate firm exhibited a selection of winter-flowering carnations, showing Robert Craig, Aurora, Mrs. S. J. Brooks, Britannia, the fine new Marmion, Mrs. Burnett, The Belle, Harlowarden, Rose Doré, Fiancée, and the scarlet St. Louis.

Sarracenia purpurea, a big clump, lifted from the open ground the previous afternoon, with the pitchers filled with ice, was brought up by Mr. W. A. Cook, from Sir Edmund Loder's garden at Leonardslee, Horsham. This species does well out of doors, unprotected at Horsham. Messrs. Paul and Son, Cheshunt, sent a bunch of flowers of the new perpetual musk rose, named Snowstorm, and also a bunch of flowers of Montanoa bipinnatifida. Messrs. J. Peed and Son, West Norwood, submitted a collection of alpines and succulent plants, with a few lachenalias. Cotoneaster Francheti, a graceful grower with neat leaves and an abundance of bright coral red berries, was well shown by Messrs. James Veitch and Sons, Chelsea.

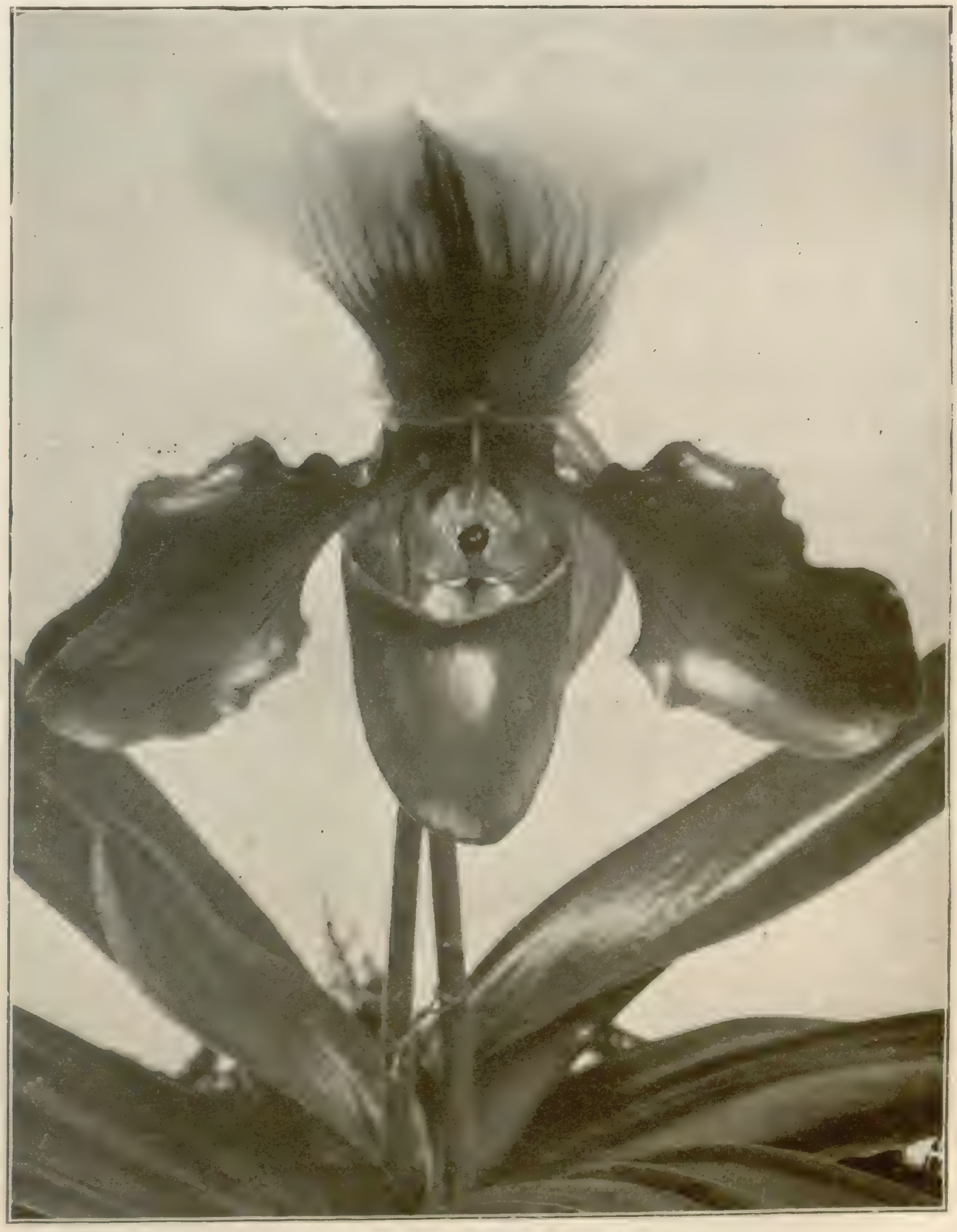
Primula obconica grandiflora Hayes' Place Double, is the far too lengthy name of a very pretty strain of double-flowered P. obconica, and one that should secure a large amount of popularity if distributed; an A.M. was granted. Messrs. H. B. May and Sons, Edmonton, staged a group consisting of batches of Euphorbia jacquiniæflora, scarlet and white-bracted poinsettias, winter-flowering carnations, and Dracæna Her Majesty, the latter of handsome form and rich colouring.

ORCHID COMMITTEE.

Cypripedium insigne Arnoldiæ was shown by Mr. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford. Mr. Alexander, orchid grower to Major Holford, C.I.E., Westonbirt, Gloucester, brought up the fine Cypripedium Moonbeam (F.C.C.), a white and yellow-green cross between C. Thomsoni and C. Sallieri; and C. Bellerophon, with brown sepals and petals and a white, purple, and green dorsal sepal. From the same collection came Lælia anceps Schroderæ, var. Theodora, with three very large bright flowers, each with a vivid crimson-purple lip. Mr. F. Corney, gardener to J. H. Craven, Esq., J.P., Beeches, Keighley, Yorks, submitted Cypripedium Troilus var. Cravenianum (A.M.), a big flower with brownish-green lip and petals, and a very broad green, purple spotted, white banded dorsal sepal; this is derived from C. insigne Harefield Hall, which it greatly resembles, and C. nitens, Ball's var.

Very beautiful was the new Odontioda Craveniana (A.M.), shown by Messrs. Charlesworth and Co., Heaton, Bradford. This had a spike of eight medium-sized flowers of a deep rich scarlet hue, with yellow mottlings on the broad apex of the lip. The parents of this hybrid are Cochlioda Noetzliana and Odontoglossum cordatum. M. Mertens, Ghent, showed several beautiful odontoglossums, but, unfortunately, none were named, and, for the matter of that, there was no card to denote from whom they came.

Some finely-grown cypripediums were shown by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, and among these there were splendid flowers of C. Mrs. W. Mostyn Chardwar var., C. insigne Sanderæ, C. Euryades Charlesworth var., C. Maudiæ, C. Advastus Marie, C. Leopoldianum, and C. Arthurianum pulchellum. Messrs. Moore, Lim., Rawdon, Leeds, showed a small group of cypripediums, that included C. insigne Sanderæ, C. aureum virginale, C. Niobe, etc. Messrs. Cypher and Sons, Cheltenham, showed a charming lot of orchids, displaying fine odontoglossums, Lælia anceps Chamberlainianum, L. autumnalis alba, calanthes, and Cypripedium insigne Sanderæ, Miltonia Bleueana nobilior, Zygopetalum Mackayi, and Oncidium obryzatum.



CYPRIPEDIUM MOONBEAM.

Exhibited by Major Holford, at R.H.S. Meeting, December 31, 1907, and awarded a First Class Certificate. Flowers, large, petals and lip rich yellow-green; dorsal sepal yellow-green at base, white at apex, and marked with purple.

FRUIT COMMITTEE.

A very fine display of apples and pears was well arranged by Messrs. J. Veitch and Sons, Chelsea, who set up their fruits in neat baskets on soft wood wool. It was a splendid exhibit for the season of the year. The pears of special note were Directeur Alphand, Olivier des Serres, Bellisime d'Hiver, Marie Benoist, Easter Beurre, Nouvelle Fulvie, and Bergamotte Esperen. The apples were grandly shown, and a few of the finer of the hundred and forty varieties were King of Tomkins County, Withington Fillbasket, Newton Pippin, Hambling Seedling, Lord Derby, Bowhill Pippin, Langley Nonpareil—a new cross between Peasgood's Nonsuch and Cox's Orange Pippin, and partaking far more of the latter than Charles Ross, which is a similar cross; Langley Favourite—a useful cross between Bismarck and Cornish Gilliflower, Cox's Orange Pippin, The Queen, Lane's Prince Albert, Crown Apple—very bright; Bismarck, very fine; Tyler's Kernel, Bramley's Seedling, beautifully coloured; Blenheim Pippin, Duke of Beaufort—a very late keeper; Colonel Vaughan, Brabant Bellefleur, Christmas Pearmain—beautifully coloured, shapely, and firm; Allington Pippin, Blue Pearmain—a splendidly solid apple; Hormead's Pearmain, Barnack Beauty, a late dessert variety of fine shape and appearance; and a fine dish of Winter Peach.

A collection of twenty-two varieties of pears and the same number of apples was set up by Mr. W. A. Cook, gardener to Sir Edmund Loder, Bart., Leonardslee, Horsham; all the fruits were from orchard trees. The pears were most attractive, and the best dishes were of Beurre Baltet père, Glou Morceau, Beurre Alexandre Lucas, Duchess de Nemours, Le Lectier, Beurre de Naghan, Catillac, and Easter Beurre. A good potato that passed the cooking test satisfactorily was Messrs. Dobbie and Co.'s Favourite; a First Class Certificate was awarded.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Cypripedium Moonbeam, from Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester; to Potato Favourite, from Messrs. Dobbie and Co., Rothesay.

Award of Merit.—To Odontioda Craveniana, from Messrs. Charlesworth and Co., Heaton, Bradford; Cypripedium Troilus Cravenianum, from J. H. Craven, Esq., Keighley; to Primula obconica grandiflora Hayes Place Double, from E. A. Hambro, Esq., Hayes Place, Kent.

MEDALS.

Gold Medal.—To Messrs. James Veitch and Sons, Chelsea, for apples and pears.

Silver-gilt Flora.—To Messrs. James Veitch and Sons, Chelsea, for winter-flowering plants.

Silver-gilt Banksian.—To Messrs. H. Cannell and Sons, Swanley; Messrs. W. Cutbush and Son, Highgate.

Silver Flora.—Messrs. Cypher and Sons, Cheltenham; Messrs. Hugh Low and Co., Bush Hill Park, Enfield; Messrs. H. B. May and Sons, Edmonton.

Silver Banksian.—Messrs. Hugh Low and Co., Enfield (orchids); Messrs. Moore, Lim., Rawdon, Leeds; Messrs. J. Peed and Sons, West Norwood, S.E.; Mr. W. A. Cook, gardener to Sir Edmund Loder, Bart., Leonardslee, Horsham (fruit).

Bronze Flora.—Mr. W. A. Cook, Leonardslee Gardens, Horsham, for Sarracenia purpurea.

Colchester Horticultural Society.

The annual meeting of this society was held at the Town Hall on Monday, December 16, the Deputy Mayor presiding over a goodly number of members.

In the report presented to the meeting the committee congratulated the members on the strong financial position the society has attained owing to the success which attended the exhibitions, and to the careful control of expenditure. There was a balance in hand of £112, and the committee felt they had an adequate reserve fund. It was recommended that the summer show for 1908 be held on Wednesday, July 8, and the autumn show on Thursday, November 12. Owing to the pageant being arranged to be held during the last week in June, 1909, the committee had considered the question of altering the usual show arrangements in that year, and they suggested that it might be advisable to hold a spring show in that year instead of a summer one.

The balance-sheet showed that the receipts for the year, with balance of 1906, were £517 17s. 11d., of which the sum of £175 17s. 6d. was received in the form of subscriptions, £41 1s. special prizes, £166 9s. 5d. gate money at the summer show, £50 17s. at the autumn show. The expenditure included: Prizes, £171 16s. 3d.; printing and stationery, £43 6s. 10d.; advertising, £15 6s.; bands, £32 8s.; hiring account, £40 16s.; judges, £12 10s. 10d.; bill posting, £19 15s. 10d.; stamps, £11 8s. 3d.; secretary, £20; illuminations, £9 17s. 6d. The balance on deposit and in bank is £112 6s.

Mr. Orpen proposed the adoption of report and balance-sheet, and on the motion being put to the meeting it was carried.

The hon. officers: Captain Tufnell, hon. treasurer; Messrs. P. R. Green, assistant hon. treasurer; C. H. T. Marshall and C. E. White, hon. auditors, were re-elected, and thanked for their past services.

On the election of the committee being proceeded with the following were elected members: The Mayor, Major Buckle, and Messrs. E. P. Baker, R. B. Beard, W. Bibby, W. W. Bunting, A. Cant, C. E. Cant, F. Cant, F. Chapman, W. Cheshire, J. Claydon, C. Gall, G. B. Halls, C. H. Martin, C. E. Rice, A. S. B. Sparling, R. W. Wallace, and H. H. Weatherall.

A vote of thanks to the Deputy Mayor for presiding closed the proceedings.

Southampton Royal Horticultural Society.

The annual meeting of this society was held in the Mayor's Parlour at the Audit House, with the Mayor in the chair.

The annual report and statement of accounts was submitted by Mr. Blakeway, who said that, notwithstanding their many difficulties, they had a surplus of £1 7s. 6d. on the year's work. Their subscriptions this year were 6s. better than the highest subscription for the past ten years, and this, although the amount was small, was highly satisfactory.

Mr. Toogood having seconded the motion, the report was unanimously adopted.

The balance-sheet showed that the receipts, including the amount brought forward, were £715 8s. 10d., and the expenditure was £700 17s. 3d., leaving £14 11s. 7d. cash in hand. There was a credit balance of £49 4s. 1d., as against £26 10s. 11d. last year.

ELECTION OF OFFICERS.

After some discussion with reference to the schedule for 1908, during which various recommendations were made to the Council, and Mr. A. Munt kindly offered a cup for competition, the election of officers was proceeded with. The president and vice-presidents of last year were re-elected, and Sir Alfred Wills and Messrs. R. C. W. Dixon, J. R. Anderson, and C. H. Farnham added to the list of vice-presidents. Messrs. Green, Moberly, and Green were reappointed hon. solicitors, Mr. H. J. Blakeway was re-elected chairman of the Council, Mr. A. Doggrell vice-chairman, Mr. A. G. Thompson hon. treasurer, and Mr. C. S. Fuidge secretary. Messrs. G. Busby, N. O. Desborough, G. A. E. Ebborn, Wilson, W. E. Edwards, and J. T. Robb were elected members of Council.

Reading Gardeners' Association.

At a recent fortnightly meeting of the above association, held in the Abbey Hall, Mr. H. J. Jones, the well-known trade grower and exhibitor, of Lewisham, delivered a most practical and exhaustive lecture on chrysanthemums, from the cutting to the drawing-room and exhibition table. For ninety minutes the lecturer kept his audience fully interested, as he treated minutely with details of culture, etc., from the time the cuttings were taken to the show day, when the flowers were staged for the judges' examination. He strongly impressed upon his audience that attention to the very smallest details very often decided whether the first or some other prize was obtained. The first important point touched upon was, naturally, propagation, and under this heading advice was given as to size of cuttings, soil, light, the best method of striking, time, etc. Then followed directions as to the first shift, size of pots, subsequent shifts, constituents of a good compost, date and timing of buds, stopping, housing, temperature, damping, ventilation, selecting and staging for show. There was very little time left for discussion, but a good deal of information was gained by the questions asked by Messrs. Hinton, Durward, Judd, Exler, Wilson, and Goodyer. A very hearty vote of thanks, on the proposition of the chairman, was accorded to Mr. Jones for his very instructive paper.

Mr. G. Hatch, of Cavenham Park Gardens, Mildenhall, Suffolk, sent twelve splendid bulbs of Sutton's Selected Ailsa Craig onions, which had recently been awarded first prize at Bury St. Edmunds show and also first prize at the Norwich Chrysanthemum Show, and Mr. A. F. Bailey, of Leopold House Gardens, Reading, exhibited two seedling plants of Cryptomeria gracilis.

Windsor Rose Society.

At the annual meeting of the Windsor, Eton, and District Rose and Horticultural Society, which was held in the Guildhall Council Chamber, with Mr. W. Fairbank in the chair, a very satisfactory report was presented to the members.

The receipts for the year, with the balance of £5 18s. 3d. from the previous year, amounted to £252 16s. 5d. Of this sum £156 11s. 6d. were subscriptions, and £42 19s. gate money. The expenses were £237 13s. 1d., leaving a balance in hand of £15 3s. 4d. The assets of the society amount to £102 16s. 9d.

Both report and balance-sheet were adopted. In the course of the subsequent business it was decided, on the motion of Mr. Romaine, seconded by Mr. Keppell Gifford, to extend the radius for local classes to within ten miles of Windsor, and include also the whole of Berkshire.

A vote of thanks to the chairman terminated the proceedings.

New Year Gifts.—If you wish to give an acceptable present to a friend whose hobby is his garden, his poultry, greenhouse, rabbits, or any other rural pursuit, you cannot do better than send to the Publishers of the Gardeners' Magazine, 148-149, Aldersgate Street, London, for the new catalogue of books on gardening and live stock. Amongst the many interesting and practical works is the recently published volume, "The Flower Garden," universally commended by the Press, and of which a prospectus may be had for the asking.

The Begonia Mite.—The note on this troublesome insect (p. 787), and the advice that was given to supply plenty of moisture for keeping it in check are sound, and doubtless moisture in abundance materially assists the plants to withstand attacks. Where a stock of plants is badly affected the best remedy I have found is a solution of "Niquas," of the strength recommended for destroying insect life. We were much troubled by mite attacking not only begonias, but also cyclamen, and finding this insecticide so useful generally we tried it, with the best results. Plants attacked with the mite should be dipped in the solution, care being taken when immersing the plants that every part of leaf and stem is thoroughly wetted, turning the plant round several times in the liquid. After immersion the plants should be laid on their sides to drain. With an interval of a day or two another dipping should follow and then once a week or every ten days until the plants are thoroughly cleansed. Fumigating will partly destroy the mite, and hold it in check, but there is no means so effective for destroying insect life as dipping when the size of the plants will permit of it being done.—T. H. Slade, Poltimore Gardens.

THE
GARDENERS'
MAGAZINE

LEADING FEATURES for 1908.

Beautiful and Interesting Gardens will receive prominent attention during 1908, and be freely described and illustrated. Special arrangements have been made to present these in a quite new manner that will be of unrivalled interest. We shall, as opportunites offer, describe and illustrate single gardens as during the past year, but we shall make a special feature of illustrated descriptions of the great gardening districts in the United Kingdom. These will appear at regular intervals throughout the year, and the arrangements that we have made will enable us to make our readers familiar with the characteristic features of the gardens in each of the districts. We commence the series in this issue with an account of the horticultural features of the Isles of Scilly, and this will be followed by descriptions, even more freely illustrated, of the great gardening centres in South, West, East and North of England, and of the more important centres in Scotland and Ireland.

Garden Architecture cannot be omitted from any well considered scheme of garden adornment: we shall, therefore, present to our readers the best styles of Pergolas, Tea and Summer Houses, Terraces, Garden Vases, Garden Gates, Fountains, etc.; and these will be illustrated to show their suitability for the positions they occupy.

Rock, Water and Mural Gardening find many ardent lovers, and for these we shall cater extensively. Our success with these subjects in the past year, and the many new friends we have made as the result, have led us to make special preparations for illustrating the finest examples, and giving the best cultural details.

Hardy Flower Gardening, an all important and immensely popular subject, merits, and will continue to receive the fullest attention.

Profitable Cultures that are of special interest to the gardening community will be discussed by the best qualified to write upon the practical details as well as the general principles that must be carried out to secure success.

Roses and Carnations are among the most popular of garden flowers, and we shall continue to give them the prominence their beauty and usefulness demand.

Orchid Cultivation is now as essential a part of Horticultural Knowledge as Vegetable and Fruit Culture; we shall again have the services of eminently successful Culturists and Raisers, and from time to time we shall illustrate New Species, Hybrids and Varieties, and describe and illustrate the finest collections.

Chrysanthemums and Sweet Peas are of the utmost importance, and their selection and up-to-date methods of cultivation will be fully dealt with.

Hardy and Tender Fruit Culture is a branch of garden activity that *The Gardeners' Magazine* is especially *au fait* with. It has instituted many reforms, helped to build up a big industry, and will continue to urge extended cultivation in orchard, garden and glasshouse, on the most extended lines.

Plants and Flowers from Seeds are more important in these days than they were, and the means we have taken to bring more prominently before our readers the extreme value of Annuals and Biennials are certain to be appreciated.

The Kitchen Garden Department is of such importance that arrangements have been made with the most successful growers and exhibitors to contribute of their experience in these pages.

Novelties add zest to every branch of horticulture; in 1908 as in the past all the finest of them, whether tender or hardy, flower or fruit, useful or ornamental, will be described and figured with that promptitude which has won for us many admirers.

Scientific Horticulture, particularly in the direction of soil improvement, use of various manures, eradication of insect and other pests, prevention of fungoid attacks, and raising new and improved flowers, fruits, etc., will be given a prominent position.

Birds and Insects, and indeed all animal life that comes under the eye of the garden lover, because of good or evil deeds, will be discussed by competent naturalists.

Glass Houses: Their Construction, Heating, Ventilation, etc., will again receive the attention they demand, and full details of the best methods of providing good crops of flowers, fruits and vegetables, by their aid, will be given by leading gardeners of the day.

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NOTES OF OBSERVATION.

◆

Leeks and Onions under Glass.—Almost every up-to-date gardener now raises these valuable vegetables under glass, in a temperature of about 50 degrees, and there is no question that the system is a sound one. What, however, I have noticed of late, is a tendency to sow the seeds altogether too thickly, and leave the seedlings in the same state. Only last year I saw a splendid box of seedlings ruined in this way; almost every plant damped off, and this at an amazing rate. With thin sowing, early pricking out, and thorough hardening off before planting, glass-raised leeks and onions are some of the most successful crops in the garden.—E. J. K.

Poinsettias after Flowering.—In view of the special treatment required by these plants, it is always well to keep them together after they have ceased to be beautiful. It should be remembered that much depends upon the gradual but thorough ripening of the stems, and to bring this hurriedly about is the reverse of wise. A place on a stage in full light, and with a temperature of about 50 deg., should, if possible, be given, and an effort should be made to keep the leaves on as long as possible consistent with allowing the plants to have a good rest. Where old stems are cut into short lengths for propagating purposes, there is no need to stand the resting plants under a stage when the leaves have fallen, as propagation in this case takes place much earlier than when green young shoots are used.—J.

Propagating Old Dracænas.—Large old dracænas are apt to be a bit of a nuisance in the stove at this season when room is precious; not only do they take up valuable space, but they shelter undesirable plant enemies. This being so, they should be taken in hand at the first opportunity, cut up, and used for propagating. Probably the tops are not worth saving, and if any doubt is felt on this point, throw them away, as they strike none too readily thus early in the year. With the stems and fleshy roots the case is different, and every piece of either, an inch long, may be depended upon to grow if placed in pans of light sandy soil, and stood on or near the hot-water pipes.—E. J. K.

Ornamental Asparagus. — A simple method of growing Asparagus plumosus and A. plumosus nanus, which are most useful for decorative purposes, is to train the shoots up a piece of twine. They can then be taken down when required, and used in various ways. Especially will this method of training be found the more useful during the next few weeks where house decoration has to be considered. In warm rooms, with a fair amount of light, it is surprising how long asparagus lasts in good condition. The long lengths may be twined wreathlike round any object, or along the edges of stands and baskets of plants with charming effect. If dwarf, bushy plants in pots are required for general decorative uses, the young growths should be pinched when they are about a foot high, and these will be found useful in vases for standing in exposed places in the dwelling-house. All species of asparagus are easily multiplied by division of the root-stock, and also by seed. If any plants have now become shabby, these may be treated as stated, and if put into small pots and given a free, rich loamy compost, and afterwards placed in a warm house, they will soon commence to grow and furnish material for next season's requirements.—B. CROMWELL, Cleveley Gardens.

Blind Deutzias.—The so-called blindness of deutzias is, in my experience, confined solely to forced plants, and consists, as most readers may know, of the production of flowers which never properly expand. I have known shoots over two feet in length, and covered with bloom buds, refuse to open a single flower. The general opinion is that this blindness is caused by introducing the plants suddenly to too much heat, and I believe that this is pretty correct in most cases. But there is another common cause of blindness, and one which I have seen in operation on quite a large scale. This is chopping off the roots at potting time. Plants are dug up from the open ground, and not only the roots, in some cases, but the bulk of the underground woody stock is cut away in order to get the plant into a small pot. Small wonder that the flowers refuse to open!—J.

Poinsettias.—Many of these will have had their floral bracts cut for Christmas decoration. They should be collected and placed in a warm, dry position, fully exposed to the light, and should not be placed, as is often done, underneath the stages, because they are unsightly. Mature wood, and plump eyes are what is required when the time for propagation arrives. Many failures occur in rooting poinsettias owing to the indifferent treatment the plants receive after the bracts have been cut, when a little care and attention bestowed upon them at the present time would ultimately lead to success.—B. CROMWELL, Cleveley Gardens.

A Rose-Potting Experiment.—The following incident may suggest ideas to some readers who are carrying out ground operations this winter. A few years ago an intelligent amateur gardener friend had to move a score or more of rose bushes in the course of winter ground work. In the ordinary way he would have heeled them in, and planted them again when the ground was ready. Instead, he carefully pruned in the roots, potted the plants, and plunged them in ashes outdoors until the turn of the year. He then took them to the greenhouse, pruned them, and obtained a nice lot of early flowers. Nor did his reward end here. After flowering, he planted the roses in a bed, and reaped a bountiful crop of autumn blooms.—E. J.

THE VALUE OF MUD.

Several of the old agricultural writers have advocated the utilisation of pond mud, and as a writer in "British Husbandry" (1837) observes: "The mud from ponds, when they are cleaned out, has always been an object of attention to farmers." The composition of the sediment may vary considerably, as will be seen from analyses given below, and is naturally dependent on the character of the pond. Where a pond is placed at the lower part of a field it is likely to receive, after rain, surface washings which may be rich in manure. If, however, the pond contains springs, the sediment may be of little or no value.

Pond mud has proved valuable at the Royal Botanic Gardens, Kew, where the deposit from the bottom of the lake has been used for some years past for general gardening purposes, as a dressing for the lawns, and also as a mulch for the beds, borders, and trees. It has also been used for such pot-grown plants as chrysanthemums, dahlias, fuchsias, pelargoniums, and other gross feeders. The best examples of calanthe and phaius (orchids) ever grown at Kew were planted in this mud. It is also an excellent soil for vegetables. As an example of how freely it may be used for trees, mention may be made of a mulch, four inches thick, which was placed last winter about the large horse chestnut near the Thames; the effect of this on the health of the tree is already most marked.

According to the "Journal" of the Board of Agriculture, the only plants for which it has not been found suitable are Ericaceæ and peat-loving plants generally. Probably this is due to the presence of calcium carbonate in the Thames water, from which the Kew lake is fed, and also to the shells of various molluscs which are abundant in the lake. The only harm that might possibly result from the use of this mud would arise if it were allowed to lie as a cake, so that air was excluded from the roots. The mud at Kew is the silt from the Thames water, and contains decomposed vegetable matter from the surrounding trees, etc.; when first taken out it has almost the consistency of clay, and in this condition is unsuitable for use. The practice at Kew is to drain off the water from the lake, and when the mud can be cut out with spades it is carried in barrows on to the banks, where it is allowed to lie and drain until it can be broken up easily. It is then distributed over the lawns, woods, beds, etc., where, under the influence of weather, it soon breaks down. If used on beds or borders it is forked over, and mixed with the other soil soon after it has been put on. For lawns it is used in the proportion of about twenty loads to the acre, it is then chain harrowed and raked, and after that it soon works down below the grass. When the lake was first cleaned out in 1892 to 1894 the mud was found to be five feet deep in some parts, and altogether some thousands of loads were removed.

An analysis has been made of the mud taken from the Kew lake, and also of some pond mud from Nottinghamshire. The sample from Kew contained 45.15 per cent. of moisture, and that from Nottinghamshire contained 78.81 per cent.; in order to enable them to be compared, the results are given in the following table, free of moisture:

	Sample from Kew. per cent.		Sample from Notts. per cent.
Organic matter* and loss on heating	11.30	...	27.71
Oxide of iron and aluminium	8.17	...	10.45
Lime	12.04	...	7.79
Magnesia, alkalies, etc.	0.97	...	7.05
Carbonic acid	8.85		
Phosphoric acid	0.27	...	0.32
Insoluble siliceous matter	58.40	...	46.68
Total	100	...	100
*Containing nitrogen	0.439	...	0.863
Equal to ammonia	0.533	...	—

It will be seen that the Kew sample in its dry state had less than half the quantity of vegetable matter (and nitrogen derived therefrom) contained in the other. It had, however, more lime and nearly as much phosphoric acid. The fact that the one sample contained so much less water than the other would make the Kew sample in its natural state the richer of the two. The quantity of lime would make it a useful material for any land where lime is needed.

Two other samples of mud from ponds in Kent are referred to in the fifth report of the Analytical Laboratory at the South-Eastern Agricultural College, Wye. Sample A was from a pond which had not been "mudded" since 1836, and as neither ditches nor drains run into it, the water supply has been kept up only by percolation through the soil, which is described as a sandy clay. For many years the pond had, throughout the summer, been a mass of weeds, mainly silk weed, and Nymphæa alba. The analysis showed this mud to contain 23.3 per cent. of water, 7.8 per cent. of organic matter, and .183 per cent. of nitrogen.

Sample B was from an adjacent pond, into which a little ditch and several drains run. It was expected that the mud would be very rich, and it was used as a dressing for hops. Analysis showed, however, that mud was little, if any, richer than the soil of the hop garden, and it had not, therefore, much value as a fertiliser. It is mentioned in the report that "The fermentation processes going on at the bottom of a pond are very complete, organic matter is broken up into carbonic acid, marsh gas, and hydrogen, and free nitrogen is probably liberated also. Resistant forms of organic matter would survive, but these have little value as manure." The analysis showed this sample to contain 52.2 per cent. of water, 7.3 per cent. of organic matter, and .175 per cent of nitrogen.

Generally speaking, the effect of such material is as much a physical or mechanical one as a chemical one, and if used on land of lighter and drier texture would help in improving it. On heavy land, on the other hand, it might not be so successful. It should do very well as a top-dressing for grass.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

ADDRESS.—O. C., Ramsgate: The hon. secretary of the National Sweet Pea Society is Mr. C. H. Curtis, and his address is Adelaide Road, Brentford, Middlesex.

ANNUAL MEETING OF THE ROYAL HORTICULTURAL SOCIETY.—M. E., Billericay: The annual meeting is always held in February, and the next is due on February 11.

STEWING PEARS.—G. S., Mortimer: The best stewing pears are Uvedale's St. Germain, Catillac, Bellisime d'Hiver, Verulam, and General Todleben. The latter is not always fit for dessert, but it is a good stewing pear.

PROPAGATING FUCHSIAS.—S. L. A., Salisbury: Towards the end of the month place a couple of old plants of each variety in gentle heat. Here they will soon commence to grow, and the young growths may then be removed and inserted in sandy soil in pots or boxes, surfacing the soil with sand after the cuttings have all been inserted.

LARGE ONIONS.—S. B., Bury St. Edmunds: Sow the seeds thinly now in boxes of fine rich soil, and place in gentle heat. When the seedlings appear keep them near the glass, and gradually harden them off so that by April they will be fit to plant out into the well-prepared ground. Onion fly rarely damages crops so raised.

BOXES FOR EXHIBITION ROSES.—S. R. S., Exeter: Exhibition rose boxes must be four inches high in front, and eighteen inches wide, and of the following lengths (all outside measurements): For 24 blooms, 3ft. 6in. long; for 18 blooms, 2ft. 9in. long; for 12 blooms, 2ft. long; for 9 blooms, 1ft. 6in. long; for 6 blooms, 1ft. long; for 8 trebles, 3ft. 6in. long; for 6 trebles, 2ft. 9in. long; for 4 trebles, 2ft. long.

FORCING FIGS IN POTS.—B. M., Gloucester: By far the best method of forcing figs is to place the pots in a bed of tree leaves made up on the stage of a light house. The bed should be at a temperature of about 70 degs. The temperature of the house, until growth begins, should range from 50 to 55 deg. at night, and 55 to 65 deg. by day. When the fruits begin to swell, gradually raise the night temperature to 60 deg., and the day temperature to 70 deg. Syringe the trees and paths and stages with tepid water once or twice a day, according to the weather prevailing. Do not force up the temperature by excessive firing in cold weather.

HYBRIDISING.—A. T. C., Huntingdon: A knowledge of elementary botany is essential to success in hybridisation. Many who profess to scoff at botanical study have themselves acquired such elementary knowledge at second-hand, but they frequently fail in hybridising because they do not understand the affinities of plants, and their experiments are about as likely to succeed as a cross between a cat and an elephant.

SPOTTED MIMULUSES.—A. D. G., Epsom: The modern strains of these interesting and beautiful plants are vastly superior to the old ones; it is therefore essential that a first-rate strain be secured. Sow the seed about the middle of February in gentle heat; gradually harden off the seedlings and plant them out in April or May. So treated the plants will flower well the same year and afterwards. Being hardy and perennial they will stand the winters in all but very cold, wet soils.

HEADING BACK TREES.—G. R. D., Oxford: This work should be done as soon as weather permits. If the trees are tall and the branches heavy, the work must be done with great care, or there may be considerable damage to property and person. In wet weather, in snow, or during hard frost, tree lopping or heading is dangerous, as it also is during high winds. Get the lopping done directly weather permits; the removal of the wood may wait until all the trees are headed back.

SEEDLING PERNETTYAS.—A. R. S., Bangor: As you will not require a large quantity, gather the best fruits from the best varieties, and pick out the seeds, rubbing them through dry sand to clean them. Sow them in a shallow bed of light peaty soil made up in a cold frame, or in boxes of similar soil placed in a frame. Sow in February or March, thinly and regularly, and as the seedlings progress give them plenty of air, and when they are large enough transfer them to a nursery bed during genial and moist weather.

SINGLE CHRYSANTHEMUMS.—F. E. G., Nottingham: The single varieties that gained a first-class certificate from the National Chrysanthemum Society in 1906 were: Surrey (Wells and Co.), J. H. Runchman (Wells and Co.), Alice Crate (Wells and Co.), Lizzy (W. Pagram), Beauty of Weybridge (W. Pagram), Mrs. H. Redden (H. Redden), Crown of Gold (W. Pagram), Miss E. Partridge (Wells and Co.), Galatea (Wells and Co.), Edith Harling (Wells and Co.), Kathie (Peed and Son), Mrs. Thyne (D. Fairweather), and Mrs. Andrews (D. Fairweather). The Royal Horticultural Society granted an Award of Merit to Dora Godfrey (W. J. Godfrey), Mrs. Brewster (D. Fairweather), Edith Harling (Wells and Co.), Merstham White (Wells and Co.), and Miss H. Hampson (E. Beckett).

CLEANING WATER COURSES.—G. W. C., Sunbury: The matter requires careful handling, and it is better to try all other means of securing the end in view before taking legal steps. We believe sections 14 and 15 of the Land Drainage Act of 1847 (10 and 11 Vict., c. 38), cover your inquiry. According to the Board of Agriculture Section 14 of the Act enacts that where, by the neglect of any occupier to maintain or join in maintaining the banks, or to cleanse and scour or join in cleansing and scouring the channels of existing drains, streams, or water-courses lying in or bounding the lands of such occupier, injury is caused to any other land, the proprietor or occupier of any land so injured may serve a notice on the neglecting occupier requiring him to maintain the banks or cleanse or scour the channels in question. If he neglects so to do, the occupier of the land injured may, after one calendar month from the service of the notice, carry out the necessary work. The cost of the same or a just proportion thereof is to be paid by the neglecting occupier, and payment may be enforced by an order of justices. Section 15 provides that, unless the drain, stream, or water-course to be cleansed bounds or immediately adjoins the land of the occupier injured by the neglect, a justices' warrant to enter on the defaulter's land in order to carry out the necessary works must be obtained. This warrant is to be granted if the justices are satisfied that the injury has been caused by the neglect of the occupier whose land is to be entered.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

M. J. B., Effingham.—1, Azara microphylla; 2, not recognised.

S. P. M., Grantham.—1, Psychotria cyanococca; 2, Ardisia crenulata.

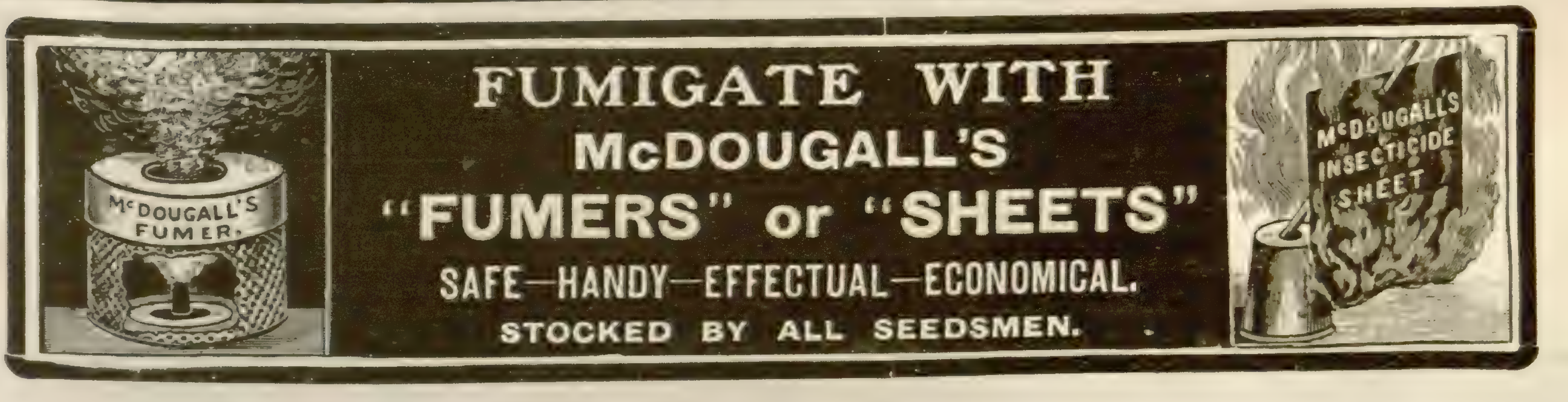
R. S., Leicester.—1, Genista fragrans; 2, Calceolaria Burbidgei; 3, Asparagus Sprengeri.

C. L. T., Cardiff.—1, Mussænda frondosa; 2, Choisya ternata; 3, Jasminum nudiflorum; 4, Gaultheria procumbens.

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, January 8.—Society of Arts Meeting, 8 p.m.
TUESDAY, January 14.—Royal Horticultural Society. Floral, Fruit, and Orchid Committees, 12 noon; Scientific Committee, 4 p.m.; General Meeting, with Lecture, 3 p.m.
WEDNESDAY, January 15.—Society of Arts Meeting, 8 p.m.
THURSDAY, January 16.—Linnean Society Meeting, 8 p.m.
TUESDAY, January 21.—National Amateur Gardeners' Association Annual Meeting, 7 p.m.
WEDNESDAY, January 22.—Society of Arts Meeting, 8 p.m.
TUESDAY, January 28.—Royal Horticultural Society Meeting of Floral, Fruit, and Orchid Committees, 12 noon; Scientific Committee, 4 p.m.; General Meeting, with Lecture, 3 p.m.
WEDNESDAY, January 29.—Society of Arts Meeting, 8 p.m.

Autumn - planted Cabbages and Slugs.—I never remember seeing autumn-planted cabbages so badly mauled by slugs as they have been this winter. No doubt the mild, open weather of the early winter enabled these pests to keep on the prowl longer than is their wont, but the fact remains that in many cabbage plots nothing but bare stumps can now be seen. Fortunate is the man who has a reserve to draw on, or who can buy more, for there is little doubt that plants put in now stand as good a chance as many put in in October.—E.



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STOCKED BY ALL SEEDSMEN.

SWEET PEAS FOR WINTER.

A light house of the modern type and well prepared solid beds, at or near the ground level, are the best conditions for the culture of sweet peas for winter cutting. Too many cultivators are under the impression that any kind of soil is good enough for this crop, while no crop pays better for a thoroughly sound and well prepared rooting medium.

When a succession of flowers is looked for sow at intervals from the end of August until October, and for flowers to come in early before the outside crop is ready sow the first week in the New Year. If the beds are ready, the seed can be sown directly into them; otherwise small pots should be prepared and about three seeds sown in each, thinning them down subsequently to single plants and planting them out before the pots are filled with roots. Avoid breaking the ball when planting, and place a small stake to each immediately, even if strings are to be used to support the vines, for often there is a shrinkage of the soil that takes the plants down with it and strangles them at the point where they are fed.

The watering at first must be gone about with considerable caution, many cases in which the plants stubbornly refuse to grow being directly traceable to overwatering. All through the growing season cool, airy conditions are necessary. Fire heat should be avoided as long as possible unless damp and wet weather prevails, when a little heat should be kept on and full ventilation to keep the atmosphere dry and the air moving about the plants. The temperature is not an important point, provided there is plenty of air kept on at all times, day and night, when possible. From 48 degrees to 50 degrees is the best night temperature, rising a few degrees by day when dull, and, of course, higher by sun heat. Try, in short, to maintain an atmosphere as near like that obtaining outside, and as little artificial as may be. If this point were kept in mind, there would be less trouble with bud dropping than is often the case. Sudden changes of temperature, too much fire heat, and fluctuations of root moisture, are all prolific causes of bud dropping.

Frequent attention to supporting the vines is necessary, and the closest attention must be given to insects. Greenfly often attacks the young points of the shoots. If possible, get rid of it by frequent light sprayings with nicotine in solution, but if this is found to be ineffectual, fumigate lightly on two successive evenings. Heavy fumigating is very injurious to sweet peas, especially in the early stages. The green grubs of the white butterfly are also destructive early in the season, and should be picked off daily. Later they usually give little trouble. When the time comes for gathering the flowers, do this carefully, and avoid injuring the vines.—R., in "Gardening" (American).

Radishes on Vine Borders.—Vine and peach borders are such sacred things in some gardeners' eyes that to suggest sowing radishes on them savours of heresy. However, the plan is such a good one that I do not hesitate to recommend it to anyone who values early radishes—or the delicious greenery which comes before the radish does—and has not a spare pit in which to grow them. The seed should be scattered broadcast and just buried by breaking down the soil with a rake; a soaking of water should follow, unless the border is already wet. The radishes should be thinned early, eating the thinnings like mustard and cress, none should be left to grow old.—E. J. K.

NO RATS SEEN
since using DANYSZ VIRUS six months ago; see testimonials.
Single tubes 2s. 6d., 3 tubes 5s. Post free.
DANYSZ VIRUS, Ltd.,
(Garden Dept.), 52, Leadenhall St. London, E.C.
Harmless to other Animals.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The supplies of flowers have of late been somewhat less liberal, and with the brisk demand prices have had an upward tendency.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	4 0	to	6 0
Arums	per doz.	2 6		4 6
Asparagus	per doz. bun.	1 6		6 0
Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	4 0		5 0
Carnations	per doz. blms.	2 0		4 0
,,	per doz. bun.	7 6		12 6
Cattleyas	per doz.	10 6		12 6
Chrysanthemums	per doz. bun.	3 0		7 6
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	6 0		7 6
Cypripediums	per doz. blms.	2 6		3 0
Eucharis	per doz.	2 6		4 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	2 6		3 0
Hyacinths, Roman	per doz. bun.	7 0		8 0
Lapagerias	per doz.	1 0		2 0
Lilac	per bun.	3 6		5 0
Lilium auratum	per bun.	2 6		3 0
,, tigrinum	per bun.	1 0		2 0
,, speciosum	per bun.	1 3		2 6
,, longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		14 0
Marguerites, white	per doz. bun.	2 0		3 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	2 0		2 6
Odontoglossums	per doz. blooms	2 0		3 0
Pancratiums	per doz. blooms	3 0		5 0
Pelargoniums	per doz. bun.	4 0		6 0
Pernettya	per bun.	0 9		1 0
Physalis Francheti	per doz. bun.	3 6		5 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0
Tuberoses	per doz.	0 4		0 6
Violets	per doz. bun.	1 0		2 6
,, de Parme	per bun.	1 6		3 0

Fruits.

Supplies are about equal to the demand, and prices are about the same as last week. The value of the finest grapes is beginning to show signs of improvement.

		s. d.		s. d.
Apples, cooking	per bush.	2 6	to	7 6
,, dessert	per ½-bush.	2 6		9 0
,, American	per barrel	14 0		24 0
Bananas	per bun.	5 0		10 0
Cranberries	per case	8 0		10 0
Cob Nuts	per doz. lb.	4 0		5 0
Figs	per doz.	0 6		1 6
Filberts	per doz. lb.	3 6		4 0
Grapes, Alicante	per lb.	0 8		1 3
,, Muscats	per lb.	2 6		4 0
,, ,, Canon Hall	per lb.	2 6		4 6
,, Gros Maroc	per lb.	1 0		1 6
,, Channel Islands	per lb.	0 9		1 0
,, Belgian	per lb.	0 9		0 10
,, Almeria	per barrel	8 0		15 0
Lemons	per case	8 0		14 0
Oranges	per case	9 0		12 0
Pears, French	per crate	10 0		14 6
,, English	per bush.	3 0		6 6
,, Californian	per box	7 0		20 0

LONDON POTATO MARKETS.

With moderate supplies and a fairly good demand prices are well maintained.

		s. d.		s. d.
British Queen	per ton	70 0	to	85 0
Blacklands	per ton	75 0		85 0
Lincoln Kidneys	per ton	75 0		80 0
Maincrops	per ton	90 0		105 0
Up-to-Date	per ton	80 0		95 0

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ILLUSTRATIONS.

Portrait of Professor I. Bayley Balfour, M.D., D.Sc., LL.D., F.R.S., V.M.H., 1; A Beautiful Single-flowered Hybrid Tea Rose, Irish Elegance, 3; Fine Gateway into Flower Garden, 5; Tresco Abbey: Isles of Scilly, 7; Tresco Abbey: Part of the Agave Walk, 8; Tresco Abbey: Old Abbey Ruins and Dracæna indivisa vera, 9; Tresco Abbey: View down the Long Walk, 10; Tresco Abbey: The Dracæna Avenue, 11; Cypripedium Moonbeam, 15.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
1907. December 22 to December 28.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 22—Sunday	3 5	48	46	52	43
,, 23—Monday	—	48	48	49	48
,, 24—Tuesday	0 50	39	39	44	38
,, 25—Wednesday	0 5	43	40	44	39
,, 26—Thursday	4 55	34	31	38	33
,, 27—Friday	—	33	30	35	33
,, 28—Saturday	—	34	34	35	32
Means	1 16	40	38	42	38

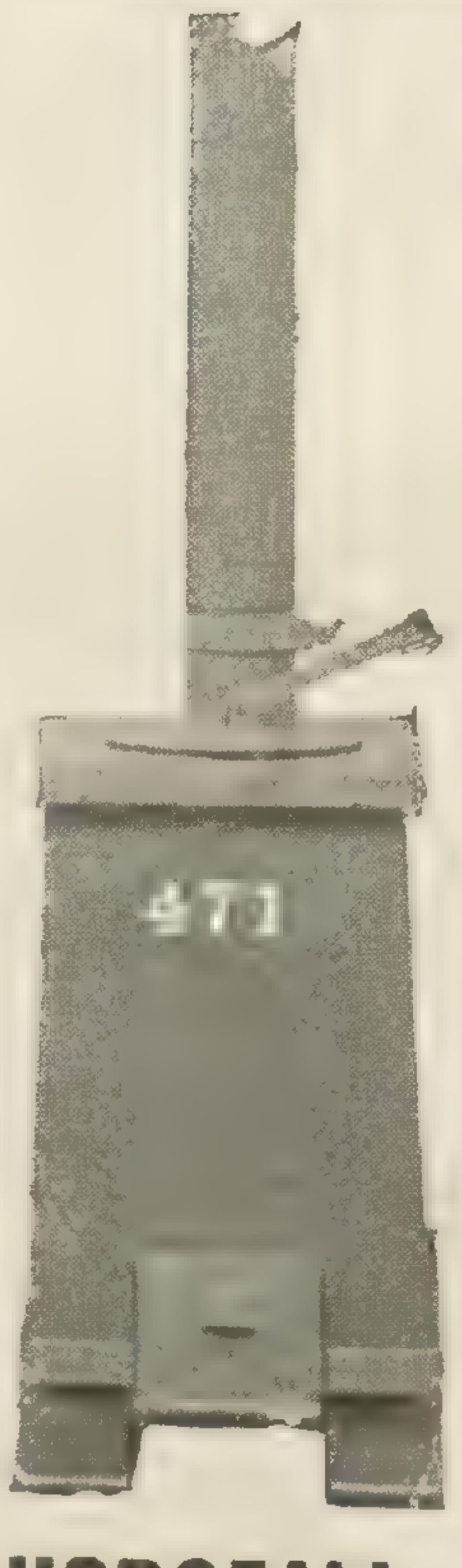
Date.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
1907. December 22 to December 28.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg
Dec. 22—Sunday	0.27	45	46	46	36
,, 23—Monday	0.14	46	46	46	42
,, 24—Tuesday	—	45	46	46	35
,, 25—Wednesday	—	44	46	47	38
,, 25—Thursday	—	42	45	46	30
,, 27—Friday	—	40	44	46	28
,, 28—Saturday	—	39	43	46	29
Means	(total) 0·41	43	45	46	34

CATALOGUES RECEIVED.

VILMORIN-ANDRIEUX AND CO., QUAI DE LA MEGISSERIE, PARIS.—Seeds of trees, shrubs, and indoor plants.

JAS. BACKHOUSE AND SON, LIM., YORK.—Alpine and herbaceous plants, roses, rock gardens.

J. W. COLE, MIDLAND ROAD NURSERY, PETERBOROUGH.—New and choice chrysanthemums.



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The "HORSFALL" (Patent) Garden Destructor
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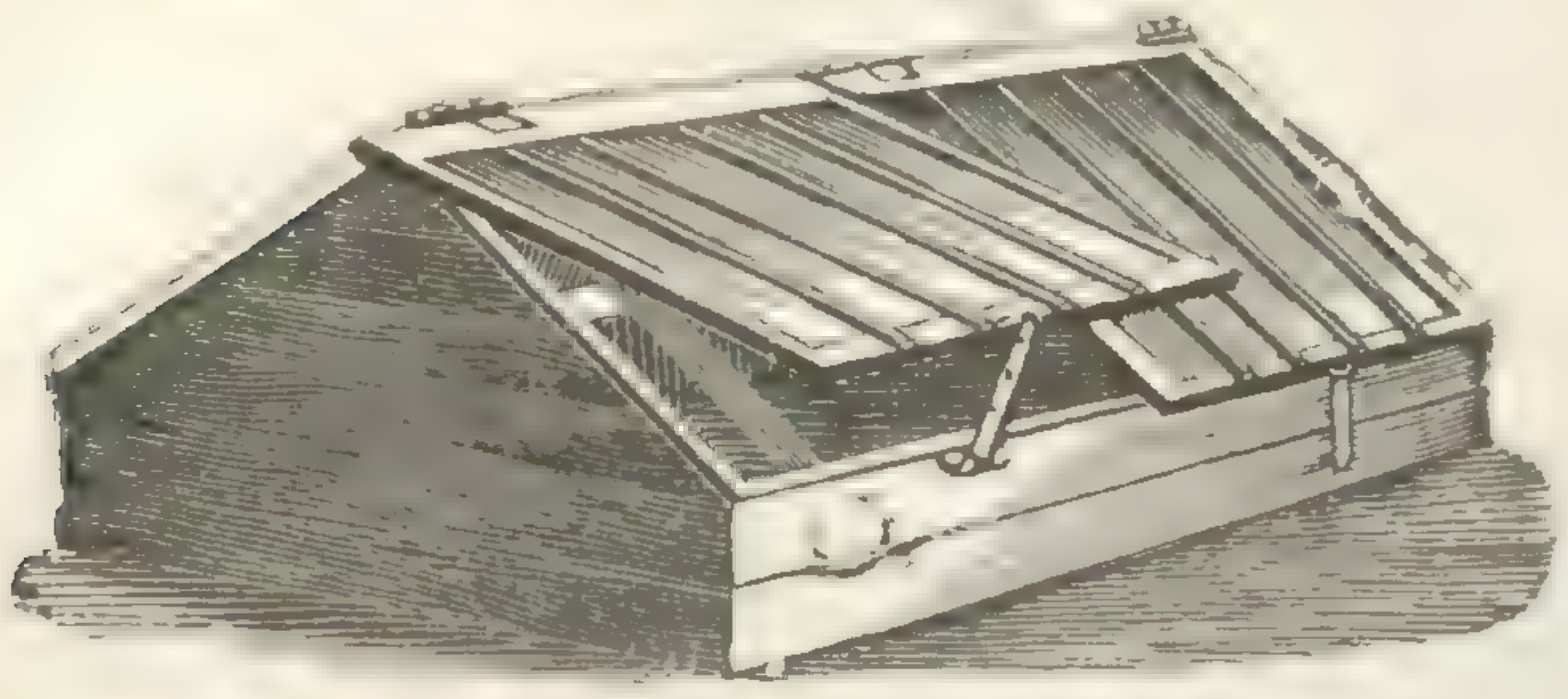

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12 ft. ,, 4 ft. ,,		4	0	0
6 ft. ,, 5 ft. ,,		2	15	0
12 ft. ,, 5 ft. ,,		4	15	0
12 ft. ,, 6 ft. ,,		5	12	6

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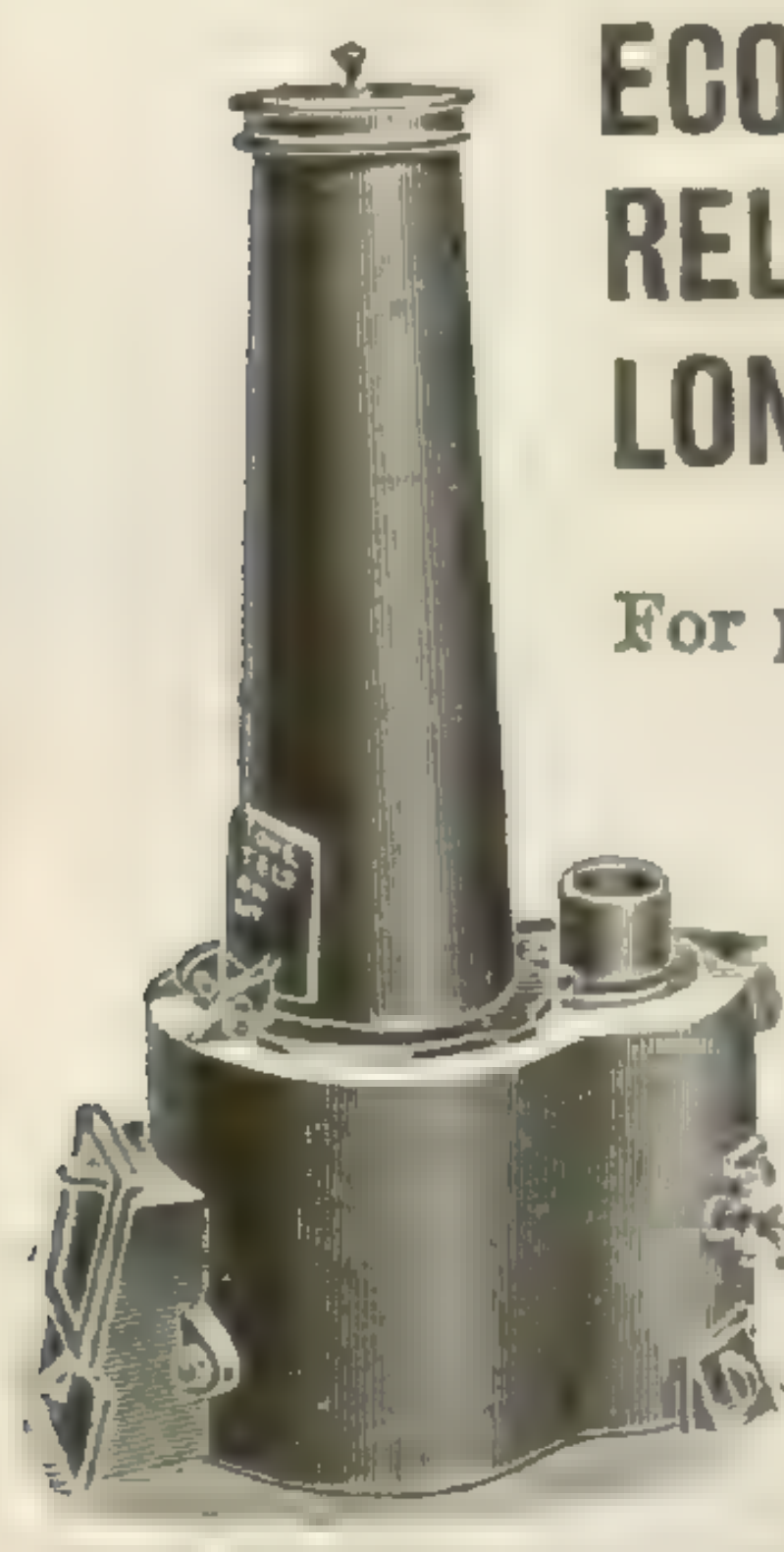

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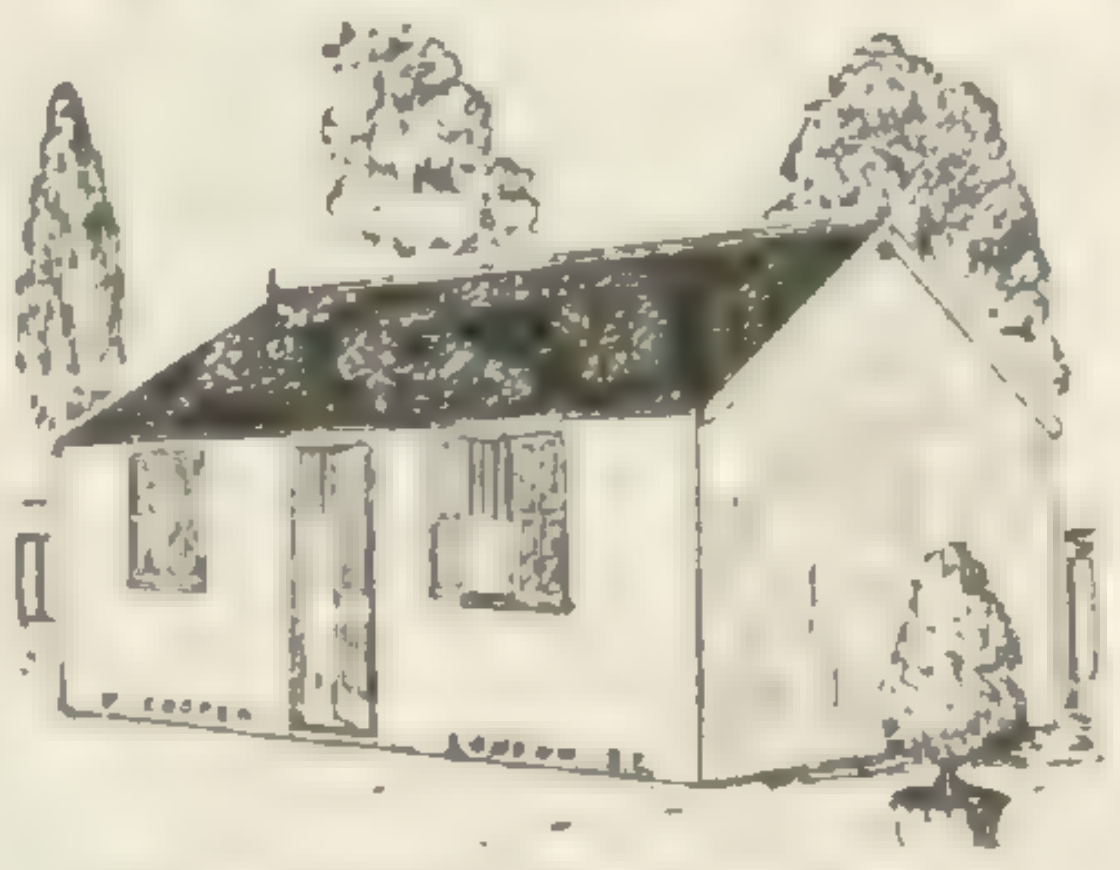
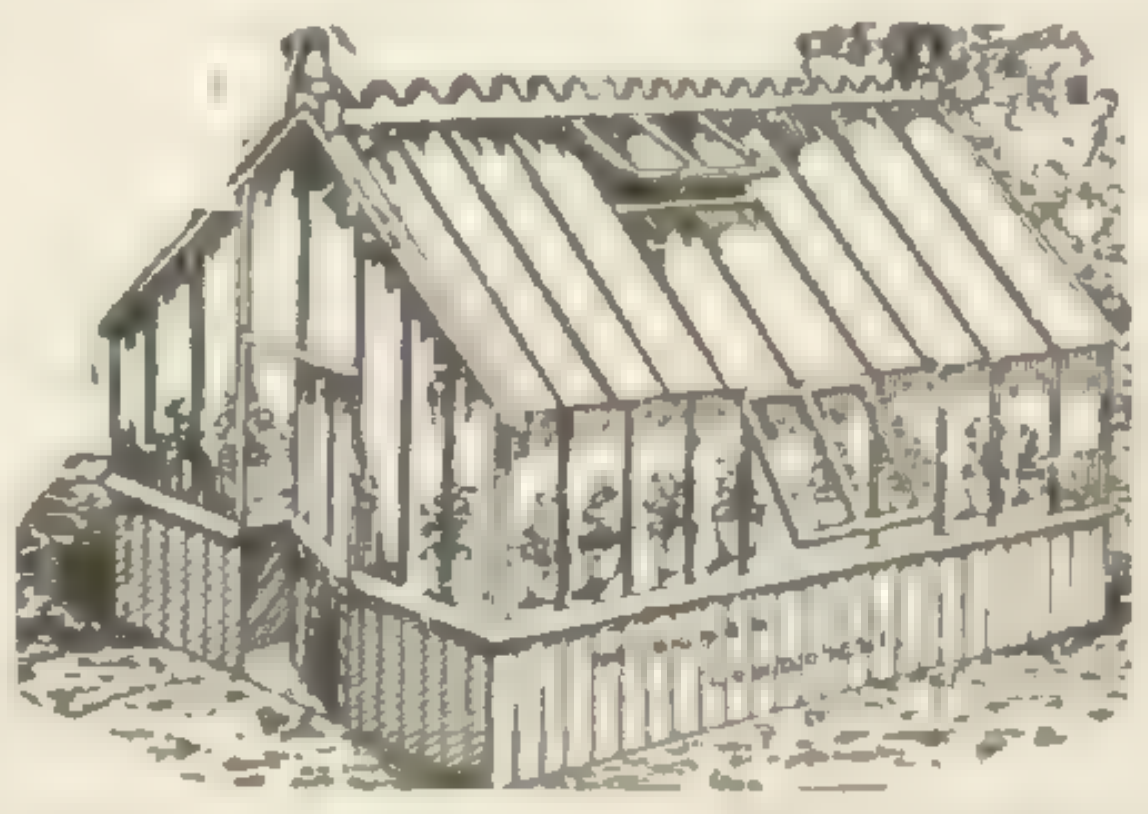
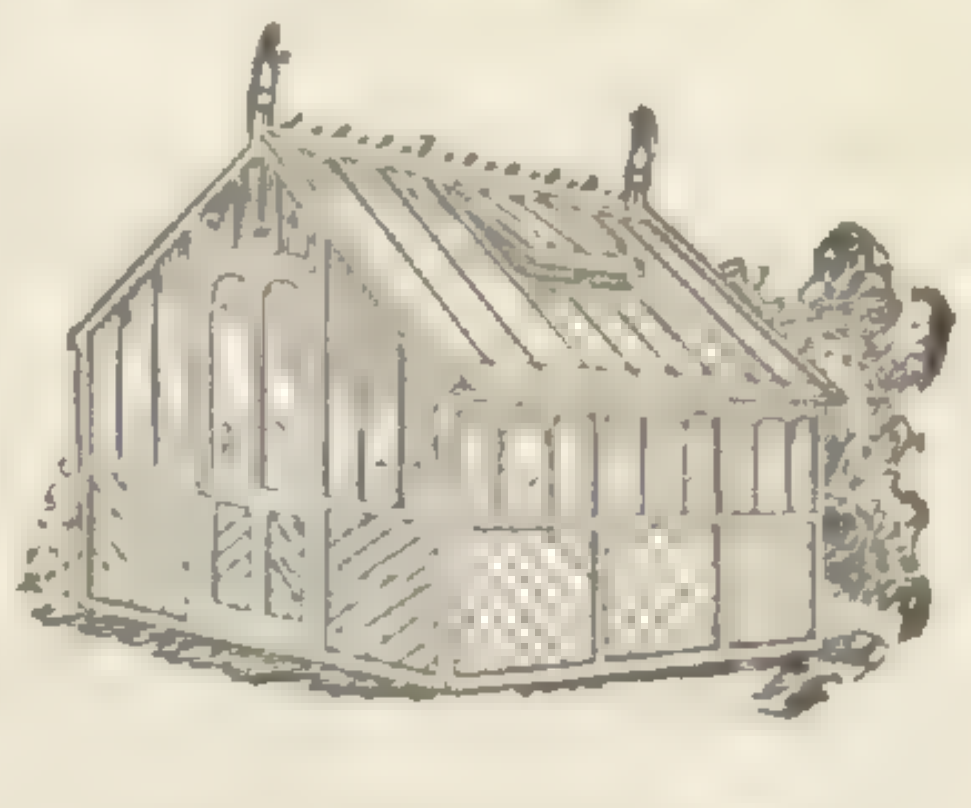
Below are some of the Bargains, the cost of newspaper space precluding the insertion of over 360 illustrations contained in 32 large pages.



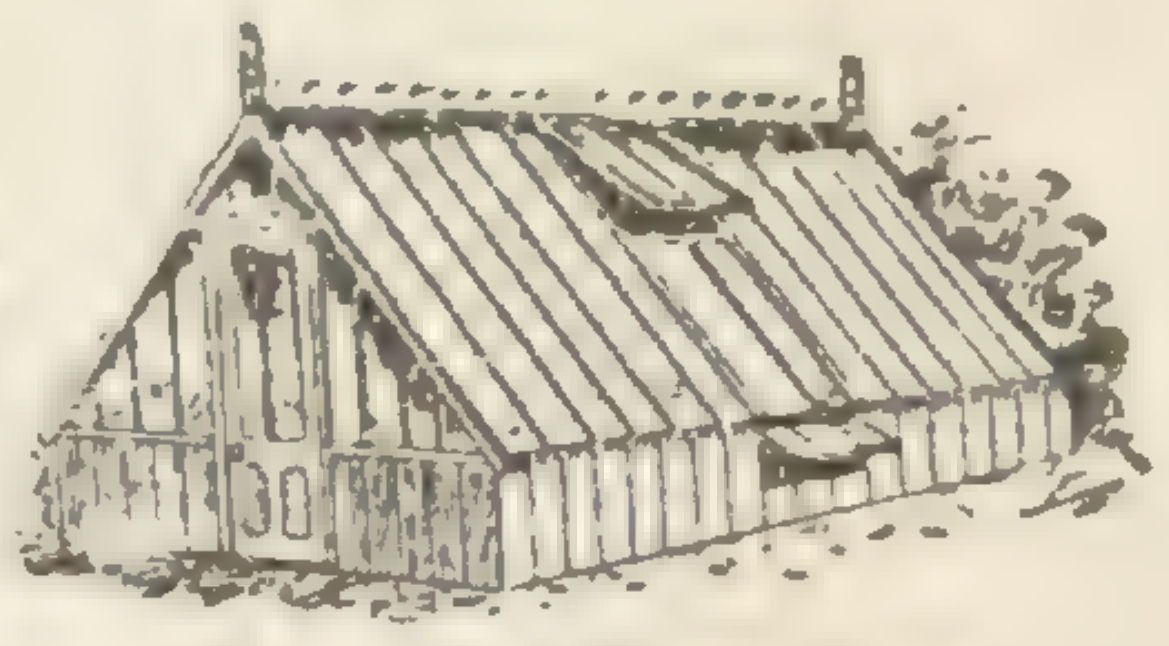
Portable Buildings from 57/6



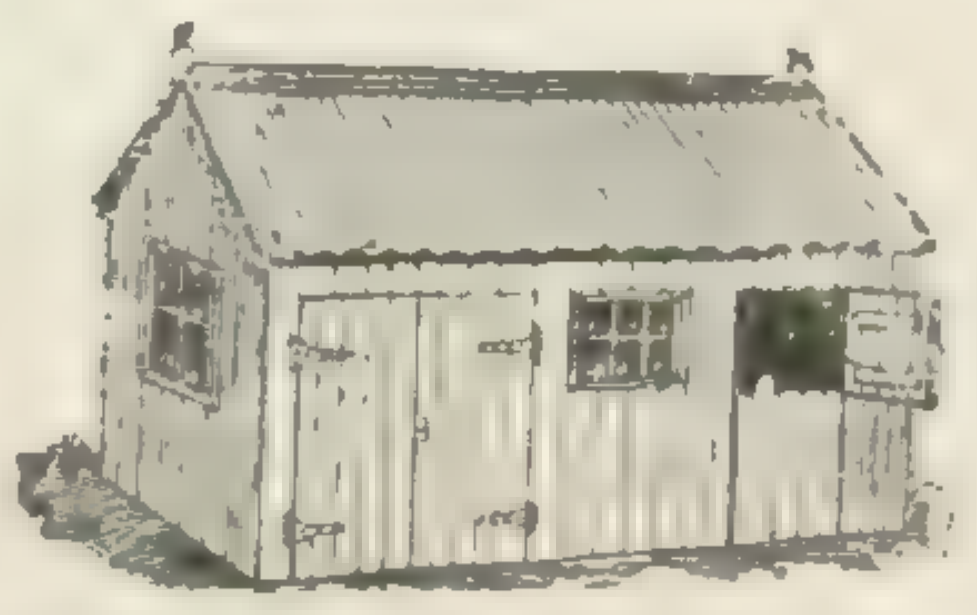
Greenhouses from 50/-



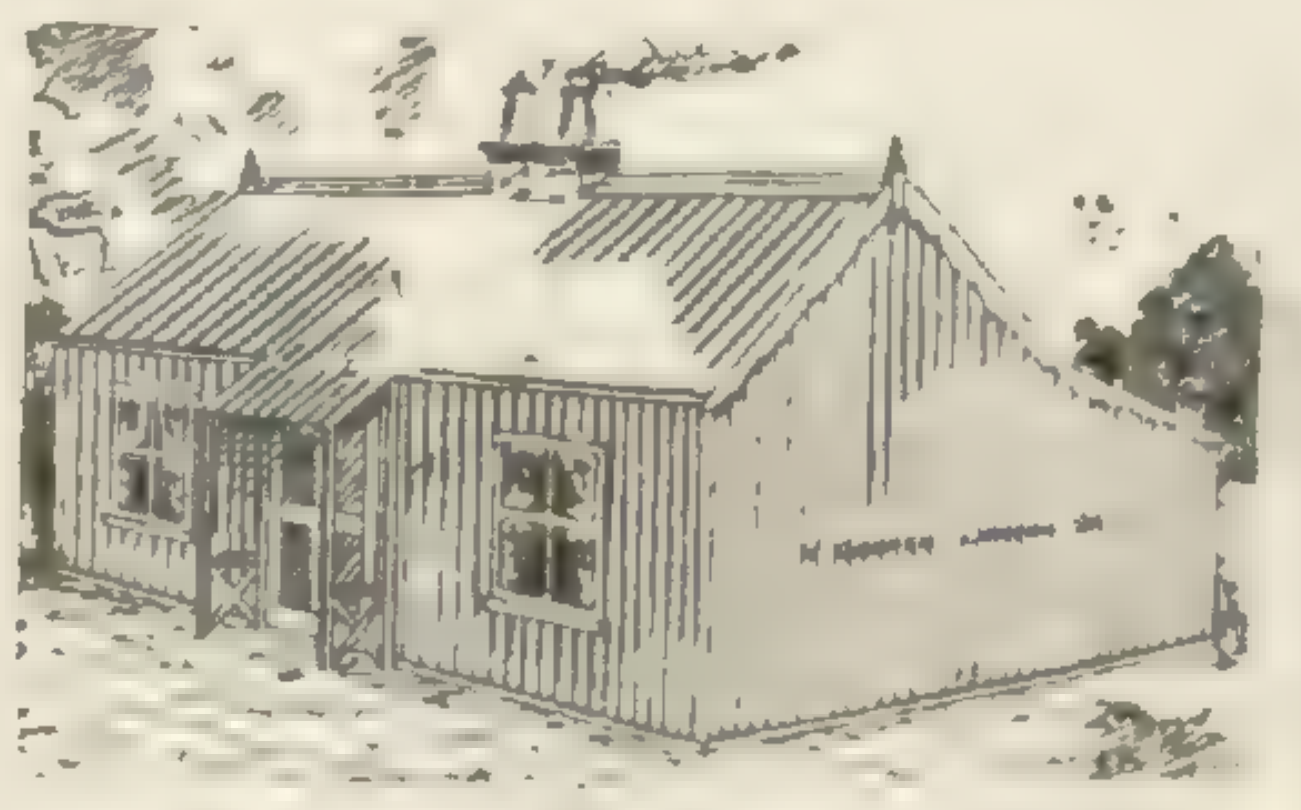
Conservatories from £4 7 6



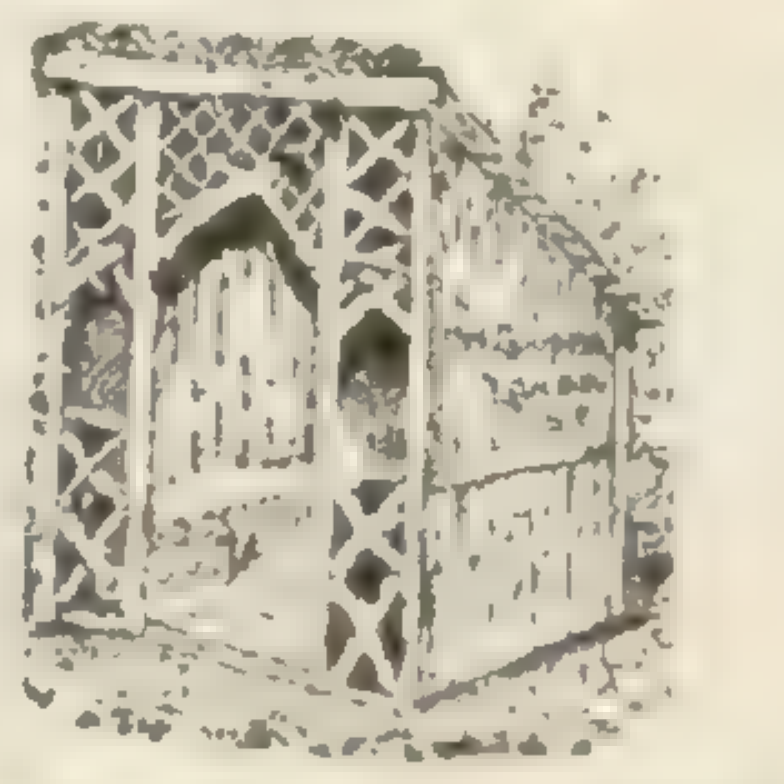
Forcing Houses from 42/6



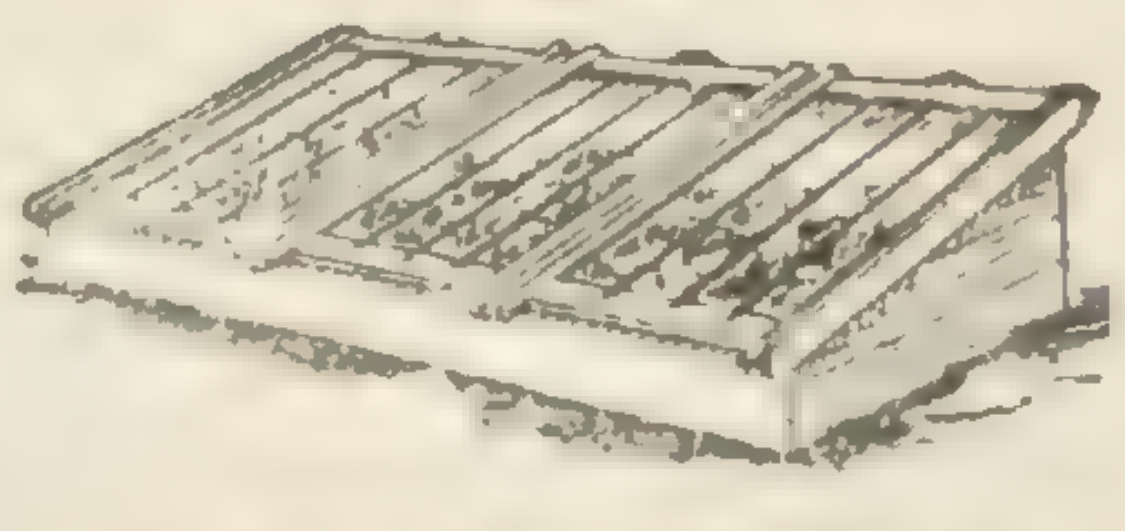
Stable and Coach House from £8 5 0



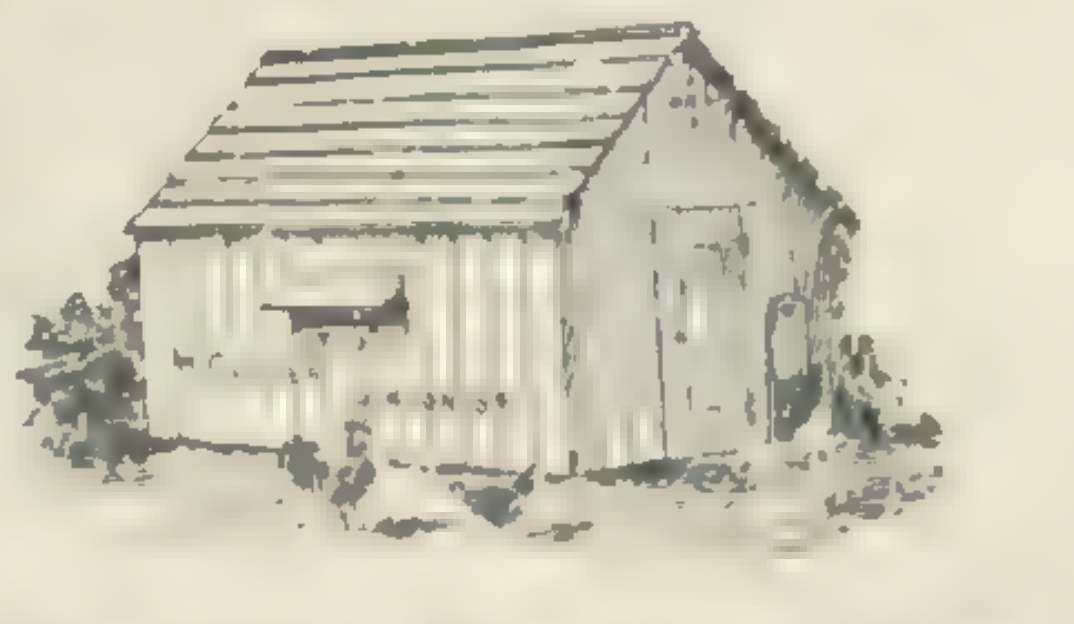
Iron Cottage, £40



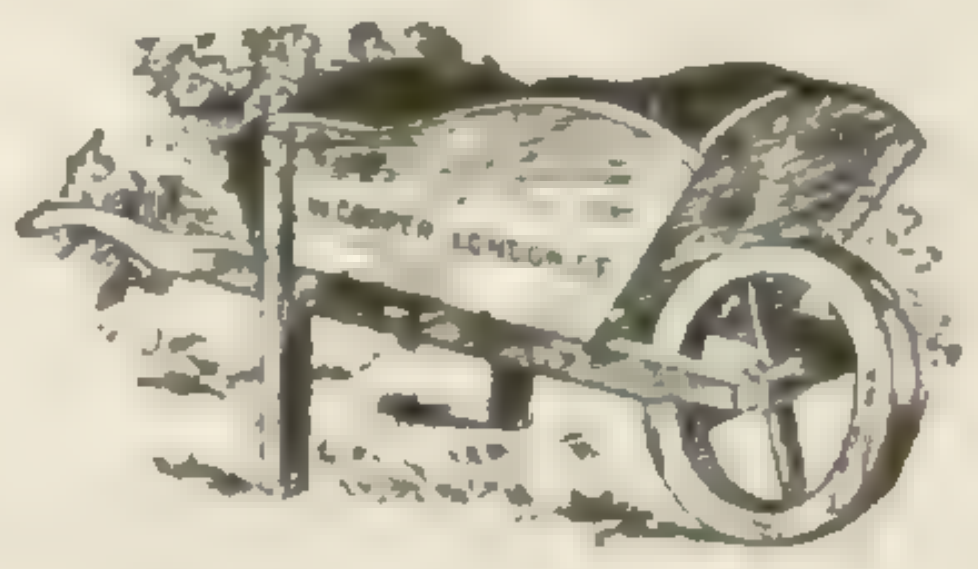
Rustic House. 57/6



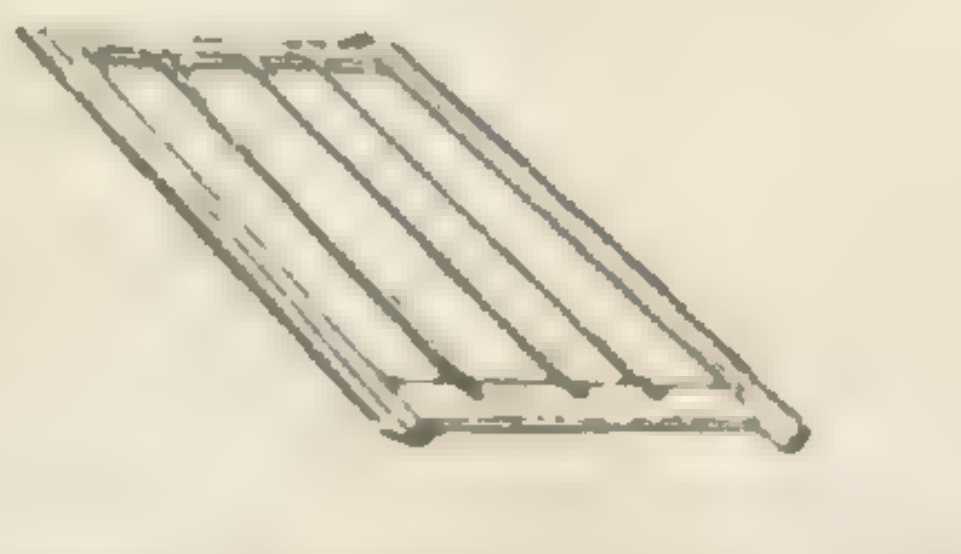
Cucumber Frames from 11/6



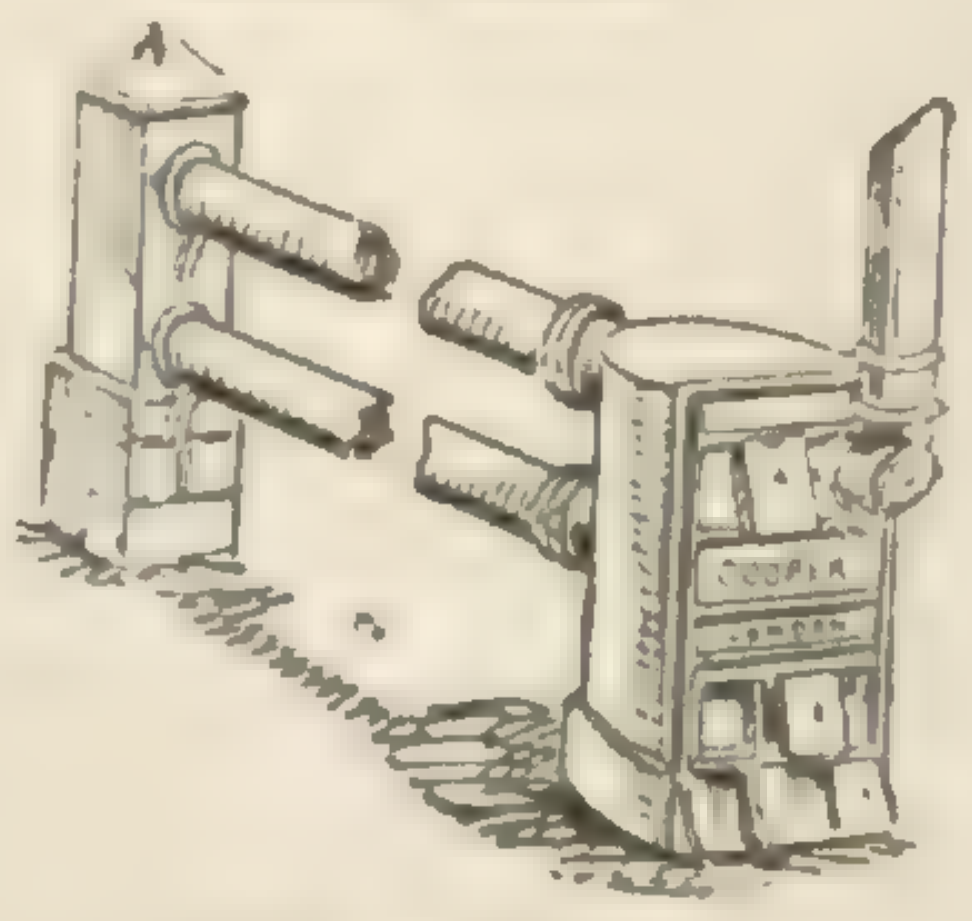
Poultry Houses from 10/-



Barrow, 16/6



Garden Lights from 1/6



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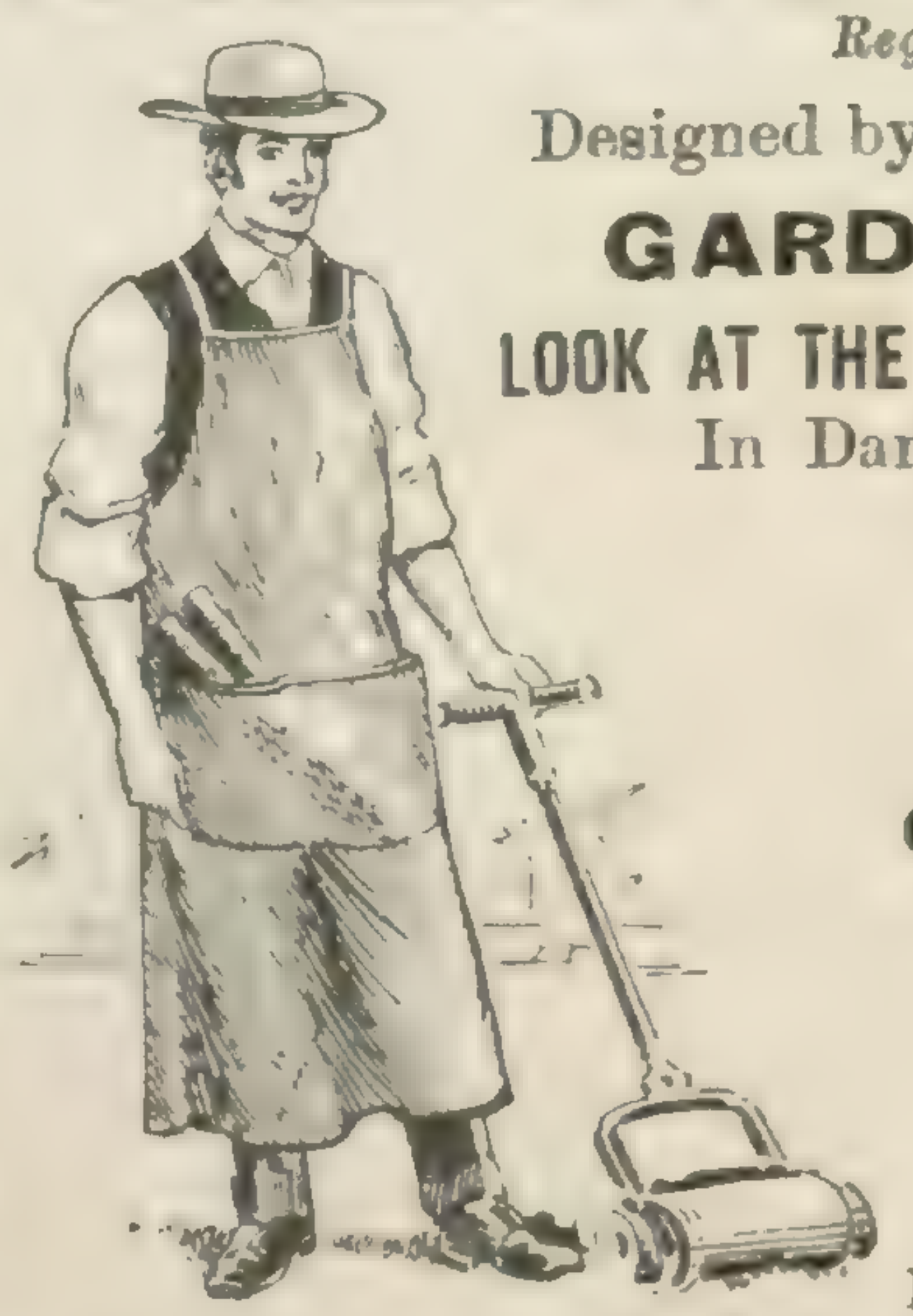

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For full Advertisement see page 41.

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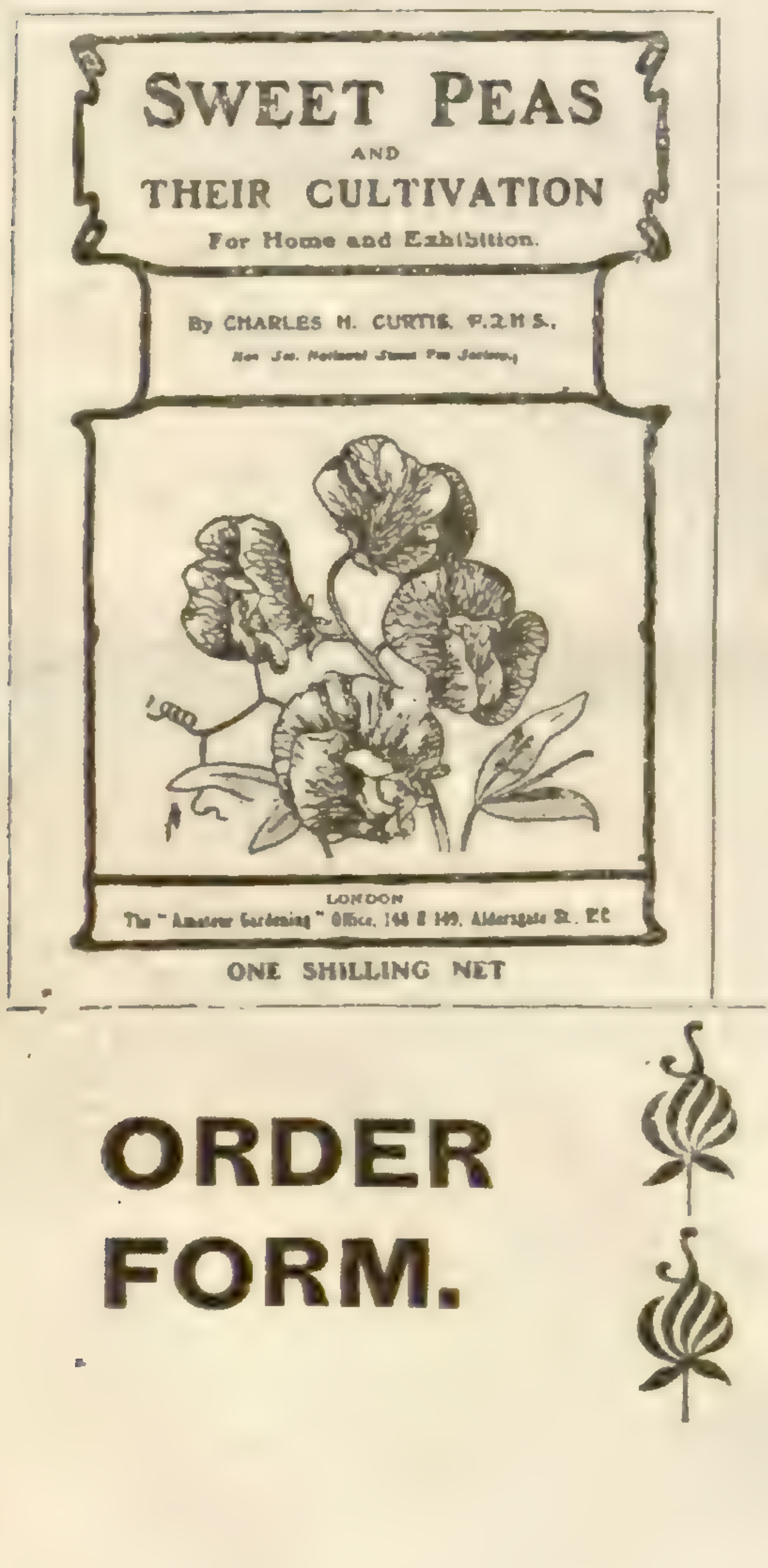

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VOL. LI.—No. 2,828. SATURDAY, JANUARY 11, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Nature Study in Schools.

Having for a long series of years kept constantly before those engaged in educational work the importance of giving Nature study a prominent place in the curriculum of both elementary and secondary schools, it is highly gratifying to have unquestionable evidence that our views are now accepted by the whole of the scholastic world. We have, as opportunities have arisen, urged that children should be taught something about the animate and inanimate life with which they are brought into daily contact. We have pointed out that such knowledge would be far more useful to them than would be a superficial acquaintance with the abstruse subjects that for so long a time found favour with educational authorities. Not less consistent have we been in our advocacy of the necessity in teaching botany, of making the children familiar with the various parts of the plant selected for study by means of living specimens, instead of setting them the irksome task of committing to memory lists of cumbersome and, to them, unintelligible scientific terms. An acquaintance with these latter is essential to those who desire to make a serious study of botany, but to attempt to set children to learn them before they know practically anything of those parts of the plants to which they refer was a grave mistake, inasmuch as it had the effect of rendering the study of botany distasteful to young people. Happily this is now changed, and a more rational method of procedure adopted. The great change that has taken place in the views of educationalists on the position botany should have in the school curriculum, and on the methods of teaching, was brought into prominence at the Conference of School Teachers held in London a few days since. We heard nothing about the necessity for children being taught scientific terms, but we had evidence that all the speakers were agreed that the children should study the plants from living specimens, and, where practicable, from specimens growing in the borders in the garden or in the field. Dr. Forman, who presided over the two meetings devoted to Nature study, in opening the discussion on the teaching of botany, said that, while botany was not specifically mentioned in the Government Code, it was included in science and Nature study. In many schools in the Metropolis the subject was taught, as shown by the fact that in the County Council schools 16,841 pupils were taking botany, and in the non-provided schools the number was 2,332. He thought that, with a somewhat crowded curriculum, the botanical course should not be too systematic or too detailed. The lessons should be demonstrations rather than lectures, and be recreations to be enjoyed rather than tasks to be performed. It was not, he said, advisable to frighten children with scientific terms or bring into prominence the difficulties that beset students who determine to carry their studies to an advanced stage. Facilities, he said, were afforded the pupils engaged in botanical studies to visit the botanical gardens in the Metropolitan parks with their teachers for the purpose of observation lessons on botany and Nature study. They would, he had no doubt, have classes in both the Royal and municipal parks, but they could not, in Dr. Forman's opinion, teach botany by lectures. If they were to obtain the best possible results from the teaching they must, he felt, avoid places where the plants were arranged in their natural orders, and had labels attached to them. To bring about a real love of Nature they must, said Dr. Forman, familiarise the children with the country itself. There can be no doubt as to the advisability of familiarising children with the country, but in the interest of children in London and large provincial towns this view must not be pressed too far. Several other speakers referred to the advantage of using living specimens, and of taking the pupils into public parks and gardens in towns, and of making excursions into the fields and lanes in the country, and the desirability of avoiding everything of the dry-as-dust character.

REV. W. WILKS, M.A.
Secretary of the Royal Horticultural Society.

Rev. W. Wilks. — In presenting our readers with a portrait of the Rev. W. Wilks, which we do with much pleasure, we are met with the difficulty that in the space at our disposal we cannot do even bare justice to the valuable service he has rendered in the cause of horticulture during the long period he has filled the position of secretary of the Royal Horticultural Society. The name of Mr. Wilks is so intimately associated with the society as we now know it, that one might be excused were one to indulge in the supposition that it was chiefly of his creation. We do not suggest that, because, if for no other reason, we know that it would be most distasteful to Mr. Wilks to have other than the barest acknowledgment of his services in our reference to him. No one knows better than himself, and no one is more ready to acknowledge the self-denying labours of the distinguished horticulturists with whom he has been associated in the management of the Royal Horticultural Society, which now occupies a position that surpasses in influence, in usefulness, and in wealth, any other society associated with gardening in the world. With a full knowledge of the strenuous efforts made by the several members of council to perform their duties we shall not write a word that can in any way be regarded as comparative. All have unquestionably done their best; but speaking, as we shall do, in the most moderate manner, we must in this brief reference to Mr. Wilks, give expression to our opinion, which is shared by all who know him that it would be difficult if not impossible, to overestimate the value of his share of the great work that has been accomplished in placing the Royal Horticultural Society in the commanding position it holds. We know from long experience that the success of a society largely depends upon its secretary. We know also that a secretary with commanding ability, with exceptional capacity for sustained effort, and with great strength of will, must exercise a potent influence upon the progress of a society. Mr. Wilks possesses these three important attributes in a marked degree, and as they have been exercised to the fullest extent with but one object in view—the welfare of the society—he has very materially contributed to the success that has been achieved in the conduct of its affairs. If it be asked what is the measure of this success? A reply can be given in a few words. When about twenty years ago Mr. Wilks accepted the responsibilities of his present office the Royal Horticultural Society was in debt, practically homeless, and with a small number of Fellows. Now, it has a large sum of money invested, a magnificent hall, a well furnished library, a finely equipped lecture room, adequate offices, a large experimental garden, and over 10,000 Fellows. To have taken a small part in bringing about such splendid results would be something to be proud of; but to have had an important share—well, we suppose Mr. Wilks is too engrossed in his multifarious duties to think about such a matter, and we will not do more than express a hope that the Royal Horticultural Society may long continue to have the advantages of his services.

Horticultural Club.—The next house dinner of the Horticultural Club will take place on Tuesday next, the 14th inst., when Mr. E. A. Bunyard will give a lecture on "Recent Advances in Plant Breeding," with special reference to Mendel's work.

Cankered (?) Rose Roots.—At the meeting of the R.H.S. Scientific held on December 31, a report was received from Mr. Güssow concerning the rose roots shown at the previous meeting by Mr. Jenkins, as follows: "I find the trouble with the rose roots is not canker, and cannot be transferred from one plant to another. It is generally accepted that canker is caused (a) by frost, (b) by fungus, (c) by any other mechanical injury which fungi have infested. In the present case there is no fungus present, and if the root in the attacked plant (when repotting) is cut away, no injury will be done to the plant. The growth is nothing but a continuous formation of adventitious roots, especially where the root is bent or injured. New callus is formed, and from that callus rootlets are everywhere sent out, but as the plant depends on the root system of the Manetti no use is made of these roots, and they develop but little.

Some Famous Horsham Gardens.—The district of which the old Sussex town of Horsham is the centre, has long been famous for its great gardens, and in the issues of the GARDENERS' MAGAZINE for February 8 and 15 we shall give a fully illustrated account of the more noteworthy of them. Among other gardens that will be described and illustrated are Leonardslee, Warnham Court, South Lodge, and Denne Park.

Weather of 1907.—The record of the weather of the past year contains several features of interest. Somewhat generally regarded as a wet year, the observations of the Meteorological Office show that the rainfall was below the average. The aggregate rainfall was 19.5 inches, or 4.9 inches below the average for the past thirty-five years. The year was distinguished by the number of days on which rain fell, and this frequency of rainy days gave rise to the supposition in the minds of many that it was a wet one. There were one hundred and sixty-two rainy days, and of these twenty-two occurred in October, in which month, singularly enough, the rainfall was nearly half an inch below the average. So great a frequency of rainy days suggests a deficiency of sunlight, and undoubtedly the weather was sufficiently dull in the early part of the year to increase the difficulties with which those engaged in flower and fruit culture under glass have to contend. But, as a matter of fact, there was an increase of ninety in the number of hours of sunlight, the total having been 1,234 hours. With regard to temperature, the mean was 50.2 degrees, or 0.1 degree above the average. The highest monthly mean was 60.8 degrees, in August, and the lowest 38.5 degrees in February. The highest temperature was 80 degrees in September, and the lowest 23 degrees in January. The mean temperature for the summer months was below, and for the winter months above the average.

Grease Bands and Winter Moth.—Messrs. W. Voss and Co., of Millwall, contributed to the last meeting of the R.H.S. Scientific Committee specimens of grease bands taken from trees on Mr. Mitchell's fruit farm, Enfield Highway, covered with both male and female specimens of winter moth (brumata). The bands had been placed on the trees in the middle of November, and no other insects but these had been caught with the exception of two or three weevils. The chairman remarked that the time of appearance of this moth varied greatly with the seasons, frequently being found as early as near the beginning of October. Grease banding to be thoroughly efficient should, it was pointed out, be commenced then, and the bands should be kept sticky until near the end of March in order to capture other species of a similar nature.

Chrysanthemum Leaf-Mining Fly.—In the course of last autumn specimens of chrysanthemums were received by the Board of Agriculture from Newmachar, Aberdeen, and it was found that they were infested with the maggots of a leaf-mining fly. The fly has since been bred out from the material sent, and has been identified as Phytomyza geniculata (=P. horticola). This fly has a similar life history to the celery fly (Acidia heraclei), and the measures most suitable for dealing with that pest should be practised in the case of P. geniculata. It may be remarked that this fly can also breed in the sow thistle (Sonchus oleraceus), and this is an additional reason why this weed should be eradicated. An ichneumon fly parasitic on the maggots of P. geniculata was also bred out from the specimens sent.

Sweet Pea Trials at Reading College.—The National Sweet Pea Society purposes holding a further trial of sweet peas at the University College Gardens, Reading, during 1908, and is desirous that growers and raisers should assist in making these trials as complete as possible by sending seeds of new sweet peas that they may be distributing in 1908, or are getting forward for distribution in 1909. The trial will be an absolutely independent one, and under the able management of Mr. Charles Foster. Not fewer than fifteen seeds of each variety should be sent, and they should reach Mr. Charles Foster, Assistant Director in Horticulture, University College, Reading, on or before January 14, 1908. The Colour Section to which each variety belongs, and whether it has waved or plain flowers, should be indicated. The committee does not propose to make a charge for these trials, but suggests that a donation be sent to the honorary secretary, Mr. C. H. Curtis, Adelaide Road, Brentford, to help defray their cost. The trials conducted in 1907 necessitated considerable expenditure, and this was defrayed chiefly by private donations. No awards to new varieties will be made at the society's exhibitions in 1908; Awards of Merit or First Class Certificates will be granted only to meritorious varieties tested in the society's trials at Reading.

List of Kew Publications.—The appendix to the "Kew Bulletin," containing the list of Kew Publications, 1896-1906, is of special interest, as illustrating the activity of the several members of the staff of the Royal Gardens in dealing with plant nomenclature and other matters of botanical and horticultural interest. In the "Kew Bulletin" for 1897 a list was given of publications by members of the Kew staff, or by other botanists working at Kew, which appeared during the period from the first devotion of the Royal Botanic Gardens to public use in 1841 till the close of the year 1895. That list, compiled with much care by Mr. B. Daydon Jackson, takes the form of a chronological catalogue, and it has proved so useful that it has seemed desirable to the authorities to bring the subject matter up to date. The chronological method of arrangement, so valuable as to be practically essential in a catalogue covering a period so prolonged as that dealt with in the list drawn up by Mr. Daydon Jackson, has been considered less necessary when what is little more than a decade is passed under review. It has therefore been possible to make use in the present list of the convenient system of classification by authors, under whose names are catalogued (i.) separate works, (ii.) contributions to separate works, and (iii.) articles in scientific and technical journals, given in each case in chronological sequence. The practical utility of the list will, it is hoped, be found to have been considerably enhanced from the fact that in cases where authors have made themselves responsible for the proposal of previously undescribed species this is duly indicated.

Sulphuric Acid as a Fungicide.—We learn that a safe and useful fungicide, which is used with satisfactory results at the Royal Gardens, Kew, is a solution of sulphuric acid in the proportion of 1 to 1,000, or 1 lb. to 100 gallons. This does not injure the plant, and completely destroys mildew and similar fungi. No harm will be done to pumps, etc., if a small amount of clear water is pumped through the apparatus at the conclusion of spraying. This should be done whatever solution is used, as the apparatus is then left in a clean condition.

The Fire Thorn.—A correspondent resident in Surrey, who does not wish his name to be published, sends us a finely fruited spray of Leland's pyracantha (Cratægus pyracantha Lelandi), with a note stating that it was cut from a large specimen growing against the walls of his residence. He also expresses the opinion that it is one of the finest of the berry-bearing shrubs for clothing wall spaces. We fully share in this expression of opinion, and should be prepared to go further, and suggest that it is the very best for the purpose. Leland's pyracantha is vigorous in growth when planted in ordinary soil, has evergreen foliage, is attractive in spring when enwreathed in its white flowers, and is highly effective when the fruits that follow have assumed their characteristic brilliant orange colour. This fine shrub has been rather freely planted in gardens in the Kew Gardens district, and one has excellent opportunity for instituting comparisons between the different styles of training that have been adopted. In some cases the shrubs are regularly trained over the walls of the houses, and the lateral growths annually shortened back to within about six inches of the wall, and these bear good crops of fruit, and produce a bright effect. In other cases one, two, or three main stems are trained up the wall at various distances apart, and the lateral growths are allowed to grow naturally away from the wall. These latter produce the largest crops of fruit, and the shoots depend more or less gracefully. The colour display is not brighter than that produced by the severely trained examples owing to the mingling of the foliage with the fruits, but owing to the relief given by the green leaves the effect is far more pleasing. To prevent the growths extending too far from the wall a portion of them are cut back each year. Grown as bush and pyramidal specimens in the shrubbery border this thorn fruits freely, and produces a fine effect, but the birds begin to levy toll upon the fruits early in the winter when the plants are some distance from the house, and if the the weather is severe soon take the crop.

Prevention of the Cabbage Flea.—Two or three years since experiments were carried out in Germany for the purpose of testing measures recommended for the prevention of the Cabbage Flea (Haltica oleracea). Among them, dusting the plants with tobacco dust is mentioned as satisfactory. During the past year this pest has been very troublesome in Germany, and this remedy has given excellent results on a large area of white cabbage, to which it was applied at the rate of rather less than 3 cwt. per acre. Four days after the application none of the insects could be found, nor did they appear again subsequently. It is mentioned that successful results can only be expected in dry weather, as rain would wash the tobacco dust into the ground.

Legible Writing is at all times desirable, but it is especially so when sending an order for goods required for the garden. Our attention is called to this by an advertiser in the Gardeners' Magazine, who writes: "Our advertisement is bringing us a large number of orders, and among these is some that are most difficult to decipher. Some customers do not give their names, and others omit the post town, with the result that we are not always able to execute their order immediately; in fact, not until they write again."

A USEFUL AUTUMN PEAR.

While unquestionably a matter of considerable importance that fruit growers should carefully consider the merits of new kinds as they are presented to public notice, and add to their collections such varieties that have the promise of proving valuable additions, it is most desirable that the older kinds of proved usefulness should not be overlooked. Hence it may be well that we should remind our readers of the extreme value of Louise Bonne of Jersey, which for nearly a century has contributed liberally to the autumn fruit supplies. We are induced to refer to it not because of it being superior in appearance and quality to some others of its season, but because of its adaptability to gardens of small size and to soils and districts of the most varied character. It can be successfully grown over extremely wide areas, and in proof of this we would mention that we have seen in the North Riding of Yorkshire crops that would compare most favourably with those borne by trees growing in Kent.

Louise Bonne of Jersey is not only so accommodating as to be equally at home in both the southern and northen counties, but it may be successfully grown in almost any form the cultivator may desire. It is one of the best pears for growing as bushes and pyramids, and it produces excellent crops when grown as a standard. The fruits are of medium size, and decidedly handsome, while the quality leaves little to be desired, the flesh being white and buttery, and the flavour delicious. Excepting in the northern districts the fruits have in favourable seasons a bright crimson cheek, and this colouring adds much to their appearance when on the table. It ripens in October.

[Photo: J. E. Tyler

PEAR LOUISE BONNE OF JERSEY.

One of the most useful of dessert pears, ripening in October.

NEW AMERICAN TREE CARNATIONS.

Several new American varieties of tree carnations were sent out last spring, and among them is one named Aristocrat, described as bright cerise, a shade brighter than Mrs. Lawson. In its form, stem, habit, and size, one grower describes it as nearer perfection than any carnation of to-day. If this is so it must differ with him from what it has done with me. It is possible that when we have propagated our own stock, and grown it another season, it may have the good qualities attributed to it. Under artificial light it is very effective. Winsor is a variety which promises well. It is silvery-pink, and the colour improves after the blooms are fully open. It has a good full flower, calyx and stem good, and apparently it is a good grower. The colour is a useful shade for winter; this variety and Beacon are the most promising of those we have on trial this season.

Melody is a pale pink sport from Mrs. Lawson, and has the same shaped bloom as the parent, and similar habit; this may improve another season, but so far it is a trifle disappointing.

Helen Gould, a sport from Enchantress, with fine pencillings of carmine on silvery pink, has been simply Enchantress in bloom and growth with me, but I saw some good blooms of this variety at Chelsea recently, fully bearing out the catalogue description; like most sports this will probably vary at times, and therefore must not be judged too quickly. Imperial, "a variegated variety of delicate pink, similar to Enchantress" (vide catalogue description) has not yet opened its blooms; it is a strong grower. Pink Imperial is said to be a pink sport from the preceding variety, its growth is similar to that of Imperial, but its colour I should describe as rosy-magenta, and not at all pleasing. I may be colour blind, but it requires a great stretch of imagination on my part to describe this variety as pink, indeed, it is misleading to send out varieties of this shade and call them pink.

The unsatisfactory varieties of this season may improve after becoming acclimatised, but in my opinion this batch is not much improvement on previous introductions. Have our American friends reached perfection in their tree carnations?

I think that with the material now at the command of English growers, they may raise varieties more suitable for our winter cultivation under glass than some of the American varieties have proved to be. There is one good English variety which has done remarkably well with me, viz., Mrs. H. Burnett. I think Mr. Burnett may be congratulated on raising this beautiful carnation which fully bears out his description.

T. H. SLADE.

Poltimore Gardens.

White Scale on Palms.—This disfiguring pest often works for months unnoticed along the midribs on the underside of palm fronds, and it is often only when a palm becomes decidedly unhealthy that its presence is detected. More than this, I have even known young fellows sponge a palm several times during a season without observing the scores of scales clustered along its lower midribs. Ordinary sponging avails nothing against the pest; it may kill off a few tender young ones, but the old scale is generally totally unmoved by the sponge. A piece of pointed stick is the thing, bamboo for preference, and with this every scale should be dislodged, after first well syringing the plant to make the pests slide off easily. A good sponging should follow the use of the stick.—E. J. K.

SPECIALISING IN THE FLOWER GARDEN.

The interest of a garden is immensely increased if the owner makes a speciality of some particular flower; that is, spares neither reasonable trouble nor expense to grow some one flower, and as many of the best varieties of it as possible, to the highest state of perfection. Some make a speciality of some particular flower under glass, and some of a half-hardy plant in pots out of doors, such as fuchsias, but the most common practice, because it makes less demand upon the accommodation at disposal, is with some hardy flower in the open ground. A nobleman who has a seat in the Eastern Counties makes a speciality of the blush-white Souvenir de Malmaison carnation, and has seven or eight houses filled with plants. It is very delightful to have a supply of this lovely flower for several months of the year, but it will occur to the real garden-lover that so much space, time, and expense might be used in providing greater variety, and therefore greater interest.

Suggestions for specialising under glass are endless, but it is with hardy flowers that this article proposes to deal. Under glass the conditions can be made to suit almost any plant, but in the open many things have to be considered, one's absolutely favourite flower being not infrequently out of the question through unsuitability of conditions. As the flower should have as nearly perfect conditions as possible, it is necessary, before any decision is arrived at, to give due consideration in relation to the situation and nature of the ground to be devoted to it. If the soil is very sandy, and becomes hot in the summer, it would be simply courting failure to attempt specialising with roses, dahlias, perennial phloxes, pyrethrums, or pæonies, while carnations, iris, narcissi, and the choice aquilegias might, with due preparation of the soil, do well. On the other hand, if the soil is very heavy and wet, to take another extreme, it would only lead to disappointment to take in hand the lilies, carnations, narcissi, and anemones, while great success might be obtained with pæonies, pansies, pentstemons, and Lenten roses. This is speaking in a general way, for it is possible, and even practicable, in dealing with a limited tract of ground, to very largely alter its character, though its wetness or dryness, heaviness or lightness, will only be modified. It is hardly necessary to say that deficiency of chalk or potash, phosphates, or humus, can be remedied by deep cultivation and intelligent manuring, though not all at once.

Another thing which has to be taken into consideration is the aspect of the ground. It would be of little use to make a large collection of pansies or perennial phloxes on a piece of ground sloping towards the south, with little or no shade, and as little use to make a cistus or carnation garden on a northern aspect sheltered by trees or buildings. Still another consideration is the garden which lies low near a river, large tract of water, or marshy ground, as in a low-lying garden, especially if near much water there is a risk of late spring frosts injuring the occupants. Moreover, a humid atmosphere, which is fatal to many plants in winter that elsewhere are quite hardy, e.g., pentstemons and antirrhinums are more or less injured. It is only by taking all the above considerations into account when selecting a flower for extensive growing that the best results can be obtained, results which are a constant source of pleasure to oneself and the envy of all one's neighbours and visitors. Is the inspiring of this harmless envy in our neighbours a pardonable weakness among gardeners?

Hence the selection of a particular flower is not necessarily the one we like most, but the one out of half a dozen favourites to which our conditions are best suited. The expense of forming a good collection of varieties of any one subject is certainly very considerable if done all at once. In looking through a catalogue of a well-known nurseryman, I found there 270 named varieties of iris, 230 of pæony, 120 of herbaceous phlox, 90 of Michaelmas daisy, 80 of pyrethrum, and 65 of Lenten rose. As most of these are at least a shilling each, and many of them half a crown or more, it will be readily seen to what expense one can go with one flower only. But this is not necessary, and those not disposed to spend very much can have a splendid show by beginning with a few varieties and propagating them, and exchanging with friends, and what is most interesting, by raising seedlings. Raising iris, Michaelmas daisies, or pæonies from seed, is a very different thing to raising lobelias, stocks, or verbenas. In the latter case we know pretty much what we are going to obtain, but in the other case there is so much sporting that you can have no idea how the seedlings will come, nine out of ten of little value probably, but the tenth may be really valuable if the seed has been saved from good varieties.

The position in the garden which such special collections should take must, of course, depend upon the taste of the owner as much as upon the nature of the garden. To the lover of flowers, beds packed with pelargoniums, like magnified window-boxes, and rainbow borders of ageratums, geraniums, calceolarias, etc., are a source of very little interest. The eye, having glanced over them once, finds little more in them to engage its attention. With a pæony, briar rose, or carnation and lily garden, how different it is, not only in the season of their flowering, but from the commencement of spring! The one objection to be brought against such specialising is that the part of the garden devoted to one thing is generally only gay for a comparatively short time, generally only from one to two months. Each must deal with this objection to suit his own special circumstances. Why not apply to the garden the principal applied to general knowledge—everything of something and something of everything?

When one has the necessary space, and is prepared to spend the necessary amount of money upon it, one could have special gardens in beauty at each season of the year — Lenten roses or primroses in March, narcissi or pansies in April and May, pæonies or irises in June, carnations or lilies in July, or phloxes or pentstemons in August, and Michaelmas daisies or border chrysanthemums in September and October. This would be a large order, more suited to a nurseryman than to a private individual.

This article has already exceeded its proper length, or I should like to have said something about the fascination of making a study of one flower, and hybridising selected blossoms with a view to getting new varieties. This is very delicate work and a never failing source of interest.

ALGER PETTS.

Sweet Pea "Annual" and Schedule.—We are asked to state that the National Sweet Pea Society's "Annual" and Schedule for 1908 will be sent to members about January 16.

NEW PLANTS, ETC.

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CYPRIPEDIUM MOONBEAM.

A very fine Lady's Slipper, with bold, substantial flower, set on a rather short stiff stem. The parents are C. Thomsoni and C. Sallieri. As seen in the illustration on p. 15, the dorsal sepal has a broad white apex, with green and purple shading, and veins running into it from the base. The petals and lip are yellowish green with brown shading, and these organs are brightly burnished. F.C.C., R.H.S., December 31, 1907. Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

CYPRIPEDIUM TROILUS CRAVENIANUM.

A large-flowered variety of the hybrid between C. insigne Harefield Hall and C. nitens, Ball's var. As may be expected from such a cross, the variety much resembles C. i. Harefield Hall. The dorsal sepal is large, white and green, with dull purple spots; the lip and petals are green, shaded with brown. A.M., R.H.S., December 31, 1907. Mr. J. H. Craven, J.P., Beeches, Keighley, Yorks.

ODONTIODA CRAVENIANUM.

A very beautiful hybrid obtained by crossing Odontoglossum cordatum and Cochlioda Noetzliana. The flowers are neat and medium size, borne on a short, slender spike. They are brilliant scarlet, with faint mottlings of dull yellow on the lip, though one or two flowers also showed very subdued markings on the petals. A.M., R.H.S., December 31, 1907. Messrs. Charlesworth and Co., Heaton, Bradford.

PRIMULA OBCONICA GRANDIFLORA HAYES' PLACE DOUBLE.

We protest against the use of such names as this—they detract from the merit of good plants, and soon sink into disuse. The strain shown represented an excellent and double type of P. obconica in several shades of rose and lilac. The strain is worthy of extensive culture. A.M., R.H.S., December 31, 1907. Mr. E. Hambro, Hayes' Place, Kent.

POTATO FAVOURITE.

This excellent kidney potato was sent up from Wisley, where it has passed the trials, and the cooking test in fine style. F.C.C., R.H.S., December 31, 1907. Messrs. Dobbie and Co., Rothesay.

GESNERA CARDINALIS.

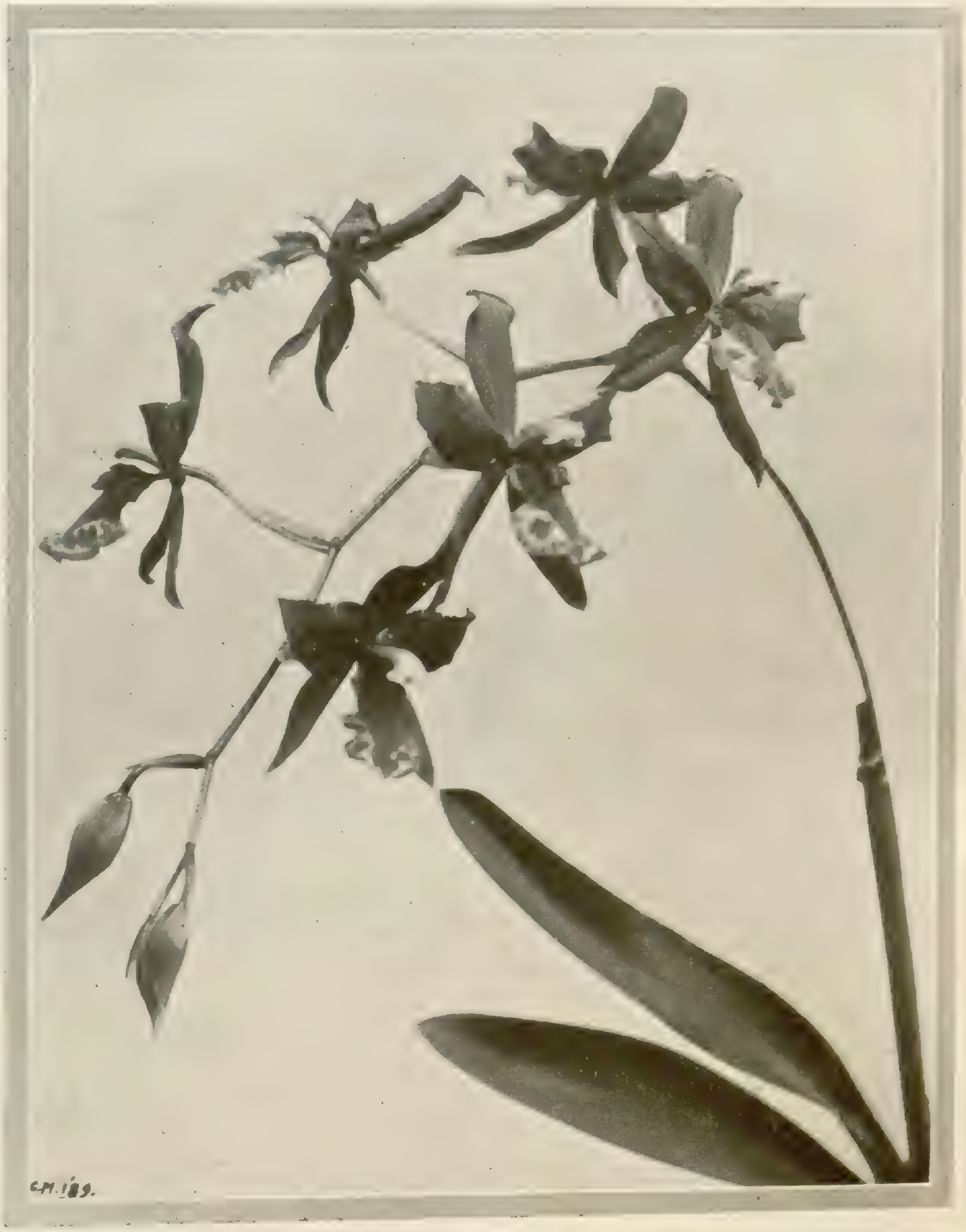
This handsome species, which has long been in cultivation, belongs to the group of species for which Decaisne proposed the genus Dircæa. The most striking characteristic of the group is the marked disproportion between the upper and lower lips of the corolla, that on the lower side being very short. In common with other gesneras the species has a tuberous root, and under ordinary good cultivation attains to a height ranging from eight to ten inches. The leaves are broadly ovate, bright green, and the flowers are produced in a cluster at the top of the stem. These latter are between two and three inches long, and bright red-scarlet. It is, in Mr. Watson's opinion, the best of the gesneras from the decorative standpoint, and is quite easy of culture to those who understand the cultivation of stove plants.—"Bot. Mag.," t. 8167.

PRIMULA MUSCARIOIDES.

This striking primula is a native of Western China, and is very closely allied to P. cernua, P. deflexa, and P. pinnatifolia, and at first was taken for P. deflexa, which, however, has fewer and larger flowers, and at Kew attains to a greater height. The flowers are produced in dense heads, turn downwards, and are deep purple-blue, the colour becoming paler towards the tips of the lobes; the leaves are similar in shape to those of the common primrose. Mr. G. Forrest describes it as growing in moist, open, grassy situations on the margins of pine forests in Yunnan.—"Bot. Mag.," t. 8168.

PICEA MORINOIDES.

A handsome fir, of which there appears to be but two specimens in the United Kingdom. One of these is growing at Castlewellan, co. Down, the seat of the Earl of Annesley, which was raised from seed received from Chumbi in 1889. The other is in the gardens of Leonardslee, Horsham, the seat of Sir Edmund Loder, Bart., and must, judging from its large size, have been planted many years since. This tree has produced cones for the first time in this country. P. morindoides is conical in growth, with spreading branches and slender, pendulous branchlets, the leaves slender, yellowish-green when young, becoming greyish-green with age.—"Bot. Mag.," t. 8169.



ODONTIODA CRAVENIANUM.

Flowers deep rich red scarlet, with yellow mottlings on the lip.

ERIA LONGISPICA.

An interesting species, which has been in cultivation at Kew during the past ten years or so. It is a free-growing species, nearly allied to D. latifolia, with erect habit, broad leaves, and long spikes of very numerous flowers, which are light yellow blotched with reddish-purple. Although possessing comparatively little horticultural interest, it is not wanting in attractiveness when so well grown as in the case of the Kew specimen. This is grown in a tropical house in a mixture of peat and sphagnum, kept moist at all times, except for about eight weeks in midwinter, when the plant is allowed to rest.—"Bot. Mag.," t. 8171.

DELPHINIUM CANDIDUM.

An interesting species belonging to a small group of delphiniums confined to the mountains of tropical East Africa. It is closely allied to D. Leroyi and D. macrocentron, and has large, pure white flowers with purple anthers and sweetly scented, the perfume resembling that of the primrose; the leaves are palmately five-lobed, and measure four or five inches across the widest part. The plant figured in the "Botanical Magazine" was raised in the gardens of Hindlip Hall, from seed gathered by Lady Hindlip in 1904 between Mount Elgon and Kisumu, Uganda. D. candidum is a perennial species, and dwarf in growth. —"Bot. Mag.," t. 8170.

Summer Bedding.—If the plan of summer bedding has not yet been arranged, it should be done without delay, and in due course the stock of plants be worked up accordingly. It is, of course, much better to prepare the plants according to requirements than to fill the beds according to the plants at hand. If only a small number of stock plants are available, early propagation will be necessary to ensure obtaining sufficient. As the annual seed catalogues have been sent out the order should at once be made up and despatched, as a number of seeds for summer bedding may with advantage be sown in the course of this month. In purchasing seeds it is always best to order from a good firm, even if the cost is apparently a little more, it being much better to start with good strong seedlings of the finest types. A few novelties should be selected and tried each season, and thus ensure keeping abreast of the times.—E. F. Hazelton, Knowsley Gardens, Prescot.

GROUPING CONIFERS.

No garden of any size is complete without a good collection of coniferous trees, for at all seasons of the year they are most interesting. In some it may be their peculiar growth, in others their foliage, while not a few produce cones of exceptional beauty.

If we take the different sections of Abies, in these alone we have sufficient material to form quite an interesting pinetum, some of them being so dwarf when fully grown as to scarcely exceed a couple of feet in height, while others grow so rapidly that in the course of a few years they make valuable timber. Though many of the pygmy conifers can only be regarded as botanical curiosities for planting in small gardens, there are others of noble dimensions that are worthy of, not only being planted as single specimens or forming collections, but extensive cultivation for the supply of timber.

To plant a pinetum worthy of the name would need much space and an undulated piece of land, and this cannot be provided in all places, though much might be done in this direction on many estates if sufficient interest were taken in the subject, and a thorough knowledge of their requirements forthcoming. I remember a choice collection of coniferous trees being planted on an estate, with such species as the Common Spruce, Pinus austriaca and other quick growing kinds being planted amongst them for shelter while they were young. As the common kinds grew more rapidly than the choice ones, and as there was a change in the management of the estate, the person appointed knowing nothing about conifers had all the choice slow ones cut down, the majority of those left being of little or no value.

For a person to take an interest in these trees he must be brought up amongst them, and must study their habits as an orchid grower does all the peculiarities of the plants under his charge, and know the requirements of each. Some kinds, in fact the majority of them, succeed best on a sloping piece of land where the water can pass away rapidly, as few of them will succeed in low swampy ground. Where such a position cannot be provided, the land ought to be drained, and the trees raised well above the level of the ground to give them a start.

Firs.

Some of these are close, compact growing trees, having a spread of only a few feet, while others need plenty of room for them to develop freely. Such species as Abies amabilis, A. concolor, A. grandis, A. nobilis, A. lasiocarpa, A. Nordmanniana, A. bracteata, and others of like habits are upright growing trees, and of themselves do not require planting more than forty feet apart for the display of their characteristics, even when fully grown.

It is a mistake to plant such trees at regular distances apart, better by far group them more naturally, at the same time giving them plenty of room. What could be more effective than a group of Pinus sylvestris, planted irregularly, when they have attained to the age of from eighty to a hundred years? At that age the trunks and bark have become interesting, the lower branches having died away. As a rule, however, the silver fir, if allowed to grow naturally, given ample space, will retain its branches down to the ground even at a greater age, if the grass around it has been kept short and the plants free from weeds.

In addition to the foregoing kinds of firs, there are others of the spruce family which are most interesting. Picea pungens glauca, A. polita, A. Smithiana, A. Engelmanni, and A. Alcockiana may be mentioned, all of which grow well on light soil in a fairly dry situation. Here, too, such species as the Douglas fir, Abies, and A. Albertiana thrive admirably.

Pines.

Those who have noticed a patch of waste land on the edge of a forest will, in all probability, have been attracted by the young seedlings, and notice how they have grown in irregular patches. In some places, close to the forest, they will be clustered together, in others they stand out more singly. It is this kind of growth that gives a natural beauty to the landscape, and if in planting for ornament something of this kind were attempted, the effect in after years would be far more pleasing than is an artificial arrangement. Some of the least spreading kinds might be planted at irregular distances closer together, giving such species as Pinus insignis a space of at least fifty feet from anything else. This is a kind that does not grow well everywhere, but here it is sheltered from the north, and has already attained a height of upwards of a hundred feet. There are many interesting trees in this group, some of them of rapid growth, while others are much less so. When trees of P. Cembra, P. strobus, P. pyrenaica, P. sylvestris, P. Laricio, P. macrocarpa, and P. ponderosa, and the like have attained to a height of a hundred feet, and having stems from six to ten feet in circumference they are certainly noble objects.

Cedars.

Cedars have been associated with our gardens for a long number of years, and there are some truly noble specimens in various parts of the kingdom. Those at Wilton Park, near Salisbury, are very fine, as also are those at Goodwood, Stowe, and other places. Here Cedrus deodara grows very rapidly, trees planted about half a century ago have already attained a height of upwards of one hundred feet, having trunks from nine to ten feet in circumference. The difference in the colouring of the foliage of some of the varieties is very great. Cedrus atlantica aurea, whose young foliage is of a rich golden yellow, forms a great contrast to that of C. atlantica glauca, and the various forms of C. deodara, some of which have quite a silvery hue. Unfortunately these trees soon grow too large for small gardens, and are more adapted for park planting, or in places where there is ample room for them to show themselves to advantage. Though single specimens present a noble appearance when they are old a group of half a dozen or so of the different varieties when young is far more pleasing, and these may be kept within bounds for a number of years by taking out the points of the leading shoots each year, thus causing them to assume a more conical habit.

Cupressus.

For small gardens there is such a variety of cupressus that very fine, interesting groups may be formed of these, and if we add to them the junipers and retinosporas there is hardly any end to the variety. Some are dark green, others a bluish cast, while some are yellow, and others almost white. If we take the cupressus alone, there is sufficient variety in them to satisfy most people, and, as most of them are of slow growth they are a long time in growing too large for a limited space. It is, moreover, as young trees that they are the most effective. C. Lawsoniana lutea, when about twenty feet high, is a handsome tree of upright habit. So is C. L. Goveniana, but when these become overgrown they are liable to be broken down by heavy falls of snow, and then their beauty is spoiled. Amongst the junipers, Juniperus chinensis aurea, J. japonica aurea, and J. virginiana glauca are most effective when planted amongst the greener foliaged kinds, and such that turn a brown colour in the autumn. The colouring is sufficiently varied for a very pleasing combination to be formed in a limited space. Such kinds are most effective when planted in large beds in winter, as their neat habit and varied colours render them most attractive.

Miscellaneous.

Of course, there are many other conifers that are very interesting, some of them, such as the taxodiums, the Wellingtonias, and yews, being quite as ornamental in their way as any others. Then again there is the thuias, of which T. Lobbi is certainly worthy of special mention, particularly when well grown on a lawn where the grass is kept short, for then it is seen at its greatest beauty. Plants from eighty to one hundred feet high, with their slender tapering leads feathered to the ground are objects not soon to be forgotten. There is also a small group known by the name of Libocedrus. Where these do well they are very ornamental, but L. chilensis is often cut back in severe winters except in very sheltered places, and therefore not to be generally recommended. Here it was quite killed in 1880-1881, but L. decurrens is a noble tree, and quite hardy. A very interesting little group is formed by the podocarpus, but with us they do not grow satisfactorily, as only two or three of the species are sufficiently hardy to withstand the winter in this low-lying place.

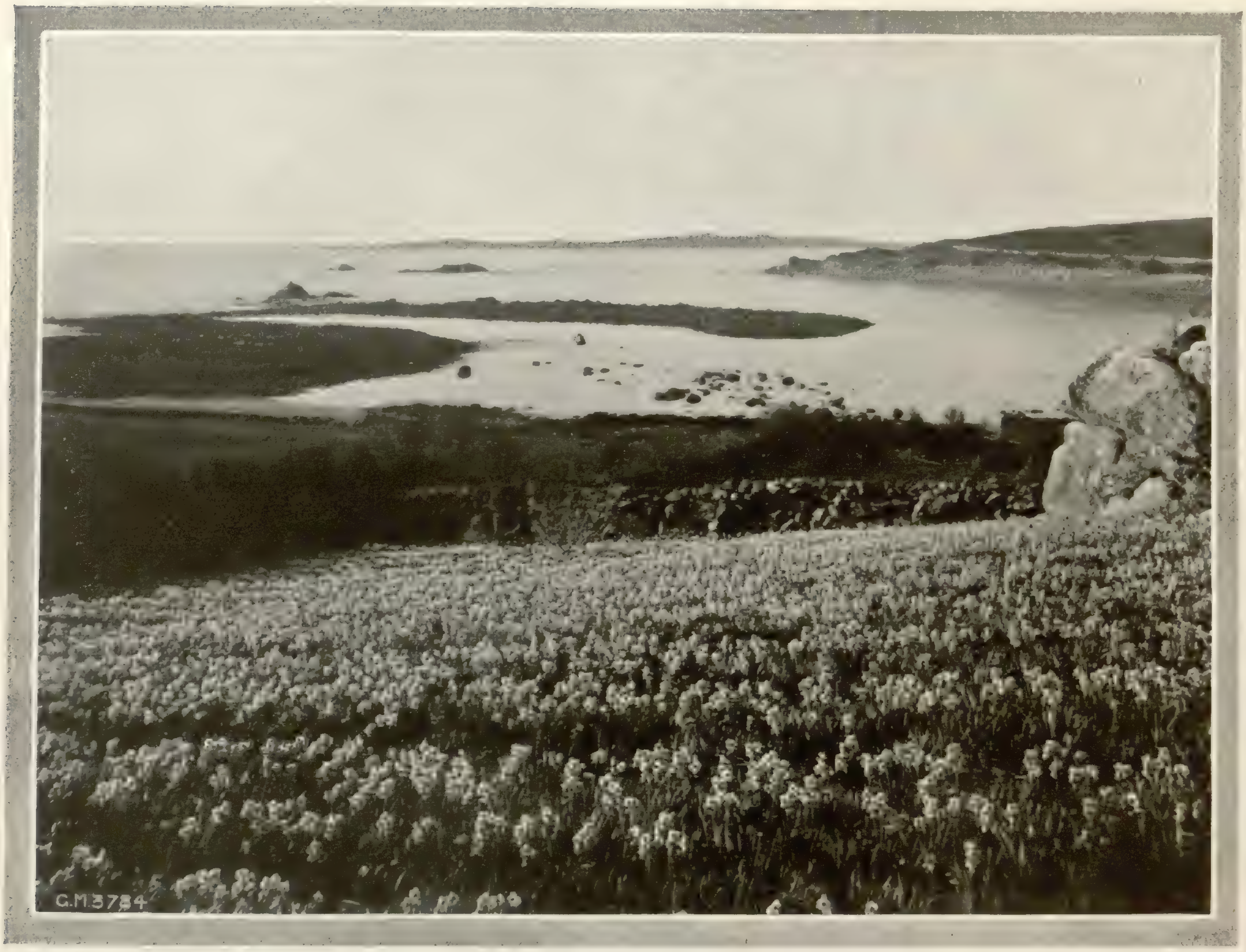
Buxted Park. H. C. Prinsep.

ASTER GRANDIFLORUS.

The average gardener finds the Christmas Daisy—Aster grandiflorus—a disappointing plant indeed, not on account of cultural disability, because there is none of this, out on account of its very late-flowering season. In the East of England, and in other cold districts, the plants have very little chance of developing more than a few terminal flowers. The tufts of subsidiary ones are literally nipped in the bud, and cannot expand. Those who value the plant and have plenty of glass accommodation find it an easy matter to lift the clumps as they develop flower buds, pot them, and gently bring them into flower with the chrysanthemums. I have seen many clumps so treated in Scottish gardens, and they provide many sheaves of lovely violet-blue flowers at a time when this colour in flowers is almost unobtainable, moreover the pot specimens are worthy of the room they require, and are much appreciated when the last aster outside has been destroyed by frosts.

To many gardeners, another way of helping this plant may prove worth a trial, and that is to hasten growth in spring. This aster is a veritable sluggard in growth, wasting six weeks or more if the soil happens to be wet and cold in early spring. If cuttings are taken in February, rooted in heat and grown on for a few weeks, finally hardened off in a frame and planted out with six to twelve inches of growth already made, they will flower late in October, and every bud that has strength will flower. Cuttings or rooted pieces will make typical pyramidal bushes in one season. The mode of culture being that considered good for early-flowering chrysanthemums.

G. B. Mallett.



ISLES OF SCILLY: A SEA-GIRT FLOWER FARM AT ST. MARY'S.

THE ISLES OF SCILLY.

The Bulb Industry.

In a previous article enough has been written to show that the Scillonians start with great natural advantages when they set out to grow early flowers for the London and other markets. Clear light, abundant sunshine, and pure air go a long way towards success in flower culture, as these give intensity and purity of colouring, and add substance to the blooms. But in addition to these free and priceless boons, there is the one of temperature, and it also is one that costs the islanders nothing, because the Gulf Stream looks after that part of the business.

The mean temperature in the Isles of Scilly, for November, ranges from 47.6 degrees to 50.8 degrees; for December, from 44.5 degrees to 50.6 degrees; for January, from 45.7 degrees to 47.4 degrees; for February, from 44.2 degrees to 48.1 degrees. These figures show the range from 1900 to 1905. For the same months of the year there may be as many as 105.5, 57.0, 76.3, and 102.7 hours of bright sunshine respectively, though in some years the average for these months is not quite so high. These figures, and the fact that March may have a mean temperature of 48.9 degrees, and 129 hours of sunshine; and that April may have a mean temperature of 49.9 degrees, and 194 hours of sunshine, will serve to show how it is that daffodils are blooming out of doors in the Scillies in February, in the sheltered gardens.

The Daffodils.

The great business of the Scillonians is flower culture, and practically everyone, from the Lord Proprietor downward, has an interest in the trade. About forty years ago there were probably not more than eight kinds or varieties of daffodils to be found in the Isles of Scilly, some as wildings, others in gardens. It is possible that the Benedictine monks of the Priory of St. Nicholas, introduced bulbs to Tresco. But the credit of discovering the commercial possibilities of the islands for flower production must be accorded to the late Mr. Augustus Dorrien-Smith, who sought in every way to improve the condition of the islanders. It is said that his first consignment of flowers to Covent garden was rewarded by a cheque for 20s. Some difficulty was experienced at first in securing the interest of the Scillonians in this new industry. But Mr. Dorrien-Smith himself developed an extensive bulb farm at Tresco, and ere long the more enterprising spirits on St. Mary's followed suit. The rest of the islanders holding land or possessing gardens took up the culture, until now the Isle of St. Mary's seems clothed in daffodils in the early spring time, bulbs filling the ground from quite near the seashore up to where the hard rock puts a bar against cultivation. From that first consignment the industry has developed until in the season that began at Christmas, 1906, and ended in April, 1907, nearly 900 tons of flowers, filling about 140,000 boxes, were despatched from the islands.

The earliest flowers are opened under glass, indeed almost all the flowers, even late in the spring, are fully expanded under glass, to ensure clean, clear blooms, but in January the broad light houses, chiefly span-roofed, are heated, and the flowers, culled from the fields as their buds show colour, are set in deep flower pots—made without a drainage hole—in water. Here they expand quickly, and on the central stage or in an adjoining glass-roofed shed they are packed in boxes and despatched to the salesmen. Thousands of bulbs are also forced into bloom in these houses by the larger growers, and they are grown in boxes, pots, or broad pans, so that flower time in the Scillies now lasts from Christmas almost to June.

The work of bunching and packing is carried out very largely by women and girls, and during the busiest season there is a special arrangement with the school authorities, whereby the young people are released from some part of the schooltime, so that they may assist in the ingathering and despatch of the harvest of flowers.

Bulb Farm at Tresco.

Nowhere has the cultivation of daffodil blooms for the early markets been so carefully studied as at Tresco, where, apart from the Abbey Gardens, Mr. T. A. Dorrien-Smith has an extensive bulb farm, and a fine range of sharp-pitched, comparatively narrow, heated, span-roofed houses, built especially for forcing bulbs. What the total output is I do not know, but it is safe to say that when thirty tons or more of flowers are despatched from St. Mary's in one day, a third of the cargo is furnished by the Tresco farm.

There is no room wasted in these houses. The bulbs are planted thickly in boxes, and the boxes are made to fit the benches in the houses, and when all are in position there is only sufficient room along the central path for the worker to move comfortably. At Tresco, as at the other bulb farms and gardens, the earliest daffodils to flower are the Scilly White and Soleil d'Or, and the first of these are ready for the Christmas markets, sometimes earlier.

Emperor and Empress, Horsfieldi, Sir Watkin, the Campernelli jonquil, poeticus, Grand Monarque, Telamonius plenus, Barri conspicuus, Victoria, Gloria Mundi, Golden Spur, Madame de Graaff, obvallaris, Mrs. Langtry, Frank Miles, and Mrs. J. B. M. Camm are some of the varieties grown more or less extensively at Tresco. The proprietor is always on the look-out for new varieties of commercial merit; he invariably attends the big spring shows at Truro and Plymouth, and he is a member of the Royal Horticultural Society's Narcissus Committee. On the occasion of my visit I saw over a hundred flowers of the fine new poeticus variety Horace being bunched for market, and yet this is as yet a high-priced narcissus. This indicates the enterprise with which the work is conducted at Tresco.

ISLES OF SCILLY: FORCING NARCISSUS POETICUS AT TRESCO.

The packing shed is a very big, light structure, as it needs must be to enable from one thousand to over two thousand boxes of flowers to be packed for despatch at one time. Long, broad tanks extend along the glass side of the shed, and on the water are light wooden rafts made of strips of wood crossing each other at right angles, so as to leave spaces a few inches square between the strips. Into these spaces the flowers are placed as they are brought from the fields, and here they open. The structure is heated at will. One end of the shed is partitioned off to form the tying or bunching room, and here the work proceeds merrily. Six young fellows sit at each bench, and facing them are two others. The latter supply the "bunchers" with the flowers from the big pans, and they also cut the ties and put the bunches back into water ready for the packers. Each man keeps three "bunchers" going, and it is remarkable how quickly the work is done by this method. Now and again someone breaks into music, and the whole company joins in the singing or the whistling, but eyes and hands never falter in the work, and as you watch the score or more of men for a few minutes hundreds of bunches are made up and passed on at almost incredible speed.

On the farm the bulbs are mostly grown in small plots, each surrounded by a high, dense hedge of euonymus, escallonia, or veronica. Careful and regular planting is carried out, and the ground is well cultivated. It is rarely that the bulbs occupy the same plot more than three years, usually a much shorter time. Many acres are under bulb culture, and every care is taken to keep the stock up to a high standard, and to add new varieties for the purpose of testing their merits for market use.

After the daffodils are over the glass houses are occupied by tomatoes. Early potatoes are also grown on the farm, near the daffodil houses, in long pits or frames, and they are usually fit to lift in April.

Rocky Hill.

Every Scillonian knows Rocky Hill, and is prepared to enlarge upon its floral treasures, and everyone who stays at St. Mary's should see Mr. Trevellick's garden, which is open to all who are sufficiently interested in flowers and plants to ask for admission.

As St. Mary's is not big enough to lose oneself in, there is no need to say that Rocky Hill is so far from Hugh Town, or Star Castle, or the church, or other landmark. The hill itself is a mass of grey rock, with patches of greenery, but Rocky Hill, that is the garden, is a delightful spot, nestling under the hill, occupying a very sheltered position. It is a patchwork garden, inasmuch as it is cut up into small portions, each with its surrounding hedges, and such hedges! They may be of bamboo, three or four feet through and twelve to fifteen feet high; of Escallonia macrantha, eight feet high and two feet thick, a delightful mass of green foliage and pink flowers; of the broad-leaved evergreen euonymous, varying much in height; of Veronica Andersoni, six feet high, and very dense; or even of the New Zealand flax, roughly cut into shape with a sickle.

Mr. Trevellick was one of the first to enter heartily into the flower industry, and he reaped the full benefit of the good prices that were obtained in those earlier years. Daffodils are still largely grown in these sheltered plots, and several glass houses are used for expanding, bunching, and packing the flowers.

But it is rather to the interesting plants that Mr. Trevellick has brought together than to the bulbs that I propose to draw attention. Approaching the garden from Hugh Town the scene is distinctly un-English. Towering above the dense hedges and windbreaks of bamboo and phormium rise scores of tall dracænas, varying in size and age, but all carrying good heads of their tough leaves. This is the first view, but on entering the garden, by the side of the house, and passing within the shelter of these hedges, one finds roses flowering freely in the first week of April, Fuchsia fulgens aglow with flowers, Acacia Drummondi just coming into flower, and the whole air redolent with the fragrance of the daffodils that carpet the ground everywhere.

There are some fair-sized apples trees at Rocky Hill, and also some plums, and Mr. Trevellick is as proud of these as of any other of his garden treasures. Pittosporums are plentiful, P. Tobira forming big masses that give shelter to plots of arum lilies. In another spot is a great mass of Lomaria magellanica several yards through, with a huge bay tree close by just coming into flower. Here Hedychium coronarium stays out all the winter without harm, and the common Genista fragrans rises fourteen feet high, and is a mass of yellow blossoms. Clianthus puniceus and Pittosporum undulatum flourish near a collection of old ships' heads that remind one of the dangers of these rocky coasts.

A little dell is almost filled with a great patch of Puya chilensis that is scarcely, if anything, behind the Tresco specimen. This is in a very sheltered spot, and near by is a perfect Araucaria excelsa twenty-five feet high; a beautiful Trachycarpus excelsa, finely furnished with its rich green frondage, and rising over twelve feet high; Choisya ternata, making a huge bush; and Eucalyptus globulus, forty feet high. Close by this spot is another, where Dicksonia antarctica rises fifteen feet high, and spreads out its fronds to cover a space at least thirteen feet across, and, underneath it are herbaceous and stellate cinerarias, self-sown, and perfectly happy.

The splendid masses of hydrangeas, the great tree of the lemon-scented verbena (Lippia citriodora), with its stem almost a foot thick, arching over a pathway; the double blue primroses that edge a rose border, and the giant junipers along the highest walk, are more of the many interesting subjects in a garden that is full of surprises.

Holy Vale.

I was disappointed to find Mr. W. P. Mumford away from home when I visited Holy Vale, where he has an extensive bulb farm, and cultivates for flowers and for bulbs also. Mr. Mumford was also one of the pioneers of the flower industry in the Scillies, and he has a number of large glass houses devoted to forcing bulbs, and ample light sheds for opening and packing the blooms.

The flowers are mostly bunched by girls, and I gathered that some of the girls are so nimble fingered that they can set up a thousand bunches per day. Mr. Mumford does not confine his attention wholly to daffodils, but, like not a few other growers, he cultivates arum lilies on the moist and rich soil of the lower lying fields. Big patches of arums, sheltered by stout walls or dense hedges, are to be found in several districts, and they are an interesting feature of the flower industry. A broad plot, such as shown in the illustration, just before gathering commences, is a fine sight, the pure white spathes rising from a mass of ample rich green leafage.

Old Town.

Mr. Watts, of Old Town, is the largest grower of daffodils in St. Mary's, and in the extent of his cultivation he must occupy almost as important a position as Mr. T. A. Dorrien-Smith. Mr. Watts has a very big business, and a well-kept establishment. He finds it impossible to have all his flowers bunched in the big packing shed during the busy season, and so he arranges with several families living near by to bunch, by piece work, and the flowers are conveyed to these homes direct from the fields or the houses, and brought from the homes to the shed to be packed.

Mr. Watts has from fifty to sixty acres of daffodils, and the cleanliness of the beds and the neatness of his sheltering hedges are ample evidence of good cultivation and keen attention to business. Some daffodils must be replanted every two years, some every three years, but some varieties may be left as long as ten years undisturbed, but, as Mr. Watts points out, this is bad practice.

In answer to a question that was suggested by some of the plots of daffodils growing on the smaller bulb gardens I passed through, Mr. Watts expressed the conviction that in some cases bulbs had not been lifted and replanted for upwards of fifteen years. Such plots as these pay poorly, and the flowers from them tend to keep prices down. It would seem that a combination of the growers for the purpose of preventing the export of all blooms below a certain grade would effectually put a check to the careless cultivation, or lack of cultivation, followed chiefly by those who have other interests, and are not wholly dependent upon their flowers.

Mr. Watts has three long span-roofed houses, each 217 feet by 20 feet, in which daffodils are forced for the Christmas and New Year markets. Scilly White and Soleil d'Or are most largely grown for early forcing. Sixteen-sized pots are extensively used, and in these about sixty bulbs are planted as closely together as possible, but when boxes are used a hundred bulbs are put in each. Mr. Watts says that for early forcing all the varieties, except ornatus, may be packed thus closely together.

ISLES OF SCILLY: DRACÆNA GROVE IN MR. TREVELLICK'S GARDEN AT ROCKY HILL.

Twelve flowers are placed in each bunch, arranged so that they all face one way and do not overlap one another materially. It requires from fifty to sixty bunches to fill a box, the boxes being lined with whitey-brown paper, and covered with white or blue paper. Just as some varieties occupy more room than others when bunched, so some are much heavier than others, and it is found that the boxes vary from eight to eleven per hundredweight.

Mr. Watts, and also Mr. Dorrien-Smith, supply flowers in their own boxes, and not in salesmen's boxes, and in every case the name and mark of the sender is prominent. I am not quite sure, but I believe Mr. Watts said he now used light, non-returnable boxes.

Daffodils Everywhere.

The forced daffodils, and also the small bulbs removed during the replanting operations, are frequently thrown into heaps on a piece of open unused ground. By various means they find their way from thence into hedgerows, lane sides, on to the common land, and round among the rocks, so that they are found blooming everywhere. It is safe to say there are daffodils in every garden in St. Mary's. The coastguards' plots are, in some cases, filled with them, and they are to be found in the churchyard and along the fortifications, as well as among the grass near Peninnis Head, not far from the famous Pulpit Rock.

On St. Martin's, and also on St. Agnes' daffodils are grown in lesser quantities, and from here they are brought by sailing boats to St. Mary's to meet the outward-bound steamers. From Tresco the flowers are brought by a steam launch that often has other boatloads in tow. There is much shouting and joking as the boxes are got on board, for visitors, and most of the folks who are not otherwise engaged—and, by the way, folks seem to have a lot of leisure time in the Scillies—gather on the pier to see the "Lyonnesse," or the "Lady of the Isles," start for the mainland. Next morning, when you are buying your daffodil buttonhole in Piccadilly Circus or Cheapside, the Scillonian grower is scanning a telegram that tells of the prices his flowers obtained, and the daffodil you wear so bravely was in the Isles of Scilly twenty-four hours ago, and it has travelled by road, by steamer, and by train not fewer than 370 miles.

You may dine in London in the evening, take the night train for Penzance, and lunch next day in St. Mary's. To horticulturists the Isles of Scilly offer an opportunity for a quiet and vastly interesting holiday, but, as Sir Walter Besant so cleverly puts it, each one "must just walk about, sail about, and look about. If after a week he is not contented, I have no more to say."

CHARLES H. CURTIS.

ISLES OF SCILLY: SHELTERED PLOTS OF ARUM LILIES, IN ST. MARY'S.

Tea Roses in Pots.—A good supply of tea rose buds is always appreciated at Easter and thereabouts, and the way to get them is to introduce a few plants to the greenhouse now. These should be well established in their pots, or forcing may not be quite a success. The plants should be pruned a few days after bringing them indoors, and it is well at the same time to look them over carefully for brown scale; this pest spreads rapidly in heat and moisture, and does much damage. At first the plants should have quite a cool temperature, gradually increasing this as growth proceeds; a vinery starting is an excellent place for pot roses. When syringing the vines see that the roses get their share, for this will greatly assist the buds to start into growth.—E. J. K.

SOME RARE SHRUBS.

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Abutilon vitifolium.

This Chilian shrub is a very handsome object when in flower early in June. It is quite hardy in South Devon and Cornwall, where it will attain a height of from fifteen to twenty feet. Large examples, when covered with their flat lavender, or pure white blossoms, are very lovely. It has a habit of dying off suddenly without apparent cause, and in some gardens absolutely refuses to grow. Fine specimens, twelve feet in height and as much through, that appear in perfect health, are one day found with flagging leaves, and in a few weeks are dead. In one Devon garden over fifty good plants were lost last year.

Anopterus glandulosa.

This is a beautiful Tasmanian shrub, and is rarely met with in gardens. Its glossy, deep green serrated leaves are six inches long, and its flowers, which are cup-shaped and about half an inch in diameter, are borne in erect, terminal racemes. In Tresco Abbey gardens, Isles of Scilly, there is a splendid specimen ten feet in height and as much through, which in the early spring is white with blossom. It is a wonderfully free flowerer.

Bowkeria Triphylla.

This is a very rare South African shrub, probably not grown in more than three English gardens. It has sessile, lanceolate leaves, in groups of three, and its porcelain-white flowers resemble those of a calceolaria, and are borne in racemes of six or seven. They measure an inch across and the same from top of the hood to the base of the lip. It is apparently fairly hardy, as a plant here, seven feet in height, was uninjured by 10 degrees of frost on four nights.

Buddleia Colvillei.

This comes from the Sikkim Himalayas, is quite hardy in the south-west. It is a striking sight when every shoot is terminated by a large cluster of rose-coloured flowers. According to my experience it does not bloom until it attains a height of about eight feet. The example here bore numerous seed-pods this year.

Cassia corymbosa.

This shrub is a native of Buenos Ayres, and is largely grown as a wall plant in the south-west. There is a splendid specimen at Tregye, and at Trebah a large portion of the front of the house is covered with it. It comes into bloom in August, when it is a sheet of bright gold, and retains its blossoms for a very lengthened period, generally carrying some until Christmas.

Callistemon salignus.

This is an Australian shrub, also hardy in the south-west. This is the plant sold by nurserymen under the name of Metrosideros floribunda. According to Kew the colour of its flowers is crimson, but in Nicholson's dictionary of horticulture the colour is given as pale yellow. Both are doubtless forms of the same species. At Menabilly there is a fine bush of the straw-coloured variety, about ten feet in height and of like diameter, and there are many fine specimens of the crimson-flowered type in Devon and Cornwall which flower profusely.

Clethra arborea.

A native of Madeira, and is called the lily of the valley tree, from its racemes of white, bell-shaped blossoms resembling that flower. It blooms in August, and is very beautiful when white with blossom. It is grown as a shrub in the open in many gardens in Devon and Cornwall, the finest specimen being probably that at Trewidden, which is fifteen feet in height. There is also a very large one at Tregye. The plant here had its young leaves killed by ten degrees of frost, but was not otherwise damaged.

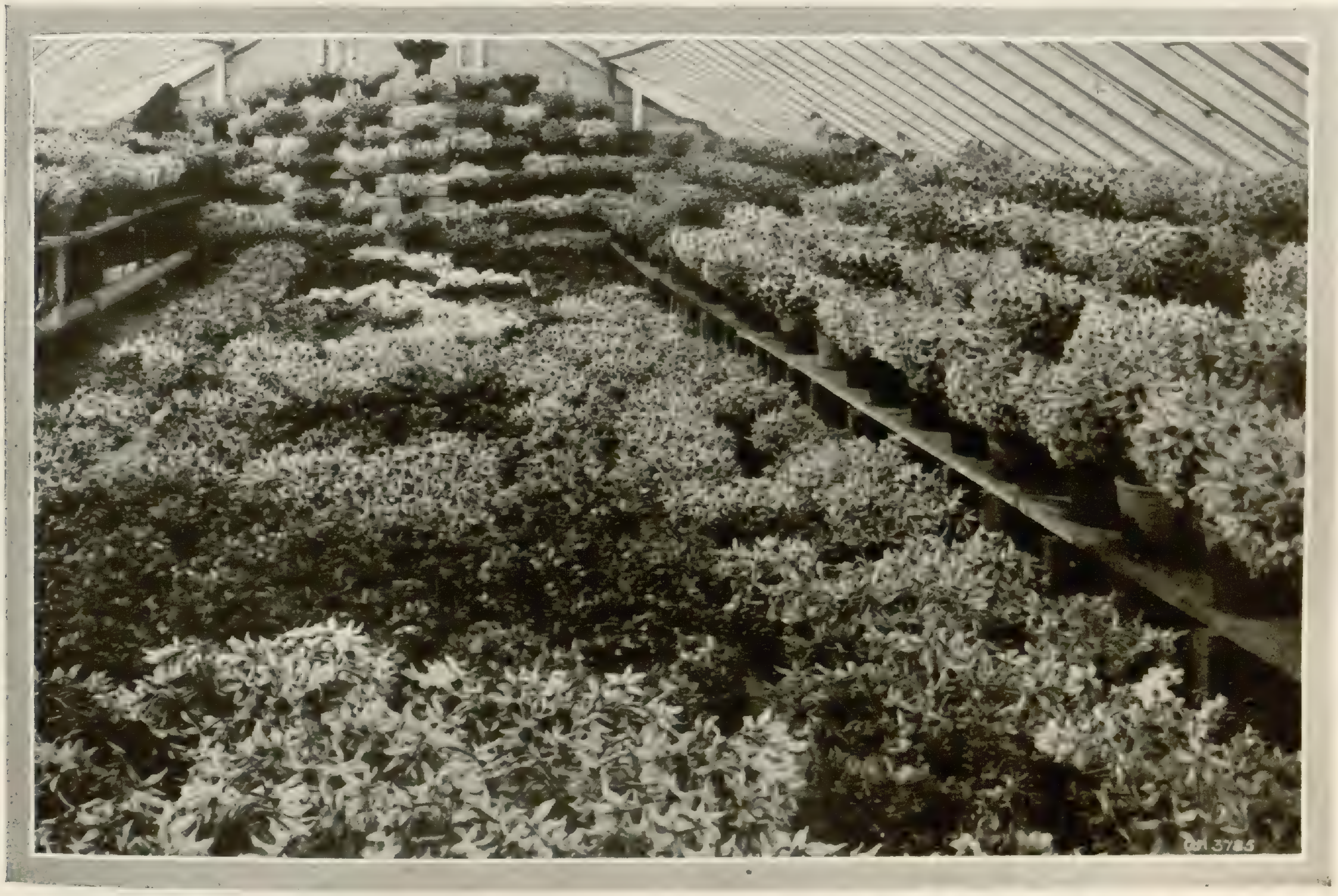
S. W. FITZHERBERT.

Kingswear, South Devon.

CLEANLINESS IN CULTURE.

The number and variety of garden pests, insect, animal, vegetable, and fungoid, is truly alarming; but is it not a fact that cultivators are largely to blame for their undiminished prevalence? Is it not certain rather than doubtful that, although cleanliness of the person is looked on as an essential virtue, yet cleanliness of plants and place is regarded too much as an ideal, and unattainable at that? I fear that despite all protests and excuses it must be said that, in relation to their plants, gardeners do not take the means which are clearly in their power to ensure that degree of cleanliness of plants which is an essential condition to the enjoyment of good health.

Without further attempting to fix the blame I will proceed to point the remedy.



ISLES OF SCILLY: THE "TYING" HOUSE ON MR. WATTS'S BULB FARM AT OLD TOWN.

Under this title I do not intend to treat of measures for the eradication of pests, but rather preventive means. First, as to the kitchen garden. It is well known that deep culture (which does not necessarily mean only trenching and double digging) is a powerful means of keeping the land free of insect pests and weeds. Seeds of weeds, if buried deep, are less likely to germinate, and similarly if the larvæ of many pests are put well below the surface there is at least a strong probability that many of them will fail again to reach the zone wherein they become dangerous to crops. A soil also well charged with lime, and one enriched with manure (which can be traced to its source to prevent contact with seeds of hay and other obnoxious weeds), will exhibit a cleaner surface than one where such simple precautions are not considered.

Then again weeds are often allowed to go to seed either in the beds or on the walks, which, if the exigences of time did not admit of their being hoed up or otherwise destroyed, could at least be mown down before the seed had formed. Timely work with the hoe will, of course, do much to lessen the prevalence of weeds, and we know that weeds are often guilty of harbouring many pests. In gardens which are bounded by hedges it is common to be told that it is impossible to keep down weeds and pests with a hedge for a boundary, and that there is nothing better than a good wall. While agreeing with the latter opinion, it must be recognised that hedges, as a source of weeds and pests, can be largely nullified by keeping the hedge bottom clean, a work that is well nigh universally neglected. It is but reasonable to suppose that the hedge bottom will harbour more pests when choked with weeds and rubbish than when kept clean.

Too often insufficient care is taken in the removal of couch grass and other troublesome weeds, as well as the vegetable remains of diseased plants. It does not necessitate more work to simply put these in a heap and make a fire of them than to take them to the rubbish yard; and there is no question of alternative as a matter of safety. Many gardeners still use the same site for their seed beds every year. Now I am fully convinced that this is a prolific cause of the prevalence of disease. I remember on one occasion advising a change of seed beds to a gardener who was annually troubled with club-root, and he acted on that advice, with excellent results. To puddle the roots of plants of the cabbage family in a mixture of clay, soot, and lime and water before planting is a means of prevention which necessitates but a few extra moments of work, and may be the saving of much disappointment. To wash and point a brick wall where young trees are to be planted is a work upon which too little value is set.

In the glass department the doctrine of hot water needs to be persistently advocated. The plentiful use of hot, and, when possible, boiling water when washing a house will greatly reduce the need for insecticides. Boiling water will destroy almost all living things, and when the house is empty, as it should be for cleaning, there should be no stint in its use. For woodwork, glass, floor, pipes, shingle, walls, etc., it should be freely used. Paraffin is a cheap and powerful insecticide, which can be largely used for washing out purposes when the house is clear of plants. When a house that has been thoroughly washed, it is a good plan to examine the whole of the inside with a tin of paraffin and an old paint brush, and work this powerful pest destroyer into all holes, corners, cracks, and interstices from top to bottom.

It should be made a practice, whenever possible, to wash both the outside and the inside of the house at the same time, so that from the apex of the roof to the footings of the foundations all parts of the structure will have been brought within the purifying influence of soap and water. Hot soapy water is also good for syringing infested creepers, if done regularly twice a week. In the interests of cleanliness it will often be necessary to consider the advisability of destroying the creepers entirely, for once they become infested with bug it is well nigh impossible to thoroughly clean them or to keep clean the plants beneath them.

The remarks above relating to the destruction by fire of all infested and diseased plants applies to the glass department as well as to the kitchen garden. Spraying, dipping, and other remedial measures will prove abortive if the simple means of prevention which must occur to any thinking man be not carried out. How simple a matter it is to destroy all infested plants, either collectively in a smother fire, or individually in the boiler furnace, instead of throwing them beneath the potting bench, or allowing their remains to fall about on the greenhouse floor. Especially does this apply in the case of an attack of chrysanthemum rust or other fungoid diseases, which are so easily spread and so difficult to check.

If other similarly easy means of combating our enemies were taken advantage of there would be less trouble everywhere. For instance, cuttings of suspected plants or from a suspicious source, should be dipped. All plants, cuttings, bulbs, etc., from places where pests are known to abound should be kept in quarantine until their immunity from disease, etc., is fully established. Above all, the propagating frame should be clean, and in every way above suspicion. The material should be frequently changed.

Finally, let it be remembered that dirty pots, boxes, floors, walls, shingle, etc., as well as a want of care in stacking turf, leaves, and manure, are means whereby disease and pests are spread, the work of combating them increased, and the health of the plants jeopardised.

W. F. Rowles.

CHRYSANTHEMUMS IN BASKETS.

The illustration you gave on page 803 of last year's volume, should influence those who have not seen such exhibits to imitate them, either as a class at the autumn shows or arranged for their private use. Tastefully arranged in baskets of any size or shape chrysanthemum blooms, large or small, lend themselves to this form of decoration admirably. I think societies who have not a class of this kind in their prize list lose a beautiful feature at their shows. Not only does such a class provide much interest, but it affords an object-lesson of much value to those who arrange flowers for home decoration.

Any form of basket can be fitted with a vase or receptacle of a suitable kind, even a jam pot will suffice; something that is not too cumbersome that will contain water in which blossoms can be arranged for the drawing-room or hall is all that is necessary. Such a class affords an opportunity of utilising the many kinds of autumn foliage and berries in conjunction with chrysanthemums. For instance, the foliage of scarlet and dark coloured oaks, Prunus Pissardi, Guelder rose, spireas, and so forth all may be utilised in making a telling display when arranged in conjunction with the blooms of the chrysanthemums.

Ten years since the committee of the Windsor Chrysanthemum Society at their autumn show had a class for twelve Japanese blooms arranged with any sort of cut foliage. This was a class that was distinctly popular, as a dozen exhibitors took part in the competition; the result was an admirable object-lesson of how to utilise large Japanese blooms for decoration. In a basket more so than in a vase, perhaps, large blooms can be most advantageously employed, as a greater area is provided, and it is more easy to arrange the blooms without undue crowding.

At York baskets of chrysanthemums are encouraged with their own foliage. In many instances there, Source d'Or and its yellow sport are employed, and with splendid success.

In no other way can a better effect be produced, especially by single-flowered varieties, than by arranging them in baskets. In arranging the flowers the greatest mistake made is that of overcrowding them, every bloom should stand clear of its neighbour, except in the case of undisbudded sprays.

E. Molyneux.

FERN SPORES.

Among cryptogamic plants it is certainly in the ferns that the faculty of reproduction by microscopic spores strikes the observer most, because in them we find the development of the foliage to approach more nearly to that of flowering plants proper, both in make and dimensions.

In no other tribe of cryptogamic or spore-bearing plants, with the exception perhaps of some of the gigantic seaweeds, can we find anything to rival in height and spread of foliage a good-sized palm tree as does a well-developed tree fern, such as a Dicksonia, alsophila, or cyathea. In the familiar plant world we are apt to expect the size of the seed to bear some relation to that of the adult plant, but comparing the initial stage of a huge tree fern and that, say, of a cocoanut palm of similar size, we find, in the first case, that the spore is so small that the unaided eye cannot detect it, while in the second case the new generation starts with a fruit possibly a foot long in its enveloping husk and shell. The one reproductive body indeed is many million times smaller than the other, and is yet capable of producing an equally large specimen.

In view of this capacity, the tree fern would apparently possess an immense advantage over the cocoanut palm, when we consider that its annual crop of spores is, numerically, inconceivably great, many thousands of millions covering the entire under surfaces of the huge fronds of a healthily fertile specimen. It is obvious, however, that the numerical advantage is fully handicapped by the minuteness of the individual spore, since the practical capacity of holding its own is no greater in the fern than in the cocoanut, the vast bulk of spores perishing.

This is owing to the fact that the process of producing the fern from the spore is a delicate one, necessitating non-disturbance and humid conditions, and that at the critical period of fertilisation the necessary apparatus is still very minute, consisting of a tiny green scale only a quarter of an inch across, or even less. The little scale which is the first product of the germinating spore, becomes attached to the soil by a multitude of fine roothairs, and on its underside two sets of bodies are produced which are practically male and female flowers, each of the latter having what, to all intents and purposes, is an embryo seed embedded at its base. This seed, being fertilised by means of swimming antherozoids, the equivalent of pollen grains, produces a tiny frondlet with a bud at its base and a root which penetrates the soil, and the fern is launched into existence. Up to this point it has been a delicate little affair, liable to be dislodged or devoured by a myriad insects or washed away by the merest shower, or, worse still, the spore, when shed, may have lodged on other vegetation, or, under other circumstances which gave it no chance of germinating at all.

That the numerical loss is not due to lack of reproductive power in the spores themselves is shown by the fact that if we sow a very minute portion of the crop, a tiny heap scarcely perceptible to the eye, on properly sterilised soil and under favourable conditions of growth, a considerable number of young ferns will, as a rule, result, proving that most, if not all of the spores are fully capable of germinating, and reproducing a new generation if they have the chance.

Every genus of fern bears its spores in its own particular fashion, since it is mainly on the basis of such arrangement that botanists have classified ferns. Roughly, they may be divided into three classes, viz., those which bear their spores on the backs of the fronds, on the edges of the fronds, and on altogether specialised fronds or portions of fronds. We may typify these by the common Polypody (Polypodium vulgare), which has round golden heaps of spore capsules on the undersides of its fronds; the well-known Haresfoot Fern (Davallia canariense), which carries its spores in marginal pockets, and the Royal Fern (Osmunda regalis), which has the tips of its fronds contracted into panicles consisting of bunches of spore capsules, giving it a false appearance of inflorescence, whence its name of flowering fern.

All three categories, however, show great multiformity in detail, the arrangements at the backs of the frond being in dots, lines along the margin and within it, or broken up into short segments, as we see respectively in the polypody cited, in which the round heaps are uncovered, and in the Male and Shield Ferns (Lastreas and Polystichums), in which they are protected by a sort of skin (indusium), in the common Bracken (Pteris aquilina), where the spore heaps lie in even lines along, but underneath the margin; in the Spleenwort (Asplenia) and the Hartstongue (Scolopendrium vulgare), in both of which they lie in lines along internal veins arranged herring-bone fashion, and finally in the Maidenhair Ferns (Adiantum), in which they form short marginal heaps.

If, therefore, we familiarise ourselves with the typical generic arrangement, it matters little how the fronds may differ in character in the numerous species or varieties, they betray their relationship at once if they be fertile. The spore capsules in the great majority of cases are of a lucent brown tint, oval in shape, and attached by a stalk, which is continued from its point of attachment up and over the top and halfway down the other side as a ribbed projection, which, when the spores are ripe, contracts so strongly that the capsule is ruptured at the point where the rib terminates, and is torn violently and suddenly open, the upper portion flying backwards, and with the shock scattering the spores far and wide.

In a few species the ring, or rib, is either absent or runs round the upper portion horizontally, and in still fewer the spores are contained in different receptacles altogether, termed synangia. The spores in most species are brown, some smooth and oval, and others roundish and ridged; in the Royal Fern (Osmunda regalis), however, they are a light olive green, even when ripe, and in the common polypody they are bright orange-yellow, as are the capsules themselves. In speaking above of the capacity for germination we used the expression "as a rule" as regards abundant offspring, since fern spores vary considerably in their readiness to germinate, some becoming veritable weeds, while others germinate very slowly and are difficult to raise from despite every care. In many cases this slowness appears to be correlated with extra fertility in other directions, in the way of bulbil plants on the fronds numerous offsets, or travelling rootstocks, all of which tend to propagate the fern freely. Nature having in this, as in other cases, furnished increased means of propagation in one direction, reduces them in another by way of compensation.

Chas. T. Druery, V.M.H., F.L.S.

THE POSITION OF GARDENERS.

Allow me to thank "A. G. B." for his very complimentary reference to my article on the position of gardeners, which appeared in these pages on November 9, 1907. The question is a very knotty one, but I must confess I fail to see a solution of it just at present. "A. G. B." objects to men calling themselves gardeners who have no more right to do this than a house-painter has to style himself an artist. Just so, but when does a man cease to be a labourer or general factotum and begin to be a gardener. At present there is no line of distinction, nor is there likely to be while one hears people who employ a man to do the pony, cow, pigs, knives, boots, windows, etc., proudly referring to him as "the gardener." I am afraid there is no possibility of an Act of Parliament to stop people who employ a general odd man calling him a gardener, and if the latter gets the title from his master or mistress you cannot blame him for using it himself.

"A. G. B." considers that no man should be permitted to practise as a gardener unless he has passed an examination, and holds a certificate to show that he is proficient. There would certainly be something in this if, after obtaining his certificate, the gardener could command a respectable salary on the strength of it, but in most cases employers pay their gardeners what they can afford rather than what the latter are worth, and a stipend of a pound or twenty-five shillings a week would not be a big reward for passing an examination. Further, what kind of an examination would "A. G. B." suggest? We already have examinations in horticulture, and I notice that the certificates are chiefly won by college students—mostly girls, by the way. If "A. G. B." were an employer and owner of a garden, I wonder if he would like to put it in charge of one of these students, on the strength of the fact that he or she holds a certificate.

I am afraid the kind of examination that would act as a safe test of the ability of a gardener has yet to be devised, and I would rather favour a system of apprenticeship, by which a man could show that he had had so many years' training in a suitable establishment, and had the right in consequence to call himself a gardener. What I object to is the present wholesale system of making gardeners. Take the average establishment, where there is one head gardener and three or four young men in the bothy. What does it amount to? Three or four men are being trained to compete for one man's place, and they can't all have it. The result is that some must drop out or content themselves with the single-handed berths, where a host of odd jobs are mixed up with the horticulture.

Gardeners have, in my opinion, had a big finger in the pie that has led to the present state of over-crowding, and the lowering of the position of the profession in the eyes of the world. Gardeners have largely been the means of increasing the bothy system, by which labourers are done away with and gardeners in training are employed to do labourer's work. And in the selection of lads to put into bothies and train as gardeners, not half enough care is taken, with the result that the idea has got abroad that anybody will do for a gardener. The old apprenticeship system was in many ways better than the present method, if such it can be called, for, though the gardener of the old school was a bit of an autocrat, he was particular about his pupils, and if they were any good he could generally put them into the way that finally led to a fairly good position. Young gardeners to-day are more of the butterfly order. They flit about from place to place until they wish to get married, and then they have to hunt round to find a way of making a living.

By the way, are employers of gardeners anxious that the standard of men should be raised? I only ask the question because I have never heard any expression of opinion on this point, and it is a matter of some interest. In some cases, now, I am afraid that when engaging gardeners there is a haunting fear amongst a certain class of employer that the man may be too superior for the place. "Oh, I only want a plain kind of gardener, a man who can work and will take orders, but does not profess to know too much." This is the kind of thing one hears sometimes in connection with the engagement of a new gardener. Personally I think a few years at Kew is a splendid training for a young gardener, because it has somewhat the same effect on him as the finishing touches of a secondary school have on a lad who has been grounded in an elementary school; but I am not sure that all employers think so, because some seem inclined to the opinion that Kew training unfits a man for private service. I should like to hear the views of others on this point.

Gardeners are supposed to be badly paid in England, but here salaries are lucrative compared to what they are in Ireland, according to the testimony of an Irish member of the B.G.A., who has made a collection of advertisements culled from various papers in the Green Isle. I learn from a few selections taken from the bulk that the magnificent stipend of 12s. a week, with a free house, is offered for a gardener who is married and thoroughly understands his business. Aspirants to headships, please do not all speak at once, as the place may be filled. Thirteen shillings a week is offered for another gardener, but for this he must understand glass, and his wife must attend gate. The perquisites are summed up in two words—milk, lodge. With these examples it would be well to stop for fear we get worse, but if Irish gardeners should emigrate in a body by way of protest, who can blame them?

I notice that an interesting question was put at a recent meeting of the Bristol Gardeners' Association, viz., "Can anything be done to stop book travellers pestering young men for orders?" There is something original about this, and I should like to hear whether any satisfactory solution was given to the problem. Most of us know something of the gardening book canvasser, and if some authors of horticultural works were aware of the way he talks young gardeners into giving orders they would never write another book on horticulture. I can see him now, the typical book canvasser, a man of shabby genteel appearance, but with a tongue as near approaching perpetual motion as it is possible to get. He has talked and talked and talked to a lad earning 12s. a week until he has persuaded the latter that his professional existence depends on having a dictionary or something that will absorb one or two shillings a week out of the modest twelve, and, having achieved this victory, he goes to pitch the same yarn into some other unoffending journeyman. One wonders that men with such powers of tenacity and persuasion have not achieved something greater.

SPY.

Forcing Mint and Tarragon.—To pick useful green sprigs of mint and tarragon early in the year demands not so much skill as the exercise of a little forethought. I have known excellent and long sustained pickings to be obtained by simply running a spade under a few roots in the bed and transferring them to the inside border of a peach house, where they shared in the syringing given to the trees. A variant of this system is to place the roots in shallow boxes, and then stand them about the vinery or peach house. This is the better plan, as the boxes can be moved to a cold frame if necessary.—E. J. K.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

DECIDUOUS CALANTHES.—The numerous species and hybrids belonging to this winter-flowering genus will now be passing out of bloom. As soon as the flower scapes have been removed the potting compost should be allowed to become quite dry; when the grower is satisfied that the compost is free from moisture, the pots containing the pseudo-bulbs should be placed on a shelf or some other suitable position, where they may obtain the full advantage of available light. Where a large number of calanthes are grown, the storage of the pseudo-bulbs in their pots, as above mentioned, takes up much space, and this, where room is limited, is often a matter of consideration. In such cases it is a good plan to turn the pseudo-bulbs out of the pots, shake away all the old compost, and cut away the roots to within about an inch of the base of the last-made pseudo-bulb. The old bulbs should also be severed from the new ones at this time. Care must be observed to carefully label both the old and new bulbs when turning them out of the pots to avoid mistakes hereafter. When all the plants have been turned out of their pots, and the dead and decaying matter has been removed, take care to see that there is no scale lurking at the extreme base of the bulbs.

STORAGE OF PSEUDO-BULBS.—Select some shallow boxes, such as are used for ordinary propagating purposes, and at the bottom of the boxes place a layer, about one inch deep, of clean dried chopped sphagnum moss, freely intermixed with coarse silver sand or finely-broken crocks. On this layer the pseudo-bulbs may be stood, close together in an upright position, taking care that each kind is separated by a lath and properly labelled. The old bulbs should be given a box to themselves, as these are useful in cases where it is desirable to increase the stock. The boxes may then be stood close together in a suitable position, and space will be considerably minimised, compared with the room occupied, when they are stored in their pots. We adopt this method and leave the plants in the boxes until the growth becomes sufficiently advanced to repot in spring, the necessary encouragement being given after growth commences by keeping the moss moist at the bottom of the boxes. Some of the calanthes of the C. Regnieri section, which are late-flowering, must be kept moist at the roots and in a genial atmosphere until after the flower-scapes have been removed, after which they may be treated as above advised.

ORCHIDS COMING INTO FLOWER should be placed in a position where they may have full advantage of the light at the present season. One can scarcely realise the difference that light has upon plants. If we take, for example, a fine coloured form of Odontoglossum crispum flowering at the present season, and compare its flowers with those of the same variety expanded in the months of April and May, or any of the brighter months of the year, the lack of colour pigment will be found very great. Not only is there a deficiency in the colour of flowers produced in the winter, but the texture is also unsatisfactory. This may be to some extent remedied by the cultivator taking advantage of every facility for placing the plants under favourable conditions. In cases where the plants are at a distance from the roof glass, there will be a tendency in advancing spikes and flower-scapes to become drawn and weakly. By placing such within reasonable distance of the glass, these undesirable conditions may be minimised.—H. J. CHAPMAN, Oakwood, Wylam-on-Tyne.

CONSERVATORY AND GREENHOUSE.

GENERAL MANAGEMENT.—Throughout this month plants in the conservatory and greenhouse should not be stimulated by heat, and although some of them will bear a temperature nearly as low as the freezing point for a short time, without being apparently injured, yet such must be considered an exception to that which is natural to their constitution, and therefore the temperature should not be allowed to fall below 40 degrees, unless in very severe weather, when that point can only be maintained by so much fire heat as would render the air of the house too dry. Amongst plants usually introduced to the conservatory will be found some that require a considerably higher temperature than others, and on this account it will be advisable to maintain a temperature ranging from 40 to 45 degrees at night, and 50 degrees by day, or 55 degrees with sun heat and plenty of air. It it should be too damp although sufficiently mild, fire heat should be given to raise the internal temperature two or three degrees throughout the day, above that of the external air. Water sparingly, but effectually, when the soil in the pots indicates the desirability of watering.

GYPSOPHILA ELEGANS.—This is a most useful subject when grown in pots for the conservatory or house decoration. It is also very useful in a cut state, and can be had in bloom nearly every month of the year by a succession of sowings. Seed may now be sown thinly in five-inch pots, using a light porous compost. Thin out the seedlings, leaving five or six in a pot, and always keep them in a light, cool position. Stake and train as necessary.

CHRYSANTHEMUMS.—Close attention must be paid to the cuttings now in course of propagation. Some varieties root more freely than others. These should be removed immediately they begin to make young growth into another frame, which can be ventilated much more freely, and after a few days the lights may be removed altogether. It is most important that the young growth at this stage, and, indeed, at any other, is strong and short jointed. Coddling should be guarded against at all times; abundance of air must be afforded the cuttings immediately they are sufficiently rooted, but at the same time it is equally bad to rush from one extreme to the other, and the cultivator must be guided to a great extent by the weather and the temperature in which the plants are placed. Always remember that light and air, when chrysanthemums are under glass, will play a most important part as to the final result.

CINERARIAS.—These should have a free circulation of air about them when the weather is mild, and choose the early part of the day for watering. Do not allow the plants to become dry at the roots, and give frequent applications of liquid manure to those developing their buds until the flowers show colour, when it should be discontinued. Plants growing in lean-to houses should be turned regularly to prevent them growing one-sided. Fire heat should only be applied to keep out frost. Keep a sharp look-out for aphis, to the attacks of which cinerarias are especially liable.—T. B. Field, Ashwellthorpe Hall Gardens, Norwich.

THE FLOWER GARDEN.

INTRODUCTORY. — Readers will, of course, readily understand the advice given must to some extent be general rather than particular for a paper having the wide circulation of the Gardeners' Magazine, and due allowance in the matter of time must be made for performing the various operations. At the time of writing this we are having a spell of cold easterly winds with frost, which are to some extent hindering the work outside, though enabling other work to be pressed on. While the ground is clear of snow, leaves not yet raked up, especially on grass near trees where bulbs are planted, should be collected and cleared off, so that when the flowers open there will be nothing to injure them or detract from the effect. As growths are in some cases appearing above ground, care is necessary to avoid damaging them. In warm, sheltered spots the earliest of the snowdrops will soon begin to open, closely followed by the aconite, and where these are planted together at the fringe of or under trees or shrubs in suitable places they make a pleasing combination.

PLANTING.—It is not desirable to do much in the way of planting this month, February being more suitable. If the weather is favourable, and plants are in readiness or waiting to be planted, they may be dealt with. Deciduous and evergreen shrubs may be planted, as also herbaceous plants and late anemones. Sometimes late bought bulbs are planted at this season, but it is not a desirable practice, the bulbs have naturally lost some of their vitality, and have not sufficient length of time to properly root and establish themselves before the flowering season.

ALTERATIONS. — Push on with any ground work, consequent on alterations now in hand, making or turning of walks and general cleaning up, as work will soon come on with a rush. It is best to leave dead fronds on hardy ferns for a time longer, as they are such good protection to the crowns.

PERGOLAS are justly increasing in popularity, and in suitable positions are very beautiful. In their construction avoid making them too narrow, and be careful to have them substantial. Structures of wood, brick, or stone, or of a combination of all these materials, are much better than are those of iron. If wood, the posts should be not less than six inches in diameter, but if thicker, so much the better, as they will then last several years. Materials that are quite permanent, as brick and stone, are preferable. The height, etc., must be decided by the position the pergola is to occupy, it should, however, not be less than eight feet high, and as much wide, while it may be as much as fifteen or sixteen feet wide. Where it is not possible to build a pergola, it is often possible to build one or a series of arches along walks, and at bends or corners, on which roses or other suitable climbing plants may be trained.

AMERICAN ALLSPICE (Chimonanthus fragrans) will now be opening its fragrant flowers, and these may be gathered, laid in shallow saucers of water, and placed in the residence, where their sweet perfume will be much appreciated.

CARNATIONS AND SPRING BEDDERS should have the soil kept firm about them, as generally after frost they are quite loose and cannot root properly. Manure and dig or trench any vacant beds or borders, though with the numerous varieties of plants and shrubs now at command, vacant ground should be very scarce in the flower garden. If weather becomes very severe the most tender things should be protected, either by bracken being lightly secured over beds, mats laid on sticks over them, or similar protection given. Where there are a number of suitable chrysanthemum cuttings on old plants outside, these may be taken and rooted, and the old stools should be lifted, divided, boxed up, and put into an unheated frame or house, as probably, if left in the ground throughout winter, severe frost will kill them.

SNOW AND EVERGREENS. — Should heavy falls of snow occur at once, relieve all evergreen shrubs and trees of the heavy covering to prevent damage or breaking.—E. F. Hazelton, Knowsley Gardens, Prescot.

HARDY FRUITS.

MORELLO CHERRIES.—These, if not already finished and put right for the time being, should be taken in hand at once. The pruning and nailing of Morello cherries I usually commence very early, when the weather is warmer and more suitable for getting on with the work. Before commencing to prune and nail the trees cover the border with some strawy litter, or use planks to tread upon, as this not only prevents the border from being trodden into a sticky state, but is much more comfortable to the worker. Trees which may have been neglected, and require a large amount of thinning, should be removed from the wall and all the old nails, shreds, and ties should be destroyed. Cut out all the old long branches that can well be spared, and retain as much as possible of the young fruiting shoots, not forgetting it is from the young wood as well as the spurs that the cherries are produced. If anything has to be done to the wall it should be done before replacing the branches. Syringing with a mixture of soft soap and paraffin, at a reasonable strength, one small 60-sized flower pot full of paraffin to three gallons of water, together with four ounces of soft soap, is a good practice. Thoroughly mix and syringe this forcibly into the crevices, and it will, in a great measure, destroy any insects harboured therein. Clean all the old wood thoroughly with the same kind of mixture, using a scrubbing brush for the work, but the young fruitful wood, full of buds, should be more carefully dealt with, sponging these with a weaker solution.

TRAINING.—First regulate the old branches, securing them to the walls at equal distances, and then fill in the bare spaces with the young wood, but not too thickly; when tying allow plenty of room for the swelling of the wood during the coming seasons. Young wood should be carefully preserved all over the trees, and especially at the bottom of the trees, as these can be trained over the old bare branches, and in due time replace them entirely, so that instead of a lot of long, bare, useless wood, good fruitful shoots will cover the walls. Trees which may have been more carefully attended to annually will require much less attention. Remove all ties and shreds likely to pinch the wood, lightly prune, and replace any of the branches to keep the trees in good shape; follow with a good syringing, then remove a little of the surface soil, and finally top-dress with good loam, crushed lime, and manure. Recently planted trees need not be touched for some time; they must be allowed to settle before securing the branches to the walls.

GENERAL WORK.—Although the best time to plant fruit trees is early in the autumn, they may be planted at any time from November to March with good results as long as the weather keeps open and the soil is not too wet and sticky. When planting trees at this season of the year prepare the stations for the reception of the trees, and plant them immediately in case the new soil should become soaked with rain. Trees should never be planted too deeply, especially on heavy land, but the roots should be carefully trimmed and spread out flatly and as evenly as possible. If the soil is too wet a few shovelsful of fine soil from the potting bench spread over and about the roots before filling in with the staple will encourage new roots.

WET WEATHER.—Should the weather be unfit for planting where fruit is grown extensively, there will always be jobs to be done under cover that will be useful at a later date. There are labels to see to, and nets, stakes, and shreds to be made ready, and protecting materials to arrange for. Cuttings of gooseberries and other bush fruit may still be made, labelling these correctly as the work proceeds.—H. Markham, Wrotham Park Gardens.

Selaginellas for Table Plants.—Anyone who has many table and room plants to provide cannot well have too great a stock of those useful selaginellas S. Kraussiana and S. K. aurea. Many gardeners dibble pieces of these in over the surface soil of all plants likely to be called upon for the table, and the practice is an excellent one where strong liquid manure is not used; this latter often kills or browns the selaginella. A first-rate plan is to fill a few shallow pans or saucers with a mixture of equal parts of loam, leaf-mould, and silver sand, and dibble selaginella cuttings in thickly over the surface. In the stove this soon forms a mat of greenery, and it can be drawn upon at will for hiding the bare soil of room or table plants.—E. J. K.

ALLIUMS.

Among the many bulbous plants which are held in comparative neglect by the great mass of gardeners and flower-lovers of all classes are the alliums, or garlics, which, despite the odour so many possess in a more or less marked degree, are much more worthy of cultivation than many would suppose. Not the least of their recommendations is that they generally bloom at a time when bulbous plants are not too plentiful; while the singularity of some of the species compensates largely for the want of the brilliant colouring which only a few of them possess, although the purity of the white of many gives to these a high value in our eyes. One cannot but agree, in looking at some of these, with the words of Ruskin, who said: "The star-group, of the squills, garlics, and onions, has always caused me great wonder. I cannot understand why its beauty and serviceableness should have been associated with the rank scent which has been really among the most powerful means of degrading peasant life, and separating it from that of the higher classes."

Fortunately, however, all the garlics have not this scent in such a pronounced form as others, and there are many which, in our gardens, would be unrecognised as allies of our wild ramsons or garlics because of their beauty, and the onion-like odour being only perceptible when the plant was cut or bruised. Few are really so strong in their odour that it is perceptible without direct contact, and this renders them suitable for many purposes in these modern gardens of ours, which ought to contain at least some representatives of such summer-flowering bulbs as the alliums. They flower over a considerable period, and one may have them from May to August, especially in a year such as the last, when the later species bloomed longer than usual, and one had really good flowers from the genus until long after the middle of August.

It would take up too much space to deal fully with the genus, and even the plants in cultivation and procurable by those intent on securing them, would require more than can be afforded for a class of plants not in high popular favour, so that one must confine oneself to a few of the most useful or those most distinguished for some peculiarity or uniqueness of appearance. Among the species but little known, but yet deserving of more regard, is A. acuminatum, a really pretty species, with good-sized, flattish heads, about three or four inches across, formed of delicate rose-coloured flowers, each about half-an-inch in diameter, and on stoutish stems about a foot high. It is not by any means a scarce bulb, yet it is but little known in gardens, although apparently quite hardy. There is a purple form, of rather less beauty.

Another ornamental allium, but one which seems to dislike a wet winter, as it sometimes goes off in such, is A. azureum, a pretty allium, growing, as a rule, about a foot or a little more high, and giving round heads of deep sky-blue. This is a pretty and useful allium, especially if carpeted with such a subject as the annual limnanthes.

Seldom met with, although cheap, is A. ciliatum, about ten inches high, and giving umbels of an almost flat form of fair-sized white flowers. It is one of the latest to bloom with me. It is said to be synonymous with A. sub-hirsutum, but the plants I have cultivated as such are quite distinct, both in character and in time of bloom.

A little-grown, but worthy species, is A. flavum, which grows about a foot high, and gives umbels of pretty little drooping pale-yellow flowers. It is of slender habit, and would hardly be recognised by the casual observer as a near ally of A. Moly. There is a rose-coloured variety, called pumilum roseum, of some beauty.

I must confess to caring but little for A. giganteum, introduced from Merv more than twenty years ago, which some of us recollect being greatly praised on its introduction. Its stature, three to four feet, seems to the writer its great feature, as its large, globular heads of flower, which are described as lilac, are of the lurid hue which is against so many of the coloured alliums, and the plant is, as a whole, coarse.

One of the quaintest of all my garden plants last year was A. Karataviense, a low-growing species, some nine inches or so in height, but with a large globular head of flowers of an extraordinary character. When in bloom, and seen a little off, it resembles a gigantic head of dandelion in seed, the manner in which the flowers are arranged on the globe, and their greyish colouring lending colour to the general resemblance. It is very distinct from the majority also on account of its broad and glaucous leaves.

A. kansuense, which I used to grow in my last garden, but which I have not at present, is a pretty little species with deep blue, small flowers, and is only a few inches high. It is one which I shall be glad to have again when an opportunity offers.

A. Moly, the old Moly, whose golden flowers look so well in the garden in late May or June, is a much finer plant than many are aware of, its yellow flowers and glaucous leaves looking bright and effective when rising from some dwarf carpeter in the bright days of the season at which it blooms. It is about a foot high. It may be mentioned that practically all the alliums should be carpeted with other plants, as the majority lose their leaves before the flowers are in perfection.

A. neapolitanum, so much used for forcing, is so well known that one need say nothing about its pure white flowers or its value, depreciated, however, by its strong odour after standing in water for a little time. It is fairly hardy, but I have lost it in severe winters, which had wet intervals between the frosts.

A handsome species which few appear to be acquainted with, is A. orientale, which has broad and ornamental glaucous leaves and long stems some two feet high, surmounted by a good, flattish head of creamy-white flowers. This is a good garlic of considerable beauty.

A. Ostrowskianum is now fairly well known, and gives us good, deep rose, or pale purple flowers in drooping umbels. It grows some eight or nine inches high, and is generally confounded with A. oreophilum, a dwarfer plant. A. pedemontanum, of somewhat similar character, is one of the prettiest of the genus, and an excellent plant for the front of the border or the rockery.

The old A. roseum, with nice umbels of rose-coloured flowers on stems a foot or more in height, is hardly ever met with now, save in a botanic garden. It remains one of the most useful of the genus.

A. Schuberti, an extraordinary-looking plant, especially when in seed, was introduced about nine years ago, but has not yet become well known. It has what is termed a sub-globose head of flowers on long stalks, and is quite ray-like in appearance. The flowers are purple. I have not found this very hardy, over a period of years, but it is such an extraordinary plant that it is well worth growing.

A. sphærocephalum is a late bloomer, coming in for August, and even for September bloom. It has long stems about two feet high, each with a globe of little flowers at the summit. These open from the top and are purple. It is too long in the stem for the size of the heads, and should be grown with a tall carpeter.

A. stipitatum, whose acquaintance I made last year only, is a good and distinct allium, with stems about two feet high, and having a globular umbel of violet purple flowers on longish stalks. It has handsome leaves, but these are past ere the flowers open. This is a species well worthy of notice. A. sub-hirsutum, already referred to in connection with A. cernuum, is one of the most beautiful of the white-flowered varieties, with rigid stems, and when seen in a good group, very pleasing.

Few among the species are more beautiful than A. triquetrum, which has triangular stems about a foot high, carrying umbels of pure white-drooping flowers. This is a very hardy and ornamental garlic, a little strong in odour when bruised, perhaps, but not obtrusive in itself.

One might have discussed other species, of which there are many, but these are some of the most easily procured, and a selection from them will give a pleasing variety in the garden. Their culture is easy, as the greater number will thrive in any good garden soil, preferably of a rather light nature. They should be planted from two to three inches deep, according to the size of the bulb, as early as they can be procured in autumn.

S. Arnott.

ALTHÆA PONTICA.

In common with many gardeners who take active interest in the planning of gardens, I have often had occasion to use quick-growing plants of giant stature as a temporary screen (in the case of new gardens), or as a means of filling the troublesome gaps that occur in old shrubberies. For many years I used bocconia and kindred plumy plants, and right well they filled their office, but when colour was wanted in connection with stature, selection was limited. A giant species of hollyhock (Althæa pontica) is one of the few plants I can recommend for this purpose. It must have plenty of room, full light everywhere, and a tolerably rich soil; with these requirements fully met, it will reach sixteen to twenty feet in height, every few inches of the many stems will bear a large, refined rose-pink flower typical of hollyhock in shape, but seemingly of a more attractive colouring than many hybrid varieties, and they give the impression of being stouter in substance than really is the case.

This althæa has one good feature that will appeal to many who fail to grow hollyhocks; it is not debilitated by disease. It is not immune, however, far from it, but a few spots here and there are nothing when the exceptional vigour of this species is taken into account. It is a good perennial, but does not reach full stature till the second year, hence those who may have occasion to plant it must keep a few seedlings in the reserve garden to draw upon as they may be wanted. Its greatest use in the garden is in the furnishing of shrubbery gaps. A cluster of leafy spikes thickly studded with flowers, towering through an ugly gap, impresses one with its value.

G. B. Mallett.

A TALK TO GARDENERS.

In commencing my talk to gardeners, let me first say that I am a gardener of the single-handed class, which is by far the most numerous in the country. I have a garden two acres in extent to look after, and this is so arranged that there is a fruit and vegetable garden of one acre, and a similar area devoted to lawns, shrubbery, rosery, flower beds, and herbaceous borders. I think this fairly represents the average gardener's place throughout England. Anyway I feel assured that everyone will agree it is quite enough for one man to manage, even with occasional help in the summer. I have been here six years, so I presume I "give satisfaction."

It will be generally agreed that nothing disheartens a gardener so much as to find his work not appreciated, and especially if he is conscientiously doing his best. But in my opinion it is very often the gardener's own fault when this is so. He may have learnt his business in every detail as an under-gardener, or he may have been in one place a considerable number of years, and when entering on a new charge he finds himself called upon to carry out a quite different style of gardening. If he persists in working on the same lines as those followed in his previous place he will very likely have to bear with some amount of unpleasantness. Different persons have different tastes, in gardening as well as other things. Let the gardener in entering on a fresh charge find out what his employer's wishes are with regard to his garden, and then devote himself to carrying them out. Employers are generally willing to tolerate any shortcomings on the part of the gardener if they can see him trying to do things in accordance with their wishes. He should put his own views entirely on one side, and endeavour to look at the garden from his employer's standpoint.

A gardener, it should be remembered, requires great patience and tact in dealing with the different members of the household. Take first the master, who is often away at business all day. He may be an enthusiastic gardener himself, or he may not, but in any case, he will like to see the garden neat and tidy when he is at home on Saturday afternoons and Sundays. He can then find pleasure in taking his friends round, as he will not find anything to give him annoyance. An employer does not like to hear grumbling from the gardener as to how hard he has to work, and so on. If he brings home a tree of any kind or a flower root, he has much interest in seeing it grow, and though the gardener may look upon it as of no account, he will do well to give it every attention, and make the best he can of it.

There is also the lady of the house to be considered, and, as a rule, whether she understands gardening or not, she will require plenty of flowers for house decoration, and the gardener will be wise if he devotes special attention to the work of supplying them, and makes careful note of what flowers are preferred. Although the gardener may not like to see the garden partly denuded of flowers for the time being, he should remember that they look well in the house, and meet with more attention and receive greater admiration than they would have done had they been left on the plants. If there are any grown-up sons they will not, generally speaking, overlook the possibility of the place providing them with games of some kind, and this should be kept in mind.

Again, the daughters must have due consideration. They will probably want to play tennis or croquet, and may be they will bring seeds that they have had given them, and want the gardener to see what he can do with them. If there are young children they may want to do a little gardening, and if this is the case they should not be frightened off, as so often is done. To see a bulb or a tree grow which they have planted themselves gives them the greatest enjoyment. Too often the gardener throws cold water on their little efforts. They always remember the manner in which the gardener treats them, and when they have the chance they treat him accordingly.

In conclusion, let me say that when gathering vegetables they should always be so prepared as to reach the kitchen in a clean state, without waste. If this is not done there will surely be complaints about them. This all helps to show what a self-sacrificing occupation that of the gardener's is, but if he has to sink his own personal feelings in gardening he will have his reward in seeing those by whom he is employed happy in the enjoyment of their garden.

H. Roberts.

Bentley Heath,, near Knowle, Birmingham.

BACTERIOSIS IN WINTER-FLOWERING CARNATIONS.

A correspondent of the "Weekly Florists' Review" writes concerning Stigmonose or Bacteriosis, as follows:—

This disease seems to be the final undoing of more varieties than any other disease or cause, and that in spite of the fact that we know to a certainty how it is introduced into the plants' system and that it could be prevented. It must be admitted that it is directly caused through carelessness on the part of the grower in keeping down insects. While it is almost impossible to keep the plants absolutely free from thrips, red spider, and aphis, yet the careful grower will allow so few of these pests to live that there will not be enough punctures to injure the plants perceptibly. A plant will bear a moderate amount of these punctures without showing any deterioration, but if they are too numerous the drain on its vitality is too severe, and a breakdown of the cell structures is sure to follow. This is especially true of new varieties.

A plant which is started from seed is entirely free from this disease until it is inoculated through insect punctures. This may happen any time after germination. A plant which is raised from a cutting may have been infected when the cutting was taken from the old plant. In fact it is almost sure to have some of the poison in it, if the old plant showed any signs of it. The more of these light spots that show, the more is the disease getting the upper hand. So, after a plant is once infected, it is entirely a question of cutting selection, attention to insects, and careful growing being only natural, whether there is disease or not. Spraying with fungicides or germicides, or fumigating, will do no good. If the cuttings are taken indiscriminately, regardless of the amount of disease they contain, it will become worse each season until it destroys the whole stock; whereas if the cuttings are selected carefully, and only such taken as show no spots whatever, and this is followed up each season, the disease can be worked out of the stock entirely. As I have said before, the value of a variety must determine whether it is worth the trouble. New and improved varieties come along so rapidly that unless a variety is unusually good it would pay better to discard it entirely if badly infected.

It is sometimes stated that the presence of this disease signifies that a variety is getting old and less vigorous. I do not agree with this theory. The only thing it proves is that there has been carelessness on the part of the grower in keeping down insects and in the selection of cuttings. There is, however, considerable difference in varieties. Those which have a hard surface and firm growth in general will not succumb so easily as those of a softer nature. That is why some varieties never show this disease at all, while others will show it when you get them from the originator.

One thing which the presence of these spots does prove, however, most conclusively is, that unless great care is exercised the variety will not last long.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in EASILY GROWN HARDY PERENNIALS. The Publisher of THE GARDENERS' MAGAZINE will send you a copy from 148-149, Aldersgate Street, London, E.C., by post, for 5s. 6d.

ERADICATION OF FAIRY RINGS.

With reference to the injurious effects of fairy rings on turf, which were the subject of an interesting note in the "Journal" of the Board of Agriculture for August last, Mr. G. H. Robinson, assistant vegetable pathologist, Victoria, states that of all the causes which operate against the formation and maintenance of a good, even turf in bowling greens, golf links, and lawns in general, none is more potent, in Melbourne and its suburbs, than the fairy ring puff-ball (Lycoperdon polymorphum, Vitt.). For ten years or more the fungus has been defying the efforts of the caretakers of the Melbourne bowling greens to eradicate it, and until recently nothing short of digging out the affected areas was regarded as satisfactory. Such a method, though practicable where the rings are few and small, is out of the question when large and numerous, owing to the difficulty of securing a level surface after the work, and in a green so treated the remedy would probably be worse than the disease. Within the last two years, however, a cheap and effective method of eradication has been found, so that the fairy ring ceases to occupy the position of a dangerous enemy, and may be regarded as a parasite easily destroyed.

It may be mentioned that the name of "fairy ring" has been given on account of the curious effect of the fungus upon the grass where it is found. The spawn of the fungus draws its nourishment from the roots of the grass, and spreads always in an outward direction to all points of the compass, so that shortly after a green has been infected, and during the latter part of summer, a number of darker-coloured, narrow circular bands or rings may be seen, less than a foot wide, but with a diameter of a few or several feet. In these rings the grass is at first so much deeper in colour than the rest that they are easily seen from a considerable distance. It used to be said that this richer green was due to the dancing of fairies; hence the name fairy rings. Soon, however, a change for the worse is observed; the grass in the ring becomes thin, though still retaining its deeper hue; much of it dies away, resulting in an uneven surface, and a great number of small puff-balls are formed. If the grass is swept and rolled every day these puff-balls often escape notice, since in such cases they scarcely exceed the size of a pea; but, growing unchecked, they may reach a diameter of an inch or more, and may be nearly two inches high.

About ten years ago Mr. McAlpine, vegetable pathologist of Victoria, made some experiments with various fungicides, and it appeared that a solution of sulphate of iron might overcome the disease, but the experiments were not conducted long enough to be conclusive. In April, 1905, Mr. G. H. Robinson was requested to make an effort to eradicate the pest on a bowling green in Victoria. Some preliminary trials were then made on a small scale, plots being treated with a solution of iron sulphate, Bordeaux mixture, copper-soda, and copper sulphate solution. It was soon found that mixtures like Bordeaux and copper-soda with their bulky gelatinous precipitates, were useless for the work, for the material could not be made to permeate the soil so as to reach the spawn of the fungus. Of the others, a copper sulphate solution of one ounce per gallon, using half a gallon per square yard on three occasions a week apart, was found to injure the grass before eradication was complete. Fortunately, the plot treated with sulphate of iron was doing well, no puff-balls appearing after three applications of a solution of rather less than one pound in five gallons of water at intervals of a week, though, of course, it was then impossible to say whether the fungus had been entirely destroyed. The only sure sign of eradication is the absence of fairy rings and puff-balls in the next season.

The measure of success achieved with sulphate of iron appeared sufficient to justify its use over the whole green, the rings being then so numerous that it is doubtful if an area of thirty square yards was free of them. The green was therefore divided into plots of sixty square yards, putting on that area eight pounds of sulphate of iron dissolved in thirty gallons of water. The solution was made in barrels and applied with ordinary zinc watering cans, one man using two at a time, one in each hand. The evening previous to the application the green was well watered, and after the solution was applied a further light watering was given to assist to convey the solution down to the roots. The green was closed two days prior to the first application, and it was found that where much trampling had occurred when play took place the iron sulphate blackened the grass to some extent, but no lasting injury resulted. Little effect was observed from one application beyond a deepening of the colour of the grass and a marked reduction in the number of puff-balls.

Three additional treatments were given, four in all, at intervals of a week, and only two puff-balls were gathered on the whole green after the second dose, though before the first it would have been no hard task to collect a barrowful. Since the third treatment no puff-balls have been seen on the green, and two whole seasons have passed with no trace whatever of anything in the shape of a fairy ring. Owing to the large amount of sulphate of iron used, over a ton to the acre, it was deemed advisable to give a heavy dressing of lime to reduce any remaining in the ground to a harmless state. A week after the last application, quicklime, freshly slaked to a fine powder, was evenly spread over the surface at the rate of one ton per acre.

The success of these operations was so pronounced that other greens similarly affected were treated last autumn. A few precautions should be taken by those who try this method. Chief amongst them is the necessity for keeping the ground moist, while on no account must the dressing of lime a week after the last treatment be omitted. The area to be treated is better left without rolling, and it is well to cut the grass only once a week during the work, say two days before each application. Though four doses were given, it is possible that three would prove sufficient, but less than that might leave some spawn uninjured in the soil to form the centre of another outbreak. The autumn—when the fungus is actively growing—is the proper time for the work; in the height of summer, or in the depth of winter, the prospects of success are not so good, while the risk of injury to the grass is greater.

Chrysanthemum inodorum Bridal Robe.—Annual flowers hardly ever come amiss in the garden, whether employed as bedders or grown among perennial flowers, either as a supplement to their beauty or for securing plenty of bloom at seasons when the perennials may give some gaps in their succession. Useful as it is valuable, Chrysanthemum inodorum plenissimum, the new variety, called Bridal Robe, which I had the pleasure of making the acquaintance of last year, is very beautiful indeed. As a bedder it will prove almost unsurpassed where a close array of pure white is required. The flowers, like large double daisies, are produced in enormous numbers, and are of the very purest white, the whole, when massed together, giving a snow-like effect to the bed. The great doubleness of the blooms has the effect of prolonging the time of flowering, and one can hardly conceive any of the annuals of recent introduction as being likely to achieve a higher place in the estimation of those who desire a good bedder of this character and growing from nine to twelve inches high. It comes true from seed, and may be raised in the ordinary way of other hardy annuals.—S. A.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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British Gardeners' Association.

At the last meeting, held on December 31, nine new members were elected, making 1,128 since the establishment of the association. The secretary reported that the last issue of the "B.G.A. Journal" had been posted to every member, both at home and abroad. The design for the members' certificate was adopted, and, it is hoped, this will be ready for issue in a few weeks. The report of the Richmond and District branch for the past year was received and discussed, and will be printed in next issue of the association's "Journal." Gardeners are reminded that the B.G.A. is confined to qualified gardeners only, and that new members may join at any time, provided their credentials are up to the required standard. Forms can be obtained from the Secretary, B.G.A., Talbot Villa, Isleworth, W.

Bristol Gardeners' Mutual Improvement Association.

The usual fortnightly meeting was held on Thursday, January 2, at St. John's Parish Room, and was presided over by Mr. A. O. Shelton. The lecture was upon "Butterflies and Moths," and was given by Mr. L. Stafford, Caerleon, Mon., representative of the Newport Gardeners' Association. Mr. Stafford is an enthusiastic entomologist, his collection comprises practically all the British species and varieties of butterflies and most of the moths, the result of nearly twenty years' work. The lecturer had fourteen cases of insects on view, which added interest to the lecture, and for these he was awarded a special certificate. Mr. Stafford said there are from sixty to seventy kinds of British butterflies, and hundreds of moths; they belong to the order of Lepidoptera, and are true insects, because they pass through four stages—egg, caterpillar, pupa, and imago, the latter of which have three divisions—head, thorax, and abdomen. The female insect will fly for miles to find a suitable tree or plant on which to deposit its eggs, and thus ensure food for the caterpillars when hatched. These will devour two or three times their own weight in a few hours, and whose aim is to prepare for the next stage—the pupa—from which the perfect insect emerges. The lecturer was accorded a very hearty vote of thanks. For two primulas Messrs. Shelton and Curtis were placed respectively first and second.

Tonbridge Gardeners' Society.

At the annual meeting of this society, which was held at the Bull Hotel, with Councillor T. Ives in the chair, and Mr. C. Milner in the vice-chair, a satisfactory report was presented to the members. The receipts for the year, with the balance of £1 10s. 5d. from the previous year, amounted to £110 11s. 11d. Of this sum £43 14s. 6d. were subscriptions, and £28 6s. gate money. The expenses were £106 8s. 9d., including £3 10s. sent to the Royal Gardeners' Orphan Fund, and £45 12s. paid in prizes, leaving a balance in hand of £4 3s. 2d. Both report and balance-sheet were adopted. The chairman, vice-chairman, treasurer, auditors, and secretary were re-elected, and Messrs. Dann, Lawrence, Ireland, Humphrey, Webler, Russell, Remnant, Keale, and Orrom elected as members of the committee. The chrysanthemum show was fixed for November 11 and 12, when about £50 will be offered in prizes.

NOVELTY IN ROSES.

In addressing the Chicago Florists' Club on the occasion of its December meeting, Mr. E. G. Hill, the well-known rosarian, of Richmond, Indiana, U.S.A., said: "Anything new in roses?" is a question propounded much more frequently now than a few years ago, especially by the rose growers of America, and the same question is asked with even more interest in Europe.

The rose growers, he said, charge the retail store men with being more largely responsible than themselves for the seeming indifference toward new varieties, and in this there is undoubtedly a considerable degree of truth, but it must be confessed that a large number of florists, including the growers, have shared in this indifference. In the light shed on the matter of novelty by the milliner, the silk manufacturer, the dry goods man, and, in fact, by all the vendors of apparel, ornament, and furniture, it is surprising that the florists should have been the reactionaries in the matter of novelty in roses, but we have to admit that such has been our past record.

Novelty in Roses is Being Sought.

It was a leading society lady who gave utterance to the protest against being compelled to use Bride, Maid, or Beauty for her frequent functions. Her criticism was only too well justified, and she simply voiced the general complaint concerning the world's pre-eminent flower, the rose. But a change has recently taken place and new varieties are given a very different reception from that accorded a few years ago. It is well for the rose that such is the case, else the carnation would have continued its triumphant march to the point of disputing leadership with the rose.

Believing that a radical change has taken place, and that novelty in roses is being sought, the question arises: Shall we be able to meet reasonable expectations, and can we provide new varieties so as to satisfy this greater interest? The answer is in the affirmative, and it is a pleasure to record that a considerable number of workers are endeavouring by hybridisation and cross fertilisation to give to the rose-loving public new forms and types.

So many qualities have to be present in a rose that lays claim to favour as a forcing variety that the progress made will seem slow, but, nevertheless, it is within the range of possibility to gain entirely new and unique colours and forms.

Future Efforts.

I believe, said Mr. Hill, with Mr. Robert Simpson, the present president of the American Rose Society, that the forcing roses of the future will come largely from an admixture of Rosa indica with the present hybrid perpetuals. In fact, do not the hybrid teas bear witness to this prophecy? Still, the strong old Bourbon varieties, like Gloire des Rosomanes, should be made to furnish their rich scarlet tones to the newer sorts. Our task is to breed into the tea varieties the strength, vigour, length of stem, and the finer dark shades found among the hybrid perpetuals, using the tea section in order to secure freedom in flowering. The varieties of the future will not be the result of a single cross between the two sections named, but will be the result of patient interbreeding, extending through a series of years. Here and there a desirable new variety may make its appearance as a result of a haphazard cross, but to get at definite results we must make careful note of the qualities present in the progeny and then seek to breed those missing qualities into future seedlings.

We must not forget that Rosa indica is the one class that is to furnish the foundation for all our forcing varieties, and this is on account of its continuity of bloom. No matter how fine a rose, or what the tint or length of petal, unless it has the inherent power to produce buds and flowers freely it will prove practically valueless. We have every reason to hope that we may yet possess the ideal from the careful crossing of the hybrid perpetuals and the teas. We have Richmond, Mme. A. Chatenay, Liberty, Killarney, all undoubtedly from this source; hence it is within reason to hope for others in this particular line.

Peculiarities of New Varieties.

The new varieties appearing will perhaps require more careful treatment, or at least different cultural treatment from that given our present forcing varieties. The new varieties will require study; perhaps some will thrive best grafted on certain stocks, or will do best in certain soils. A case in point is the variety Killarney. It was Mr. B. Dorrance who discovered the peculiarities of this variety and who brought it into its present prominence. It would be well, therefore, to give new varieties a careful trial before casting them aside. My conviction is that we have much to learn in regard to right cultural conditions. I am inclined to think that perhaps other valuable varieties have been lost sight of by their not having had proper cultural treatment. We know that to grow American Beauty successfully requires the application of good cultural skill, and very often this variety fails to give best results in the hands of the most skilful growers. Great progress has been made in methods of culture, and you have some notable examples in this line in your own vicinity. I mention the cultural side of the question in order to show how important it is that new introductions shall not be condemned too hastily.

Some fairly successful rose men still inveigh against Killarney and Richmond, because they cannot do them successfully, and it is only the fine showing made by a majority of our best growers that has given these roses the position they deserve. Each new rose must be studied and results carefully noted, before its cultural requirements can be known. It is infinitely easier to master the peculiarities of two or three sorts, drop down into a rut with them, and run along comfortably, than to experiment, and fail, and try again. Experimental work is seldom comfortable work, but buyers demand novelty and variety, and there is nothing for it but for us to take off our coats and do our best to provide what is demanded of us.

Golden Wedding Celebration at Edinburgh.—Messrs. Dicksons and Co., 1, Waterloo Place, Edinburgh, entertained their employees at the Craigmillar Nurseries, on the occasion of the golden wedding of Mr. William McAra, one of their nursery overseers. Mr. Welsh, one of the partners, presided over a company of sixty, and in a few words of congratulation to Mr. and Mrs. McAra presented them with a purse of sovereigns, which had been subscribed by Mr. McAra's fellow workers. A dance followed, and altogether a very enjoyable evening was spent.

A New Work on Sweet Peas.—During 1907 there was a marvellous development of sweet pea culture, and a wonderful advance in the form and colour of the new varieties of our most popular hardy annual. At this moment there comes most opportunely an attractive, useful, and entertaining little book on "Sweet Peas and Their Cultivation for Home and Exhibition," by Mr. Charles H. Curtis, F.R.H.S., hon. secretary of the National Sweet Pea Society. The history and evolution of the sweet pea make up an interesting story, and these are followed by chapters dealing concisely and clearly with seed sowing, ground preparation, methods of staking, manuring, how to raise new varieties, how to cut and pack the flowers, and how to win prizes. There are lists of the best varieties, and of too-much-alike varieties, consequently one discovers what to grow and what to avoid. The book is freely illustrated, and it is published this week by Messrs. W. H. and L. Collingridge, 148, 149, Aldersgate Street, London, price one shilling (by post 1s. 2d.), or bound in cloth 1s. 6d., by post, 1s. 8d.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

PENTSTEMONS.—H. C. N., Cheshire: We do not know whether the strain you mention is in commerce; but if you write to Mr. E. Beckett, Aldenham House Gardens, Elstree, we have no doubt that he will give you the required information.

BEGONIA GLOIRE DE LORRAINE.—R. M., Sussex: You have not been correctly informed with regard to the origin of this begonia. It was raised by M. V. Lemoine from a cross effected between Begonia socotrana, which, as stated in our issue of the 4th inst., was discovered by Professor I. Bayley Balfour, when exploring Socotra, and B. Dregi a species that had long been in cultivation. It was distributed in 1892.

GARDENERS AND THEIR WORK.—H. R., Birmingham.—We are much obliged by your communication and appreciate the spirit in which it is written. A frank discussion among gardeners regarding their position, duties, and so forth can hardly fail to prove useful to all concerned, and help to maintain the good feeling which happily so generally exists between employers and their gardeners. This good feeling is largely due to the strenuous efforts that are made by gardeners as a body to proceed on lines that are in full accordance with the requirements and wishes of their employers.

PRUNING GRAPE VINES.—G. S., Hampshire: It is a good rule to prune grape vines on as early a date as convenient after the leaves have fallen. When pruned thus early there is sufficient time for the cuts to heal before the sap begins to rise. When the pruning is delayed until this stage there is some difficulty in preventing "bleeding," which, if not checked, has a weakening effect upon the vines. The few bunches of grapes remaining upon the vines should be cut with some seven or eight inches of the lateral below the bunch. For keeping them in good condition until required for use, suspend bottles in the fruit-room, place two or three small pieces of charcoal in each, and fill to the neck with clean water. Then place the lateral of each bunch in a bottle and just deep enough for the bunch to be quite free from the neck of the bottle.

FUCHSIAS FOR BEDDING. — W. B., Yorks: As you require plants between two and three feet high when you bed out at the end of May, it will be necessary to commence the propagation of a stock early in the year. We suggest that within the next fortnight you prune the old plants of the varieties you require, and place them where they will have the assistance of a temperature ranging between 50 and 60 degrees. With moderate waterings at the roots, overhead syringings, and the temperature suggested they will soon commence to make stout growths, which in due course may be taken off and rooted in accordance with the usual practice. It is essential to success in the production of strong bush or pyramidal plants for bedding to have stout growths for cuttings and to maintain a steady growth throughout by means of a temperature not greatly exceeding 60 deg.; except during bright, hot weather, when an additional 5 or 10 deg., with free ventilation, may be allowed. A rather rich compost should be used, and after the plants have filled with roots the pots into which they are put when they receive their final shift, weak liquid manure may be occasionally used. Free ventilation and but little, if any, shade are important points in the production of fuchsias with firm short-jointed growths.

PLANT RUSTS.—Warrington, Subscriber: The fungi causing the diseases known as carnation rust and chrysanthemum rust are quite distinct from each other, and according to the present stage of knowledge of them, there is no danger of the carnation rust attacking the chrysanthemum, and vice versa. The first of the two rusts (Uredo dianthi) is the most destructive to plants when grown in an insufficiently ventilated house, and the chrysanthemum rust (Puccinia hieraci) is usually most prevalent in dry seasons, such as that of 1898, when it spread so rapidly in collections both in England and on the Continent as to cause much anxiety to chrysanthemum growers generally. You do not give either name or initials in your letter. Your name should have been given, not necessarily for publication, and if not that, initials or a nom de plume is essential to enable us to indicate the correspondent for whom the answer is intended.

WINTER-DRESSING OF FRUIT TREES.—R. A., Winchester: There can be no question that the present season of the year is by far the best in which to make an effort to eradicate the pests of fruit trees. The trees are now dormant, and insecticides can be used that in the spring, summer, and autumn months would be most destructive to the trees. Your apple trees are infested with that troublesome pest, the woolly aphis or American blight, and your pear trees are not less seriously infested with the oyster scale, which is so objectionable because of it spreading to the fruit during the summer months. We therefore strongly advise you to commence operations at once with a view to the eradication of the pests. You may not be able to effect a complete eradication, but you will be able to so reduce them as to prevent their doing any considerable amount of injury, and thus prepare the way for their extermination next year. A solution of caustic soda and caustic potash has been used with good effect in winter for many years past. This is prepared by dissolving half a pound of caustic soda (Greenbank's 98 per cent.) and half a pound of crude commercial potash in five gallons of water, and is applied during the winter in the form of a fine spray. You must use a pair of thick gloves when you are spraying the trees to prevent injury to your hands. As the result of the experiments carried out at the Woburn Experimental Fruit Farm, a mixture prepared with copper sulphate, caustic soda, quicklime and paraffin is recommended, and if you would like to give it a trial we will give you the necessary particulars. In your case it will probably be well to confine your attention to the older remedy. An excellent dressing for use at this season on both apple and pear trees is prepared as follows. Put 4oz. of hard soap into one quart of water, and heat the latter until the soap is dissolved. Then add one pint of paraffin oil and agitate the whole until an emulsion is formed. To the emulsion add water in sufficient quantity for the paraffin to be in the proportion of one to fifteen. Apply with a brush, and well work it into the crevices of the bark and wood, that none of the pests may escape.

PEAR CULTURE UNDER GLASS.—Amateur, Lincoln: The cultivation of dessert pears under glass is not so simple a matter as the glass culture of peaches and nectarines. Unlike the two last-named kinds, which ripen their fruits in the most perfect manner when grown throughout under glass, the pear requires during the ripening process full exposure to outside atmospheric conditions to ensure the fruits attaining their full flavour. The cultivation of pears under glass has much to recommend it, especially where, as in your garden, the wall area available for these fruits is extremely limited. With good management excellent crops can be depended

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CONTENTS OF No. 2.

Crops: Beet Root—Carrots—Celeriac—Garlic—Horse Radish—Jerusalem Artichokes—Kohl Rabi—Leeks—Onions—Parsnips—Potatoes—Salsify and Scorzonera—Shallots—Turnips.

Pests: Beet Carrion Beetle—Mangold or Beet Fly—Onion Fly—Parsnip and Celery Fly—Wireworm—Carrot Fly—Red Spider—Wasps—Turnip Leaf Miners—Heart and Dart Moth—Common Dart Moth—Turnip Gall Weevil—Turnip Sawfly—Turnip Fly—Turnip Aphis—Diamond Black Moth.

Diseases: Beet Rust—Carrot Disease—Finger and Toe Disease—Onion Scab—Onion Sclerotina—Onion Smut—Turnip Bacterial Disease—Onion Mildew—Parsnip Disease—Potato Disease—Potato Rot—Potato Scab.

Miscellaneous: Quantities of Seeds per Acre—Yield of Produce Per Acre—Longevity of Seeds—Cost of Cultivating Crops—Time Required for Germination of Seeds—Average Market Prices of Vegetables—Market Measures—Manures—Analyses of Vegetable Ash, &c., &c.

No. 3.

ASPARAGUS, BEANS, PEAS, MARROWS, CELERY, &c.

A Practical Treatise on the Culture of Peas, Beans, Rhubarb, Celery, Asparagus, Marrows, &c.; Soils and their Treatment; Pickling and Preserving the Crops; Pests, Diseases, &c.

CONTENTS OF No. 3.

Crops: Asparagus—Broad Beans—Cardoons—Celery—Globe Artichoke—Kidney Beans—Peas—Rhubarb—Ridge Cucumbers—Runner Beans—Sea Kale—Vegetable Marrows.

Pests: Aphides—Asparagus Beetle—Bean Aphis or Dolphin Fly—Cockchafer Beetle or May Bug—Celery Fly—Millepedes—Pea and Bean Thrips—Pea Midge—Pea Moth—Pea Seed Weevil—Pea Weevils—Red Spider—Slugs and Snails—Wireworm—Woodlice.

Diseases: Asparagus Rust—Canker and Rot—Celery Leaf Blight—Cucumber Mildew—Mildew—Pea Mildew—Pea Spot—Seedling Pea Blight.

Pickling and Preserving: Green Peas—French Beans—Gherkins—Rhubarb Jam—Vegetable Marrow Jam—Rhubarb Wine.

Soils and Their Treatment.—Clay—Loam—Sandy Soils—Peat Soil—Colour of Soil—Testing Soil for Water—Paring and Burning Soils—Composition of Soils.

Miscellaneous: Quantities of Seeds or Plants per Acre—Average Yield per Acre—Seed Testing—Analyses of Vegetables (Ash)—Average Prices of Produce—Cost of Soil Cultivation—Hedge Planting—&c., &c.

No. 4.

MUSHROOMS, CUCUMBERS, SALADS, TOMATOES, &c.

A Practical Treatise on the Cultivation of Cucumbers, Mushrooms, Tomatoes, Watercress, Salads, &c.; Preparing and Packing for Market; Pests and Diseases, and How to Eradicate Them.

CONTENTS OF No. 4.

Crops: Chicory—Corn Salad or Lamb's Lettuce—Cucumber—Dandelion—Endive—Lettuce—Mustard and Cress—Mushrooms—Radishes—Spring Onions—Tomatoes (Indoor)—Tomatoes (Outdoor)—Watercress.

Pests: Ants—Aphides or Green Fly—Birds—Lettuce Fly—Lettuce Root Aphis—Mushroom Pest—Onion Fly—Radish Fly—Radish and Turnip Flea Beetle—Red Spider—Slugs and Snails—Snowy Fly—Surface Caterpillars and Grubs—Tiger Moth—Thrips—Wireworm—Woodlice.

Diseases: Bacterial Disease of Tomatoes—Black or Brown Stripe Tomato Disease—Cucumber Leaf Blotch Disease—Cucumber and Melon Mildew—Eelworms—Finger and Toe Disease—Lettuce Mildew—Mushroom Disease—Potato Disease in Tomatoes—Radish Mildew—Sleeping Disease in Tomatoes—Tomato Black Spot or Rot—White Rust—Yellow Spot Tomato Disease.

Glass-houses: Market Glass-houses—Tomato House—Cucumber House—Cost of Building Glass-houses—Cubical Contents of a Glass-house.

Miscellaneous: Market Measures—Formulæ for Insecticides and Fungicides—Average Prices of Produce—Analyses of Animal Manures.

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upon annually, and a house of moderate or larger size devoted to pears will give an ample return. For the reason already indicated, portability is essential to success, and therefore the trees must be grown in pots. The trees make a satisfactory growth and produce good crops, and ripen their fruit when grown wholly in a glass structure, but the fruits are more or less inferior in quality, as compared with those of trees grown wholly or in part out of doors. With the trees in pots you can keep them out of doors with their pots plunged in a bed of ashes, or partly-decayed leaves, until the flower buds are beginning to swell freely. They can then be taken indoors and the house in which they are placed be freely ventilated at all times, excepting in frosty weather. They ought not to have fire-heat, excepting in frosty and in humid weather, and then only sufficient to keep the embryo fruits safe from frost or maintain a dry, buoyant atmosphere, as the case may be, the latter being essential to the fruit setting freely. You should keep the trees indoors with abundant ventilation until about the middle of June, when they should be placed in the open upon a bed of coal ashes or a hard surface and have coal ashes or partly-decayed leaves placed about the pots, to prevent the soil drying too quickly. When they are in the open you must protect the fruits from the birds, and efficient protection can be afforded by means of a few light strips of wood and old fish nets, securely fixed at such distance from the branches as will render it impossible for the birds to reach the fruits. The trees will require careful watering, and from the commencement to the completion of the growth, rather liberal supplies will be necessary. The soil must not be allowed to become quite dry, or be kept in a constantly saturated state, for either extreme is injurious. The growths must be thinned, as in the case of trees outside, and be stopped two or three times, the first stopping to be done when the shoots are five or six inches long. The trees, when carrying good crops, will require top-dressing two or three times with some approved artificial fertiliser, or occasional supplies of weak liquid manure.

Chrysanthemum F. S. Vallis.—The popularity of this Japanese chrysanthemum has not been excelled by any other variety, excepting perhaps Madame Carnot, which was also one of Calvat's seedlings, and, the flowers being white, it would naturally be a trifle more sought after than any yellow chrysanthemum. "C. H. P." has undoubtedly seen some monster blooms during his sojourn in Paris. We here are content to obtain blooms twelve inches in diameter, but "C. H. P." records them at four inches more than that! I wonder whether these huge blooms were grown in the Roubaix district?—Sadoc.

Sweet Peas in Cold Frames.—The practice of raising sweet peas in cold frames is now fairly common, so that the note of warning below will appeal to many readers. It is this: Do not be misled by the fact that the sweet pea is hardy to allow frames to go unprotected on frosty nights. When confined in pots the roots are not hardy, the pots attracting frost. Last year a noted grower sent me plants of sweet peas for opinion as to the cause of their death. The tops were comparatively fresh and green, but the roots were brown and rotten, and a few inquiries left no doubt that frost had got into the frame and done the damage. Of course, a fairly severe frost would be required, but we got several such last year.—E. J. K.

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MARKETS.

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Flowers.

The supplies of cut flowers have been about equal to the demand without any material change in prices.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	4 0	to	6 0
Arums	per doz.	2 6		4 6
Asparagus	per doz. bun.	1 6		6 0
Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	4 0		5 0
Carnations	per doz. blms.	2 0		3 6
,,	per doz. bun.	7 6		10 6
Cattleyas	per doz.	10 6		12 6
Chrysanthemums	per doz. bun.	3 0		7 6
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	5 0		6 0
Cypripediums	per doz. blms.	2 6		3 0
Eucharis	per doz.	2 6		4 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	2 6		3 0
Hyacinths, Roman	per doz. bun.	6 0		7 6
Lapagerias	per doz.	1 0		2 0
Lilac	per bun.	3 6		5 0
Lilium auratum	per bun.	2 6		3 0
,, tigrinum	per bun.	1 0		2 0
,, speciosum	per bun.	1 3		2 6
,, longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		10 0
Marguerites, white	per doz. bun.	2 0		3 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	2 0		2 6
Odontoglossums	per doz. blooms	2 0		3 0
Pancratiums	per doz. blooms	3 0		5 0
Pelargoniums	per doz. bun.	4 0		6 0
Pernettya	per bun.	0 9		1 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0
Tuberoses	per doz.	0 4		0 6
Violets	per doz. bun.	1 0		2 6
,, de Parme	per bun.	1 6		3 0

Fruits.

Supplies are about equal to the demand. The finest grapes have improved in value.

		s. d.		s. d.
Apples, cooking	per bush.	4 6	to	8 0
,, dessert	per ½-bush.	4 6		14 0
,, American	per barrel	14 0		21 0
Bananas	per bun.	5 0		10 0
Cranberries	per case	7 0		8 0
Cob Nuts	per doz. lb.	4 0		5 0
Figs	per doz.	0 6		1 0
Filberts	per doz. lb.	3 6		4 0
Grapes, Alicante	per lb.	0 8		1 3
,, Muscats	per lb.	2 0		4 0
,, ,, Canon Hall	per lb.	2 6		5 0
,, Gros Colmar	per lb.	1 0		1 6
,, Channel Islands	per lb.	0 9		1 0
,, Belgian	per lb.	0 9		0 10
,, Almeria	per barrel	10 0		20 6
Lemons	per case	8 0		14 0
Oranges	per case	9 0		12 0
Pears, French	per crate	10 0		14 6
,, English	per bush.	3 0		6 6
Pineapples	each	2 0		5 0
Walnuts	per doz. lb.	4 0		5 0

Vegetables.

Most kinds are in good supply and meet with a brisk demand.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	3 0
Asparagus, Paris green	per bun.	3 6		4 0
Asparagus sprue	per bun.	1 0		1 6
Aubergines	per doz.	1 6		2 6
Beans, French	per lb.	0 6		0 7
Beet	per bush.	1 3		2 0
Brussels sprouts	per ½-bush.	1 3		2 0
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
,, French	per pad	2 3		3 0
,,	per bag	2 6		3 0
Cauliflowers	per tally	3 6		5 0
Celery	per bundle	0 9		1 0
Celeraic	per doz.	1 6		1 9
Chicory	per lb.	0 3		0 4
Cucumbers	per doz.	3 0		5 0
Endive	per doz.	1 6		2 0
Greens	per bag	1 6		2 6
Horseradish	per doz. bun.	10 0		12 0
Leeks	per doz. bun.	1 6		2 6
Lettuce, cabbage	per doz.	1 3		1 9
Lettuce, cos		4 6		5 6
Mint	per doz. bun.	0 9		1 0
Mushrooms	per doz. lb.	7 0		12 0
Onions, Valencia	per case	5 0		6 0
,, Dutch	per bag	3 6		4 6
,, Egyptian	per bag	8 0		9 0
Parsley	per doz. bun.	1 6		2 0
Radishes	per doz. bun.	0 8		1 0
Salading	per doz. pun.	1 0		1 6
Salsafy	per doz. bun.	3 0		3 6
Seakale	per doz. bun.	12 0		14 0
Spinach	per bush.	0 9		1 3
Tomatoes, Teneriffe	per 4 boxes	10 0		14 0
,, selected	per doz. lb.	3 0		4 0

LONDON POTATO MARKETS.

Supplies continue moderate and meet with a fair demand at rather higher prices.

		s. d.		s. d.
British Queen	per ton	90 0	to	100 0
Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		130 0
Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	90 0		105 0
Lincoln Maincrop	per ton	95 0		110 0
Lincoln Up-to-Date	per ton	90 0		105 0
Royal Kidneys	per ton	80 0		85 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1907-8. December 29 to January 4.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 29—Sunday	—	33	33	34	33
,, 30—Monday	—	33	32	35	33
,, 31—Tuesday	—	34	33	37	33
Jan. 1—Wednesday	—	34	31	34	34
,, 2—Thursday	5 0	30	30	31	29
,, 3—Friday	6 0	25	25	32	24
,, 4—Saturday	2 0	21	21	37	20
Means	1 50	30	29	34	29

Date. 1907-8. December 29 to January 4.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg
Dec. 29—Sunday	—	38	42	46	31
,, 30—Monday	—	38	41	45	31
,, 31—Tuesday	—	38	41	45	31
Jan. 1—Wednesday	—	38	41	44	32
,, 2—Thursday	—	37	41	44	25
,, 3—Friday	—	36	40	44	19
,, 4—Saturday	—	35	39	43	9
Means	(total) —	37	41	44	25

FORTHCOMING ENGAGEMENTS.

TUESDAY, January 14.—Royal Horticultural Society. Floral, Fruit, and Orchid Committees, 12 noon; Scientific Committee, 4 p.m.; General Meeting, with Lecture, by Mr. J. Gregory, on "Prominent Exhibits of Flowers and Fruits in 1907," 3 p.m.

National Rose Society General Purposes Committee, 2 p.m.

Horticultural Club, Dinner and Conversazione, 6 p.m.; Lecture by Mr. E. A. Bunyard on "Recent Advances in Plant Breeding."

WEDNESDAY, January 15.—Society of Arts Meeting, 8 p.m.

THURSDAY, January 16.—Linnean Society Meeting, 8 p.m.

SATURDAY, January 18.—Société Française d'Horticulture de Londres, Café Royale, at 6.30 p.m.

TUESDAY, January 21.—National Amateur Gardeners' Association Annual Meeting, 7 p.m.

WEDNESDAY, January 22.—Society of Arts Meeting, 8 p.m.

TUESDAY, January 28.—Royal Horticultural Society Meeting of Floral, Fruit, and Orchid Committees, 12 noon; Scientific Committee, 4 p.m.; General Meeting, with Lecture, by Mr. T. E. Waltham, on "Flower Photography and Swiss Flora," 3 p.m.

WEDNESDAY, January 29.—Society of Arts Meeting, 8 p.m.

CATALOGUES RECEIVED.

HORACE J. WRIGHT, 32, DAULT ROAD, WANDSWORTH.—Sweet Peas and Vegetable and Flower Seeds.

FRANK LILLEY, GUERNSEY.—Chrysanthemums, Dahlias, etc.

DOBBIE AND CO., ROTHESAY.—Seeds, Florists' Flowers, etc.

JOHN PEED AND SON, WEST NORWOOD, S.E.—Seeds.

JAS. CARTER AND CO., HIGH HOLBORN, London.—General Seed Catalogue.

KELWAY AND SON, LANGPORT, SOMERSET.—Plants, Seeds, Bulbs, etc.

COOPER, TABER, AND CO., LIM., 90 and 92, SOUTHWARK STREET.—Wholesale seed catalogue.

R. H. BATH, LIM., WISBECH.—Vegetable and flower seeds.

ROBERT SYDENHAM, TENBY STREET, BIRmingham.—Vegetable and flower seeds.

W. J. GODFREY, EXMOUTH, DEVON.—New and select chrysanthemums.

ROBERT VEITCH AND SONS, 54, HIGH STREET, EXETER.—Flower and vegetable seeds.

GEORGE MASSEY AND SONS, SPALDING.—Vegetable and flower seeds.

FISHER, SON, AND SIBRAY, SHEFFIELD.—Vegetable and flower seeds.

WILLIAM CUTBUSH AND SON, HIGHGATE.—Flower and vegetable seeds.

WILLIAM PAUL AND SON, WALTHAM CROSS, HERTS.—Seeds and garden sundries.

DANIELS BROTHERS, LIM., NORWICH.—Vegetable and flower seeds.

E. WEBB AND SONS, WORDSLEY, STOURBRIDGE.—Vegetable and flower seeds.

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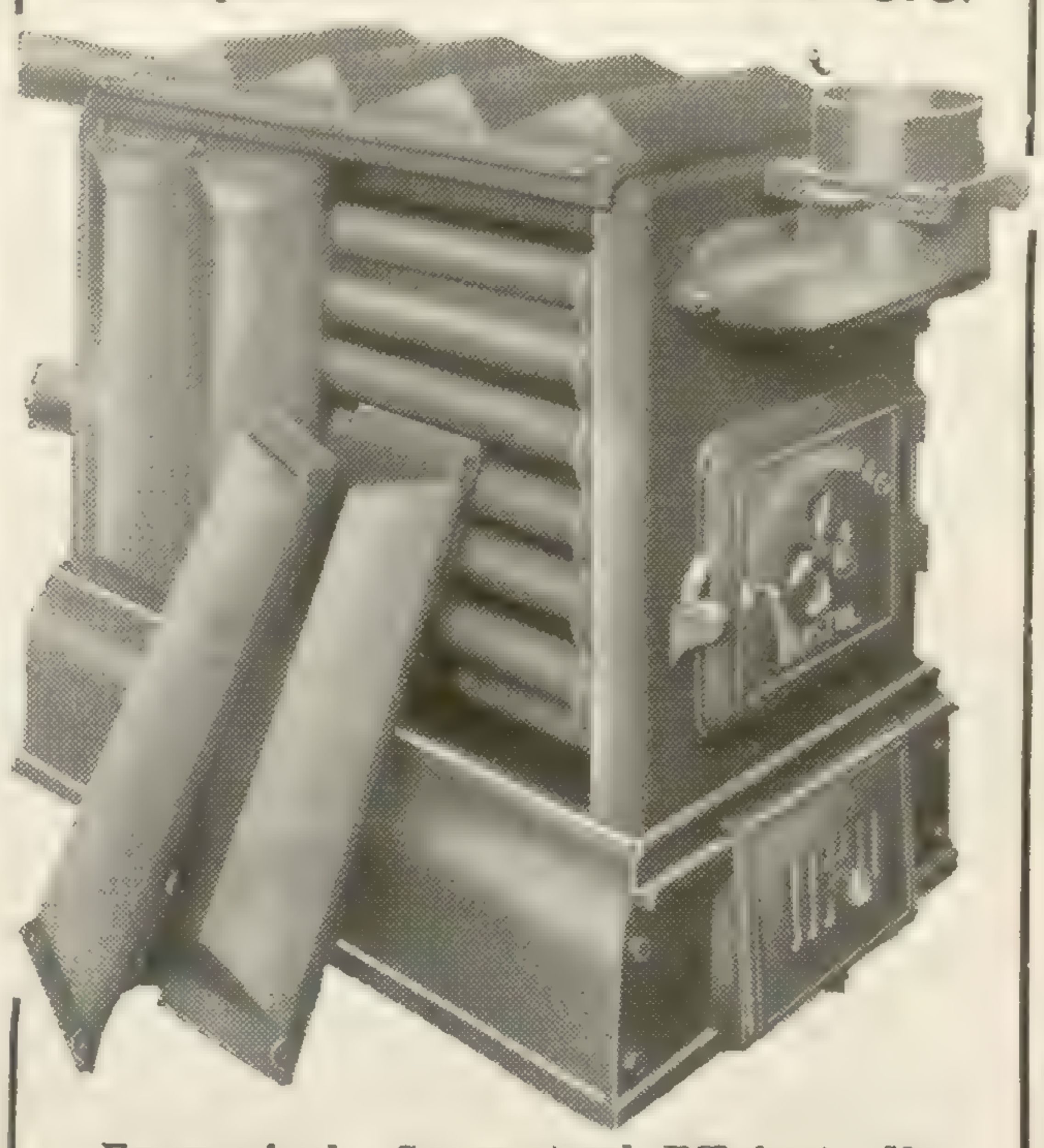

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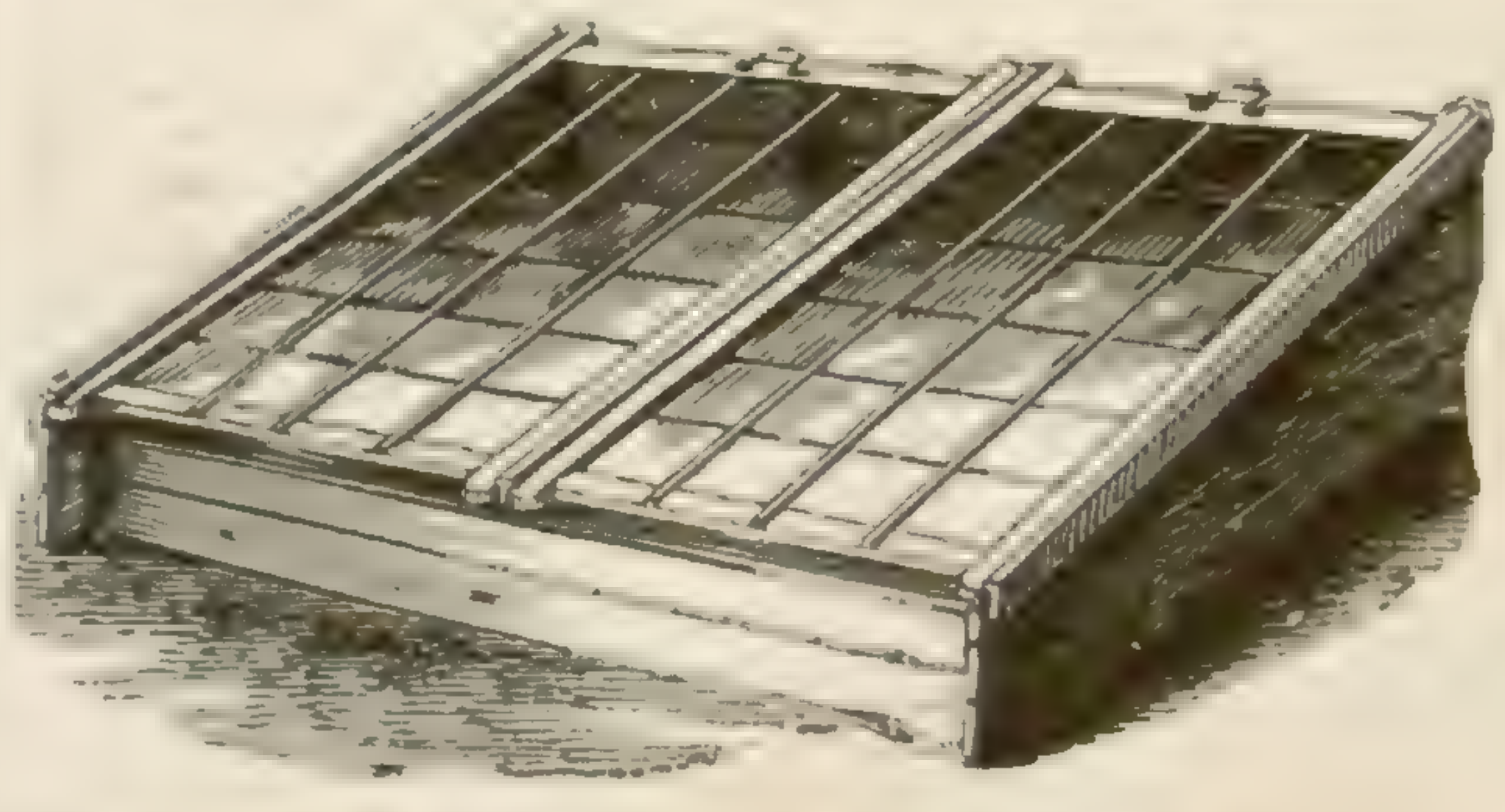

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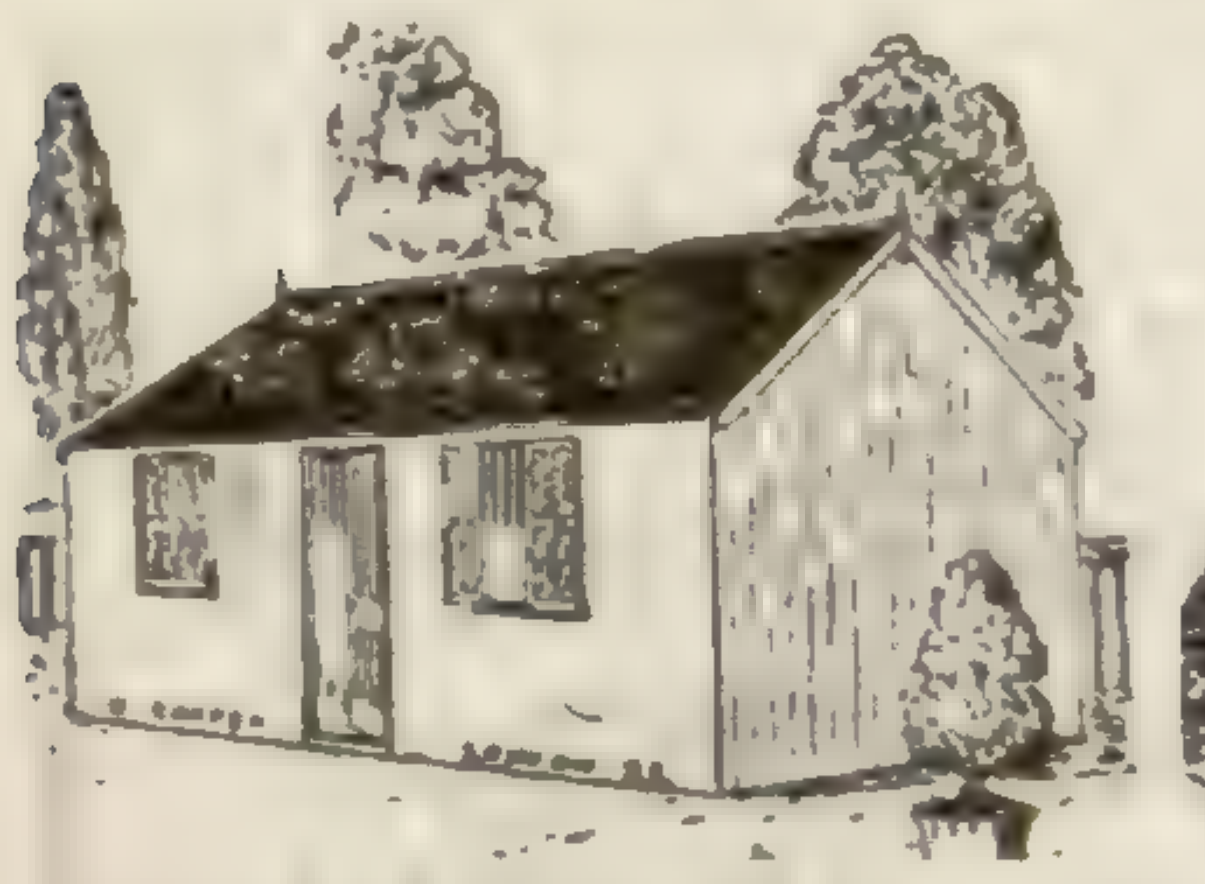
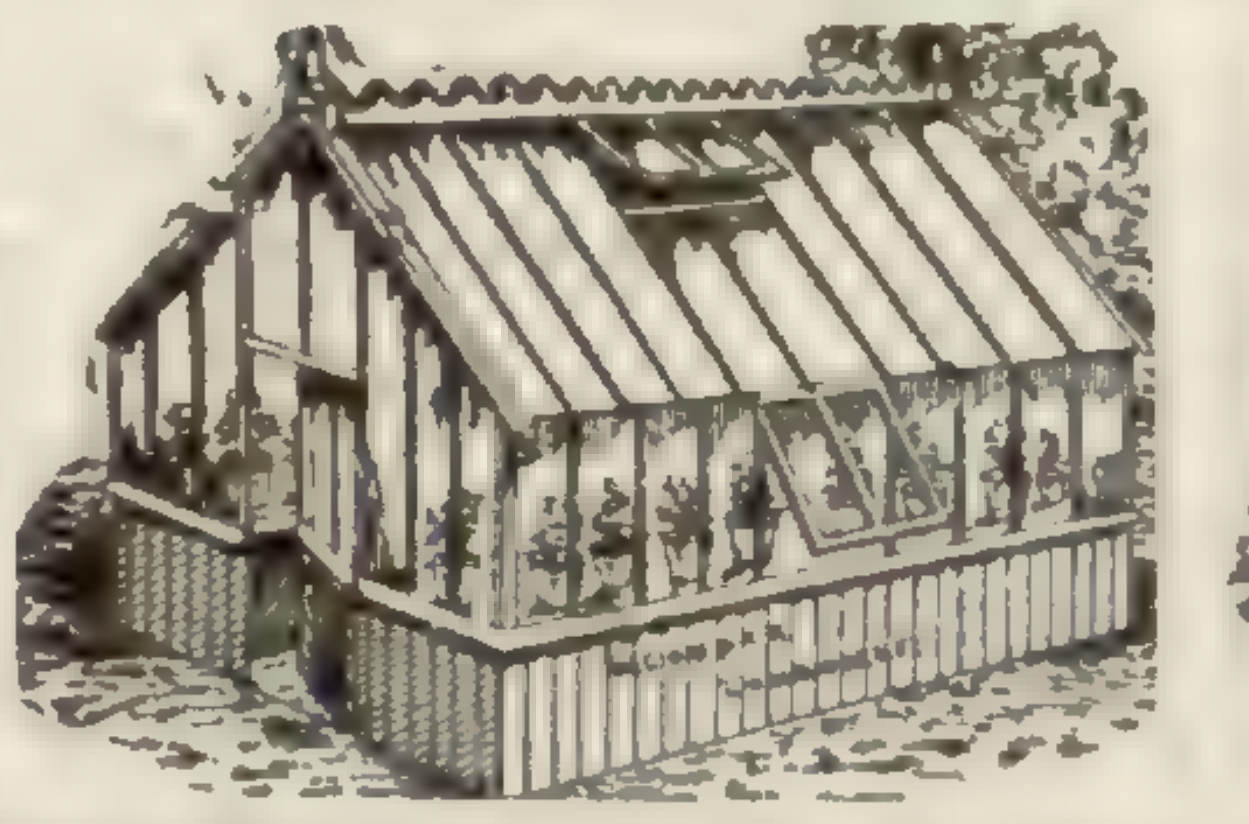
Below are some of the Bargains, the cost of newspaper space precluding the insertion of over 360 illustrations contained in 32 large pages.



Portable Buildings from **57/6**



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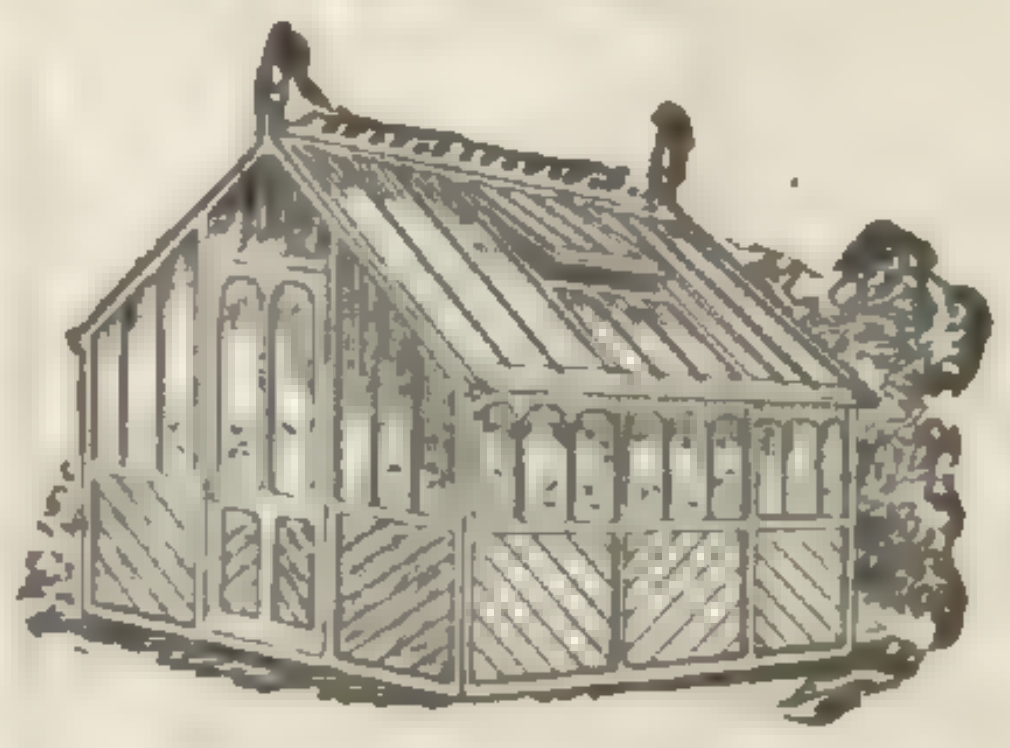
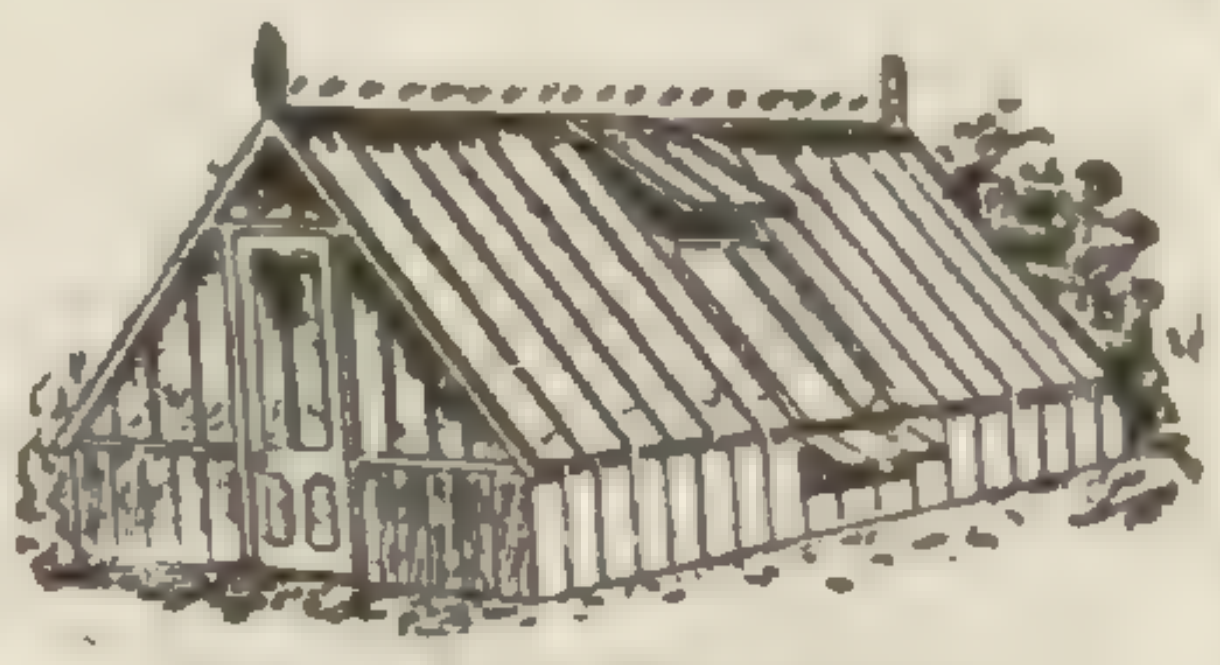
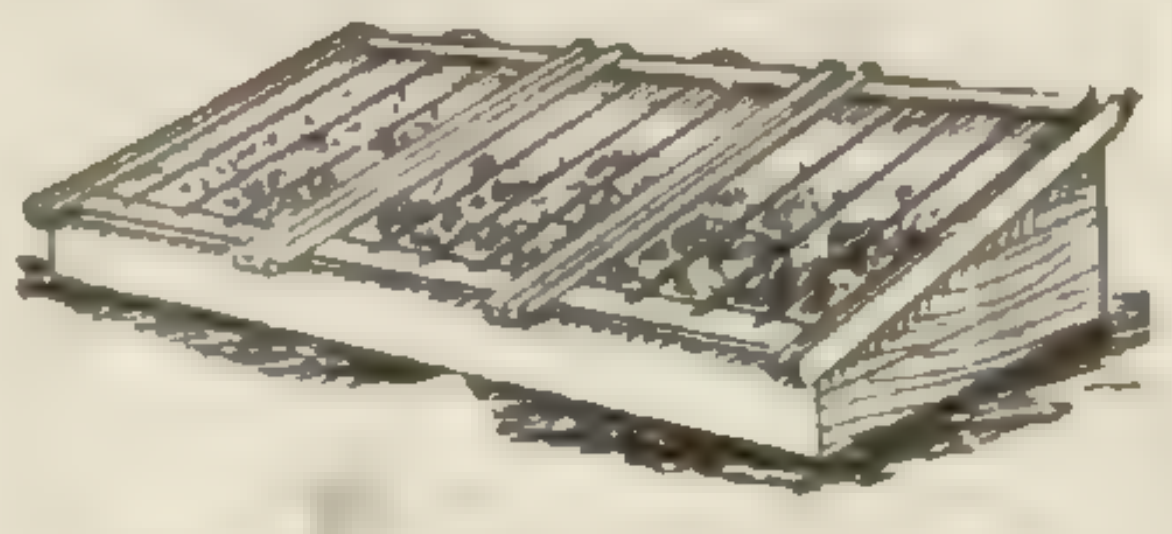


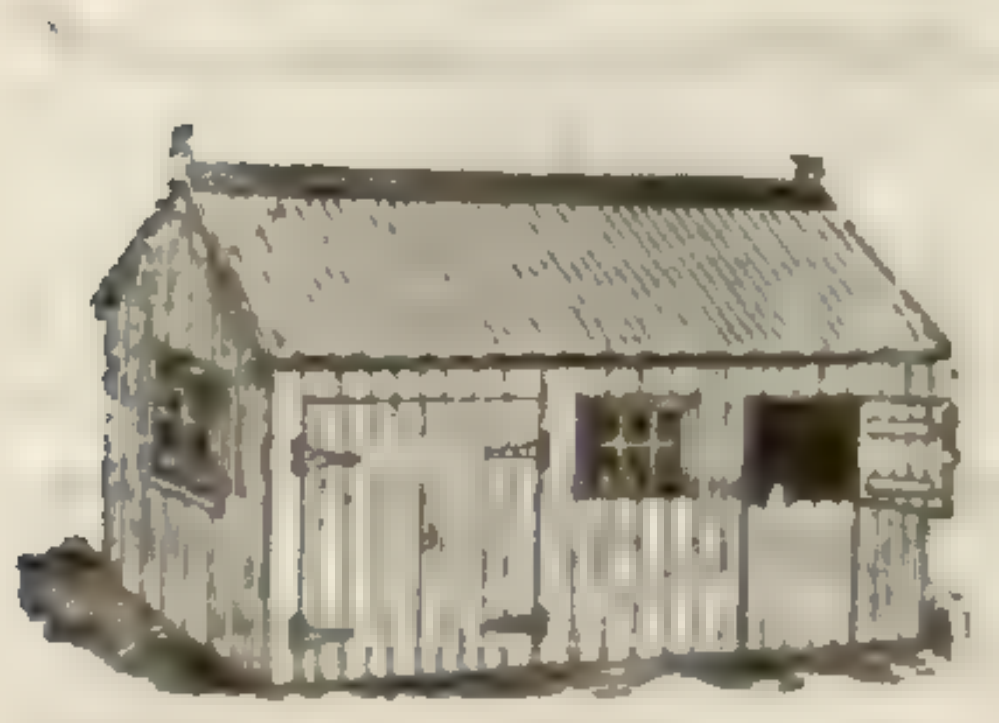
Conservatories from **£4 7 6**



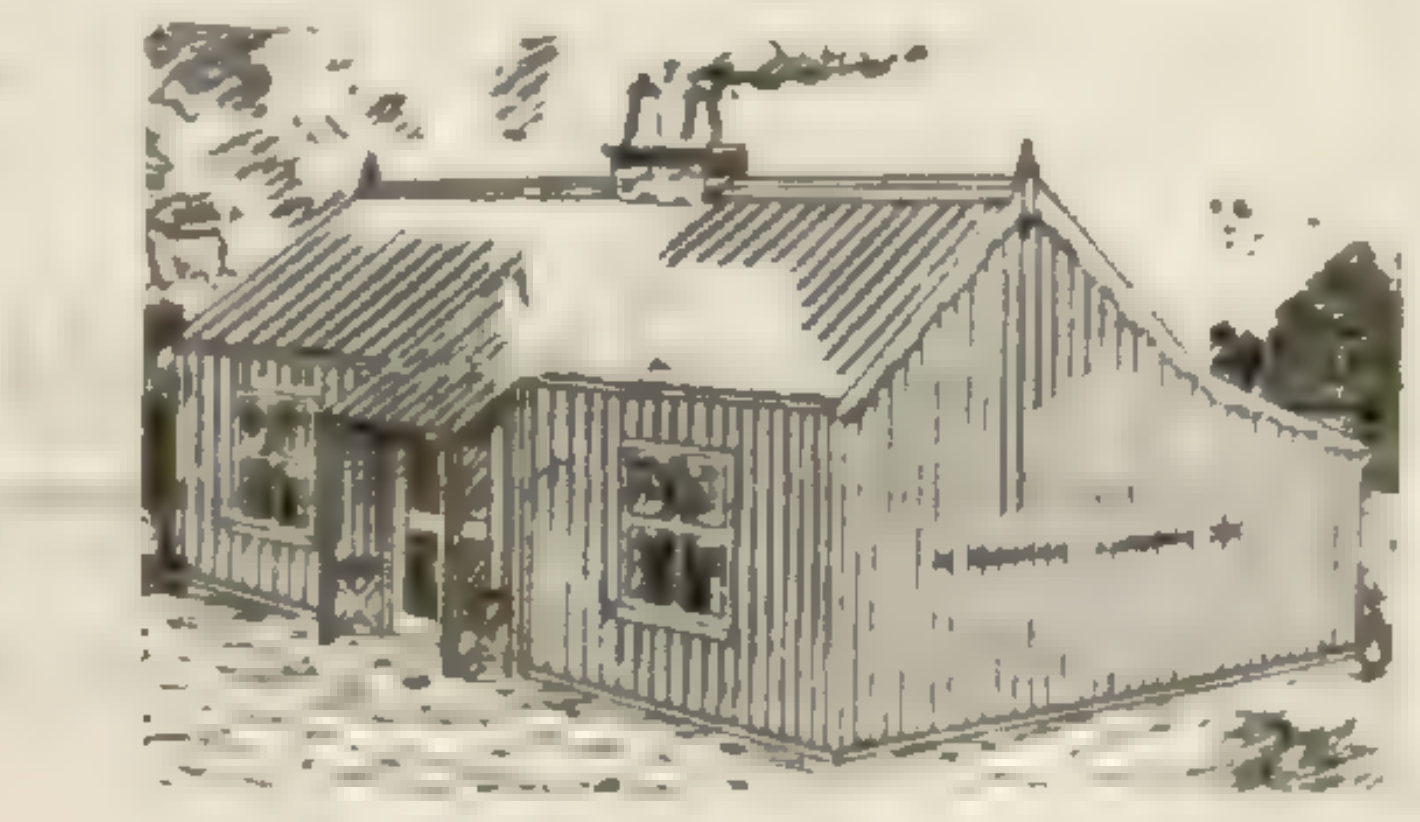
Forcing Houses from **42 6**



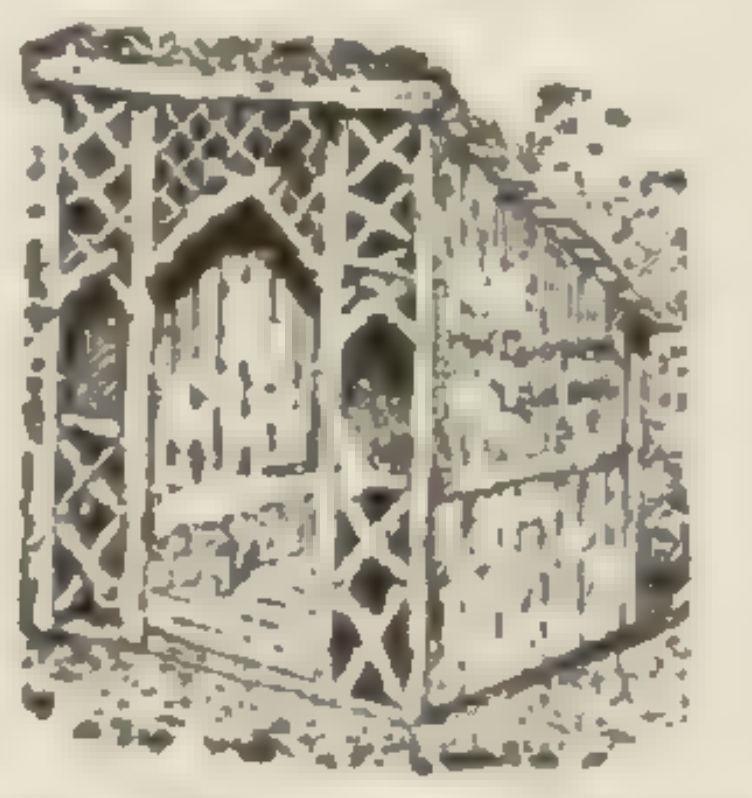
Cucumber Frames from **11/6**



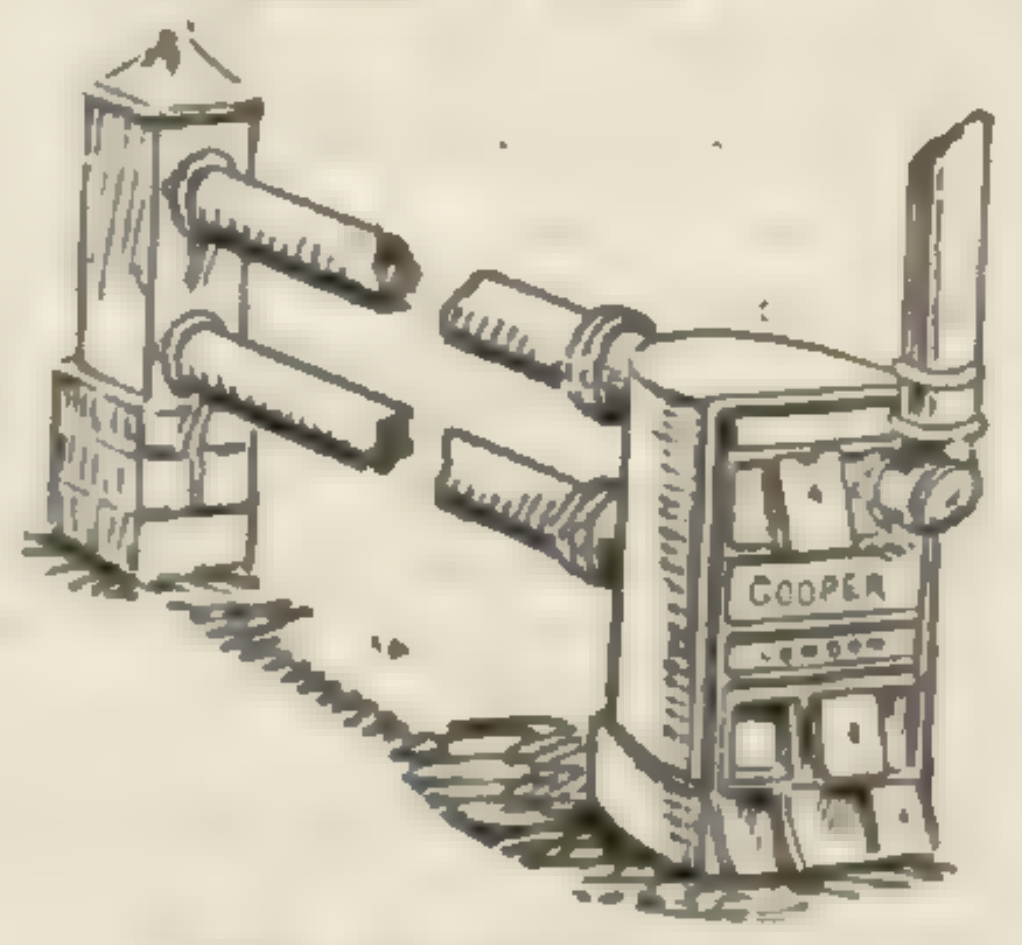
Stable and Coach House from **£8 5 0**



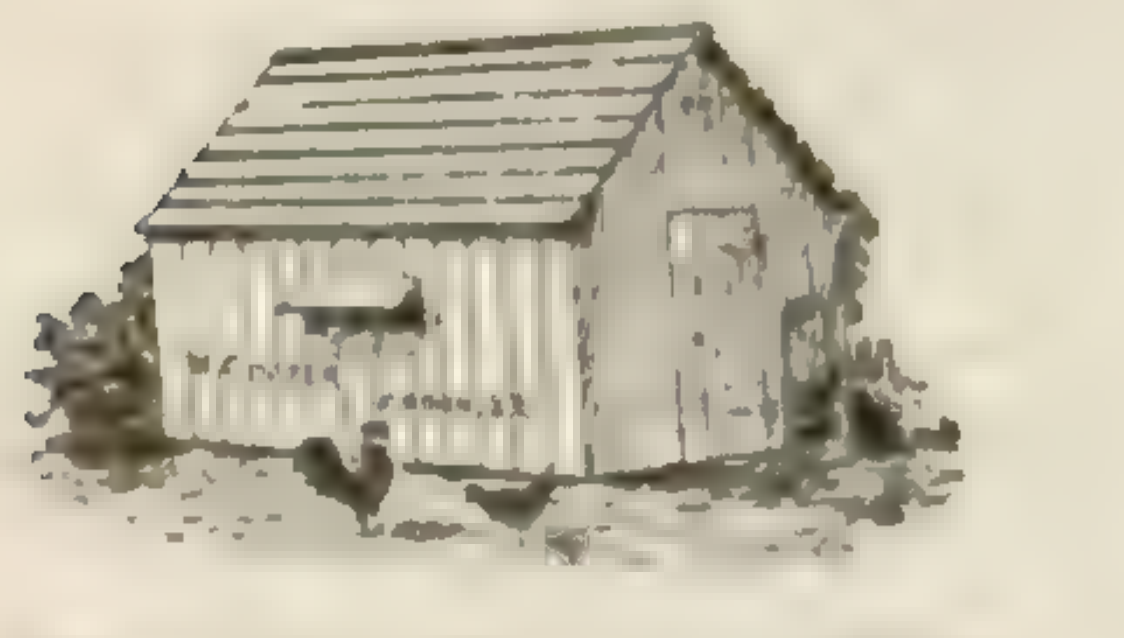
Iron Cottage, £40



Rustic House, 57/6



Greenhouse Apparatus from **55/-**



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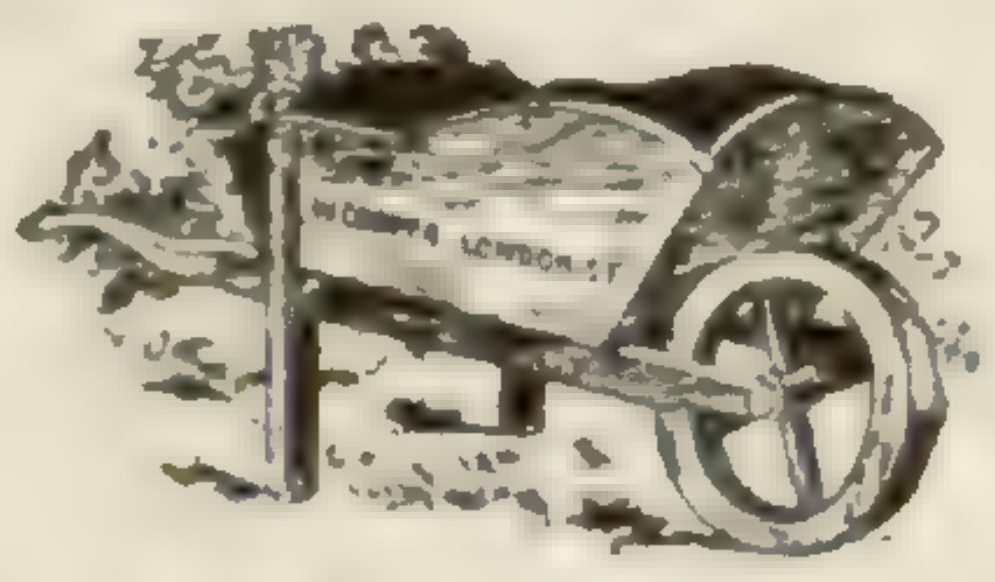
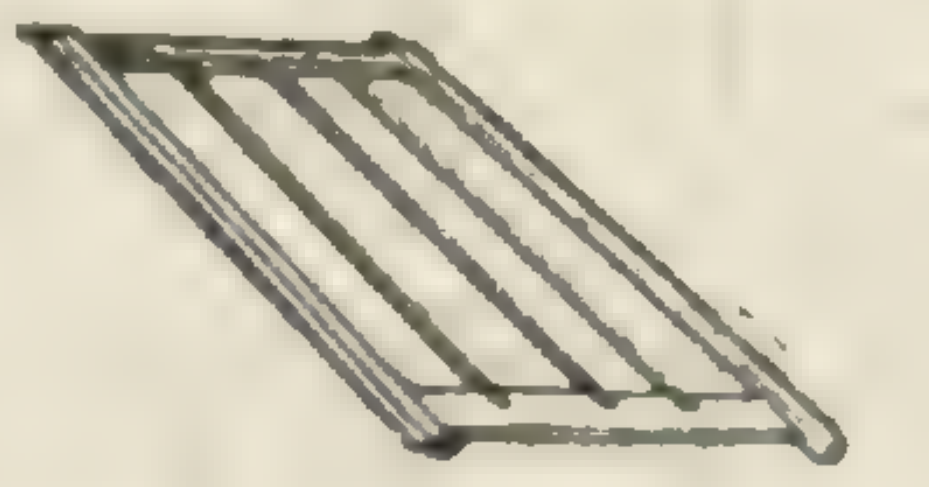


Barrow, 16/6



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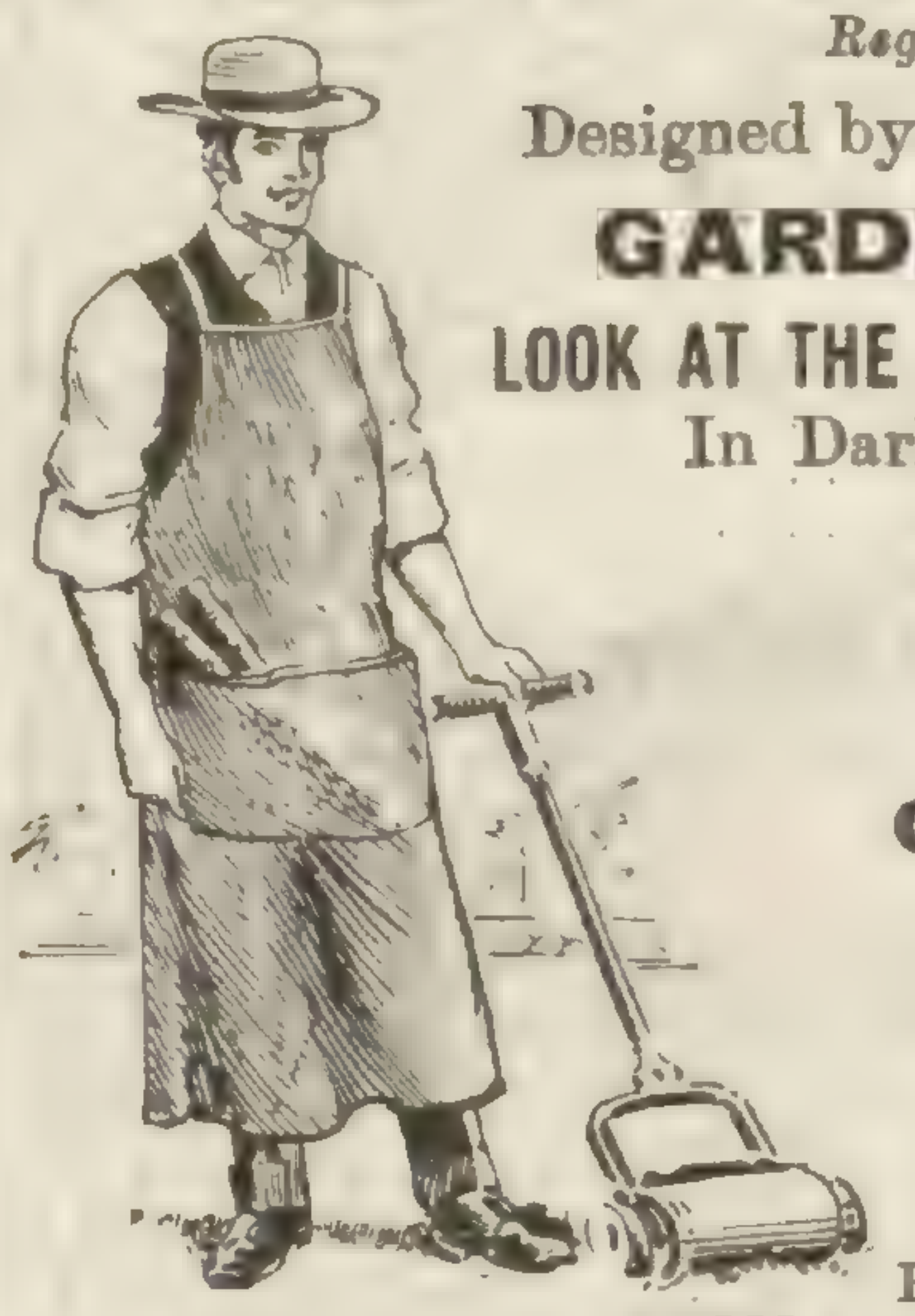

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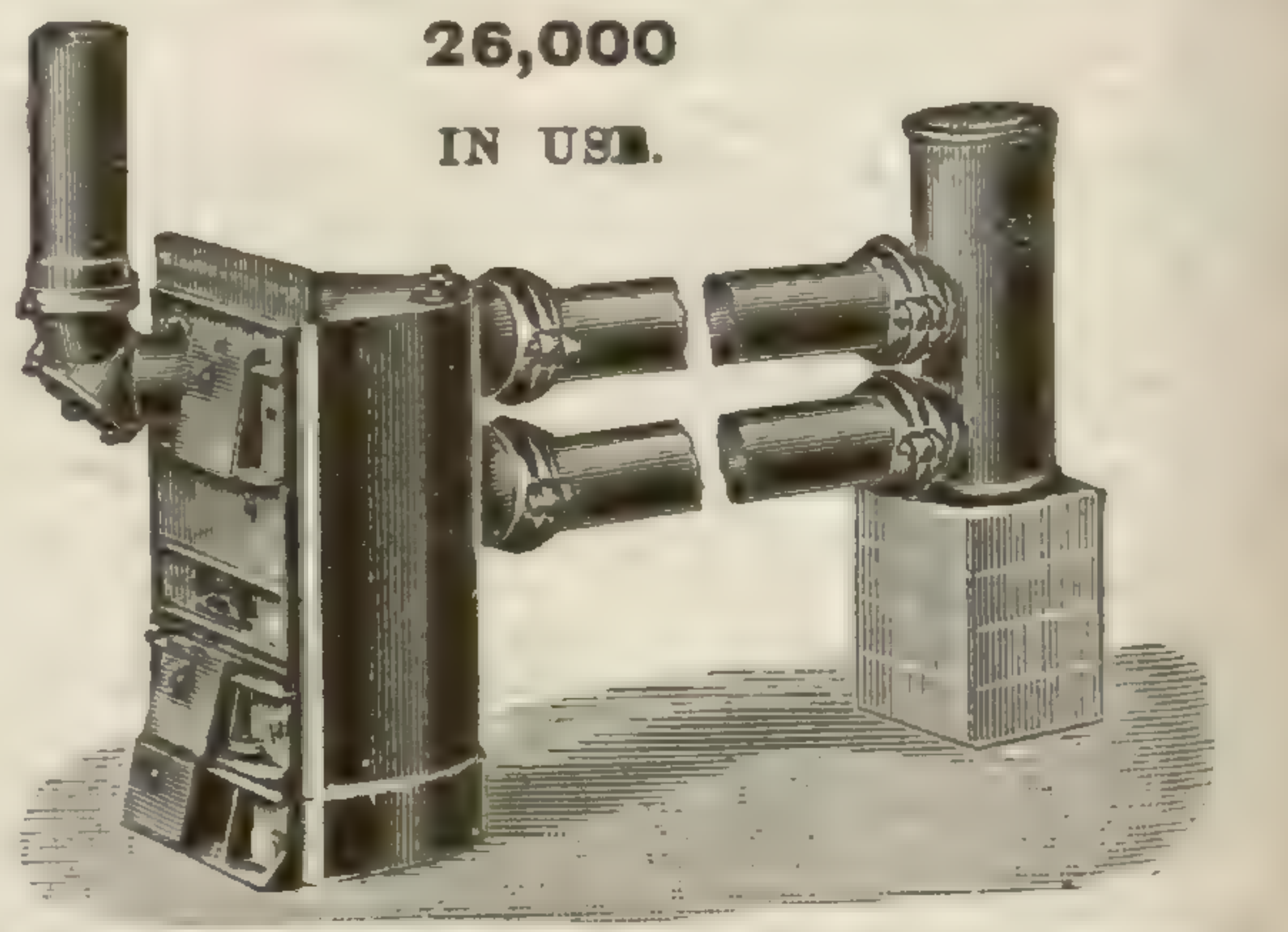

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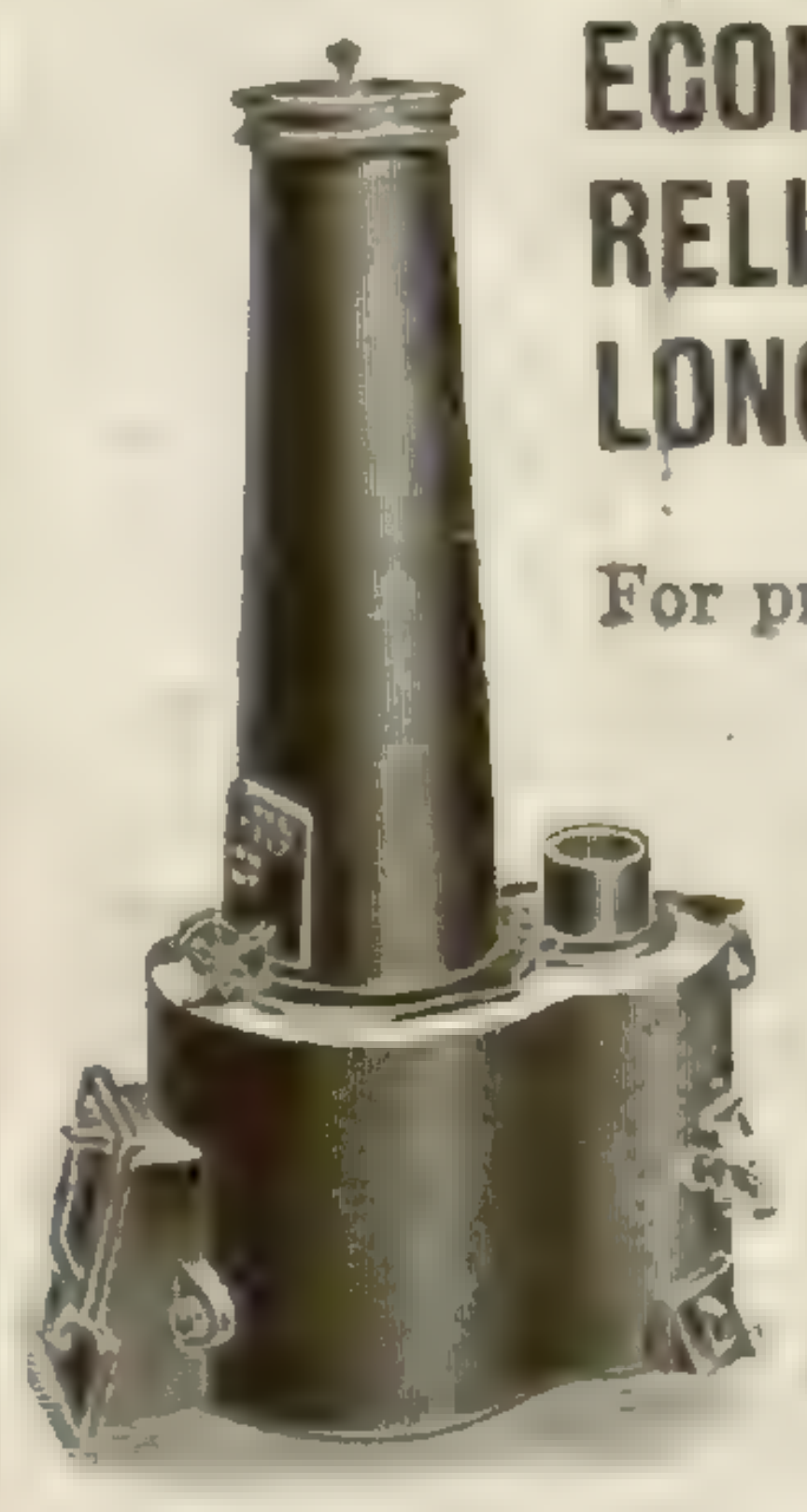

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THE GARDENERS' MAGAZINE.

No. 2,829 Vol. LI.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, JANUARY 18, 1908.

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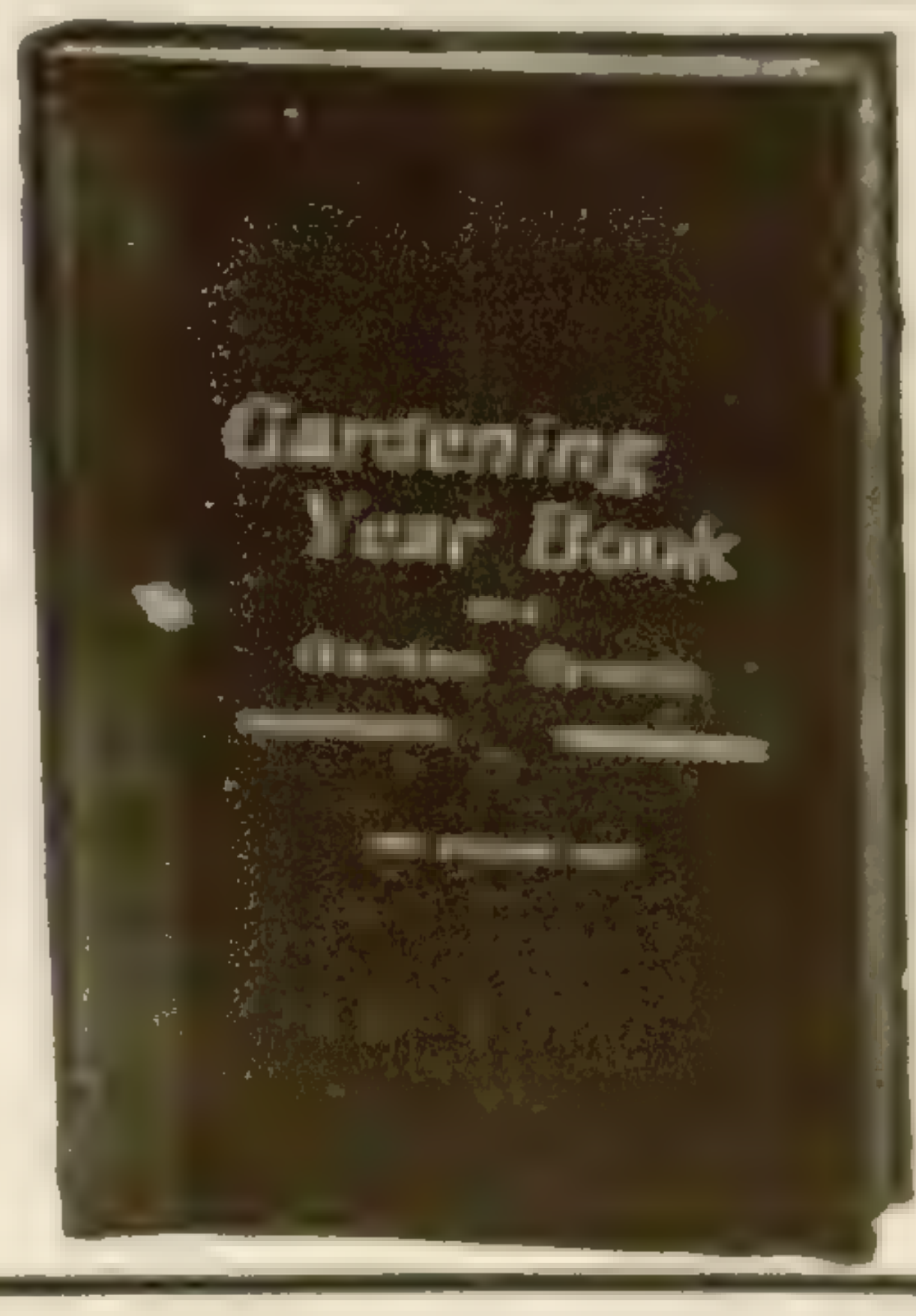

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MONDAY and FRIDAY next, Jan. 20 and 24th, at Twelve o'clock.—HARDY BORDER and HERBACEOUS PLANTS, PERENNIALS, etc., Liliums, Begonias, Gloxinias, Gladiolus; 200 Azaleas Indica and Mollis, 50 Rhododendrons, 50 lots of choice Ferns, Greenhouse Plants, etc.

At Half-past One o'clock, 1,000 Roses, Standard, Dwarf, Climbing, etc.

WEDNESDAY next, Jan. 22nd, at Twelve o'clock, 200 lots of HARDY HERBACEOUS PLANTS, Japanese Liliums, Begonias, Spiræas, Anemones, American Fruits, Gladiolus, etc.

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At One o'clock, a splendid consignment of about 2,000 c/s LILIUMS, received direct from Japan.

At Five o'clock, 100 lots of choice Ornamental and Decorative Palms and Plants, Standard Bays, etc.; 450 Azaleas Indica, Mollis, and Hardy Ghent, 150 Rhododendrons and Camellias.

FRIDAY next, Jan. 24th, at a Quarter to One o'clock, an importation of ODONTOGLOSSUM CRISPUM, Carderian type; also choice established ORCHIDS. ORCHIDS in flower and bud.

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THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

Notice is hereby Given that the SIXTY-EIGHTH ANNUAL GENERAL MEETING of the Members and Subscribers of this Institution will be held at "SIMPSONS," 101, STRAND, London, on THURSDAY, January 23rd, 1908, at 2.45 p.m., for the purpose of receiving the Report of the Committee and the Accounts of the Institution (as audited) for the year 1907; electing Officers for the year 1908; and for the ELECTION of EIGHTEEN PENSIONERS on the Funds.

The Chair will be taken by HARRY J. VEITCH, Esq., F.L.S., V.M.H., Treasurer and Chairman of Committee, at Two Forty-Five o'clock.

The Poll will be open at Three o'clock and close at Four o'clock precisely, after which hour no Voting Papers can be received.

The Annual Friendly Supper will also be held at Simpson's on the Same Date at Six p.m., under the presidency of

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Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

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GARDENER (Head Working, or good Single-handed with help); married; age 40; thoroughly experienced in all kinds of Fruit, Flowers, and Vegetables, Inside and Out; good character. J. W. S., 5, White Cottages, Clay Hill, Enfield.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working); life experience in Vines, Peaches, Chrysanthemums, and Carnations, Early and Late Forcing, Inside and Out; age 35; married, no family; excellent references. A. K., The Lodge, Vale Lodge, Leatherhead.

GARDENER (Head Working, where others are kept); thoroughly experienced in all branches; Inside and Out: hardy and forced fruits, vegetables and flowers. Good testimonials; two years and four months at present situation, and well recommended by employer. Age 27; married; abstainer. A. MUNDAY, The Gardens, Bifrons, Canterbury.

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GARDENER (Head of two or three or good Single handed); age 28; married; thoroughly experienced Inside and Out; excellent references; disengaged. HARTLEY, 6, Villiers Road, Willesden Green.

A GENTLEMAN wishes to strongly recommend his HEAD GARDENER; leaving through place being sold; experienced in all branches; age 39; married, two in family; excellent references. JACKSON, Holme Park, Rotherfield, Sussex.

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GARDENER (good Single-handed or with help); thorough experience Inside and Out; good references; age 31; married, no family. E. THURGOOD, The Cottage, Mayfield, Earlswood, Surrey.

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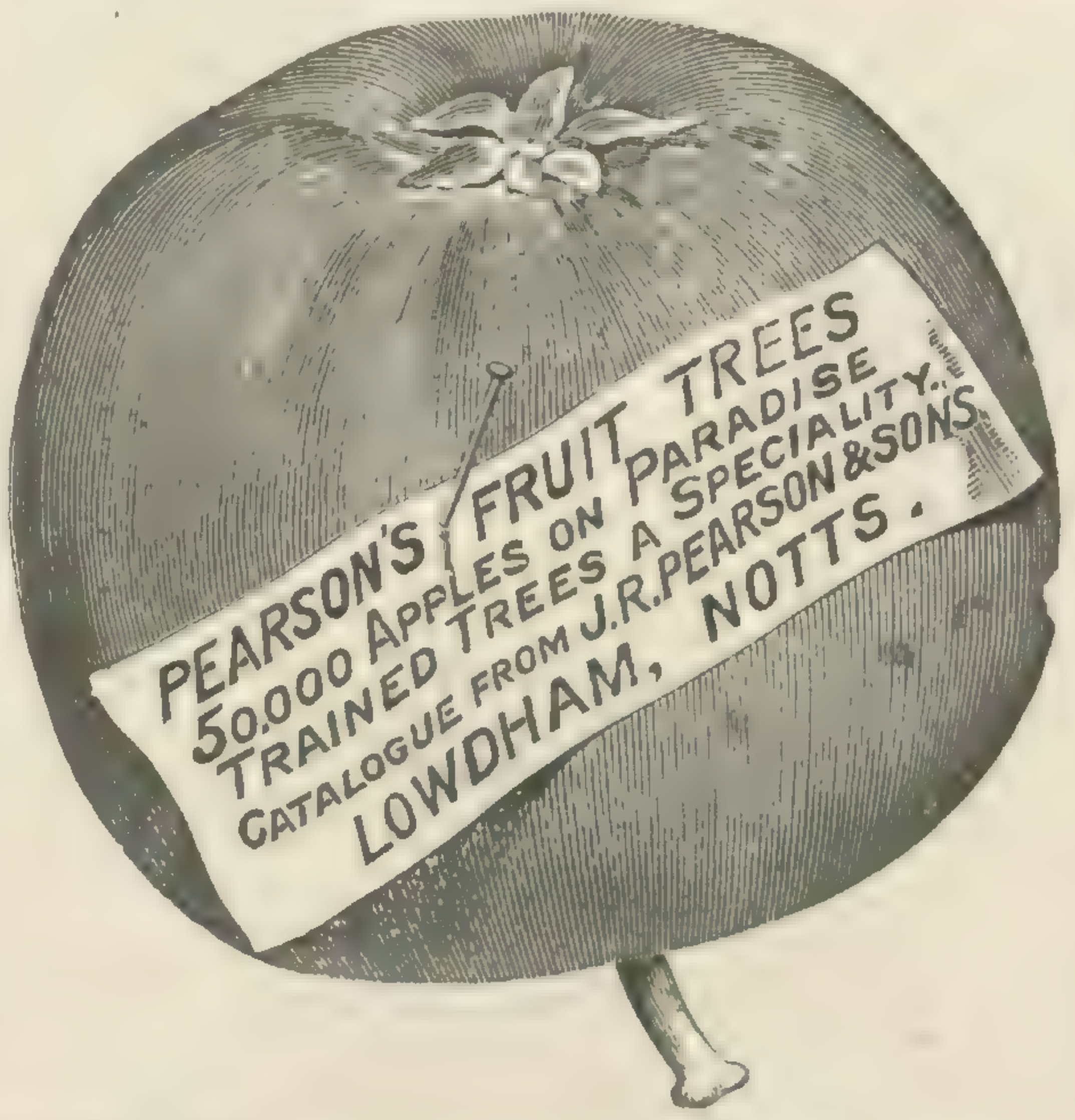
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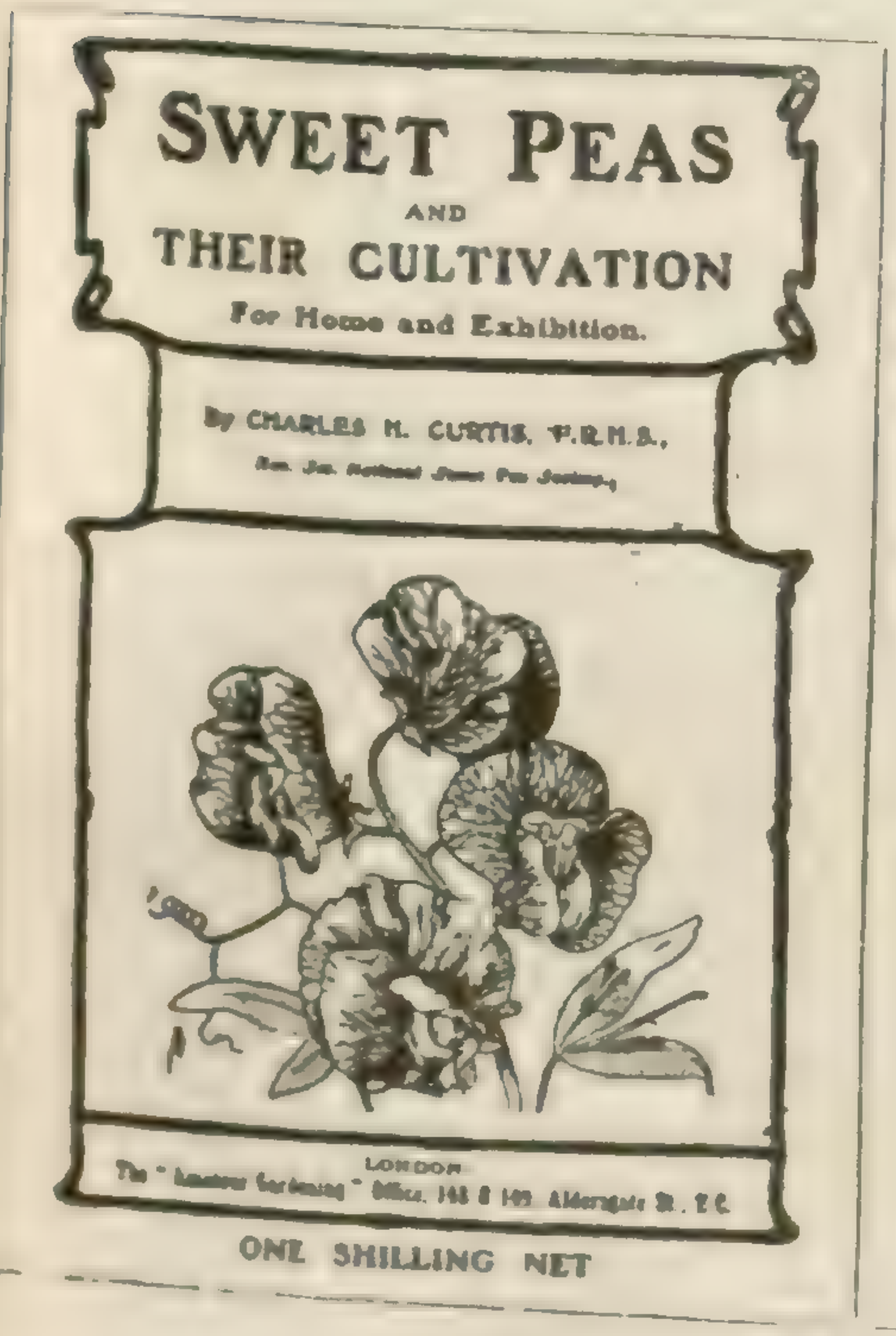

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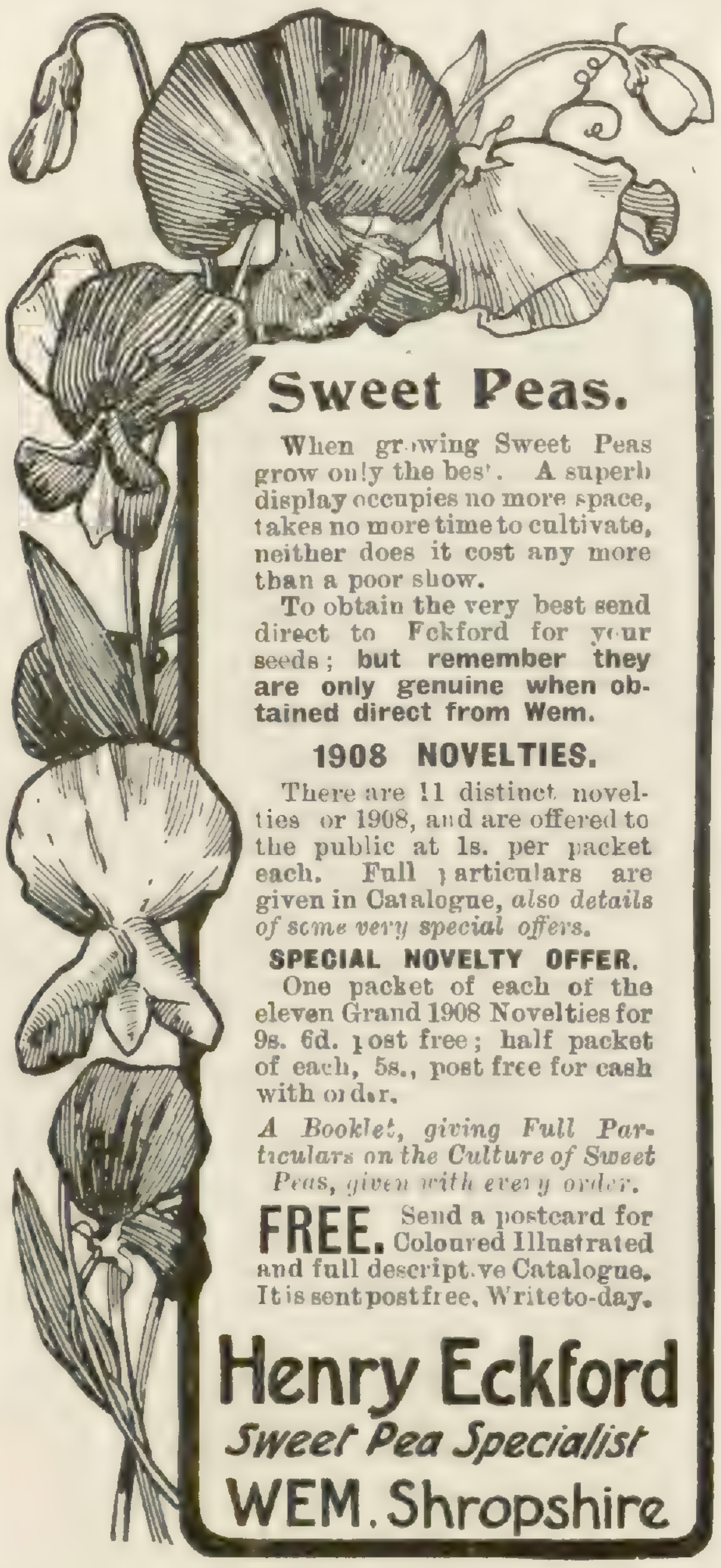

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THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Nitrogen.

It is a very curious fact that while our atmosphere contains two gases which are essential to plant life, viz., nitrogen and carbonic acid, the former forming the major part of it and the latter an extremely small one — only about the three-thousandth part—it is only this latter which is utilised by direct absorption by the leaves from the air. The two gases, however, are of very different nature, nitrogen being a simple elementary gas, i.e., not an admixture, while carbonic acid is a mixture or compound of oxygen, the other chief atmospheric constituent, and carbon which normally is a solid body assuming several forms even in its pure state, the brilliant diamond and the black opaque coal forming examples of its diversity. It is doubtless due to this compound nature, which involves a capability of dissociation, that plants are able to break it up and utilise the carbon element as building material, while nitrogen can only be utilised indirectly. Until quite recently it was assumed that this element could only be introduced by means of nitrogenous manures of various kinds, that is, manures containing earthy salts in combination with nitrogen, the plants then possessing the power of assimilating what they required. The fact, however, that these nitrogenous substances though plentiful enough in some parts of the world, such as the nitrate districts of Iquique, South America, were fairly costly owing to expense of transport, etc., while all the time the plants were literally bathing in the essential gas itself, has led to many experiments in the direction of a more direct supply. Such supply, however, had so far been found impracticable by man on commercial lines, until it transpired that there were certain natural agencies open to him, both able and willing to do the work well and thoroughly if given a little encouragement. It is a matter of tradition, as well as practical experience, that crops of the great pea family, such as clover, peas, beans, etc., differed materially from other crops, since instead of impoverishing the land upon which they were grown they actually enriched it, so that crops of different genera benefited greatly when subsequently grown in the same soil. Careful investigation showed that the roots of these clovers, etc., besides the usual fibrous growths, were studded with little knobs resembling small tubers, but not gifted like tubers proper with the power of reproduction by buds. Further investigation showed that these knobs were invariably tenanted by certain species of miscroscopic bacteria, extremely minute organisms, and some of these being extracted and cultivated by themselves, it was then discovered that they were really the cause of such knobs appearing, and that they in some inscrutable way were able to utilise the nitrogen in the air and give it to the plants, thus stimulating growth to a remarkable extent. It was even found that it was only necessary to wet the seed with water containing these organisms, or their germs, in order to ensure their presence when the seed germinated; and that when infected seed and non-infected seed were sown under precisely similar conditions the infected plants were far and away stronger and robuster than the non-infected ones. This was not all; when infected clover seed was sown with non-infected oats, the crop of oats was finer and heavier than those grown without such association, the benefits of the bacteria extending beyond the clover itself. Professor Bottomley, of King's College, has been following up this line of research for some time, distributing the bacterial germs gratis to a large number of agriculturists and others, the general result being great increase of crops, 70 per cent. in some cases, while the cost of infectious material is very small indeed, and the operation a simple one. Professor Bottomley has recently issued a pamphlet giving full details, including the results of the experiments in question, which both agriculturists and horticulturists should study, since this line of research has revealed a practically inexhaustible source of wealth in the way of increased food supplies, and also in the direction of utilisation of immense areas of now waste land, which it has been proved becomes extremely fertile if these beneficial bacteria be introduced in conjunction with very varied crops.

MR. GEORGE SCHNEIDER.
President of the French Horticultural Society of London.

Mr. George Schneider.—The occasion of the annual banquet of the French Horticultural Society of London affords an excellent opportunity for presenting our readers with a portrait of its worthy and highly esteemed president; and of this opportunity we have much pleasure in taking advantage. For many years Mr. Schneider occupied an important position in the nurseries of Messrs. James Veitch and Sons, at Chelsea, and during that period he had exceptional opportunities for becoming acquainted with the difficulties that beset young foreigners who came to this country for the purpose of becoming acquainted with British horticulture. With a due appreciation of these difficulties he became filled with a desire to take such steps as would lessen them as far as possible, if not to wholly remove them. To give practical effect to this desire Mr. Schneider set himself the task, some twenty years or so ago, of founding a society in London that would form a common ground of meeting for the young gardeners and other horticulturists coming to this country from the Continent of Europe. Such society was formed, and so sound was the basis on which it was established that it has annually increased in strength, and has accomplished an immense amount of useful work. Although designated the Société Française d'Horticulture de Londres, it is by no means limited to Frenchmen. Horticulturists of all nationalities are heartily welcomed as members, and as evidence of the cosmopolitan character of the society it may be mentioned that M. L. Gentile, the able Belgian horticulturist who founded "La Tribune Horticole," and is its editor, was for some time the secretary. The society not only aims at bringing young foreign horticulturists into touch with each other by means of its monthly meetings, but it assists them with advice and also helps them to obtain situations in nurseries, market establishments, etc. Nor is this all, young English gardeners going abroad receive similar assistance. To found a society of this description, and to carry it on successfully for a period of twenty years, represents an amount of energy and sustained effort that is not given to everyone. The task must have been arduous and incessant, but it has certainly had no depressing influence upon Mr. Schneider, who appears never so happy as when among his young friends. It is gratifying to be able to record the fact that his work in the interest of young horticulturists is highly appreciated, both by those who directly benefit from it, and those who are in a position to appreciate its importance. Some years ago, in recognition of his services, Mr. Schneider had the distinction conferred upon him of being made by the French Government a Chevalier of the Mérité Agricole, and, last autumn, he was promoted to the rank of officer of the Order. As an expression of their approval of the well-deserved honour done to Mr. Schneider, the leading French horticulturists entertained him at a banquet and presented him with a handsome testimonial, and a few weeks later a similar compliment was paid him in London. Mr. Schneider, who is a Frenchman by birth, has written the best book about ferns in the English language, and is remarkable not less for his geniality than for his ability.

Horsham Gardens.—As briefly announced in our issue of the 11th inst., we shall describe and illustrate in the GARDENERS' MAGAZINE for February 8 and 15 some of the more noteworthy of the many interesting gardens in the Horsham district. Among the gardens that will be described and illustrated are those of Leonardslee, Denne Park, Warnham Court, South Lodge, Holbrook Park, Wymblehurst, and Warnham Lodge.

Fruit Imports in 1907 exceeded in value by £349,803 those of the previous year, and afforded further proof of the steadily increasing dependence of British markets on the products of foreign orchards for their supplies of fruit. The imports of apples during the year were surprisingly large, amounting as they did to the total of 3,526,313 cwt., of the value of £2,231,327, an increase in value of about half a million sterling, as compared with 1906. In 1906 the imports of apricots and peaches were 7,646 cwt., of the value of £17,967, but last year they amounted in the aggregate to 38,814 cwt., of the value of £78,583. Bananas were received in rather smaller quantities, the aggregate having been 6,232,188 bunches, of the value of £1,771,095. The imports of cherries were smaller than for several years past, the total being 165,412 cwt., of the value of £199,489. Currants, on the other hand, show a, comparatively speaking, small increase. The total imports were 109,130 cwt., of the value of £142,245. Gooseberries were also received in increased quantities, the aggregate having been 45,603 cwt., of the value of £25,994. In the imports of grapes there was a big increase, the total having been 798,377 cwt., of the value of £769,301, against 690,371 cwt., of the value of £667,969. A considerable proportion of this increase was due to the largely increased quantities received in December last. With the imports of oranges, lemons, and nuts we are not specially concerned, but as showing the important position occupied by oranges in the foreign fruit supplies, it may be mentioned that the value of the imports of these fruits last year was £2,454,569. In the imports of both pears and plums there were substantial drops, the most marked decrease being in those of the last-named. The aggregate of the pear imports was 500,142 cwt., of the value of £478,611, and of the plums 325,761 cwt., of the value of £345,720. Strawberries also were received in smaller quantities, the total having been 44,178 cwt., of the value of £54,186. Of unenumerated fruits 538,465 cwt. were imported, and their value was £339,465. The total value of the fruit imports for the year was £10,722,323, a by no means insignificant sum for this country to pay for foreign fruit.

Mr. P. Murray Thomson has so long occupied the dual position of secretary and treasurer of the Royal Caledonian Horticultural Society, and has, moreover, discharged the duties of his offices with so high a degree of ability and urbanity, that it is somewhat of a shock to learn that he has retired from the management of the society. Having experienced much courtesy and kindness from Mr. Murray Thomson we greatly regret his retirement, as do all who have been associated with him in the management of the society. Mr. Murray Thomson is leaving Edinburgh to enter on the position of estate agent to Mr. Parkin Moore in Cumberland.

Gardeners' Royal Benevolent Institution.—The sixty-eighth annual general meeting of this institution will be held at "Simpson's," Strand, on Thursday next, the 23rd inst., at 2.15 p.m. The chair will be taken by Mr. Harry J. Veitch, V.M.H., treasurer. There will be an election of eighteen pensioners on the funds. The poll will be open at 3 p.m., and close at 4 p.m. The friendly dinner will as usual take place in the evening at "Simpson's," commencing at six o'clock. Mr. Martin H. F. Sutton will preside.

Ironmongers' Almshouses in Shoreditch.—We learn from the "City Press" that probably the almshouses in Kingsland Road, Shoreditch, will shortly disappear, and the site be used for building purposes. In one sense the removal of the almshouses, with their old-world appearance and surrounding gardens will be a great loss, but the site is valuable, and doubtless new almshouses will be erected where there will be ample gardens, purer air, and brighter light. One old record dealing with these almshouses is as follows: "1719. The company agreed with Mr. Longstaffe to plant lyme trees in the almshouses, about 80 in number, at 1s. 6d. each, free of all charges, ten feet high at least, and in girth about the bigness of Mr. Longstaffe's legge, in ye small part thereof, any falling within a year to be replaced." We may add that old Sir Robert Geffery, the Cornishman, whose generosity built and endowed the almshouses was one time Lord Mayor of London, and he did many kindly acts, the value of which is by no means exhausted.

The National Chrysanthemum Society will hold its exhibitions during the present year at the Crystal Palace on October 7 and 8, November 7 and 8, and December 2 and 3. The annual meeting will take place at Carr's Restaurant, Strand, W.C., on February 3.

Vegetables of Foreign Growth were imported in largely increased quantities during last year, and the amount that has had to be paid foreign cultivators for their produce has been a large one. The potato imports aggregated 8,249,463 cwt., of the value of £2,371,617, against 3,819,787 cwt., of the value of £1,332,027, in 1906. Of the immense quantities imported last year 88,264 cwt. came from Germany; 119,351 cwt. from France; 291 cwt. from the Channel Islands; and 231,927 cwt. came from "other countries." Their near relatives the tomatoes were also received in enormous quantities last year, the total imports aggregating 1,135,594 cwt., of the value of £1,020,795. The imports of onions also evince a material increase, the total having been 8,645,048 cwt., of the value of £1,036,231. Unenumerated vegetables were an exception to the general rule, inasmuch as they show a considerable decline in value, as compared with both 1906 and 1905. The value of the vegetable imports was £4,793,893, making with the amount paid for fruits a total exceeding fifteen and a half millions paid during 1907 to foreign cultivators for fruits and vegetables.

R.H.S. Exhibitions in 1907.—At the afternoon meeting of the Royal Horticultural Society on Tuesday Mr. J. Gregory gave a very interesting lecture, illustrated with lantern slides, on the more important of the contributions to the society's exhibitions during last year. Plants, fruits, flowers, and vegetables were included in the slides thrown on the screen, and as much judgment had been exercised in the selection of subjects, the series proved highly entertaining to the audience.

Kew Seed List.—We have just received a copy of the "List of Seeds of Hardy Herbaceous Plants, and of Trees and Shrubs," published by the Kew authorities. This list is for circulation among Kew correspondents, and shows what seeds, ripened at Kew, are available for exchange with Botanic Gardens, etc. The list runs to twenty-one pages and begins with Acæna macrostemon and finishes with Zenobia speciosa var. pulverulenta.

Brighton and Sussex Horticultural Society has sustained a loss of £16 12s. 4d. on the recent year's working. This is not welcome news. The exhibitions have been better than usual, and the loss on them much smaller than usual, but the deficit on the year's account is chiefly due to a falling off of subscriptions. The annual meeting is to be held as we go to press (Thursday), and we hope the prospects for 1908 will prove brighter than the result of 1907. Fortunately the society has accumulated a fair balance in bygone years, and has nearly £250 to start the year with; the general account shows a turnover of £1,150 15s. 9d.

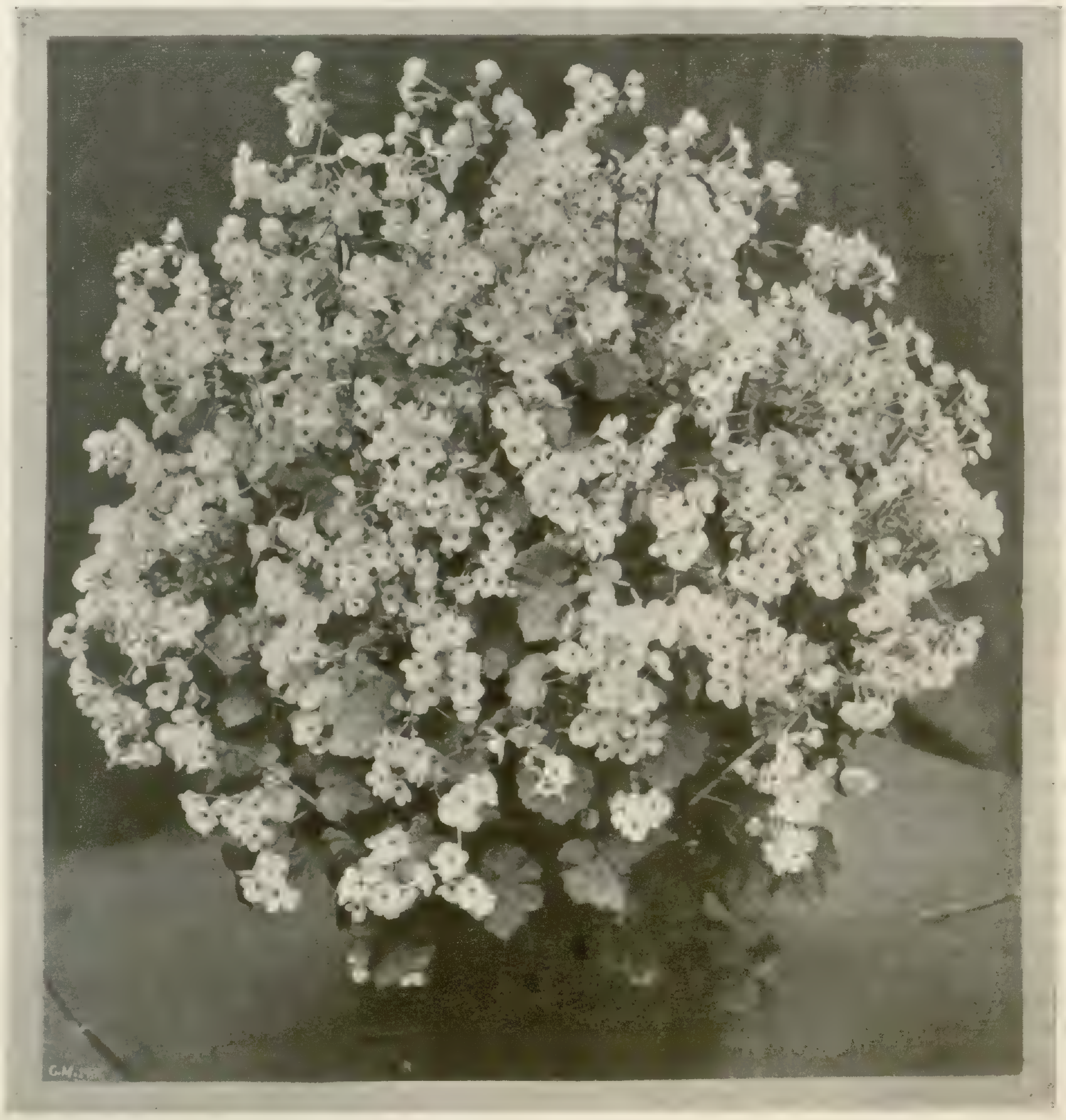
Gosport Gardeners' Association continues to make good progress, and has become so well established that this year it will hold monthly meetings, at which papers will be read, and two exhibitions. The date of the summer show is July 8, and that of the autumn show has yet to be fixed. The programme of the monthly meetings is as follows: February 5, "Potatoes"; March 4, "Outdoor Mushroom Culture"; and April 1, "Construction of Glass Houses," by Mr. C. F. Laurence, Hants County Council lecturer; May 6, "Hints on Hardy Fruit Culture," Mr. J. B. Groom; June 3, "Roses," Dr. Lamplough; July 1, "Origin and Composition of Soils," Mr. G. E. Smith, B.Sc.; August 5, "The Storing of Fruit," Mr. T. Naish; September 2, "Culture of Fruits under Glass," Mr. J. Dawe; October 7, "Bulbs," Major G. Churcher; November 4, "A Gardener's Pot-Pourri," Captain G. A. Broad, M.V.O.; December 2, Annual Meeting; and January 6, 1909, "Primulas," Mr. C. Coleman.

Disfigurement of Rural Scenery.—Lovers of the amenities in the rural districts of England have, since the advent of the motor car, had plenty to try their patience, and to cause them much regret. They have seen gardens and hedgerows covered with dust in consequence of the rate of speed at which the majority of motor cars travel, and now they find rural districts disfigured by advertisements of motor cars, and their accessories. In a letter to the "Times" with reference to this objectionable procedure, Mr. W. D. Caroe writes: "More and more frequently the approaches to the smaller provincial towns, and even to the villages, are being placarded with motor advertisements, disfiguring too often charming old cottages or barns, and destroying characteristic rural scenery. . . . . . We are already too familiar with the plague of pill and lotion puffs and posters, which, along the path of the railway, constitutes so grave a reflection upon the nation's good sense and taste. These at least obtrude themselves more upon the rapid traveller than upon the country pedestrian or anyone else. But the new form of the disease threatens the country dweller in his most frequented and legitimate haunts, and, if allowed to flourish, as competitive vulgarities will, the charms of our country roadsides are destined soon to be doomed. With the rapid spread of our towns in area and hideousness, every rural district left undefiled becomes more precious to the country at large—more precious specially to the town dweller—most precious, one might have thought, to the motorist, with all his newly-got opportunities of visiting it. The carriage builders, horse dealers, and blacksmiths of the age of horse traction did not find it necessary thus to defile the countryside. Why now the motor dealers?" Being in full sympathy with Mr. Caroe we trust he will receive the support for which he appeals, in so good a cause as "the keeping sweet and undefiled of rural England from uncalled for and misplaced disfigurement."

Production of Attar of Roses.—According to the report of M. Max Choublier, the French Consul at Philippopolis, the manufacture of attar of roses continues to be one of the principal industries in Eastern Roumania. During the past twenty-five years the industry has shown a steady increase. In 1884 the production of attar and rose water was 81 kilogrammes (1 kilogramme = 2.2055lb.), and in 1905 the quantity of attar alone was 5,316 kilogrammes.

BEGONIA GLOIRE DE LORRAINE.

During the past few years it has been our good fortune to see many finely grown examples of the beautiful and extremely useful Begonia Gloire de Lorraine and its varieties. Sometimes they have been bush specimens of large dimensions, at others they have been of a size suitable for decorative purposes in the drawing-room and other indoor apartments, and in some instances they have occupied suspended baskets and overshadowed the plants on the stages below with huge clouds of their exquisitely coloured flowers. We have a clear recollection of the finest of these, so pleasing was the impression they produced, but we are wholly unable to call to mind any that were superior to the magnificent specimens that have formed such a glorious feature of the Audley End gardens during the current winter. Examples of different sizes were grown, and all were remarkable for their flower production and finish. Some of the larger specimens were contributed by Mr. James Vert, the able chief of these gardens, to the meeting of the Royal Horticultural Society held on November 26 last, when they were much admired, both for the skilful culture they displayed and for the taste evinced in their arrangement. Sufficient specimens were exhibited to fill a broad table extending one-half the length of the Horticultural Hall, and they were set in a ground work of ferns just high enough to hide the pots. The specimens included Gloire de Lorraine, and its two fine varieties, Mrs. Leopold de Rothschild and Turnford Hall. We illustrate herewith the first of these two varieties which has bright pink flowers of comparatively large size. Turnford Hall has white flowers, and is of much value for its distinctness.



A FINELY FLOWERED SPECIMEN OF BEGONIA MRS. LEOPOLD DE ROTHSCHILD, GROWN AT AUDLEY END.

Flowers bright pink.

Mr. J. Vert has kindly contributed the following notes on the practice by which he has obtained such splendid results.

With reference to the cultivation of winter-flowering begonias of the Gloire de Lorraine type, I would say that to ensure the production of good examples healthy cuttings are essential. The cuttings should be inserted at the beginning of March in thumb-pots, using a compost consisting of two parts of loam, two of leaf-mould, and one of silver sand. As the cuttings are inserted plunge the pots in a propagating case at a temperature of 70 degrees. They will be nicely rooted in about a month.

When the plants are rooted, gradually inure them to the atmospheric conditions of the structure in which the propagating frame is placed, and transfer them to large 60's, using a compost prepared as advised above. Keep the plants growing with the aid of a moist atmosphere and a temperature ranging from 60 to 65 degrees, spraying them over once or twice a day and shading from bright sunshine are essential to success; shift them on as required. Good plants for general decoration may be had in 48's and 32's, but larger plants for specimens should be shifted into 24's. Grown in baskets suspended from the roof they are most effective when in bloom, and useful both for the conservatory and mansion. Well grown basket specimens will form a mass of flower five feet in diameter are extremely beautiful.

As the pots become filled with roots frequent applications of liquid manure will prove beneficial in promoting a sustained and vigorous growth. Remove all flowers as they appear until about six weeks previous to the time the plants are wanted at their best.

I would add that attention to details is necessary throughout the whole period of growth, but this is amply repaid by the brilliant display of colour that will be produced from October to March at a period of the year when generally speaking flowers are scarce. JAMES VERT.

Audley End Gardens.

FAILURES IN FRUIT CULTURE

Almost every practical gardener is asked the frequent question, why does not such and such a tree bear fruit? Very often this and similar questions come from some bewildered amateur, or the owner of some small garden, whose trees either fail to grow satisfactorily, or after they have grown fail to carry a crop of fruit. There are, I think, two causes why such conditions prevail, and they may be classed as preventable, and nonpreventable. With the latter case possibly it is beyond human aid to make it successful in all cases, as a bad climate and bleak situation would prove. Unfavourable soils may be improved by so adding to or taking away, as to make the staple capable of yielding successful results. But in the majority of cases these failures are traceable to

Preventable Causes.

I have in my mind's eye a striking example of a failure in recognising the importance of beginning well. The trees, as is the case in many instances, were purchased at auction in the cattle market. They are as a rule the outcast or clearing up of the nurserymen's season, but it is not the practice of all the members of the trade to dispose of their clearings up in this way. On the contrary, many of the nurserymen in finally clearing the quarters dispose of the remnants by burning. The trees in question the longer they remain, the more worthless will they become, possibly a few may struggle on and form trees, but miserable specimens they will be, and I need hardly say that prematurely old, stunted trees and bushes are dear at a gift.

If the expenditure of the planter must be limited, it is more economical and wise to purchase young maiden trees. Much time is gained by planting good-shaped well-grown trees, and they are in every way more satisfactory. Sometimes we are met with the remark: See what fruit these grotesque, ill-shapen old trees produce; but although such trees do bear crops it does not necessarily follow that the best way to secure fruitful trees is to plant those which are ill-shapen and deformed.

Unsatisfactory Planting.

I have often discovered that bad planting is another cause of failure, nothing turns young trees into prematurely old ones sooner; they never have a chance of recovering from the time they are planted. I must also especially refer to the objectionable practice of digging out holes just large enough to hold the roots, and this frequently in land of a hard, retentive, clayey nature, which has not been broken up or trenched. I can best show the objection to this practice by comparing it with cramming the roots into a large flower pot. The roots under such circumstance do not strike out readily into the soil in search of food. When the conditions that prevail make it necessary to plant in soil that is more or less unsatisfactory, a hole sufficiently large in diameter to allow a free growth of the roots without check must be made.

Filling-up Gaps in Orchards.

Another great mistake that occurs in the case of both landowners and tenants is the practice of filling up gaps in orchards. It is stipulated in some leases of farms containing an orchard, that gaps in them shall be filled up as they occur, consequently generation after generation that is done with the same kind of tree. All practical workers of the land regard the annual rotation of ordinary farm crops as of the utmost value, therefore it should be readily seen that a change is necessary where fruit trees have been grown for a generation.

Pruning.

This has to answer for many failures, and in most cases through the operators not following a middle course. Extension is advocated by some, and if carried out in its entirety, resolves itself into letting the trees alone. Some who do not obtain the extra labour required in careful pruning are partisans of it, until the system does not give the desired results. Then not only are the pruning knife and hook requisitioned, but the saw is made vigorous use of. More than one instance has come under my direct notice where whole cartloads of wood have been cut from the trees at one time, and in consequence the trees have ben so paralysed by the shock that several years have passed before they fully recover. In some cases the trees were only fit to be grubbed up. Pruning is decidedly beneficial if performed at the right time, and in the right manner. With orchard trees this should be done annually, and with trained and other forms of trees twice yearly is necessary. To allow trees to run wild for five or six years and then cut away six times as much wood as ought to be cut out at one time, is a direct road to failure. Another source of failure, and perhaps not the least, is injudicious selection of varieties.

This is often brought about by the cultivator admiring certain varieties at the fruit shows, noting them down, and then, without any knowledge of their peculiarities, planting them. This mistake more frequently occurs with pears than apples. These are most exacting as to districts and soils, and some knowledge must be obtained of them before planting to ensure success. There are, however, many good standard kinds of fruits that can be planted with confidence. The foregoing are a few of several causes of failure in fruit culture, but with a little forethought and advice they may be averted. W. H. CLARKE.

Aston Rowant Gardens.

American Gooseberry Mildew.—What an obliging institution the Board of Agriculture is, to be sure! Some time ago it set out to eradicate American gooseberry mildew by issuing an order that all affected bushes should be destroyed, but somehow gooseberry growers did not quite see the force of their means of livelihood going up into the air in smoke without some compensation, which county authorities did not see their way to give, so they not unnaturally resented the order. A deputation to the Board followed, and, instead of wholesale destruction, affected bushes are now to be pruned and sprayed. Probably those law-abiding citizens who burnt their bushes under the original order now wish they hadn't, and the change of tactics is very puzzling to the man in the street, who hears from one expert that destruction is the only means of eradicating the disease, and from another that such a contention is absurd, as it can be dealt with effectually by measures much less drastic.—SPY.

ZYGADENUS ELEGANS.

There is much to admire in this very quaint and pretty bulb from North America, one of a group collectively called fly poison—a name rightfully belonging to Z. muscitosicum, but loosely applied to all the zygadenus, at home and in America. It has glaucous leaves in loose rosettes that resemble tuberoses in habit, and in summer it throws up a very pretty panicle of flowers that are coloured a quaint shade of silver-grey, striped as in Ornithogalum narbonense, and literally produced in hundreds. The panicle is exceedingly loose, and in this respect gains in elegance, its height being two to three feet, and it lasts six weeks in full flower.

This zygadenus is one of many American bulbs that should prove more satisfactory garden plants than those we have received in quantity already from that Continent. I have tested its hardiness often and have not lost a single plant through frosts. It will grow in any good soil, but prefers a damp sandy loam. I have seen splendid examples in the red loam of a Somersetshire garden, taller and stronger than I could grow in a poor soil near London. In the south-west it should prove most delightful, as it can withstand the moist climate and appreciate the sunshine, and in Devon, Cornwall, Ireland, and the North-west of Scotland, it will probably surpass its best efforts elsewhere.

These rare bulbs add interest to any garden, and when they come to us without cultural disabilities we can welcome them the more, particularly when their flowers are novel and artistic, and elegant enough to have won a desirable specific name.

G. B. MALLETT.

WINTER-FLOWERING SWEET PEAS.

The new race of winter-flowering sweet peas, which originated in the United States, have already been taken in hand by several growers, and the results seem to point to a bright future for this section of the sweet pea.

Notes of a recent trial of some of these varieties at the Ramee Nurseries, Guernsey, provide not only interesting reading, but also matter for reflection to the many gardeners who have to provide plenty of cut flowers during the dull months of the year. The varieties in question were sown in the early days of October, and began to expand their blossoms during the last week of November. Quick work, you will say, and from the accounts given, the trial was mainly to see how soon they could be brought into bloom. It was particularly observed that the lilac, mauve, and purple shades were the first to blossom. The sweet peas in the case in question were forced in a temperature of 60 deg., though, had the growers been content with, say, 50 deg., they would have undoubtedly secured better flowers, though, of course, they would have been several days later. The varieties ranged in height from three to four feet, not a bad height at all for ordinary requirements, but I believe that some of the New Jersey seedlings of Mr. L. Volanek attain a much greater height than this. On the other hand, the scarlet variety Early Bird, and the primrose Sunbeam, and a few others are dwarfer than the ordinary forms. With careful selection and intercrossing, the best of the varieties at present in commerce may be rapidly improved, in which case the new race of sweet peas will prove a valuable asset in the hands of both the market grower and the private gardener, for the sweet pea is such a favourite flower that the opportunities of having them in flower during the winter will be made full use of, especially as they are so useful for decorative purposes. P. S. HAYWARD.

THE BUDDLEIAS.

Recent introductions from China have caused the genus Buddleia to advance rapidly in public favour during the last few years, for several of the newer species and varieties are of considerable decorative value, and are of such easy culture that the merest novice need not anticipate failure. Altogether there are about a dozen species in cultivation, and, with the exception of three, they can be cultivated in the open ground in the neighbourhood of London and south and westward, receiving little or no injury from frost, except during an exceptionally severe winter. These species are very widely distributed, some being found in South Africa, others in China, Japan, Sikkim, Chili, and Peru, etc.

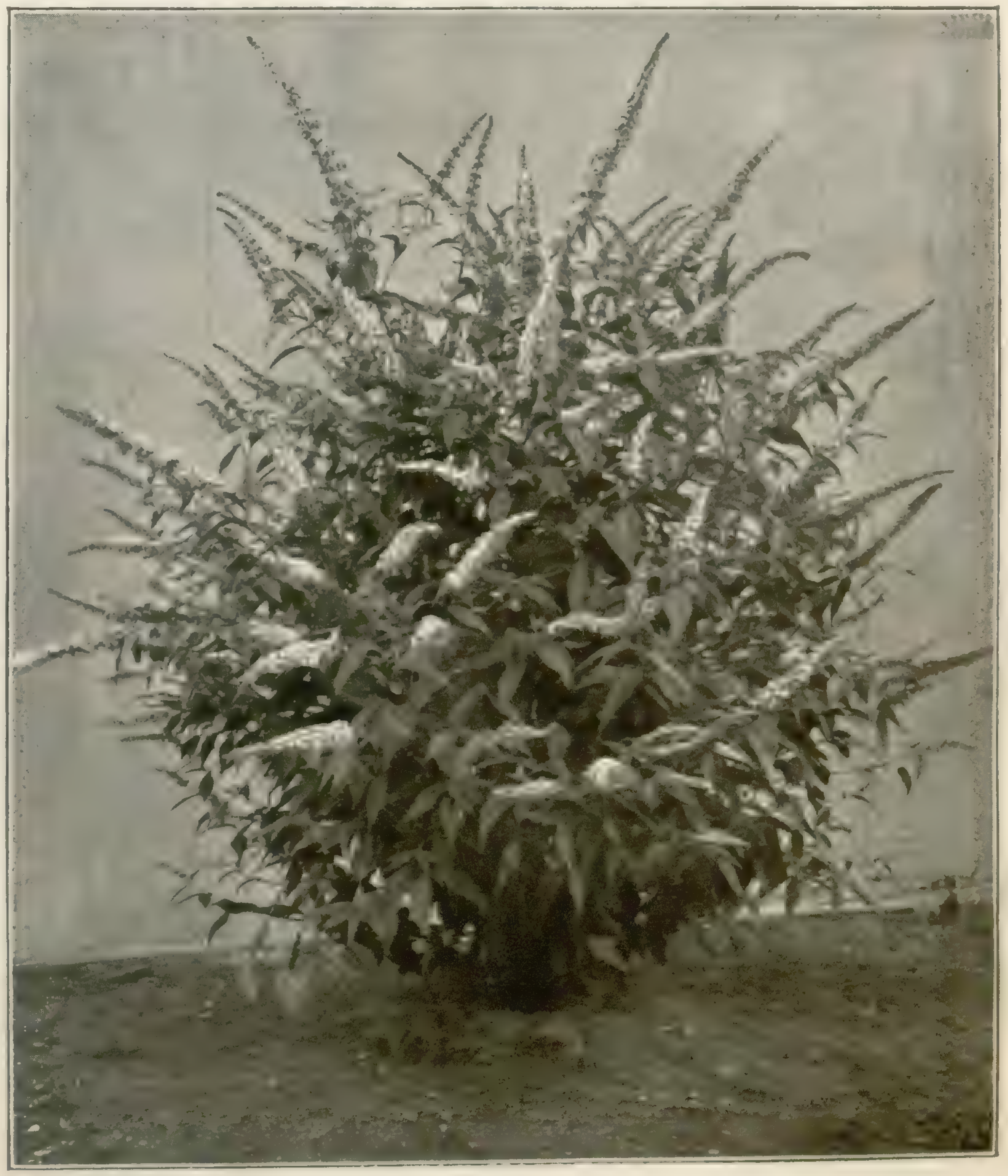
Although one or two species have rather ornamental foliage, it is as flowering plants that they are grown, and the majority of them are exceedingly floriferous and fragrant. In the open ground in the southern counties they rapidly form huge bushes, while in cold districts, if planted against a south or west wall, they quickly cover a large area, and are very ornamental when allowed to hang loosely from their support, the main branches only being secured. Though some sorts, such as B. globosa, thrive and flower well in poor, sandy soil, others, particularly the variabilis set, require very rich loamy soil to attain a high degree of excellence. When preparing ground for them it should be trenched two feet deep and well manured, and if very poor good loam should be added. Quite small plants may be placed three feet to four feet apart, if to be grown in a mass, and these, in a very short period, will meet. Single plants of the variabilis set, however, such as is shown in the accompanying illustration, are very appropriate, especially as lawn specimens, as they form well-balanced bushes with very little attention. The principal end to aim at in the cultivation of the variabilis varieties is the production of strong, sturdy shoots capable of bearing large inflorescences. To effect this end, it is necessary to commence in spring, say early March, by cutting the plants well back to within a bud or two of the base of the last year's wood. At the same time the surface soil should be lightly forked over and a surfacing of rich farmyard manure given. About June, when growth is rapid, an application of liquid manure is productive of good results. Such species as B. Colvillei, B. globosa, and B. paniculata are more satisfactory when allowed to grow naturally into large bushes, sufficient pruning only being done to keep the plants shapely and free from dead wood.

The few tender kinds are suitable for the greenhouse, and thrive in a compost of good fibrous loam, with one-fourth of its bulk of leaf-mould or peat, and sufficient sand to keep the whole open. B. asiatica is worthy of attention from everyone who has to keep a conservatory gay, for it is very floriferous, and lasts in flower for a long period.

Most of the buddleias can be easily increased by means of cuttings of young shoots in summer, whilst several of them set seeds freely, which germinate within a few weeks of sowing. The following represent the species in cultivation:

B. asiatica.—This Asiatic species has been brought prominently into notice of late as a greenhouse flowering plant, though it is by no means of recent introduction, having been introduced into English gardens from India over thirty years ago. It is of rather slender growth, and may be had from three to six feet high, the secondary branches being terminated by long close racemes of small fragrant white flowers. The leaves are lanceolate and very finely toothed. It is a very graceful plant, and well adapted for decorative purposes.

B. auriculata.—A South African plant of slender growth, with broadly lanceolate leaves two inches or so long, pale green above and silvery beneath. The flowers are cream-coloured and small. It requires greenhouse protection, but is of no special value, being of botanical rather than horticultural interest.



BUDDLEIA VARIABILIS VEITCHIANA.
A specimen growing in the Coombe Wood Nurseries. Flowers, lavender blue.

B. Colvillei.—This has been described as probably the most beautiful flowering shrub of the Sikkim Himalaya, and certainly when seen at its best it is a glorious subject. Growing naturally, it forms a bush quite twenty feet high, with ovate-lanceolate leaves six to eight inches long, green above and silvery and pubescent beneath, and terminal panicles twelve to eighteen inches long of red or rose-coloured flowers. These flowers are large, and singularly like a garden pentstemon flower in size and colouring. In the warmer parts of the country it succeeds in the open, but in other places it is necessary to plant it in a cool house.

B. globosa.—Previous to the introduction of the finest varieties of B. variabilis this was the best known of the various species. When mature, specimens are found ten to 20 feet high, and as much through. The young wood is covered with a greyish felt, as also are the undersides of the leaves. The leaves are lanceolate, about six or seven inches long, and evergreen or sub-evergreen. The flowers are orange-coloured, and borne in round ball-like heads, several of which compose an inflorescence, during June. It is very ornamental, and succeeds in most places.

B. intermedia.—This is of hybrid origin, the parents being given as B. curviflora and B. Lindleyana. The former of these two species is not described here, as it is rarely seen in cultivation; there is, however, another curviflora, which is a synonym of japonica. B. intermedia grows about three feet high, and bears ovate-lanceolate leaves and small purple flowers in long slender racemes. It is not very hardy.

B. japonica.—A fast-growing species from Japan, which grows to a height of five or six feet. The branches are curiously winged, and produce oblong acuminate leaves six to ten inches in length. The flowers are deep lilac, half an inch or so long, and borne in dense pendulous racemes, sometimes as much as eighteen inches long. It is very floriferous, the flowering season extending from May to October. This free-flowering propensity has the effect of quickly exhausting the plant, and it requires renewing from seeds every few years.

B. Lindleyana is a species from China and Japan with prominently four-angled, slightly winged stems, thin ovate acuminate leaves, with almost entire margins, and terminal racemes of purplish flowers. It forms a bush four or five feet high, and blossoms freely during autumn.

B. madagascariensis. This is a tender species of slender habit from Madagascar. It requires the protection of a warm greenhouse, and is an excellent plant for covering a tall pillar, rafter, or wall. In the Temperate House at Kew it has been planted against a pillar and carried up a rafter above the gallery, and is now about fifty feet in height. It can, however, be kept within bounds in a small structure by pruning. The branches, undersides of the leaves, and flower stalks are all covered by a dense white pubescence, which adds materially to the effect of the plant. The leaves are ovate, six to eight inches long and two inches wide. The flowers are small, of a rich deep orange shade, fragrant, and borne in elegant branched racemes a foot to eighteen inches long. It blooms profusely during late spring and again in autumn.

B. paniculata.—This is sometimes met with under the name of B. crispa. It is found in Afghanistan, Burma, and China, and is variable in character. The typical form has rather small crisped or wrinkled leaves, which are covered on both sides with a whitish tomentum. The flowers are lilac, with a lighter centre, and borne in small panicles in May and June.

B. pulchella is a native of Natal, and requires indoor culture in this country. It grows about five feet high, and produces small green leaves and cream-coloured flowers. It is not of any decorative value.

B. variabilis.—This is a Chinese plant of considerable decorative worth. If allowed to grow naturally it attains a height of ten or twelve feet, with a wide spread. The leaves are oblong or lanceolate, six to twelve inches long, green above and whitish beneath. The flowers are small, fragrant, lilac-coloured, and borne in dense terminal racemes from every shoot during autumn. Good as the species is, however, it is quite eclipsed by the varieties Veitchiana and magnifica, which have been introduced by the Messrs. Veitch, of Chelsea, through the medium of their collector Mr. Wilson, from China. The former of these two produces racemes of bloom two feet long, whilst those of magnifica are even larger. Both are excellent free-flowering shrubs, and are worthy of extensive cultivation.

B. albiflora and B. Hemsleyana are new Chinese species, introduced by the Messrs. Veitch; they are of the variabilis type. The two species are rather similar in general appearance, but albiflora has more prominently angled stems than Hemsleyana, and the leaves are different in texture and less silvery on the under surface. Both produce very long inflorescences, the flowering time being August. The name albiflora was not happily chosen, for both plants have lilac-purple flowers.

W. DALLIMORE.

Making up Hotbeds.—Gardeners in general have just cause for complaint that they do not obtain enough manure; but there are some folk who get hold of far too much, judging by the appearance of their old hotbeds when the latter are dismantled. When a dismantled hotbed shows a mass of white material near its centre the old practitioner knows at once that hotbed has only been half a success; it has heated violently for a short time, and then settled down to an apathetic coldness. Now, a hotbed should not heat thus spasmodically; it should give out a gentle but long lasting warmth. And to ensure its doing so, the manure employed should be balanced by an equal quantity of dead leaves.—E. J. K.

DRASTIC MEASURES.

The arguments that can be used in favour of drastic measures being undertaken whenever plants are plagued with an abnormal attack of some insect pest, or injured by a fungoid disease, are so strong and so plentiful that it is hard to understand why drastic measures should not figure more prominently as a weapon of war.

By drastic measures is meant, of course, those which have for their object the complete emancipation of the plants and the utter destruction of the pests. This may involve some loss, some sacrifice of plants, but the price is well worth the purchase. Better by far lose a few and be blessed with cleanliness, than have the whole stock continually troubled, and in spite of all cultural ability unable to be raised above the level of mediocrity. This is a state of affairs which too often exists, both with amateurs and professionals.

The wretched policy of "keeping it down," or still worse of "laissez-faire," is one which is painfully prevalent, and should be resisted by all who bear the banner of progress. No single act or established policy has injured the cause of progressive horticulture more than this method of allowing a pest to exist as long as it could be confined within certain limits. It is opposed to progress. It is opposed to economy; and it is in direct antagonism with the dictates of common sense.

How can the best cultural practice prevail in the formation of handsome specimens when the plants are disfigured and their precious sap absorbed by enemies. Undoubtedly it would take some time to effect a lasting clearance. It may even to some extent upset the usual arrangements of labour, but in point of time of labour and of money, taken in the aggregate, it will be found cheaper to deal with the matter thoroughly rather than be continually treating it superficially.

Before proceeding further, by way of precept, it may be well to mention a case which some years since came under my notice. The cattleyas in the place alluded to were troubled with the "fly," which lays its eggs and hatches the young maggots in the roots of the plants. This causes them to swell, and, of course, impairs the action of the roots, and as a certain consequence has a decidedly detrimental effect. Every cattleya brought into the house was in turn attacked, but strange to say, although several other orchids were present the pest with nice discrimination confined its attacks to cattleyas and lælias. Remedies were, of course, discussed and undertaken. Fumigation was found to destroy the fly when on the wing, but was powerless to affect those eggs or maggots which were maturing within the roots. Every visible swollen root was cut off, but by the continued attack of the pest it was apparent that a breeding place must have been found in those roots bedded in the compost. The practice, and supposed remedy, of leaving night-lights in the house to induce some of the flies to undertake self-destruction in the flames was tried for some considerable time, without very satisfactory results. As these remedies had no other effect than to stem the rush of evil, other more drastic measures were planned and undertaken.

Those measures I will describe. The plants were taken from their pots and all the old compost removed and forthwith burnt. The crocks were collected in a tub and the pots put on one side to be washed at the first opportunity. The plants were then taken in hand and every root, young and old, affected or whole, was cut off hard in at the base. All loose matter was pulled off, and the plants were finally washed in strong soapy water with a slight dash of paraffin. They were then forthwith taken to another house which had previously been fumigated to make sure of destroying those flies on the wing. The cattleya house was then thoroughly washed—roof, sides, walls, stagings, pipes, trellis boards, shelves, brackets, wires, and every substance within the house. The ashes on the floor were cleared off and thrown on the common fire. A heavy coat of quicklime was put on the ground beneath, and some sweet clean ashes were brought in. When all was dry a strong fumigation was given as a matter of further precaution.

Meanwhile the cattleyas under treatment were laid out on a staging over a tank and syringed three and sometimes four or five times a day. In less than a week some of them had begun to produce young roots. These were then strung up, roots downward, and still subjected to syringing. When the roots were one inch to one and a-half inches long, the plants were potted up, using peat, sphagnum moss, and charcoal as a compost, and in every case clean new pots and new crocks. In course of time all the plants were potted up, and, although they showed undoubted signs of a check, they soon pulled up with good treatment. The loss did not reach 10 per cent., and I have it on the authority of the gardener now in charge, that after a period of more than five years not a sign of the fly is to be seen, nor has it been known at any time since those drastic measures.

I have another case in my notebook which refers to mealy bug on amaryllis. The attack could by no means be characterised as a moderate one, and the effect on the plants was truly visible. The autumn was chosen for an onslaught on the pest. The plants, which numbered several hundreds, were taken from the pots, the soil was thrown away, and the pots put by to be washed. All loose skins were taken off the bulbs, and all decayed roots were cut away. The bulbs were then washed in an insecticide, and when dry were plunged half-way in shallow boxes of cocoanut fibre and put under a staging where they would not be subjected to water, but could complete their period of rest. As they produced new roots they were in due course potted up. In this case the cure was not wholly complete, for some few of the pests did reappear; but, considering the peculiar structure of the amaryllis, and the lurking powers of mealy bug, there was certainly matter for congratulation in the great reduction of their power, and I doubt not that another such measure would wholly rid the bulbs of them.

On another occasion I well remember we were troubled with brown scale, which was especially noticeable in the stove. As to mealy bug this place was certainly noteworthy in that there was not one on the place. The owner was anxious to get rid of the scale, and for that purpose had recourse to the then almost unknown method of vaporising with cyanide of potassium. The cubical capacity of the house was measured and the amount of cyanide of potassium and sulphuric acid duly purchased. The ventilators were then tightly closed, a basin was put in for the reception of the sulphuric acid and water, and the cyanide of potassium suspended over it in thin paper. A string connected with this paper package was passed along the roof and eventually through the keyhole of the door. When all was ready and the house cleared the cyanide was dropped into the basin. At once there was a process of boiling and the gas was given off. After several hours the doors of the house and the ventilators were thrown open to allow the escape of the gas. As far as the eradication of scale was concerned the result was compeletely satisfactory, but some coleuses were killed, and a few young fronds of adiantums injured. This of course, could not be considered a heavy sacrifice.

Since that time further experiments have increased the efficiency and removed the plant-killing danger of the method. The right quantities of acid, etc., have been more accurately gauged; apparatus has been invented to ensure safety to life in uniting the cyanide with the acid; fans have been arranged for more evenly distributing the gas, and it may now be regarded as a method of pest extermination which only needs practice and publicity.

Drastic measures are sure to meet with the approbation of all reasonable men. To approve a measure, however, is not to adopt it. Gardeners are slow to move, and are most distrustful of any new method, even when it promises complete freedom from some of the most worrying troubles to which plants are subjected.

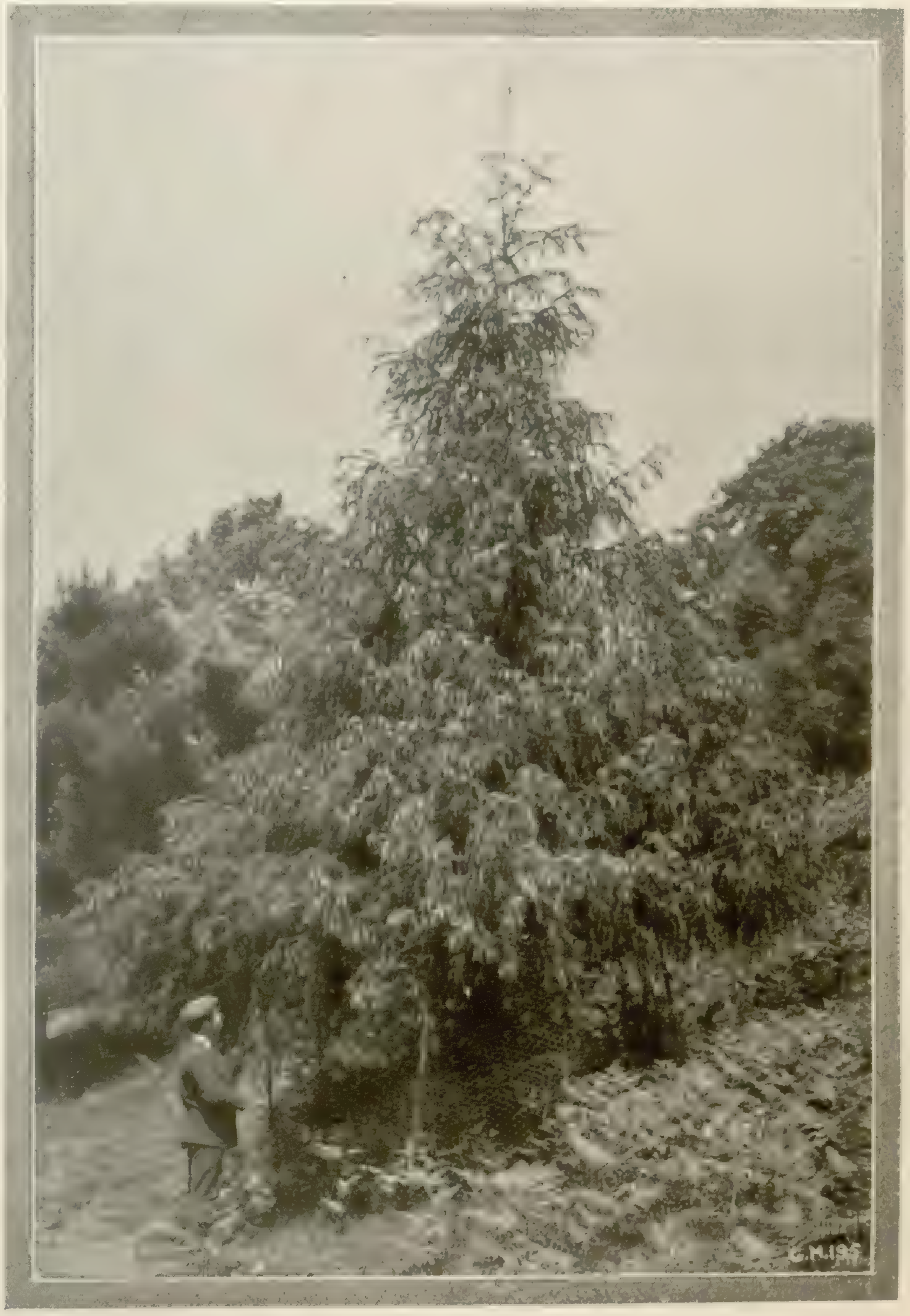
WILLIAM F. ROWLES.

PICEA MORINDOIDES.

The reference made in the GARDENERS' MAGAZINE of the 11th inst. to the figure of Picea morindoides, published in the "Botanical Magazine" (t. 8169) has brought several inquiries from readers specially interested in conifers. Several of our correspondents express themselves as desirous of obtaining information on the all-important question of the general character of the tree when of considerable age. We have, therefore, thought it advisable to give what further information is available, and an illustration of the unique specimen in the grounds of Leonardslee, Horsham, the residence of Sir Edmund Loder, Bart.

This tree occupies a position on the sunny slopes to the south-east of the wild garden for which Leonardslee has long been justly famous. The height is between thirty and forty feet, and as will be readily seen, the tree is well furnished from within a short distance of the base to the apex, is graceful in growth and elegant in contour. Originally there were two specimens at Leonardslee, but one occupied a position where it was desired to carry out some important alterations, and it had to be removed. Since the other tree was cut down the one remaining has had special attention, for like Sir Edmund Loder, Mr. A. W. Cook, the head gardener, takes a keen interest in the many noteworthy trees in the grounds, and consequently it is in a flourishing condition. There appears to be no record at Leonardslee of the origin of either of the trees, but this is not surprising considering that they must have been planted some years before Sir Edmund Loder purchased the estate.

According to Dr. Otto Stapf, who supplied the description accompanying the figure in the "Botanical Magazine," Dr. A. Henry has identified Picea morindoides with the spruce collected by Sir Joseph Hooker in the Lachen Valley, in Sikkim, in the course of his visit to the Himalayas in 1847. In his "Himalayan Journals" Sir Joseph Hooker writes: "Towards Lamteng the path left the river and passed through a wood of Abies Smithiana," and in a footnote he observes: "Also called A. Khutrow and Morinda, I had not before seen this tree in the Himalayas; it is a spruce fir, much resembling the Norway spruce in general appearance, but with longer pendulous branches. The wood is white and considered indifferent, though readily cleft into planks; it is called 'Seh.'" Further on the author states that the wood of this species "is employed for posts and beams" in the Lamteng district. Dr. A. Henry also identified the tree with a spruce collected in Chumbi by Sir J. Ware Edgar, who was then (in 1877) accompanied by Sir George King's collector Dungboo, and with the specimens collected by Mr. H. E. Hobson, when stationed at Yatung, and by Mr. E. H. C. Walsh, during the Tibet exhibition. To these the specimens collected by Mr. R. Pantling in Sikkim, and a second specimen collected by Dungboo at Chumbi, might in Dr. Stapf's opinion be added. It is also he considers evident that Gammie's Picea Morinda from the Lachung Valley is the same tree. "In my opinion," observes Dr. Stapf, "there can be little doubt that Dr. Henry is right in his identification of those specimens with Rehder's P. morindoides, although this implies the admission of a considerable range of variation in the shape of the leaf points, the density of the foliage, the shape of the cone scales, and to some degree also in the more minute details of the leaf anatomy. I have not accounted for this variability in the description, which is drawn up from the cultivated tree, but do not consider it greater than that observable in the common spruce."



UNIQUE SPECIMEN OF PICEA MORINDOIDES.
In the grounds of Leonardslee, Horsham.

Dr. Henry has gone still further, and included Griffith's Abies spinulosa in Picea morindoides, but there are no specimens of Griffith's tree either at Kew or the British Museum, or indeed anywhere so far as is known. The only evidence of identity is Griffith's description, and we regard it as unsafe to found the identification of a fir on such evidence.

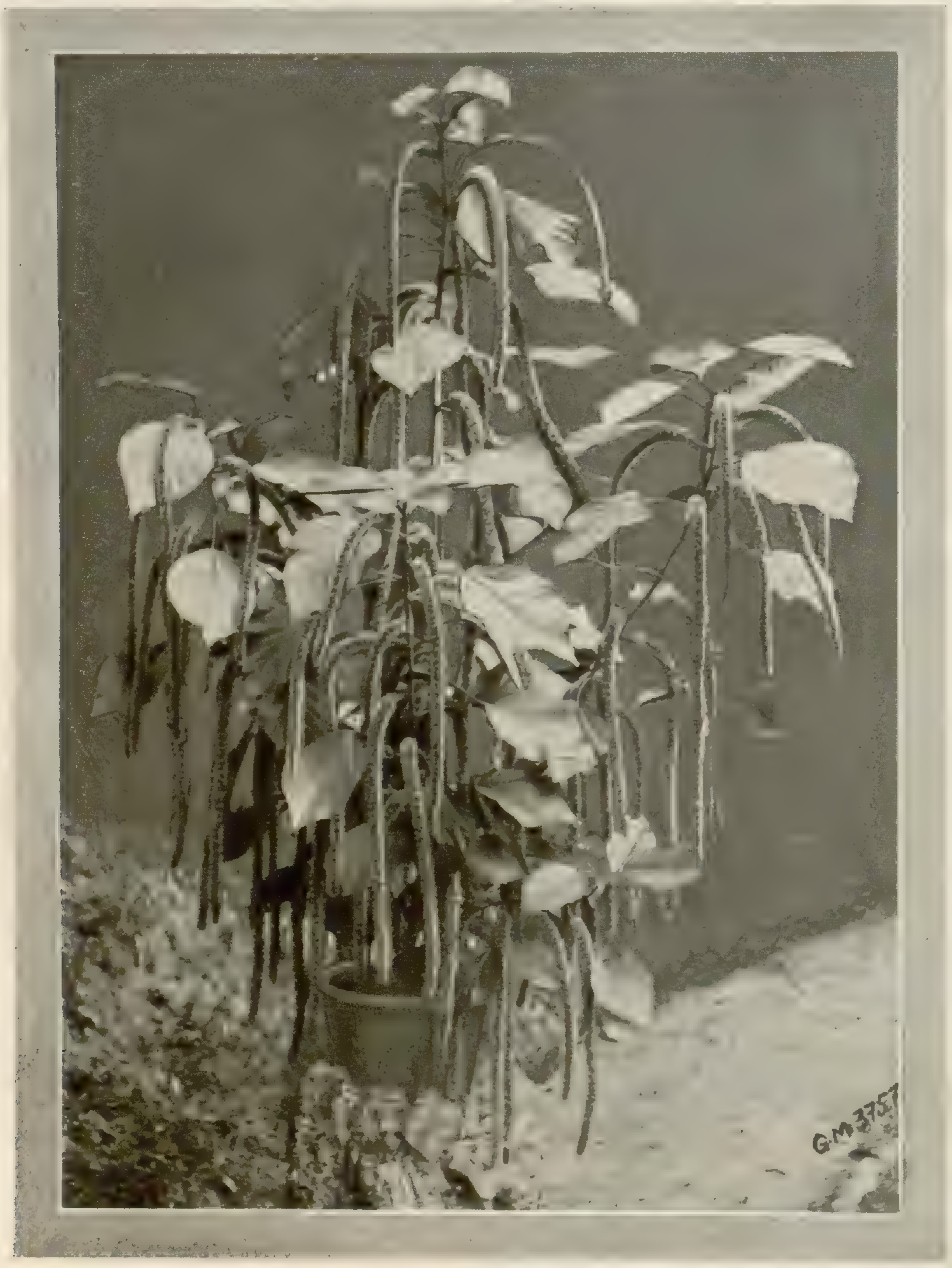
From these short notes it will be gathered that Picea morindoides is of interest to the systematic botanist as well as to the planter, and from the illustration given there will be no difficulty in seeing that it is a desirable addition to the coniferous trees grown for ornament.

G. G.

Digging Jerusalem Artichokes.—Jerusalem artichokes keep so much better in the ground that it is a mistake to dig up more at a time than will be consumed in, say, a week. The tubers should be kept as lifted, not cleaned of soil, and stood on the stone or cement floor of the vegetable shed. The point is to prevent their shrivelling. Garden critics, who know little of the inner workings of a garden, often wonder why artichokes are relegated to an odd corner. The chief reason is to allow of digging the tubers as wanted.—E. J. K.

MAIN CROP OF BRUSSELS SPROUTS.

Brussels sprouts are usually classed by gardeners as amongst the most important of the vegetable crops, and properly so, not only because they are usually very highly valued in the dining-room, but also because good crops afford a comparatively lengthened supply, and assist materially to satisfy demands made during a season when variety is difficult to maintain. Though highly valued as Brussels sprouts are, the crops are by no means at all times satisfactory, and various are the causes attributed to this. In some cases the variety is blamed for not being true to name, while in others the season, soil, or situation, is considered at fault. No one is likely to deny that instances occur when each of these assertions are justifiable, though more often probably the method of cultivation is to blame. It may be here remarked that our crops this season of the varieties Cambridgeshire Champion, and The Gem, are the most unsatisfactory I recollect having, and as their culture was conducted upon the lines which we have hitherto followed with invariable success, I feel that I should be correct in attributing our partial failure to the unfavourableness of the season.



A FINELY GROWN SPECIMEN OF ACALYPHA (SANDERI) HISPIDA.
From a photograph sent by a reader. The inflorescence rich crimson.

Raising Plants.

More depends upon the manner and the time of the year in which plants are raised and otherwise prepared for planting out than is at all times recognised. In the first place the seed is frequently sown too late, and then, perhaps, the plants are left crowded together in their seed bed until finally planted, and thus seriously injured. We find the last week in February the most suitable time for seed sowing, and then sow thinly in fine soil, placed over a warm bed of tree leaves in a cool pit or frame. The seedlings are kept as sturdy as possible by the structure being freely ventilated upon all favourable occasions, and no time is lost after they are large enough and sufficiently hardened in pricking them out. In carrying out this operation they are put about fine inches apart, in a bed of fine soil, placed upon a cool bottom in a cool frame. Here, except in severe spells of weather, they are left fully exposed until placed in their permanent quarters. After the largest plants have been pricked off, and the smaller ones have gained enough strength, the latter are pricked out upon an open sheltered border to furnish a successional crop, which often proves to be more useful than does the earlier one.

Preparation of Soil.

The cause of failure in some instances is without doubt planting in over rich or loose soils. This is especially inimical to success if the situation is low, and the weather during winter proves severe. Trenching and liberal manuring, therefore, which is so advantageous to many vegetables, must on no account be followed for Brussels sprouts. The plants keep sturdy, and freely form close, firm "buttons," when planted upon sound, firm land, and, moreover, when treated in this way they withstand severe weather comparatively well. A safe practice to follow is to plant upon stale dug, heavy loam, made quite firm, and in an open situation. If poor, of course, it should be dressed with manure before being dug, but ordinary well cultivated garden soil does not usually need to be specially manured for this crop. A plot that has previously carried a late crop of potatoes, for which it was manured, usually answers well. This for the Brussels sprouts should be merely dug, and when dry be firmed by treading.

Planting, etc.

An error may be thoughtlessly made by too close planting, and upon strong land especially, they have none too much room when placed in rows at three feet apart, and two feet asunder in the rows. With the trowel lift the plants carefully with good balls of soil, and plant them with the same help, making the soil quite firm about them. Planting is best done in dull, damp weather; watering should be attended to when necessary, and the plants be earthed up in order to keep them firmly in position, as soon as they are sufficiently strong for the operation. It is a common practice to cut and use the tops of Brussels sprouts at sometime during winter, but by doing this a late supply of small firm sprouts, that, if allowed to develop, in variably prove to be valuable, is sacrificed. T. COOMBER.

The Hendre Gardens.

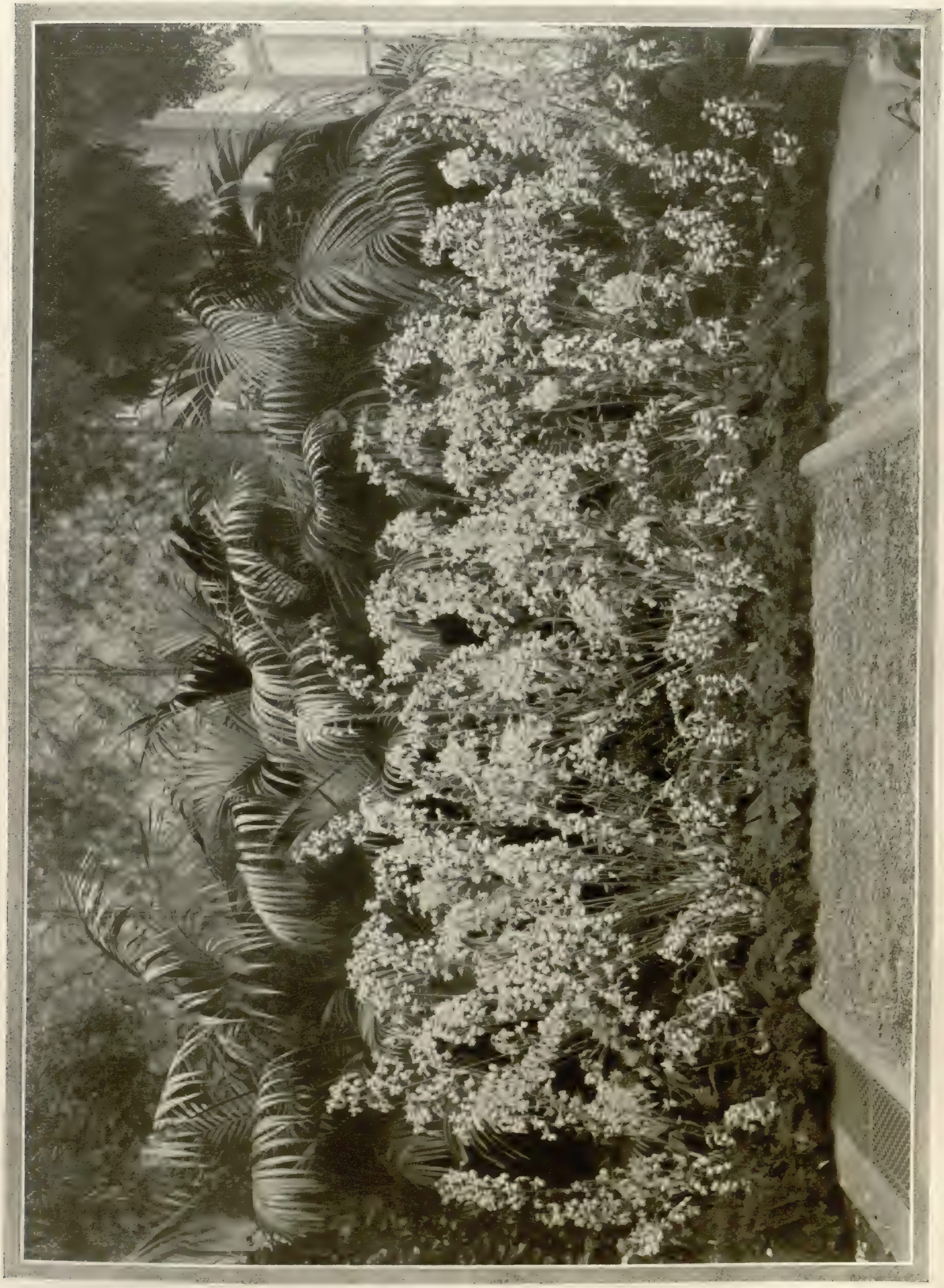
ACALYPHA (SANDERI) HISPIDA.

This ornamental stove plant is very attractive at all seasons of the year, and is especially useful for furnishing the stages with a bright glow of colour during the dull months of winter Moreover, it is valuable for warm plant houses, conservatories, house, and table decoration. When grown in small pots, and confined to a single stem, it may be used in vases in the drawing-room, and is highly ornamental. The accompanying illustration depicts a very finely-grown specimen, and at once conveys to the mind the adaptability of this acalypha for decorative purposes.

Good plants are easily grown with ordinary stove treatment. Cuttings should be taken about February, and inserted in small pots and plunged in a warm bed in the propagating pit. Spray the cuttings daily, keeping them close until rooted. Air should be admitted gradually, and on no account should they receive a check, otherwise the lower leaves will be lost. When the plants become established they will form masses of roots on the surface, and will then require a stimulant three or four times weekly, in order to develop the rich crimson tassels to perfection. When in full growth they delight in a moist atmosphere, but when the racemes appear, overhead syringing should be discontinued, otherwise the inflorescence will be seriously injured. A suitable compost is one consisting of loam two-thirds and peat one-third, with the addition of sand and charcoal siftings.

Acalypha (Sanderi) hispida created a sensation when exhibited by Mr. Sander at the Ghent Quinquennial in the spring of 1898, and it rapidly acquired a high degree of popularity. It was introduced under the name of Acalypha Sanderi, but it was subsequently found that it had previously been described under the name of A. hispida. To Mr. Sander belongs the honour of introducing it to cultivation.

B. CROMWELL.



A GROUP OF MAGNIFICENT SPECIMENS OF CALANTHE VEITCHI AT BUXTED PARK.

Mo. Bot. Garden
1909

MID-SEASON PEARS.

The value of good pears at Christmas and immediately afterwards can scarcely be overrated, and while there is a large number of pears that may be classed as fair in quality, varieties that are really first rate are limited in number. I will admit that while one pear may be good in some gardens, in other gardens it may be almost worthless. This is probably due more to the nature of the soil than to other causes, although some regard must be paid to the stock on which the variety is grown.

Nearly all our trees are on the quince, only excepting those planted twelve years or more since. The quince is the most suitable for our heavy loam. The pear stock would give us too much wood, with the additional labour of annual root pruning or lifting. In fact on the quince stock our trees are benefited by lifting and replanting about every fourth year.

Pears being much in demand, and the essential point most required being flavour, it follows that we must have a large variety to test which really are best, and we also grow them on walls that give us three aspects for the purpose of lengthening the season, and also to find out on which aspect the quality is the highest, colour ranking next in appearance to flavour. In the production of colour we find a north-east wall, inclining to east, gives the most intense colouring to some varieties.

Beurré de Jonghe.—This is a very good pear, of excellent flavour, melting and juicy. On reference to my notes, it is above medium size, this may largely depend on the crop and age of tree, it is, however, of a good size for dessert, and makes an excellent Christmas pear.

Beurré d'Anjou.—This pear was finely shown during the past autumn by the British Columbian Government, and while they were good outwardly they did not rank in flavour with Devon-grown fruits. My note on this variety places it next to Doyenne du Comice in quality, which is giving it a high position, and as it follows that fine pear in season it is a variety worth growing; above medium size, melting, and juicy. Whether the flavour of our fruits was exceptional I cannot say, but as showing the variability in quality, Mr. Bunyard places this variety in the list B in his fruit catalogue. Evidently it is not of such good quality with him as we have had it, but some sorts, which are of good quality grown in the Allington Nursery, are only second rate with me.

Beurré Renee.—Another pear which Mr. Bunyard lists with the preceding one is Beurré Renee, which is excellent with me. In fact I was agreeably surprised to find it of such excellent quality when it was tested. This was ready at he end of December. The fruits were above medium size, rather long, bronzy red on the side exposed to the sun.

Beurré d'Aremberg.—Comes of good size, very juicy, flavour good, and a useful one to form a succession in December.

Beurré Dubuisson.—Above medium size, very melting, juicy, and sweet. I find an extra note against this variety for quality. Apparently a good bearer, and a most desirable kind to grow. Mr. Bunyard, in his fruit list, speaks very highly of this pear, which, from my own knowledge of it, I can endorse.

Madame Andre Leroy.—A useful pear in December, sweet, of very fair quality, but not equal to the preceding varieties. quite distinct in shape from other kinds.

The varieties enumerated I have selected as having been extra good in a season wherein we have not had an excess of sunshine. Many kinds of pears have been sadly deficient in flavour, and apples have been more so. The season when the varieties of pears noted would be ready, will vary according to the locality in which they are grown, but in their order of ripening with me they should, in colder parts of the country, extend through December and January, and so connect with the later varieties, to which I will refer in a subsequent issue. T. H. SLADE.

Poltimore Park Gardens.

DECIDUOUS CALANTHES AT BUXTED PARK.

The illustration we have the pleasure of giving herewith of a group of the magnificent specimens of Calanthe Veitchi in the gardens of Buxted Park requires but the briefest reference, for a glance is sufficient to enable one to see that the development of the plants is of a quite exceptional character. It should, however, be said that the eleven specimens represented in the group form but a small part of the stock under the charge of Mr. H. C. Prinsep, who is a past master of the cultivation of deciduous calanthes as of many other important subjects. There must be at least four or five dozen, and they were so closely matched in size and flower production that there was but little difference between them when the flowers were at their best.

The bulbs were put in the pans in which they are flowering on March 5, 1907, the pans were provided with efficient drainage, and the compost used was formed with turfy loam and dried cow dung. Evidently the time of potting them up was suitable, the compost adapted to their requirements, and the other cultural conditions favourable to a vigorous growth, for by the end of the season the largest bulbs attained a length of eighteen inches. When in full growth the leaves were mostly four feet in length and of proportionate breadth. From such vigorous plants as these much might well have been expected, but we venture to say that but few would previous to the time when evidence of flower production was forthcoming have expected so dense a forest of flower spikes as that produced. The majority of the bulbs produced four or five flower spikes each, while the strongest had six each. The largest of the spikes were six feet six inches in length, near the base they were as thick as a man's thumb, and at two feet therefrom they branched, as the best means it may be presumed of getting rid of their superfluous vigour. We have stated the facts relating to these remarkable specimens in the plainest manner, that those of our many readers who are interested in deciduous calanthes may have no difficulty in accepting them.

Mr. Prinsep has kindly promised to give within the next few weeks the details of the practice by which he has achieved such splendid results, and with his notes we shall present an illustration of a single specimen that will show even more clearly than does the group herewith so admirably illustrated, the high degree of development to which the calanthes at Buxted Park have attained.

Lettuce.—If salads are required daily a pinch of seed of an early variety, such as Tom Thumb, should now be sown in a pan or box and be placed in gentle heat. Transplant the seedlings, and put them rather close together on a hotbed, when large enough to handle.—T. W. BIRKENSHAW.

SEED ORDERS.

Most of the leading firms have now distributed their catalogues for 1908, and it should be our first consideration at this season to make a selection of the vegetables we intend to grow and determine the quantities of each. In these progressive days many new varieties and selections of vegetables are offered, and it must be admitted that in most cases much improvement has been brought about. The safest plan in making out seed lists is to rely upon the varieties that we know are of a high order of merit, and to experiment with novelties on a comparatively small scale and with care till we satisfy ourselves of their value. Should they be found in anyway to surpass the older kinds they may then be substituted for them.

Probably there is too great a tendency to grow too many varieties of each vegetable, and I would, therefore, say that often better results would be obtained if we grew a less number and limited them to those which specially suit the soil and situation of the particular garden. The pea family especially is one that varies greatly under different conditions. A friend of mine whose garden stands at a high altitude assures me that he entirely depends upon a selection of the Duke of Albany to give a continuous supply of peas through the summer and late autumn, making a sowing each alternate week. Here, it is given to mildew, and we only grow a limited quantity of it. Admitting its good qualities on the table, there are other varieties that give us better returns, and are less subject to fungoid attack. I only give the above as an example to show how peas vary, without in any way suggesting its general adoption as in the case of my friend. Our seedhouses are sending out varieties that are suited for early and late seasons, and speaking in a general way they should be selected accordingly in making out the seed list, though to a somewhat limited extent.

An important point in the work of supplying a private establishment with vegetables is the carrying of each crop over as lengthened a period as possible, without having too great a quantity at one time. This is only managed by early and late sowings. Seedsmen of late years have assisted us materially with some vegetables in prolonging the season. In cauliflowers we have now varieties that will yield to light forcing much better than the older kinds, though some of the latter are unsurpassed for general and late use. Potatoes also vary in different soils and situations, both with regard to their eating and cropping properties. There is a great choice in early and late varieties to meet requirements, and I strongly advise a liberal amount of new seed being planted each year. Potatoes grown on the same land will soon show signs of deterioration. and a light crop be the result.

The foregoing, as far as the changing of potato sets is concerned, applies to a great extent, if not equally, to its near relative the tomato. This plant has been wonderfully improved of late years, being more prolific and the fruit of more useful size and shape, with solidity of flesh. Some of the new forcing French beans that are offered are worth careful consideration when ordering seed, as they are very free bearing and of excellent quality.

The climbing French bean is not grown to the extent it deserves to be, especially under glass late in autumn and early in winter, and thus carry on the supply after the outside crop is over. If this has not been included in the past a trial should be made. The new additions to the scarlet runner beans as far as length of pod is concerned are an improvement, though with good cultivation some of the older standard varieties are difficult to surpass from a productive standpoint.

Carrots of the French types are very valuable for forcing purposes to give the earliest supplies; and the intermediate type as the result of constant selection is now of much value to the gardener, being more economical in use, and should constitute the main crop. The turnip-rooted beet is useful for an early sowing on a warm border and should be grown in quantities in proportionate to the requirements of the kitchen. For the main sowing the longer roots are preferable, being exceedingly beautiful in colour and outline, as well as being better adapted for late use. Broccoli that are sufficiently hardy to stand our severe winters are difficult to select. for a regular supply; the hardier appear to be those that turn in about April.

I cannot close my remarks without referring to the onion, which is so important to those who only grow for culinary purposes of the establishment, and not for exhibition; I advise them to select some of the medium-sized varieties, and not to rely upon the sensational large sorts. The above are a few suggestions to the beginner in making out their first seed list.

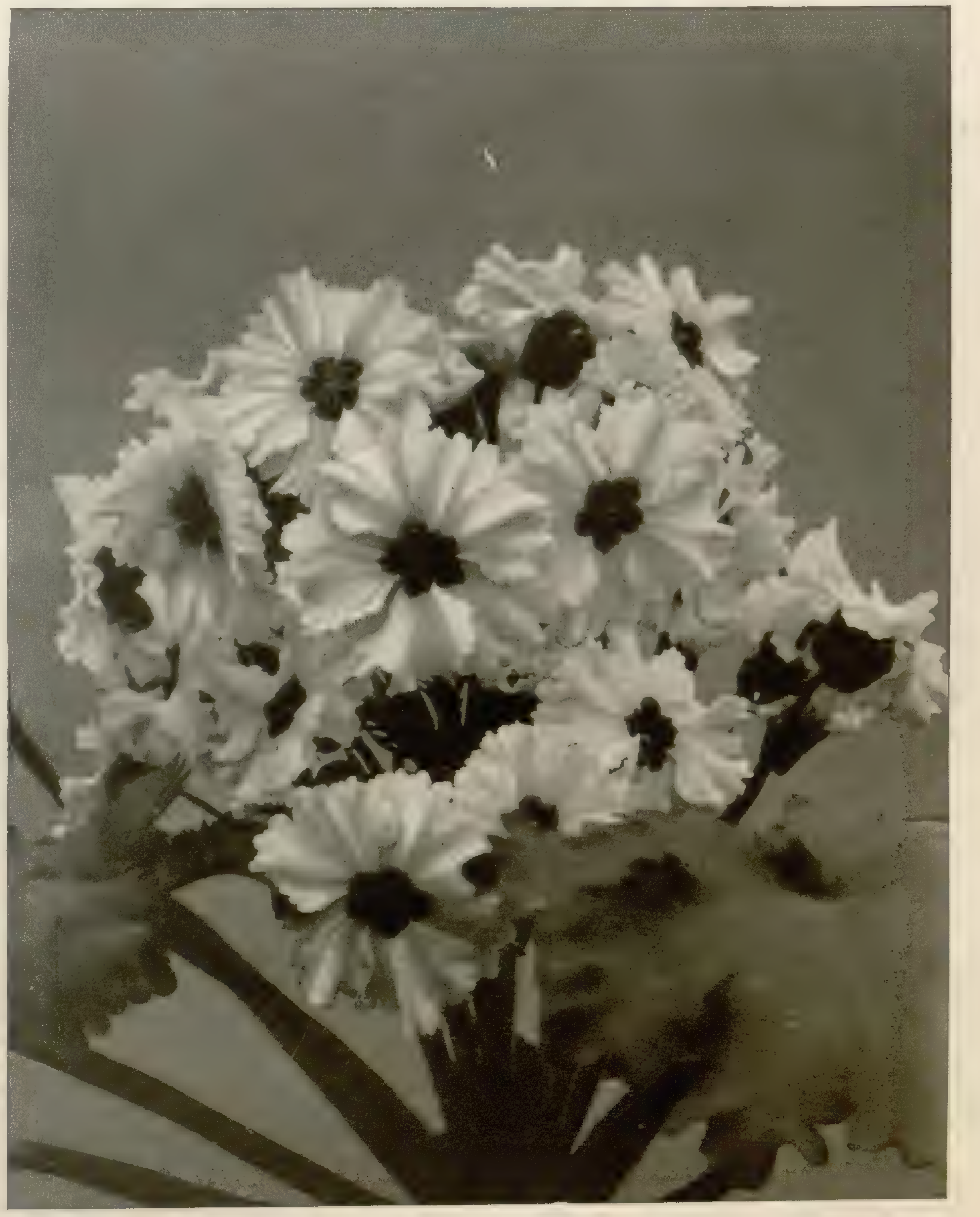
I have not given names of varieties in dealing with some of the more important crops, but in the course of the season I hope to mention varieties that I have found the most desirable for various purposes.

Charles Flack.

Cholmondeley Castle Garden.

NEW PRIMULA, QUEEN OF THE NORTH.

The beautiful new primula, Queen of the North, which Messrs. Dickson, Brown, and Tait, of Corporation Street, Manchester, have introduced this season, is so highly meritorious that it can hardly fail to attain to a high degree of popularity. The superb form and fine texture of the flowers are so well shown in the accompanying illustration as to render description unnecessary; but it is desirable to say that important as are these attributes, the claims of the variety for consideration do not wholly rest upon them. Rather do they rest upon the distinct combination of colouring the variety affords, and the effectiveness of the plants when in bloom. Queen of the North was raised by Mr. A. Traill, of Fulshaw Gardens, Wilmslow, and is described as having been raised from a cross effected between Avalanche, one of the finest of the pure white varieties belonging to the florists' type, and The Lady, a stellate form bearing white flowers, and remarkable for the deep red colouring of the leaf stems and flower stalks, and the deep bronzy hue of the foliage. In this form the characteristics of the two parents are happily combined, the flowers being like those of Avalanche in size, form, and purity, while the flowers are borne on long stalks, and the leaves and stems are very dark in colour as in The Lady. The large white flowers present an extremely pleasing contrast to the dark hue of the foliage, and suitably arranged well-flowered plants produce an effect that at once arrests attention.



NEW PRIMULA, QUEEN OF THE NORTH.

A fine form, introduced by Messrs. Dickson, Brown, and Tait. Flowers pure white, and the leaves and stems dark bronze green.

SOME RARE SHRUBS.

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Clianthus puniceus.

This comes from New Zealand, and is a common plant in the south-west, where it is almost invariably grown against a wall, though I have seen a specimen in the open in bush form. Here a few flowers may usually be cut on Christmas Day, but it is not until May that the plants are at their best, when they are sheets of crimson. The blossoms of the white-flowered variety are greenish-white in tint, and are much inferior to the type in beauty. The two, however, when planted on the same wall, as they are here, make a pleasing contrast.

Eucryphia pinnatifolia.

This native of Chili is a charming sight in August when covered with its large white flowers, which, in form, closely resemble the blooms of Hypericum calycinum. It is quite hardy in Devon and Cornwall. The finest specimen in England is probably that in Mr. T. B. Bolitho's garden at Trewidden, Penzance, which is eighteen feet in height and twelve feet in diameter.

Fremontia californica.

This shrub has an unfortunate habit of dying out when it has attained a large size, without apparent reason. It is very ornamental when bearing its bright yellow cupped flowers, about two inches across, which it carries for many weeks. At Newton Abbott there is an example over eight feet in height, which is in good health up to the present.

Guevina avellana, or the Chilian Nut.

The best specimen of this in England is that in the gardens at Greenway, near Dartmouth. It is twenty-two feet in height and about twenty feet across at the base. The great, much-divided, glossy leaves are very handsome. The flower spikes, some four inches in length, carry numerous tiny white blossoms with narrow recurving petals, and are borne in August. These are followed by large marble-like fruits, at first green, then red, and eventually purple. It is a very rare plant.

Lagunaria Patersoni.

This shrub is a native of Norfolk Island. It is probably not in more than two or three gardens in England at the present time. The entire leaves are three inches in length and one inch in breadth, and the white flowers, which somewhat resemble a camellia, and have very stiff petals, are over two inches across. A plant here was killed last winter by ten degrees of frost, but another, which was protected, was saved.

Leonotis leonurus.

This shrub, from the Cape of Good Hope, was a glorious sight in September, 1906, when every shoot held many large whorls of orange scarlet flowers, some of these being over a foot in circumference. It was a brilliant object for more than a month. The plant is alive, but was much damaged by the winter.

Leptospermum scoparium.

This New Zealand shrub, or tree, is common in the south-west, where it has attained a height of twenty-five feet. It is a pretty sight in summer when freely studded with its small single white flowers.

Osteomeles anthyllidifolia.

This native of the Pacific Islands appears fairly hardy, as it has been uninjured by last winter's frost, which was unusually severe for this district. Its foliage is attractive, and its clusters of white hawthorn-like flowers are delightful in the early summer.

Ozothamnus rosmarinifolius.

No plant can rival this Australian shrub in abundance of flower, for in July it is so smothered with bloom that not a leaf is visible. The flower sprays, if cut when the tiny blossoms are fully expanded, and hung in a dry room, will retain their freshness for a year or more. The finest specimen in the south-west is probably that at Trewidden, which is nine feet in height and as much through, and is a cloud of white when in flower.

Polygala Dalmaisiana.

This small South African shrub bears its magenta-pink flowers in April, these being an inch across. It rarely exceeds three feet in height, and has passed unharmed through the winter. It is a pretty thing when blooming freely.

Rhaphithamnus cyanocarpus.

A native of Chili. It has shining, heart-shaped, dark green leaves, about half an inch long. The flowers are tubular, mauve-blue in colour, and are carried in clusters of six. The blossoms are followed by violet-blue berries. There is a fine specimen, twenty feet in height, at Menabilly.

Sutherlandia frutescens.

A South African plant bearing racemes of crimson-scarlet flowers, somewhat resembling blooms of the clianthus. In summer, when smothered in the brilliant flowers, it is a striking sight. The flowers are followed by large inflated seed pods.

Viburnum rugosum.

This is a rare shrub from the Canary Islands, and I only know of it in two gardens. It bears large flat flower heads about eight inches across, and has attained a height of twelve feet in an open position. It appears perfectly hardy in the south-west.

Westringia triphylla.

An Australian shrub, with small rosemary-like leaves, bearing starry white flowers about three-quarters of an inch in diameter. It has passed through the winter uninjured. There is a good specimen at Tregothnan. S. W. Fitzherbert.

Kingswear, South Devon.

THE GALTONIA.

We have none too many hardy bulbous plants in autumn, especially among those of effective character which are able to hold their own among the flowers of the border in that season. In few places are the best hybrid gladioli sufficiently hardy to come under the category of hardy bulbs; while the montbretia is also tender in certain districts, and to do it justice requires annual replanting at least, and, in the case of the newer varieties wintering in a frame. It is even doubtful if the subject of this article is enduring enough to be properly classed as hardy, although it is so in the greater number of gardens in the larger part of the United Kingdom.

It is, however, justly entitled to be classed among hardy bulbs in so many gardens that it may well be spoken of as such, and may well be classed among the flowers worthy to be considered permanent occupants of our borders and beds. In respect of its beauty there can be no question as to its worthiness. Its noble mien; its unique appearance; and its purity entitle it to a high place among our garden flowers.

The galtonia, which belongs to the natural order Liliaceæ, is one of the numerous bulbous plants which we owe to South Africa, and its name reminds us of the distinguished Francis Galton, whose "Narrative of an Explorer in South Africa" has become a standard work of its kind, although the march of events in that portion of the African continent has rendered obsolete many of his remarks and descriptions. One is glad, however, to know that the name of such a distinguished man will be kept in remembrance by this stately and beautiful plant; that of Hyacinthus, so far as applied to it, being practically abandoned.

There are two species in cultivation, and it is in one sense unfortunate, but in another satisfactory, that the finer of the two, Galtonia candicans, should have been introduced to cultivation before its congener, G. princeps, as the latter, although bearing such an imposing specific name as "princeps," is distinctly inferior to the former in stature, purity of colour, and in the size of its racemes and single flowers. Of Galtonia candicans it may be said that we have few nobler bulbous plants, save the lilies, at its season, and that, whether we employ it in borders among other flowers, or in effective masses in the grass, or in beds by itself, it may be reckoned indispensable in its season.

Its appearance is familiar enough to the greater number of flower lovers nowadays, yet one comes across many amateurs who have not had an opportunity of seeing the galtonia in its best form, when it may be met with towering up to six feet high, and bearing its handsome racemes of from fifteen to twenty pure white, drooping flowers, and forming one of the finest plants of the autumnal garden. Its congener, G. princeps, is less beautiful, and as its flowers are of a greenish white, it is not so valuable as a contrast to blooms of another colour or so pleasing in itself. To the gardener many uses for the galtonia will suggest themselves, but the writer has, for example, seen it employed to great advantage in association with Gladiolus brenchleyensis and Salvia patens; while in wild gardening or for bold clumps in large borders it has been met with in many exceedingly beautiful combinations.

Among other recollections is that of a long pergola in front of which was a broad line of this noble flower, constituting a charming picture against the rough timbers of the pergola clad with plenty of greenery, which formed a background for the galtonia.

Although one speaks of this plant as six feet high, and one has occasionally met with it even taller than that, it is frequently seen in a much dwarfer state, four feet being quite a general height, a reduction of stature due to poor treatment.

Galtonias ought to have a free and rich soil, deeply dug, with some old-rotted manure at the bottom, beyond touch of the bulbs themselves; while in stiffer soils a liberal supply of leaf-mould or peat should be mixed with the remainder. Some sharp sand immediately about the bulbs is beneficial in heavy soils, and in gardens where drainage is imperfect care should be taken that the drainage of this portion of the garden is above suspicion. Planting is best performed in March, or even as early as February if the soil is in good order, and one would advocate a fair depth—six to nine or even twelve inches—for the bulbs. At a depth of nine inches in moderately heavy soils the galtonia generally proves hardy, but it is desirable to protect it during the first winter with some litter or ashes—a useful precaution with many bulbs, which require a simple covering for the first winter after planting only. Should the plants pierce through the soil early, although this seldom happens, a little straw or a few branches about the beds will be helpful and may prevent the young growths being cut by late frosts. This is more necessary with newly-imported bulbs planted in late autumn than with those put in the ground at the proper time in spring.

In cold districts where it does not prove hardy, the galtonia ought to be lifted when the leaves have become yellow, and stored in dry sand or elsewhere beyond the reach of frost until spring.

The after cultivation of the galtonia requires no detail, but it will be well for those who have exceedingly exposed gardens to stake the plants, although this is a great disfigurement to them and this noble plant is much more beautiful when left unfettered. S. Arnott.

Bedding Plants in Winter.—There are some owners of greenhouses who put away their bedding plants in winter, much as they put away their tennis rackets and cricket bats, and with as little thought for their welfare. This is a grave mistake. Geranium cuttings may damp off at the soil, or turn black and die back at the tips of the shoots; pans of lobelias may catch a drip in their midst from the roof, and decay with alarming rapidity outwards; verbenas may mildew and relapse into an unhealthy state in an incredibly short time. These are only a few of the things which may happen—there are lots of others, all of which goes to teach us that bedding plants should have a little attention in the dull months of winter, and not only when they are in strict training for filling beds and borders. Much time need not be given to them.—E. J. K.

Dimorphanthus Mandschuricus variegata.—What a magnificent subject we possess in the above for planting in the sub-tropical garden, as dot plants in large beds, or in prominent positions in the shrubbery! Of recent introduction, it has proved itself quite as hardy and vigorous as the type, while the silvery-white variegation is of the most beautiful description. We purchased a dozen young trees a couple of years ago at a considerable cost: they are grafted on the common stocks, which doubtless accounts for their extraordinary vigour. I understand the price has not yet fallen below five shillings per plant, but, seeing the stems are well clothed with buds, they should soon be plentiful enough, as these speedily develop if the top is removed, and, as is well known, the roots throw up a quantity of growths if laid horizontally.—Walter H. Aggett.

THE STATUS OF A GARDENER.

For many years I have often mused and thought how lucky we gardeners ought to think ourselves, from the fact that we have a journal named after us. Gardeners' Magazine—the very name cheers us up, for the butler has no corresponding herald nor the coachman his gazette. All the other happy family of horticultural papers, save one, prefer to take some other title connected with the garden, and do not so closely bind themselves with us. Whenever I am waiting at a railway station where there is a newspaper stall, I look at the papers arranged with their titles to attract the eye of the traveller, and it always cheers me to see amongst the vast array the well-known face, to us, of the Gardeners' Magazine. Reminiscences are not usually of much interest, except to the individual concerned, but when I consider at times the different conditions and the number of different places I have perused my "G.M.," it is interesting to me; often I have picked it up in a bothy, and it has cheered me when I have been fagged out with watering strawberries and French beans on shelves; I have rested for a time, and read its pages before I have had my tea, which meal we usually had to prepare by first lighting the fire before we could obtain the necessary hot water. These meditations might be prolonged indefinitely, and fill a whole page, but before I plunge into my subject I must mention, and apologise for, one trait in our character as gardeners—we, unfortunately, are apt to think the "G.M." is published for our especial benefit, ignoring the fact altogether that, while it looks closely after our interests, it is a popular paper amongst thousands of ladies and gentlemen, and amateur horticulturists of all descriptions, who have but little interest in gardeners and their ways.

My subject is the status of a gardener, and, of course, to illustrate it I must have an ideal in view. In very large establishments, in various parts of the country, there are two classes of servants, viz., upper servants and under servants, and the line of demarcation is very severely drawn when all the servants of the place are assembled together, we will say for Christmas festivities or the annual servants' ball, or any such like occasion. In the household establishment the house steward, housekeeper, cook, chef, if one is employed, if not a woman cook, butler, ladies' maid or maids, valet, head nurse, groom of the chambers, etc., are upper servants. The outside servants who rank equal are, head gardener, farm bailiff, stud groom, clerk of the works, forester, possibly the head gamekeeper, and one or two others. They have their dinner and supper in the house steward's room, with a boy or strong lad called the steward's room boy, who is found undress or morning livery to wait on them. The liveried servants are all denizens of the servants' hall, in which place they have their meals. These remarks, in a general way show the position of a head gardener amongst the servants, but there is also his position to consider amongst other people about the estate, farmers and tenants generally. Now this is shown on such occasions as the coming of age festivities in connection with the heir, or on occasions of local or national rejoicings. In a large place the head gardener is usually friendly with tenant farmers, and associates a good deal with them, and on the occasion of these gatherings they cannot understand why their friend the gardener is not amongst the throng. The reason is that in strict etiquette servants rank one stage lower in the social circle. Now I must conclude my remarks by saying that my ideal has been a head gardener at some very large country place, where his emoluments are £100 a year, with good house, fuel, milk, vegetables, and light provided for him, where he never soils his fingers with manual labour, and where he is always what is termed in Lancashire "at a loose end," that is, not tramelled by any rules of time, etc.

Young gardeners will now find these places very scarce, as conditions have altered, and many of these fine old places are not kept up now, or if they are it is at a greatly reduced expenditure. There are more gardeners required than ever there were, but they are mostly of a different class, to whom my notes will not apply. It is always well to set up a high ideal, but if it is not reached we have to be contented with a lower one.

For the benefit of the rising generation of gardeners who are still toiling in the forcing houses in these old walled-in gardens, and hoping for better days, I will recommend three courses of action to them, and advise them not to trouble themselves so much about the status of a gardener, but look more to the financial side of the profession, and also the likelihood of fixity of tenure. In the first rank is the orchid specialist, where orchids are well grown, and much money is expended. We are visited periodically by representatives of all the leading orchid growing establishments, and I know personally a good many growers, and from conversations I have with them I find out the financial side of affairs much better in contradistinction to the old French beans and strawberry plants in pots. In the second place I will place the position of superintendent of a public park in one of our large towns, where there are several parks, recreation grounds, etc., and you become snugly ensconced as the chief. Dynamite will not blow you out, no leaving through death of employer, reducing establishment, or some fancy whim, desirous of a change, which has seized the employer. In the third place I would suggest the trade, instead of private service; try to qualify as a departmental foreman or a manager to one of our good old and substantial firms of nurserymen. They scarcely ever change their employees.

Some readers will say, why not try a business for yourself? A very laudable thought, but it is not given to everyone to succeed in business. I always remember the words of an old gardener when I was young. He said, never be afraid of work, there always were, and always would be, "hewers of wood and drawers of water." But he had neither hewn nor drawn for forty years, as he had one of the grand old places where there were plenty of assistants to do the work. The status of the gardener deserves more than a passing thought, and I think I have shown that an upholder of Adam's profession ranks high, and takes high place in a large and well-conducted establishment. W. M.

Cheshire.

Zonal Pelargoniums. — Plants having finished flowering should be cut down to three or four eyes. Place them in a heated pit, and keep rather dry until they start into growth. Select the strongest and most vigorous growths as cuttings for increase of stock. Insert them singly in three-inch pots filled with a mixture of loam, leaf-soil, and sand. Water and place in a temperature of about 50 degrees, where they will soon form roots. The plants that were placed in their flowering pots in the autumn may now be brought into the house. A light airy house, with a warm and rather dry atmosphere, is the structure zonals flourish in. Those in three-inch pots may be shifted on into 4½-inch or six-inch pots, well drained, using a compost of fibrous loam, leaf-mould, and sand, adding bonemeal, and potting rather firmly. Zonals do best in small pots, and require plenty of liquid manure when they become pot-bound. Young plants should be stopped several times to encourage a compact habit, always pinching to a bud that will produce a shoot. —T. B. Field.

THE WINTER TREATMENT OF BAMBOOS.

Under the collective and common name of bamboos one includes the three generic names Arundinaria, Bambusa, and Phyllostachys, the species and varieties of which provide us with some most beautiful and ornamental subjects for garden decoration. During the last few years, since the requirements of bamboos have become more generally understood, they have been extensively planted, but there are yet many gardens that might be beautified by their presence.

Although it is an acknowledged fact that they are seen to the best advantage when planted on the margins of streams, lakes, ponds, etc., water is not an absolute necessity, as proved to demonstration in numberless instances. Many have so far excluded them from gardens on the assumption that they are not perfectly hardy, but this is quite a mistaken idea, for if they are planted in positions that are sheltered from cutting north and east winds they will withstand the most severe frost we are likely to experience in this country. Bamboos will succeed on both heavy and light soils, but the ground should be well worked before planting, and an abundance of decayed leaf-mould or farmyard manure incorporated. Although it is not necessary to plant them on the margin of water, they are moisture-loving subjects, and during the warm days of summer abundant supplies of water should be given them.

One frequently sees bamboos in a condition that fails to do them justice owing to the soil not being sufficiently rich for them to make strong growths and fully display their distinctive charms, but this may be easily improved, and no time is more suitable than the present for accomplishing the work. All bamboos appreciate and revel in a rich compost, but do not always find this in the surrounding soil. Therefore, it is necessary to supply their wants artificially. Liquid manure from the farmyard is an excellent agent for soil enrichment, and during the winter months it can be applied in quantity. Even when bamboos are thriving liquid manure can be applied with advantage. Another very good method of assisting them is to take out a trench from two to three feet in depth, at a distance of three to four feet or more, according to the size of the plant, from the stems, so that the principal roots are not damaged. Then fill this with decayed cow manure and loam, or a mixture of leaf-soil and loam, and manure. If cow manure is not obtainable horse droppings will answer the purpose very well, and one will be able to see the good effects in the season following. Good mulchings of decayed manure are also very beneficial, especially if soakings of water are given afterwards.

In many gardens where bamboos are cultivated their flowering propensities sometimes destroy their beauty, but fortunately this occurrence is rare, and need not deter anyone from planting largely. It generally happens that when a bamboo commences to flower in one garden it is heard of as flowering in many others, and when this is the case there is only one remedy, and it is a drastic one. The whole of the plant or clump can be taken out, root and stem, and thrown away, as it will not recover, or so little will be its recovery that it cannot be considered an ornament. This may appear very disastrous to some, but an abundance of seeds can be gathered which germinate freely, and soon make healthy plants. A. E. Thatcher.

Elstree.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

ODONTOGLOSSUM HOUSE.—There can be no doubt that the cultivation of odontoglossums has been materially improved during the past few years in this country. I am of opinion that one of the chief causes of what one might call more successful cultivation is, growers have realised that in the past we have attempted to grow odontoglossums at too low a temperature during the winter months. We have given up attempting to provide what we used to term natural conditions, and have endeavoured to accommodate the plants to suitable treatment, such as can be provided under artificial conditions.

TEMPERATURES. — There can be no doubt that a temperature ranging between 40 and 50 deg., with normal outside conditions, was a mistake. There are few successful growers of odontoglossums to-day who would like to see the temperatures of their odontoglossum houses remaining for any lengthened period below 50 deg., even with severe weather outside. Why the fact was so long overlooked that the majority of the plants in this division are in their most active stage of growth during the winter months is difficult to understand. But now that it is realised it is only natural we should afford odontoglossums the same encouragement as is given plant life generally, when growth is in the most active stage of development. The night temperature at which we keep our plants, with normal outside conditions, is from 53 to 55 degrees. The temperature of the house in which we have been successful in raising and growing seedlings seldom drops below 55 deg. With such temperatures and proper attention to ventilation, we procure changing atmospheric conditions, and these prevent stagnation, such as prevailed with cooler temperatures.

FLOWER SPIKES AND INSECT PESTS.—The flower scapes will now be making their appearance from the base of the recently-developed or developing pseudo-bulbs. Slugs and small shell snails are very plentiful, so that more than ordinary diligence is necessary to prevent the spikes being injured by these pests. Some bran or brewers' grains placed on pieces of broken pots and put about the stages or on the pots where slugs are found to be working, we find make good feeding grounds for these pests, and, with the aid of a light at night and early morning they are easily caught and destroyed. A few lettuce leaves placed about in the same way also form good traps on which to catch and destroy them. A little cotton wool wrapped around the base of the leaf, through which the scapes are advancing, and around the spike itself when more developed, forms an obstacle difficult for them to surmount, and some little protection is thus afforded.

INFLUENCE OF LIGHT.—Where plants are in an advanced state with their flower scapes every encouragement must be afforded them. It is not a question alone to see that the plants are prevented from remaining dry at the roots for any lengthened period. The light is one of the chief factors to be considered at this season of the year. See that the plants are placed in such a position that they may derive the greatest possible benefit from the available light at the present season of the year. Much has been said and written about the want of texture in the flowers. In some cases the texture has been such that the durability and usefulness of odontoglossums for cut flower purposes have been affected. I am not at all surprised at this, when we procure larger pseudo-bulbs and more vigorous growth, unless more light is given, so that the pseudo-bulbs may become properly ripened, we cannot hope to produce high quality of bloom. The same may be applied to all wood in fruit trees or plants in general. We cannot hope to obtain satisfactory results without the advantage of proper maturity.—H. J. Chapman, Oakwood Gardens, Wylam-on-Tyne.

FRUITS UNDER GLASS.

FORCING FIGS IN POTS.—These were in all probability started last month in a pit or suitable house with the pots plunged in a bed of oak leaves and where artificial bottom heat can be given if required. Trees started as suggested will be showing signs of growth. Maintain a steady bottom heat of 65 to 70 deg., and a day temperature of 60 deg. with a rise with sunheat. Renew the plunging material when the heat is declining, as this is better for the trees than artificial heat. On bright days give copious syringing with tepid water, closing the house early. The trees will not require much water at the roots till they are further advanced. If a pit or house is not available for these they may be grown successfully in the vinery if placed therein before or when the house is started. If this be done they should be scrupulously clean. One of the best varieties for forcing is St. John's or Pingo de Mel, but owing to having a white flesh it is not a general favourite, although very sweet and richly flavoured. Violette Sepor is a good one for this purpose, and comes in a short time after the former, if not as soon, especially if the trees are strong. The fruit is of good size, and freely produced, the flesh dark and of good quality. We are discarding St. John's for this variety.

EARLY FIG HOUSE.—The early house in which the figs are planted out may at once be started. The old wood will have been thoroughly cleaned, old soil removed from the surface of the border, and some good loam used for top dressing mixed with mortar rubble. No manure need be given till it can be seen what the crop is likely to be. The wood should not be crowded, and in pruning cut the shoots not required clean out. Roots of fig trees should be restricted to a moderate space, and they should be prevented passing down into the subsoil, for if that happens failure will be the result. See that the border is not dry when the trees are started, syringe well on bright days, especially if the walls are liable to become dry. About 50 deg. at night and from 55 to 60 deg. by day is ample for a start. Brown Turkey, Violet Sepor. Brown Ischia, and Black Ischia are the most suitable for growing in borders under glass.

PEACH AND NECTARINE HOUSE.—The beginning of January is early enough for starting peach-houses to ensure a good crop of fruit and high quality. Small lean-to houses with the border wholly inside are the best for this purpose. Water the border if at all dry, and give the shoots plenty of room when tying them in. These must be started with a very low temperature, say 45 deg. at night and 50 deg. by day, with a rise with sunheat, or the water in the pipes may be warmed and a little air admitted at the same time to effect a change in the air. At the temperature suggested the flowers will soon expand. Fresh clean oak leaves may be used to start them with, and they are better than fire-heat. As soon as the flowers are open a little air should be continually admitted, and sufficient warmth be maintained in the pipes to raise the temperature to 55 or 60 deg. during the day, and 50 deg. during the night. The flowers should be artificially set with a rabbit's-tail, keeping this always dry. The best for early forcing are the true variety of Early Grosse Mignonne peach and Precocé de Croncels nectarine. The second house should be made ready for starting on the first day of next month. If white scale is present this should be destroyed by the careful use of some approved insecticide. Clean the walls and rafters with some strong soapy water. Red spider is one of the most troublesome enemies of peach and nectarines, and old walls should be whitewashed, previously having the crevices filled up with cement. The walls are best cemented all over and painted every spring. Cover outside borders with dry leaves or long litter, and over this lay old lights or corrugated iron. If the trees are of a good age and carry heavy crops, a little artificial manure may be mixed with the soil when top-dressing.

BANANAS.—These require a steady temperature during the winter of 65 deg. at night and from 70 to 75 deg. by day; any sudden fluctuation in the temperature is liable to make them throw up the fruiting crowns—especially if growing in tubs, and intended to produce fruits next summer. As there is very little sun to draw them out the fruit will be short and stumpy. Watering should also be done carefully, they should be neither too wet nor too dry. If the soil become at all sour sprinkle a little slaked lime on the surface at intervals until such times as they can be overhauled. Those planted out are preferable to those grown in tubs, being easier of cultivation, and better fruits are obtained. Any that are ripening off their fruits should be kept on the dry side. A few of the strongest suckers in No. 1 pots will be ready for tubbing next month. Frequent fumigations will be required to keep down black-fly.—A. B. Wadds, Paddockhirst Gardens, Sussex.

THE KITCHEN GARDEN.

SEAKALE.—The crowns required for forcing should now be lifted, and all the best thongs cut into lengths of about five inches, with the cut at the top quite straight, and at the lower end in a slanting direction. Tie them in neat bundles, and bury them in soil to keep them from shrinking. Where quantities of forced vegetables are required a batch of crowns must be placed in heat every fortnight. Plant them in beds of 50 or 100 in each, according to the demand. If nine or ten roots are put in ten-inch pots, with inverted pots over them to exclude the light, they can be removed either into more heat or retarded, as may be found the most desirable. A good position for the bed in which crowns are planted is on the lower stage of the mushroom house. Place a sack or mat in front to keep the draughts from the tender growth, and keep the roots fairly moist until the seakale is ready for cutting.

FRENCH BEANS are always appreciated in the dining-room, especially if they are gathered before they become old and stringy. Osborn's Early Forcing is a most reliable variety for early supplies, as also is Reliance. The seeds should be sown in six-inch pots, at this early period, as they will be able to take more stimulants than those occupying larger pots, when the flowers have set. Good drainage, and a compost consisting of light loam, leaf-soil, and old spent mushroom bed manure are desirable. Place eight or nine beans in each pot, and should they all germinate two or three plants can be drawn out. If the soil is moderately moist they will not require watering until the plants are well up, when they may have a soaking of tepid water. They must be near the glass, and have a temperature of from 60 to 65 degrees.

HORSERADISH.—Beds of horseradish that have been in the same position for several years should be taken up. The roots should be assorted, and small straight roots, nine or ten inches long, be selected for replanting. In preparing these take out all side rootlets and eyes, and replant in deeply trenched ground. Deep holes should be made with a crowbar in rows half a yard wide, and a foot apart, from each hole, and the cuttings dropped in as the work proceeds. Lay in some of the best and thickest pieces for present use, so that the permanent bed may not be disturbed for several months.

CAULIFLOWERS.—A small sowing of seed of these should now be made, varieties such as Sutton's First Crop and Early London being the most serviceable. Keep the seedlings close to the glass, and rather cool. Also sow a pinch of seed of Brussels sprouts and cabbage, and treat the same way.—T. W. Birkenshaw, Hatley Park Gardens, Sandy.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, price 5s. net. or by post 5s. 6d., from The Gardeners' Magazine Office, 148, Aldersgate Street, London.

SEED AND SOIL INOCULATION.

In a neat brochure of some thirty pages Professor Bottomley, of King's College, London, gives a highly interesting account of the experimental work in connection with the nitrogen-fixing organism of the legumes, to which he has devoted much time and attention during the past two years. After a brief reference to the essential elements of food necessary for the development of the plant, Professor Bottomley directs attention to the more important of the elements present in soils, and to the necessity of nitrogen as an element of plant food and to its abundance in the atmosphere.

With reference to the desirability of utilising as far as possible the supplies of atmospheric nitrogen, Professor Bottomley writes:

"What is wanted is a cheap supply, and modern science has revealed this by showing the ability of leguminous plants, when in association with certain bacteria, to utilise the inexhaustible store of atmospheric nitrogen, and add large quantities of combined nitrogen to the soil.

"It has been calculated that there are about 75,000,000 pounds of atmospheric nitrogen above every acre of land of the earth's surface. Taking the value of nitrate of soda, containing 16 per cent. of nitrogen, at eight shillings per 100 pounds, the commercial value of one pound of nitrogen would be sixpence. At this valuation there is nearly £2,000,000 worth of nitrogen above every acre of land, free and waiting to be utilised!

"How can it be done? Well, Nature has revealed to us the way, and shows how by means of those wonder working agents of hers—bacteria—it is possible to obtain practically unlimited quantities of nitrogen from the air for the use of farm crops, at a very small cost. These bacteria live in the nodules or tubercles which are found upon the roots of all leguminous plants (peas, beans, clover, lucerne, etc.). There they multiply and absorb the free nitrogen from the air, and cause it to unite with other elements to form compounds which are suitable for plant food."

The work of the scientists who have during the past twenty or more years been engaged in the investigation of the nitrogen-fixing organism is passed under review. Among the scientists associated with this line of research are Hellriegel, who demonstrated that leguminous plants obtain their nitrogen from the air, and that their growth in soil free from nitrogen compounds depends upon nodules upon their roots; Professor Marshall Ward, who traced the development of the tubercles from the infection of the root hairs of plants by some organism in the soil, up to the formation of the mature nodule, and showed that the tubercles could be produced by the inoculation of roots with bacterial infusions; Beyerinck, who obtained a pure culture of the root-tubercle organism on artificial media and named it Bacillus radicicola; Prazmowski, who succeeded in inoculating the roots of bean plants growing in sterilised soils, and obtaining luxuriant growth by watering the plants with a liquid culture of the organism; and Professor Nobbe, who was the first to attempt the inoculation of soils by means of pure cultures on a large scale. These cultures were prepared and sold under the trade name of Nitragin, as our readers have been fully informed. In some cases satisfactory results were obtained, but the failures being so numerous the manufacture of the cultures was given up. Professor Nobbe's principal of inoculation was sound but had not devised the correct method of application.

Seven years since the United States Department of Agriculture commenced "a scientific investigation of the root-nodule organism, with a view to making it practicable for use in the United States, the pure method of inoculation." In the course of this it was discovered why Professor Nobbe's methods of culture were so uncertain in their results; and the cause of this uncertainty is explained by Professor Bottomley. Improved methods of culture were worked out by the American scientists, and the results obtained during 1901 and 1902 were such as to induce the United States Government to distribute the inoculating material on a large scale. In 1903 and 1904 over 12,000 packages were sent out free to farmers and others and, according to the report published at the beginning of 1905, 74 per cent. of the trials were successful.

The report of the results attracted much attention in this country as well as on the other side of the Atlantic, and in 1905 the Board of Agriculture "obtained the co-operation of thirteen different agricultural colleges and experimental stations, with a view of testing the cultures." According to the official report, the negative results exceeded the positive in number, but some of the latter were so striking as to fully justify further trials. The Board of Agriculture did not, however, proceed further with the matter. After referring to the apathy of the Government, which it is suggested ought to have recognised the fact that the matter was of national importance, and provided the necessary funds and machinery for a thorough investigation, Professor Bottomley proceeds to describe his own work in the preparation and distribution of pure cultures of the nitrogen-fixing organism, and the conditions most favourable to successful inoculation; and, as indicating its scope, we give a few extracts:—

"During the winter of 1905, research work on some unsolved problems in the life-history of the nitrogen-fixing organism had been in progress at the Botanical Laboratory, King's College, London, and the experiments of the Board of Agriculture had been followed with keen interest. In the spring of 1906, when it was found that the Board did not intend to follow the subject further, much disappointment was felt, and eventually, after considerable hesitancy, it was decided to distribute such of the pure cultures from the King's College experiments as were suitable and available for inoculation, and thus continue within the narrow limits of time and means at disposal, the work which ought to have been carried out by the Board of Agriculture.

"In the autumn of 1905 a bulletin had been published by the New York State Experiment Station showing the inability of the nitrogen-fixing organism to retain its vitality for any considerable time when dried on cotton wool—from six weeks to two months being the limit in most cases. Failure followed each attempt to develop cultures of the organism from the commercial cotton cultures. These failures could not be ascribed to the laboratory methods employed, since the method was uniformly successful when laboratory cultures of the organism were used in the place of cotton cultures. The failure of these cultures was due to 'the inability of the nitrogen-fixing organism, under ordinary atmospheric condition, to maintain itself upon the cotton for any considerable time. While our results explain the many failures from the use of cotton cultures, they should not be understood as being opposed to the idea of treating the seed of legumes with living bacteria.' Little wonder that the Board of Agriculture obtained so many negative results when in their report we find it stated 'that in some cases the cultures were received from Washington in the autumn of 1904, but were not used till the following spring.' In this connection it is interesting to note that the American Government has given up the use of cotton wool as a medium for distribution, and now sends out the pure cultures in liquid form in bottles.

"When it was decided to send out inoculating material from the Botanical Laboratory at King's College, it was necessary, in view of the New York experiments, to find some other medium than cotton wool for distribution of the pure cultures. After a number of experiments it was found possible to obtain a powder preparation of the bacteria, in which condition they retain their vitality for months. Some are still active after being kept for two years.

"During 1906 and 1907 over a thousand packages of this preparation have been distributed free to any one who cared to test inoculation of seed or soil, with the gratifying result that over 80 per cent. of the reports returned show an increase of crop from its use.

"At this point it will be well to utter a warning against any misconception or unjustifiable expectations regarding the use of bacterial cultures. Inoculation is not a panacea for all soil ills. The cultures are not a manure, they simply add to the soil the nitrogen-fixing bacteria which are essential for the most successful growing of leguminous crops, and this only when certain soil conditions are favourable.

"To begin with, it should be clearly understood that the nodule-forming bacteria supply nitrogen only to the crops and soil. If the land is deficient in phosphates, potash, or lime, these must be added if the bacteria are to do their work properly. Plants require phosphates, potash and lime, as well as nitrogen, for healthy and vigorous growth, but nitrogen is the most important as well as most expensive food element, and given the presence of the other food elements in the soil, inoculation will supply all the nitrogen necessary for the luxuriant growth of a leguminous crop, even in such an unlikely medium as sterilised sand. A fine crop of Mexican beans has been grown in volcanic ash from Guatemala in King's College laboratory by simply adding culture solution to the ash.

"Cinders can hardly be considered an ideal soil, yet an experimenter reports 'We also sowed inoculated sweet peas on a cinder path at the top of a low wall, and they have grown and blossomed very freely, and looked very nice hanging over and covering the wall. Our friends have been quite astonished to see them growing in cinders.'

"Another point to be remembered concerning inoculation is that soils rich in available nitrogen do not respond to inoculation. Where plants can obtain nitrates from the soil they appear to prefer this source of nitrogen supply, and tubercle formation is prevented. The fact that tubercles are not found in any quantity upon plants growing in rich soils has been frequently observed. Prof. Vines demonstrated some years ago that the presence of nitrates in the soil has an unfavourable effect upon the nitrogen-fixing bacteria, and that there is a definite relation between the amount of nitrates present and the number of root-nodules. He states 'The results of all these experiments agree in showing that the development of tubercles is much less when nitrate is present in the soil than when it is absent. It is also indicated that as the amount of nitrate diminishes, the development of tubercles becomes more marked. In all cases in which tubercles made their appearance on the roots of plants which had been supplied with nitrate, they are exclusively developed on the youngest roots, especially on those near the surface of the sand; in that part of the soil, which would naturally lose its nitrates most rapidly.

"It cannot be too strongly emphasised that the cultures of nitrogen-fixing bacteria are not to be regarded in the light of nitrogenous fertilisers, increasing the yield under any or all conditions. The cultures do not contain nitrogen. They simply add to the soil the bacteria which, under favourable conditions, form nodules on leguminous plants, and render available the nitrogen from the atmosphere for the growth of these plants. As already pointed out, rich soil containing plenty of available nitrogen checks the activities of the bacteria. It is poor soil which responds most readily and liberally to inoculation; the thousands of acres of non-productive land it does not pay at present to till and manure, which can be restored to fertility and productiveness by the use of these bacteria cultures.

"What, then, are the conditions under which a cultivator may expect to benefit by inoculation? Inoculation is necessary when the land is poor or 'thin,' that is, low in organic matter, and has not recently borne a leguminous crop.or when the roots of legumes grown are devoid of nodules. Inoculation is desirable when a different leguminous crop from that previously grown on the land is being planted; or when the crop growing, though possessing root nodules, is not producing up to the average. The introduction into the soil of a more virulent race of bacteria may greatly increase the yield.

"Inoculation is useless when the legumes usually grown are producing high yields, and the roots show nodules in abundance; or when the soil is rich in available nitrogen, for under this condition few nodules would be formed.

"Given suitable conditions the advantages which may be expected from inoculation are:

"1. Increased yield of leguminous crop.

"2. Improvement of land for succeeding crops, by adding organic nitrogen to the soil.

"3. Increase of nitrogenous contents of inoculated plants, which means increase of feeding value.

"4. In many cases hastened maturing of plants, thus allowing of earlier marketing of produce with enhanced value.

"Increased Yield.—The amount of increase will naturally vary according to differing conditions, and it is evident from what has been already stated that the greatest increase may be expected on poor or worn-out soils. As regards the soils of this country, it is often said that 'they are too good to respond to or need inoculation.' One writer recently stated that 'ninety-nine per cent. of our soils have all the microbes they need.' But the results given on pages 16 to 29 (of the brochure) show how erroneous such statements as these are.

"Increase of Fertility of Soil.—That leguminous crops effect a marked benefit on the yield of succeeding crops is so well known, that it is the practice of every farmer who wishes to maintain the fertility of his soil to include some leguminous crop in his rotation of crops. It can easily be demonstrated that the greater part of this benefit is due to the organic nitrogen supplied by the root-nodules, and that unless the nodules are present the leguminous crop actually exhausts the soil instead of improving it. It has already been pointed out that the nodules are the centres of nitrogen-fixation. In their tissues are stored up quantities of organic nitrogen greatly in excess of what is required by the leguminous plant. When the crop is harvested these nodules remain in the ground, and the nitrogen store of the soil is correspondingly increased.

"Increase of Feeding Value of Crop.—It sometimes happens in inoculation experiments that there is no evident difference in the yield from inoculated and non-inoculated plots. Now a visual comparison is apt to be misleading, and the only accurate way of obtaining results is by weighing the produce. This is well seen in the report from Grappenhall, where a crop that showed no appreciable difference to the eye weighed 30 per cent. more than the non-inoculated.

"Early Maturing of Crop.—A striking fact brought out by the experiments during the last two years is that, in a number of cases, inoculation has hastened the maturing of the crop very materially. Reference to the reports shows that 'ten days,' 'a fortnight,' and 'three weeks' are given for earlier ripening of inoculated crop. With early crops this means earlier marketing and enhanced prices, a matter of the greatest importance to growers.

These extracts will serve to show the importance of what has been already accomplished by Professor Bottomley, and that the results of the experiments which have been made in various parts of the United Kingdom have been such as to justify an extension of experimental work on a much larger scale than has hitherto been the case. It is shown that the inoculation of soil for leguminous plants is by no means costly, as "one gallon of culture solution will inoculate seed for twelve to fifteen acres of land, and when diluted will, when sprayed or watered on the soil, suffice for an acre or more." The cost of sufficient of the pure cultures for making a gallon of solution is about 3s.

For the preparation and application of the culture solution, and for the reports on the experiments that have been made during the past two years, we must refer our readers to Professor Bottomley's brochure, which is published at "Country Life" Office, Tavistock Street, W.C., the price being one shilling. It should be carefully read by all who are engaged in the production of garden and farm crops.

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HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

JANUARY 14.

The exhibition on the above date was one of the smallest held in the hall for a very long time—perhaps the smallest. In one sense the meeting was a record one—in that the Floral Committee had not a single novelty placed before it. Within the memory of the oldest committee man there had never before been a clean sheet. Winter-flowering plants were the feature of the meeting.

In the afternoon Mr. J. Gregory displayed a most interesting series of lantern slides in the Lecture Hall, showing the leading exhibits arranged at the Temple, Holland House, and other shows during the year.

FLORAL COMMITTEE.

The display of winter-flowering plants made by Messrs. James Veitch and Sons, Chelsea, was a success and on this occasion, when exhibits were few, it was all the more interesting and instructive. The big group included batches of lily of the valley, freesias, Jacobinia coccinia, J. chrysostephana, forced azaleas, Calceolaria Burbidgei, Moschosma riparia, cyclamens, Leonotus Leonurus, oranges in flower and fruit, the pretty Citrus myrtifolia, and Roman hyacinths.

Messrs. William Cutbush and Son, Highgate, were extensive exhibitors, and helped to save the situation. They had hellebores, Hamamelis arborea, Daphne mezereum, Adonis Kihusaki, A. amurensis, Iris tauri, I. histris, I. histrioides, Sternbergia hyemalis, retarded Lilium speciosum, L. longiflorum, and L. auratum, camellias, heaths, spiræas, etc., and a collection of winter-flowering carnations, including a dozen blooms of Marmion that were shown at the previous meeting.

Buddleia asiatica was largely shown by Mr. L. R. Russell, Richmond, Surrey; this is a very useful winter-flowering greenhouse plant. This was associated with berried aucubas, variegated euryas, ivies, euonymus, etc. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, contributed quite a large and pretty display of perpetual-flowering carnations, setting up good flowers of such varieties as Robert Craig, Nelson Fisher, Mrs. T. W. Lawson, Lady Bountiful, Mrs. Burnett, Harlowarden, Enchantress, Pink Enchantress, White Enchantress, etc., in tall, clear glass vases, in a most effective manner. The same firm arranged a group of Eurya latifolia variegata, edged with Aralia Sieboldi.

Christmas roses and pernettyas were exhibited by the Misses Hopkins, Mere, Shepperton, the former very clean and good. Messrs. John Peed and Son, West Norwood, contributed an exhibit of saxifragas and other alpines in pans, and a small collection of cacti.

ORCHID COMMITTEE.

Messrs. Charlesworth and Co., Heaton, Bradford, showed Odontoglossum crispum Lyott, a heavily and richly-marked variety, and Cypripedium Fowlerianum. Mr. Whitelegge, gardener to J. Bradshaw, Esq., The Grange, Southgate, showed Odontoglossum venustulum Apollo and Lycaste Skinneri armeriaca. Messrs. Sander and Sons, St. Albans, brought up Odontoglossum MacNabiana (F.C.C.), a large-flowered, handsome hybrid between O. Harryanum and O. Wilckeanum albens; this has heavy chocolate and red-brown markings on a yellowish ground, and a white, yellow, and red marked lip. The purple tips to the petals are also an additional attraction. Mr. H. Little, Baronshalt, Twickenham, showed a fine five-flowered spike of L.-c. callistoglossa ignescens. Messrs. J. and A. McBean, Cooksbridge, submitted Cypripedium Minos Youngi (F.C.C.), a splendid form, with broad white and green dorsal sepal, and brownish-green sepals and petals.

From Westonbirt, Mr. Alexander, orchid grower to Major Holford, brought up Cypripedium Sultan (F.C.C.), a bold cross between C. Mons. de Curte and C. Milo Westonbirt var.; it has broad bright brown petals, with greenish ground and edges, brown lip, and green and white dorsal sepal, the latter heavily spotted with dark purple over the green area; also from Westonbirt came L. c. Corunna, a neat purple hybrid of unknown parentage.

Messrs. Armstrong and Brown, Tunbridge Wells, showed Cypripedium Maudiæ, C. Helen II., C. Muriel Hollington var. albescens, and C. Helen Armstrongæ—a pretty set. Mr. H. Ballantine, gardener to Baron Schroder, The Dell, Egham, showed Odontoglossum Bingelianum (F.C.C.), a beautiful hybrid, with large finely-formed flowers of soft greenish-yellow ground colour, heavily blotched and spotted with brown; the lip has a white apex and red basal marks.

A very small group of cypripediums was contributed by Messrs. Heath and Son, Cheltenham; this included varieties of C. insigne and C. Leeanum, Cattleya Percivaliana, and a curious hybrid between C. Walkeriana and C. Loddegesi. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, sent up Cypripedium insigne Lucieni, C. Leeanum Clinkaberryanum, C. aureum virginale, C. Mrs. W. Mostyn, C. Thompsoni, and C. Euryades var.

FRUIT COMMITTEE.

Messrs. H. Cannell and Sons, Swanley, Kent, set up a very interesting collection of Kentish-grown apples, in which about one hundred varieties were represented, many of them in very fine style. The baskets of Bramley's Seedling, Beauty of Kent, Mere de Menage, Annie Elizabeth, Lane's Prince Albert, Cox's Pomona, Gascoigne's Scarlet, The Queen, Warner's King, Peasgood's Nonsuch, Emperor Alexander, Striped Beaufin, Allington Pippin, Charles Ross, and Lord Derby were particularly good.

Miss C. E. Martin, Willowbrook, Auburn, N.Y., showed a collection of bottles of fruit in great variety. All the fruits appeared to be in excellent condition, and all were in glass bottles. The peaches, pears, strawberries, and cherries were all preserved in brandy.

CERTIFICATES AND AWARDS.

First Class Certificate.—Odontoglossum MacNabianum, from Messrs. Sander and Sons, St. Albans; O. Bingelianum, from Mr. H. Ballantine, gardener to Baron Schroder, The Dell, Egham; Cypripedium Sultan, from Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester; and C. Minos Youngi, from Messrs. J. and A. McBean, Cooksbridge.

Award of Merit.—To Lælio-cattleya Corunna, from Major Holford.

MEDALS.

Silver-gilt Knightian.—Messrs. H. Cannell and Sons, Swanley.

Silver-gilt Flora.—Messrs. William Cutbush and Sons, Highgate; Messrs. H. Low and Co., Bush Hill Park, Enfield.

Silver-gilt Banksian.—Messrs. J. Veitch and Sons, Chelsea.

Silver Banksian.—Messrs. J. Peed and Son, West Norwood; Mr. J. R. Russell, Richmond; Messrs. Hugh Low and Co., Enfield (orchids); Messrs. Heath and Son, Cheltenham; and Miss Martin, Willowfield, Auburn, New York.

Cardiff Gardeners' Association.

The first meeting in the New Year of the Cardiff Gardeners' Association was held on the 7th inst., at the Philharmonic Restaurant, Mr. H. R. Farmer presiding. The lecturer for the evening was Mr. Harold Evans, The Hardy Plant Nursery, Llanishen, who gave an interesting lecture on the water garden, which subject he divided into two parts—firstly, plants that live entirely in water, and, secondly, moisture-loving plants, trees, and shrubs, some of which he considered were very effective during the winter months, the various colours of the willows and the red dogwood being specially mentioned. The lecturer included in the first part of his lecture references to a large number of nymphæas, and he gave advice on the depth at which they should be planted in the water, and other essential details. Many of the beautiful moisture-loving plants also had attention directed to them. Mr. Graham opened the debate, and congratulated the lecturer on his interesting paper, several members taking part in the discussion that followed. At the close of the discussion it was proposed by Mr. Julian, and seconded by Mr. Toy, that the best thanks of the meeting be accorded Mr. Evans. Mr. J. Prosser was awarded first prize for cyclamen.

Royal Caledonian Horticultural Society.

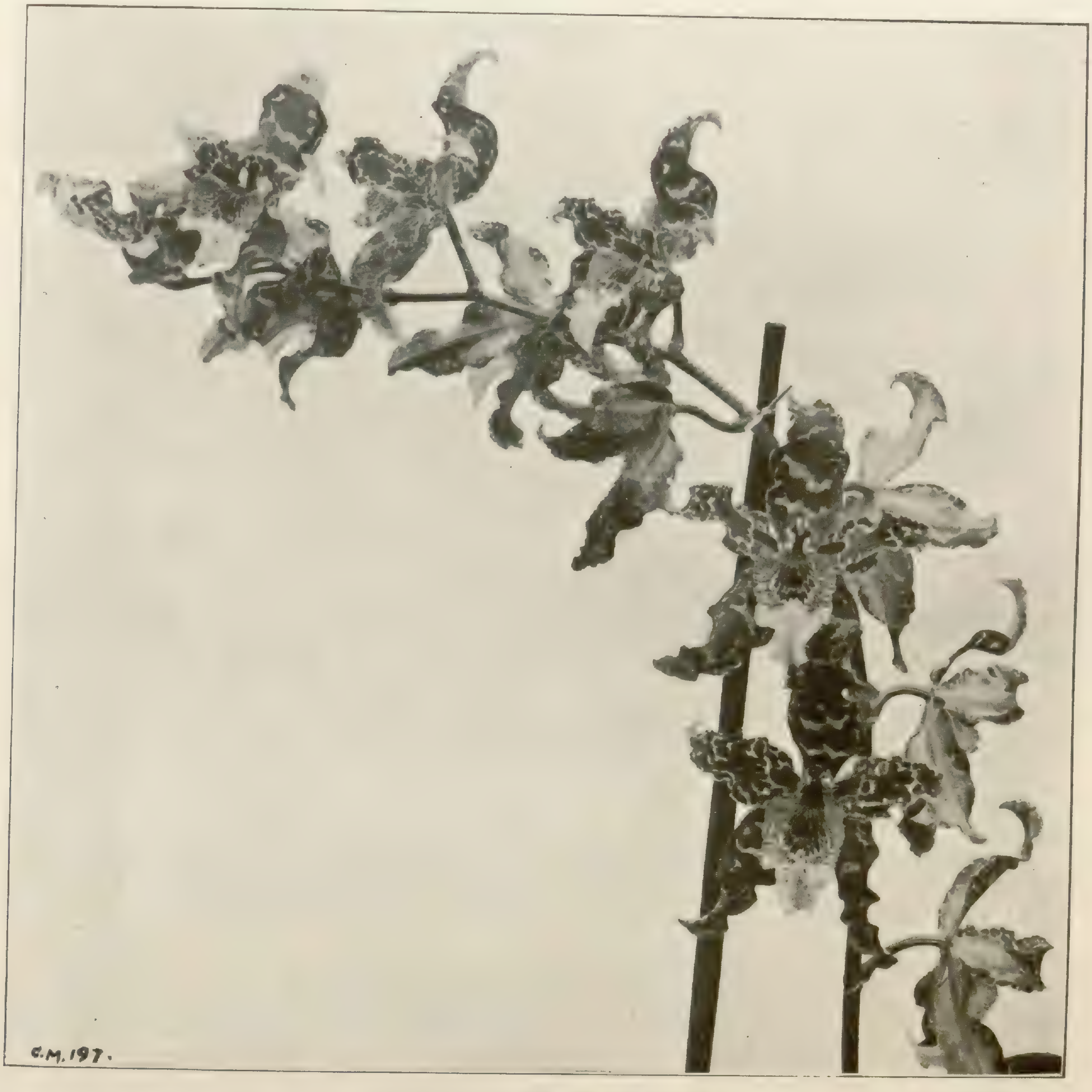
The annual meeting of this society was held a few days since in Dowell's Rooms, Edinburgh, with Mr. W. H. Massie, vice-president, in the chair. After the minutes of the previous annual meeting had been disposed of,

The report for the year was submitted, and this, we are glad to state, was of most satisfactory character. The exhibitions had been highly successful in every way. The competition had been keen, the products generally of a high order of merit, and the attendance had been good. The funds of the society, it was stated, now amount to £1,152, an increase of £93 on the previous year. Reference was made to the resignation of Mr. P. Murray Thomson, and the council stated that they regard his removal as a great loss to the society. He had been an ideal secretary, combining, as he did, the qualities of a good business man with a keen love for horticulture and an expert knowledge of some of its branches. It was considered that much of the success of the society in recent years was due to Mr. Murray Thomson's untiring and solicitous care of its affairs.

The following extract from the minute book was given: "The council desire to minute the sincere regret with which they have received the resignation of Mr. Murray Thomson, and to place on record their high appreciation of the ability and fidelity with which he has for ten years served the society as secretary and treasurer."

The Chairman, in moving the adoption of the report, congratulated the members on the success that had been achieved during the year. They might not have accomplished all they could have wished, but they had done much good work, and the financial results had been of a gratifying character. He alluded to the number of deaths and resignations, and expressed the hope that the members would do their best to increase the membership.

The report having been adopted, the election of office bearers was proceeded with. Lord Balfour of Burleigh was re-elected president, and Mr. J. W. M'Hattie was elected one of the vice-presidents. Mr. John Alex-



ODONTOGLOSSUM MACNABIANA.

Exhibited by Messrs. Sander and Sons, at R.H.S. meeting on Tuesday last, when a First Class Certificate was conferred upon it. Flowers much reduced; the colours, chocolate, red-brown, yellow, and purple.

ander, The Gardens, Niddry; Mr. D. W. Thomson, nurseryman, Edinburgh; and Mr. Gordon Caldwell, Duddingston Cottage, Portobello, were elected to the council in the place of those retiring. Mr. Donald Mackenzie, of Messrs. Henderson and Mackenzie, S.S.C., Rutland Square, Edinburgh, was elected secretary, in succession to Mr. Murray Thomson, who had retired owing to his leaving Edinburgh. The latter, in acknowledging the reference that had been made to his work, said what he had been able to do for the society had been pleasant, and he was glad to think that though they had had ups and downs, he had remained on the most friendly terms with all. He was not going so far away but that he would be able to come to their shows this year, and he would be glad to give any assistance he could to the new secretary.

East Anglian Horticultural Club.

Although not so strong, numerically, in attendance as at former dinners, there were close upon 70 members present at the annual dinner, held at the Boar's Head, Norwich, on January 8. Mr. J. Powley presided, and Mr. T. B. Field was in the vice-chair, supported by prominent local horticulturists. Short speeches upon the toasts of various gardening bodies, and some well-rendered songs, enabled those present to spend a happy evening.

Beckenham Horticultural Society.

At a recent meeting of the above society Mr. Cecil Hooper, F.R.H.S., of Sevenoaks, gave a highly instructive lecture on "Birds in Relation to the Garden," using a fine set of lantern slides for illustrating his remarks. Mr. G. N. Hooper, of Beckenham, occupied the chair, and there was a good attendance, and a profitable discussion followed. Hearty votes of thanks were accorded both lecturer and chairman.

Sandhurst Gardeners' Association.

The fortnightly meeting of this association was held in the Church Schools, Sandhurst, on January 7. There was a good attendance of members, and Mr. J. Evans occupied the chair. The lecture for the evening was, "Some of Nature's Methods of Securing Cross Fertilisation in Plants," by the Rev. H. P. Fitzgerald, of Crowthorne, who dealt with the subject in a very interesting and instructive manner. A series of lantern slides was shown of various flowers, and the way they are fertilised by the wind, bees, moths, and other insects. The lecturer was heartily thanked for his lecture. Mr. W. H. Chapman, Hilfield Gardens, Yateley, staged plants of Primula obconica.

National Chrysanthemum Society.

A fairly well attended meeting of the society's committee was held at Carr's Restaurant, Strand, on Monday, January 13, Mr. T. Bevan presiding.

The chief business was the discussion of the annual report and financial statement, to be presented to the forthcoming annual meeting on February 3. It appears that all payments have been made, but this has necessitated a heavy draft on the reserve fund. Several motions were brought forward for the reduction of expenditure during the present year, and these were adopted. Several new members were elected, and some promises of handsome donations towards the prize fund were received.

Weybridge Exhibitions. — The Weybridge Horticultural Society will hold its summer exhibition on July 9, and its autumn show on November 4. The president for the year is J. Lyle, Esq.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "End-leigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

SCHEDULE. — W. H., Yeovil: Many thanks; we shall be very glad to receive schedule and notices in due course. You have done very well indeed.

PERPETUAL - FLOWERING CARNATIONS.—M. C. N., Putney: The best work is Mr. M. Allwood's "Perpetual-flowering Carnations," published by Messrs. Hugh Low and Co., Bush Hill Park, Enfield. The price is 2s. 2d., post free.

VALLOTA PURPUREA MAGNIFICA.—M. J. P., Leigh: You had better write to the leading nurserymen who advertise in our columns, particularly those who make a special feature of indoor plants; they will quickly let you know if they have the variety, or whether they can procure it for you.

HARD-CENTRED CELERY.—J. H., Cambridge: We cannot tell the cause without an opportunity of inspecting a specimen. Sometimes, when celery has experienced a check, especially such as is caused by lack of moisture, the plants prematurely run to seed, or attempt to do so, and when this happens the centre consists of an elongated stem instead of the usual and much-prized "heart."

STREPTOSOLEN JAMESONI.—C., Isle of Wight: The plants should have been kept moderately dry during the last few weeks. If they have had this rest they may now be lightly pruned and placed in a warm greenhouse. There is no need to provide great heat, neither is this desirable. Syringe the plants occasionally to induce free growth from all parts. In March and April insert a few cuttings.

ASPARAGUS. — E. K., Keighley: We are not acquainted with the variety you name, and therefore cannot offer any opinion as to its merit. If, however, the lady of the house considers Connover's Colossal has the finest flavour when served at table, and the master of the house finds no difference between it and the new variety, it seems to us the better plan would be to plant Connover's Colossal, and none other. If it is possible to do so we should like to have the opportunity of testing the flavour of the new variety in due course.

FLOWERS ON A VINE BORDER.—M. J., Ripon.—If the border is a small one, properly cared for in the matter of mulching, watering, and protection, there will be no opportunity for cultivating flowers upon it. If the border is a very wide one, and we know many such, the front portion may be used for annual flowers, but not for perennials. The most profitable proceeding would be that of thoroughly renovating the old vines or removing them and planting strong young ones. However, if this is not possible, and flowers are preferred to first-class grapes, then annual flowers of moderate growth may be grown on the borders. Watering and supplies of liquid manure will be matters not to be lightly regarded if the season is a warm and rather dry one.

OLD PELARGONIUMS IN BOXES. G. B., Rugby: If you have a fairly well heated pit there should be no difficulty in increasing your stock of pelargoniums by inserting cuttings at once, taking the latter from the old plants. Damping must be avoided, consequently light sandy soil and ample drainage must be provided. The work should commence at once. Gradually harden off the plants after they are well rooted and grow them on a shelf in a warm greenhouse, near the light. If carefully attended to these will be very useful plants for bedding, though not so large as those from autumn-struck cuttings. The cuttings that were placed in boxes last autumn must soon be carefully potted up, otherwise they will be starved, and make weakly growth.

STANDARDS OF CALCEOLARIA AMPLEXICAULIS.—H. A., Runcorn: For large beds in the flower garden the use of standard specimens of Calceolaria amplexicaulis has much to recommend it. These plants are readily produced by inserting cuttings in cold frames in autumn and potting these up early the middle of the following April. Grown in an intermediate house they will rapidly extend, and should have all side growths removed until six inches short of the desired height is reached. Then pinch out the growing point, and pinch out the tips of subsequent growths until sufficient branches are formed to produce a good head. Growth is rapid, and with careful attention to watering, etc., it is possible to obtain good heads by planting out time, in June.

CHRYSANTHEMUM SHOW REGULATIONS. — J. S. R., Bucks: We sympathise with you, but unless we have the whole facts of the case before us, from either side, we cannot publish your letter. Every officer should do his best to see that the rules and regulations of his society are carried out fearlessly, and should also help in carrying them out. A secretary is often overburdened with work on show day, and, therefore, unless a protest is handed in at the proper time, and in the proper manner, the person protesting may not receive the consideration and justice that may be due to him. Quite often have we seen a protesting exhibitor firing off his protest in an excited and voluble manner, and waxing indignant when told to put his protest in writing, "according to rule." Such an exhibitor is indignant if, failing to properly enter his protest, his verbal protestation is not brought before the committee. The protest to which you refer should have been dealt with on the show day, but unless you were prepared to substantiate your reasons for protesting by documentary evidence it was, surely, useless to make the protest. If, however, your evidence, submitted later, has resulted in an investigation of the case and the withdrawal of an ineligible competitor, then there seems little fault to be found. That the secretary was to blame for not bringing your protest up at once we are not yet convinced, but if you properly entered the protest and was prepared with you evidence at once, then he certainly was not blameless.

NAMES OF PLANTS.

P. M., Chertsey.—Callicarpa purpurea.

F. A. F., Westgate.—1, Jasminum nudiflorum; 2, Arbutus Unedo.

W. C. T., Everton.—1, Davallia polyantha; 2, Pteris hastata; 3, Todea superba.

T. T. S., Warwick.—1, Begonia fuchsioides, 2, B. Socotrana; 3, Calceolaria Burbidgei; 4, Veronica Andersoni var.

K. F. B., Ipswich.—1, Sedum Sieboldi; 2, S. S. variegatum; 3, Oncidium varicosum Rogersi; 4, Strobilanthes Dyerianus.

OBITUARY.

◆

MR. ARNOLD MOSS.

We regret to learn of the death, at 62 years of age, of Mr. Arnold Moss, formerly head of Messrs. Jacob Wrench and Sons, seedsmen. Mr. Moss was the soul of geniality, and many will remember his jollity at the various meetings of the Gardeners' Royal Benevolent Institution, and the Royal Gardeners' Orphan Fund, both of which charities he helped in many ways.

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Seedsmen stock it.
Gardeners recommend it.
Amateurs know its Value.

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It is unsurpassed for all horticultural purposes.

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Sold Everywhere in **6d.** and **1s.** Tins ; and Sealed Bags, 7 lbs., **2s. 6d.** ; 14 lbs., **4s. 6d.** ; 28 lbs., **7s. 6d.** ; 56 lbs., **12s. 6d.** ; 112 lbs., **20s.** Or direct from the Works, Carriage Paid in the United Kingdom for Cash with Order (except **6d.** Tins).

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Mothers and interested persons are requested to write for Booklet, "Benger's Food and How to Use it." This contains a "Concise Guide to the Rearing of Infants," and practical information on the care of Invalids, Convalescents, and the Aged. Post free on application to Benger's Food Ltd., Otter Works, Manchester.

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(To be filled up and handed to your Seedsman to execute for free delivery, thus saving carriage.)

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,,	**Raffiatape,** coils better than raffia. 1d coil ties up 150 plants. 7 coils (100 yds.) for **6d.**			
,,	,, reels, with holder to fasten in buttonhole, 250 yds., complete **1 6** each ..			
,,	**Wall Tree Fasteners,** aluminium. Fastens on and off any nail in a wall, 50 for **1 -** ...			
,,	**Powder and Spray Syringe,** most useful article, **6 -** each ..			
,,	**Nicofume.** Complete self-contained fumigator, holding ½oz. 95°/。 nicotine, **6d.** ea., **5 9** doz.			
,,	**W.E.O.N. Insecticide.** Sold under a £20 guarantee. 6d. bottles **5 9** doz., **14 -** pint.			
,,	**Fumigator.** Copper cup complete, **9d.** ...			
,,	**Hand Fumigator, 2 9** each. ...			
,,	**Powder Diffuser, 6d.** each ...			
,,	**Tobacco Powder.** Specially prepared (introduced 1888), **6d.** per tin ...			
,,	**Westite.** The first and best slug and germ killer, **6d.** per box to **20 -** cwt. ...			
,,	**Beetle Killer Powder, 6d.** per tin ...			
,,	**Plant Pot Crocks.** For perfect potting, prevention of insects in o pot, etc.. **2 9** per 100 ..			
,,	**Fertiliser.** Perfect plant food. Has stood the test for 20 years. **6d.** per box to **20/-** cwt			
,,	**Watering Can Spreaders.** Fits any watering can and gives a splendid spray, **3d.** each			
,,	**Weeder.** Saves weary weeding, for a lady can uproot hundreds of weeds per hour, **2 6** ea.			
,,	**Lawn Sand.** Has stood the test for 25 years, and now improved, **6d.** per tin to **20/-** cwt .			
,,	**Weed Killer.** Best and cheapest for killing weeds on walks, etc. Introduced 1888. **1 6** tin			
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,,	**Layering Pegs** and **Verbena Pins, 9d.** per 100 ...			
,,	**Greenhouse Shading.** Introduced in 1888 and still the best. Green and cream, **9d.** box			
,,	**Garden Cuffs.** Keeps the coat cuffs clean. No gardener should be without them, **6d.** pair			
,,	**Flower Holders.** For button holes and ladies' sprays. The flowers are gripped and held in watertight nickel tube, so that the lady's may be worn downwards { Gent's, **7½d.** Lady's **10d.**			

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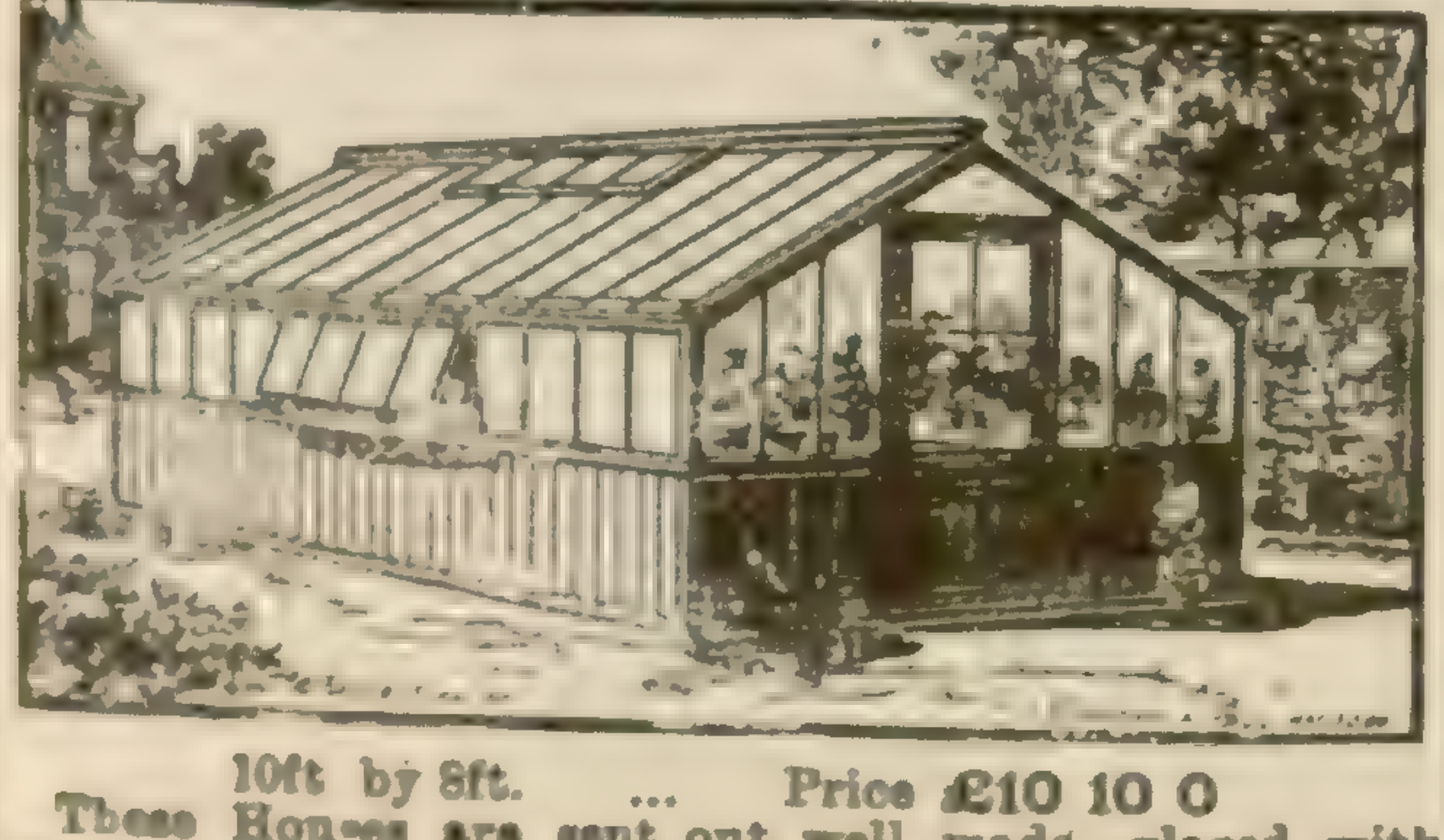
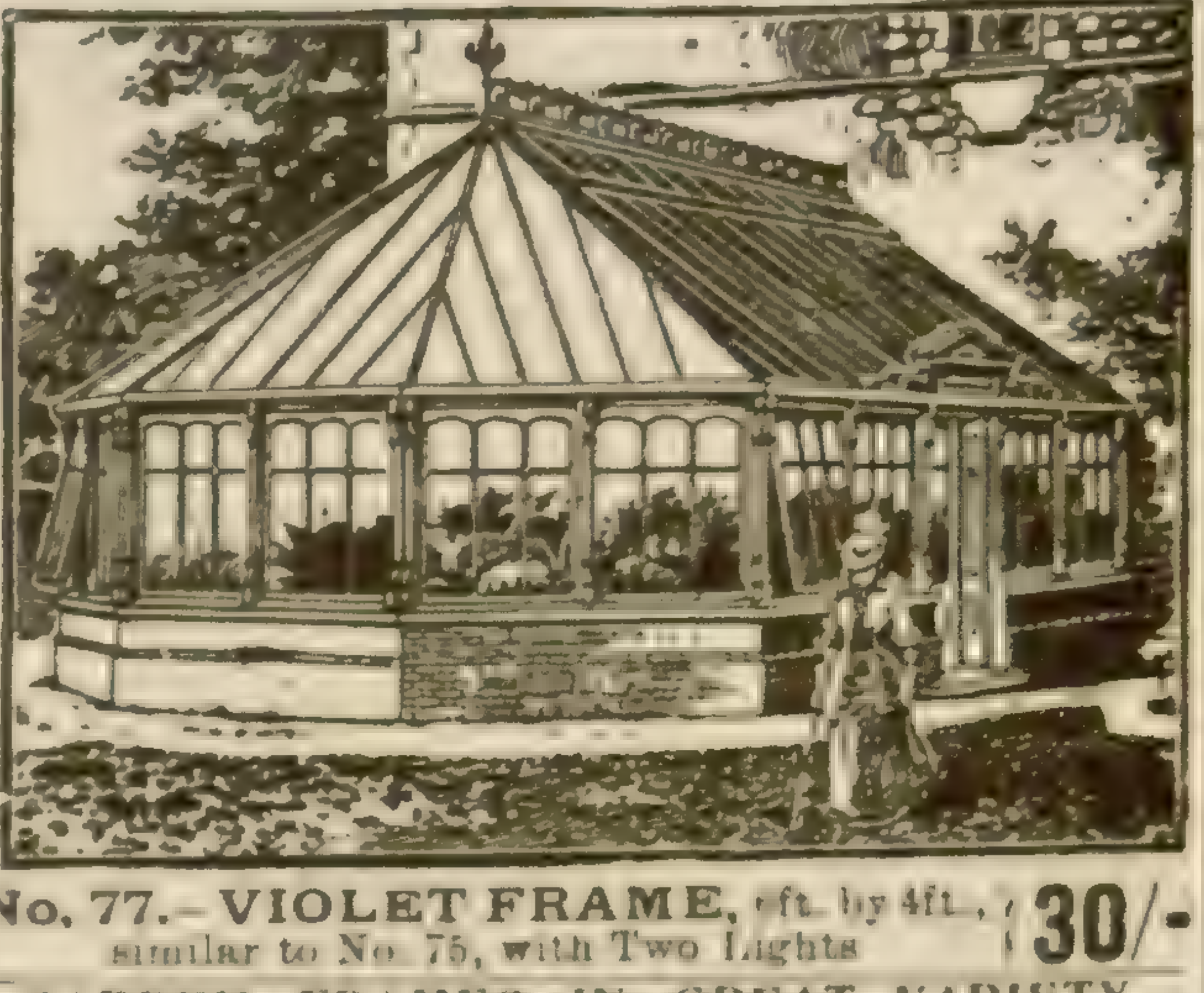
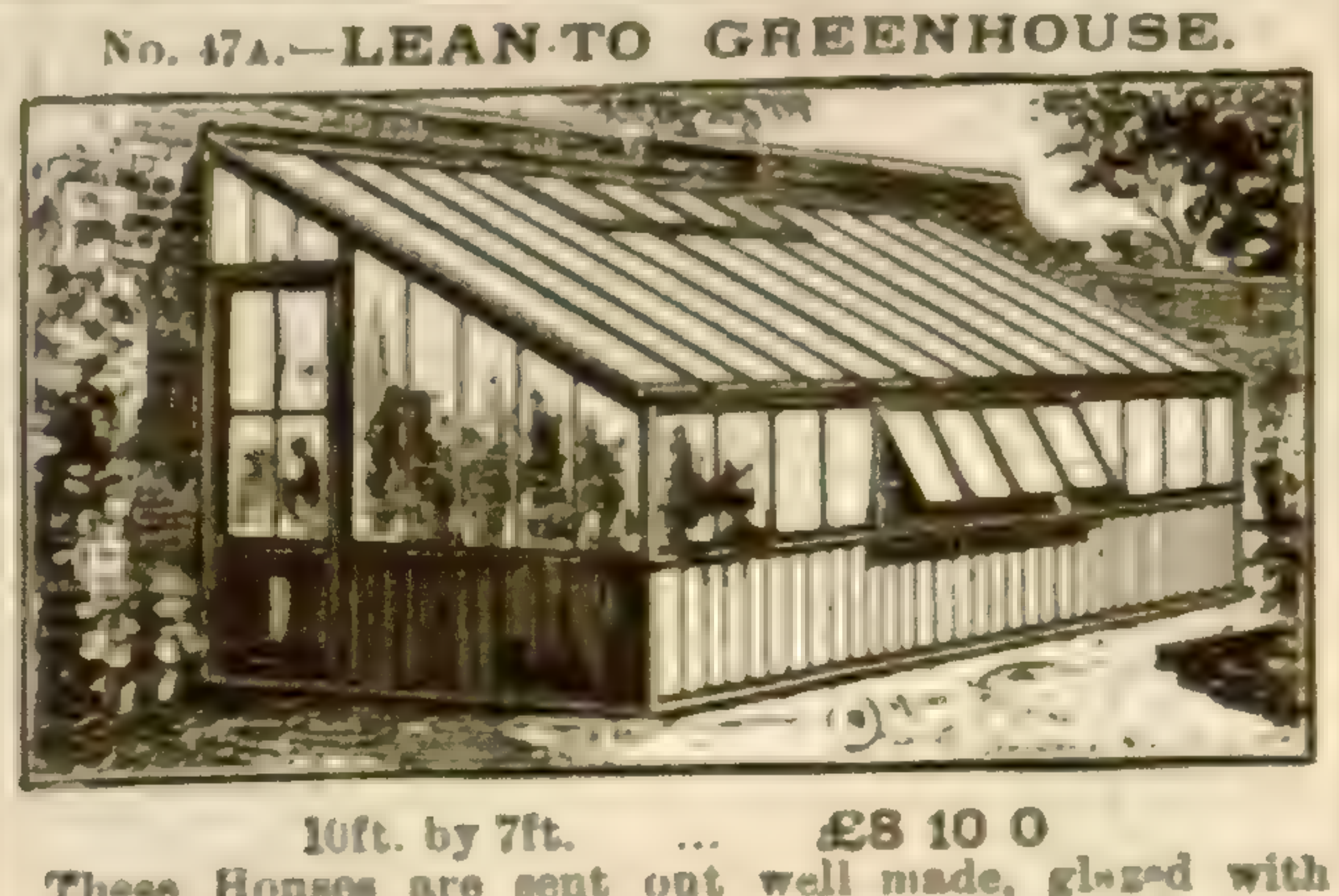


10ft by 8ft. ... Price £10 10 0
These Houses are sent out well made, glazed with 21oz. glass, painted three coats, and carriage paid.



No. 47A.—LEAN-TO GREENHOUSE.



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Retarded and forced flowers are now abundant, and French and Scilly produce is arriving freely.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	4	0	to	6	0
Arums	per doz.	2	6		4	6
Asparagus	per doz. bun.	1	6		6	0
Berberis	per doz. bun.	2	0		2	6
Bouvardias	per doz. bun.	4	0		5	0
Carnations	per doz. blms.	2	0		3	6
,,	per doz. bun.	7	6		10	6
Cattleyas	per doz.	10	6		12	6
Chrysanthemums	per doz. bun.	3	0		7	6
Croton leaves	per bun.	1	0		1	6
Cyclamens	per doz. bun.	5	0		6	0
Cypripediums	per doz. blms.	2	0		3	6
Eucharis	per doz.	2	6		4	0
French fern	per doz. bun.	1	0		3	0
Gardenias	per doz.	2	6		3	0
Hyacinths, Roman	per doz. bun.	6	0		7	6
Lapagerias	per doz.	1	0		2	0
Lilac	per bun.	3	6		5	0
Lilium auratum	per bun.	2	6		3	0
,, tigrinum	per bun.	1	0		2	0
,, speciosum	per bun.	1	3		2	6
,, longiflorum	per bun.	2	6		3	0
Lily of the Valley	per doz.	6	0		10	0
Marguerites, white	per doz. bun.	2	0		3	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	6		3	6
Narcissus	per doz. bun.	2	0		2	6
Odontoglossums	per doz. blooms	2	0		3	0
Pancratiums	per doz. blooms	3	0		5	0
Pelargoniums	per doz. bun.	4	0		6	0
Pernettya	per bun.	0	9		1	0
Roses	per doz.	2	0		6	0
Smilax	per doz. trails	2	0		3	0
Tuberoses	per doz.	0	4		0	6
Violets	per doz. bun.	1	0		2	6
,, de Parme	per bun.	1	6		3	0

Fruits.

Prices for grapes are firm; cranberries, apples, and oranges sell well. Business steady.

		s.	d.		s.	d.
Apples, cooking	per bush.	4	6	to	8	0
,, dessert	per ½-bush.	4	6		14	0
,, American	per barrel	14	0		21	0
Bananas	per bun.	5	0		10	0
Cranberries	per case	7	0		8	0
Cob Nuts	per doz. lb.	4	0		5	0
Figs	per doz.	0	6		1	6
Filberts	per doz. lb.	3	6		4	0
Grapes, Alicante	per lb.	0	8		1	6
,, Muscats	per lb.	2	0		4	0
,, ,, Canon Hall	per lb.	2	6		5	0
,, Gros Colmar	per lb.	1	0		1	6
,, Channel Islands	per lb.	0	9		1	0
,, Belgian	per lb.	0	9		0	10
,, Almeria	per barrel	10	0		20	6
Lemons	per case	8	0		14	0
Oranges	per case	9	0		12	0
Pears, French	per crate	10	0		14	6
,, English	per bush.	3	0		8	0
Pineapples	each	2	0		5	0
Walnuts	per doz. lb.	4	0		5	0

LONDON POTATO MARKETS.

Business is moderately good and prices firm.

		s.	d.		s.	d.
British Queen	per ton	90	0	to	105	0
Blacklands	per ton	80	0		90	0
Dunbar Maincrops	per ton	120	0		130	0
Dunbar Up-to-Date	per ton	115	0		120	0
Kent Up-to-Date	per ton	85	0		105	0
Langworthy	per ton	100	0		110	0
Lincoln Maincrop	per ton	95	0		110	0
Lincoln Up-to-Date	per ton	90	0		105	0
Royal Kidneys	per ton	80	0		85	0

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METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. January 5 to January 11.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 5—Sunday	—	21	21	41	20
,, 6—Monday	—	41	40	49	16
,, 7—Tuesday	0 40	47	46	50	41
,, 8—Wednesday	—	37	36	41	33
,, 9—Thursday	0 10	33	32	35	33
,, 10—Friday	3 5	30	30	35	29
,, 11—Saturday	3 0	21	21	34	20
Means	1 0	33	32	41	27

Date. 1907-8. January 5 to January 11.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg
Jan. 5—Sunday	—	34	39	43	13
,, 6—Monday	—	34	38	43	10
,, 7—Tuesday	1.26	34	38	42	38
,, 8—Wednesday	0.09	37	38	42	31
,, 9—Thursday	—	37	39	42	31
,, 10—Friday	—	36	39	42	25
,, 11—Saturday	—	35	39	42	12
Means	(total) 1.35	35	39	42	23

FORTHCOMING ENGAGEMENTS.

TUESDAY, January 21.—National Amateur Gardeners' Association Annual Meeting, 7 p.m.

WEDNESDAY, January 22.—Society of Arts Meeting, 8 p.m.

THURSDAY, January 23.—Gardeners' Royal Benevolent Institution. Annual meeting and election of pensioners, at "Simpson's," Strand, 2.15 p.m.; friendly dinner at same place, 6 p.m.

CATALOGUES RECEIVED.

HOWDEN AND CO., INVERNESS.—Garden seeds.

HERD BROS., PENRITH.—Seeds and tools.

LITTLE AND BALLANTYNE, CARLISLE.—Garden seeds.

E. CALVAT, GRENOBLE, FRANCE.—New Chrysanthemums.

DICKSONS, CHESTER.—Garden seeds.

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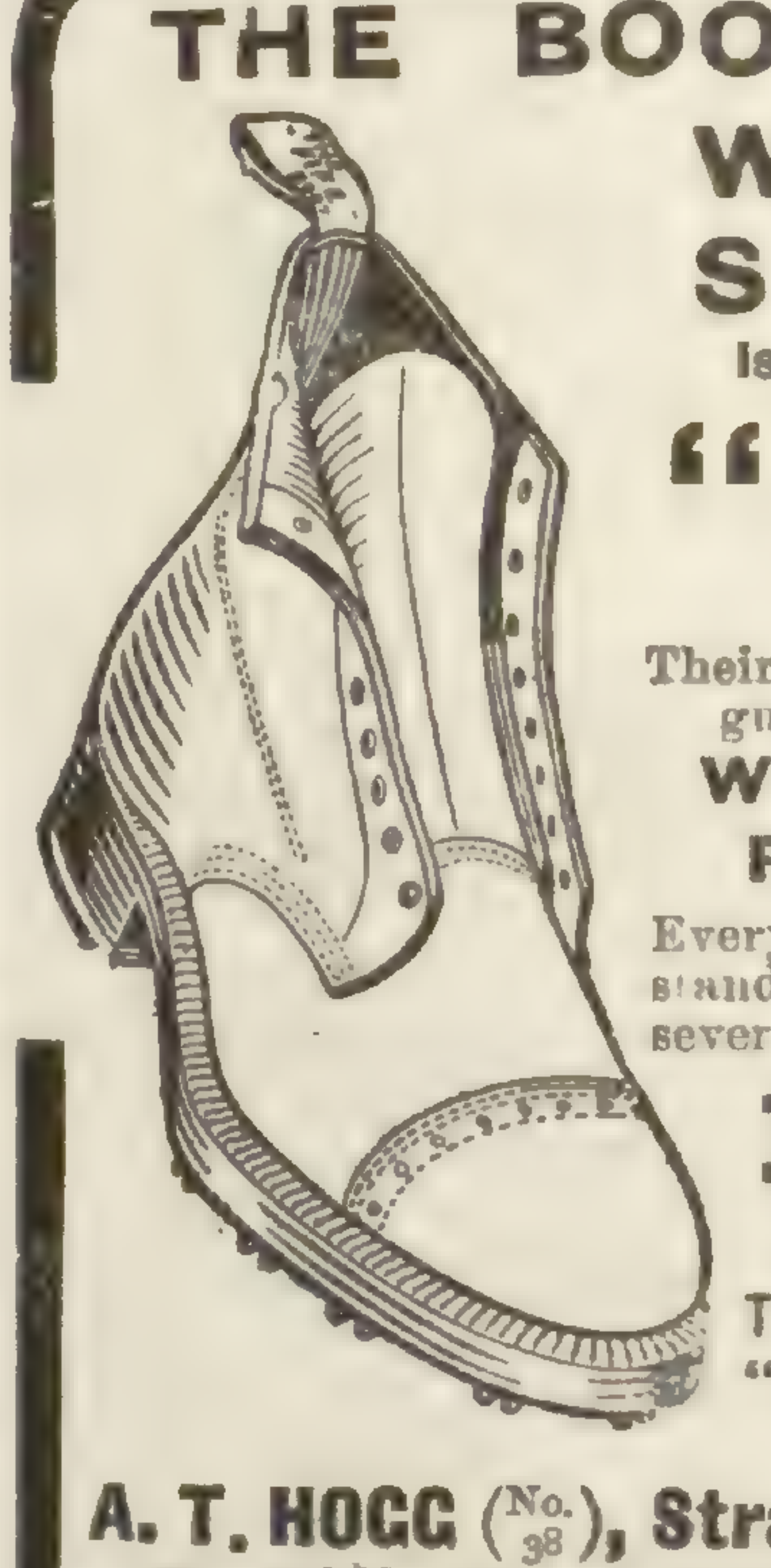

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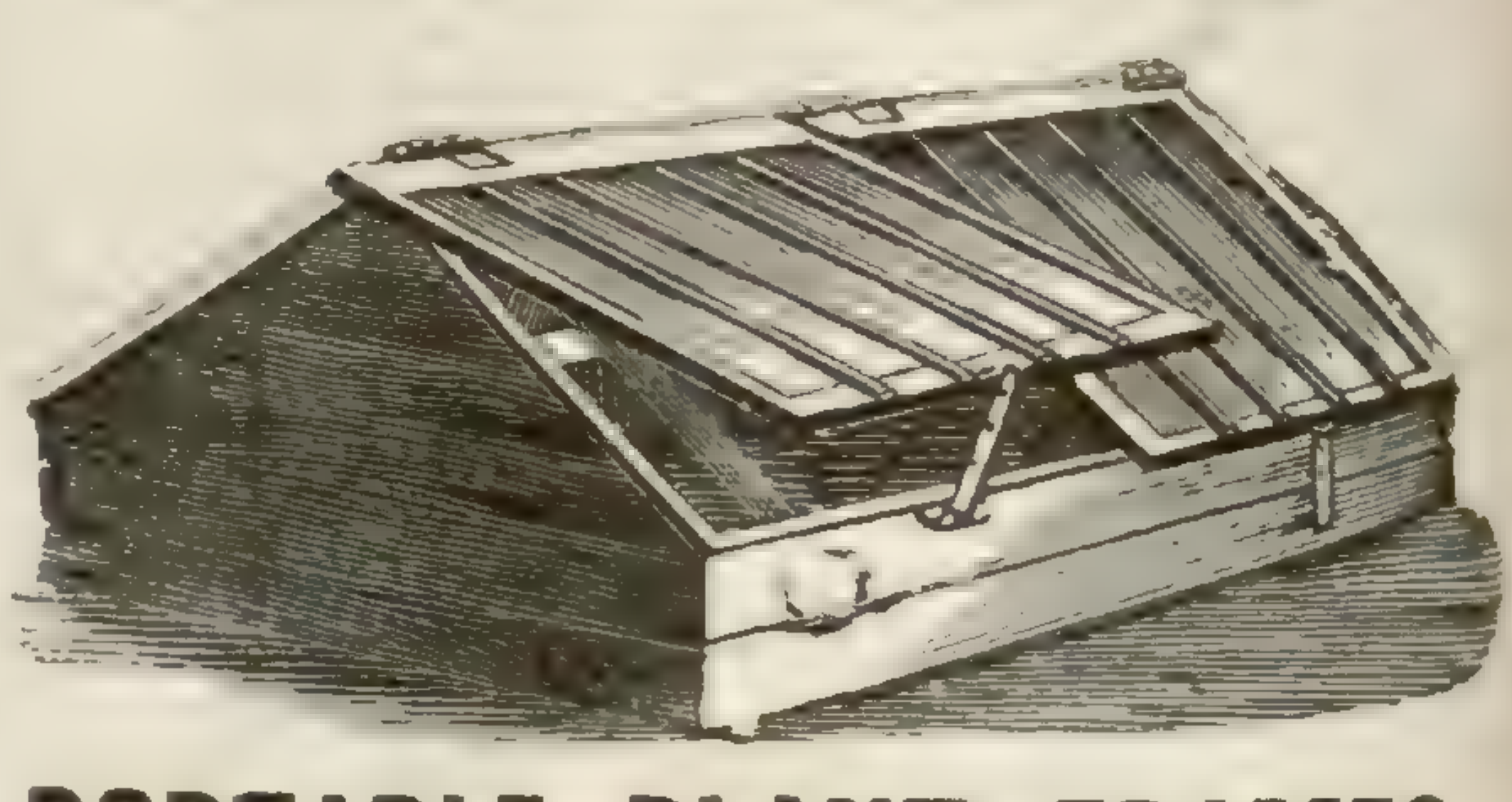

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6 ft. long, 3 ft. wide	CASH PRICES. — CARRIAGE PAID.	2	0	0
6 ft. ,, 4 ft. ,,		2	5	0
12 ft. ,, 4 ft. ,,		4	0	0
6 ft. ,, 5 ft. ,,		2	15	0
12 ft. ,, 5 ft. ,,		4	15	0
12 ft. ,, 6 ft. ,,		5	12	6

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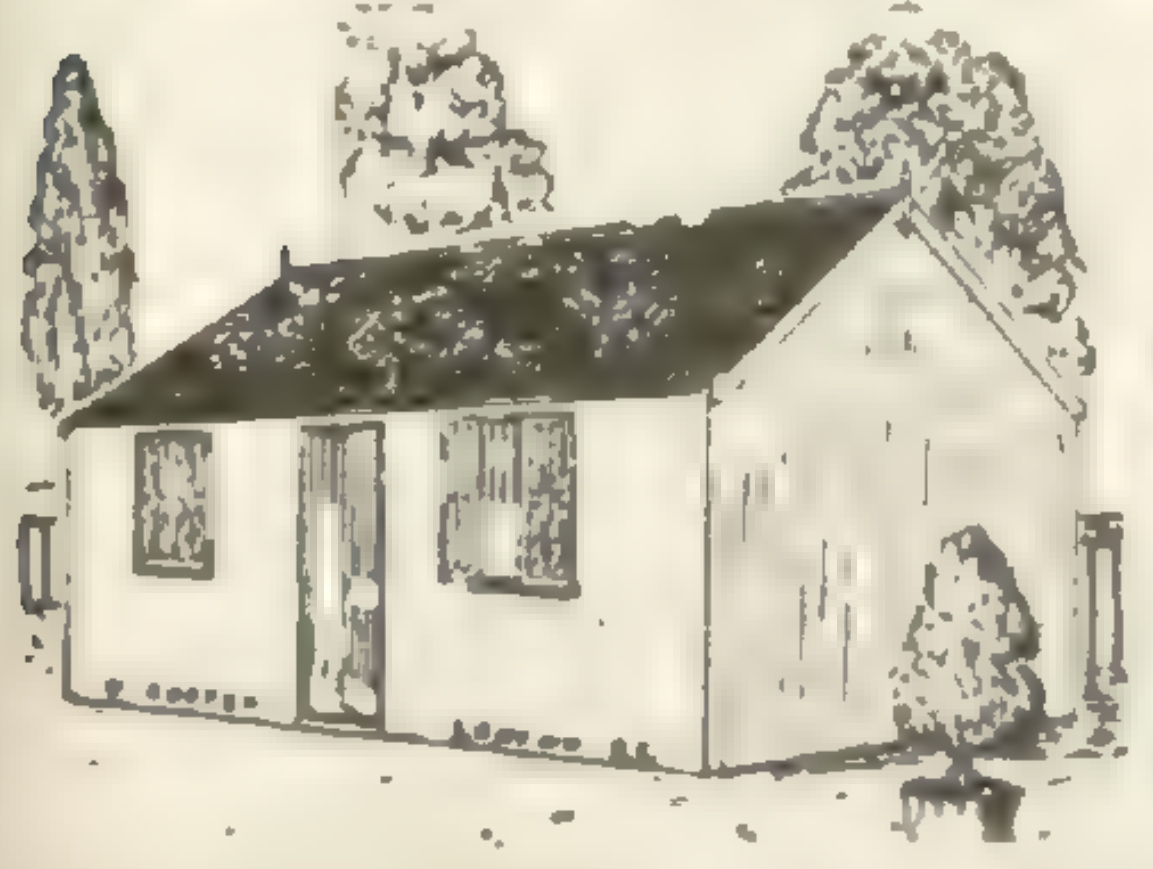
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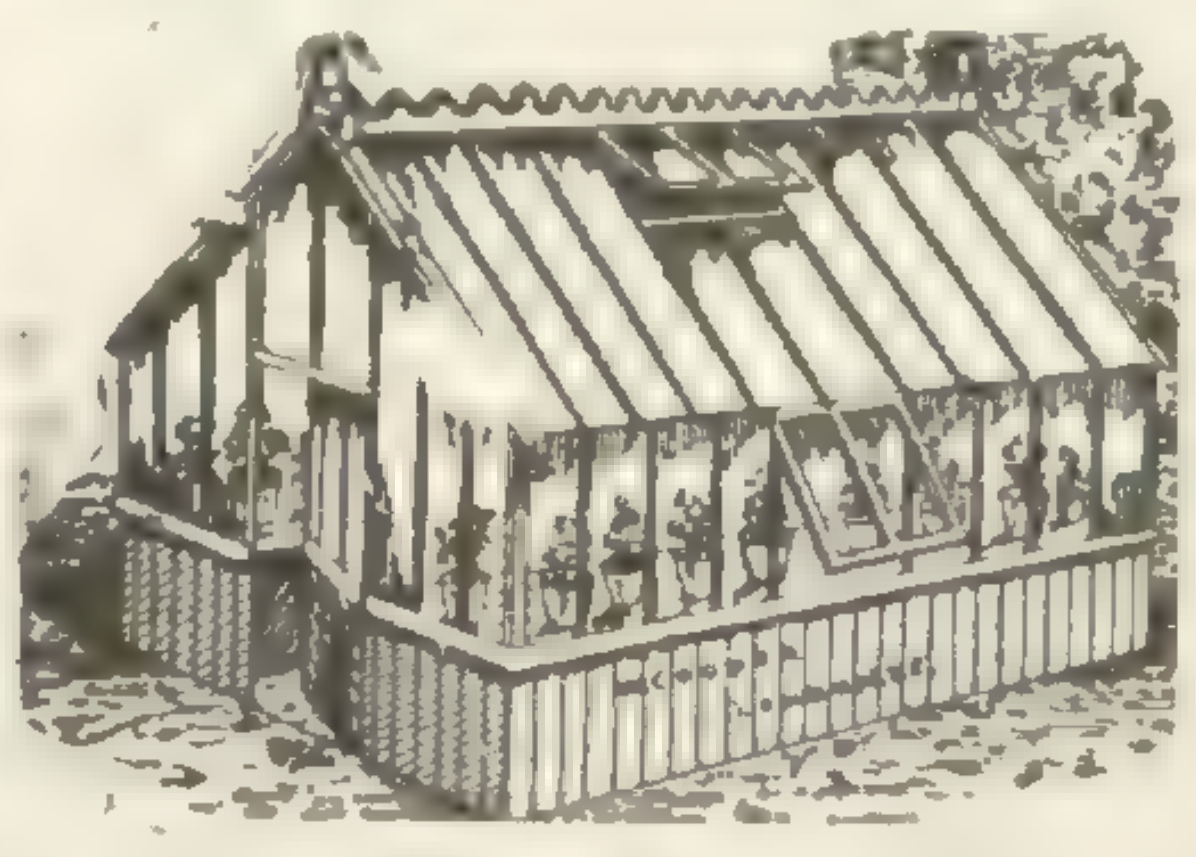
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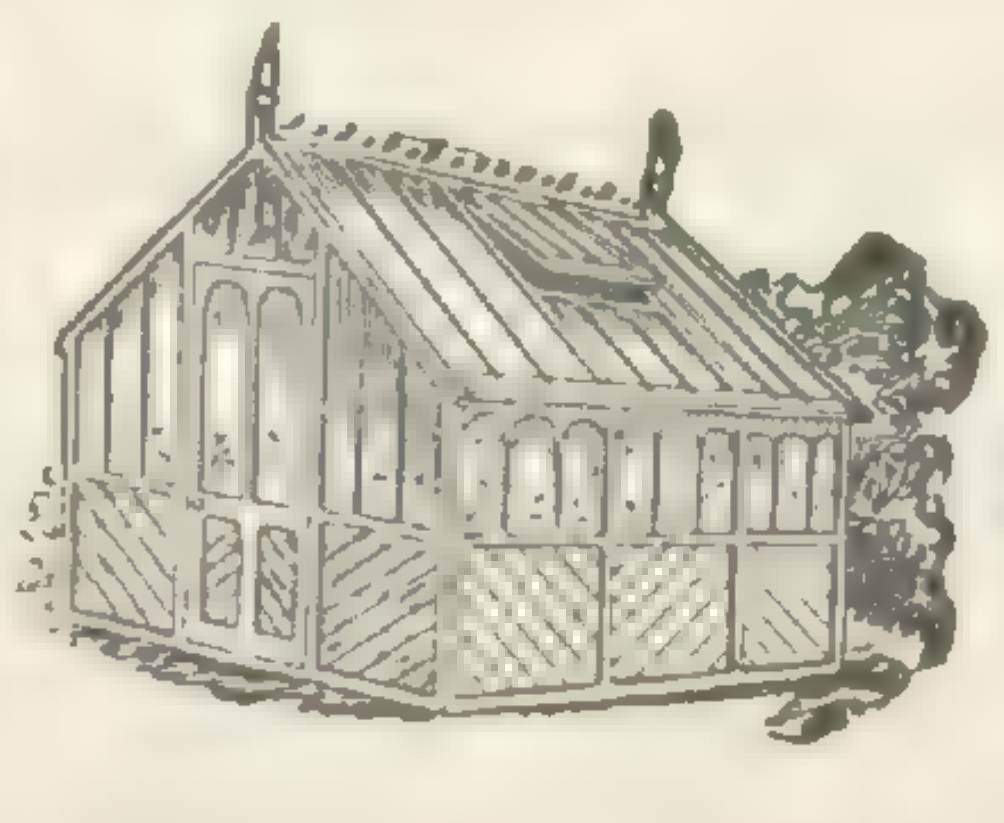
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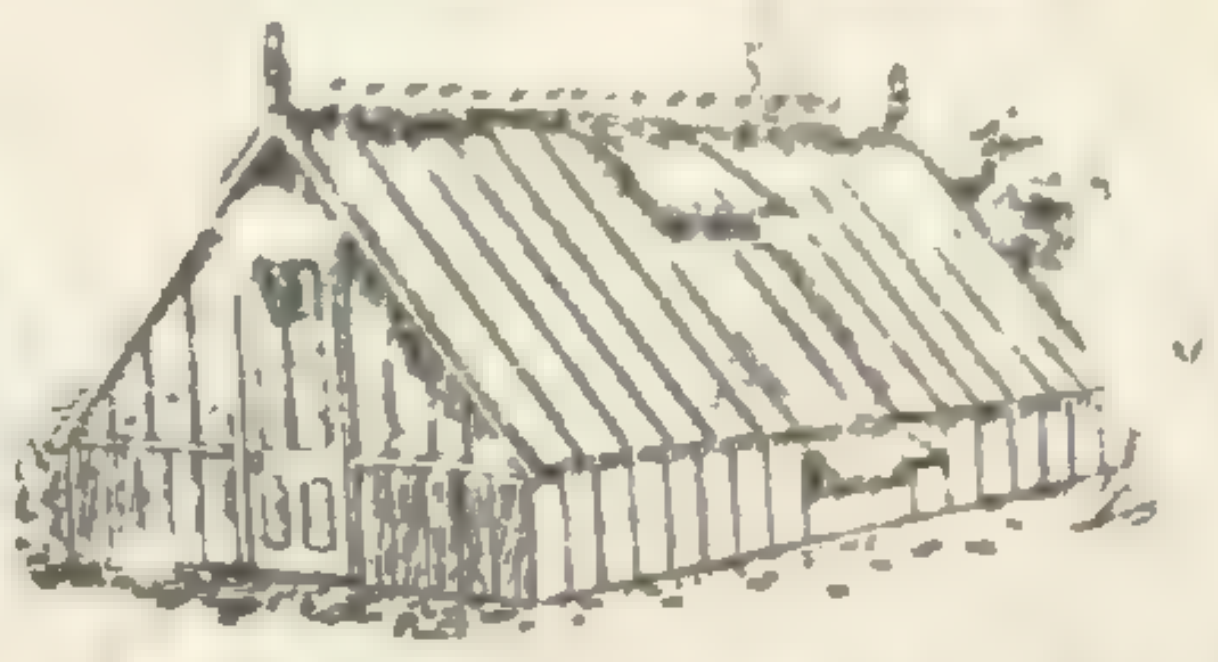
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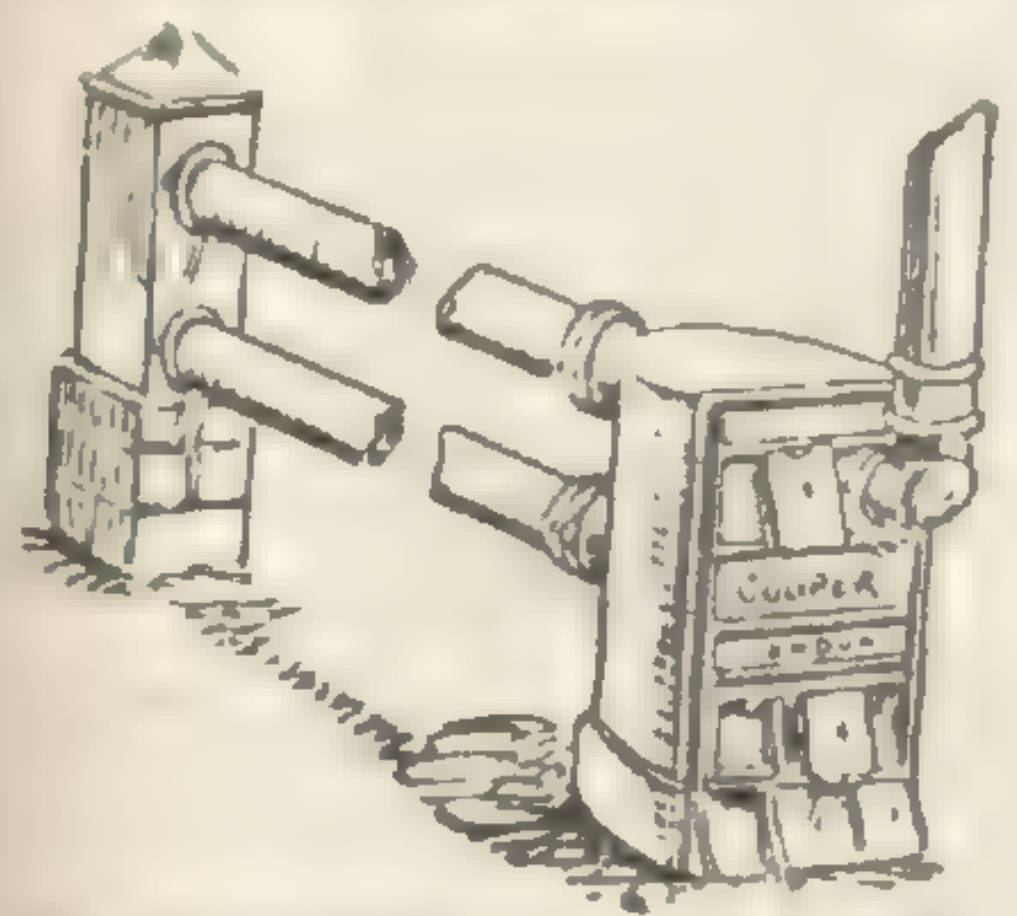
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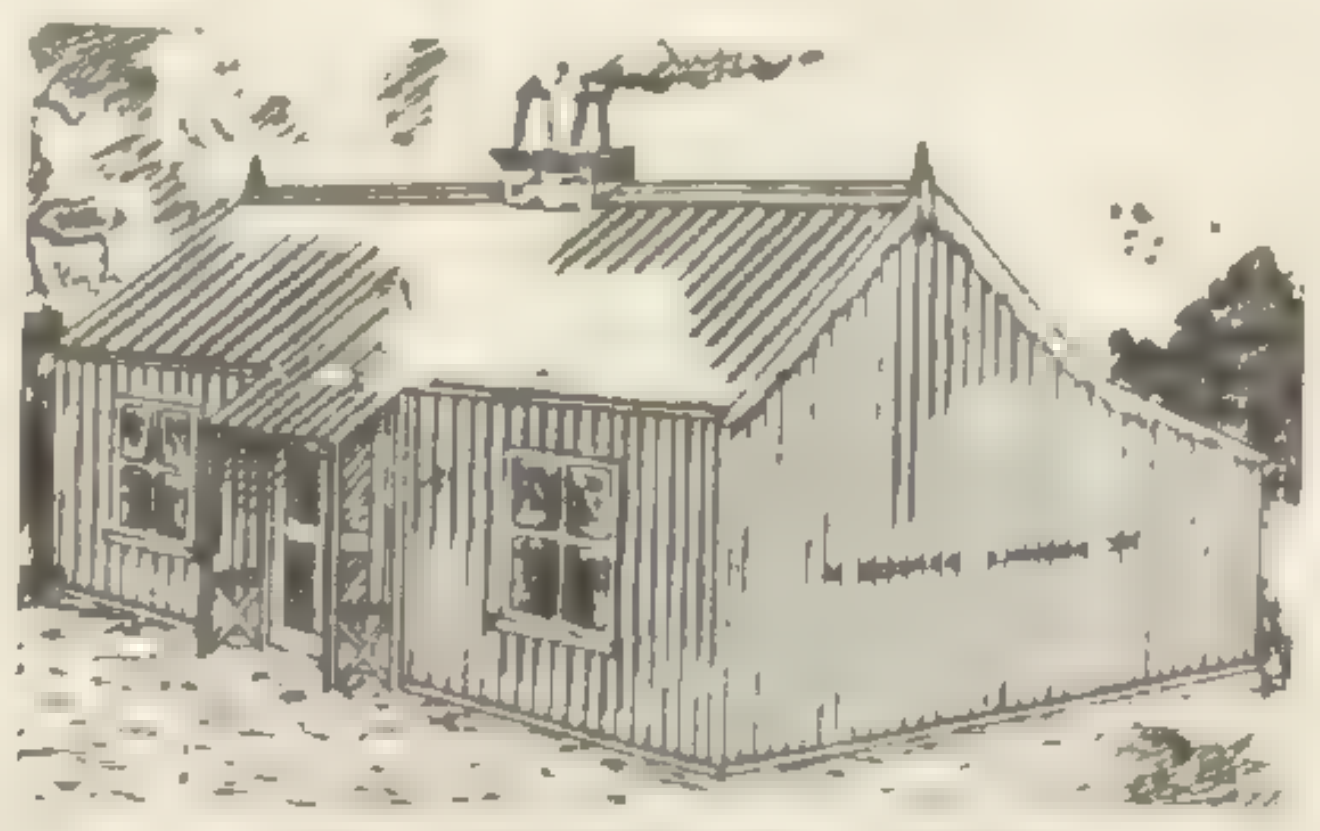
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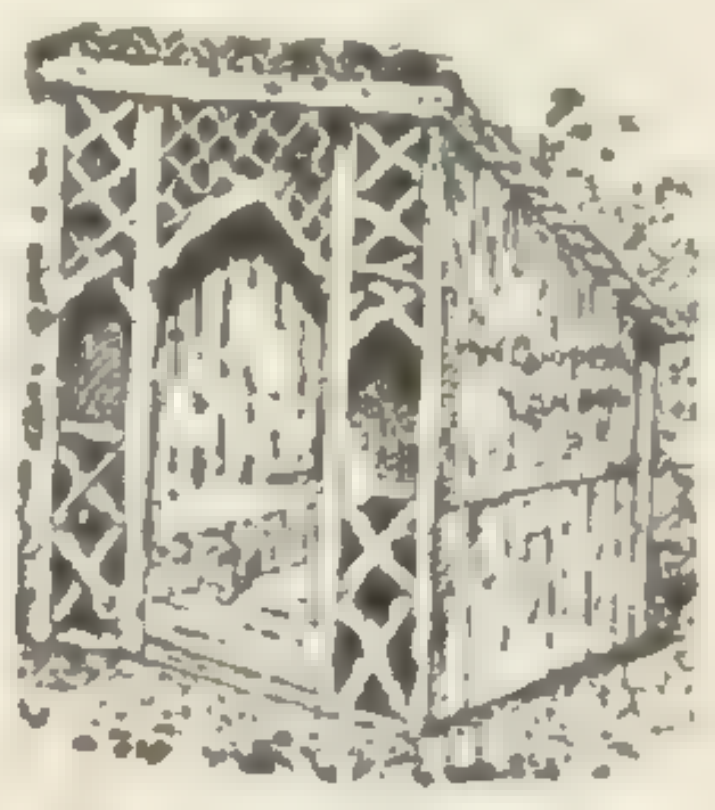
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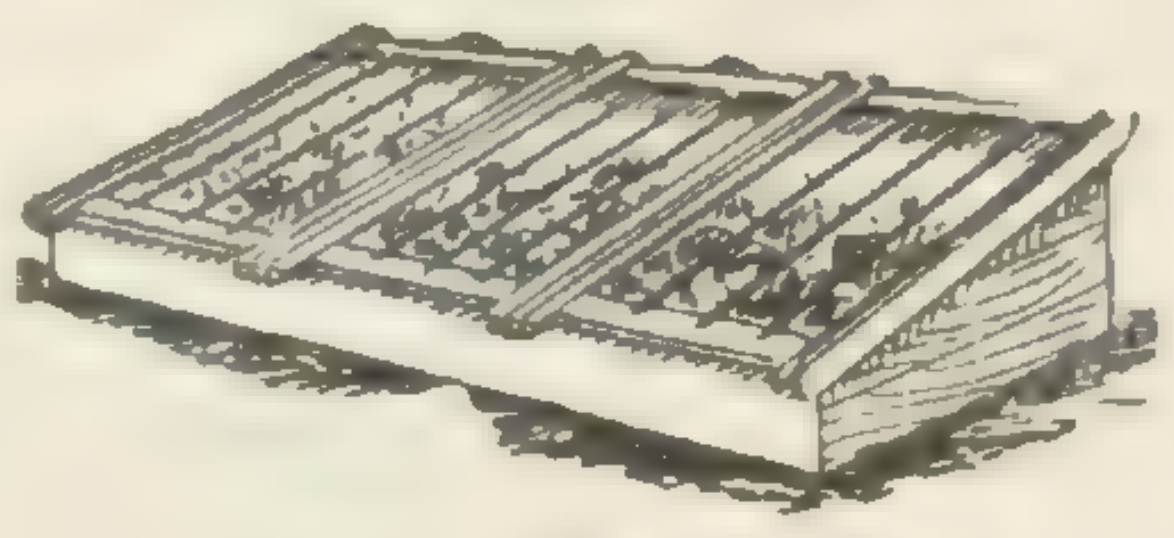
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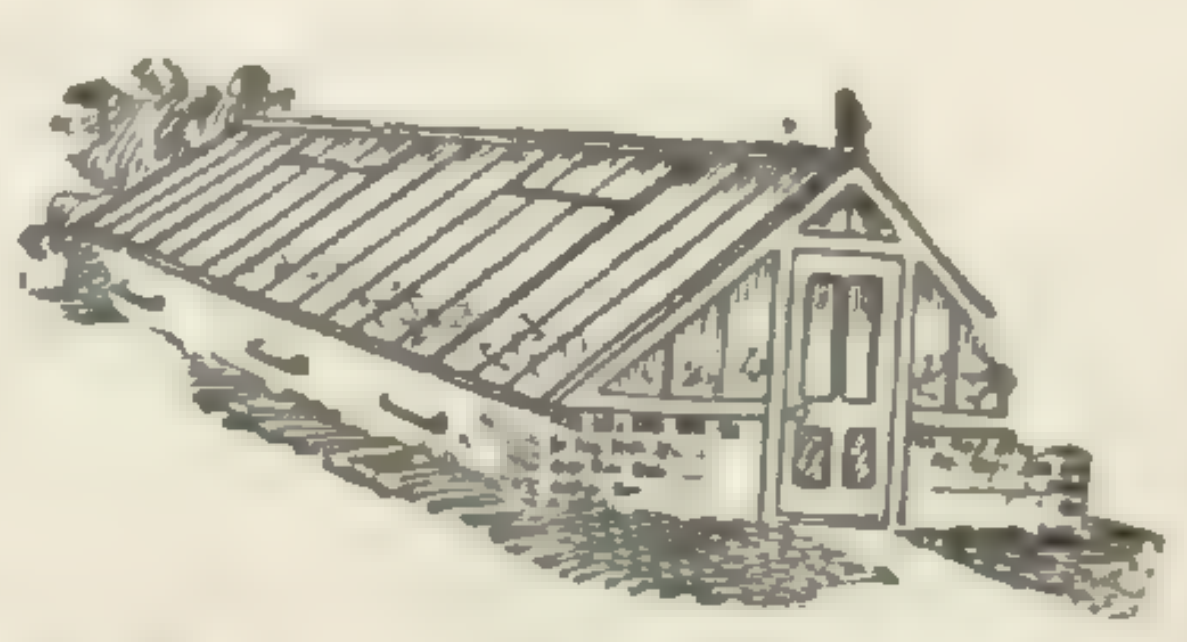
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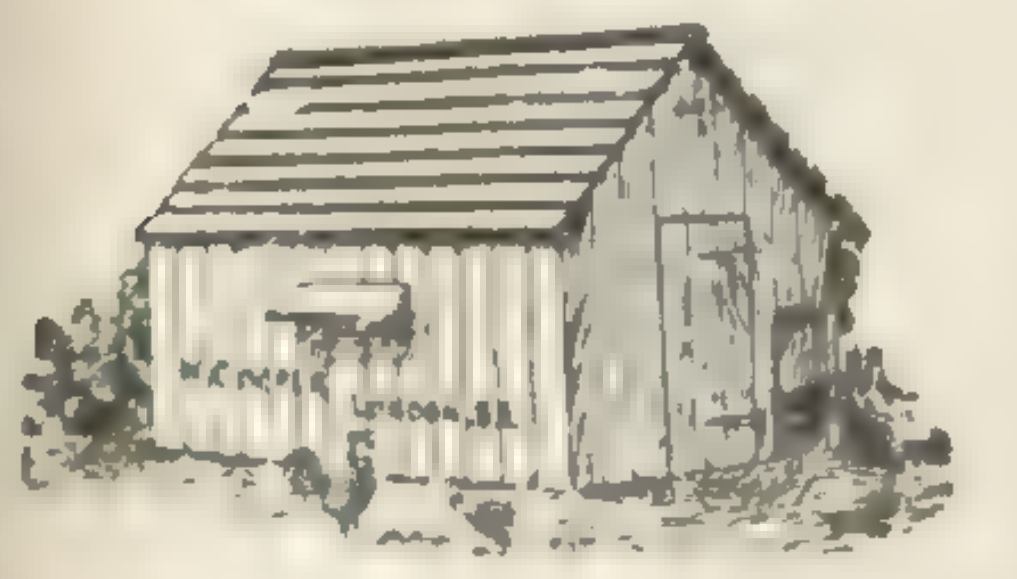
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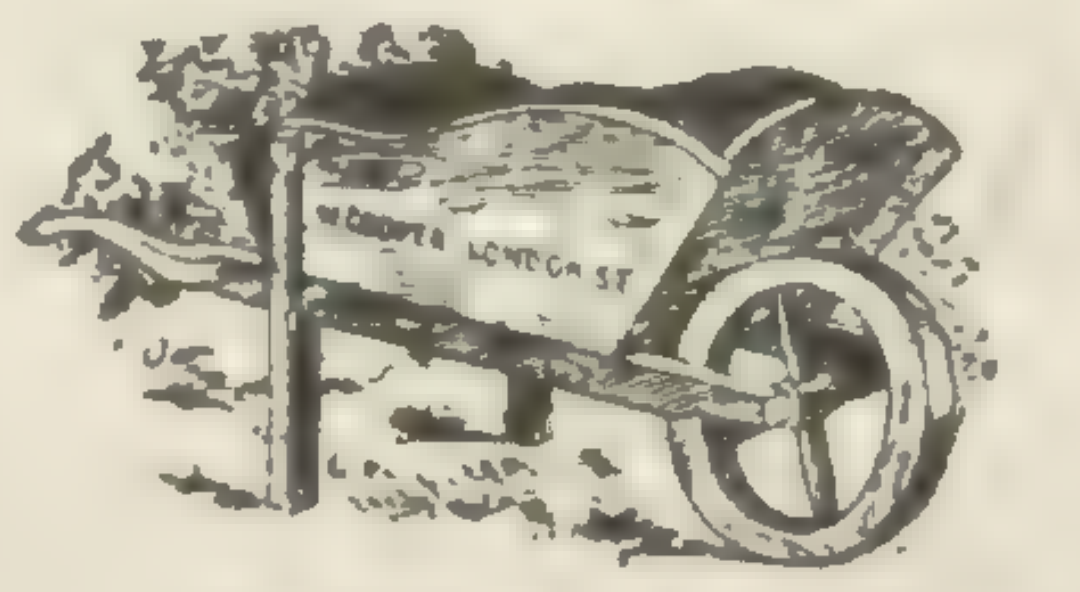
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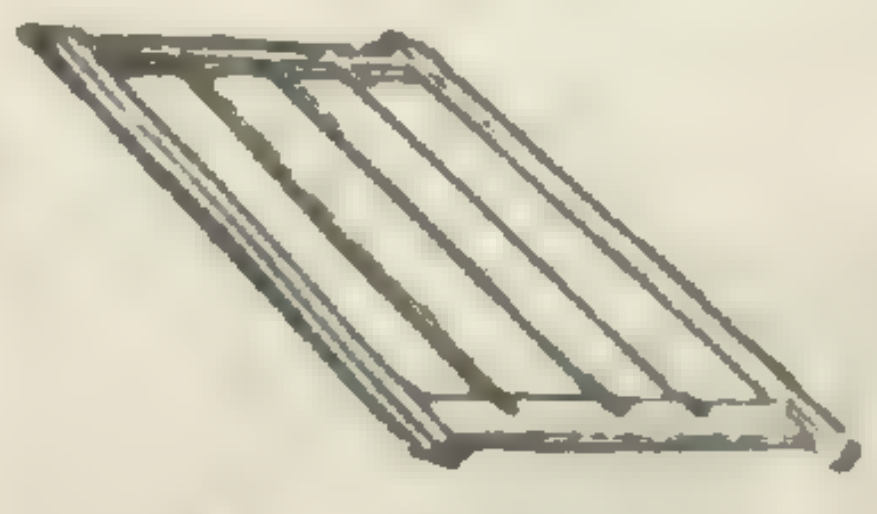
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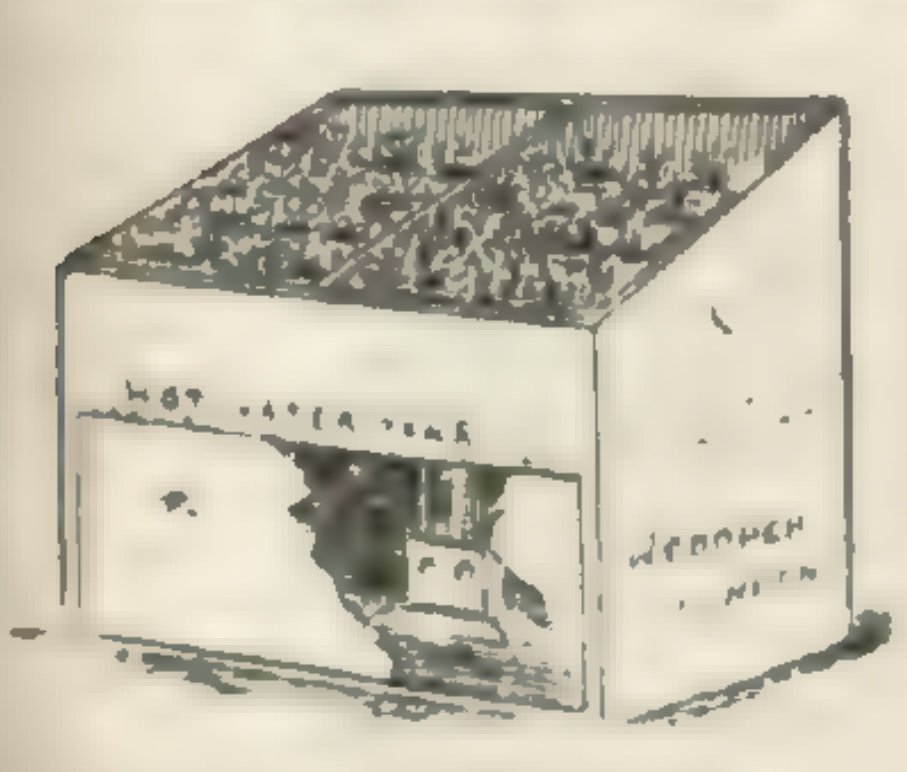
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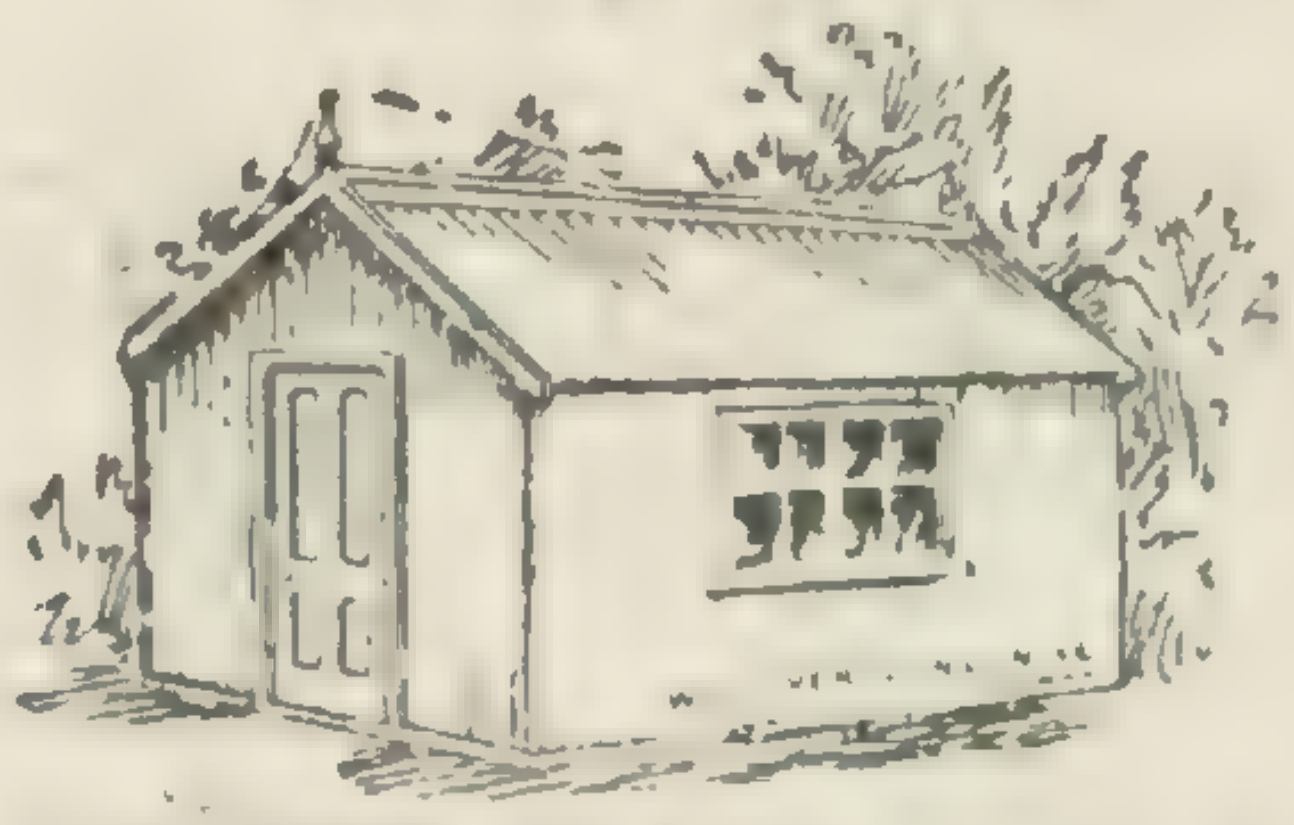
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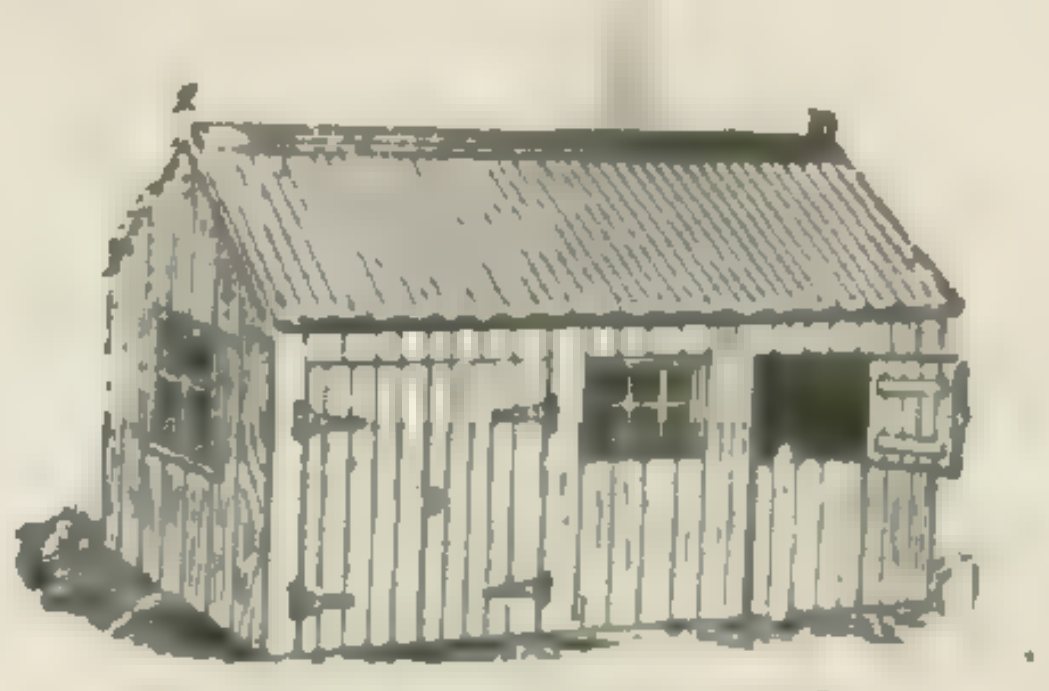
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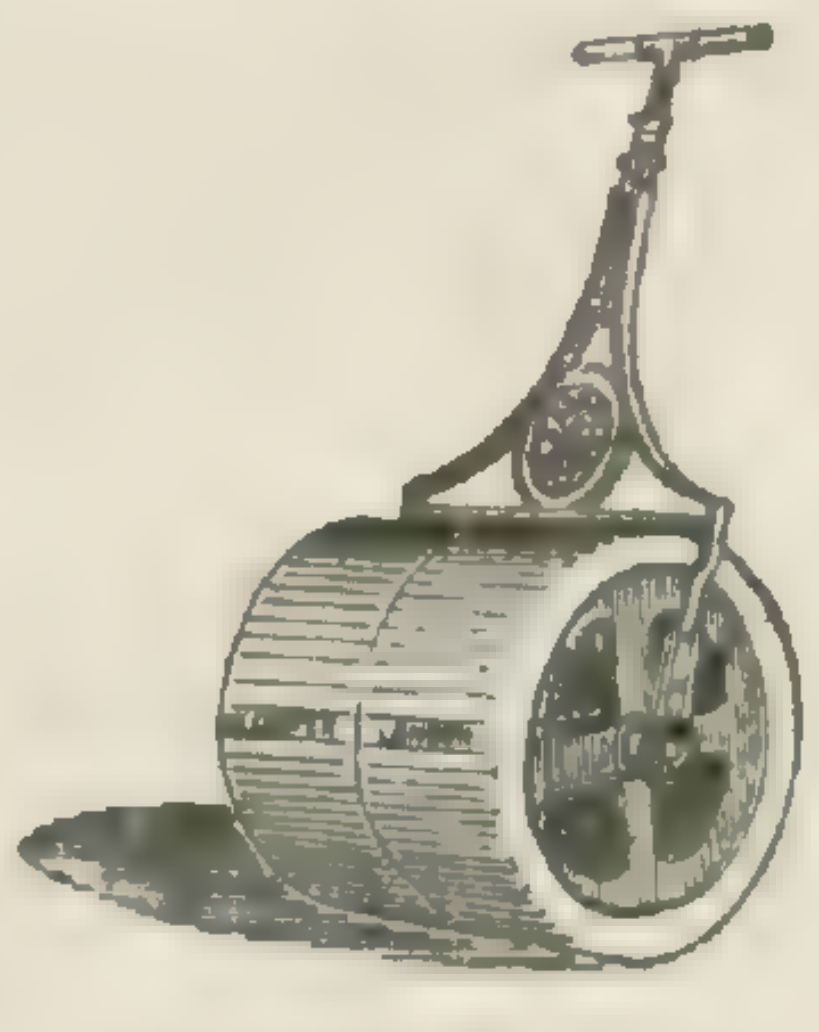
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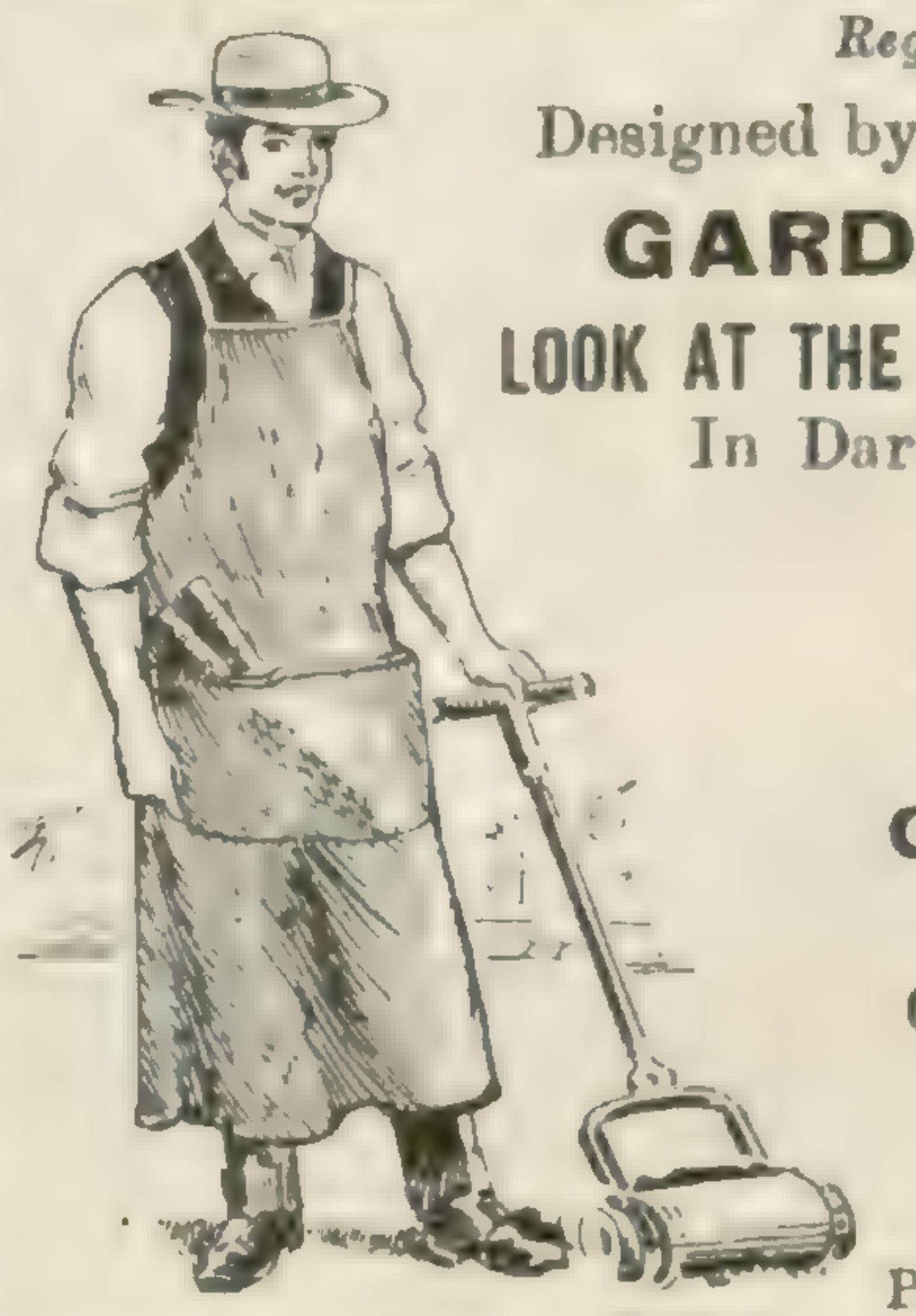

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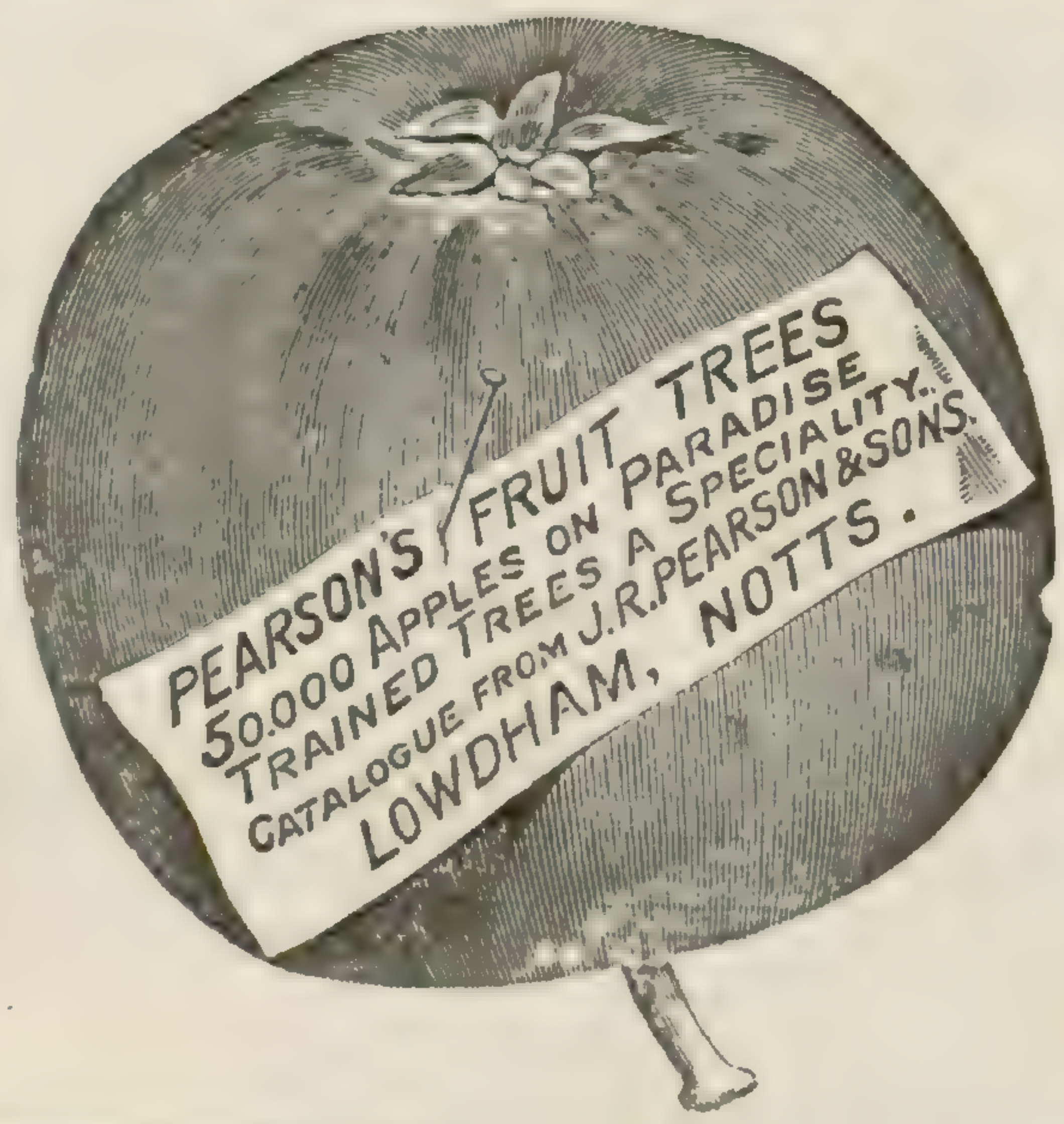
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MONDAY and THURSDAY NEXT, Jan. 27th and 30th, at Twelve o'clock.—DUTCH BULBS, Hardy Border and Herbaceous Plants, Liliums, Gladiolus, Begonias, and Gloxinias, 200 Azaleas Indica and Mollis, 50 Rhododendrons, and 50 lots of choice Ferns and Greenhouse Plants, etc.

At 1.30 o'clock, 1,000 STANDARD, DWARF, CLIMBING, and other ROSES.

WEDNESDAY NEXT, Jan. 29th, at Twelve o'clock, DUTCH BULBS, Perennials, and Herbaceous Plants, Begonias, Gladiolus, Dahlias, Carnations, Liliums, etc.

At Half-past One o'clock, 3,600 ROSES, Standard, Dwarf, Climbing, etc.; also Standard, Pyramidal, and Trained Fruit Trees.

At Five o'clock, 450 AZALEAS, Indica, Mollis, and Hardy Ghent, 100 Rhododendrons, 50 Camellias, 100 lots of choice Ornamental and Decorative Palms and Plants, Standard Bays, etc.

FRIDAY NEXT, Jan. 31st., at Quarter to One o'clock, choice imported and established ORCHIDS, from various sources; Orchids in flower and bud.

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A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

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GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working); life experience in Vines, Peaches, Chrysanthemums, and Carnations, Early and Late Forcing, Inside and Out; age 35; married, no family; excellent references. A. K., The Lodge, Vale Lodge, Leatherhead.

GARDENER (Head Working), age 47; married, one boy; thoroughly experienced in all branches; 20 years' excellent character as Head. W. FLOOD, Badby, Daventry.

GARDENER (Head Working or Single-handed); age 37; experienced Inside and Out; good references; married; no family. P. T. COOKE, Callow End, Worcester.

GARDENER (Head Working) where two or more are kept; experienced in all departments; excellent references; married when suited; age 30. CLARK, Beggar Hill, Ingatestone, Essex.

GARDENER (Head Working), where three or more are kept; thoroughly experienced in all branches of gardening, Inside and Out; good references; age 30. W. ROBERTS, The Gardens, Dunsmore, Rugby.

GARDENER (Head of two or three or good Single-handed); age 28; married; thoroughly experienced Inside and Out; excellent references; disengaged. HARTLEY, 6, Villiers Road, Willesden Green.

GARDENER (Head of two or more), age 39, married; 26 years' good practical experience in the culture of all kinds of Orchids, Plants, Flowers, Fruit, and Vegetables; four years' reference; good recommendations; abstainer. Address, L. WALKER, 10, Addison Road, Guildford.

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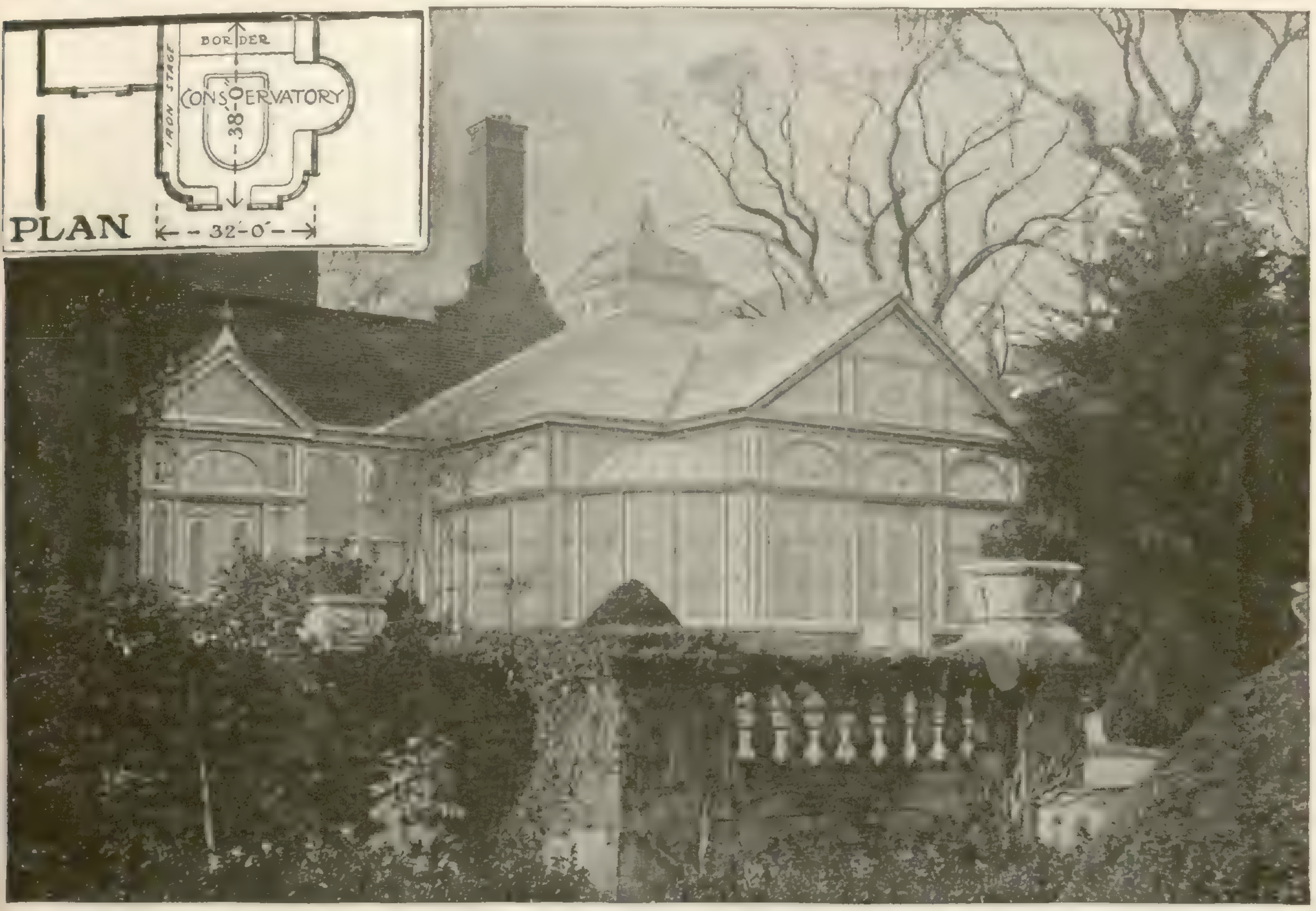

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THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Life Cycles.

The life cycle of an organism consists of the more or less varied forms which it assumes in the course of its career from the egg-seed or germ to egg-seed or germ again. In innumerable cases this involves such metamorphoses that no one ignorant of the connection would ever dream that the one individual could possibly be the outcome of or the prelude to the other. In the plant world with which we are familiar, the seed proper develops straight into the parental form, and the life cycle is simple; but in spore producing plants such as ferns, we have an intermediate phase, the prothallus or small green scale produced by the spore, which differs so materially from the fern proper that the connection was only discovered early in the last century. In some of the lower orders of vegetation such as the fungi, the life cycle is even more complex, the spore producing ramifying and spreading growths termed mycelia, which again may produce spores of varying kinds according to the environment or the season, the original type of spore only subsequently appearing to complete the cycle. In some cases the life cycle of fungi may involve even a change of host, that is the plant upon which it lives; thus the Wheat Smut passes one phase of its existence in a different form on the Barberry, upon which it produces spores which attack the Wheat, and then yields different spores which again attack the Barberry, and so on alternately. In the animal world the transformations are even more extraordinary. That terrible disease the Sheeprot, which attacks sheep and forms large parasitic bodies on the internal organs, passes one phase of its existence within the body of a water snail, and these snails being swallowed by the sheep when drinking or browsing on the wet grass in the vicinity of the water, convey the reproductive germs of the pests into the intestines, and the comparatively colossal "fluke" is the result. The life history of the pest being discovered by microscopic study, the confinement of sheep to drier ground was found to involve absolute immunity from the disease, this constituting one of the many cases where the scientist has established the value of apparently abstruse and unprofitable poking and prying into Nature's secrets. The intermediate changes which occur in the life cycles of most insects are wonderful. The familiar examples of the Butterfly and Moth, where the egg produces a caterpillar which subsequently envelops itself in a chrysalis whence emerges the egg-laying generation, is a type of innumerable others. No fly of any description emerges as such from the egg; in every case there is an intermediate stage consisting of a creature of apparently quite another kind, and actually quite different in its habits. The Dragon fly, and Mosquito, which, as such, pass their flying existence in the air, are practically born in the water where they pass the intermediate stage as aquatic insects, and the Great Water-beetle, Dytiscus, forms a sort of intermediate link, by inhabiting the water in both larval and flying forms, while gifted with wings and the power to leave the water and take long aerial flights to find fresh pools in which to deposit its eggs. The Medusa or Jelly-fish which in the summer time we may find floating in the sea, sometimes in large numbers, and with huge discs and suspended tantacles, is even more wonderful in its genesis and career than any we have cited. It commences life as a minute, actively swimming organism born of a microscopic egg; this, after a period of activity anchors itself to a rock, and this done proceeds to grow into a series of cups one within the other, which eventually separate, each one being then a small Medusa which by simple growth becomes a large one. In this case each original germ produces not one individual but many, so that in this respect it differs materially from the other cases. More marvellous, however, than even this, is the fact which is demonstrated as such by evolutionary study, that the life cycle of even man himself involves a gradation through all the stages of existence which preceded his culmination as a human being, and this is the case with all animals, the embryo passing through all the preceding forms of life, these being metamorphosed and developed step by step until birth brings to light the type finally reached.

MR. HERBERT E. MOLYNEUX,
Hon. Treasurer, National Rose Society.

Mr. Herbert E. Molyneux, whose portrait we present this week, is hon. treasurer of the National Rose Society, and it is through his connection with this society that he has become famous. He is a young man, alert, and energetic; in no sense is he a figure-head treasurer. His keen business instincts coupled with an ardent love for our national flower make him unusually capable of taking charge of the financial side of the society's work, and when we remember that the income of the society in 1906 amounted to £2,024 18s. 8d., and in 1907 to £2,244 7s. 3d., it is at once evident that the office he holds is no sinecure. Mr. Molyneux is also a very capable cultivator of roses in his pretty garden at Brantwood, Riddlesdown Road, Purley, Surrey, where he not only grows exhibition roses, but has a collection of species and varieties of which he is justly proud. In addition to financial and cultural ability, Mr. Molyneux possesses the "pen of a ready writer," and it is a source of regret that his close attention to finance and flowers so severely limits his opportunities of contributing information for the welfare of his fellow rosarians.

Visitors to Kew During 1907.—The number of persons who visited the Royal Botanic Gardens during the year 1907 was 2,962,714. These figures represent an increase of 623,222 visitors over the year 1906, when the numbers were 2,339,492, and up to that time had established a record. The total number on Sundays was, we gather from the "Kew Bulletin," 1,268,501, and on weekdays 1,694,213. The corresponding numbers for 1906 were 867,148 and 1,472,344 respectively. The maximum attendance on any one day was 92,277 on August 5, over 20,000 less than on the corresponding day in 1906, when the attendance was a record one for a single day. The smallest number on any one day was 168 on April 26. The detailed monthly returns are: January, 39,685; February, 46,845; March, 219,498; April, 186,092; May, 406,867; June, 347,709; July, 473,309; August, 553,814; September, 485,201; October, 115,735; November, 49,154; December, 38,805; total, 2,962,714.

Colour Photography is a subject of the greatest interest, and its development is a matter of the greatest importance. When plants and flowers can be photographed in their natural colours at a moderate cost the seedsman's and nurseryman's traveller will have no need to graphically describe the special plant, flower, or fruit he wishes to push among his clientele; all he will need to do will be to show the photograph and state whether the subject is hardy, half-hardy, or very tender. The orchid specialist, whose plants vary in price according to their rarity, or the form and colouration of the flowers, will find in colour photography a splendid means of convincing prospective customers of the beauty and rarity of any odontoglossum, cypripedium, or lelio-cattleya he may have raised or acquired. There is no question as to the usefulness of colour photography, therefore we are glad to be able to announce that on January 28 Mr. Waltham will lecture at the Royal Horticultural Hall on "Self-coloured Photographs of Alpine Flora." The lecture commences at three o'clock.

A Yellow Pæony (Pæonia Mlokosewitschi) is a prominent plant among the several figures in the current issue of the "Botanical Magazine." It comes from the Caucasus, is a thoroughly hardy perennial, and the best of the few yellow-flowered kinds. Philodendron corsinianum, a climbing aroid, raised on the Continent, and one that produces large red spathes; Viburnum utile, a shrubby, white-flowered member of the Laurustinus group, from China; Herbertia amatorum, a pretty iridaceous plant from South America, with vivid violet-blue flowers; and Pseudolarix Fortunei, a beautiful golden larch, first discovered by Fortune, are other subjects figured and described in the same issue.

Early Daffodils have been rather expensive lately owing to the damage done to the flowers by frost, in the Channel Islands and on the Riviera. Flowers from Scilly and Cornwall realised high prices, but rates are now lower and steadier, as supplies are increasing.

Fire at Mr. Robson's Nursery.—We regret to learn that early in the new year a serious fire broke out at Mr. John Robson's nurseries, at Hale Road, Hale, doing considerable damage to the potting and other sheds, but, fortunately it was stopped before the houses were reached. A chapter of accidents followed the discovery of the outbreak, commencing with the collapse of the bicycle ridden by the watchman who went to summon the fire brigade. We are glad to learn the damage to the nurseries did not materially interfere with the fulfilment of orders.

Branches of the B.G.A.—The Executive Council of the British Gardeners' Association wish it to be widely known that they are prepared to support efforts to form branches in any part of the United Kingdom. They will, on application, arrange to send a delegate to address such meeting, provide handbills for distribution, and pay the initial expenses for hire of room. In the case of the establishment of a branch with a properly constituted committee and secretary, the Council are prepared to assist the branch with the necessary stationery and literature. The Executive Council also suggest that at least four meetings be held by each branch during the year, and, if possible, papers of general gardening interest should be read in addition to the conduct of the general business of the branch. The secretary of each branch is also invited to send up reports embracing any item of gardening interest, in addition to the reports of business done. A branch of the B.G.A. may be formed wherever a mutual improvement society (composed of professional gardeners) exists.

The "Sweet Pea Annual" for 1908, is an excellent production, and its editors, Messrs. C. H. Curtis and H. J. Wright, and also the society whose official publication it is, are to be congratulated upon its "live," useful, and interesting contents, and its appearance. It is stoutly bound in red cloth boards, with white lettering, and we are glad to find the back cover has not been defaced by advertisements. At present we can only briefly draw attention to the principal contents, which include: The Sweet Pea Audit of 1907; The Proeedings of the Floral Committee; A Complete List of Sweet Pea Names, prepared by Miss Jessie Cuthbertson; Sweet Pea Enthusiasts, by Mr. Hugh Aldersey; An Open Letter, by Mr. W. Atlee Burpee; More Historical Notes, by Mr. S. B. Dicks; Wire Netting for Sweet Peas, by Mr. G. W. Leak; Adherence to Principles, by Mr. G Gordon, V.M.H.; Sweet Peas in Devonshire, by Mr. R. Bathhurst; Germination of Sweet Peas, by Mr. Charles Foster; Breakers Ahead, by Mr. Walter P. Wright; and Sweet Peas in the Antipodes, by Mr. H. Fox. There are some limericks, wise, clever, and otherwise, and there are numerous illustrations of the society's trials and outings, of sweet peas in various places, and portraits of the president, Mr. W. Cuthbertson, J.P.; the chairman, Mr. E. J. Edwards; of Mr. J. S. Eckford, and of the medallists and the contributors. The "Annual," which has been copyrighted this year, should be the means of adding very materially to the membership of the National Sweet Pea Society.

Brassica Hybrids.—Mr. F. Chittenden informs us that Mr. A. W. Sutton, V.M.H., F.L.S., will read a paper on "Brassica Hybrids" at the next meeting of the Royal Horticultural Society's Scientific Committee, January 28, at four p.m., in the lecture room at Vincent Square, and will illustrate his lecture by lantern slides.

Horsham Gardens.—As previously announced, we shall describe and illustrate in the "Gardeners' Magazine" for February 8 and 15 some of the more noteworthy of the many interesting gardens in the Horsham district. Among the gardens that will be described and illustrated are those of Leonardslee, Denne Park, Warnham Court, South Lodge, Holbrook Park, Wimblehurst, and Warnham Lodge.

R.H.S. Guild.—With the view of keeping past and present students and employees in the gardens of the Royal Horticultural Society in touch with one another and with the work of the society, it has been decided to form a R.H.S. Guild. A half-yearly magazine will be issued, comprising articles and letters contributed by members, notes on the work of the society in the gardens at Wisley, exhibitions, etc., general notes of horticultural interest, and a list of members with their addresses. An annual dinner will probably be arranged for on the first day of Holland Park Show. The fee for membership is fixed provisionally at 5s. a year. Will old Chiswickites and Wisleyites please communicate with the hon. secretary, Mr. R. J. Wallis, R.H.S. Gardens, Wisley, Ripley, Surrey.

British Fruit Culture. It has been estimated that during the past ten years 12,000 acres of small fruits and 25,000 acres of orchards have been added to the area under fruit culture in Great Britain, bringing up the total area to 308,859 acres.

Improvements at the Marble Arch.—The Marble Arch that stands at the head of Park Lane and Hyde Park is well-known to every Londoner and every visitor to the Metropolis. It was originally erected as a gateway to Buckingham Palace at a cost of £80,000, and was intended to carry an equestrian statue of George IV. It was erected on its present site in 1851. A proposal is now before the London County Council to take a small portion of the Park behind the arch and convert this into a broad roadway that would render the Marble Arch much more effective and imposing, and also provide ample accommodation for the increasing traffic at this spot. It is expected that Mr. F. W. Speight's plans will be adopted. and already the City of Westminster and the boroughs of Paddington and St. Marylebone have voted £2,112 towards the cost of the improvements, and the City of Westminster has agreed to maintain the increased roadway. The "place" so created will be separated from the Park by an architectural screen. The cost is estimated at £25,000, and if the plan is carried out a fine finish will be provided to a grand processional road commencing at Trafalgar Square and passing the Victoria Memorial, along Constitution Hill and through Hyde Park.

The Midland Carnation and Picotee Society's next annual show has been provisionally arranged for August 6 and 7, at the Botanical Gardens, Edgbaston, Birmingham.

The Chilian Lichens. Almost everyone who has had to deal with importations of South American plants will know that lichens are particularly abundant in some parts of that huge area. In Chili the lichens are particularly abundant and luxuriant, as was made evident on Saturday last when Mr. R. Morton Middleton gave a demonstration on the Chilian Flora in the botanical department of the Natural History Museum. The specimens were chiefly from the Pacific Slope, and among the most notable were the big masses of various species of Usnea and the red-capsuled Physica flavicans.

Forcing Rhubarb. — We were under the impression it was a matter of common knowledge that rhubarb could be readily forced during the winter months, but it would appear that this is not the case. In a journal of good standing we read under the heading of a "New Gardening Industry" that, "As the result of tests made throughout two seasons, a well-known experimenter has proved conclusively that early rhubarb, of profitable commercial value, can be raised in quantity without considering the question of light and air. All that is needed is manure, and when that is obtainable, then winter rhubarb can be grown to perfection in the vicinity of towns." It would be difficult to say when the forcing of rhubarb with fermenting materials was first practised, but, judging from two contributions to the third volume of the "Horticultural Transactions," published in 1818, or ninety years ago, it was not generally known at the beginning of last century. The first of these contributions was by Mr. Daniel Judd a gardener at Edmonton, who states he had found the hybrid rhubarb so far superior to the type that he had "expelled" the latter from the garden under his charge. The hybrid must have been strong in growth, as the leaves are said to have extended upwards of five feet on each side of the row. In making his first attempt Mr. Judd turned common garden pots over the crowns, and presumably manure also: but as they failed to give the stalks room enough, he, in the second season used pots specially made for the purpose and without holes. These were not satisfactory, and in the third season he erected a light framework of wood over the row, and this was covered with a layer eighteen inches in thickness of stable manure. At the same meeting a paper contributed by Mr. Thomas Andrew Knight was read, and in this was described a method of forcing rhubarb in pots. The roots were lifted and put in large pots, and covered with inverted pots of the same size. The roots were then placed in a dark position in a vinery and copiously supplied with water, and are said to have produced three crops.

Slow Trains Cause Damage to Gardens.—The connection between slow trains and damage to gardens may seem rather remote. Suburban Paris has lately been provoked beyond endurance by the slowness of the train service, and one evening last week an outward-bound train crawled slowly towards its destination and finally stopped short. The passengers then showed their anger by smashing all the readily breakable parts of the carriages, pelting the railway officials, and finally by spoiling the gardens so carefully cultivated along the railway side by the employees. Righteous indignation is all very well, but those who give expression to it in this way, and vent their spite on the gardens of unoffending people, should be made to pay liberal damages.

Hexham Gardeners' Society.—This is a young society, run on mutual improvement lines; its long list of officers shows the strong local support given, and its rules are clear and few. A meeting is held early in each month at which a horticultural subject is discussed. Two nights each week the reading-room is open to members, and here the current horticultural periodicals are provided, and a small horticultural library is in course of formation. There are also competitions at the monthly meetings and the prizes are books, not money.

SUMMER FLOWERS.

At this season of the year, when the days are perceptibly lengthening, and when preparations for the summertime display in the garden are already being commenced, we look forward hopefully to the time when our garden will be bathed in sunshine, fragrant as a lily, and beautiful as a rose. It is now that pictures of last year's garden scenes appeal to us, and from them we learn what to avoid and what to introduce, what to repress and what to encourage, so that the living pictures of the present year shall be still more beautiful. It frequently happens that a nurseryman is so busy trading and caring for other folks' gardens that he neglects his own, but there are many cases where this rule does not obtain. The late Mr. Benjamin R. Cant, the famous old rosarian, was as proud of his own garden around his house as he was of his acres of roses growing beyond it. His garden has been cared for by his sons, who now so ably carry on the rose-growing business at Colchester, and the picture herewith shows how delightfully herbaceous plants are grown in the old home garden. One almost smells the fragrance of the lilies and the roses exhaled from this old garden corner, and now, as in the summer days, we admire the charm and beauty of the big hedge of Dundee Rambler rose, that is at once a line of division, a means of protection, and a thing of beauty. Such a hedge is worth copying, for the variety is wonderfully hardy, evergreen, and it flowers with the utmost freedom.

B.

SUMMER FLOWERS.
A corner in the Home Garden at Messrs. B. R. Cant and Sons' Nurseries, Colchester.

NEW HARDY TREES AND SHRUBS.

For many seasons past it has been my privilege, through the courtesy of the editor of the Gardeners' Magazine, to give a few notes at the beginning of the new year on the different hardy trees and shrubs that have been awarded either First Class Certificates or Awards of Merit during the twelve months preceding. The past year showed a great advance on 1906, for in this last-named year no First Class Certificate was given, and only nine Awards of Merit, whereas in 1907 the number was three First Class Certificates and 15 Awards of Merit.

Perhaps the most notable feature connected with these trees is that the three First Class Certificates were all given to kinds whose introduction resulted from Mr. E. H. Wilson's travels in China. There is a widespread idea that these awards are given only to new plants, but that such is not the case may be seen by the following list of those honoured in 1907.

Several of the most interesting of these have been already figured in the Gardeners' Magazine, viz., Rhododendron Duke of Cornwall, in the issue for March 23; Rhododendron Kewense, March 30; Hydrangea arborescens grandiflora, May 18; Viburnum rhytidophyllum, May 18; Vitis inconstans Lowi, October 5; and Vitis leeoides, November 9. The list of certificated subjects is given in the order in which they were shown.

Magnolia Soulangeana nigra.—A particularly rich coloured form of Magnolia Soulangeana, itself a hybrid between the Yulan (M. conspicua) and M. obovata, also known as M. purpurea. This fine variety nigra was, when shown, looked upon by many as a novelty, but I made its acquaintance nearly a quarter of a century ago. It was believed to have been brought from Japan by the late Mr. John Gould Veitch. Award of Merit, March 19.

Rhododendron Duke of Cornwall.—A gorgeously coloured really grand variety obtained by the intercrossing of the two Himalayan species—R. arboreum and R. barbatum. These Indian species and their hybrids thrive particularly well in the West of England, especially in Cornwall. Award of Merit, March 19. The specimens were sent by Mr. R. Gill, Tremough, so well known as a successful cultivator of these beautiful shrubs.

Rhododendron Kewense.—A delightful hybrid raised at Kew between R. Griffithianum, far better known as R. Aucklandi, and R. Hookeri. The flowers are large, borne in loose heads, and in colour usually some shade of pink, but some are of a deeper hue and others almost white. Rhododendron Kewense was raised at Kew as long ago as 1875, but it did not flower till 1888. Numerous individuals of this section planted out in the rhododendron dell at Kew form annually a striking feature. Award of Merit, March 19.

Rhododendron intricatum.—Under the name of R. nigro-punctatum, this charming little species was given a first-class certificate on April 2. It is a native of Western China, and has proved to be quite hardy at Coombe Wood. In a state of nature it was found by Mr. Wilson to attain a height of 1ft. to 3ft., but under cultivation it will flower when but a few inches high. The flowers, borne usually in clusters of five, are individually about three-quarters of an inch in diameter, and in colour deep lilac. For the rockery or alpine garden, and for associating with the smaller growing ericaceæ this rhododendron will doubtless prove to be a decided acquisition.

Pyrus (cydonia) japonica Simoni.—By no means a novelty, but a particularly fine, bright, rich-coloured form of the well-known Pyrus japonica. Award of Merit, April 30.

Hydrangea arborescens grandiflora.—A distinct and very fine variety of the North American Hydrangea arborescens. The typical form of this species has the large sterile flowers, which form the showy part of the inflorescence, limited to a scattered few around the outside of the cluster, but in this variety they make up the entire head in the same way as the common hydrangea. The colour is creamy white. An Award of Merit was given this hydrangea on May 14, and many anticipate a great future for it.

Cytisus Firefly.—A seedling form of Cytisus Andreanus, which in richness of colouring is a considerable improvement on the type. Award of Merit, May 28.

Actinidia chinensis.—A recent introduction from Central China, this forms a vigorous growing climbing plant furnished with large heart-shaped leaves, dark green on the upper surface, and densely tomentose beneath. The leaves are when young thickly covered with bright red hairs. For pillars or pergolas this will prove a good companion to the many large-leaved vines that have been sent out within the last few years. Award of Merit, May 28.

Rhododendron (Azalea) Madame Anthony Koster.—A very fine form of Azalea sinensis or mollis, with large well-shaped flowers, in colour yellow, with a pleasing suffusion of pink. Like other varieties from the same source, it is no doubt destined to become popular. Award of Merit, May 28.

Lonicera Maacki.—This belongs to the non-climbing or shrubby members of the honeysuckle family, and towards the end of May or in June it forms a very handsome object in the open ground. It forms a freely branched bush, whose slender arching shoots are clothed with ovate acuminate leaves a couple of inches or so in length, and closely studded with clusters of creamy-white flowers. A native of Manchuria this was introduced into cultivation by way of the St. Petersburg Botanic Garden about 25 years ago. Despite its desirable features, it is even now but little known. Award of Merit, June 11.

Syringa Josikæa eximea. — A very superior variety of the Hungarian lilac, which bears large pyramidal shaped panicles of rich reddish rose-coloured flowers. They are pleasingly fragrant, and their value is enhanced by the fact that they are borne after all the forms of the common lilac are past. Award of Merit, June 11.

Hedera dentata variegata.—A form of the well-known H. dentata, which differs from the type in the foliage, being freely variegated with white, which in the young leaves has a creamy tinge. Award of Merit at Holland House, July 9.

Rubus cambusarum.—A very distinct bramble from Central China, with trailing branches from 10ft. to 12ft. long, having usually three leaflets, but occasionally five. These leaflets are lance-shaped and smooth on the upper surface, but the lower side is covered with a dense dun-coloured tomentum, as are also the young shoots. The flowers are in terminal racemes, and give place to black edible fruits. Botanical Certificate, August 20.

Viburnum rhytidophyllum. — A bold growing evergreen shrub, whose striking foliage will no doubt ensure it a place in many gardens. The leaves, broadly lanceolate in shape, are from 8 to 9in. in length, by 2 to 2½in. broad, the upper surface being dark green and very much channelled, while the under side is covered with a dun-coloured woolly tomentum. The flowers, borne in dense corymbs, are of a yellowish white colour, and expand in May or June. They are succeeded by berries which at first bright red become afterwards almost black. Flowering examples were exhibited at the Temple Show, and a specimen in full fruit was given a First Class Certificate on September 17.

Vitis inconstans Lowi.—This is a charming seedling form of the climbing plant so generally known as Ampelopsis Veitchi, but whose correct name botanists now tell us is Vitis inconstans. This new variety differs from the typical form in its small deeply-cut leaflets, while it is in every way a more graceful plant of a lighter character than its parent. In summer the foliage is of a beautiful metallic green, changing to a bright red in the autumn. Ampelopsis Lowi was raised by Messrs. Hugh Low and Co. at their nurseries, Bush Hill Park, Enfield, and an Award of Merit was given it on October 1.

Cotoneaster applanata.—An extremely promising species of cotoneaster, and one that when distributed is no doubt destined to become popular. As shown it formed a very graceful specimen, the branches arching outwards and drooping away from the leading central stem. The heart-shaped leaves are small, while the clusters of scarlet fruits extend for some distance along the branches. It comes from China, and was given an Award of Merit on October 1.

Vitis leeoides.—A recently introduced Chinese vine of robust habit, with very handsome foliage. The leaves consist of three or five oblong leaflets, which are glossy green above and purplish beneath. For the clothing of pergolas and similar purposes a considerable demand may be confidently anticipated for it. Award of Merit, October 1.

Berberis Wilsonæ.—A charming little barberry collected by Mr. E. H. Wilson in Western China, and named in honour of his wife. Its slender branches are thickly clothed with narrow leaves about half an inch long, and plentifully furnished with reddish spines longer than the leaves. The flowers are golden yellow, and the berries which succeed them change to a bright red when ripe. It was in this stage when a First Class Certificate was awarded it on October 15. Mr. Wilson states that in its native habitat the leaves are in autumn most brilliantly coloured. There is undoubtedly a great future before this barberry, which has proved hardy at Coombe Wood.

Juniperus chinensis nana aurea.—This, the only conifer recognised during 1907, is a form of the variable Chinese juniper. It is of a dwarf cushion-like habit and of a pretty golden hue. Award of Merit, November 26.

W. T.

Chrysanthemum, Mrs. J. Hygate.—Referring to Mr. Molyneux's remarks (pages 932 and 933, 1907) on Chrysanthemum Mrs. J. Hygate, are we to understand that rather than show this variety as a giant, though perfect, incurved from a late bud, we should place a seven or eight-inch flower of it in the front row of a board of Japanese varieties that include in the back row a 16-inch bloom of F. S. Vallis? Many, like myself, would also be glad to learn how these relative measurements—eight inches and sixteen inches diameter—are obtained.—R. Barnes, Malvern.

THE WILD GARDEN—I.

In wild gardening the aim should be to copy Nature in her most attractive guise. Some subscribe to the fallacy that the term "wild" implies disorder, but there can be no greater misapprehension, for Nature, however vigorous she may be, is never disorderly. Even in tropic forests, where growth is rampant, each huge leaf and giant trailer serves but to complete the picture of superabundant vitality, without conveying any suggestion of confusion. There should be no desire or attempt to remodel Nature, but merely to supplement her scheme by the introduction of native or hardy exotic plants whose presence would add to the attractiveness of the view.

In the herbaceous border and the rock garden it is impossible to predict with any certainty that, by following some particular treatment, success will be inevitably assured, and in the wild garden this holds good to an even greater degree. There are so many differences of climate, aspect, and soil to be considered that no general rule can be laid down. What succeeds in Yorkshire may fail in Devonshire, and vice versa. A plant that is a weed in moist Western Scotland may not improbably refuse to exist in Surrey sand. Though much may be learnt from others, experience is the only safe teacher of the likes and dislikes of plants in any particular locality.

The possibilities of the wild garden are very varied. Fields, open glades between copses, woods, boggy ground, and the surroundings of water are all available for the naturalisation of effective plants, while steep rocky slopes will often afford as fitting a home for alpines as the most skilfully constructed rock garden. The list of subjects suitable for planting in the wild garden is a very lengthy one, for not only are the natives of the temperate regions of the globe available for our purpose, but the mountain heights of the tropics provide many a desirable plant that will not resent its change of latitude. In the very wideness of the selection, however, danger lurks, since the planter may be tempted to experiment with so varied a collection that all similitude to Nature's grouping will be irretrievably lost—and Nature must be the teacher.

The dotting system is atrocious in the herbaceous border, but in the wild garden, where natural effect should be the guiding note, it is infinitely worse. It is far better to err on the side of too few genera and varieties than too many. Nature spreads her flowers in wide drifts of one species, mile-long colonies of gladiolus on the South African veldt, flower-enamelled Alpine meadows, where sheets of Gentiana verna glow in their intense blue under the mountain sunshine, or Eritrichium nanum paints the rocky spaces with its tenderer tint, a flower that, singly, is insignificant, forms a feature in the landscape when growing in massed thousands.

One of the chief merits of the wild garden is that it requires no continual striving to keep it tidy, such as is indispensable with the beds and borders surrounding the house. The herbaceous perennials wither and die where they stand, just as do the native inhabitants of the ground. In woods of deciduous trees the falling leaves rest thickly on the earth, rotting and enriching it. The wind that blows the russet leaves hither and thither about the trim garden plots has no effect in the wood, where the countless stalwart trunks and innumerable interlacing branches form an effectual barrier to its violence. In the spring the tall browned stems of lilies, that have never known a stake, may be seen still standing intact, affording evidence that they have escaped the furious onslaughts of the wind endured by their sisters in the open border. Such sights lead to the recognition of how greatly plants are benefited by the encompassing shield of the wood.

Again, the wood does not limit its beneficence to the bitter winter season alone, but, in the arid summer days, when from the parched earth beyond its limits the heat rises in tremulous exhalations, it affords a cool retreat for many a pretty plant. The cyclamens and hepaticas love a gentle shade, and are never as happy in the sunny border as within the confines of the wood.

Some care should be exercised in the provision of plants for the wild garden. Bulbs are, naturally, procured in a dry state, and planted. Herbaceous plants should be well prepared before removal to their destined positions, for it is of the utmost importance that they should be in as vigorous a state of health as possible at the time of their planting. For this reason it is unwise to purchase a number of subjects from a nursery and plant out at once where they are intended to remain. A far better plan is to place them, upon their reception, in a rich border in the kitchen garden, where, in a season or two, they will gain immensely in vigour and size, and may then be transferred, with little risk, to their permanent quarters. The best plan is, however, to grow the plants from seed, cuttings, or divisions, in a reserve garden, and plant them out when they are large enough.

The roots of all strong-growing herbage should be removed from the ground for a distance of three feet around the proposed sites of the plants, and the soil well dug up and plentifully manured, for it is of the greatest importance in the wild garden that the plants should have a good start. Those who are of opinion that all that is necessary is to dig a hole in the ground, put the plant in, and leave it, will inevitably lose much, for the established occupants of the ground will probably choke the newcomers before they have gained a secure roothold, whereas, if the spot is well manured and cleared of competing vegetation, they will have had sufficient time to become thoroughly established before this again intrudes upon their precincts.

S. W. FITZHERBERT.

CHRISTMAS ROSES AS CUT FLOWERS.

There are two complaints generally brought against the Christmas rose as a cut flower, and both are the result of knowing so little about the plant and its flowers. The first is that the flowers have such short stems that it is impossible to arrange them nicely—I have even seen it suggested that the only way of using them satisfactorily is to float them in saucers of water! The second is that the flowers flag in water, and never do themselves or their arranger justice.

A VASE OF CHRISTMAS ROSES.

In some cases both these complaints are justified, but the grower of the plants and arranger of the flowers can then neither be absolved from blame. The old form of Christmas rose, Helleborus niger, does produce short-stalked flowers, and will reduce the stalks to almost vanishing point in poor ground. But what is known as the Bath Christmas rose, Helleborus niger maximus, will give flowers in plenty on six-inch stems, and I have had them over ten inches in length.

The charge of hellebores flagging after cutting is distinctly founded on fact, as anyone who has handled the long-stemmed, spring-flowering species and varieties can testify. But this flagging is remedied just as easily as the shortness of stem, and withal just as simply. Before putting a hellebore of any sort in water cut off the end of its stem afresh, and slit the stem up lengthwise for an inch or two, and no flagging will follow.

When it is remembered that Christmas roses will retain their freshness as cut flowers for from two to three weeks in a cool room, anything which makes for their wider use cannot be too generally known. I use them in many ways, and find them invaluable.

E. J. K.

DECORATIVE WINTER-FLOWERING PLANTS.

The provision of a continuous supply of flowers under glass, either for cutting or otherwise, often taxes the grower in a private place, and at no season of the year is the difficulty greater than in the interim between the flush of chrysanthemums and the time when forced bulbs are easily procurable. Even then these leave something to be desired, for they are quite unsuited for use in tall vases, and one is often hard put to it for material to fill such vases in the free and graceful style which is a feature of present-day floral decorative work.

Winter-flowering carnations have of late years filled a gap in this respect, but even these have their limitations, and one cannot keep the supply going without ample means in the way of house room, as the flowers open but slowly under our winter skies, and it takes many dozens of the blooms to make a good display on the dining table when the latter is laid for a score or more covers, and to keep this up day after day requires a huge supply, even though the individual flowers last well.

Poinsettias (Euphorbia pulcherrima) are excellent decorative plants, either for cutting or for grouping, and a good batch of these should always be grown where a winter display is demanded. Used in water as cut they very soon flag, but if a small portion of the cut stems are immersed in almost boiling water directly they are severed, the milky juices are sealed up and the heads remain fresh and good for many days. E. jacquiniæflora is also excellent for small decorative effects, but is only desirable where it can be really well grown in bulk, under which conditions it is one of the brightest and showiest plants that can be grown.

The Arum Lily (Richardia æthiopica) is also an excellent winter-flowering plant of larger growth, and a big batch of this should always be grown, for it can be had in flower by Christmas without trouble, and, given an intermediate temperature, plenty of light, and good feeding, the same batch of plants will go on flowering for several months, and though the display of spathes may not be great at any one time the aggregate return is excellent.

Anthuriums of the Scherzerianum section are excellent plants for flowering in the early part of the year. As generally seen dotted about in the stove they have not much to recommend them, neither are they valuable for cutting if only a few spathes can be cut at one time and used in conjunction with other flowers, but where they are well grown in quantity they give a display not easily forgotten, and when the spathes can be cut by the dozen or score they lend themselves to decorative work with great effect, if used in mass with no other assistance than suitable greenery. At present (mid-January) we could cut quantities of spathes measuring seven inches by three and a half inches, on stems three feet and more long, and the display of brilliant scarlet these give can be imagined. They last for a fortnight in a cut state. I know of few more satisfactory plants, as the leafage is always attractive. A passing word as to culture, or rather management, is that they are usually grown in a temperature too high to suit them, as may be imagined when I say that we are quite satisfied with a minimum temperature of 55 degrees in cold weather, and at no period are they allowed a high stove temperature except by sun heat, and from this they are heavily shaded.

A group of bulbous plants that has given great satisfaction as winter-flowering plants is the amaryllis or hippeastrums. As generally seen these are essentially spring flowering, and at their best in April, but an educative system of early growth will be readily responded to by early flowers. We grow these rather largely here, and since November have not been without a number of spikes in flower. By the middle of February at least 90 per cent. of the bulbs will have flowered, and this earliness does not mean poor flowers or weak stems. Many of the former have been eight inches to nine inches across, and borne on stems three feet to four feet high. Many bulbs have carried two spikes, and from some seven-inch pots containing more than one bulb as many as ten flowers have been produced, the strongest spikes usually bearing four flowers each.

Very little artificial heat or forcing has been given to the production of these; it is mainly the result of good feeding during the growing season, and thorough ripening of the bulbs after growth has finished, from which time they occupy shelves near the glass in fig houses and vineries, where they become firm, and in good trim for early production of spikes. Hippeastrums should certainly be more often and more largely grown for winter use. My method of treatment differs from that generally advised in that whatever potting we do is done directly after flowering, and not when the bulbs are dormant. This suits our conveniences best. The bulbs are not potted annually, but in any case a considerable portion of the old soil is removed and its place filled by a mixture of loam, leaf-mould, sand, and a little bonemeal, and this treatment appears to suit them well. If there is any falling off in condition of the bulbs,then they are shaken out and repotted in similar soil and in well-drained pots.

Hippeastrums are frequently injured by a too free use of the waterpot early in the season. One good soaking of water given after the flower spike shows, not before, is sufficient to carry the plants to the time the buds show. Frequent watering causes decayed roots, and a soft formation of the bulb that soon leads to disease.

The provision of greenery for cut flowers is not always well considered. Here our old friend the Solomon's seal is one of our most satisfactory plants for the purpose, as it gives height and a delicate greenery that makes it suitable to use in conjunction with most flowers. Home-grown crowns force readily if they are not allowed much exposure to light or a dry atmosphere until growth begins, and it may easily be had in good condition quite early in January.

Cyclamens, too, give a thoroughly good mid-winter display if the seeds are sown in August and the plants are grown on without a check. Seeds that produce plants true to colour may be purchased—none being more effective than the type known as Salmon Queen—so that a decorative scheme of colour is possible with these alone. Here, in Derbyshire, it is quite essential to secure for these a supply of rain water, as the plants will not grow if the hard water of the district is used for them.

Harking back to the chrysanthemum, I would like to suggest that more care be used in selecting varieties for use as cut flowers, and especially on the lines of their lasting properties when cut, for few species of plants vary more in their capabilities in this direction than do chrysanthemums. It is galling to find, say, a large vase of flowers set up yesterday withered to-day, and this is what often happens if care has not been taken to select the best varieties for the purpose. Unfortunately many of the best varieties for cutting are not suitable owing to want of size or some other defect. For many years I have made a special study of this matter, and new varieties are chosen with a view to cutting; for one plant will then do double or treble duty, as compared with some others. If the flowers do not "last" the variety is soon discarded. Among the large-flowered section there are many which last well and are of good colour, so that one is not confined to small-flowered varieties only.

With all the plants mentioned in these notes one has the satisfaction of knowing that they have been home grown, and that variety may be had during the depth of winter without dependence on imported bulbs, useful and important as these are, and it appears to me that much more might be done in this direction.

Of course, I have only touched the fringe of the subject, there being many other good winter decorative plants that I have not mentioned, but which may be not less worthy than those I have selected.

J. C. TALLACK.

Shipley Hall Gardens.

PRIMULA POISSONI.

Among the numerous species of Primula which have been from time to time introduced into our British gardens the very beautiful Primula Poissoni deserves to take a high place, although it must, unfortunately, not be considered absolutely hardy in every part of the United Kingdom. In many mild parts it is hardy, but in some which are not subject to the most intense frosts we experience in these islands it only stands the milder winters, and in such seasons as that of 1906-7, failed to survive. It is thus entirely unsuited for any of the colder districts, save as a plant grown under glass, and preferably in a structure from which frost is just excluded. It can, of course, be wintered in a cool house, and planted out to bloom, its flowering period being from June until September—a desirable time for such a flower to bloom, as we have not too many of the Primulaceæ in flower at the time.

In cultivation I have never seen it reach anything like the height given in works of reference, and about a foot is that which it generally attains in the open air. It has rather narrow and oblong, stem-clasping leaves, serrated at the margin, and good stems bearing several whorls of rich purple flowers, generally rather more than half-an-inch across.

It is a very striking primula in its way, and but for its suspicion of tenderness, would have made its way largely into the gardens of many. In my own experience outdoors I found it do best in a somewhat cool exposure, such as the north-east, but well sheltered from cold winds, and in a soil of peat, loam, and sand, with a plentiful supply of water in spring and during the flowering period. In pots it should have the above compost in a six-inch pot, and a plentiful supply of water, with good drainage. P. Poissoni is best raised from seeds sown as soon as ripe or in spring under glass. It is a native of Yunnan, China, and was introduced to cultivation as far back as 1889.

S. ARNOTT.

Dumfries.

The Value of Flowers imported into the United Kingdom during 1907 was £233,641, as compared with £233,841 in 1906, and £202,217 in 1905.

GEUM CHILOENSE (SYN. COCCINEUM).

The Common Avens (Geum urbanum) of our hedgerows is a near relative of the geums of our gardens. Though it is not so showy as many, yet of all the perennials of the garden I know of none which keeps in flower for a longer time than this, for it comes into bloom so early as almost to entitle it to be called a late spring flower, and if the old flowering stems are cut off occasionally it will continue to produce at least some blossoms until the late autumn. It is useful for cutting, and lasts a long time in water, though a drawback to it for this purpose is that it cannot be cut without sacrificing a good many buds.

There are one or two forms of Geum chiloense (erroneously called G. coccineum) that have single, bright orange-scarlet flowers; G. c. grandiflorum has larger flowers, and is of stouter habit, while the semi-double form of this G. c. grandiflorum plenum is a general favourite, its flowers being of a dazzling scarlet, and lasting longer in bloom than the single form, as is the case with some other flowers when doubled, notably the potentilla.

This geum will grow in any soil, and though some recommend it for well-drained and sunny situations, I have found it grow more vigorously, and produce a more constant succession of blossom when in a somewhat damp and well-manured soil in partial shade. It does not stand moving well after it gets established, the roots being deep and fibreless, and if taken up and divided it takes at least a season or two to recover its vigour and floriferousness. It can be easily raised from seed, and I have found seed saved from the double form of G. c. grandiflorum come fairly true, though not perhaps so large-flowered, or so fine in form as the original.

If seed is sown in April on a bed of prepared soil, with which has been mixed a good proportion of leaf-mould, and the seedlings are pricked out when large enough, they will make nice little plants for putting out in permanent quarters in the autumn. They will bloom the following summer, making large strong clumps for the next season. The method of flowering is not altogether pleasing to the slave of tidiness in the garden, as the flowering stems fall down and spread over a good deal of space, and it is a question of taste whether the plant should be allowed to grow perfectly free, or given a little support with two or three short sticks. I think the latter way has something to recommend it if the sticks are concealed by judicious tying up, and the natural grace of the plant is not injured thereby. It has the advantage of bringing the flowering stems together, by which a finer display of colour is produced than when they are spread over a larger area.

A large patch of plants together is much more effective than one or two isolated examples in a mixed border, and by reason of their spreading nature when in flower the interspaces are good positions for spring bulbs, especially tulips, the leaves of which will not fall over and smother the plants so much as narcissus. Some lilies, montbretias, gladioli, and other upright-growing bulbs are good in theory, but in practice it is found that the geums extract too much moisture from the soil in the summer-time for anything growing between them to have a chance of succeeding without much watering and feeding. It is just this dryness, however, which spring-flowering bulbs like in the summer.

Alger Petts.

LAVATERAS.

With the possible exception of L. trimestris, an annual plant everyone grows, there is but little interest taken in the lavateras or Tree Mallows, although they are capable of giving a splendid display practically all the summer long, out-vying hollyhocks in their own sphere of usefulness. The two best species are L. cachemiriana and L. thuringiaca, but beyond noting that L. cachemiriana is the dwarfer plant, they may be considered as one. They make sturdy bushes six feet through and eight feet high, if given a good soil, whilst in the second year there is a greater girth than height owing to a veritable thicket of growths that follow the primary one. The flowers are of typical mallow shape, coloured a pretty shade of pink, and they are as refined as they are beautiful, recalling some species of hibiscus in their airy poise on the slender foot stalks.

It is quite an easy matter to develop seedlings into specimen clumps; they require little or no cultivation to develop them normally, but where giant pyramids are required studded with large flowers in such quantities as to be literally described as countless, there must be no stint of manurial aid, not in the seedling stages, but when the main stems branch freely. Those who have not hitherto tried lavateras for the flower border will be astonished at the splendid display they can give, there is nothing coarse in flower or foliage to offend the eye, but simply an elegant bush-pyramid of pretty digitate leafage and showy pink flowers that are artistic individually and effective in quantity. They are easily reared from seeds, and if one plant happens to flower itself to death before its time it will be quite in accordance with what sometimes happens to lavateras.

G. B. Mallett.

LAURUSTINUS.

In many old gardens there are huge bushes or trees of the common Laurustinus (Viburnum Tinus), and these have been very effective during the last six weeks or more, and will continue to add some brightness to their surroundings for some time to come. Nowadays, however, the laurustinus seems to have fallen into bad odour, judging from the manner in which it is omitted from so many new plantations of shrubs. On Christmas Day I walked up through Worcester Park, in Surrey, and was much impressed by the number and beauty of the big bushes of laurustinus that brightened so many gardens in that pretty locality. A few sprays cut and placed in a small vase, or larger branches set in a large receptacle, form no mean ornament at the end or the beginning of the year, therefore, when planting is again occupying attention, it will be worth while to consider the claims of laurustinus, without in any way forgetting the claims of more modern flowering trees and shrubs.

SPRAY OF LAURUSTINUS IN VASE (VIBURNUM TINUS HIRTUM).

Two especially good varieties of V. Tinus are V. T. hirtum, represented in the accompanying illustration, and V. T. lucidum. The former has hairy undersides to the leaves, and its flowers are very long-lived. It is a good variety for pot culture, or for window boxes. V. T. lucidum is later in flowering, and it bears larger heads of white bloom, and has larger leaves than the former.

K. C.

PREPARING FOR SPRING.

With the turn of days there are usually many operations in gardening that need special attention. The glass structures may have all been washed down, and the houses made ready for forcing; potting composts may be in readiness for the plants as they require it; pans and boxes ready for seed sowing, and potatoes in the storehouse stood up ready for sprouting; but one of the most difficult tasks that falls to the lot of the gardener in some places is making out the seed orders. It has been remarked by some folks that gardeners order things indiscriminately, but if these people did but know the hours some gardeners spend in pondering the various seed catalogues that reach them, in order that their employers may have the most up-to-date varieties—and yet, at the same time, keep down the seed account to the lowest possible limit, they would withdraw these accusations, and offer an apology for having made them.

When making out a seed order for a garden of any specified size, many things ing a considerable time in making out a have to be taken into account. The requirements of some establishments are much greater than those of others, and some gardeners are able to produce far more from a specified piece of land than others can, for not only is the soil more productive in some places than it is in others, but the situation may be more favourable, and more labour employed. For these reasons it is useless to state what the seeds for a garden should cost. But it sometimes happens that after spend- list, this is submitted to the employer, who reduces it considerably, and at the same time expects his gardener to produce quite as much as those who have a free hand in ordering what they consider necessary.

CYPRIPEDIUM SULTAN.
Flowers green, white, and brown. F.C.C., R.H.S., January 14.
Major Holford, Westonbirt, Gloucester.

We will take flower seeds as an illustration, as these, in many instances, form the chief part of the order. Packets of some kinds are very small indeed, containing only a dozen seeds in each, and where from three to four hundred plants of these particular kinds are required, from ten to a dozen packets of seed are necessary to produce the requisite number, whereas the employer may consider two or three packets sufficient. When seedsmen make up packets they should state the number of seeds a packet contains at a given price, then we know what to expect.

When making out these seed orders one must therefore be guided by circumstances, and when that most unthankful task is completed, the mind is somewhat relieved. Then the seeds arrive, and in some instances we are annoyed to find that the very variety we wished to try most is omitted, and another substituted for it. This may be because the order was not sent in until the season was far advanced, or there may have been a special run on that particular variety; but it would be far more business-like if the seedsman to whom the order was given would write and say he was sold out, and ask if he should substitute something else, instead of sending varieties that one does not require.

Sowing seeds requires some knowledge, as many kinds are so small as to be almost invisible, particularly to those whose eyesight is not of the best, and, as before remarked, when there is only about a dozen of such seeds in a packet, the operation needs special care. These small seeds must be kept at a certain state of moisture, otherwise the germ, being so minute, withers before development can take place. Preparation must therefore be made in the way of shading that the sun's rays may not injure these delicate morsels.

Preparations must also be made for cuttings of various kinds. It is useless to say when certain plants are required that one forgot to put in the cuttings, or that a sufficient number were not provided. Better by far have a few extra than not enough. When the weather is unfavourable for outdoor work boxes of various sizes could be made ready for propagating, so that when the time arrives for such work there need not be any delay. Gardening, if it is to be carried out in the most approved manner, requires much forethought, and it is only by such timely preparations that one is able to cope with the many and varied duties that fall to the lot of those whose business it is to conduct a good-sized establishment. Some people I know wonder why it is necessary to have a stock of such things as packing boxes, insecticides, and various other requisites that are needed for a garden, but it must be remembered that gardens, for the most part, are in rural districts, and one cannot go next door and borrow of one's neighbour like a bad housewife, neither can one run to a shop in a few minutes and get what is required for the time being. For this reason then it is necessary to make preparations some time beforehand, and procure a stock of all those things that are needed to carry one on for at least three months at a time. Further, there is economy in procuring a stock instead of driblets. It is quite certain that half a dozen men cannot use the same tool at one time, and if this were possible they could not do the work to advantage.

Now that work is slack, such implements as mowing machines should be overhauled, and should any repairs be necessary these should be taken in hand at once that the machines may be ready for use when the lawns will need to be mown. There are many such items as preparing flower stakes, pea stakes, etc., that could be done in wet or unfavourable weather, which will be found of great advantage later on in the season, when the busy time comes round. It is of great importance to keep the work well in hand at this time of the year, so as, in a measure, to relieve the pressure later on. H. C. PRINSEP.

BEAUTIFUL GARDEN HEDGES

Hedges that are not boundary markers can be made of many beautiful flowering shrubs, some of which are seldom used for such a purpose. For example, nothing can exceed the loveliness of "syringa" hedges enclosing a rosery, or beds of roses and liliums, set either in grass or gravel. There are several excellent varieties of the "syringa," or mock orange, Philadelphus rosæflorus being one with immense semi-double blossom; P. Gordonianus coming into beauty rather late, and being especially prodigal of bloom; and P. parviflorus claiming attention as an extra rapid and tall grower. Then the exquisite Philadelphus purpureo maculatus might be represented, whose large white blooms have a mauve-rose blotch on each petal.

Hedges of mingled varieties of one shrub are usually more successful than those in which different species of shrubs are combined, yet the latter have plenty of charm and should be planted in situations where uniformity of height is not required. One might contain Philadelphus rosæflorus, Escallonia macrantha, Viburnum opulus, Cistus ladaniferus, laurustinus, Ribes sanguineum, and Symphoricarpus radicans, the snowberry tree. All could be pruned into some kind of regularity, and this hedge in a small garden would certainly serve to introduce beautiful subjects for which room could not otherwise be spared. Escallonia macrantha Ingrami is much hardier than is generally supposed; it seldom fails in the walled-round garden, except in coldest counties, thrives in a heavy soil, and grows remarkably thick and high; the bottom density can be annually increased by layering some of the lowest shoots. As a dividing line between flowers and vegetables, or to enclose the environs of a summerhouse, it is one of the most attractive of all shrubs.

Japanese honeysuckle makes a good hedge in time, if given some faggot supports in its youth, so too does the common white jasmine; this last I have seen delightfully used with the white Scotch heavily-spined rose as a kind of undergrowth; indeed, Rosa spinosissima shows at its best when thus employed, but is equally at home with the tall Penzance briar roses or common sweet briar. A well-grown hedge of sweet briar is, by the bye, one of the most fortunate possessions of any garden, for it can be ruthlessly cut back and down to keep it trim and green, and serves as an ideal support for any of the light-growing summer climbers, convolvuluses, sweet peas, canary creeper, Lophospernum scandens, Eccremocarpus scaber; even the profusely-leaved cobæa will not harm it. Gardeners who wish to treat such a hedge in a unique fashion should plant out some Plumbago capensis of good height against it next summer; supposing the hedge to have one side facing south; the gray-blue blossom will make a fine show.

In warm sheltered places hedges of Berberis Darwini succeed admirably; if there are cold winds feared from one quarter let a double hedge be planted consisting of a row of dark holly, or euonymus, on the cold, and the berberis upon the warm side. When a privet or laurel hedge has become bare at the base, as is often found to be the case in neglected gardens, the effect can be improved most rapidly by planting along it a line of gorse; this will flourish and flower, and in time grow up even inside the evergreen hedge, bursting through it here and there and everywhere with masses of cheerful golden blossom. I have improved old ill-kept laurel hedges, by the bye, with the common bracken fern; the fine fronds look charming as they thrust themselves through the sides, and up above the evergreen foliage.

For a thin hedge Symphoricarpus racemosus is admirable; the spring foliage is of a heart-cheering pale gay green, the pink and white florescence makes a show, although the individual blossoms are small, so lavishly is it spread over the branches; later in the year, when the stems are so heavily laden with white round fruits that they nearly lie upon the ground, the beauty is yet greater.

A rather tall hedge of well-trained laburnum makes an original feature in a garden, for this tree consents to bloom well even when it has been greatly cut back. For exposed seaside gardens nothing can be lovelier or more serviceable than Tamarix gallica, which easily reaches a height of six feet, and will ultimately attain ten, yielding a harvest of pinkish blossom-clad branches, as well as possessing elegant freshly-green, feathery foliage.

M. H.

ODONTOGLOSSUM BINGELIANUM.
Flowers yellowish-green, red-brown, and white. F.C.C., R.H.S., January 14. Baron Schroder, The Dell, Egham.

LAGASCA'S ROSE CAMPION.

Among the alpine flowers which have proved a frequent disappointment to the ardent cultivator with less knowledge than enthusiasm, we may well include the pretty Rose Campion called Lychnis Lagascæ. One has found many keen growers of these flowers who have purchased plants or have raised them from seeds, but who have had to admit their failure to retain Lagasca's Rose Campion for any length of time in their gardens. This is not due to any true want of hardiness inherent to this pretty little native of the Pyrenees, but simply because they did not know its two main enemies, and did not consequently guard against them.

These enemies are winter's damp and slugs or snails, and of these the more destructive are wintery damp and heavy rains at the same season. Slugs and snails do not abound in every garden, although they are generally more prevalent in places where the other enemy is most potent—in gardens in wet districts. Thus those whose lot is cast in dry neighbourhoods have a much better opportunity of succeeding with this lychnis than those in wetter parts, and many of these can cultivate it successfully in a dry and sunny chink in the rock garden. Yet even in these it sometimes fails, and the wall garden will generally be found the most satisfactory home for the plant, which, when of considerable size, as we may see it in a few gardens, is charming in the extreme.

A sunny wall garden, with the plant growing between the interstices, and, if possible, into a small body of earth behind, is an excellent place for this flower; and in wet localities it is not difficult to have the stones above arranged in such a way that a small piece of glass or a thin flat stone or piece of slate can be inserted to throw the rainfall in winter off the plant. In such a position the lychnis will increase in size and beauty for many years; whereas on the level or even on a sloping rockery it would die off. On the other hand, it is needful here to watch carefully against slugs, as these pests cannot be warded off by such means as are commonly employed, and naught but persistent and almost nightly search for, and destruction of, these enemies in places where they abound will suffice to save the plants from being cropped to the root.

But Lagasca's Rose Campion well deserves this trouble where time will permit of it, as a good plant covered with rose-coloured flowers, with their white centres, and showing but few of its glaucous leaves, is very beautiful indeed. It likes a gritty soil, and ought to be firmly planted, care being taken when placing it between stones that no space is left unfilled with the soil. Young plants are the best to use in establishing them on a wall, and seedlings raised under glass from seeds sown in February and March may be planted out in May for subsequent bloom. Seeds can be purchased from seedsmen who make a speciality of such plants.

S. ARNOTT.

Forthcoming Books.—The Oxford University Press has in preparation "Types of Floral Mechanism; a selection of Diagrams and Descriptions of Common Flowers," by Professor A. H. Church. Messrs. Macmillan and Co. will shortly publish "The Origin of a Land Flora," by Professor F. O. Bower; and Messrs. Cassell and Co. announce for publication "Gardening for Women," by the Hon. Frances Wolseley, who has founded a school for lady gardeners at Glynde, Sussex.

CARNATION NOTES.

Perhaps the most notable feature of the Winter-flowering Carnation Society was the conspicuous success of the Guernsey growers. This, I take it, is but another proof of the beneficial influence of the sea-air. The clear, sweet, yet salt-laden breezes seem to have the power of imparting a robustness and vigour which so many growers of carnations who are inland residents never see in their own plants. Of course, the beneficial climate is ably seconded by good culture, and the result was strikingly illustrated in the recent show.

I believe that many of our English growers use salt as a spray, and a very useful spray it is. It is invaluable for keeping down red spider and for keeping fungoid diseases at bay. With the American growers it is a standard remedy, and this is solid proof of its virtues, surely.

One was also glad to note the continued success of many of the older favourites. For a blush coloured variety, it was Enchantress everywhere, and it will be long before her glory is eclipsed. Harlowarden showed up well again in the crimsons, though President was shown in fine condition by the Guernsey folk.

Mrs. T. W. Lawson still continues to rank high both in competition and in popular favour, though the new Aristocrat will doubtless prove a formidable rival.

Britannia was foremost for the thirty-six blooms of scarlet, but in the eighteens Robert Craig was shown in very good form, gaining first and third places. Winsor made a remarkable debut. Its glorious triumph at the Toronto Show at the beginning of 1907 was continued at Regent's Park, where it was first in the light pink classes, beating even the favourite Mrs. Burnett. It also ranked highest among those which were awarded the Certificate of Merit.

Beacon was shown in good condition, but will, I believe, improve as it becomes more popular. Rose Pink Enchantress has made good its American reputation, and will doubtless become a standard variety in the near future.

Melody completed the quartette which gained the coveted distinction; it is a soft blush colour, and is accredited with being "very free-flowering." There is evidently yet no white to surpass the favourite trio Lady Bountiful, White Perfection, and Improved White Lawson, at least, if there is, it has yet to show itself.

The new American variety Sensation promises to be more than useful. It is a beautiful bright cerise in colour, the blossoms are well built, non-bursting, with long, strong stems, and exceedingly free.

One of the Michigan growers has a new seedling of much promise. It is a cross between Enchantress and a Red Seedling, and partakes closely of the habit and colour of Enchantress. The blossoms are very large, and, unlike Enchantress, which loses its colouring as it ages, it deepens in hue. It is free and very fragrant. Another new American which has been certified at New York and Indianapolis, is Mabelle. This is a peculiar yet charming shade of pink, with a faint yellowish tinge; it is a first-rate grower, strongly scented, and giving an abundance of good-sized blossoms on long, stiff stems. It is spoken of as being uninjured by the brightest sunshine, and comes in flower early.

Many other novelties are undergoing trial, some of them on this side of the water, including Red Chief, a bright-hued variety, favourite with some American growers already. Others will be seen at the next American Show, which will be held at Washington.

Already the perpetual carnation has a strong hold on the horticultural world, and its fame will increase rapidly during the next few years. For private gardens and for market culture there is nothing much more desirable, or which is in more constant demand. One notices the lasting properties of the blossoms when cut, and as the flower-buying community fully realises this, they will purchase carnations in preference to cheaper flowers. Even now the sale of cut carnations reaches goodly proportions, and, like the American trade, it will grow and increase rapidly, especially as this is the "day of the cut flower," and the plant trade is practically a decaying industry, at least at the present day.

P. S. HAYWARD.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM MACNABIANUM.

This splendid hybrid, from O. Harryanum and O. Wilckeanum albens (figured on p. 57), is a fine addition to the already large group descended from the former parent. The flowers are of large size, and the ground colour is pale yellow, this showing through between the heavy red and red-brown blotches in the form of irregular lines and marks. The lip is flat, and has a large white apex, but the base is prettily marked with purple and red. The plant is a strong grower, and it carried a spike of twelve flowers. F.C.C., R.H.S., January 14. Messrs. Sander and Sons, St. Albans.

ODONTOGLOSSUM BINGELIANUM.

Another grand odontoglossum, but of unrecorded parentage. The flowers are large and of particularly fine shape, as shown by the illustration. The colour is soft greenish-yellow, heavily spotted and blotched with rich red-brown. The lip has a white apex, but is marked with red-brown at the base. F.C.C., R.H.S., January 14. Mr. H. Ballantine, gardener to Baron Schroder, The Dell, Egham.

CYPRIPEDIUM SULTAN.

This imposing variety was raised at Westonbirt by crossing C. Mons. de Curte with C. Milo Westonbirt var. It has flowers of largest size, well proportioned, and substantial. The broad petals are green and brown, the latter shade being very bright; the dorsal sepal is yellowish-green at the base and white at the apex, the green area being heavily spotted with dark purple. The lip is brown, with green shading, and the whole flower presents a burnished or varnished appearance. F.C.C., R.H.S., January 14. Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

CYPRIPEDIUM MINOS YOUNG'S VAR.

A beautiful cypripedium, and one that was granted an Award of Merit in 1903. It is the result of crossing C. Spicerianum with C. Arthureanum. The dorsal sepal is particularly fine, broad, rounded, white, marked with rosy-purple, and with a greenish base; the petals and lip are yellowish-green, heavily shaded with brown. F.C.C., R.H.S., January 14. Messrs. J. and A. McBean, Cooksbridge, Sussex.

LÆLIO-CATTLEYA CORUNNA.

A shapely and effective hybrid of unknown parentage. It has rosy-purple sepals and petals, and a rich crimson-purple lip, with orange and gold veinings in the throat. A.M., R.H.S., January 14. Major Holford.

Naming Trees at West Ham.—At the instance of Mr. A. Jerrold-Nathan, the chairman, the West Ham Park Committee have decided to label the various trees and shrubs in the park with their botanical and proper names.

NEW BOOKS.

SWEET PEAS AND THEIR CULTIVATION.

By Charles H. Curtis, F.R.H.S. (W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.) Price, 1s. net, by post, 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d.

Sweet peas have become so enormously popular of late years that their cultivation has increased by leaps and bounds, and as the result there are but few happy in the possession of gardens who do not endeavour to produce an abundance of their fragrant and exquisitely coloured blossoms. With the immense increase in the cultivation of these charming flowers a handbook wholly devoted to them has become a necessity, and fully understanding the aid cultivators generally are likely to require, the perusal of "Sweet Peas and their Cultivation" has given us much pleasure. It is pleasant to read the brightly written sketch of the history and development of sweet peas, and also the advice given on the various details that must have attention to ensure success. But it gives us much pleasure to find, as we anticipated would be the case, a work wholly free from the defects of shilling gardening books devoted to special subjects. The author has appreciated his responsibilities, and taking full advantage of his exceptional opportunities for observation, he has known exactly what his readers would require, and has evidently made strenuous efforts to provide what they would be likely to need. Having a thorough knowledge of the cultural requirements of sweet peas, and a practical acquaintance with the numerous varieties, he has been able to tell his readers all that it is necessary they should know to obtain successful results. What is not less important, possessing literary skill of a high order, he has been able to give the information contained in the book in such a manner that the readers will have no difficulty in understanding it.

The book opens with a chapter on "The Sweet Pea Cult," which affords interesting reading, and this is followed by a chapter in which the history and development of sweet peas is admirably sketched. The remaining part of the book is devoted to cultural matters, and in the several chapters the reader will find all the information he could possibly desire relating to the growth of sweet peas and to the selection of varieties for beautifying the garden, for the decoration of the home, and for winning prizes at exhibitions. While every chapter should have careful consideration, we would suggest that special attention should be given to those devoted to "Soil Preparation," "Seeds and Seed Sowing," "Staking and Tying," and "Some Points for Exhibitors." Fungoid diseases and insect pests are described, and illustrated, so that the reader is not only, with the aid of the book, placed in a position to select the finest varieties and grow them to a high degree of perfection, but he is given assistance in combating those enemies that, were they allowed to go unmolested, would greatly hinder him in his efforts to obtain success of a high order.

The book contains numerous illustrations, and we reproduce the one of a clump of Dora Breadmore sweet peas as indicating their excellence.

SWEET PEA DORA BREADMORE.

Sown January 11, under glass, cut back twice during summer. Photographed September 7.
(From "Sweet Peas and Their Cultivation.")

A CONCISE HANDBOOK OF GARDEN ANNUAL AND BIENNIAL PLANTS.

By C. M. A. Peake. (Methuen and Co., Essex Street, Strand, W.C.) Price, 3s. 6d. net.

A dainty book, elegantly printed and prettily illustrated, and containing much useful information on the various classes of annuals and biennials, and on many of the perennials that can be readily raised from seed. The author has missed the opportunity of producing a really good book on annuals and biennials by including a considerable number of perennials, and failing to indicate the duration of a considerable portion of them. In a selection of half-hardy annuals at the beginning of the book there is a list of "half-hardy annuals," in which ageratums, hybrid begonias, cobæas, dahlias, and eccremocarpus are included. As annuals are now grown largely for exhibition, it is of much importance that in a work devoted chiefly to them the arrangement should be such as to avoid the risk of the reader being mistaken as to the duration of the plants included. We suggest that in a future edition the author, in process of revision, very clearly indicates the duration of the whole of the plants he mentions. With this improvement the book would have its usefulness materially enhanced.

MODERN FRUIT CULTURE.

(George Bunyard and Co., Lim. Maidstone.) Price, 1s.

In this brochure Messrs. G. Bunyard and Co. have reprinted the cultural articles contained in their fruit catalogues, and thereby have been able to present them in a more convenient and handy form. There are several new chapters, notably one in which the root pruning of fruit trees is described at some length by Mr. George Bunyard, V.M.H., and notes on the cultivation of roses, which, by the way, receive much attention at the Maidstone establishment.

THE GARDEN ANNUAL, 1908.

Edited by W. Robinson. ("Gardening Illustrated" Office, 17, Furnival Street, Holborn, E.C.). Price 1s.

The "Garden Annual," as so well known, is devoted almost exclusively to the directories of gardeners and the nursery and seed trades. It is not less well known that these directories are remarkable for their fulness and accuracy, and it would be difficult to give higher praise to the issue for the current year than to say that it fully maintains the high character of its predecessors. The several lists bear evidence of careful revision, and the work is in every way thoroughly up to date and trustworthy.

HORTICULTURAL DIRECTORY.

("Journal of Horticulture" and "Poultry" Office, 12, Mitre Court Chambers, Fleet Street, E.C.) Price, 1s.

As the "Horticultural Directory" has a history extending over nearly half a century it would be difficult to say anything new with regard to it. But we can say without experiencing the slightest difficulty that it fully maintains the high character which has rendered it popular for so long a period. In addition to the full directory of the nursery and seed trades in the United Kingdom, there are lists of the principal nurserymen and seedsmen on the Continent of Europe and in the United States and the Colonies. There is a list of botanical gardens in the British Empire, and a directory of horticultural builders, engineers, and sundriesmen.

L'HYBRIDATION DES PLANTES.

By Raphael de Noter. (Charles Amat, 11, Rue Casette, Paris.) Price, 2.50 francs.

An excellent work on the hybridisation of plants by one of the leading French authorities. In the first division of the book the reproductive organs of the plants are described, with the aid of well-executed diagrams, and full information is given on the several operations necessary to ensure success in the fertilisation of flowers. The second part is devoted to the more important of the several classes of plants that are in general cultivation, and in addition to the descriptive matter suggestions are made for their improvement. The book, which is in French, is freely illustrated.

SWEET PEA AUDIT.

For permission to publish the following Audit of the Sweet Pea Show held in London, 1907, prepared by Mr. C. H. Curtis for the National Sweet Pea Society, we are indebted to the committee of that body:—

Never was the work of compiling the Audit of our great London show such a tiresome business as in 1907. The increased number of classes, larger number of competitors and bunches, bigger attendance of visitors, and the comparative crowding necessary to get the whole of the exhibits into the great hall, all tended to make the difficulties of the auditor greater than ever before. Then, too, many competitors appeared to consider that as long as the name cards were duly inscribed and placed somewhere on the table, that was sufficient, and in this connection the competitors in the "Small Growers'" section and "Single Bunch" classes were the greatest sinners. In many instances comparisons had to be made ere the proper name of the variety could be arrived at. Remembering that an Audit is one feature of the society's work, exhibitors should do their best to assist by taking care that their name cards are legibly inscribed and properly placed in position.

Probably, indeed very possibly, future Audits will be conducted on different lines to this and the preceding ones. Or, rather, the varieties named for the Audit Class may be the "bests" as shown by an Audit of only those exhibits in classes where there is no restriction as to varieties. This, however, is a matter for further consideration, but it has been raised by the suggestion that it is possible to force almost any variety to the top of the Audit, or thereabouts, if sufficient motive power, in the shape of big money prizes, is provided.

But let us to the Audit itself. The first comparisons are as follows:—

Year.		Classes.	Exhibits.	Bunches.	Varieties.
1907	......	81	651	2390	205
1906	......	73	416	1949	152
1905	......	36	273	1826	119
1904	......	29	258	1561	107
1903	......	28	128	991	90

These figures show a big increase in classes, a large addition of exhibits, and about 400 more bunches than at any previous show. There was also an increase in the number of varieties exhibited, and though this was to be expected at such an enlarged exhibition, there is nevertheless a feeling of regret that the increase in this respect is so large. We do not improve as one could wish, and an average of 11.65 bunches per variety is a poorer showing than the 15.34 bunches per variety in 1905; that is, if the reduction of varieties is to be regarded as progress. Some may urge that the lower average of bunches per variety is progress, because it indicates activity on the part of raisers and argues for a wider interest and lack of monotony in the show.

The averages of bunches per variety, as shown by the various audits, are:—11.01 in 1903; 14.58 in 1904; 15.34 in 1905; 12.82 in 1906; and 11.65 in 1907.

GENERAL AUDIT.

Variety.	Times shown.
Helen Lewis	135
Countess Spencer	130
John Ingman	115
Dorothy Eckford	110
Helen Pierce	97
King Edward VII	92
Nora Unwin	81
Mrs. Collier	73
Black Knight	64
Gladys Unwin	61
Jeannie Gordon	57
Paradise	56
Frank Dolby	52
Queen Alexandra	51
Lady Grizel Hamilton	51
Henry Eckford	47
Mrs. Walter Wright	45
Navy Blue	37
Mrs. Alfred Watkins	36
Dora Breadmore	35
Sybil Eckford	35
Hon. Mrs. Kenyon	34
Miss Wilmott	32
Mrs. Hardcastle Sykes	31
Seedlings	31
Duke of Westminster	30
Bolton's Pink	29
E. J. Castle	29
Dainty	28
George Herbert	28
Agnes Johnson	27
Shasta	27
America	26
Janet Scott	26
David R. Williamson	22
Phenomenal	22
Princess of Wales	22
Romolo Piazzani	22
Evelyn Byatt	19
Duchess of Sutherland	17
Enchantress	15
Queen of Spain	15
George Gordon	13
Jessie Cuthbertson	13
Lady Cooper	13
A. J. Cook	12
Coccinea	12
Horace Wright	12
Agnes Eckford	11
Mrs. Chas. Foster	10
Phyllis Unwin	10
Rosie Sydenham	8
Audrey Crier	7
Earl Cromer	7
Gracie Greenwood	7
Hetty Green	6
Prince of Wales	6
Unique	6
Etta Dyke	5
Evelyn Breadmore	5
Triumph	5
Lord Nelson	5
Aurora	4
Beacon	4
Duke of Sutherland	4
Lady Althorp	4
Lottie Eckford	4
Marjory Willis	4
Pink Pearl	4
Prima Donna	4
Scarlet Gem	4
Tweedy Smith	4
Vera Jeffery	4
Codsall Rose	3
Elsie Herbert	3
Gladys Deal	3
J. T. Crier	3
Lady Sarah Spencer	3
Lord Althorp	3
Lord Rosebery	3
Maid of Honour	3
Mrs. Alec Ware	3
Mrs. C. W. Breadmore	3
Othello	3
Peach Blossom	3
Salopian	3
Silas Cole	3
Althorp Gem	2
Apple Blossom	2
Black Michael	2
Blanche Burpee	2
Cecil Crier	2
Clara Curtis	2
Cyril Breadmore	2
Countess Cadogan	2
Dudley Lees	2
King Alphonso	2
Lady Aberdeen	2
Lady Mary Currie	2
Lorna Doone	2
Lovely	2
May Malcolm	2
Eric Hinton	2
Miss H. O. Phillbrick	2
Mrs. H. H. Lees	2
Olive Bolton	2
Prince Edwd. of York	2
Superbe	2
Venus	2
Amy Weatherer	1
Baroness Schroder	1
Betty Cantley	1
Betty	1
Blue Eyes	1
Blue Seedling	1
Bobby K.	1
Boreatton	1
Bronze Prince	1
Burpee's White	1
Captain of the Blues	1
Captivation	1
Chilton	1
Colonist	1
Constance Oliver	1
Coral	1
Coral Gem	1
Countess of Radnor	1
Delicata	1
Devonshire Cream	1
Doris Clayton	1
Doris Stevenson	1
Dorothy Tennant	1
Dorothy Tigwell	1
Duchess of Westminster	1
Emily Eckford	1
Evelyn Hemus	1
Ethel Cartwright	1
Finetta Bathurst	1
Flora Norton	1
Florence Molyneux	1
Gladys Roberta Jones	1
Glitters	1
Glory of Paris	1
Gratton	1
Harold	1
Helen Byatt	1
Hester	1
Hon. Miss Delia Spencer	1
Horace Skipper	1
Ivy Herbert	1
James Grieve	1
James Vine	1
Jargoon	1
J. Breadmore	1
John Gray	1
Kamah	1
Kitty Mitchell	1
Lady Beaconsfield	1
Little Dorritt	1
Mabel	1
Marbled Blue	1
Marquess	1
Marquis	1
Maud Guest	1
Maud Hadman	1
Menie Christie	1
Miss Audrey Crier	1
Miss Philbrick	1
Mrs. Bickersteth	1
Mrs. Dugdale	1
Mrs. Eastham	1
Mrs. E. Collyer	1
Mrs. E. Forster	1
Mrs. Horace Wright	1
Mrs. I. M. Gerhold	1
Mrs. J. Chamberlain	1
Mrs. J. Higginson, Junr.	1
Mrs. Silas Cole	1
Mrs. W. J. Unwin	1
Mrs. Kendal Barnes	1
Nigger	1
Novelty	1
Paradise Carmine	1
Paradise Dawn	1
Paradise Ivory	1
Paradise Regained	1
Paradise White	1
Prince of Asturias	1
Princess Mary	1
Princess Royal	1
Phyllis	1
Purity	1
Queen of Norway	1
Rose Queen	1
Rosie Adams	1
Senator	1
Spectre	1
Spencer Seedling	1
Sport from George Herbert	1
Stark's Giant Mauve	1
Syeira Lee	1
Tom Bolton	1
Topaz	1
White Spencer	1
Winnie Jones	1
Total Bunches...	2,390
Total Varieties	205

The general Audit of 1907 presents a very different appearance to that of 1906. Helen Lewis and Countess Spencer, which were ninth and tenth in the latter year, now stand at the top of the list; John Ingman comes up from thirteenth place to third position; Dorothy Eckford and King Edward VII. come from first and second places to fourth and sixth respectively, but they easily maintain their places as the best varieties in their colour classes, with 110 and 92 points as against 121 and 97 in 1906; the rise of Queen Alexandra and the exhibition of many seedling white varieties may be considered as partly answerable for this alteration of the position of such excellent varieties, but probably the chief reason is to be found in the great advance in popularity of the waved varieties during the year.

Helen Pierce has jumped from 33 points to 97, and now takes fifth place. Mrs. Collier has taken a big leap upward; Black Knight keeps a steady position; Gladys Unwin falls away somewhat, and Miss Willmott drops from 72 points and fourth place in 1906 to 32 points and twenty-third place in the present audit. Nora Unwin takes a good position, with 81 points, the same number that Gladys Unwin had in 1906. Paradise, Frank Dolby, Mrs. Hardcastle Sykes, Henry Eckford, and Mrs. Alfred Watkins are varieties that have come forward with a rush. Another interesting point is that no fewer than thirty-one unnamed seedlings were exhibited. The substantial positions taken by Shasta, America, and Janet Scott are evidence that these three good garden varieties are favourites with many other growers than the writer.

FIRST PRIZE AUDIT.

Variety.	Times shown.
Helen Lewis	24
Nora Unwin	20
Countess Spencer	19
Seedlings	18
Frank Dolby	14
John Ingman	13
King Edward VII.	12
Mrs. Alfred Watkins	11
Helen Pierce	10
Dorothy Eckford	9
E. J. Castle	9
Mrs. Collier	9
George Herbert	8
Mrs. Hardcastle Sykes	8
Queen Alexandra	8
Black Knight	6
Jeannie Gordon	6
Duke of Westminster	6
Paradise	6
Phenomenal	6
Gladys Unwin	5
Henry Eckford	5
Lady Grizel Hamilton	5
Mrs. Walter Wright	5
Princess of Wales	5
Shasta	5
Dora Breadmore	4
Evelyn Breadmore	4
Romolo Piazzani	4
A. J. Cook	3
Audrey Crier	3
Agnes Eckford	3
Coccinea	3
Dainty	3
Elsie Herbert	3
Enchantress	3
Etta Dyke	3
Janet Scott	3
Jessie Cuthbertson	3
J. T. Crier	3
Navy Blue	3
Tweedy Smith	3
Vera Jeffery	3
Agnes Johnston	2
Bolton's Pink	2
Duchess of Sutherland	2
Dudley Lees	2
George Gordon	2
Codsall Rose	2
Hon. Mrs. Kenyon	2
Horace Wright	2
Lady Cooper	2
Marjory Willis	2
Mrs. Charles Foster	2
Mrs. C.W. Breadmore	2
Queen of Spain	2
Rosie Sydenham	2
America	1
Betty	1
Cecil Crier	1
Clara Curtis	1
Cyril Breadmore	1
David R. Williamson	1
Devonshire Cream	1
Doris Stevenson	1
Earl Cromer	1
Ethel Cartwright	1
Finetta Bathurst	1
Hetty Green	1
Ivy Herbert	1
James Grieve	1
King Alphonso	1
Kitty Mitchell	1
Lady Althorp	1
Lady Sarah Spencer	1
Lord Nelson	1
Lord Rosebery	1
Lorna Doone	1
Lettie Eckford	1
Marquess	1
May Malcolm	1
Miss Phillbrick	1
Miss Willmott	1
Mrs. Alec Ware	1
Mrs. H. H. Lees	1
Olive Bolton	1
Peach Blossom	1
Phyllis Unwin	1
Prince of Asturias	1
Prince of Wales	1
Princess Royal	1
Purity	1
Purple Emperor	1
Queen of Norway	1
Rosie Adams	1
Silas Cole	1
Spectre	1
Superbe	1
Sybil Eckford	1
Tom Bolton	1
Triumph	1
Venus	1
Total Bunches	378
Total Varieties ...	102

The Audit of the first prize exhibits includes 378 bunches and 102 varieties, as against 261 bunches and 64 varieties in 1906. Varieties do not invariably hold the same relative positions in the general Audit and the first prize Audit, and this year the differences are very marked. Helen Lewis holds first place in each case, but here Nora Unwin displaces Dorothy Eckford as the best white, though with insufficient points to triumph altogether, the points being 110 plus 9, equals 119 for Dorothy Eckford, and 81 plus 20, equals 101 for Gladys Unwin. Next year another young lady will be striving for premier place as the best white—which will win? Plenty of opportunities for comparison are afforded by the two Audits, such as those between Mrs. Alfred Watkins and Mrs. Hardcastle Sykes, Romolo Piazzani and Navy Blue, but these can be easily made by the reader.

A most interesting point is the average number of bunches per variety in the first prize Audit. The figures are as follows:—

Year.		Bunches.		Varieties.		Average Bunches per Variety.
1907	...	378	...	102	...	3.70
1906	...	261	...	64	...	4.07
1905	..	244	..	73	...	3.34
1904	...	217	...	62	...	3.50
1903	...	216	...	71	...	3.04

This is not so good a showing as in 1906, but nevertheless a good one compared with previous years, and also relatively to the averages in the general Audit. It suggests that the most successful growers pin their faith to a moderate number of varieties for exhibition purposes.

BEST VARIETIES.

The varieties from which those who compete in the audit class in 1908 must make their selection are given below, and in the subsequent columns are given the points these varieties gained in the general Audit and first prize Audit and also their position in the respective colour classes, as shown by the votes recorded in the returned classification lists:—

Colour and Variety.	General Audit.	Prize Audit.	First Position in Classification list.
White—Dorothy Eckford	110	9	1st
Crimson and Scarlet — King Edward VII.	92	12	1st
Cerise—Coccinea	12	3	1st
Rose and Carmine—John Ingman	115	13	1st
Pink—Countess Spencer	130	19	1st
Blush—Mrs. Hardcastle Sykes	31	8	1st
Blue—Navy Blue	37	3	3rd
Yellow Shades—Mrs. Collier	73	9	1st
Orange—Helen Lewis	135	24	1st
Lavender—Frank Dolby	52	14	2nd
Mauve—Mrs. Walter Wright	45	5	1st
Violet and Purple—Duke of Westminster	30	6	1st
Magenta—George Gordon	13	2	1st
Maroon and Bronze—Black Knight	64	6	1st
Picotee Edged—Dainty	28	3	1st
Red Stripes—America	26	1	1st
Blue Stripes—Princess of Wales	22	5	1st
Bicolors—Jeannie Gordon	57	6	1st
Fancies—Sybil Eckford	35	1	2nd
Marbled—Helen Pierce	97	10	1st

DOUBLE-FLOWERED EPACRIS.

This epacris, now known as Epacris purpurascens flore plena, though it was first distributed as E. onosmæflora flore plena, differs from all the other numerous forms of epacris in the flowers being double. As far as I know the double-flowered variety of the common ling or heather is the only heath we have with duplex blossoms, so that this feature is less pronounced among the Ericaceæ than it is among many classes of plants.

The epacris in question also differs from the ordinary garden forms in being of stouter growth, and with the young shoots of a more succulent character. These shoots are thickly clothed with leaves, from the axils of which the flowers are produced. Individually they form, when fully expanded, little white rosettes, but in the bud state they have a slight purplish tinge, which can always be seen at the back of the petals. These flowers form a closely packed mass for a considerable distance along the shoots.

Introduced from Australia about thirty years ago, this epacris was first sent out in 1883, and in those days was thought highly of, but now it is very rarely seen. Its cultural requirements are the same as for epacris in general, except that most of the shoots, being very stout and succulent, do not strike root readily. The best way to get suitable cuttings is to put a plant or plants into a little warmer structure than that in which epacris are usually kept. This will induce weaker growth, and the shoots so obtained are not at all difficult to strike, provided they are dibbled into well-drained pots of sandy peat, sifted fine, and pressed down very firmly. After being watered, they must be covered with a bell glass, and given a shaded position in a house kept at the same temperature as that in which they have grown.

W. T.

Manuring Sweet Peas with Superphosphate. — No, it does not mean, "E. J. K." (page 4), that I am about to commence the sale of concentrated plant foods, for if I did my generous recommendations would kill all my customers' plants, and they would want to kill me. During my journalistic experience I learned (and it only took me three days to do it) to put every error, frivolous or serious, big or little, down to the printer, and behind that mysterious individual I shield myself now. That maxim should have read: Use 7lb. of superphosphate to the square rod, in which condition it is good, and, in conjunction with the others that accompanied it, will help the sweet pea grower on towards success. I try to find consolation in the reflection that very few people will feel disposed to spend the money necessary to apply a dressing at the rate of 7lb. to the square yard.—HORACE J. WRIGHT.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

GENERAL REMARKS.—The exceedingly changeable weather conditions during the past three or four weeks—and from general appearances these conditions are likely to continue for awhile—has restricted the general work in the orchid houses. Opportunity should now be taken to attend to any cleansing that may be necessary. A more than ordinary amount of artificial heat is required, even to maintain the minimum temperature in each division, and this, with the drier atmosphere created will have a tendency to aid insect life, especially red spider. Close observation is therefore necessary, and when the pest is found steps must at once be taken to check it. There is no better method of preventing the spread of red spider than to carefully sponge the leaves. Small yellow thrips are perhaps the worse pests the orchid grower has to contend with, especially the species which attack cypripediums; I never hesitate to dip these plants at any season of the year, where thrip is found in the axils of the leaves. Where plants have to be dealt with that have become so infested that the foliage is disfigured, the best method is to dip at intervals of a week for about a month, and then fortnightly, until satisfied that the plants are free from the pests. For dipping and spraying purposes we use XL All. Prevention is always better than cure, and we find it advisable to spray the plants once or twice a month in all the warm divisions, choosing a day when the outside conditions are favourable for the purpose.

HEATING.—The varied facilities provided in the shape of boiler power and piping naturally have their advantages and disadvantages, which very materially affect the results produced in the cultivation of orchids. It is now many years ago since I drew attention in these columns to the necessity of the provision of ample piping in every department of our orchid houses. I am still of opinion that sufficient care has not yet been generally observed in this matter. The horticultural builder mostly sticks religiously to his hard and fast rules, i.e., that the amount of piping specified is ample. The fact that the greater amount of piping used will give the necessary heat with less firing and far less deplorable results is generally overlooked. Growers and their enthusiastic employers have of late years given more attention to this matter, but there is still plenty of room for improvement, and I would impress any who may be contemplating the erection of houses to see that more than sufficient piping is used. The initial outlay may be considerable, but it will soon be balanced by the saving in fuel.

WATERING.—One of the greatest difficulties during the prevalence of unfavourable outside conditions is the proper application of root moisture. There may not, perhaps, be so much judgment required in absolutely hard weather as is necessary during lengthy periods of foggy or dull weather. When there is obscured light the drying conditions are naturally reduced, and a general tendency to stagnation is prevalent, and I always feel that with such conditions one cannot be too careful. With low temperature plants are not nearly so liable to injury when dry as when they are in a wet state at the roots. Care must also be observed that the water used is, if possible, a degree or two higher than the normal temperature of the house. After heavy rains, or where snow water is finding its way to the rainwater tanks, it will be found that the temperature of the water becomes very low, and before using such water sufficient hot water should be added to raise the temperature to the required degree.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

FORCING PLANTS.—From this time onward forced plants will come forward well, and those who have been able to wait so long before beginning will be repaid for the delay by the better quality of flowers produced. To those who have plenty of convenience for forcing the work is easy, but in many cases makeshifts have to be used, and to those who have very little choice it is far better to begin with a comparatively low temperature than it is to give much heat, as the latter frequently defeats the end in view entirely, and invariably tends to the production of flimsy flowers that are all but useless for cutting. Shrubby plants, such as azaleas, staphyleas, guelder roses, and lilacs enjoy a moderate temperature in a house where they can be freely and frequently syringed; spiræas cannot be given too much water, they revel in it from the time they begin to grow.

WINTER-FLOWERING CARNATIONS must be struck early to obtain good plants by the autumn; some growers have already secured an early batch, but successional plants are very useful when room can be found for them, and the present is an excellent time for putting in the cuttings. As most varieties will now be producing plenty of side growths the shoots should be pulled out in the form of pipings, and the knife not used. Use sand freely in the cutting pots, and make each piping firm; water well in, and after having allowed the pots to drain, plunge them in a fairly brisk hotbed. The tops should be kept cool, and the soil warm.

ASPIDISTRA LURIDA VARIEGATA.—No garden should be without a stock of this most useful plant, but, vigorous as it is, fresh plants have to be established. It increases readily by division, and when given a good start, in smart bottom heat, it makes roots rapidly. The present, therefore, is a good time to propagate. A light and porous soil should be used, one containing a good portion of lime rubble being preferable; the pots used should be well drained, as copious waterings are essential when the plants are well rooted. I find that three-inch pots are the most convenient to use, as the plants can be placed directly from these into 4½-inch pots, which are the most serviceable for furnishing. The crowns, or roots, should be broken up into pieces suitable to the size of pots, and pressed in firmly. Little water will be required until growth is active, and at no time until the pots are well filled with roots should liberal waterings be given. Then, however, they will demand abundance, and be benefited by occasional waterings with soot water.

SOWING SEEDS.—For the majority of plants it is full early for sowing seeds, but some things, such as hybrid streptocarpuses, Saintpaulia ionantha, tuberous begonias, and others which are treated as annuals, if allowed plenty of time to grow, can hardly be sown too soon if space and other conveniences can be given them. The above have very fine seeds, which must be sown on the surface in pots carefully prepared by being well drained to within two inches of the rims, and filled up with a sandy soil, which should be quite level, and well watered before sowing the seeds. Place the pots in heat, half plunging them in the hotbed material; cover with glass, and shade always during the day. The streptocarpuses are especially impatient of sunlight, and should never be neglected in the matter of shading.

LILACS.—Very few shrubs respond so readily to a genial temperature as the lilac. Where large bushes of the ordinary white lilac are obtainable, this is a good time to lift them carefully, tie their branches closely together, and set them in any warm greenhouse with a gradually increasing temperature; cover the roots with soil, water freely, and keep the tops syringed daily until the buds burst into leaf. If the white variety is not available, the ordinary purple-flowered sorts are very easily blanched by means of a thick shading. The Persian variety is most useful, and may be kept for several seasons to a serviceable size by giving it a little extra attention during the summer.—T. B. Field, Ashwellthorpe Gardens.

STOVE PLANTS.

PROPAGATION. — To obtain useful crotons and dracænas early in the season, for table decoration or for single-stemmed specimens, I prefer propagation by notching and mossing. For this purpose plants that have lost their lower foliage, but have good healthy tops, are selected. Immediately below the healthy foliage a notch is made on either side of the stem, and the bark removed. Having secured the plant to a stake, some damp moss is placed around the stem and tied firmly. If ordinary moss is used I prefer to mix it with cocoanut-fibre refuse or fine peat and silver sand. The moss must be kept moist, and as the roots appear another layer of moss is added. For the largest and most valuable specimens I prefer to split a six-inch pot in half and tie this around the stem, filling it with potting compost into which the roots very readily run. The tops may be separated from the parent plants as soon as the small pots are filled with roots, the stem being cut through gradually at intervals of a few days. After separation syringe and shade as necessary.

POTTING.—Although the season is not sufficiently advanced for potting in general, some of the more free-rooting subjects may be treated in order to save time later on when so many plants require attention.

ALLAMANDAS.—Those plants that have had a season of rest may be pruned well back into the hard, ripened wood, and potted almost immediately afterwards. Before removing the soil from the roots to prepare for potting, the plants should be wholly immersed in a tank of tepid water, where they may remain until the soil is thoroughly moist; then allow them to drain for a few days. Allamandas succeed best in a compost of good fibrous yellow loam, to which are added a sprinkling of half-inch charcoal and lime rubble, with about a sixth part of well-decayed manure and enough silver sand to keep the compost porous. Use well-drained clean and dry pots, according to the size of the plants, and pot firmly in order to secure short-jointed wood, as this gives the best display of bloom. After potting the plants may be placed in position, and given enough water to settle the soil. Syringe occasionally to encourage growth, but give very little water until the roots are active. Carefully train the shoots to the wires as they become long enough to tie, because if neglected they are likely to become injured.

CALADIUMS.—Early batches of these handsome foliage stove plants never fail to command admiration. We select the earliest ripened tubers, and start them into growth by placing them two inches apart in shallow seed boxes, which have been previously filled with a mixture of silver sand and oak leaf-soil in equal parts. The tubers are lightly covered, and the surface sprinkled with sand. The boxes are placed in a light position in the stove. Only a light damping as the surface becomes dry is needed until root action has commenced. The tubers should be potted up before the roots become entangled. For the earliest batch I prefer small pots, as the plants are then serviceable for house or table decoration. If large specimen plants are desired they must not be allowed to become root-bound, as this retards progress.

GENERAL REMARKS.—During January very little ventilation is required in the stove; if, however, the temperature rises above the required degree from sun heat, and the atmosphere is clear, a little air given judiciously is beneficial. Be careful to close up the house again early, before the sun looses its power, or a waste of fuel will be the result. Continue syringing and damping as previously advised, and towards the end of the month the night temperature may be raised to 68 degrees, with 5 to 10 degrees higher during the day. Pots or soil used for potting stove plants should always be at the same temperature as that of the stove.—John Donoghue, Bardon Hill Gardens.

THE FLOWER GARDEN.

WINTER.—Of late the weather has been very severe, and I fear unprotected tender shrubs and plants will suffer badly. On the slightest rise of temperature above freezing point at once remove temporary protection and let frost out. Many lessons may have been learned during severe weather, if observation has been made. The pleasing effect of the various brightly-coloured barks of shrubs and trees, especially when looking across stretches of water or ice, may have been noted. The scarlet and golden willow, or silver birch, scarlet dogwood, Rubus phœnicolasius in a fairly warm but prominent position, maples in variety, and others, with the sun shining on them, have had an almost dazzling effect. Note should be made of any spot available for planting these when weather becomes suitable. The sea buckthorn is also suitable, and if a green patch or two is desired, gorse or broom may be used.

ROCK GARDEN.—Pay attention to rock gardens, as cleaning and any top-dressing may be done now; pockets from which any plant has been removed should be cleaned out and refilled in readiness for planting. Make sure all plants are correctly named.

WINTER FLOWERS.—A plant that is very acceptable for its sweet-smelling flowers at this season, yet which should not be planted in a mixed collection, but in a spot where it may ramble, is Tussilago fragrans; one can only recommend it for its sweet early flowers, as if once planted where it grows freely it is difficult to eradicate. Hamamelis, with their early flowers, should be planted more than they are; the individual flowers are not very noticeable, but in the aggregate, on a well-flowered tree, are very beautiful.

CLIMBERS.—Flowering and ornamental climbers on arches, pergolas, and sheltered parts of walls should be attended to towards the end of the month, and any old or dead wood be cut out, pruning done, and growths tied in, in readiness for the ensuing season. When pruning pay proper regard to each species and variety; with clematis, those that flower on the young wood, such as Jackmani, Madame E. Andre, Star of India, rubella, etc., will require more severe pruning than those that flower on the previous season's growths, such as Lady Londesborough, Miss Bateman, The Queen, Duchess of Edinburgh, Lucy Lemoine, Albert Victor, etc. The smaller flowering montana type should have an abundance of room, and receive practically no pruning. Jasminum nudiflorum as it passes out of bloom should be pruned, laying in young wood where space permits. With roses, if the old wood was not removed after flowering last summer, this should be done now, replacing it with strong young growths. On cold or exposed positions it is better to postpone pruning until next month, as only on warm sheltered positions is it safe to prune thus early, lest early growth should ensue, and then later frosts come and kill or damage it.

PELARGONIUMS.—If the stock of bedding pelargoniums is insufficient cuttings from the largest autumn-struck ones that have made sufficient growth may now be put in; do not cut small or weakly plants too low, or they may not be sufficiently large when required for bedding. Cuttings may be inserted either singly in small pots or several in larger ones. Personally I prefer single pots, as then there is no damage to the roots when potting. The object should now be to obtain sturdy plants. A temperature ranging from 55 to 65 degrees is suitable for rooting them in, after which a lower one may be given. Use sandy soil, and keep it just moderately moist; shading is quite unnecessary, but do not place the cuttings in a draughty place. The variety Paul Crampel seems to be becoming a very general favourite among the scarlets.

SEEDS.—Many seeds may now be sown, such as Acacia lophantha, eucalyptus in variety, ricinus, pentstemons, antirrhinums, dianthuses, aquilegias, Papaver nudicaule, begonias, etc. Acacias, cannas, ricinus, eucalyptus, and begonias must have a fairly high temperature, the others not so high. Great care must be taken; for the smallest seeds no covering of soil should be given; sow in pots, pans, or boxes, with a layer of leaves, old moss, or roughest of soil over the drainage, then fill with sandy soil, make firm with an absolutely level surface, give a good watering, and allow the pots to stand until well drained, when a light sprinkling of sand may be given, and the seed sown on it. Cover with a sheet of glass, place in a moist atmosphere, and keep well shaded. Never attempt watering overhead, but allow water to soak up from a pail or tub of water. The larger seeds should be just covered with soil and a sprinkling of sand. Cannas and some other large and very hard seeds germinate much better if first soaked in warm water for twenty-four hours, and then have their outer shell just filed through with a sharp fine file; in fact, unless something of this sort is done they often fail to germinate.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

PRUNING.—During frosty weather it is not advisable to prune fruit trees, but as soon as the frost is out of the wood the work should be pushed forward as fast as possible. When pruning plum trees on walls I prefer the trees to be trained fan-shaped, retaining plenty of young shoots here and there for the purpose of replacing old worn out branches. Two-year-old wood invariably produces the finest fruits. Shorten all foreright growths back to within a few eyes of the base; those intended for leaders and for fruiting in between the main branches, etc., should be shortened back to within fifteen inches of the last year's wood. See that the ties and fastening do not pinch the bark, and be careful not to bruise the wood with the hammer. Any old worn-out trees should be grubbed up and replaced with young, healthy, fruitful ones. Young trees that have been planted two or three years and which are growing too coarse and strong to be fruitful, should be lifted and replanted afresh, shortening a few of the strong roots, and relaying them in a little fresh, sweet soil, and then filling up with the staple. I am not a believer in too many varieties, especially if wall space is limited. Do not omit to save grafts, if these are required. They should be tied up in bundles, correctly labelled, and heeled in under a north wall till the season arrives for grafting.

MANURING.—Advantage should be taken of frosty weather to wheel manure on to all fruit quarters and borders where such is needed; short, well-rotted farmyard manure is the best for most purposes. On currant and gooseberry quarters, when the frost is out of the ground, it may be lightly dug in, taking care not to damage the roots, but on newly-planted plots, where it is intended to grow a crop of vegetables between the rows digging may be deeper. A good mulching of manure over the roots of black currants will be found very beneficial, and will assist the bushes to produce stronger wood and reduce the bud mite.

STRAWBERRIES AND RASPBERRIES.—Those intending to make fresh strawberry and raspberry beds should get plenty of manure wheeled up in readiness for trenching when the frost is out of the ground. Trenching early gives the soil a better chance to become consolidated before planting, especially on light soils. Do not forget to examine newly-planted beds after the frost leaves the ground; the plants may have been somewhat lifted and require a good firm treading over the roots. Forced strawberries, if properly hardened and planted about March or April, make fine fruiting plants the following year, and some varieties produce a nice crop during the autumn. Viscomtesse Hericart de Thury and Royal Sovereign both fruit well if carefully attended to. Those who have not grown Givon's Late Prolific should certainly do so; for late use it is the best I have ever grown, the fruits are plentifully produced, and large.

ORCHARD TREES.—These are apt to be overlooked and neglected, but those who make it a practice of attending to them every two years, or annually, will be well rewarded for the amount of trouble and attention given. The heads should be kept somewhat open to allow of light and air reaching the interior of the trees. All cross branches should be cut out, using a saw for the work. Some of those interlacing should be removed, so that instead of the heads being thickets of useless wood and the crops of fruit small and scabby, serviceable fruits will be produced. Good soakings of farmyard liquid manure will greatly help the trees if judiciously applied over and about the roots at this season of the year; it may be given at a much greater strength now, but whatever is applied, enough should be given to penetrate the soil to a considerable depth.

FRUIT ROOM.—The stored fruit should be examined weekly, and any showing signs of decay should be picked out and used at once; do not handle the good fruits if possible, as the least bruise may cause rotting. Air should be admitted on favourable occasions to keep the room sweet. Do not allow hay or straw to remain inside the room till it becomes musty. Our Cox's Orange Pippins are nearly over, and those to follow are Baumann's Red Reinette, Duke of Devonshire, Court Pendu Plat, Scarlet Nonpareil, and Lord Burghley, while of kitchen apples we have Lane's Prince Albert, Bramley's Seedling, Old Round Winter Nonsuch, Dumelow's Seedling, and Anne Elizabeth all keeping well.—H. MARKHAM, Wrotham Park Gardens.

THE UP-KEEP OF BOUNDARY FENCES.

As the Board of Agriculture has frequently received inquiries as to the legal position in regard to the repair of boundary fences, it has now stated in its "Journal," in general terms, the legal position in this respect.

At common law the owners and occupiers of adjoining fields are not bound to fence either against or for the benefit of each other, but each person is bound to prevent his cattle or other animals from trespassing on his neighbour's premises.

A liability to repair a fence can only be created by Act of Parliament, as is done in certain Inclosure Acts and Railway Acts, by prescription or by some agreement or covenant which constitutes a binding contract between the parties. Evidence of such an agreement may be implied by the fact that a person has repaired a fence when called upon to do so; but it depends on the strength of such evidence and the circumstances under which the repairs were made whether it will be sufficient to establish a liability to repair. The fence may have been erected by the owner on his own land to prevent cattle from straying upon the property of a neighbour, and the mere fact that it had been repaired by the owner is not sufficient to establish a liability on his part to keep it in repair, for the habitual repair of a fence is perfectly consistent with the contention that the repairer has kept his fence in order for his own purposes, and is no evidence of any obligation to repair it for the benefit of a neighbour.

To prove a right by prescription very similar evidence is required, showing the uninterrupted enjoyment of the alleged right to enforce repair for a period of forty or in some cases twenty years.

NATIONAL SWEET PEA SOCIETY. ROYAL HORTICULTURAL HALL, July 24th, 1908. PROVINCIAL SHOW, DUBLIN, August 5th, 1908. Now is the best time to join the Society. Subscriptions from 5s.

SWEET PEA ANNUAL. Free to members. 1s. 3d. post free, to non-members. Full particulars from CHAS. H. CURTIS, Hon. Sec., Adelaide Road, Brentford.

EXHIBITIONS AND MEETINGS.

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The Horticultural Club.

"RECENT ADVANCES IN PLANT BREEDING."

On Tuesday, the 14th inst., after the usual monthly dinner of this club, Professor J. B. Farmer, M.A., F.L.S., taking the chair, Mr. E. A. Bunyard addressed the meeting on the above subject, with special reference to Mendel's work, pointing out the immense advantage which the publication of the Mendelian experiments, and the law of heredity which they indicated, had given to selective culture of every kind, the old-fashioned guesswork, with all its uncertainty and consequent loss of time and labour, being now largely replaced by the knowledge that, given a conjunction of certain characters by crossing or hybridising, certain definite results were practically sure to appear in their progeny.

Mr. Bunyard, in his experiments, had followed Mendel's example by selecting the pea tribe as material, and found the results fairly confirmatory; he had, however, conceived the idea that the so-called dominant and recessive characters were not necessarily of a distinct nature. Taking, for example, wrinkled and round peas, or white, pink, or blue flowers, he was of opinion that the difference was merely one of development, the wrinkled peas being an advanced form of the round, while as regards colour it was frequently to be noted that the unopened flower buds might be of a recessive tint, and the dominant tint developing gradually as the flowers matured, passing from white, through pink, to bluish tint as they faded. Mr. Bunyard illustrated his remarks in a very clear manner by means of black and white cardboard discs, the black representing dominant and the white recessive characters, each of which was present in mixed offspring, either in a latent or patent form, and subsequently made their appearance in F2, or the next generation, in strict conformity with the law of chance which underlies the Mendelian law. Thus if 200 wrinkled peas, for instance, be thoroughly mixed with 100 found ones in a bowl, and taken out in pairs by a blindfolded person, those pairs would come out in definite ratios of round and round, wrinkled and wrinkled, and wrinkled and round, precisely in the same proportions as they would reappear by the Mendelian theory and experiments. This, indeed, is the logical result to be expected from the segregation of the two different character potencies existing both in the pollen grains and in the ovules of the plants concerned.

In the subsequent discussion, in which Professor F. Farmer, Messrs. Darbishire, Bilney, Cuthbertson, and Druery took part, the value of Mr. Bunyard's observations was fully recognised, and many interesting points in connection with the subject brought forward. Professor Farmer pointing out the probable extreme complexity of the units, which form what are termed characters, Mr. Cuthbertson adding some interesting remarks anent his own experiments, and citing the singular fact that wrinkled peas appeared to be correlated with lilac or purple flowers. Mr. Druery considered that much of the literature relating to the Mendelian principles ignored to too great an extent the possible disturbing influence of the spontaneous adoption of new characters due to sudden "sporting," since any tendency in this direction would be apt to upset results entirely.

Mr. Bilney referred to hybrid orchids as evidencing, in the first generation, intermediate characters on very diverse lines, which on Mendelian principles should not be the case, but Mr. Bunyard considered that such cases lay outside the scope of the Mendelian experiments, which dealt, as far as possible, with known pure forms. Professor Farmer, in conclusion, pointed out the great value of such meetings as bringing together the scientific and the practical men, each being thus able to profit by the knowledge of the other to mutual benefit. A hearty vote of thanks concluded a pleasant and instructive evening.

French Horticultural Society of London.

On Saturday evening last there was a large gathering at the Café Royal, Regent Street, of members and friends of the above society to celebrate the 19th anniversary of its foundation. Mr. Harry J. Veitch occupied the chair, and among the company we noticed M.M. Lageat, Huguenet (editor of "La Chronique"), McKerchar, Ingram, R. Hooper Pearson, Geo. Gordon, Gaskell, J. Weathers, T. Bevan, J. H. Witty, E. F. Hawes, W. Howe, Hiehle, B. Wynne, Such, Ingamells, and others.

The toasts of "The President of the French Republic" and "The King" having been duly honoured with the usual accompaniment of the "Marseillaise" and "God Save the King," the Chairman then rose to propose the toast of the evening. In wishing continued and increasing success to the society, Mr. Veitch said that when invited to occupy the chair he did not hesitate to accept, for two reasons; one was because he was extremely glad to have the opportunity of expressing his sympathy with French horticulture and with La Belle France, the other because he had watched for many years the expansion of this excellent society which had now a membership of 700 on its books. He was proud to think that the young men who came over here thought they could learn something, and he hoped that whatever knowledge they acquired would be profitable. He noticed that they had several grades of members, one of which was a life membership. Although his firm's name appeared on the list, yet his own name did not, and he would take it as an honour if the society would accept him in that capacity. No occupation was so good as gardening, but, like other professions, it was not free from trouble. It had made great progress during the past 50 years, and he could remember many of the most important introductions during that time. He rendered a tribute to the work of the French, mentioning M. Maron, M. Bleu, and M. Lemoine. He also dwelt on the pleasant experience he had in France as a youth, and his indebtedness to the firm of Messrs. Vilmorin, Andrieux, and Co., with whom he stayed. The present generation would have to step into the ranks of the older one, and he hoped they would use their opportunities well. They would have to work if they wished to succeed, but he was not one of those who wished them to do nothing else. Work, however, must come first, and play afterwards.

Mr. Veitch reminded them of the American competition in apples which had flooded the European markets, as a proof of the necessity for exercising their skill in horticulture generally. The society was one that helped them. Through its influence they could form friendships, many of which, and often the best, when formed in youth, lasted a whole lifetime. He reminded them of the success of some of their members, instancing that of their former secretary, M. Louis Gentil, and concluded by saying that, if in future he could assist them or any of their friends, he would always be pleased to do so. He had much pleasure in proposing "Continued and Increasing Success to the Society," and would call upon their worthy president to respond.

Mr. George Schneider, in returning thanks, said that Mr. Veitch's title to their consideration was known to all, and his geniality to their young people was proverbial. He thanked him for his kind words, and he would add that his hospitality in entertaining the society at his residence at East Burnham was not forgotten. Through Mr. Veitch's kindness they had largely been helped in the foundation of the society, therefore it was only right that he should occupy the position he did that evening. The society had received the generous support of the English trade, and he was grateful for their help, for it must not be forgotten that their young men were not rivals. They came here to learn and then go back and help to improve the good fellowship between the horticulturists of both countries. He had much pleasure in drinking to the success of English horticulture.

Mr. J. McKerchar followed with a humorous speech. He hoped that in future all rivalry between the two countries would be confined to the friendly rivalry in horticulture, and that by closer intercourse the two peoples would know each other better. The society had been assisted in the past by the help of former chairmen, to whose health he would ask them to drink.

On behalf of past chairmen Mr. Harman Payne replied, referring briefly to the death of Mr. Arnold Moss, and to the enforced absence of M. Philippe de Vilmorin. The society had been helped largely by the officers, one of whom—M. Ripard—had very kindly decorated the tables with great taste, and to whom their thanks were due. Mr. Ripard briefly replied, expressing the society's obligations to the horticultural Press for much valuable assistance. To this toast Mr. George Gordon returned thanks.

Other toasts were "The Chairman," proposed by M. Lageat, and "The French Press," proposed by the Chairman, and responded to by M. Huguenet, of "La Chronique."

There was an excellent musical programme, and the whole proceedings were of the most enjoyable character.

The Linnean Society.

THE CABBAGE FAMILY.

In various places on our sea coasts the wild cabbage grows in the form of a somewhat fleshy-leaved weed with small yellow cross-shaped flowers, and no one, looking at it, would imagine that such a plant could be the origin of the wonderful wealth of nutritious vegetables which we possess in the shape of cabbages of various forms, shapes, and colours, kales of equal variety, cauliflowers, broccoli, Brussels sprouts, and even that singular turnip-like form, kohl rabi. It is, however, beyond all doubt that it is to the peculiarly sportive nature of this weed, and its singular capacity of responding to high culture, that all these varieties are due. Our seedsmen's catalogues will also show us that each of these types has given innumerable sub-varieties, so that there are hundreds of varied descriptions.

The process of selection which has led up to these is, however, still going on, and Mr. Arthur W. Sutton, F.L.S., of the well-known Reading firm, gave a most interesting paper at the Linnean Society on Thursday, the 16th instant, which, being illustrated by a large number of lantern slides, showed how even this multitude of forms could be increased by crossing, several new ones of great value being exhibited, such as combinations of Brussels sprouts with the savoy and other cabbages, increasing size and weight, and consequent food value. Independently, however, of such acquisitions, the experiments described by Mr. Sutton had for their object the settlement of the vexed question among seed growers as to how far plants of these different forms, grown for seed, could be safely associated without risk of deterioration by intercrossing, a risk which has on more than one occasion led to lawsuits, seed supplied having mysteriously yielded inferior or even worthless crops, although derived from apparently reliable sources. In this connection it is not merely the cabbage species proper (Brassica oleracea) which is concerned, but its near allies, the turnip, the swede, and the rape, which, as Mr. Sutton's slides clearly demonstrated, are capable of intercrossing to some extent, a possible result being that a crop of turnip seed may be so affected by neighbouring rape pollen that few or no turnips would result, the rape influence predominating.

The paper had also considerable interest from the purely scientific side, and a number of prominent scientists were consequently present to hear what evidence the experiments afforded in connection with the Mendelian theory, or rather, law, of inheritance of characters, and it was noted with great satisfaction that, although the families concerned were of such a variable nature, the ratios in which the two parental characters of crossed forms came out separately and clearly in the next generation but one, agreed closely with what that law would lead us to expect. Returning to the question of purity of seed crops, it was clearly established that certain varieties and species might quite safely be grown side by side, or even intermixed, without the least risk of crossing; while others crossed so freely under like circumstances that a more or less impure and mongrel crop of plants was sure to result from their seed. The long series of experiments concerned had therefore had a threefold value, by giving us new and improved vegetables for culinary purposes, instructing seed growers as to what crops might or might not be grown in association, and finally by adding some important data to our scientific knowledge of the laws underlying inheritance which, until Mendel's theory was published, remained an apparently insoluble enigma.

Professors Farmer and Percival, and Mr. Bateson, in the subsequent discussion, emphasised the value of Mr. Sutton's experiments, especially from the scientific point of view. The additional paper on the tuber-bearing solanums was unavoidably postponed owing to lack of adequate time.

Weybridge Horticultural Society.

The January monthly meeting of this horticultural society was held onTuesday evening last, the president, J. Lyle, Esq., presiding. Over fifty members were present. Mr. Goatley, of Sutton Place Gardens, Guildford, gave an instructive lecture on "The Cultivation of Calceolarias and Cyclamens." Many useful hints were given by the lecturer, and they should prove valuable to the members present.

Well-grown amaryllis, primulas, freesias, and Brussels sprouts were staged by members, and a discussion on the lecture and exhibits closed a successful opening meeting for the year.

London Dahlia Union.

The annual meeting of this body was held at the Horticultural Club, Hotel Windsor, Victoria Street, S.W., on January 16, when Mr. John Green presided. There was a fair attendance, and most of the leading dahlia growers were present.

After the preliminary proceedings the report and financial statement were presented as follows:—

COMMITTEE'S REPORT FOR 1907.

Though only constituted as a society in 1904, your committee are gratified to find that the interest in the dahlia is fully maintained, and to report that the year's working has been of a most satisfactory nature.

The annual exhibition was again held in the Gardens of the Royal Botanic Society, at Regent's Park, by kind permission of the Council, to whom the best thanks of the members are due. It was generally acknowledged by all who visited it that the show was the finest yet held under the auspices of the union. The best thanks of the members are therefore due to the exhibitors who so readily came forward and assisted in forming so grand a display.

Your committee are also pleased to find that the membership is steadily increasing, and desire to ask all members of the union to introduce at least one new subscriber during the year.

It is also satisfactory to note that at the end of the year's working the union has a balance of assets over liabilities, amounting to £11 6s. 8d., and this after carrying on a bolder propaganda for bringing the work of the union before the notice of the dahlia-loving world than previously.

Your committee are at present unable to state definitely the place and date of the exhibition for 1908, as they are negotiating with the various authorities, but they hope to decide the matter as early as possible.

The best thanks of the union are also due to the Press, and other kind friends who so ably assisted at the exhibition, to the donors of special prizes for their continued support, and also to the Horticultural Club for allowing the use of their rooms for the meetings.

FINANCIAL STATEMENT 1907.

RECEIPTS.

	£	s.	d.
To Balance Brought Forward	23	8	6
Annual Subscriptions, 1907	34	2	6
Special Prizes, 1907	7	9	6
Gate Money (Royal Botanic Show)	14	3	0
Hire of Vases	0	8	6
Unpresented Cheque	0	3	6
	£79	15	

EXPENDITURE.

	£	s.	d.
By Dean Medals, 1906	3	12	0
Prize Money, 1907	29	7	0
Dean Medal Dies, 1906 ...	6	8	0
Honorarium to Miss Dean	5	0	0
Dean Medal to Miss Dean	1	16	0
Printing, etc., 1907	1	11	0
Advertising	3	3	6
Postage, etc.	2	11	7
Sundries	0	5	9
Balance at Bank	26	0	8
	£79	15	6

LIABILITIES.

	£	s.	d.
By Prizes Outstanding	18	17	0
Dean Medals	3	12	0
Printing account	3	11	0
Balance of Assets over Liabilities	11	6	8
	£37	6	8

ASSETS.

	£	s.	d.
Balance in Bank	26	0	8
Subscriptions due	5	0	0
Special Prizes due	1	10	0
Dean Memorial Dies, less 25 per cent.	4	16	0
	£37	6	8

These were adopted without dissent.

Mr. John Green was re-elected president; Mr. E. F. Hawes was re-elected secretary; Mr. R. Ballantine was re-elected auditor; and the four retiring members of committee were also re-elected, and in every case the election was unanimous and accompanied by hearty thanks for services rendered. A few slight alterations of rules necessary to keep pace with the times were made.

It was agreed that the Dean Memorial medals should be awarded to pompon dahlias in 1908. Mr. J. Green observed that he proposed to conduct an extensive trial of garden cactus dahlias at Dereham during 1908, and he suggested that three members be elected to visit these trials, and make awards in conjunction with representatives from the National Dahlia Society, etc. The matter was left in the hands of the committee, as also was the revision of the schedule.

A vote of thanks to the president concluded the proceedings.

British Gardeners' Association.

At the last meeting, Mr. C. Foster in the chair, ten new members were elected, bringing the total up to 1,138. A keen discussion took place as to turning the quarterly "Journal" of the association into a monthly publication. It was eventually decided in favour of a "monthly" after the next quarterly issue, which would complete the year, and subject to full details as to cost, etc., to be submitted at the next meeting.

A resolution in favour of legislation in Parliament for the establishment of old age pensions was carried, and Messrs. Lewis and Little were appointed a sub-committee to watch the procedure and report any progress made. A sub-committee was also appointed to prepare a practicable scheme for the examination of gardeners, the details to be ready by the annual meeting.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, January 14.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Dr. Farmer, Messrs. G. Nicholson, C. T. Druery, E. M. Holmes, J. Douglas, H. T. Güssow, W. Cuthbertson, G. Gordon, C. H. Hooper, W. C. Worsdell, G. Saunders, and F. J. Chittenden (hon. sec.)

WEEVILS ON GREASEBANDS. — Mr. Saunders reported that the three weevils captured on the greasebands shown at the last meeting belonged to a species of Magdalinus, but they were too much battered to make out the exact species. There appears to be no record of them attacking plants to a serious extent.

MALFORMED FLOWER OF DENDROBIUM NOBILE.—Mr. Worsdell reported that he had examined the very curious malformed flower of Dendrobium nobile sent from the R.H.S. Gardens to the last meeting. He found an attempt at the making of a dimerous flower, but the attempt was partially abortive. Two sepals only were developed, and two petals, one lateral, the other half of the form and colour of the labellum, and half of the form and colour of an ordinary petal. The latter petal was inserted partly in the position usually occupied by the labellum, and partly in the position normally occupied by one of the other petals. The ovary had aborted.

ORNITHOGALUM LACTEUM.—Mr. E. M. Holmes showed a flowering specimen of this plant sent from the Cape. The bulb had not been planted, nor, apparently, supplied with moisture.

FASCIATED HOLLY.—Dr. Farmer showed a curiously fasciated and twisted specimen of the common holly. The stem was fully an inch in breadth, and curled round at the apex.

COLOUR AND SCENT OF FLOWERS.—Mr. Douglas raised the question as to whether there was any relation between the colour and scent of flowers, remarking that there certainly seemed to be in the case of carnations. The subject would apparently repay investigation.

INOCULATION OF LEGUMINOUS PLANTS.—Mr. Chittenden produced a copy of the suggested plan for carrying out a trial of the effect of inoculating peas with cultures of nodule forming bacteria at Wisley, and explained the manner in which it was intended to estimate the result, etc.

DISEASED PLANTS.—Several specimens of diseased plants were received and dealt with.

Chorlton-cum-Hardy Amateur Gardeners' Society.

At the first annual meeting of this society Mr. Woodall presided. There was a large attendance, and the Chairman remarked that it was with very great delight he looked back upon what this society had done during its year of existence. They could boast of a membership of 250, and officers who had performed their duties to the utmost satisfaction of all. They had formed a library, with about 40 books. They had had two outings during the summer, one to Earl Egerton's Gardens at Tatton Park, Knutsford, and the other to Mr. Bell's (Mayor of Stockport) Gardens. They had also held a summer show in August, when 200 entries were received. The lectures and social evenings had been instructive and enjoyable, and they had also been the means of starting another society called the "Didsbury and District Amateurs' Society."

Mr. Woodall then went on to say that the Chorlton Society had a very bright future before it, and he hoped the gentlemen elected for the different offices would carry on the work efficiently.

The Secretary (Mr. W. Scott) said the society was doing its utmost at the present time to acquire a piece of ground suitable for about fifty allotments, and he hoped to be able to report a settlement in a few weeks. The dates had been fixed for three shows for 1908—a rose show on July 18; a summer show on August 22; and an autumn show on November 14.

The Treasurer (Mr. J. Carroll) reported an income of £58 10s.; expenditure, £49 2s.; and balance in hand, £9 8s.

A hearty vote of thanks was accorded to all the retiring officers, and these were re-elected, and six new ones added.

GARDENING AND GARDENERS.

The article by "A. G. B." on "Recognition of Gardeners" in your issue for December 28 is interesting to all who have the best interests of the profession at heart; but I much question whether the remedies he proposes will prove to be the panacea for all the ills under which the gardener labours, and while I shall be the last to raise my voice against examinations in practical horticulture, or any other subjects that will tend to his improvement and fit him for a position of trust and responsibility, I question whether "A. G. B." is not making a grievous mistake when he supposes that such will have the effect of lifting the profession, and those who follow it, on to a higher plane in the world's estimation.

But before pursuing this line of thought further, and with the article in question before me, I am bound to ask—is the gardener that lowly and much-despised creature which seems to be suggested? I think not. I have moved about the country, and have invariably found that men holding respectable and responsible positions as gardeners, whether in private, public, or business establishments, are looked upon as men of intelligence and respectable social position; and surely the standard of excellence to which gardening has been raised and is found to-day has been brought about very largely by these, whom your correspondent appears to very much underestimate because, maybe, some of them lack that scholarly ability which we are asked to believe is going to revolutionise the profession.

Please do not misunderstand me. I do not underestimate the importance of education, but one cannot shut their eyes to facts; these very men who have done so much for British gardening have been trained in the severe, but best of all schools—practical gardening; and while "A. G. B.'s" remarks about the grading of gardeners by the B. G. A. as apprentices and under gardeners, may be all very well for those entering upon their life's work, and who have chosen gardening as their profession, I ask—where will he place those to whom I refer? Will he, because they are unable to give answers to questions in horticulture set in examination papers, in the form of highly finished written papers, but who are, nevertheless, thoroughly practical in their profession, pass them by as amongst the "unfit"? Or what provision does he propose for them whereby they may become possessors of this much-prized certificate? Surely there is a way out of the difficulty, if it be so very necessary to obtain it?

My suggestion is to hold an examination under the auspices of the R.H.S., in practical gardening, in two parts, viz., "viva voce" and "practice." Subject these men to answering questions orally, and then subject them to practical tests, as seen in their manner of procedure to carry out certain work requiring skill and practice, and methinks many of them will "romp home" easy firsts, and with honours, whilst those who may have made progress in the written work by reason of some scholarly ability and cramming will find great difficulty in reaching home at all.

With regard to the step taken by the L.C.C. with reference to certificates, it is good in so far as it goes in acting as a stimulus to the young men to read up subjects bearing upon horticulture and become more observant in their work, and to improve their general education; but this is exactly where my suggestion seems to me to be of most effect, as there are, no doubt, many men who are amongst the best of the Council's gardeners, capable, trustworthy men, but lacking in that general education which would enable him to take a certificate in a written examination, but none the less men of intelligence, and we do them great wrong if we make no provision for them.

"A. G. B.'s" suggestion to our leading nurserymen, I am afraid, will fall upon deaf ears. What the nurseryman requires, and always insists upon (and I trust always will) is the man who is thoroughly practical, and what he invariably asks is not "What certificates do you hold?" but, "Where have you received your training which fits you to hold the position for which you offer yourself?" And just in proportion to the training the applicant has received does the nurseryman form his opinion of the man's fitness; and while there is much to be said in favour of certificates, no one can deny this is the safer method to adopt. For this reason I much prefer the old-fashioned idea of apprenticeship, where the lad starting on his life's work has to serve a term of years and at the expiration of the period arranged, which may be four or five years, receives his indentures or a testimonial to the effect that he has been trained in practical horticulture, to the one whereby many doubtlessly are "pitchforked" into the gardening world (as "A. G. B." remarks), and are, by reason of a fair education and reading up gardening subjects, able to take the certificate; but many of whom in practice would be more or less failures, for the simple reason that they have drifted into the profession without any serious attempt to become proficient in it. These latter are not the men our nurserymen are looking for, neither are they those who are calculated to materially alter the status of the gardener.

Depend upon it this social improvement will come just in proportion to the number of lads of high moral character who enter the profession with a fixed determination to master it, and make themselves respected in the world, not only for their knowledge of gardening (which is most important), but by the loftiness of their character and the influence for good they bring to bear upon those around them. In this way will the profession be lifted higher by each individual effort; and it is here that the crux of the matter lies in so far as the rising generation is concerned; we want it made attractive to this class of youth. The difficulty is how to do it. In so far as moral tone is concerned depend upon it we who are now in the profession may do much in this way. "Like begets like." Let us not forget that old proverb. Lads of high principle will to a certain degree be attracted as we do our part; but there must be more, it must be made more lucrative. Ah! there's the difficulty, but depend upon it that is the key to the situation. And good as certificates may be I do not believe they are going to make that difference which "A. G. B." suggests.

Surely "A. G. B." does not mean that the labourer is incapable of the same high moral character as the gardener? If so, I strongly resent such an idea: for this great highway is peopled by no particular class; the king and the peasant have equal rights and opportunities to tread its well-worn paths, and many of those found there are the humble labourers. Again, surely "A. G. B." is forgetting the high esteem in which many garden labourers are held by their employers, who, whilst recognising in the gardener a man whose calling and training has made more intelligent, and who respect him very highly as such, still fail to see any great gulf between the two in moral character. And surely your true garden labourer is a skilled labourer in the true sense of the word, for there is a wide difference between him and the class of worker we call the "general labourer." And so I would urge that, whilst anxious to improve the status of the gardener, we should be careful lest we place ourselves in the position of the Pharisee. L. B.

Dulwich.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

RHODODENDRONS.—S. N. C., Devon: Your question will be answered in our next issue.

PÆONY - FLOWERED DAHLIAS. — D. W. C. R., St. Paul, Minn.: We believe the raisers, or at least the original introducers of pæony-flowered dahlias were the Messrs. Copijn, of Groenekan, near Utrecht, Holland.

SCARLET SALVIAS.—B. C., Leamington: Cut back the old plants at once, and place them in a warmer house, near the glass. Here they will soon commence to grow, and as soon as these new growths are large enough they should be taken off and inserted as cuttings in sandy soil.

YORKSHIRE GALA.—S. M., Sandy: The secretary of the Yorkshire Gala Committee is Mr. Fred Arey, Davyhill Chambers, Davygate, York. You should procure a copy of the "Gardening Year Book" for 1908 (1s. 2d. post free, from Messrs. W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.), as it contains a complete list of horticultural societies, with name and address of secretary in every case. It is a useful book in other respects, and very handy for the desk.

FAILURE WITH CHERRY TREES.—J. W. W.: Provided the trees were carefully planted we fail to understand why so large a percentage have failed altogether. Too often trees are not properly cared for when received from the nurseryman; when unpacked they should be at once laid in in moist soil, and if they appear dry they should first of all be immersed in water for a few hours. The great majority of early failures must be attributed to carelessness in this respect or in planting. We assume you staked the young trees, but you tell us so little we can only guess at the cause. Perhaps you can supply us with further information.

PEAT MOSS v. STRAW LITTER. — M. E. G., Devon: Two years ago experiments were conducted at Wye Agricultural College for the purpose of discovering the relative merits of peat moss litter manure and straw litter manure. Considered only for their fertilising matter, analyses showed the following results:—

	Peat Moss.		Straw.
Nitrogen	.83	...	.45
Phosphoric Acid	.10	...	.32
Potash	.17	...	1.64

Ignoring the mechanical effect altogether, it will be seen that peat moss litter is far richer in nitrogen than straw litter, and poorer in potash and phosphoric acid. But it must be remembered that potassic and phosphatic fertilisers can be purchased more cheaply than nitrogenous ones.

POTTING LÆLIA ANCEPS.—S. J. B., Sevenoaks: It is too early yet to pot Lælia anceps. This orchid needs a fairly long season of rest after it has flowered, longer, perhaps, than any other orchid needs. After flowering it should be kept at the coolest end of the house, and given little or no water for some time to come. Late in the spring new growths will begin to appear, and new roots quickly follow; this is the proper time to pot or repot Lælia anceps. You do not say in what condition your plant is, therefore we are unable to advise you whether it should or should not be potted. It is surprising how little root room this orchid needs and how long a plant will remain in good condition in a quite small receptacle suspended from the roof.

AGRICULTURAL SCHOOL IN HAMPSHIRE.—F. E. C., I. of W.: You had better apply to Mr. J. C. Newsham at the Hampshire School Farm, Basing. At this school provision is made for training lads or young men in winter and women in summer. The winter course lasts for twenty-four weeks and is thoroughly practical. Indoor instruction for about one hour is given each morning and afternoon. As regards outdoor work, the lads are divided into four groups, each taking a month at farm work, in the dairy, with the poultry, and in the garden. Once a week they are taken to Basingstoke market. The summer course is designed mainly for women, and is divided into three periods of five weeks each. It is largely devoted to dairying. The fees for pupils from Hampshire are 10s. per week for those connected with dairy work or farming, and 15s. for other Hampshire pupils, including board, lodging, and tuition. All other pupils, £1 5s. per week. The farm consists of 71 acres, 31 acres being dry pasture, 15 acres water meadow, and the remainder arable. There is also a specially built dairy and a garden of about one and a-half acres.

ROSES.—E. T., Walsall: Carefully remove the loose surface soil, and then cover the whole area of the rose bed with half-decayed manure, making this firm with the back of the fork and covering it with some of the surface soil removed. The manure should be rich, but not wet or rank; decayed cow manure that is readily workable, is good material, especially for light soils. A good artificial dressing to be applied in early spring and hoed or forked in and also watered in, consists of 12lb. of superphosphate of lime, 10lb. of kainit, and 1lb. of sulphate of iron, all well mixed together, and then used at the rate of ½lb. of the mixture to each square yard. In May and June, if the weather be at all dry, and the soil at all light, it is a good plan to dissolve a quarter ounce each of sulphate of ammonia and nitrate of soda in two gallons of water, and give this quantity to each rose tree or bush once every week or ten days. Clear soot water is also an excellent stimulant and fine for syringing the leafage to keep insect pests at bay, but it must be very carefully used when roses are expanding, or, clear as it may be, it will leave marks on the delicately-hued petals.

. . THE . .

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IN THE

GARDENERS' MAGAZINE,

February 8th and 15th.

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NAMES OF PLANTS.

W. D. P., Wareham.—Zygopetalum Mackayi.

G. E. J., Cirencester.—1, Exacum affine; 2, Asparagus retroflexus; 3, Semele androgyna.

N. W. T., Evesham.—1, Jasminum nudiflorum; 2, Chimonanthus fragrans.

E. J., Wimbledon.—1, Eupatorium ianthinum; 2, Maxillaria variabilis; 3, Odontoglossum Adrianæ.

B. S., Ripon.—1, Ipomæa Horsfallæ; 2, Acrostichum crinitum; 3, Gymnogramma Laucheana.

THE ART OF STOKING.

A correspondent by no means unknown to our readers contributes the following note, among other gardening items, to the "Estate Magazine":—

Very great advances have been made in the heating of glass houses since the old days of brick flues, and much credit is due to hot-water engineers for the introduction of various makes of boilers which heat quickly and with a minimum amount of fuel. It is part of the professional gardener's business to learn how to stoke and know something of the principles which govern the circulation of hot water. Stoking, in fact, is one of the first lessons that a gardener has to learn, and many of mature age doubtless remember the time when they marched from fire to fire on wintry nights banking up, or turned out in the small hours of the morning when the thermometer registered many degrees of frost to start the fires going and get the heat up. This is the only way to learn stoking, and, assuming that all professional readers have acquired the knowledge in the school of practice, I will direct my remarks to members of the amateur fraternity who become possessors of conservatories and greenhouses, and have to undertake the responsibilities of heating them.

The amateur, by the way, who has aspired to the possession of a small greenhouse, often finds that his troubles have begun when the winter comes along, and he has to adopt artificial means of heating, because it is much more difficult to regulate the temperature in a small structure than a large one. The length of piping is short, the quantity of water to be heated small, and if great care is not taken in the manipulation of dampers the fire rattles away and the water is heated to boiling point, which means emptying of pipes and a lot of additional trouble. When the pipes are heated so much that it is hardly possible to bear the hand on them, the house gets suffocatingly warm, and if the boiling should take place in the night, when no one is at hand to give attention, the chances are that the house may be quite cold by morning. This is the amateur's trouble with his heating arrangement, the house is either too hot or stone cold, and either extreme is bad for plants. Fortunately, however, boiler-makers have realised these difficulties, and have overcome them to some extent by introducing boilers of sufficient capacity to heat small houses, and the fire can be regulated so that it will burn slowly and maintain a steady heat. A boiler, like a motor-car, wants understanding, and, having become accustomed to whatever kind of apparatus is used, the thing is to attend to cleanliness and detail. "Keep your bars clear" was the advice given to me years ago by an old gardener, and I have proved the value of it scores of times. A whole furnace full of fire will not heat the pipes if the bars are choked with dust and ashes, but if the latter are clear, and there is a good draught, a small handful of fuel will suffice. Before banking up a fire for the night it should be well cleared of clinkers and cinders, and a few ashes put on the top of the fuel are a means of economising the same. A little experimenting with the dampers puts one in the position of knowing how long the fire may be expected to last and keep up a gentle heat, and when one has acquired this knowledge the principal difficulties of heating a small house are overcome. As I said before, the chief thing is to avoid extremes of heat and cold.

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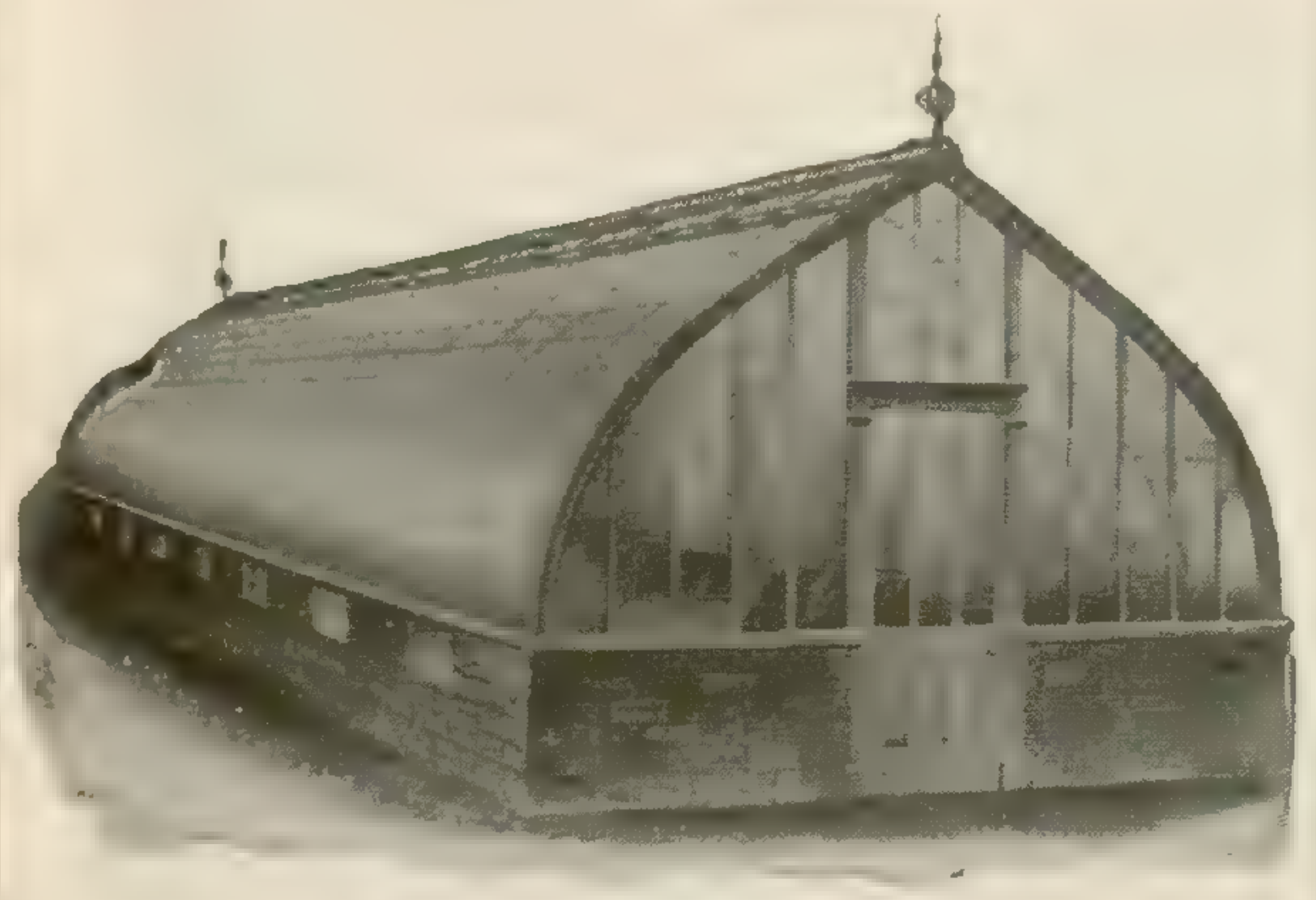

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OBITUARY.

◆

MR. J. R. PETCH.

At the advanced age of 71 years Mr. J. R. Petch passed away on Sunday, January 12, at St. Peter's Hospital, Covent Garden, after undergoing an operation. The deceased was very widely known among horticulturists, as he was formerly a traveller for Messrs. Richard Smith and Co., of Worcester, and latterly for Mr. L. R. Russell, of Richmond. Mr. Petch was at one time in business for himself as a florist and seedsman, at Saffron Walden, but gardeners of the elder generation will remember him as head gardener to Samuel Mendel, Esq., at Manley Hall, Manchester. He was a splendid cultivator, knew plants well, and had a fine collection under his charge. It will be remembered that one of the most beautiful of cattleyas (C. Mendeli) was named after his employer. Mr. Mendel was a successful cotton merchant, and he gave Mr. Petch some cotton seeds to experiment with, the result being that to Mr. Petch must be accorded the honour of first cultivating cotton successfully in this country. The cotton he produced was spun into yarn by a hand loom weaver engaged by another celebrated horticulturist—the late Mr. Samuel Barlow, and some handkerchiefs were made and presented to Mr. Mendel on his birthday. This little episode created a good deal of interest at that time.

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Bouvardias	per doz. bun.	4	0		5	0
Carnations	per doz. blms.	2	0		3	6
,, ...	per doz. bun.	7	6		10	6
Cattleyas	per doz.	10	6		12	6
Chrysanthemums	per doz. bun.	3	0		7	6
Croton leaves	per bun.	1	0		1	6
Cyclamens	per doz. bun.	5	0		6	0
Cypripediums	per doz. blms.	2	0		3	6
Daffodils	per doz. bun.	2	0		3	6
Eucharis	per doz.	2	6		4	0
French fern	per doz. bun.	1	0		3	0
Gardenias	per doz.	2	6		3	0
Hyacinths, Roman	per doz. bun.	6	0		7	0
Lapagerias	per doz.	1	0		2	0
Lilac	per bun.	3	6		5	0
Lilium auratum	per bun.	2	6		3	0
,, tigrinum	per bun.	1	0		2	0
,, speciosum	per bun.	1	3		2	6
,, longiflorum	per bun.	2	6		3	0
Lily of the Valley	per doz.	6	0		12	0
Marguerites, white	per doz. bun.	2	0		3	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	6		3	6
Narcissus	per doz. bun.	2	0		3	0

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Aubergines	per doz.	1	6		2	6
Beans, French	per lb.	0	6		0	8
Beet	per bush.	1	3		2	0
Brussels sprouts	per ½-bush.	1	3		2	0
Cabbage	per tally	3	0		5	0
Carrots	per doz. bun.	1	0		1	6
,, French	per pad	2	3		3	0
,, ...	per bag	2	6		3	0
Cauliflowers	per tally	5	0		10	0
Celery	per bundle	0	9		1	0
Celeriac	per doz.	1	6		1	9
Chicory	per lb.	0	3		0	4
Cucumbers	per doz.	3	0		6	0
Endive	per doz.	1	6		2	0
Greens	per bag	1	6		2	6
Horseradish	per doz. bun.	10	0		12	0
Leeks	per doz. bun.	1	6		2	6
Lettuce, cabbage	per doz.	1	3		2	0
Mint	per doz. bun.	0	9		1	0
Mushrooms	per doz. lb.	7	0		12	0
Onions, Valencia	per case	5	0		6	0

FORTHCOMING ENGAGEMENTS.

MONDAY, January 27.—National Chrysanthemum Society's Floral Committee Dinner, at Carr's Restaurant, Strand, at 6.30 p.m.

TUESDAY, January 28.—Royal Horticultural Society: Committees meet at 12 o'clock; Scientific Committee at 4 o'clock; Lecture at 3 p.m. on "Self-coloured Photographs of Alpine Flora," by Mr. Waltham.

WEDNESDAY, January 29.—Society of Arts Meeting.

FRIDAY, January 31.—Twenty-first annual meeting of the Croydon Chrysanthemum Society, at the County Hotel, Croydon, at 8.30 p.m. The Mayor (H. K. Moore, Esq., J.P.) will preside.

SATURDAY. February 1.—Liverpool Horticultural Association Meeting.

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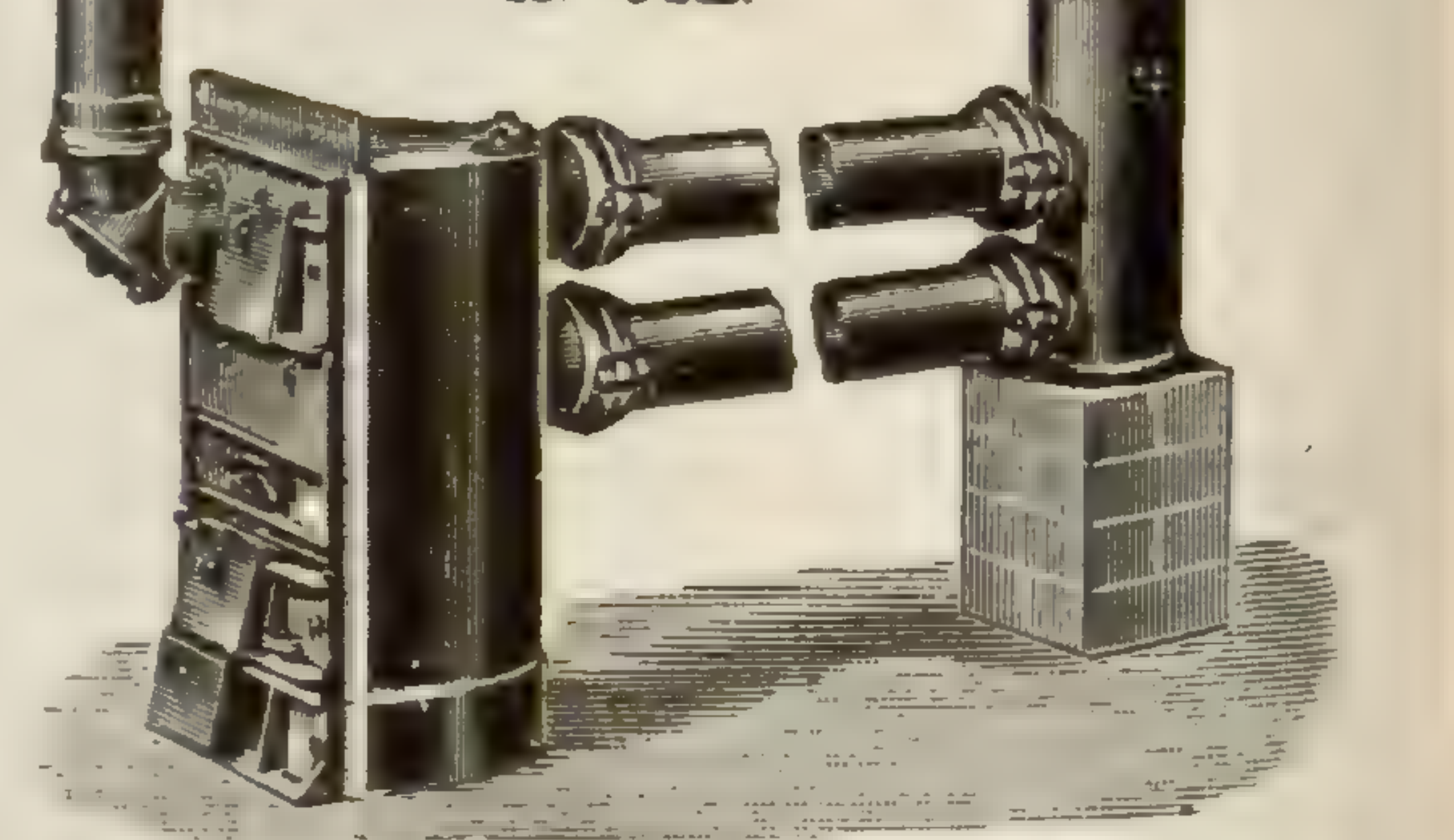

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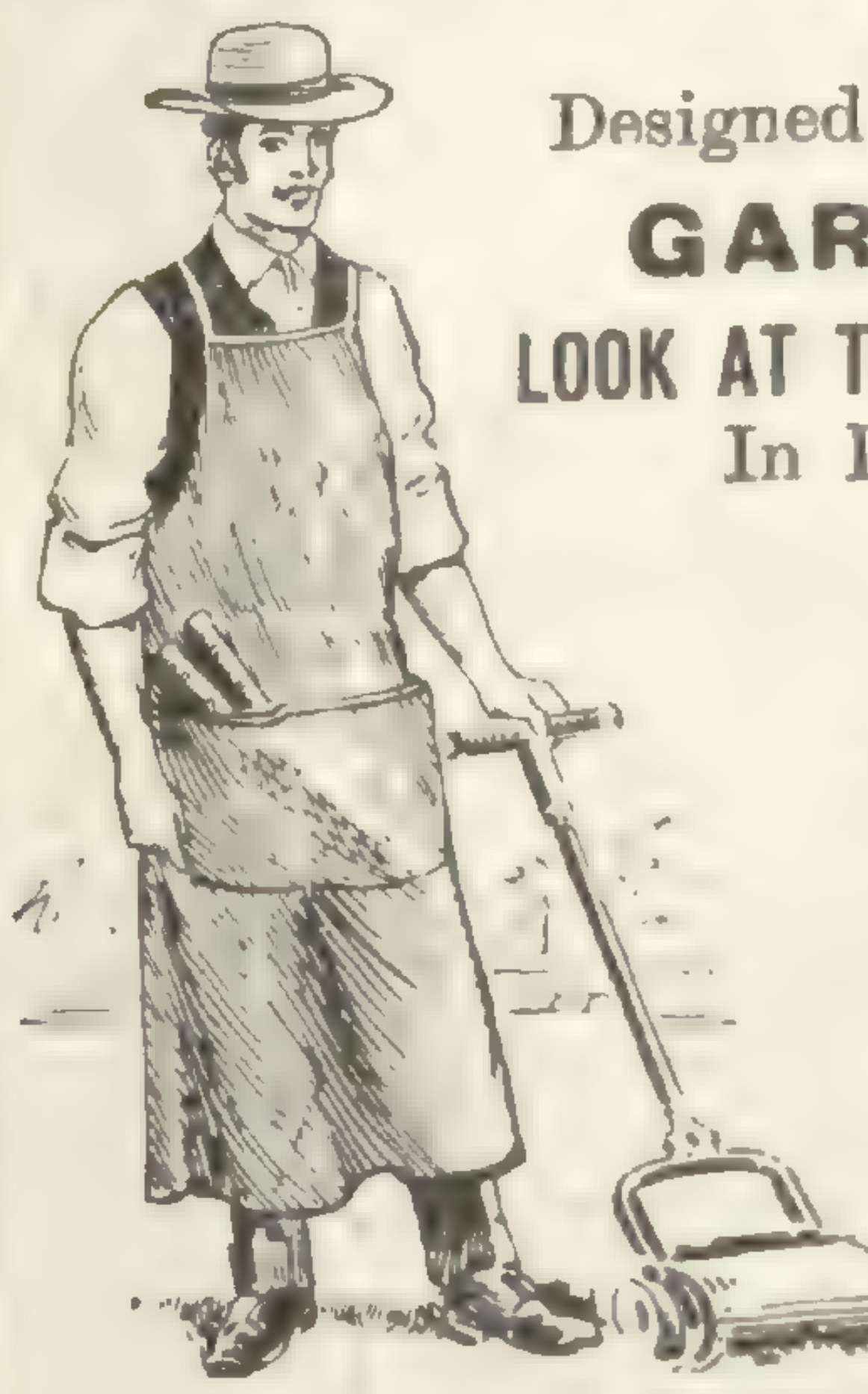

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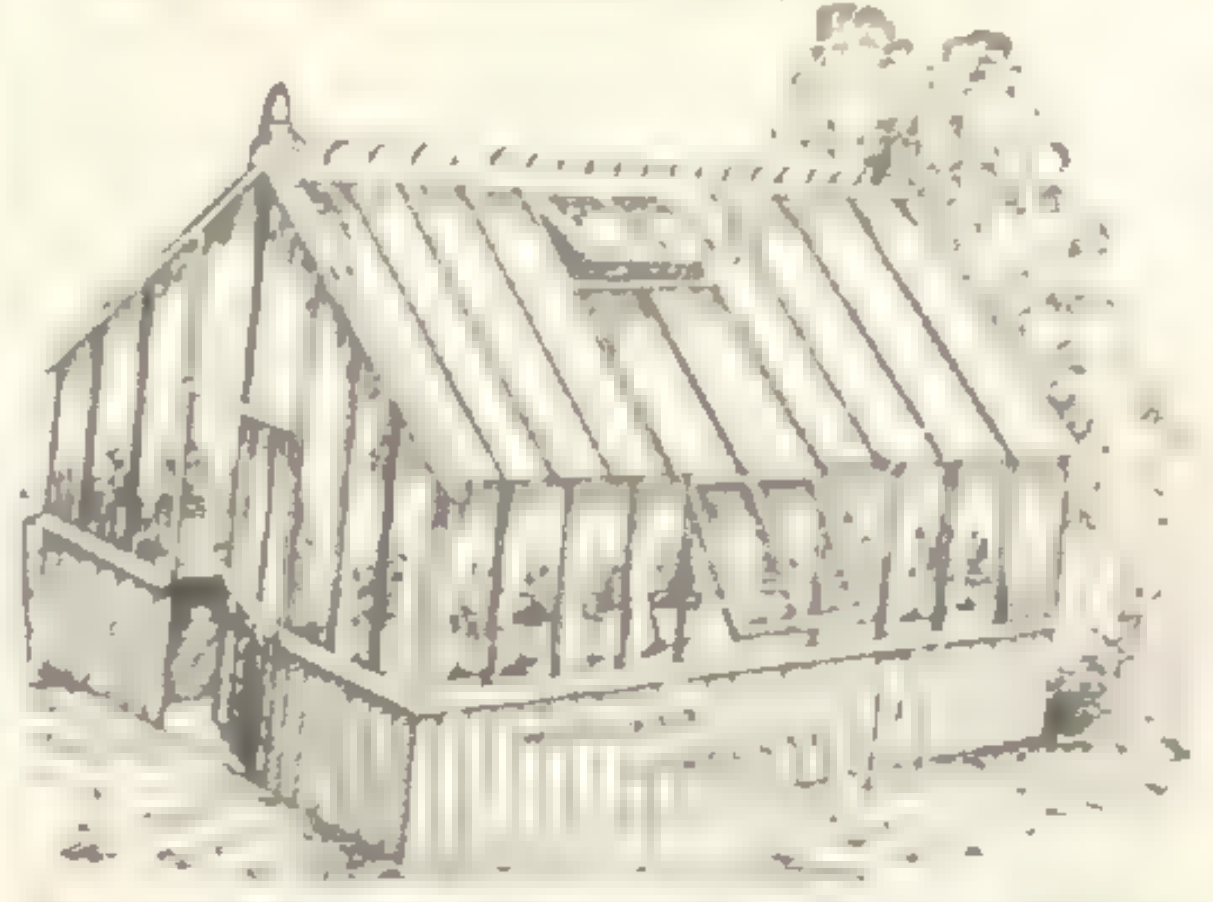

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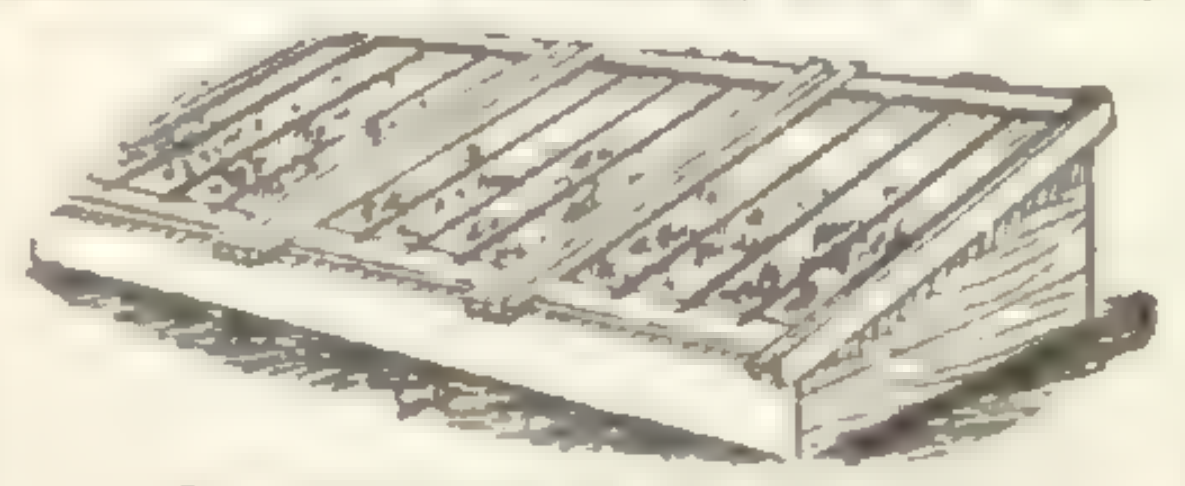

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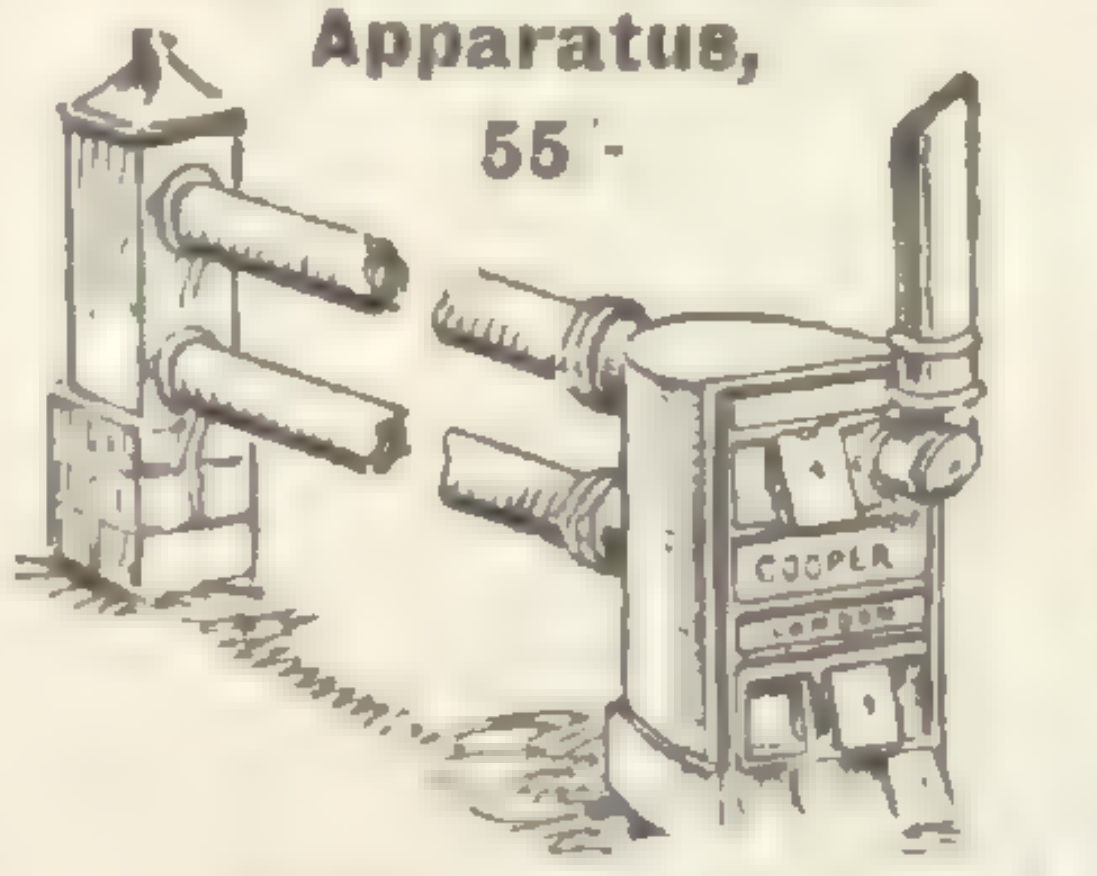

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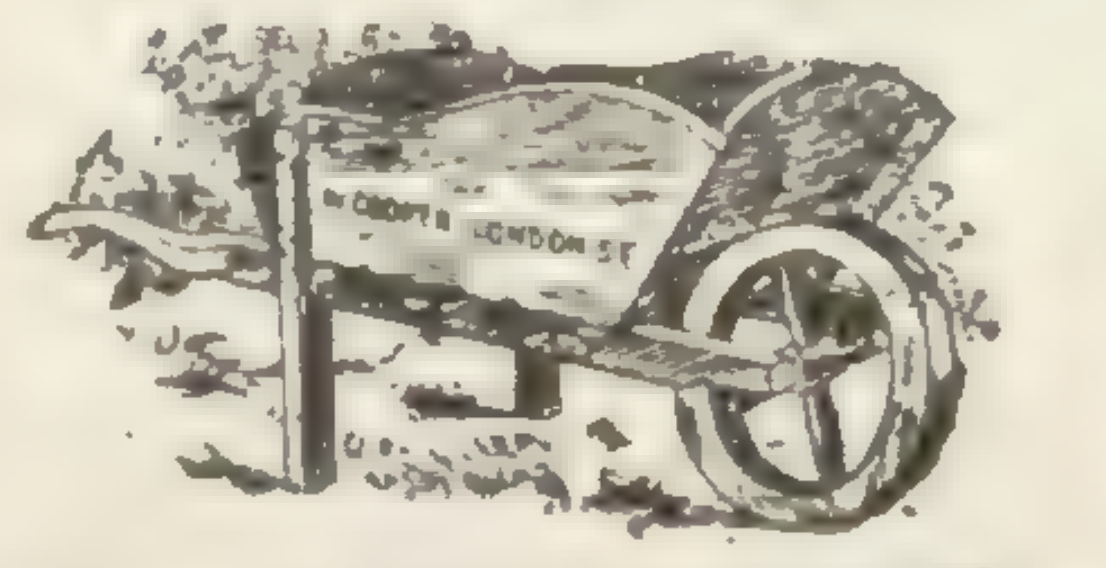

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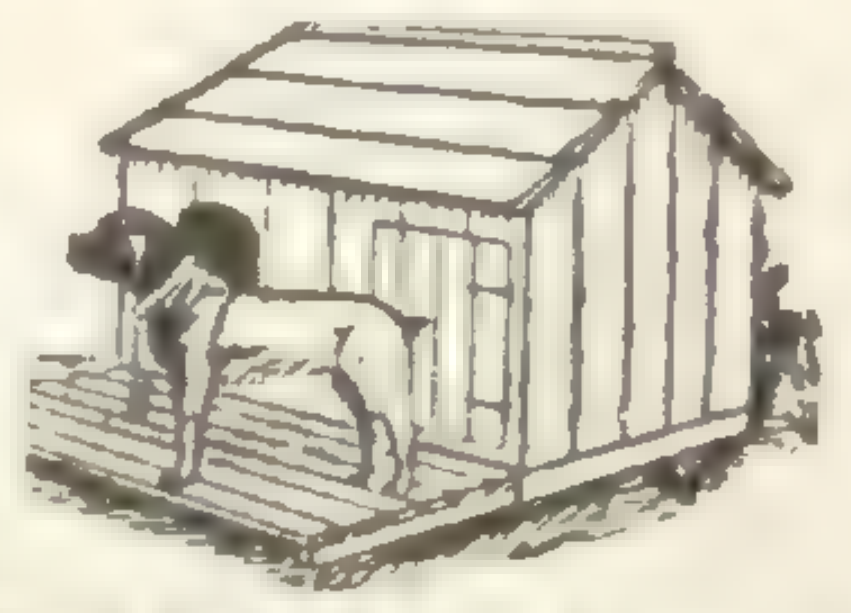

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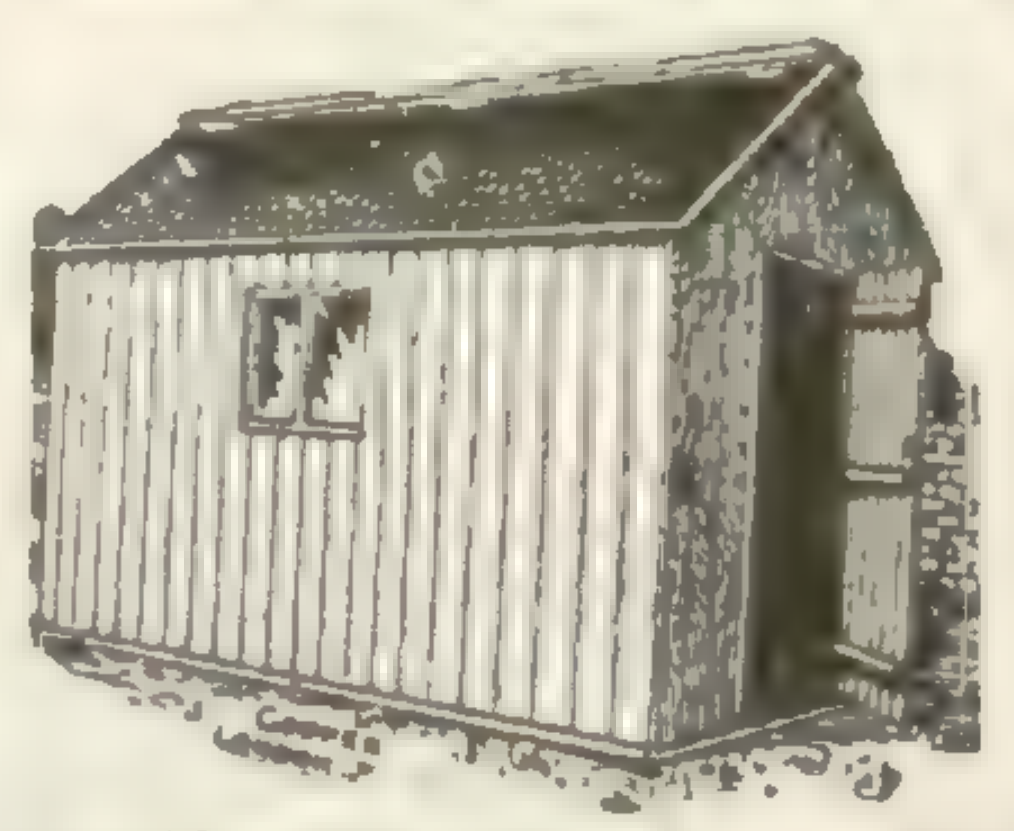

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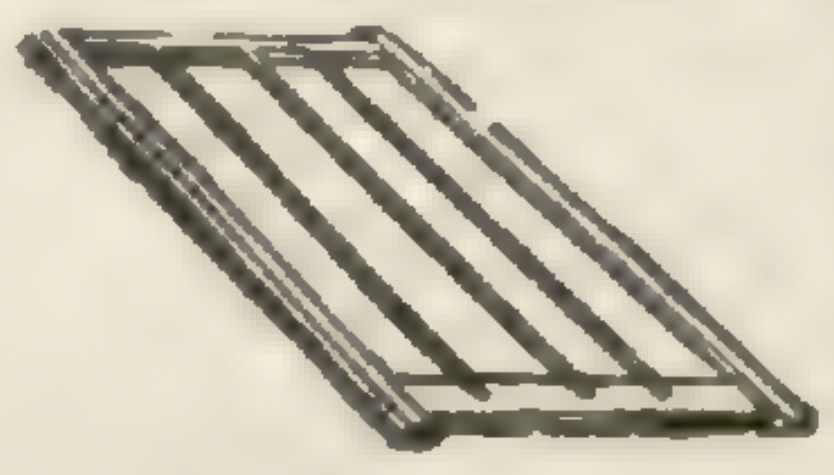

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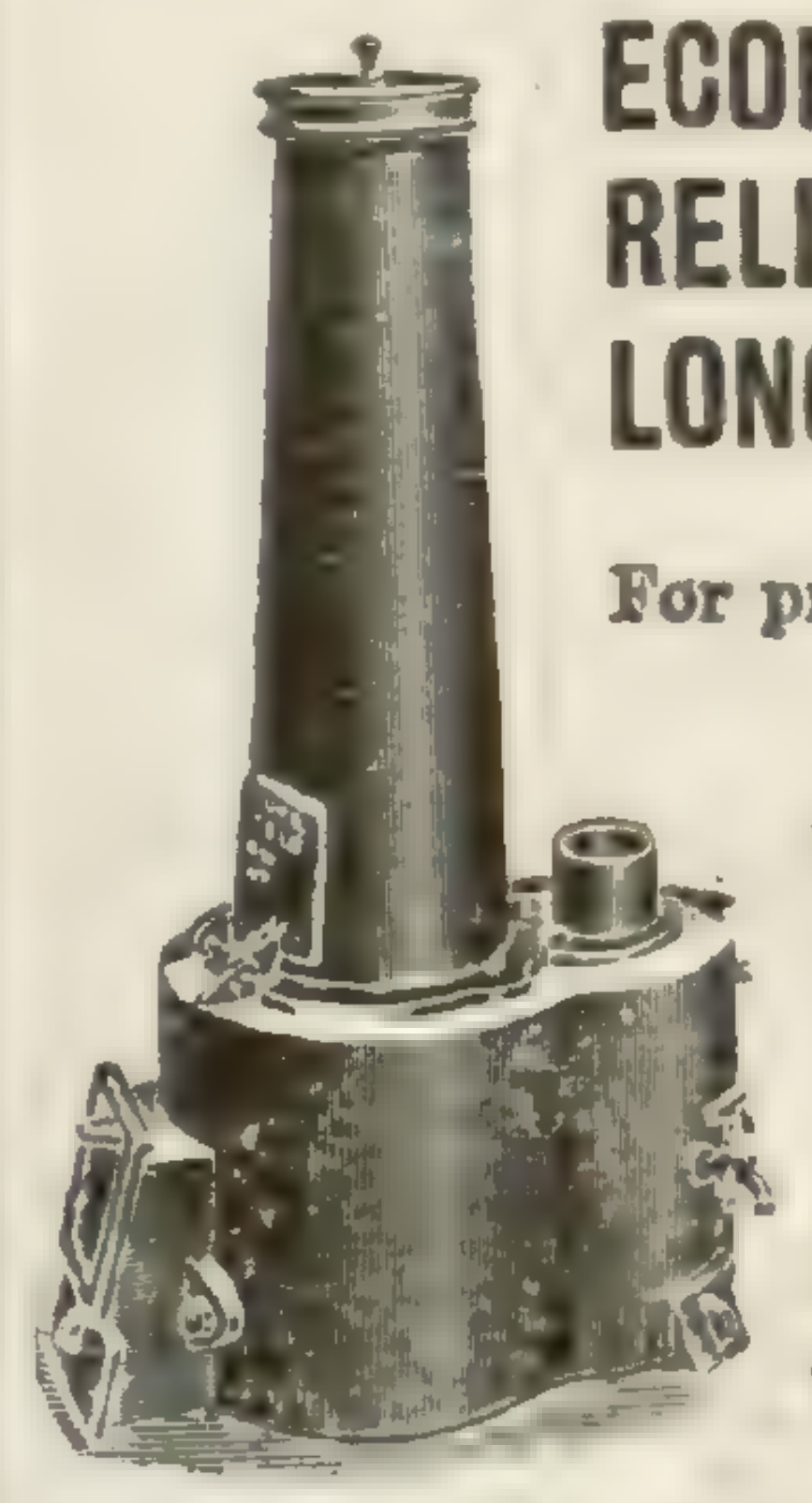

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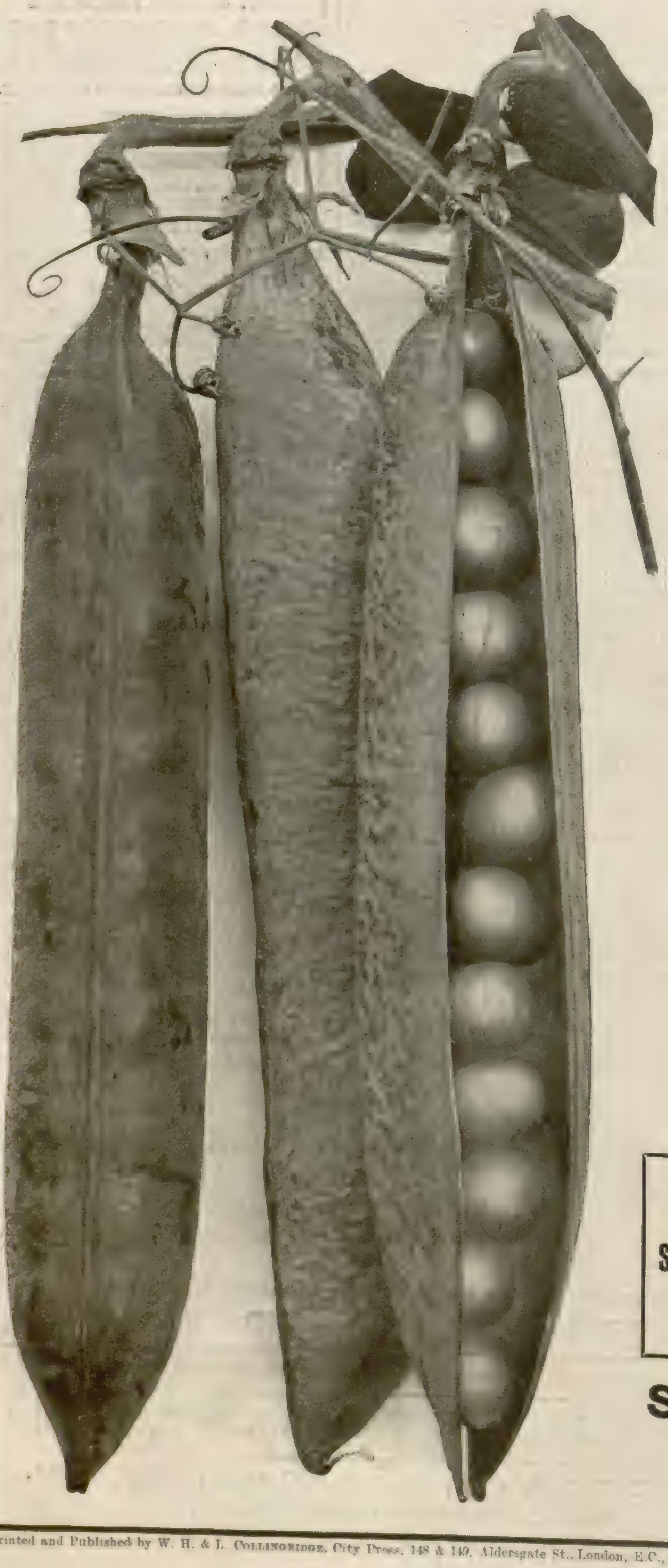

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GARDENER (Two or three kept). Gentleman can thoroughly recommend Gardener; left for no fault; thoroughly experienced all branches; honest, energetic, and reliable; age 35; married. Any enquiries answered. HURST, The Lodge, Grove House, Dulwich Common, S.E.

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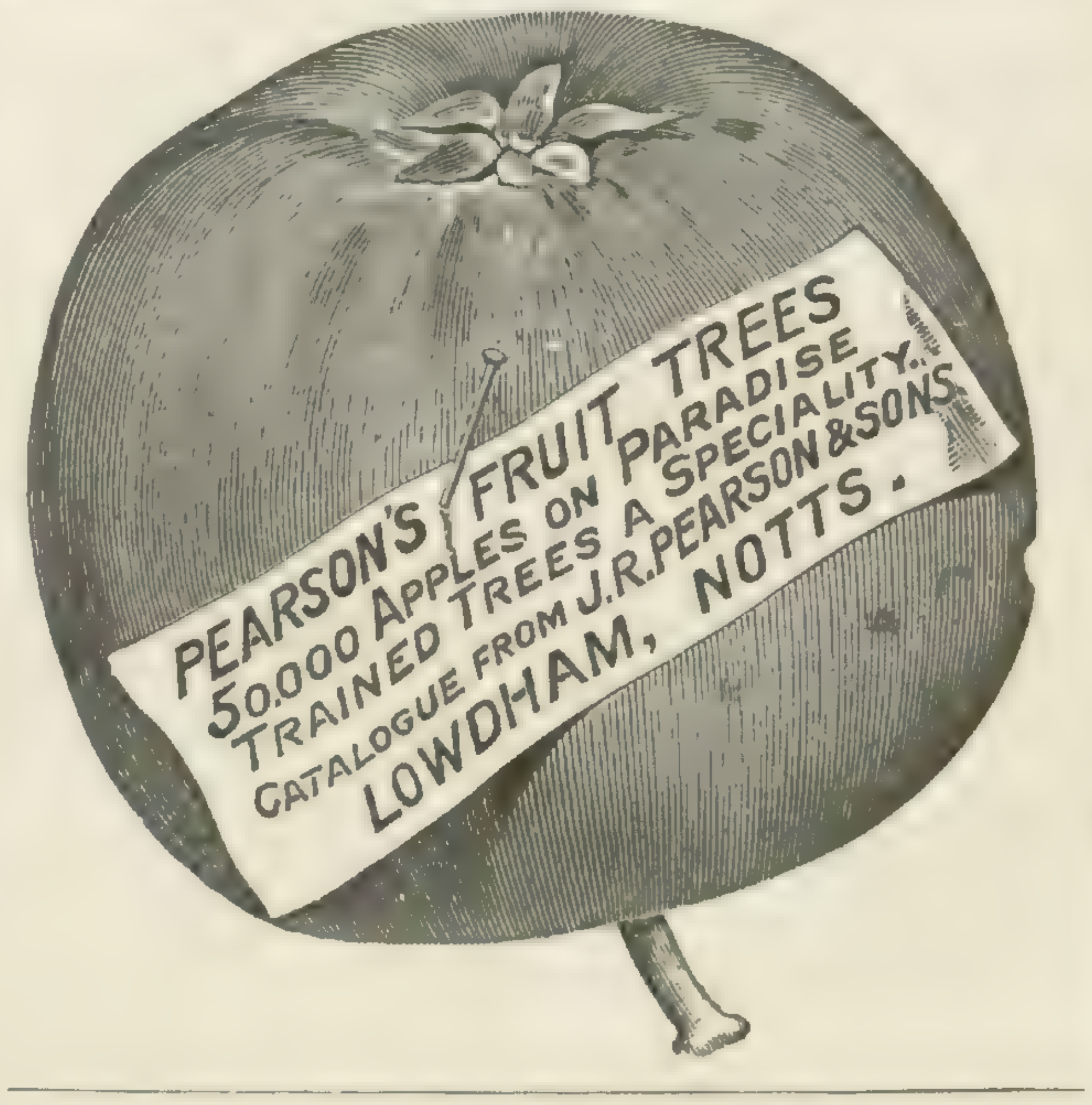
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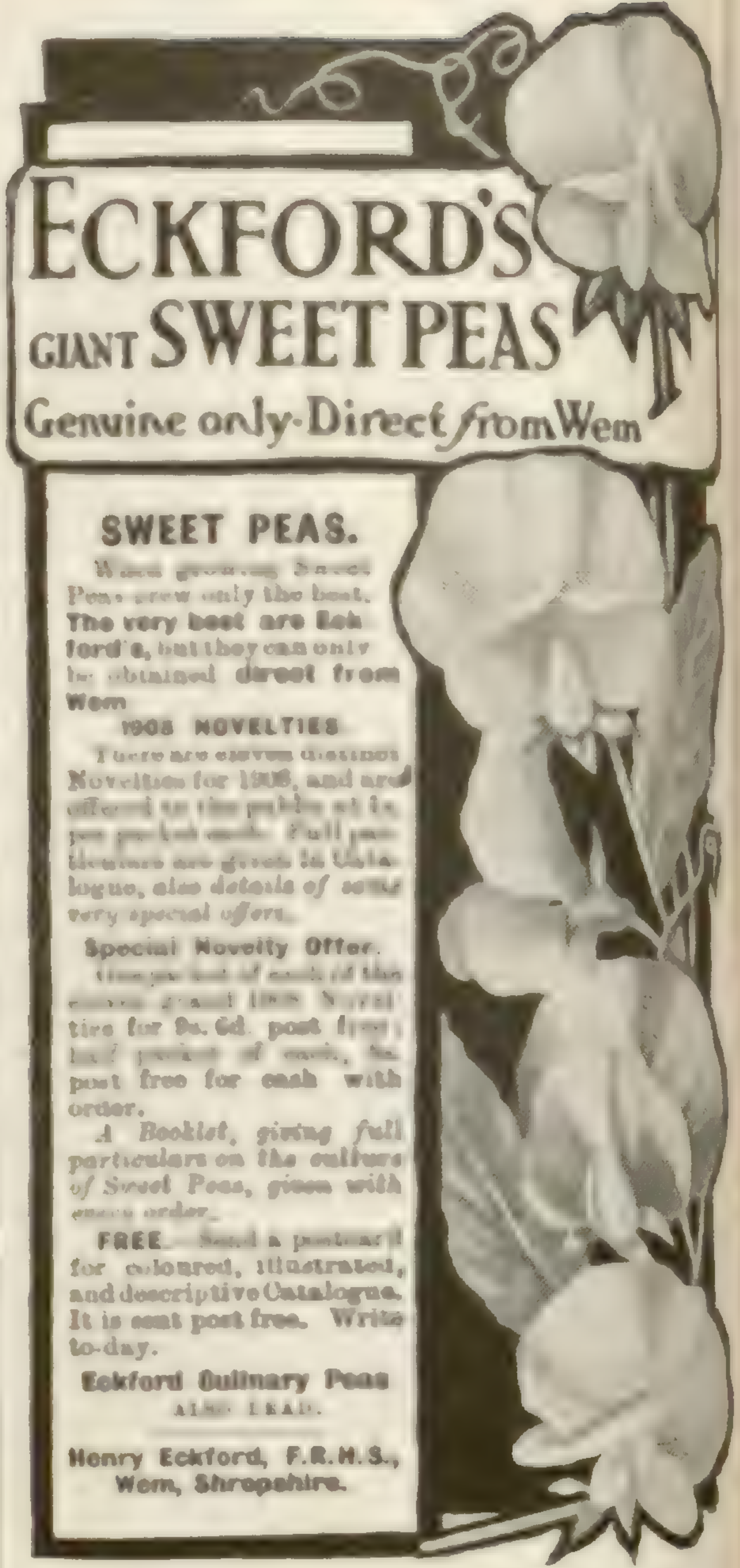

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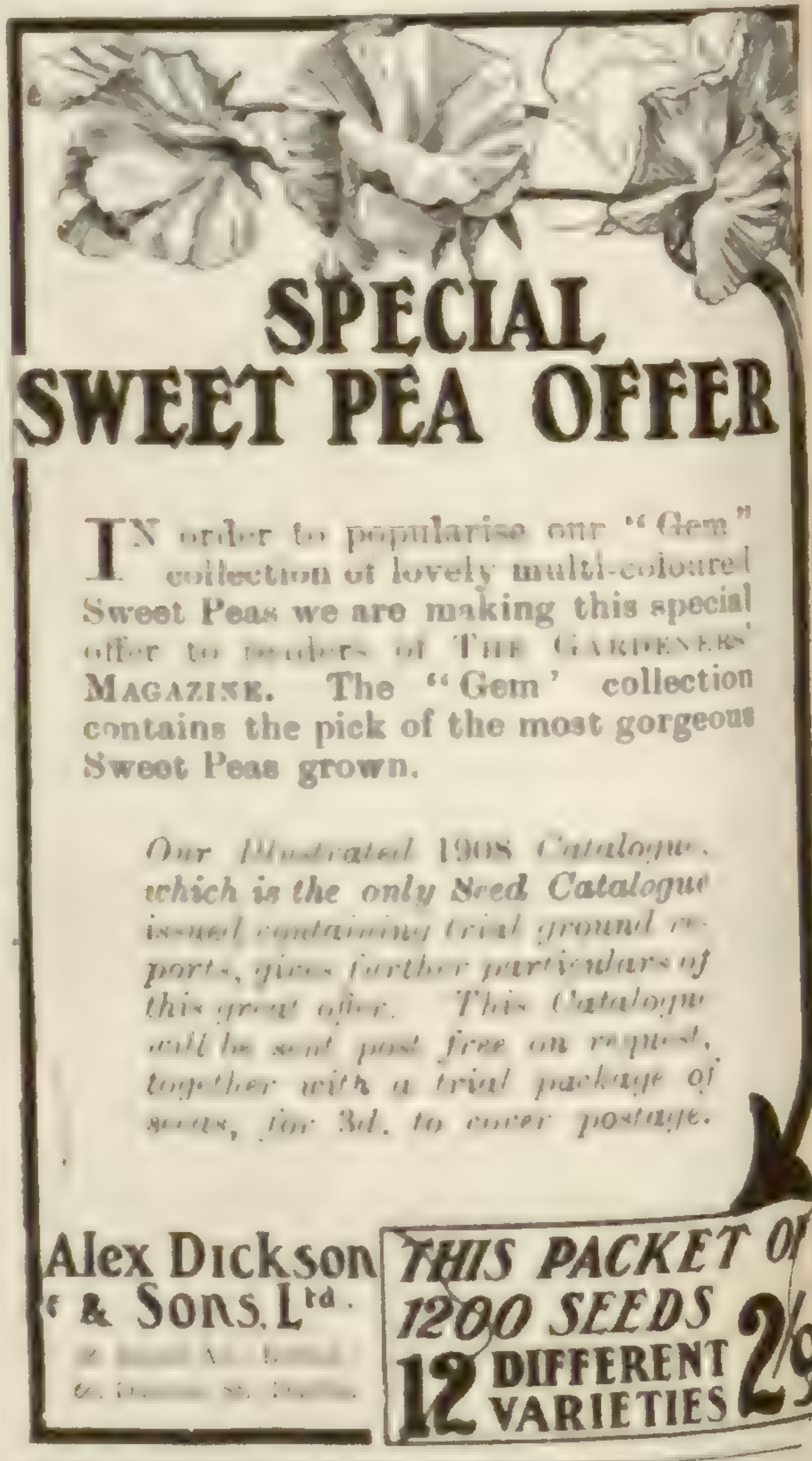

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VOL. LI.—No. 2,831. SATURDAY, FEBRUARY 1, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The Nickerson Prizes for Roses.

It will be remembered by those who take an active interest in roses that last year Mr. W. E. Nickerson, an enthusiastic rosarian resident at Boston, U.S.A., presented three silver cups to the National Rose Society, to be awarded to the raisers of the best hybrid perpetual, the best hybrid tea, and the best tea-scented variety introduced within a prescribed period. The award of these cups was entrusted to a specially appointed committee, and in the result the raisers of Frau Karl Druschki, Madame Jules Gravereaux, and Dean Hole, were adjudged the winners. As these roses are of German, French, and Irish origin no one could well suggest that in the making of their awards the members of the committee were influenced by insular prejudice. Their selection has been questioned by some, but this has been largely due to the fact that the time limit has been overlooked. Mr. Nickerson was so well satisfied with the results that this year he has placed twelve cups at the disposal of the society for honouring the best dwarf and climbing roses, without any stipulation as to the year of introduction. He suggests that four cups should be awarded for bush roses, four for climbers blooming in trusses, and four for climbers with flowers not in trusses, the cups in each group to be awarded to the best red, the best pink, the best white, and the best yellow variety. All colours are to be admissible and to be arranged under the head to which they approach most nearly. For example, all reddish shades deeper than deep pink are to be classed as red; salmony, etc., shades to be classed as pink; canary, buff, orange, etc., shades to be classed as yellow, and all very light tints or shadings to go with the whites. These suggestions are of much value, and will, we have no doubt, be acted upon, but it is not difficult to foresee that the preparation of a scheme for giving practical effect to Mr. Nickerson's views will require much care and thought; and this we know will be ungrudgingly given by the executive of the National Rose Society. The climbers flowering in trusses are such varieties as Crimson Rambler, Dorothy Perkins, and Lady Gay; and the climbers producing their flowers singly or at most a few in a cluster are best represented by Aimée Vibert, Gloire de Dijon, and Madame Berard. Believing that the only method by which anyone can obtain a really complete and accurate idea of the value of a variety, Mr. Nickerson recommends that the lists sent to those taking part in the election should contain a scheme of marking by points. For example, one hundred points would constitute a perfect variety, one in which the flower is faultless in form, colour, opening, keeping qualities, fragrance, etc.; the foliage, growth, hardiness, resistance to blight and pests of the highest order, while the plant should bloom continuously. It is suggested that each of the following qualities should be covered by five points each, and in putting this into practice on Frau Karl Druschki, Mr. Nickerson obtained the following result: The flower—Form, 3; size, 4; substance, 4; colour, 5; permanence of colour, 5; distinctiveness, 4; flower stem, 4; fragrance, 0; opening, 4; keeping, 3; total, 36. The bush—manner of growth, 3; vigour of growth, 4; constitution and healthiness, 4; adaptability to situation, 4; colour and brightness of foliage, 3; form and arrangement of foliage, 3; hardiness to cold, 4; resistence to mildew, 3; freedom of bloom, 3; continuity of bloom, 3; total, 34; or a grand total of 70. It is believed that if some such plan as is here briefly explained could be adopted and clearly set forth in the circular letter accompanying the voting list, much useful information would be brought out about the qualities of the roses voted upon as they appear from different points of view, and in different localities. On the other hand, it is feared that without a point-marking scheme many taking part in the election will vote without the proper amount of detailed and definite thought, giving mere impressions which they may have, and in any case it would not be known on what grounds their opinions were based. Recognising the fact that under the scheme only twelve roses will be honoured out of the scores entitled to distinction, Mr. Nickerson very generously offers to place a sum of money at the disposal of the National Rose Society for the purpose of having a suitable diploma prepared, so that the second and third most popular roses in each section may receive proper recognition. In addition he suggests that all roses receiving a certain percentage of the votes be named in the published account of the contest, it being thought that in this way probably the most popular hundred roses or thereabouts will become known to the rose world as such. Mr. Nickerson's suggestions for ascertaining which are the most popular roses are so new in character and comprehensive in scope that the election can hardly fail to prove of immense interest to rosarians, and the results of much value to all who grow roses. The preparation of the scheme, and the carrying out of the details will be not the least important of the work included in

MR. H. BALLANTINE, V.M.H.

the programme of the National Rose Society for the current year, and the display of the winning varieties will, unless we are much mistaken, be not the least attractive of the many features of its metropolitan exhibition in July next.

Mr. H. Ballantine, V.M.H., whose portrait we have the pleasure of giving herewith, is one of the best known of gardeners, and is held in high esteem both for his great cultural skill and geniality of disposition. Exactly how many years Mr. Ballantine has had charge of the gardens of The Dell, the charming residence of Sir Henry Schroder, Bart., at Englefield Green, we are not now able to say. We are, however, able to state that he has occupied his position for a very long time, and that throughout the period the gardens have been regarded, and properly so, one of the most noteworthy horticultural establishments in the country. The Dell gardens have become the most famous for their collection of orchids, and having regard to the extent of the collection, the great value of large numbers of the varietal forms, and the splendid development of many of the specimens, this is in no way surprising. The collection of orchids is unique, but the gardens contain many features, each one of which is sufficient to make them famous. The collection of choice rhododendrons is extensive, and the condition of the plants such as to evince cultural skill of the highest class, while the rock garden with its many beautiful alpines presents many charms to lovers of hardy flowers. Mr. Ballantine possesses in an eminent degree the skill and judgment essential to an orchidist of the highest class, but he is equally at home in all other departments of the garden, as proved to demonstration by the splendid results that are annually obtained. Last year Mr. Ballantine had the well-deserved honour of receiving from the Council of the Royal Horticultural Society the Victoria Medal of Honour in Horticulture.

Gardens Around Horsham.—We would remind our readers that in the issues of the GARDENERS' MAGAZINE for the 8th and 15th inst. we shall describe and illustrate some of the most notable gardens in the district of which the town of Horsham is the centre. This is one of the most important gardening centres in Sussex, both as regards the number of important gardens and the great interest that is associated with them. Both issues will be profusely illustrated with finely executed reproductions of photographs specially taken for the purpose.

New Flowers at Vincent Square.—We learn with very great pleasure that on and after February 11, all plants and flowers to which a first-class certificate or award of merit are granted by the Floral Committee of the Royal Horticultural Society must be staged on a table in front of one of the annexes in the hall, instead of being returned to a group that the exhibitor may have arranged. As a rule, after the committee rises, the certificated plants become distributed through the exhibition and are therefore most difficult to find. We have on previous occasions urged that all new plants and flowers receiving official recognition should be set up in a special position together, because of the greater convenience such an arrangement offers to the general public, and because such a proceeding is in accordance with the original intention of the fortnightly meetings. We hope the other committees will follow the example of the Floral Committee in this matter.

The Chester Paxton Society's programme for the second half of the winter session commenced on January 18 with a lecture by Mr. J. W. Siddall on "Springtime in the Undercliff District of the Isle of Wight." The other lectures are on February 1, "The Common House Fly," by Mr. R. Newstead, A.L.S.; February 15, "The Flora of India and Ceylon," by Mr. Joseph Thompson; and February 29, "Herbaceous and Alpine Plants," by Mr. W. S. Sharp.

Brassica Hybrids.—At the meeting of the Scientific Committee of the Royal Horticultural Society on Tuesday an important paper was read by Mr. Arthur Sutton, V.M.H., on Brassica hybrids. The meeting was on this occasion held in the lecture room, which was well filled. The comprehensive experiments on which Mr. Sutton's paper was based were commenced in 1905, and were conducted with a view to determine the extent to which the several kinds will intercross. In the course of the experiments it was proved to demonstration that the brassicas which had originated from the wild cabbage readily intercrossed with each other, but would not enter into union with the rapes, turnips, or kohl rabi. As the result of the intercrossing of the descendants of the wild cabbage, two distinct forms of much value for culinary purposes was obtained. One of these was derived from a cross between the Brussels sprout and the savoy, and the other originated from a cross between the Brussels sprout and an ordinary cabbage. Numerous hybrids were obtained between the rape and the thousand-headed kale, but these were for the most part sterile. Hybrids were also obtained between the thousand-headed kale and kohl rabi, and between the kale known as Ragged Jack and the swedes. The first year the progeny was of a very mongrel character, as might, Mr. Sutton said, have been expected, but in the following season the plants raised from seed saved from the hybrids resembled, in well-defined proportions, the forms used in making the original crosses. There was a brief but interesting discussion, and in the course thereof Mr. Sutton, in answer to an inquiry, expressed the opinion that it would probably not be possible to bring the hybrids obtained to the same high degree of perfection as the parents within the course of an average lifetime.

Preservation of Ludshott Common.—An appeal is being made by the Ludshott Common Preservation Committee for the funds necessary for the purchase of Ludshott Common, which forms one of the group of commons at Hindhead and the tract of woodland between the common and Waggoner Wells. The 542 acres of common, and the 17½ acres of woodland can be purchased for £1,675, and the legal and other expenses are estimated at £125. Towards the £1,800 thus required £700 has already been subscribed. It is proposed if the purchase is effected to vest the land in the National Trust for places of Natural Beauty. Mrs. Lyndon, of Grayshott, is the honorary secretary of the committee.

R.H.S. Guild.—The movement on foot for the promotion of a guild of old Chiswick students and officers, and old and present Wisley employees of the Royal Horticultural Society is receiving the attention it merits. To put the whole matter on a definite basis and to decide the title, rules, etc., a meeting of those eligible to join the guild will be held in No. 3 Committee Room, at the Royal Horticultural Hall, Vincent Square, Westminster, on Tuesday, February 11, at the conclusion of the R.H.S. annual meeting. It is hoped that all old Chiswick and Wisley men will do their best to attend.

Field Botany Excursion.—An interesting experiment in field botany has been conducted for three successive seasons by Prof. F. W. Oliver, F.R.S., of London University College. A large area of salt marsh at Erquy, in Brittany, was selected, and this it was proposed to inspect for many successive years for the purpose of noting the distribution of plants, migration, differences of plants in varying degrees of salinity of soil, alteration of conditions and plants, and other similar and useful questions. Upwards of twenty students have joined each year in this most interesting study, and they have spent a most enjoyable as well as profitable time at Erquy.

Fall of a Giant Poplar.—During the December gales a very noble specimen of Populus deltoides was blown down in Christ Church Meadows, Oxford, a few yards west of the Oxford Botanic Garden. This tree had attracted the attention of many persons interested in aboriculture. When divested of lop and top its trunk measured 55 feet in length; girth, twelve feet from base, 16 feet; it contained 1,056 cubic feet of timber, and weighed 20 tons. Last year G. Claridge Druce, Esq., collected leaves of it for distribution to the members of the Botanical Exchange Club of the British Isles, in order to contrast it with the foliage of another giant black poplar growing close by. The specimen under note had very large clusters of mistletoe, supposed to have been brought by the birds from the Botanic Garden, where there is a large display of this parasite. This form of poplar grows rapidly in the Midlands, and though its wood is soft it is tough. To remove the tree, which fell across the west arm of the river Cherwell, was a task of considerable difficulty, for chains and steel cables attached to it snapped like cotton under the strain of a powerful Burrell compound engine. However, after two days' work the log began to roll, it was drawn ashore, cut in half, and conveyed to Littlemore, three miles distant.

Rose Culture at Bristol.—Under the auspices of the St. Martin's Branch of the Church of England Men's Society, a series of lectures has been arranged for the winter session. The January lecture, given in the schoolroom by Mr. T. P. Elkes, head gardener at St. Agnes' Home, Knowle, Bristol, deserved a larger audience than it received. The subject, "Roses and their Culture," was ably dealt with by the lecturer, who, dealing first with the historical side of the national flower, led his audience by easy stages through the different phases of successful rose culture, illustrating his remarks on pruning by practical demonstrations on varieties he had specially selected and potted for the purpose.

The Horticultural Club Annual Dinner will take place on Tuesday, February 11, at 6 p.m., at the Hotel Windsor, Victoria Street, Westminster. After dinner there will be music under the direction of Mr. F. Morrison. Those desirous of attending this function, to which ladies are especially invited, should notify the Secretary, Mr. E. T. Cook, not later than February 16, as accommodation is limited.

Scottish Horticultural Association.—The Right Hon. Lord Elphinstone has been elected hon. president of this association for 1908; Mr. James Whytock is president; Messrs. D. Kidd, W. H. Massie, and M. Todd, vice-presidents; and Mr. A. D. Richardson, secretary and treasurer. The retiring president, Mr. D. W. Thomson, was presented on January 4 with a finely illuminated address in appreciation of his services to the association whose membership is now 1,306.

STANDARD ROSES.

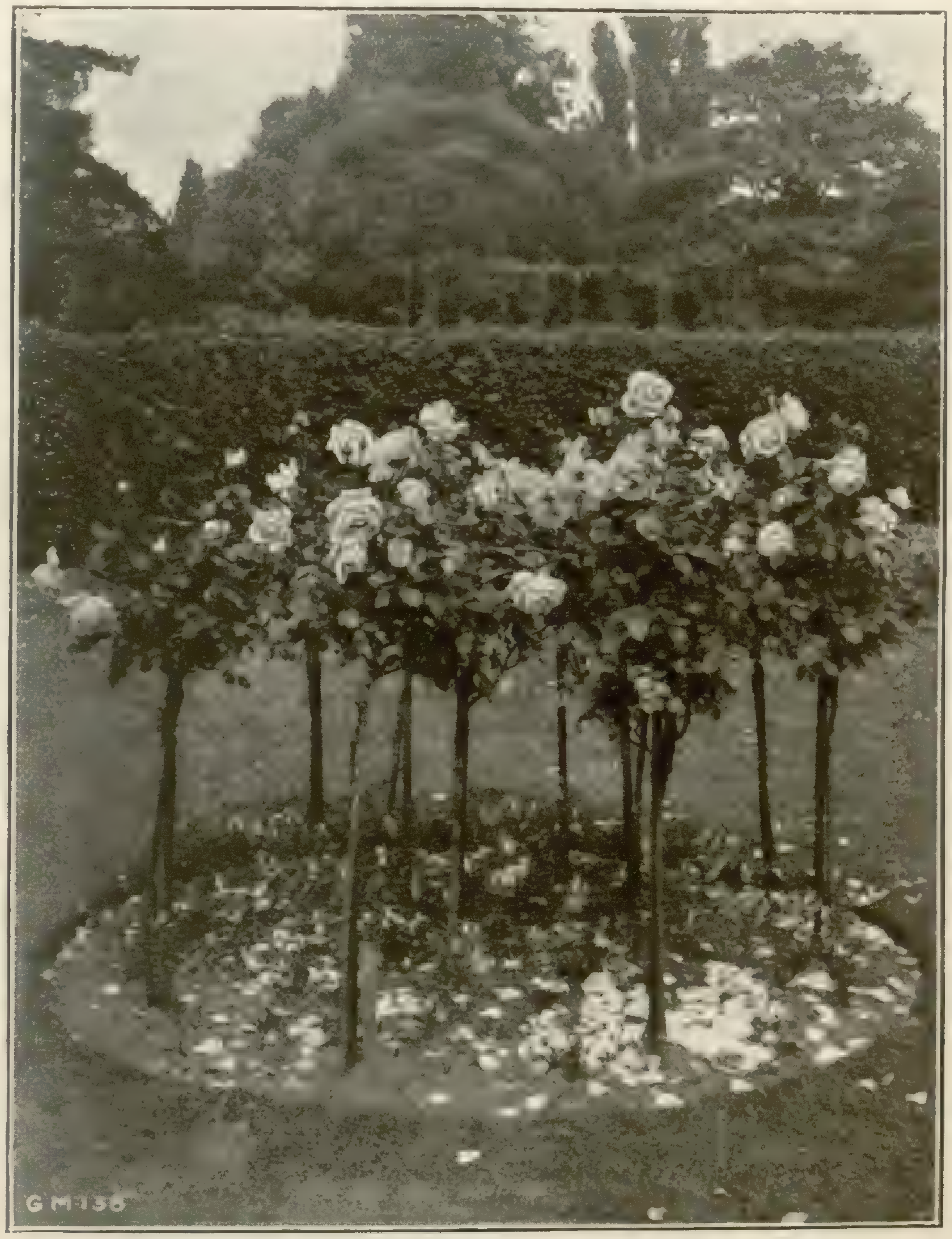
Opinions are somewhat sharply divided with regard to the merits of standard roses, and their advantages and disadvantages as compared with dwarf or bush specimens, although the diversity of views is not so marked as was the case some years ago. Here, it should be understood, reference is made to those standards only that reared aloft have borne, if not the battle, the breeze for many a long year, and not to the tall weeping forms that have sprung into popularity within quite recent times. There is no great difficulty in understanding how this divergence in the views of amateur rosarians has been brought about, when one has had opportunities for visiting a considerable number of gardens, and seeing what is being done in the matter of rose growing. One's opinion on questions of garden practice is necessarily greatly influenced by the results obtained. If they are satisfactory the practice is regarded as a good one, and it is supported accordingly. Should they fail to realise expectations the practice by which they have been brought about, if not strongly condemned, is not spoken of or written about as one that should be followed.

The variability in the results obtained in the cultivation of standard roses fully justifies the diversity of opinion that exists with regard to them. In some gardens they are found in a vigorous state of health, with large heads furnished with an amplitude of foliage, and an abundance of blooms of good size. In others, and these, unfortunately, in the majority, they are lacking in vigour, with small attenuated heads, and with but few blooms, and these of indifferent quality. Let us pause for a moment to inquire why there should be this difference in the standards grown in two gardens that differ but little in the skill that is brought to bear on their management. Standard roses, it should be understood, are somewhat peculiar in their requirements, and do not possess the same degree of recuperative power as the dwarf bush and some other forms. Hence it is essential to success that a good beginning should be made. The English brier, which is so largely used in the making of standards, is a hungry plant, and the rose that is worked upon it soon shows signs of distress if the soil is in a state approaching impoverishment. The age and character of the stock have also considerable influence upon the growth. If the stem is stout and sufficiently youthful for the bark to be still green, the sap will rise freely and supply the rose with the food essential to a healthy growth. Not only is it necessary the stock should be young and healthy, and the soil deeply stirred and liberally enriched with manure previous to planting, but the variety must be well suited to growing in standard form.

Many amateurs fail with standard roses because of their planting them in positions that are quite unsuited to them. The roses are sometimes planted in borders among shrubs, and if the borders are not crowded, and the soil free from the roots of large trees, they usually do well, and present a pleasing appearance; but in crowded borders they seldom do even fairly well. A favourite practice with many amateurs is to plant standard roses in the grass alongside the walks; but as the rose trees, like those grown for their fruits, have an objection to the grass being brought close up to the stems, they have a short, and, judging from their appearance, miserable existence. Occasionally they are planted singly in small beds, and if the soil is well prepared and the beds kept free from deep-rooting plants, and the other conditions being favourable, the results will be satisfactory. More often than not the owner of the garden regards the area so valuable as not to admit of a square foot of the surface being bare, and in giving practical effect to his views he fills the beds with strong-growing bedding and other plants, and, in a few instances, trains nasturtiums or other climbers equally vigorous up the stems, and, it may be, among the branches. The results are an attenuated growth, a few indifferent flowers, and a short life.

From the foregoing remarks my readers will have been able to obtain a fairly clear idea of what to avoid, and we may now turn to consider what should be done to ensure success. The first point that should have full consideration is the selection of varieties. Those who would avoid the risk of failure should not visit the exhibitions note book in hand, and select from winning boxes varieties that attract attention by reason of their large size and fine form. They may do this if they intend growing roses for competitive purposes, but those who would ensure success with standards must visit nurseries and gardens during the summer months, and make note of the more beautiful varieties that have a robust habit, or seek the advice of someone well acquainted with the garden culture of roses. At the close of these notes a list of a few of the best varieties for standards will be given, and if these are purchased and planted they will not fail to form objects of beauty, provided the planting is well done and the subsequent management judicious.

In the purchase of the plants select those only that are in a robust state of health, and where there is room for choice give preference to those with stout, comparatively green stems. With such plants as these a good beginning will have been made, and one may anticipate with some confidence satisfactory results. On the other hand, when the heads are weak and the stems present a grey weather-beaten appearance, there is not much chance of a full restoration to vigour. One can sympathise with the growers in the difficulty they must have in obtaining from the hedgerows large stocks of the briers of the right kind. The difficulty is great, and it appears to me that the time has come when a systematic effort should be made to raise standard stocks on a large scale. With the rugosas, Penzance briers and other robust forms there ought to be no great difficulty in raising home-grown stocks of the right sort, and the suggestion should have careful consideration.



BED OF STANDARD ROSES AT KEW.
The variety, Caroline Testout.

There are various ways in which standard roses may be arranged to produce a pleasing effect, and to these brief reference may now be advantageously made. In a geometric or other rose garden, and in groups of beds on the lawn, it may be well to furnish a few of the beds exclusively with standards, as in the case of the bed of Caroline Testout, of which an illustration is here given. In the majority of gardens, and especially those of moderate dimensions, it is preferable to associate them with dwarfs, as shown in the second of the two illustrations. This bed had not long been planted when photographed, but it was selected as showing more clearly the method of arrangement than one long-established would have done. This latter method is especially suitable for borders, whether near the boundaries of the garden, with a background of shrubs, or in prominent positions on the lawn. Where it is desired to flank a walk with roses it is the best of all methods. In the latter case it will suffice to make a border three feet wide, and then to plant a line of standards and dwarfs alternately along the centre, at a distance of eighteen inches apart. In a large space the border may be four feet wide, and have three rows of dwarfs, and two of standards, the latter being arranged alternately with the dwarfs in the two outer rows. Where there are three rows the plants should be two feet asunder in them. In the one case the standards will be three feet apart, and in the other four feet, but the distance may be varied to suit the taste of the planter, but they should not be nearer than three feet. In arranging beds the dwarfs should be placed about two and a-half feet apart, and the standards four feet; but when both are in the same lines they should be arranged alternately, in which case the two forms will each be five feet asunder. It is not essential to a pleasing effect that there should be but one variety in each bed, but the varieties ought to be of the same height, and the colours be selected with due regard to harmony.

The necessity for thorough soil preparation and subsequent good cultivation has been indicated, and a mere mention of the fact to those who love roses, and desire to have them at their best, should be sufficient. Thorough preparation consists in applying a four or five-inch layer of well-rotted manure from the stable or farmyard, and then breaking up the soil to a depth of twenty-four or thirty inches, and well incorporating the manure with it. Subsequently the soil should be maintained in a high state of fertility by annual or biennial applications in winter of manure, and by occasional supplies of liquid manure during the season of growth. The planting may be done from November till the end of February, in accordance with the usual practice, but whenever carried out the roses should be at once staked, to prevent loosening.

The following varieties comprise some of the very best of those suitable for standard culture: Caroline Testout, H.T.; G. Nabonnand, T.; Dupuy Jamain, H.P.; Frau Karl Druschki, H.P.; La France, H.T.; La Tosca, H.T.; Madame Abel Chatenay, H.T.; Madame Jean Dupuy, T.; Madame Pierre Cochet, T.; Mrs. John Laing, H.P.; Mrs. R. G. Sharman Crawford, H.P.; Ulrich Brunner, H.P.; and White Maman Cochet, T.

Viator.

Planting Climbing Roses in a Greenhouse. — From information received and from personal observation I have come to the conclusion that very few amateur gardeners treat their climbing roses correctly in the first season after planting. The shoots carried at planting time are generally laid in their full length, and, as a consequence, the unripe tips die back, and growth only pushes from the top two or three buds, leaving the base of the plant bare. All shoots found on a climbing rose at planting time should be cut back at least half their length, or to the eaves of the greenhouse, then strong shoots will push from near the base and the lower part of the rose will be well furnished.—E. J. K.

PERPETUAL CARNATIONS.

The "cult of the perpetual carnations" is ever increasing, so that any new particulars regarding varieties or culture is warmly welcomed by growers and others interested in carnations.

Mr. Slade, in his interesting notes on "Seedling Carnations" ("G.M.," January 4), gives a descriptive account of many of his own seedlings, and particulars of the crosses from which they were raised. Many of the crosses made were probably made as the result of a desire to obtain a batch of seedlings which should be as different as possible from the parents from which they sprung, and in this Mr. Slade has been eminently successful.

The notes in question also prove that in many crosses the progeny partakes more closely of the characteristics of the seed parent than the pollen parent, and though this is noticeable in other flowers than carnations, it should not be lost sight of by those who intend to pursue the interesting hobby of seedling raising.

Mark you, however, that though the question of seedlings seems to be largely dominated by luck or chance, in reality it is no such thing, and though a grower may raise a "sterling" novelty by haphazard crossing, yet he has really effected the "right cross," even though it be by accident. Naturally enough, some varieties are better fitted for seed parents than others, and it is by a close study of the varieties, and of the range of colourings in hand and desired, and working upon the results of this study, that success can be made possible.

One of the foremost of America's carnation specialists has laid down a set of rules for his own guidance in the raising of new varieties. These rules are based upon many years close attention, and have been productive of very good results. In selecting parents for crossing the first consideration is for the colouring, and for this the rules have been formulated. All varieties possessing undesirable undertones, shadings, stripes, etc., are put on one side as unfit for the production of first-class seedlings. It must be borne in mind that the seedling carnation which is to gain a true measure of popularity must in all cases be an advance upon its parent, it must be clear and decided in colouring or else it will be of little use, and will never supplant our present forms.

So much for colour then, and for progressive work; to obtain first-class "whites" white must be mated with white if purity of colour is to be obtained. For yellows yellows must be crossed with yellows or with white. Yellow mated with scarlet will usually either give a brighter scarlet or else deeper yellows and orange. Scarlets crossed with crimson heightens the crimson hues, and often affords those rich red shades midway between the two. To produce dark crimsons crimsons only should be used.

All shades of pink cross well, but if clear bright pinks are sought for those which tend to rose and scarlets should not be used. When "variegated" varieties are used for crossing it is wise to keep to the same colour class for each cross. The mauve, lavender, purple, and similar shades should be kept apart, and not used with the brighter colours, as the result would be to render the colours dull.

The Ever-blooming Carnation.

This is the type for the future—the ever-blooming carnation. This is the kind that will pay to grow. To emphasise my meaning, I may say that the true "ever-blooming type" will commence to flower at three months from sowing, and cuttings will go straight away to blossom as soon as rooted. The habit is light (not close and bushy), side shoots are continually produced, and these run to blossom quickly. There is thus no superfluous foliage, and a batch of plants is really always in blossom. Harlowarden will amply illustrate my point; there you have a light-habited variety, with few leaves, long stems, and a regular succession of side shoots which speedily run to flower, and the flowers are good.

There is the object in view, and first-class carnations which are produced on these lines will be always welcome.

The flower and its form are other important points which merit the closest attention; with the English florist the plain-edged flower has always been popular, but his American brethren favour the fringed-edge section. There is a sound reason for this Transatlantic love of fringed blossoms, for whereas the plain-edged flowers travel badly and bruise easily, the finely serrated edges of the fringed blooms protect the petals from injury to a great degree. The plain-edged varieties are, of course, first and foremost in point of beauty, and many seedlings are now being raised (particularly by some of the Guernsey raisers), which are of this character.

Apart from this, the flower, to be of value, must neither recurve nor incurve. Incurving petals make a blossom look partially faded, while the recurving petals make the flowers look poor and faulty. The outer petals should expand horizontally, and above these the inner ones should be arranged symmetrically, culminating in a high, full centre.

Sundry Points.

It may be noted in any collection of perpetual carnations that the foliage varies very much in colouring. In some varieties the leaves are pale green, in others the hue is a deep bluish-green, and though each of these may produce fine flowers, one can say with a great amount of certainty that those with the deep bluish foliage have the stronger constitution, a point that should not be lost sight of in the raising of seedlings.

We may hear of many sterling novelties in the near future, and the "Channel Islanders" will be well to the forefront with new varieties. Among their acquisitions at the present time we may note the fiery red Louise Michel, raised by Mr. Maurice. Then there is Mr. Lancashire's Rose Doré, which was shown at the recent show at Regent's Park, and of which more will be heard. The same grower has also a grand pure white, which promises to be of exceptional merit. Messrs. Bell and Sheldon, too, have a splendid new white variety, so that the standard varieties must expect some keen competitors shortly.

A carnation popular in Guernsey is the bright rose-scarlet Sarnian, which will be extensively grown for cut flower purposes. Mr. H. Burnett's novelties, which embrace such favourites as Mrs. Burnett, Marmion, Ceres, and Aurora, also include Cassandra, a large fragrant rose-pink; Daphne, a deep rosy gem, of moderate size, but very free; Rosalind, a white ground with pink markings; Miranda, which can be described as an improved Prosperity; and the rich heliotrope-coloured Mikado, which is novel in colouring, and strong in growth.

P. S. Hayward.

Mr. H. W. Weguelin's book—Carnations, Picotees, and Pinks, will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering, taking cuttings, fertilising blooms, etc. Price 2s. 6d. net by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

HITHER AND THITHER.

In an interesting article published recently Mr. Alger Petts observed that "the interest of a garden is immensely increased if the owner makes a speciality of some particular flower." I quite agree with him, and it is to this spirit of specialising that we owe so much. Floral tastes wander in different directions, as they should in order that nothing that is worthy should be neglected, but, take what flower you will and study its history and development. In close connection with the latter you will find the names of specialists, men who loved the flower, lifted, it may be, from the common place, as Eckford did the sweet pea, and Peter Barr the daffodil, and centred on it the force of undivided attention. This is the way by which flowers are improved, and though the man who specialises may work alone for a time he is by no means a plougher of a lonely furrow, for others catch the spirit, and he soon finds himself one of a band of interested enthusiasts.

Nor is specialising confined to individuals who have large gardens and money to spend on this or that flower, for the spirit moves amongst cottagers and amateurs who move in lowly spheres. Perhaps these men do not raise new varieties, nor do much towards the further development of the flower they love best, and they benefit rather from the efforts of others in the enjoyment they get from the new varieties that come out. Still they are specialists and worthy of the name, as scores of illustrations show. I think the finest specimen fuchsias I have ever seen were grown by a working shoemaker in a home-built greenhouse in the heart of a great town. He cared but little for any other flower; fuchsias had all his affection. In short, he was a specialist. So is another man, a bargeman, by the way, but his forte is roses, standards which he buds with his own hands. His garden is full of them, as novelties are sent out they are added to the collection, and since he took up his abode in the village where he lives, a number of his neighbours have taken up rose-growing. It is true that the spirit of specialising is infectious.

It is quite refreshing to read an article from the pen of a single-handed gardener who commences by stating that he belongs to this large section of the community, and I can assure Mr. H. Roberts that I was very much interested in his remarks. The article in which your correspondent talks to gardeners on page 36 is like some sermons that are simple, it is impressive. It teaches a lesson to young gardeners, namely, to use tact. Just so, the gardener needs horticultural knowledge and also tact, and he must be a student of human nature as well as of plant life. The master, the mistress, the daughters, the children, yea, even the cook, they must all be considered, as Mr. Roberts aptly points out, and doubtless he has succeeded in doing it; but then I take it that he has reasonable people to deal with, and some poor gardeners, single-handed and otherwise, are not so fortunate in this respect.

Regarding the reference on page 22 to the use of grease bands round fruit trees as a remedy for the winter moth trouble, I would say that the place to see grease-banding done on something like an organised system is in that famous fruit-growing district known as the Evesham Valley. The Evesham fruit growers, by the way, are a hard-headed set of men, but they have proved the value of grease-banding, and they believe in it, almost without exception. It is true that some of them are careless and merely daub the stems of the trees with the grease, which is a mistake, as it is not good for the bark, but the result of this co-operative method of dealing with winter moth is the means of keeping down what would otherwise be a serious evil. Recently I visited a number of plantations round Evesham, and observed scores of trees on which the bands were thickly studded with male and female specimens of the winter moth. What would have been the result next season if all these pests had been allowed to live?

Catalogues are coming in with a rush just now, and most gardeners have quite a pile of these interesting publications. The sending out of catalogues is, of course, the seedsman's sprat with which he hopes to capture the mackerel, but I fancy that many in the trade would feel disappointed if they knew what a number of their catalogues are never stripped of the wrappers. Of course, this is inevitable, because you cannot deal with every firm that tempts you with a catalogue, or one would soon be in a state of bankruptcy. If plants and flowers have increased in number and improved in quality, so have catalogues, and the seed lists of leading firms to-day are bulky and elaborate publications, which do credit to the artists, photographers, colour printers, and, indeed, all who help to make them up. Perhaps, if catalogues were a little less elaborate, seeds would be cheaper, but there, that is part of another story.

AN EXCELLENT ARRANGEMENT OF DWARF AND STANDARD ROSES.

Let me pay a word of tribute here to the trade that has done so much to improve horticulture by the introduction of almost endless varieties of fruit, flowers, and vegetables. The tradesman knows the value of novelties if they are good, and the considerations of business compel him to cater for the public in this direction, but he has no control over a new introduction after it leaves his hands. The man who invents a new machine can protect it by means of a patent, but not so the nurseryman, who may have spent as much time and patience over a new plant. All he can do is to keep the stock until he has sufficient to recoup himself for all his trouble, before he puts it into the market. Of course, private individuals also raise new plants, but it is the trade that distributes them, and, but for the competition of business, it is not too much to say that the horticultural world would never have had many of the treasures it now possesses.

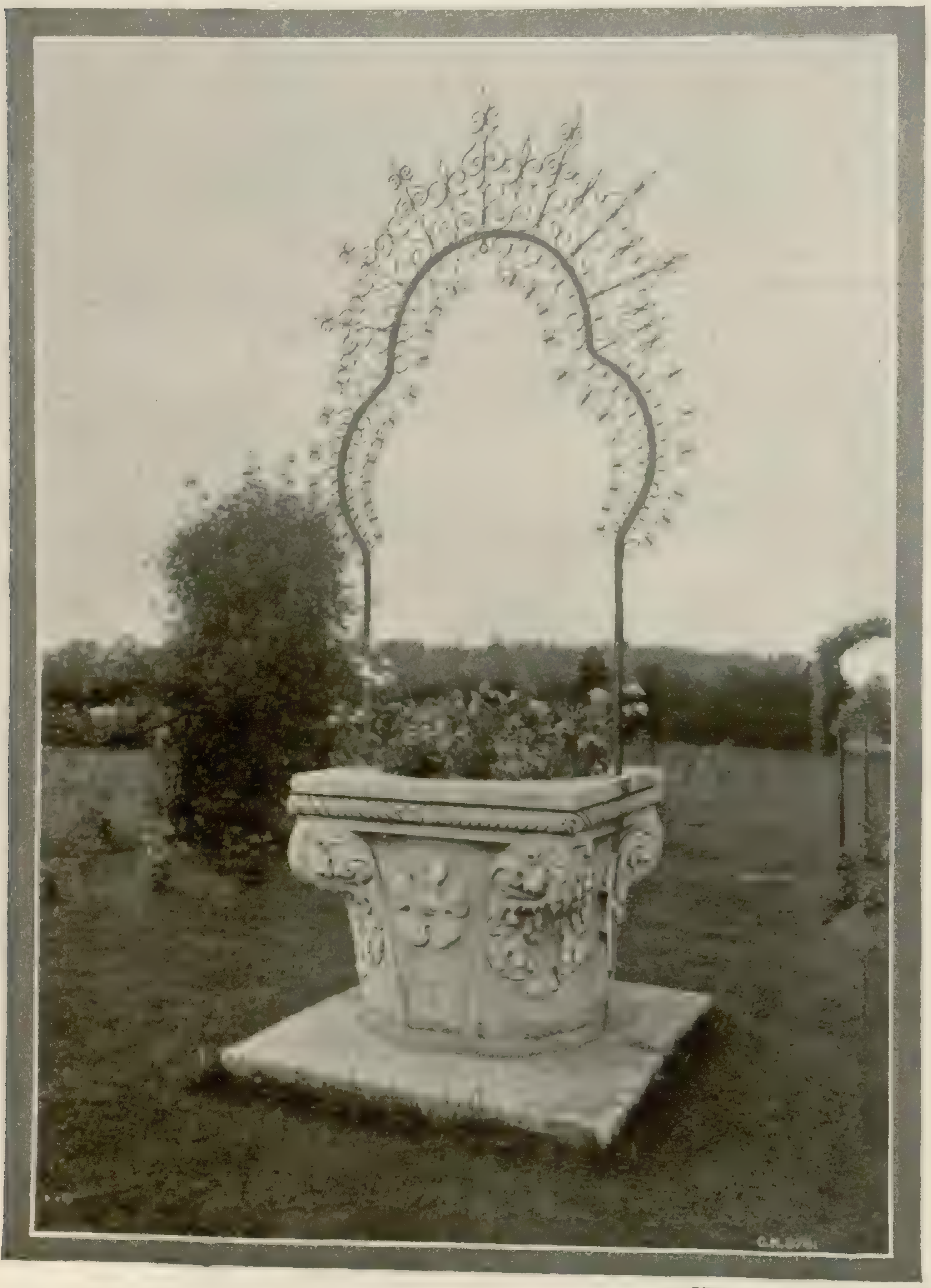
When I was a boy I hadn't the usual boyish ambition to go to sea, but I longed instead for the life of an orchid collector. This was the result, no doubt, of reading the reminiscences of one of the fraternity, telling of hairbreadth escapes and thrilling adventures in tropical climates when in search of orchids. I pictured myself penetrating an unknown region, and imagined myself coming home in triumph with such a floral wonder as the civilised world had never seen before, and myself, of course, the hero. Needless to say, my early dream was never realised, and such ideas are hardly entertained by the boys of to-day, for the vocation of the orchid collector, like that of buccaneer of old, is gone, or nearly so. The hybridist and raiser at home has knocked him out, and there is little need to scour the world for orchids now that the difficulties of propagation are mastered, and the raising of orchids from seed has become a comparatively easy matter.

Taken as a whole, the life of a young journeyman gardener is by no means unpleasant, and there would be little to complain of if prospects were better, but he is not altogether to be envied when he happens to be on duty at night and the thermometer is registering twenty degrees of frost. Some of you, my readers, have had that experience (perhaps some are having it now), as also has the writer, who has vivid recollections of marching lamp in hand at midnight from boiler to boiler situated a long way apart. One felt in those days that the modest twelve shillings which came in on Saturday night was being earned (we didn't get duty pay), but it had its redeeming feature, for one could eat such a meal by the bothy fire after banking up at midnight that it would be dangerous to try now with any hope of sleeping after it.

Spy.

GARDEN ARCHITECTURE.

There are few matters in which greater taste and more refined judgment are required than in the introduction of architectural features into our gardens. As a rule, well-grown plants are the best decorations, but there are many who think that architectural adornments add to the beauty of a garden, and when this is of the formal type, and especially when it is in juxtaposition to the mansion, such a standpoint has certainly something to commend it. At Versailles, and in many Italian gardens, sculpture has been allowed to intrude into what should be the gardener's domain, with the most unsatisfactory results. In many cases the effect is absolutely ludicrous, the exquisite proportions of the statuary and vases being entirely lost owing to their incongruous setting.



[Photo: F. Mason Good.

AN OLD VENETIAN WELL-HEAD AS A GARDEN ORNAMENT AT TYLNEY HALL.

Statues are out of place in an English garden. If they are valuable works of art they deserve a protecting roof, for in our climate they soon become ruined by the weather; if they are without merit, as the majority of them are, their mere existence is an offence, and they may well be included with those to which Lord Rosebery referred when he said, "If those restless spirits that possessed the Gadarene swine were to enter into the statues of Edinburgh, and if the whole stony and brazen troop were to hurry and hustle and huddle headlong down the steepest place near Edinburgh into the deepest part of the Firth of Forth, art would have sustained no serious loss." Bacon also wisely wrote, "They add statues and such things for state and magnificence, but nothing to the true pleasure of the garden."

As a matter of fact, it is not possible to overestimate the care with which a selection of architectural objects should be made, so that they may take their right proportion in garden schemes, and with so many opportunities of seeing how this should not be done, and with some thought expended on the ultimate harmony of the effect, there is no reason why anyone, with the opportunity of choosing good and artistic specimens of stonework, and with a true appreciation of landscape beauty, should not be enabled to add materially to the charms of his garden. Many indeed are the nooks and corners in a garden where a well-placed urn, vase, or well-head may be of great value, throwing the far-seen views into still greater perspective, and emphasising the attractions of its own particular setting. If the ornaments used are not of a character which corresponds with the other stonework of the garden, then, indeed, their value is lost, and they become interlopers, whatever beauty they possess in themselves being nullified by their lack of harmony with their surroundings.

What can be more unpleasing than the sight of marble vases, urns, or such-like ornaments, lovely in themselves and in the Italian landscape from which they were torn, arranged along the sandstone terrace or gravel walk of a red-brick English dwelling? Even in the garden of such a house they would be out of place. all the stonework surrounding it should correspond in colour with the walls of the house, and, in view of the beautiful designs in urns, sun-dials, and fountains that are procurable, it should be an easy task to make the garden at once lovely and in keeping with the house to which it forms the setting. The warm, rich colour of red stone against the dark green of the trees, the blue shadows and tones given it by distance make such ornaments of incalculable value in an atmosphere too cold and grey to endow the marble of the south with the warmth of colour which transforms it into such a thing of beauty in a sunnier land.

The old stone well-heads, such as illustrated, and vessels of bygone centuries will beautify our gardens if they are softened down with such features as will cause them to blend with their surroundings. Imbedded in flowering creepers, which, clinging about the foot, serve to accentuate rather than to hide the pedestal from which the great carved bowl rises, one of these old vases forms a lovely picture, and looks as if it had always belonged to the particular spot in which one finds it, and had become as much a part of the garden as the very trees and flowers themselves, carrying the same message of age and tranquility as the great oaks in whose shade it stands. The end to be striven after in the arrangement of stonework in the garden is that it should form part of the landscape and not be merely an object set down in it; and if the fact that the hand of man placed it there can be obliterated, and its position and setting appear so natural that it conveys the idea that it is an incident in the view the success of its position is assured.

Another important point is that whatever stonework is set up should be useful, and its reason for its position in the landscape obvious, for without utility there is no real art, and the stone vase with no meaning or use to which it could be put becomes ridiculous. It is extraordinary that with so many artistic examples of stonework, both of our own day and of the centuries behind us, we should see so many hideous examples in our gardens. Particularly in fountains has the tortured brain of man evolved weird shapes and fantastic outlines, which force themselves on eye and brain with all the horrible fascination of a nightmare—a nightmare frozen in stone. Yet what beautiful forms are to be had for the copying, or are sometimes to be found by the fortunate in out-of-the-way corners.

In an old garden, rich in stone terraces, where clipped yews throw shadows on the grey steps and paved ways, is a fountain to all appearances as old as the garden itself, and contemporary with the balustrade of the terrace above, yet it has only been in position eighteen months. It is an old granite cider trough, circular in shape, and about six feet in diameter, and was discovered half-buried in the mud of a farmyard. It is now set in the centre of a quiet lawn, surrounded by a pavement of harmonising stone. From a central fountain-head, hidden by rocks, clear water rises to a height of five feet, sparkling in the fitful gleams of sunlight, and falling in the low trough with a musical note, while dew-bright drops glitter on the enclosing stones. Yet another instance illustrating the happy use of garden ornament.

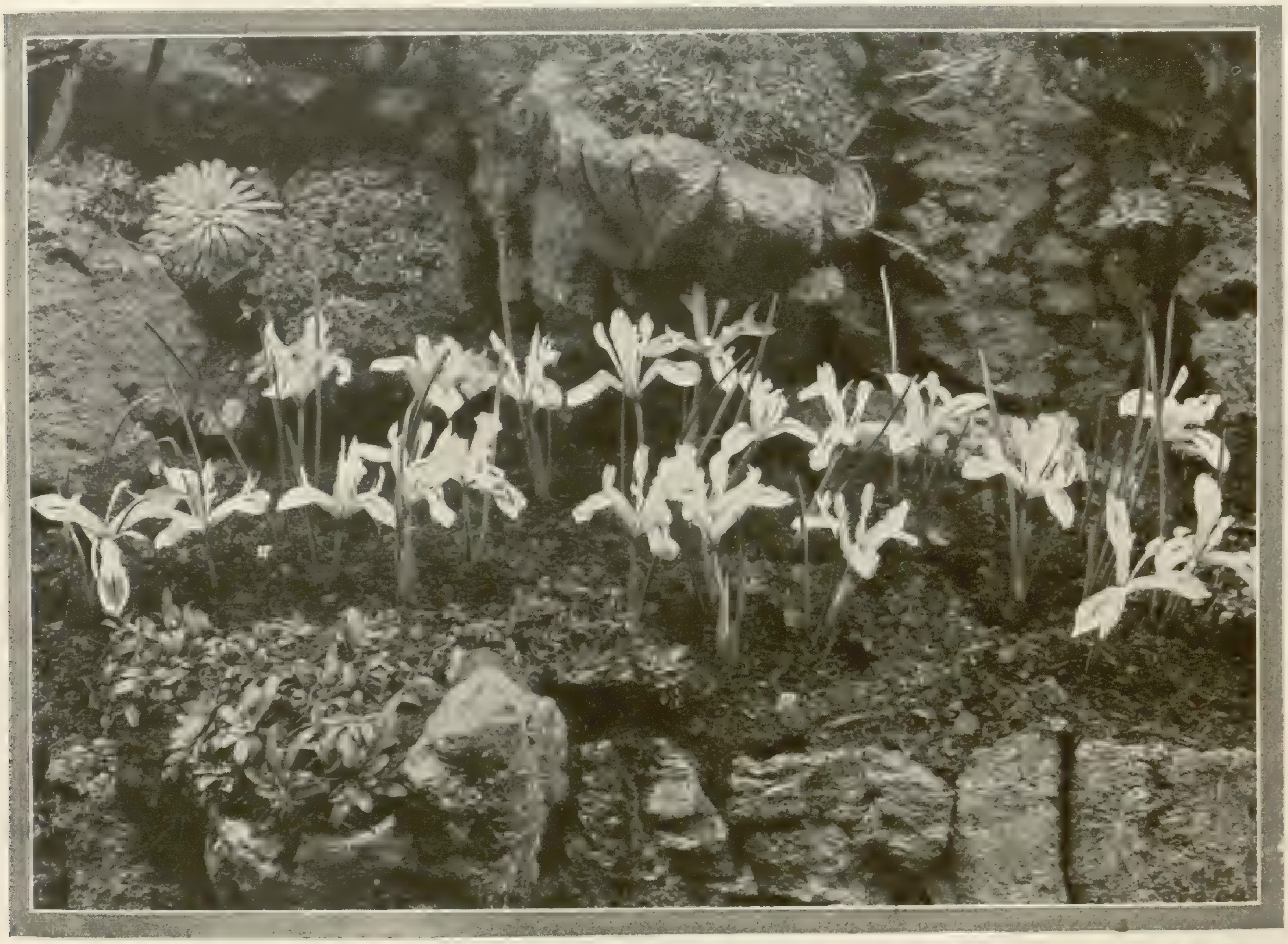
In a garden overlooking the mouth of one of the loveliest of west-country rivers is a walk, bordered on the river side by a low, wide wall, fern-studded and lichen-grown. On the wall stand at intervals tall and finely-shaped Italian wine jars, brimming with the sweetness, not of southern wine, but of fragrant English pinks, that crown every vessel as with snowy foam and perfume the evening air with their sweetness, while they delight the eye with the harmony of their grey-green grass against the warm red of the old earthenware. S. W. Fitzherbert.

Metropolitan Window Gardens.—The Earl of Meath, President of the Metropolitan Public Gardens' Association, again draws attention to the desirability of inducing London householders to cultivate plants and flowers in window-boxes, baskets, etc., for the purpose of adding a cheery aspect to the streets and gladdening the passers-by as well as the inmates. In 1907 a series of prizes was offered for the best efforts in window gardening, by this association, and there were 140 prizewinners out of 450 entries. The Earl of Meath is now arranging a competitive scheme for the present year, and he will be delighted to receive contributions towards the prize fund at the association's offices, 33, Lancaster Gate, London, W.

THE RETICULATA IRISES.

Among the fairest flowers of our gardens are the irises, a race of plants familiar to all generations of flower lovers, and never more prized than now, when the search for new plants and the work of hybridisation and seedling raising have given us so many beautiful new forms. It is needless to press home this point to the mind of the reader, as everyone is familiar with one or more of the exquisite irises whose almost bewildering variety affords us a choice greater than we can well limit to a few species or varieties.

Even when we think of the noble irises of summer, with their still more opulent beauty, we cannot but delight in the graces of their earlier sisters who dare the uncertain spring of our climate, and from an early period give us their exquisite flowers and sojourn with the snowdrop, the crocus, the early scillas and glories of the snow, finding in them no superiors in beauty or in grace.



GROUP OF IRIS HISTRIOIDES, EXHIBITED BY MESSRS. W. CUTBUSH AND SON AT A RECENT R.H.S. MEETING.
The flowers of this Iris are bright blue.

And of all the early irises, now more numerous than ever before, there are few so much admired as the forms of Iris reticulata, the netted iris, whose blue and gold or purple and gold (true regal colouring) blossoms afford us endless delight in their season. The section called the reticulata group includes a few species not perhaps coming precisely within the range of the typical I. reticulata and its varieties, but as all possess the beautifully reticulated bulb, whose netted covering well repays close investigation, either with the naked eye or the microscope, they cannot well be considered separately. One may, however, omit the allied I. Sisyrinchium, which has the reticulation of a different pattern, and has a much shaggier and thicker covering than that of the iris under notice.

Broadly speaking, the reticulata irises are widely distributed in several parts of Asia, the typical reticulata and Krelagei coming from the south-eastern Caucasian region; cyanea from Armenia; sophenensis from Central Asia Minor; Histrio from Palestine; and histrioides from the neighbourhood of Amasia. Vartani is found in the neighbourhood of Nazareth; Bakeriana comes from near Mardin between Armenia and Mesopotamia, and Danfordiæ or Bornmulleri from the South of Cilicia, and from the Amasia region of Asia Minor. All of these reticulata irises have ovoid bulbs, netted coats, sessile flowers, and, with the exception of Bakeriana, four-sided leaves.

I. reticulata.

This, called the type, is, as the late Sir Michael Foster told us, probably not the real typical flower, what we know as the variety Krelagei being the more common plant in its native habitats; seeds from I. reticulata generally produce Krelagei. However this may be, the form has been long recognised as I. reticulata, and it must be adhered to for practical purposes. It has long strap-shaped falls whose violet-blue coloration is brightened by a white middle ridge, decorated in the centre with a line of orange, and a yellow, dotted streak along the claw, also of a beautiful blue. The whole effect of the beautiful form of the flower and its colouring is exquisite, while the delicious violet fragrance it exhales adds to its attractions. The leaves, which are of some length when the flower opens, are four-sided, with a horny point.

I. reticulata Krelagei.

Although the colouring of Krelagei more nearly approaches the royal colouring of "purple and gold," it is not so pleasing as that of the typical plant, although some of the varieties are much brighter than others — red-purple, plum-purple, and almost black purple existing in the range of coloration. It differs from the type in other respects, as it is seldom fragrant, and has generally a shorter and broader character all over its parts. It is, however, so variable that the different characters are difficult to define with certainty. It generally blooms before I. reticulata, but is irregular in this respect.

I. reticulata Histrio.

Sometimes accorded specific rank, there are now few who would recognise enough in its general characters to justify this, and it may be conveniently dealt with as simply a variety of reticulata. For garden purposes it is less valuable than the type, seeing that it is not particularly hardy, and in many gardens is so much weakened by occasional injury to the leaves, which are produced very early, that it dwindles away in the open. The flowers may come as early as December, and may linger until March, while, as the leaves—not too hardy—are about a foot long when the blooms open, it is easy to understand how difficult this iris finds it to accommodate itself to our winters. It is a very beautiful iris with the fall of a reddish-blue with a large centre of white adorned with blue spots and veins, and a yellow ridge, while the standards and styles are blue. It is an excellent subject for pot culture, but, save well south, a difficult one to maintain in health.

I. reticulata histrioides.

I look upon this as one of the best of all the reticulata group of irises, as it stands the weather well, although some think the leaves rather long in proportion to the height at which the flowers are produced. The flower of this variety appears before the leaves, and is a charming one, not unlike that of Histrio, although it varies considerably in its shades and markings. It is also variable in time of flowering, but I have found it one of the most amenable of the group to cultivation in the open-air. It generally blooms in the open about February or March, when its blue, white, and golden flowers are very beautiful. The illustration shows this iris as exhibited by Messrs. William Cutbush and Sons at the Royal Horticultural Hall on January 14.

I. reticulata sophonensis.

This handsome variety, which hails from Asia Minor, near Kharput and Mardin, has secured the name of sophonensis, from Sophene, the old name of the Kharput district. It is one of the earliest of the set, following Histrio, and coming in before any other. The leaves are barely through the soil when the flowers appear, and the latter are very beautiful with their metallic colouring, varying from purple of different shades to lilac. The usual orange ridge is present on the flowers, and they are more spreading than those of the typical plant.

I. reticulata major.

This, the noblest of all the reticulata irises, is said to have been raised originally by the late Rev. J. G. Nelson, of Aldborough, but it appears to have been distributed from other sources. It is larger in all its parts than the type, and the fine deep violet and gold colouring shows to advantage on the larger flowers. This form is scarce in cultivation, but I had a bulb or two from the late Mr. James Allen years ago.

Other reticulata varieties.

The other varieties of I. reticulata proper are not of sufficient importance for the garden to merit much detail. Of these the best is cyanea, an indigo blue one; caerulea, slatey-blue; and purpurea, close to Krelagei, and of a deep purple. It differs in a few features from Krelagei, and is superior to that form as it is frequently seen. Other varieties have been raised or collected, and Herr Max Leichtlin has raised some handsome seedlings which he has distributed under garden names.

Dumfries. S. Arnott.

WEATHER AT ROTHAMSTED IN 1907.

The meteorological records of the Rothamsted Experimental Station, Hertfordshire, show that the year 1907 was characterised by a deficiency of rain, and a deficiency of bright sunshine, and that upon the whole it was a year of gloom.

The total rainfall for the year was nearly 27½ inches, showing a deficiency of about three-quarters of an inch. There were seven months recording a low rainfall, and five months giving an excess.

The mean temperature of the year was 47.9 degrees, being exactly the average record for this district for over the past 29 years. There were five months below average, and seven months above average, the great feature of the year being its low night temperatures.

Bright sunshine amounted to 1,557 hours, or 49 hours below the average record at Rothamsted. During the year the sun shone, on an average, 4 hours 16 minutes on each day, as against 5 hours per day in 1906.

The three first months of the year were noted for their small amount of rainfall and their high record of bright sunshine. March was the month of highest sunshine for the whole year, when a total of 206 hours was experienced, which is 92½ hours in excess of the average amount for this neighbourhood. The large quantity of bright sunshine for March caused the ground at one foot deep to be 5 degrees warmer than is usual for the time of year, which was beneficial for the germination of small seeds in the garden, and for spring-sown corn.

April was the wettest month experienced at Rothamsted for the past twenty-five years. There were seventeen rainy days and three slight falls of snow, giving a total of nearly three inches of water, or one inch in excess of the usual average. April, June, and October were the months of greatest rainfall, over 11 inches being measured during these three months. September was the month of largest deficiency of rain, there being a falling off from the average of 54 years of nearly 170 tons of water on each acre of land.

June weather was generally showery, cold, and dull, and both grass and corn crops were exceedingly backward. The ears of corn were a considerable time in pushing themselves free of the sheath, which is always a sure indication of a low yield of grain per acre, although there may be an excess of straw, as was the case in 1907. The flowering time of the grain crops was about a fortnight later than is usual at Rothamsted.

Hay harvest did not commence until the middle of July, and, in fact, there is but little really good well-cured hay to be found from the 1907 crop. As one travelled about the country it was no unusual thing to see a field of meadow hay still uncarried, but bleached and saturated with rain, in the second week of August.

September, with its glorious weather, seemed to come, as it were, to atone for the shortcomings of the months immediately preceding, and registered 185 hours of bright sunshine, or 24 hours in excess of the average, while the mean temperature was 57.6 degrees, showing 1.8 degree above the average. Corn harvest did not become general until about the middle of September, being about three weeks later than usual.

October was a month of excessive rainfall, and over-average temperature, but deficient sunshine. Both November and December gave more than normal temperature and over-average sunshine. December, the last month of the year, was noted for its extreme mildness, the mean temperature being 2.2 degrees above the normal. There were several days when the warmth was as great as during several days of May. In the flower gardens around this district were to be seen many blooms of roses, pansies, violets, and primulas.

Calculating the total rainfall of 1907 to the tons of water per acre, we find that during the whole year 2,768 tons of water have fallen on each acre of land, and if it had not been for the excessive rainfall of October and December, which recorded 828 tons of water in excess of the average, the underground water supply of this district would have been abnormally low, resulting very probably in a water famine.

Harpenden. J. J. Willis.

MIGNONETTE IN WINTER.

Mignonette sown in July, and grown expressly for bloom in winter, becomes well established before frost and fogs set in, and if due care is given in watering, and a comfortable and even temperature maintained, growth continues to advance, and good heads of bloom are produced in plenty. The batches raised for spring bloom, the plants being comparatively small, frequently collapse or become so patchy that they are not worth retaining. Very often late-sown batches are allowed to become saturated while standing in cold frames, and although the young plants may look green and healthy when removed to the greenhouse for the winter, the delicate young roots cannot assimilate the moisture, and the leaves gradually droop and die.

Winter mignonette must have a pure atmosphere. It cannot endure fog or smoke. Some recommend keeping the soil in a dry state, but if this is carried to extremes the roots soon suffer, and then, should water be freely given, the roots cannot take it up, and the plants die. It is not advisable to use liquid manure for these late, small plants, as the roots are easily injured during winter. February is quite soon enough for the use of liquid manure.

Plants that are grown to bloom during March may be made to do double service, instead of being thrown away. If a few of the best are potted from six-inch pots into ten-inch pots, and placed in a warm moist peach house, it is astonishing how freely they will grow, and they will yield abundance of blooms through the early summer months. Plants in full flower in midwinter are best kept in a temperature of from 55 to 60 degrees, and both growth and bloom trusses are much improved by weak applications of warm liquid manure.

T. B. Field.

Ashwellthorpe Gardens.

NEW BOOKS.

THE SWEET PEA ANNUAL.

Edited by C. H. Curtis and H. J. Wright.
(C. H. Curtis, Adelaide Road, Brentford.)

The issue of the Sweet Pea Annual for the current year is in some respects an advance upon its excellent predecessors, and forms an admirable model of what the official organ of a special society should be. It might appear somewhat extravagant to some who are not sweet pea enthusiasts were we to say that the publication is worth the minimum subscription constituting membership of the National Sweet Pea Society; we will therefore avoid the risk of a suggestion of extravagance of statement by stating that it forms an important part of the advantages enjoyed by the members. The contents, as usual, are varied, interesting, and useful, and have a special value as representing the views and experiences of the cultivators and others who take an active interest in sweet peas and the society identified with them.

There are as usual a number of special articles all more or less good, and the most noteworthy of these are "More Hostorical Notes," by Mr. S. B. Dicks; "Impressions," by Mr. Atlee Burpee; "Germination of Seeds," by Mr. Charles Foster, who, it will be remembered, conducted the society's trials in the University College Gardens, Reading, in 1906 and 1907; "Wire Netting," by Mr. G. W. Leak; "Sweet Peas in New South Wales," by Major Nedwell, North Brighton; "The Popular Vote for Sweet Peas," by Mr. G. H. Mackereth; "Breakers Ahead," by Mr. W. P. Wright; "Adherence to First Principles," by Mr. George Gordon; and "Sweet Peas in Devonshire," by Mr. R. Bathurst. Of special value, both to traders in and growers of sweet peas, is the catalogue of sweet pea names prepared by Miss Jessie Cuthbertson, which contains all the varieties that it has been possible to obtain from the lists of raisers and distributors. The catalogue is so full and admirably compiled that all concerned with the sweet pea are under a debt of gratitude to Miss Cuthbertson for the valuable service she has rendered. Valuable, however, as the catalogue is, it would have been still more so had the year of introduction been also given. This would have added materially to the difficulties inseparable from the preparation of so comprehensive a catalogue as this, but a lady of Miss Cuthbertson's ability would have successfully contended with them. The report by Mr. C. Foster on the Reading trials is admirably written, and will be found extremely useful to cultivators who are not well acquainted with varieties. As seed sowing will soon become general, the following extracts from Mr. Foster's article on the germination of the seeds of sweet peas is of special interest at the present time:

"In the spring of 1907 many purchasers of sweet pea seeds were much annoyed because varieties they had paid fancy prices for failed to grow, and the trade and the gardening Press were kept busy offering explanations as to the cause of failure. With regard to this subject the 1907 trials were most interesting, as the following remarks will show.

"All seeds received for the trials were sown in pots on February 24, twenty seeds of each variety being sown. Many of the varieties germinated very evenly and quickly, but others made no progress. We allowed these dormant seeds to remain until March 20, twenty-four days after sowing, and then went systematically over all the pots where the seeds had failed altogether, or in part, to grow, and were relieved to find that the seeds had not decayed, the outer covering being as hard as that of a canna seed and as impervious to water.

"In six stocks the seeds had all failed to germinate; five stocks had one seed, five had two seeds, four had three seeds, seven had four seeds, four had five seeds, one had six seeds, and two had seven seeds germinated. Thus 136 pots were gone through to find the laggard seeds, each of which then had a portion of its outer covering removed with a sharp knife, and in a very few days every seed was pushing its growth through the soil, even in those cases where not one out of the twenty had previously shown any signs of life.

"It is interesting to note that, with three exceptions, the thirty-four stocks that failed up to the stage named, were all of them new seedlings of quite recent introduction, and it is possible that they were over-ripened and too fully hardened before being harvested during the hot summer of 1906. It is also interesting to note that nearly every variety that failed to germinate had dark seeds, and that many of the flowers were maroon, blue, purple, and of the John Ingman type, although some stocks of this latter germinated to a seed. It was very instructive also to note the superiority of stocks from gardens where the seeds had undoubtedly developed under the very best cultural conditions, and so long as cultivators continue to work the soil deeply, encourage good growth in the early stages, and apply plenty of phosphates to aid seed production, we shall always, as now, produce seed that will give the most vigorous plants."

HARP OF SWEET PEAS.
Arranged by Mr. H. A. Fox, Wellington, New Zealand.
(From "The Sweet Pea Annual," 1908).

MY GARDEN DIARY, 1908.

(Sutton and Sons, Reading.) Price 1s.

A dainty publication, equally suitable for the drawing-room and the garden office, combining as it does elegance with usefulness. Reminders of work to be done are given for each month, with notes on the changes of the moon, the rising and setting of the sun, the weather averages, and there is also space for memoranda. In addition there are at the end of the book concise notes on vegetables and selections of annual flowers.

A SIMPLE METHOD OF BOOK-KEEPING.

By H. W. Kersey. (Headley Brothers, Ashford and London.) Price 1s. 6d.

The object of this book is to provide a simple method of book-keeping which will give farmers and market gardeners a thorough knowledge of their financial position. The author, who is an expert in book-keeping, has been eminently successful in divising a method that is at once simple and efficient, and we can strongly recommend it to those who are desirous of keeping their accounts in a really satisfactory manner without the difficulties associated with keeping them by double entry.

THE "GARDENING WORLD" POCKET DIARY, 1908.

(Maclaren and Sons, 37 and 38, Shoe Lane, E.C.) Price 1s.

A handy diary for the pocket, in which much information relating to horticulture is given in a compact and readily accessible form. The diary pages are so arranged as to allow two pages to the week, and consequently provides as much space as could well be desired in a book to be carried in the pocket.

ELEMENTARY SCHOOL GARDENS.

Elementary school gardens are being created and developed in so many parts of the country, and with such great success, that we need offer no apology for publishing the following excellent and instructive report on these gardens, as they exist in Essex (1906-7), by **Mr. A. F. Butler, His Majesty's Inspector**:

The 42 school gardens in Essex were carefully inspected during the late spring and the summer of 1907, and, speaking generally, the work seen deserves much praise. Gardening is a subject which should have a foremost place in the curriculum of an elementary school where circumstances admit of its introduction. It is eminently practical, and provides both manual and mental training; it arouses children's interest in Nature, and encourages them to observe accurately.

Experience shows that the efficient teaching of gardening causes no deterioration in the general school-work. On the contrary, it is found to induce a more intelligent interest in the ordinary school subjects by showing their practical utility in the processes of everyday life. In order that gardening may occupy its proper place in the school course it is essential that the educational aim should be paramount, and the pecuniary value of the produce or the rearing of exhibition crops of secondary importance. The main object is not to train boys to be professional gardeners.

The subjects with which it can be profitably correlated are composition, mensuration, and arithmetic, Nature study and drawing. The scholars can describe the various operations in which they have been engaged. They can realise the use of mensuration and arithmetic in such exercises as measuring the garden and its plots; calculating the amount of soil displaced, weighing or measuring and estimating the value of the produce, and in keeping simple accounts showing the profit or loss on each plot and on the garden as a whole. They can study Nature in their gardens, and take notes of what they observe. These notes can be illustrated by drawings from the actual specimens. The children would thus be taught to see accurately, and these studies from Nature might with advantage take the place of the second-hand drawings from flat copies which are now so prevalent in the schools. The mending of broken tool handles, together with the preparation of wooden labels, etc., as done at the Purfleet Council School, enables the boys to become handy with the common carpentering tools.

Apart from its general educational value, horticultural knowledge is itself of much practical benefit to a rural population. The same principles are involved in cultivating crops in the garden as on the farm. An interesting illustration of the value of school gardening is seen at Roydon, where the school gardens, which form part of the village allotments, have for some years been a special feature. This year seven old boys who learnt their gardening at school are holders of allotments, and these are amongst the best cultivated. The allotment holders generally are said to take an interest in the school gardens and their youthful workers.

For some years a horticultural expert has been employed on the Essex County Staff, and classes for teachers have been conducted at Chelmsford and elsewhere. Thus a considerable extension of school gardening should take place in the near future, although in some quarters it is urged that suitable land near the schools cannot be obtained. A greater difficulty, however, is that arising out of the present staffing of the schools, which is often such that the head teacher cannot leave the schoolroom, and undoubtedly the best person to carry on this work is one of the school teachers, if he is interested in the subject and is a practical gardener. The employment of working gardeners is not entirely satisfactory unless a capable teacher is present for disciplinary purposes, and for keeping the theoretical class-instruction in touch with the practical operations of the garden. At Halstead, however, the school gardening is taught by a visiting "woman gardener," whose education, disciplinary powers, and special horticultural training enable her to carry on the work most successfully.

Of the 42 gardens in Essex, 33 are worked by the school teachers alone. In the other nine cases visiting gardeners are employed, two of whom have been specially trained in the Essex County Gardens. Several of the teachers also possess special qualifications, having attended the Horticultural Training Classes at Chelmsford, as well as being good practical gardeners. In four cases the subject is taken by women with much success, and it is important to note this now that the number of masters is gradually diminishing.

School gardening in Essex may unhesitatingly be pronounced a practical success, both teachers and scholars having entered heartily into the work. The different gardening operations have been well carried out; habits of tidiness, industry, and attention to details have generally been inculcated; and the crops have been satisfactory as to kind and quality.

Those who have had no previous experience in this matter, have been surprised at the keenness of the boys in the work, and at their unremitting attention to the gardens in their spare moments. In mixed schools the older girls have often shown a most appreciative interest in the plots, and have become critical as to their merits and defects. In some places the girls have been encouraged to form flower-beds and borders, which beautify the school surroundings, and it is hoped that this, together with window gardening, may become general in the county. It should be mentioned, also, that at a few schools the girls share in the theoretical instruction, and even assist in the gardening operations.

Alresford School provides a good illustration of successful gardening taught by a mistress under great difficulties, and here some commendable work is done in Nature study, the records of observations and the drawings of natural specimens being very good. At Great Braxted, too, the practical operations have been well taught by the mistress, and the crops have been good. At Roydon and Wakes Colne the use of a microscope and lenses for closer examination and observation of natural specimens is a feature much to be commended. The use and management of a "cold frame" have formed part of the practical instruction in a few cases, and might well become more general. A further development may be noted in connection with the school at Noak Hill, where the master has erected a greenhouse with suitable heating arrangements, and excellent use has been made of this.

The weakest point in connection with the gardening generally has been in its insufficient correlation with general school-work, and especially in—

(a) the keeping of simple accounts;
(b) the recording of operations and observations;
(c) the drawing of natural specimens.

Each boy should have a special note-book for this subject, and should keep exact records of his operations, experiments, and observations.

The plan of dividing the garden into plots, and, after reserving one or more of these for experimental and combined work, entrusting each of the rest to the care of one boy, or to a couple of boys, has been generally adopted. This certainly seems to be the best system. Where two boys share a plot, it is advisable, so far as is possible, to place a beginner with an experienced boy. The plots vary in size at the different schools, but the best results are obtained where one boy is held responsible for as large a plot as is possible and practicable. At Purfleet, for instance, each boy has a plot 30ft. by 18ft., and the master considers it "just as important that each boy should have a plot to himself as it is that he should have his own separate exercise book for school-work." The large experimental plot at this school is well stocked with trees and herbs, and thus an opportunity is provided for good practice in pruning, grafting, budding, and propagation by division. In many cases the common plot has not been made of sufficient value, but, to some extent, this may be due to the fact that several of the gardens have only been recently established.

At a few schools the plot system has not been adopted, in one case at least from choice, and in others for convenience and economy of space.

Land for the school gardens has been provided in three ways:

(1) by hiring or purchasing a piece especially for the purpose;
(2) by renting some of the village allotments;
(3) by using the teachers' gardens,

and in nearly every case the site is in close proximity to the school—a decided advantage.

The tools provided are, as a rule, adequate and suitable. It would be an advantage, however, if one set of tools were supplied for each plot, and more suitable accommodation provided for their storage at some of the schools. As the care and uses of tools are matters of importance in gardening instruction, it is advisable that each boy should be made responsible for one or more tools, and this can best be done where there is a special tool-shed with places labelled or numbered for each boy's tools.

The cost of seeds, manure, etc., has been met by the local education authority in some 30 of the 42 schools. In one case the boys have provided seeds, and in the remaining cases the head teachers have met the outlay. The most satisfactory plan seems to be for the local education authority to defray all expenses, and for the produce to be sold to recoup the outlay as far as practicable. But the sale of garden produce in country districts, where each house has its own garden, is not possible, and in such cases the produce is either taken by the boys or the teachers, or shared between them.

The schemes of work drawn up by the several teachers for the approval of the Board of Education were, in the main, satisfactory, and, in some cases, they gave evidence of most thoughtful preparation. Speaking generally, however, they were somewhat wanting in fullness, and did not sufficiently indicate the educational character of the instruction, the seasonal operations to be performed, and the general arrangements and equipment. These are matters applicable to all school gardening, and they might well be incorporated in the general county scheme without in any way discouraging the originality or the individuality of the teachers.

Each scheme should indicate clearly the scope and character of the proposed work, and show the general arrangements and equipment for carrying it out. Such a scheme would state:

(1) The dimensions of the garden, the number of plots (if any) into which it is divided, with the size of each plot, and whether the boys work singly, in pairs, or in co-operation.
(2) The use to be made of the common plot.
(3) The name of the teacher or teachers, with special qualifications (if any).
(4) The nature of the crops to be grown, how the seed is provided, and the manner of disposing of the produce.
(5) The seasonal operations to be performed, e.g.:—
    (a) Digging, double digging, trenching, ridging.
    (b) Manuring.
    (c) Mulching.
    (d) Seed sowing, planting and transplanting.
    (e) Gathering or raising of crops.
    (f) Pruning, grafting, budding, etc.
    (g) Utilisation and disposal of garden refuse.
(6) The chief points of the theoretical class instructions, e.g.:—
    (a) Nature of soils and suitability for different crops.
    (b) Manures and their special qualities.
    (c) Plants, their food, etc.
    (d) Garden pests and methods of eradication.
    (e) Rotation and succession of crops.

  (f) Climatic influences on soils and crops.
  (g) Economy of space in planting and cropping.
  (h) Care and use of tools.
  (i) Methods of storing produce.
(7) The method and extent of correlating gardening with ordinary school-work, e.g.:—
  (a) Drawing to scale—drawing of natural specimens.
  (b) Nature Study—plants, etc., used for illustration of lessons and for inducing observation, accompanied by note-taking and illustrative sketches.
  (c) Mensuration and Arithmetic—keeping of accounts.
  (d) Composition—exercises on operations, observations, and deductions.
(8) The character of the records and notes to be kept by the teacher and by the scholars.
(9) The general equipment, e.g.:—Tools, shed, cold-frame, etc.

EARLY CAULIFLOWERS.

Cauliflowers occupy an important place among vegetables, and their production in quantity over as long a period as possible will necessitate considerable attention and care in sowing and growing on the several batches of plants that will be necessary to form the successional crops. What we are specially interested in at this season is the earliest crop to give the first heads. There are two ways in treating the plants. The older plan of providing the early supply was to sow seed about September and winter the young plants in frames till March or April, according to the conditions of the weather, when they were planted out in their permanent quarters. Through change of circumstances this is not practised to the same extent now, and more reliance is placed upon a sowing this month.

Sowing Seed.

First Crop, Early Snowball, and Early London are good varieties, but I prefer the two first-named, with Early London to follow. Somewhat shallow pans or boxes are suitable for this sowing if filled with an open gritty compost. One of the pitfalls for beginners is that of sowing the seed too thickly, which results in weakly plants that are particularly liable to damp off near the soil and become worthless. Sow thinly, and place the plants from the time the seed has germinated in the lightest position near the roof glass in a temperature not exceeding 45 to 50 degrees. To ensure sturdy growth from the commencement water must be given carefully.

When the rough leaves have well commenced to form the seedlings will be ready for pricking out. If a carefully prepared mild hotbed can be made up of leaves and litter, on which a frame can be placed, and the hotbed covered with a layer of rather sandy, open soil, here the plants should be pricked out at six inches apart, and they will make rapid progress. If conveniences exist for another plantation in a pit, over another mild hotbed, one may slowly force on a batch to give the first heads; or if grown on steadily, with plenty of air on all favourable occasions, and gradually inured to the weather, they will form the first plantation outside in March or April. Smaller plants from this, or slightly later sowing, may be also pricked out at the same distance apart in a bed of sandy soil placed on a cool base in a cool frame; after becoming established they must be allowed plenty of air on fine days. This will probably be the most satisfactory plantation.

Site and Soil.

An elevated south border is without doubt the best possible position for the first planting, because here one avoids atmospheric moisture during frosty nights, and obtains the fullest benefit from the sun on bright days. On light soils especially deep digging or trenching, with plenty of manure incorporated, is essential for cauliflowers, but with heavy land less manure may be required, but deep cultivation is of the greatest advantage here for most of the brassicas. Coarse heads are not required, but a great difference exists between a thin poor flower head and one that has been properly grown.

Planting Out.

Discretion is required at this stage as to how and when to plant out, as a severe check to the plant will certainly bring about premature buttoning, and probably the heads will be so small as to be useless. Failure of this kind is caused in some cases by the plants being insufficiently hardened before being exposed to the open, so that it is best to have the lights entirely removed for a time before planting that the tissues of the plants be consolidated.

The time to plant must be absolutely ruled by the conditions of the weather, soil, and district. Here it is a great risk to plant until the end of March or beginning of April, even with careful night protection of spruce boughs, which we consider the best means of warding off cold winds and frost. Failing this laurel boughs or 32-sized pots are useful. A distance of two feet from row to row and eighteen inches from plant to plant for this permanent planting is ample to allow of full development.

The plants, previous to being removed, should receive a thorough soaking of water to settle the soil, and be afterwards lifted with a trowel to secure a ball of earth to each one; they should be conveyed to their permanent positions in trays with the least possible shaking, and planted firmly, without unduly crushing or damaging the roots. Considering the amount of moisture in the soil at this time of year a light watering only will be required. Afterwards the amount of the rainfall must determine the watering necessary.

C. Flack.

Cholmondely Castle Gardens.

Mowing Lawns.—The mild autumn caused the grass to grow on lawns unusually late in the year, and the latter weeks of 1907 were so wet that it was impossible to get the lawn mower to work. This means that the grass is now becoming very untidy, and an early opportunity should be taken of having it cut. Worm-casts are the greatest trouble at this season, as not only do they choke up the machine in wet weather, but they harden in frost, and so prevent mowing being done then. The thing is to keep them scattered with a besom or rolled down, then should a nice frosty period supervene, the machine can be run over the grass with ease.—E. J. K.

The White Jasmine on a North Wall.—The white jasmine is generally looked upon as being a little tender, and while its yellow-flowered sister is often recommended for and found doing well on a north wall, it cannot be said that the white finds equal favour for such a position among gardeners in general. But that it will thrive excellently on a north wall, that is the north wall of a dwelling-house, I had ample demonstration last summer, when I saw a specimen 20ft. high and laden with bunches of its fragrant white blossoms. The house, too, was on an exposed hillside, so that the jasmine had no shelter from the north winds.—E. J. K.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

SEED SOWING.—In gardens where hybridisation is practised—and there are but few places now where orchids are grown without home-raised seedlings from the material at hand for cross-fertilisation purposes—one must consider the subject of seed sowing. For members of the cattleya family, epidendrums, dendrobiums, and other epiphytal orchids that ripened their seed vessels during the closing months of last year, advantage is obtained by deferring seed sowing until the turn of the days; better light facilitates the work, and fewer disadvantages are experienced with small seedlings.

METHODS.—There are several methods of sowing orchid seed. The one in general practice for these epiphytes is to fill a four-inch pot to about one-half its depth with broken crocks or chopped bracken roots, and over this is placed a layer of ordinary potting compost. Select a piece of bookbinder's linen, the No. 5 roof shading providing it is new and clean, or any coarse-grained cotton or silk material. In this roll tightly, so as to form a ball, some clean chopped sphagnum moss, press this into the top of the pot, and pack a little more chopped sphagnum firmly around the edges so as to keep the ball in position; thoroughly wet the compost with tepid water, and as soon as this has drained the seed may be thinly and evenly sown on the surface. Place the pots in a moist propagating case, with an even temperature of from 70 to 75 degrees; if the seed is good it should show signs of germination in a few days. As the seed requires more moisture care must be observed to give it in such a manner that the seeds do not get washed or floated from their position.

WOOD BLOCKS.—A very good method is to obtain round dry deals, such as thin ends of scaffold poles; roughly saw these asunder, so that the grain of the wood may be left rough. After fitting them to suitable sized pots, the wood should be put into the rainwater tank for a few days to become well soaked. When ready for sowing, fix them into the pots filled with drainage, and fill any marginal space with finely chopped sphagnum. This is a very good method where the facilities of a propagating case are not available, for although the seed may be longer in germinating, the wood better resists fungoid attacks than does linen. Place the blocks, as soon as seed has been sown, in a warm, moist position where they may have every advantage of the available light.

CYPRIPEDIUMS, CALANTHES, and other terrestrial orchids are best suited by having their seeds sown on the surface material of a selected plant of the kind to which they belong. The seed should be sown thinly and on several pots, if possible. I have sown seed on a number of pots, and in several instances the seed has only satisfactorily germinated on the surface of one, a fact that is difficult to account for, as all had been treated precisely the same.

ODONTOGLOSSUMS, with us, germinate more readily than any other class of orchids. There was only a small portion of seed sown from each of the seed pods last year, and we have more plants than we can well find room for. I do not hesitate to sow odontoglossum seeds at any season; they are sown whenever pods ripen. The seeds are sown on the surface of pots containing plants of their own kind, and a surface selected that is practically free from moss and algæ growth, so that the seedlings may not become overgrown or choked. The ordinary potting compost of about equal portions of fibrous peat, broken leaves, and sphagnum is what they are sown on, and we find germination very rapid.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

EUCHARIS AMAZONICA.—Plants which have been flowering through the autumn are now showing signs of growth. Those desiring to increase their stock of plants should take advantage of the early season when potting is necessary. I have found that restriction of the roots to promote flowering is altogether unnecessary, and that, if practised to any extent, eventually proves detrimental to the health of the plants. A very successful system is to pot up one-half of the batch each spring when the largest specimens are divided into suitable sized ones, and the smaller plants potted separately. Our potting compost consists of two parts loam, one of peat, and one of dried sheep manure, with charcoal and coarse sand added. When potting eucharis bulbs it is advisable to dispense with the use of a potting stick, and press firmly but carefully around the roots. After potting plunge the pots into bottom heat if possible, and maintain a moist atmosphere by damping and syringing. The plants will not require much water until the leaves have considerably developed. Bulbs which have been infested with eucharis mite should have the whole of the soil removed from their roots and both bulbs and roots thoroughly washed with a solution of carbolic or paraffin soap.

EUPHORBIA JACQUINIÆFLORA. —Plants, as they pass out of bloom, should be placed on a shelf near the glass in order to produce a stock of cuttings for early propagation. If attention is given the stock plants by affording them a light position in the stove, the cuttings are not so liable to damp.

GENERAL REMARKS.—A general overhauling and thorough cleansing of stove plants is always required in early spring previous to starting the plants into growth. If this work is done thoroughly it will save a great deal of labour later in the season. All creepers should be removed from the roof, carefully pruned, and tied up again.

GLOXINIAS.—The present time is a suitable one for sowing seeds of gloxinias or other stove subjects. For this purpose shallow pans, which are clean, and well drained with broken crocks, are preferable. Prepare a finely sifted compost of loam, leaf-soil, peat, and silver sand in equal parts. The soil should be moistened, and the seeds sown thinly and regularly over the surface; cover very lightly with fine sand, and over each pan place a sheet of glass.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

PINES.—Plants that were late in throwing up their fruit last autumn, and have been kept in a somewhat lower temperature may now be given fresh plunging material; keep this at about 85 degrees, and then they will soon start swelling again, and, though small, will provide a good early supply of fruit. They may be top-dressed with some fresh loam and bonemeal. White scale very often affects these, and should be cleaned off the leaves before it spreads on to the fruit. The pit or house for successional plants should be cleaned, the walls scraped and whitewashed down, and the corners and crevices well syringed with paraffin and hot water to dislodge all insects. Fill the bed with clean leaves, and plunge the plants in these when the temperature ranges from 70 to 75 degrees, with a top heat of 60 degrees. Damp down the walls and all dry places, and on bright days a slight damping overhead may be given with tepid water. Remove any suckers that appear, and, if required, pot them in small pots and plunge in a slight bottom heat.

STRAWBERRIES.—Those in flower will require to be artificially fertilised by means of a very soft brush, taking care that both flowers and brush are dry; when set reduce the fruits to five or six of the best to each pot. More heat may soon be given, with air on all favourable occasions, but cold draughts should not reach the plants or mildew will appear. Place another batch in a cool house or pit to keep up a succession, and allow for a few blind plants.

TOMATOES.—The winter-fruiting plants will still be yielding a few fruits, and should be given every encouragement; top-dress them with a good open soil and a little artificial manure, and keep all decayed leaves removed. Young growths will appear and flowers may be set, but it is not advisable to rely on these for a crop. Lye's Early Prolific set fruits in December, but these did not come to any useful size. Young shoots of this variety struck last December are now potted into 54-sized pots, stood on a bed of ashes in a temperature of 60 to 65 degrees; these will be shifted on again as soon as they are sufficiently advanced. At this time of the year such plants are best without a large bulk of soil, hence small shifts are best. The batch should be fumigated once a week to keep down white-fly. Seedlings raised the first week in January will be ready for potting singly into small pots; place them on a warm shelf near the glass away from the draught.

POT VINES.—As the shoots become strong enough they may be only slightly pulled down to the wire or the sun will draw them back and break off the shoot; stopping may take place two or three leaves from the bunch, but the bunches should be well advanced before this is done; give air on all favourable occasions, closing the house with sunheat when possible. When the vines are in flower reduce the moisture, and, if possible, admit a little air to the house till they are set; if the weather is at all favourable no artificial setting will be required.

ORCHARD HOUSE.—If the trees are not too tall for the house they are best not plunged until the fruits have set, as watering can be done more carefully without it. Syringe the trees twice a day, and close up with all sunheat when possible. Apricots will probably be the first to open their flowers, and they should be placed at the coolest end of the house. If there are too many flower buds showing some of them may be removed, and a slight fumigating before they expand will be beneficial.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

HOTBEDS.—Where these have not already been made, they should now have immediate attention; they are most useful for forwarding early supplies of vegetables, and serviceable for assisting other crops. The making of a hotbed requires some practical knowledge, for if built in a haphazard manner, the heat will not be lasting. Thoroughly mix together three-parts of fresh leaves with one of long litter, and tread them firmly down as the work of building the bed proceeds. When portable frames are to be used the beds should be fully half a yard wider on each side and ends than the frames to allow for relining as the heat declines.

EARLY POTATOES.—Another batch may be planted in pits or frames, slightly heated either by fermenting material or pipes. The most suitable varieties for this work are Sharpe's Victor and Ringleader, as they are both dwarf and produce fair crops of good flavoured produce. Loam of a light nature, mixed with old potting shed soil, and some lime rubble, with a sprinkling of bonemeal, makes up a good compost.

PEAS.—It is generally one of the chief aims of the gardener to secure a few dishes of peas as early as possible. To accomplish this a batch should be sown in 8-in. pots at once, using an early dwarf variety, such as Little Marvel, or Carter's Early Forcing, and growing them in the cool fruit houses well up to the glass. For succession to these, Exonian and Gradus should be sown in 4½in. pots, or on turves about five or six inches wide, placed on boards, covering them over with an inch of soil. Put these in mild heat until they are ready for hardening off. If the weather is favourable, and the soil is in a fit state for working, a few short rows should be sown on a warm border outside, choosing a round seeded variety at this date to make certain of the seed not rotting through excessive moisture.

SPINACH.—If a few rows of spinach are sown between the peas they will come on very well, especially if the soil has been well worked.

CARROTS.—Where plenty of frames are at command, one or two might be utilised by half-filling them with fresh leaves, and covering these over to a depth of six inches with any light soil, and sowing Inimitable Forcing and Paris Market, which are two good early carrots. This may be followed by Early Short Horn and Nantes.

ONIONS.—Where large well-ripened bulbs are required, it is necessary to sow the main crop in boxes, in some good rich soil, placing these in a peach house or vinery that has been started. Ailsa Craig and Record are useful varieties for the purpose, the latter makes a heavy and finely-shaped bulb, which keeps well. As soon as germination takes place, let the plants have all the light possible, and be placed well up to the glass. When they are large enough to handle they should be pricked out in other boxes, and carefully hardened off before planting outside in April.

MUSHROOMS. — Continue to collect the manure each day, and place in an open shed, keeping it well turned to get rid of the rank steam. When enough has been secured, it should be made up into a bed in the mushroom house, making it very firm, and when the heat has declined to about 89 deg. the spawn should be inserted ten or twelve inches apart in rows, and about two inches deep, and the bed covered with an inch and a-half of good soil. Follow this with a layer of straw, and keep up a temperature of 55 deg.

VARIOUS.—Any vacant plots should be trenched without delay, and exposed to the weather. Radishes should now be sown in pits or frames; Wood's Early Frame and French Breakfast are good reliable sorts; keep them well supplied with water while growing. Mustard and cress must be sown every few days in heat, and endive be planted out in the mushroom house at intervals for blanching.—T. W. Birkenshaw, Hatley Park Gardens, Sandy.

Prunus japonica flore plena.—Where hardy shrubs are forced into bloom for the embellishment of the greenhouse during the early months of the year, this delightful little member of the plum family (which, by the way, is often known as Prunus sinensis), occupies a foremost position among even the most select. It forms a neat bushy specimen, and when at its best the slender, rather upright shoots are studded for some distance with large double blossoms, suggesting those of a double-flowered cherry. There are two forms, one in which the flowers are pure white, and the other in which they have a pinkish tinge. This latter feature is more noticed in the bud state and just as the flowers are expanded than it is afterwards. Another point in its favour is that it retains its beauty when forced longer than many other shrubs, and a succession of blossoms is kept up for some time. This prunus may be grown altogether in pots, and under such treatment it can be depended upon to flower year after year, added to which, plants that are continually forced flower earlier than those so treated for the first time. In the case of those it is intended to keep in pots they should as soon as the blossoms are over, have the flowering shoots cut back to within a couple of inches or so of the base. They must still be kept under glass and encouraged to make good vigorous shoots. Then when all danger from frosts is over the plants can be plunged in a sunny spot out of doors, where the wood will be well ripened. In obtaining plants of this prunus care must be taken to see that they are on their own roots, as they are often budded or grafted on to the sloe, and the suckers from the stock are always a nuisance.—W. T.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Gardeners' Royal Benevolent Institution.

There was a good attendance at the annual meeting held at Simpson's, Strand, W.C., on Thursday, January 23, when Mr. Harry J. Veitch presided. Those present included: Messrs. A. W. Sutton, G. J. Ingram, G. Monro, T. Morris, G. Wythes, O. Thomas, G. Gordon, J. Willard, W. Poupart, A. W. Paul, Rochford, W. Howe, J. McIndoe, etc., etc.

The following report and balance-sheet were presented:

COMMITTEE'S REPORT FOR 1907.

The committee, in submitting their annual report, together with a statement of receipts and expenditure (as certified by the auditors) for the year 1907, again have the pleasure of congratulating the subscribers and donors to the institution on its continued success.

At no former period in the sixty-eight years of its existence has so much been done in the way of affording permanent and temporary assistance to the unfortunate members of the horticultural community—gardeners, market growers, nurserymen, etc., and the widows of such—as during the past year. Over £4,000 has been disbursed in permanent aid alone. That this happy condition has obtained is a matter for thankfulness, and the committee feel it is also an encouragement to the subscribers and others whose generous liberality has enabled them to carry on the work.

At the beginning of 1907 there were 227 pensioners on the funds—123 men and 104 widows—receiving annuities of £20 and £16 per annum respectively for life. During the year twenty have died, one man has been removed to an infirmary under medical orders; another, a widow, to an asylum owing to her mental condition, and another has left England for America to reside with her son. Of the men who died, three left widows, whose circumstances being such as to render them eligible, have been placed on the funds without election to receive the widows' allowance of £16 a year each for life, under Rule iii. 13. The committee now recommend an election from an approved list of fifty-two candidates, to fill the vacancies created.

The "Victorian Era Fund," and the "Good Samaritan Fund" still prove a source of much benefit and comfort. From the former fund nearly £200 has been distributed amongst the unsuccessful candidates at the last election who had formerly been subscribers, in terms proportionate to the length of time they had subscribed; and from the latter fund £106 has been given in small amounts as temporary relief to numerous applicants—whether subscribers or not—whose cases were of a most distressing and pathetic nature. The committee again beg to draw attention to the value and utility of these two funds; the one helps the candidate awaiting election, whilst the other bestows temporary help in cases of emergency. As the income only from these funds is available, special contributions ear-marked for either of them will be warmly welcomed.

The annual festival dinner which took place at the Whitehall Rooms of the Hotel Metropole on June 26 last, under the presidency of the Hon. Walter Rothschild, M.P. (trustee), was most successful, and resulted in a substantial sum being raised towards carrying on the work. The committee desire to place on record their gratitude and indebtedness to the chairman for his earnest advocacy of the claims of the charity, and for his generous contribution to the funds. They also take this opportunity to express their sincere thanks to those gentlemen who acted as stewards or collectors; to the contributors of flowers; to the horticultural Press for their gratuitous and invaluable help; to Mr. James Hudson, V.M.H., for superintending the decorations; and to other friends throughout the country who in any way, directly or indirectly, contributed to the gratifying result attained. Grateful thanks are likewise tendered to the Right Hon. Mary Countess of Ilchester, for again allowing her beautiful gardens at Holland House to be opened to the public on the occasion of the great summer flower show of the Royal Horticultural Society, part of the proceeds obtained therefrom being handed to the institution; also to the Right Hon. Earl Beauchamp (Madresfield Court), and Sir Frank Crisp (Friar Park) for similar kindness for the same object.

To the "Geo. Munro" Concert Committee they offer their acknowledgment for again contributing to the funds. Sincere thanks are likewise accorded to N. N. Sherwood, Esq. (trustee), for his gift of £20 to the unsuccessful candidates at the last election; and to Arthur W. Sutton, Esq. (member of committee), for kindly supplying a similar amount for a year's allowance in support of an incurably paralysed candidate. Very gratefully do the committee also acknowledge the services rendered by the hon. treasurers and hon. secretaries of the several auxiliaries which continue to be a source of strength and support, not only in obtaining additional financial aid, but in maintaining, as well as creating interest in, the operations of the charity.

It is with great pleasure the committee have to announce that the Right Hon. Lord Aldenham will preside at the sixty-ninth anniversary festival dinner in aid of the funds on Wednesday, June 24 next, at the Whitehall Rooms, Hotel Metropole. They hope his Lordship will be warmly supported.

The committee, unfortunately, have again to refer to the large number of losses by death amongst the friends and supporters of the institution they have sustained during the past year. They would especially mention the Marquis of Bristol and Maxwell T. Masters, M.D., F.R.S., both of whom were vice-presidents for over forty years, and took a lively interest in the institution. Dr. Masters being always ready to help forward the work. Among others who have passed away are Sir Alex. J. Arbuthnot, chairman of committee for a short time some years ago; Mr. James H. Veitch, also formerly a member of committee; and Lord Battersea; the Hon. Mark Rolle, Sir Michael Foster, Baroness Burdett Coutts, Mr. J. Hill White, one of the founders and hon. treasurer of the Worcester Auxiliary, and Mr. R. B. Cater, of the Bristol and Bath Auxiliary.

With much gratitude the committee acknowledge the practical aid and sympathetic help afforded them in their work, and they now very earnestly appeal to every well-wisher of this National (unsectarian) Horticultural Charity for further exertions and interest on its behalf, so that the beneficial work which has been carried on with such signal success for the poor and needy for so many years may continue to be maintained.—**Harry J. Veitch**, treasurer and chairman of committee; **George J. Ingram**, secretary.

RECEIPTS AND EXPENDITURE FOR 1907.

RECEIPTS.

To Balance	£1,001 13 2
Amount on deposit	3,580 0 0
Annual subscriptions	1,464 17 6
Donations at festival dinner	2,796 14 3
Legacy, the late H. Aiton, Esq.	10 0 0
Grant from Exors. Edward Poole Estate	64 9 5
Return of Income Tax	42 19 8
Dividends	937 15 3
Sale of waste paper	0 8 6
	£9,898 17 9

EXPENDITURE.

By Pensions and gratuities, including Mr. Sherwood's and Mr. Sutton's gifts	£4,033 14 9
Expenses annual meeting and election	9 19 0
Rent, firing, salaries of Secretary and Clerk	566 18 5
Printing and stationery	88 15 1
Expenses festival dinner	53 16 11
Postages, travelling expenses, insurance, etc.	72 4 8
Investment in India Three per Cent. of grant from "Edward Poole Estate"	64 9 5
Placed on deposit	3,880 0 0
Balance with Treasurer and Secretary	1,129 9 6
	£9,898 17 9

In accordance with the rules of the Gardeners' Royal Benevolent Institution, we certify that all our requirements as auditors have been complied with, and we report to the subscribers that we have compared the books, together with the bankers' certificate of securities deposited with them, and that the balance-sheet is a true and correct account of same. We also wish to add that we find the books well kept.

T. SWIFT,
BERT. J. MONRO,
J. WILLARD.

January 21, 1908.

VICTORIAN ERA FUND.

RECEIPTS.

To Balance, January, 1907		£200 4 9
Donations, 1907	£15 15 0	
Dividends	155 0 6	
Return of Income Tax	8 3 2	
		178 18 8
		£379 3 5

EXPENDITURE.

By Gratuities	£194 12 0	
By Balance, December 31, 1907	184 11 5	
		£379 3 5
		£379 3 5

GOOD SAMARITAN FUND.

RECEIPTS.

To Balance, January, 1907		£230 17 7
Donations	£75 8 6	
Dividends	64 5 2	
Return of Income Tax	3 6 2	
		142 19 10
		£373 17 5

EXPENDITURE.

By Gratuities	£106 10 0	
Balance, December 31, 1907	267 7 5	
		£373 17 5
		£373 17 5

The Chairman moved the adoption of the report and financial statement, remarking that it was a full report and a satisfactory one. He was a little anxious for the future because their losses by death had been severe. Dr. Masters had passed from them since the previous annual meeting. But he hoped others would come forward to fill the places rendered vacant. They would that afternoon proceed to elect eighteen pensioners to the benefits of the fund, and he was glad to announce that Mr. N. N. Sherwood, V.M.H., had given £25 to be distributed among the unelected candidates—an increase of £5 on his gift in 1907. During the year just ended the institution had distributed £4,334 16s. 9d. The motion was duly seconded, and carried.

Mr. Arthur W. Sutton, V.M.H., moved the re-election of Mr. Harry J. Veitch as treasurer, and eulogised the services he had so long and ably rendered. He also said that, in view of recent enactments, members of the trade who wished to show they were well disposed towards gardeners, should show their good feeling by subscribing liberally towards the gardening charities. Mr. Denning seconded the motion, which was carried and duly acknowledged by Mr. Veitch, who pointed out that 355 votes had been lost that day on a total of 48 papers, owing to the latter being unsigned.

Mr. G. Monro, V.M.H., proposed the re-election of Mr. E. J. Ingram as secretary, and this was seconded by Mr. E. Wythes, V.M.H., both of whom warmly praised Mr. Ingram's work. On the motion of Messrs. C. H. Curtis and W. Poupart, the retiring members of committee were all re-elected. The auditors, Messrs. T. Swift, B. J. Monro, and J. Willard, were re-elected, on the motion of Messrs. O. Thomas and J. McIndoe, and heartily thanked for services rendered.

Messrs. B. J. Monro and E. White were appointed scrutineers of the ballot, and the chairman, in adjourning the meeting for the declaration of the poll, announced that Mr. A. W. Sutton had kindly provided a pension for the year for a selected non-elected candidate.

The poll was declared soon after 4.30 p.m., when it was shown that the following had been elected: James Mack (3,671 votes), W. Cookson (3,455), Wm. Swanborough (3,307), George H. Green (3,073), Jas. Chesher (2,972), Wm. Edwards (2,797), Robt. McAdam (2,788), Mary Manderson (2,633), Euphemia Chinging (2,543), John Stanton (2,535), Nehemiah Blandford (2,498), George Little (2,496), Thos. J. Foote (2,481), Ann J. Solman (2,452), Wm. Pooley (2,426), Chas. Kinns (2,360), Robt. Maher (2,357), Alex. Clark (2,338), and Wm. Moore (2,270). Two others were voted on in accordance with the rule, and these were Wm. Jones (1,957), and Susan Hale (1,561). The "Sutton" pensioner is Thos. Jones, and, as Mr. G. Monro kindly promised to provide a pension for one year, this was granted to Laura Stockwell, who only polled 106 votes.

Votes of thanks to the scrutineers and chairman concluded the proceedings.

FRIENDLY SUPPER.

During the evening about sixty friends of the institution joined at supper, under the very able presidency of of Mr. Martin H. F. Sutton, of Reading. Messrs. H. J. Veitch, E. White, Bilney, E. Sherwood, W. Sherwood, J. F. McLeod, G. Monro, P. C. M. Veitch, J. Monro, G. Paul, H. G. Cox, M. Veitch, J. G. Veitch, W. Howe, E. T. Cook, H. G. Cove, etc., etc., were present.

After the loyal toasts, the Chairman proposed "Our Institution—its Continued Prosperity," and did so briefly and admirably. He pointed out the national character of the charity and said it was worthy of the assistance of all connected with horticulture. Instead of declining after its "three-score years and ten"—it was now 69 years old. He hoped the institution would increase in usefulness and prosperity. Already £117,000 had been distributed, and the pensions had gone to all parts of the United Kingdom. What relief this assistance had brought it was impossible for one to fully realise. But, though glad of the past usefulness and present position, he urged all to do their best to make the future brighter and better. No one was more worthy of relief in times of need, for no other skilled labour was so poorly paid, and it required many years of patience to save enough to smooth the declining years. Mr. Sutton was heartily applauded for his remarks, and Mr. Harry J. Veitch who responded to the toast, heartily thanked the chairman for his presence and speech. He stated there were now 123 men and 104 women on the funds, and the annual pension list, together with assistance rendered the unsuccessful candidates from the Victorian Era and Good Samaritan Funds, now amounted to about £4,400 a year. He wondered sometimes whether if old age pensions became a state matter, whether the institution would cease, and what would become of their invested capital. They had lost many friends in 1907, including Dr. Masters, but they had many good friends, who were also very generous, notably Mr. N. N. Sherwood, Mr. A. W. Sutton, and Mr. G. Monro.

Mr. G. Paul proposed "The Committee, Honorary Officers, and County Friends," and to this toast Messrs. W. A. Bilney, E. White, and P. C. M. Veitch responded. "Our Chairman" was proposed by Mr. Edward Sherwood, and pleasingly acknowledged.

The music, kindly provided by Mr. M. H. F. Sutton, and supplied by the Westminster Singers, was unusually good; indeed, we cannot recall such an exquisite rendering of charming music at any previous function of a similar character we have attended.

Oxfordshire Chrysanthemum and Fruit Society.

This society recently held its forty-fourth annual meeting of subscribers at the New Inn Hotel, Oxford. Mr. Councillor Turrill presided over nearly thirty members. The annual report referred to an improvement in the specimen plants and groups for effect; cut blooms demonstrated a high standard, though there were fewer than in some seasons; the two hundred dishes of hardy fruit were regarded as a wonderful display in an uncertain season; and the vast array of collections and single dishes of vegetables proved the suitability of the district for producing high-class quality. The statement of accounts revealed the fact that, despite a large attendance (2,750 tickets being handed in), there was a loss of £3 7s. 9d. on the year's working, traceable to an increase of prize money. Harvey du Cros, Esq., M.P., was chosen president, and Mr. W. Greenaway, secretary (fortieth year). The next show is fixed for November 10.

Royal Horticultural Society.

JANUARY 28.

There was a fairly good display on the above date, and, as the weather was favourable the attendance was good. Orchids were a feature, and other leading displays were of primulas, cyclamens, shrubs, carnations, and potatoes.

FLORAL COMMITTEE.

Cyclamens were extensively shown by Messrs. Sutton and Sons, Reading, who make a speciality of these flowers. They had freely-flowered, well-grown plants of White Butterfly, Giant Salmon Pink, and a particularly good selection of superb fringed varieties in very many shades of colour, notably the white grounds with purple edges and tips. These made a most effective and interesting display. From the Guildford Hardy Plant Nursery came a collection of Alpine shrubs, notably heaths and veronicas, with a few berberis and rhododendrons. Messrs. H. B. May and Sons, Edmonton, had a most interesting exhibit of ferns, showing excellent examples of Davallia tenuifolia Veitchi, Platycerium stemmaria, Nephrolepis todeaoides, the charming Asplenium elegantulum, Nephrolepis Whitmani, etc. With these were elegant and bright dracænas, crotons, and aralias, and a fine strain of Primula obconica.

Messrs. Wm. Cutbush and Son, Highgate, N., had a large exhibit, in which early flowers, such as Adonis kikusaki, A. amurensis, Iris reticulata, I. histrio, Helleborus niger major, Jasminum nudiflorum, Hamamelis arborea, and heaths were noticeable. This firm also had Daphne indica, camellias, acacias, Erica Wilmoreana, and a collection of perpetual-flowering carnations, the latter including St. Louis, Enchantress, Glendale, My Maryland, Helen Goddard, Robert Craig, and Mrs. Burnett. The Misses Hopkins, Mere Gardens, Shepperton-on-Thames, exhibited a small collection of rockwork plants, and a fine basketful of hellebore flowers. Some very beautiful carnations were exhibited by Mr. H. Burnett, Guernsey, who showed fine stands of big blooms of Mrs. H. Burnett, Marmion, Enchantress, Robert Craig, Mikado, Winsor, Britannia, White Perfection, and Mrs. T. W. Lawson.

Primulas in variety and a collection of saxifragas, sedums, and other evergreen alpine plants, was submitted by Messrs. J. Peed and Son, West Norwood, S.E. Messrs. H. Cannell and Son, Swanley, set up some wonderful primulas; these were of the true florists' or Chinese type, and they carried flowers of unusual size and substance, though at this date there were not many on each plant. The group included a number of new seedlings, and the salmon and crimson shades were very pleasing. Messrs. John Waterer and Sons, Lim., Bagshot, Surrey, contributed a very handsome and interesting display of hollies, in both standard and bush forms. The yellow-berried holly was very fine, as were the specimens of Golden Queen, Lawsoniana, Silver Queen, Golden King, the uncommon Ilex latifolia, the Scotch Golden, Waterer's Golden, Milkmaid, and Moonshine, the latter a very distinct and effective variety.

Mr. G. Reuthe, Fox Hill, Keston, brought up early crocuses, adonis, berberis, hellebores, and hardy heaths, and cyclamen, etc. Some very interesting and effective shrubs were shown by Mr. L. R. Russell, Richmond, and the most attractive were Garrya elliptica with its tasselled spikes, Aucuba vera, full of berries, Eleagnus japonica aurea, Cupressus macrocarpa lutea, Buddleia asiatica, Eurya latifolia variegata, and euonymus.

The exhibit of perpetual-flowering carnations made by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, was a very effective one. There were large vases of such popular varieties as White Perfection, Enchantress, Rose Pink Enchantress, Mrs. Burnett, Mikado, Britannia, Lady Bountiful, Robert Craig, and Cardinal. The same firm showed Euphorbia jacquiniæflora, some fine salmon-coloured cyclamens, and the sweet Daphne indica. Early flowers were contributed by Messrs. Barr and Sons, Covent Garden, and these were very pretty, and included crocuses, snowdrops, hyacinths, ericas, hellebores, etc.

Mrs. Sophia Miller, Moyleen, Marlow, showed several dozen water-colour drawings of flowers and garden scenes; the carnations, the hellebores, and the crinums appealed most to us. Paintings of various flowers, many of the studies being designs for tiles, etc., were shown by Miss Summer Jones, Wellesley Road, Chiswick. The carnation pictures were very good.

ORCHID COMMITTEE.

Some charming orchids were grouped by Messrs. Charlesworth and Co., Heaton, Bradford, and among the many good things we noted Lælio-cattleya Prospero, Cattleya Octave Odoin, L.-c. Andromeda, C. Enid, and Odontoglossums in variety. Mr. Hopkins, gardener to F. Wellesley, Esq., Westfield, Woking, brought forward Cypripedium Mr. F. Sander (A.M.), a bright and finely-formed hybrid; and C. Rajah, the latter a very bold cross between C. Io grande, and C. Swinburnei magnificum.

Some lovely odontoglossums were sent over by Messrs. Linden and Co., Brussels; O. crispum Jean Linden, with heavy red-brown markings on a finely-formed flower was splendid; O. Nottianum, O. exultum formosum, and O. Orphanum, the latter with a beautiful spike of ten flowers—were all of first-rate quality. Cypripedium Fairieanum Cookson's var. (A.M.), with very dark purple tips to the dorsal sepal, was shown by Mr. Chapman, gardener to N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne. Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester, sent up the showy Golden Lælio-cattleya Goldfinch, Cattleya Cyril, and Cypripedium Bianca.

Numerous handsome cypripediums were shown by Messrs. James Veitch and Sons, Chelsea; there were specially good blooms of the C. villosum group, some good odontoglossums, Trichopilia suavis, and Brasso-cattleya Orpheus rosea, and the quaint Neobenthamia gracilis. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, had a fine plant of Cypripedium aureum virginale in their group of orchids; around it were various cypripediums, Odontoglossum Rossi majus, Lælia anceps, etc.

Some beautifully-grown odontoglossums, chiefly white forms of O. crispum, were shown in quantity by Messrs. J. and A. McBean, Cooksbridge, Sussex, and the group was the most beautiful in the hall. The plants were grandly grown, and the spikes long and graceful. Epiphronitis Veitchi, and white forms of Lælia anceps were also shown equally well by these famous growers. Some freely-flowered specimens of Cattleya Percivaliana were shown by Messrs. Heath and Son, Cheltenham, who also had a goodly set of cypripediums, such as C. Leeanum, C. villosum, and C. insigne varieties.

Messrs. Cypher and Sons, Cheltenham, contributed a fine and interesting collection of cypripediums, with a few odontoglossums and a large Cymbidium Uraniarum. Among the cypripediums we noted C. Leeanum viginalis, C. Fairieanum, C. Almos, C. nitens F. F. Smith, C. aureum virginale, and C. Sallieri Hyeanum. Messrs. J. W. Moore and Co., Lim., Rawdon, Leeds, exhibited a small group of orchids in which were Odontoglossum Harryano-crispum, O. crispum, a fine form of Lycaste Skinneri, and numerous good cypripediums.

Well-grown and finely-flowered plants of Cypripedium insigne Sanderæ, C. Euryades, C. Leeanum, C. villosum, C. Minos, etc., were contributed by Mr. Balmforth, gardener to F. Mentieth Ogilvie, Esq., The Shrubbery, Oxford. From Messrs. Armstrong and Brown, Tunbridge Wells, came some good forms of Odontoglossum crispum, including a very shapely pure white variety; Sophronitis grandiflora, Cypripedium Helen II., Cymbidium Woodhamianum, and Brasso-cattleya Mdme. Hye, were other prominent orchids in this group. Mr. Bound, gardener to Sir J. Colman, Gatton Park, Reigate, showed Cymbidium Gattonense (A.M.), a hybrid between C. Traceyanum and C. Lowianium; it has bold handsome flowers.

FRUIT AND VEGETABLE COMMITTEE.

Mr. Gentle, gardener to Mrs. Denison, Little Gaddesdon, Berkhamsted, submitted a collection of forty dishes of beautiful potatoes, every tuber clean and fresh, and of good size. Up-to-Date, Ashleaf, Eldorado, Satisfaction, Sir J. Llewelyn, Royal Kidney, and Triumph were particularly good. Mr. Gentle also showed large bulbs of Ailsa Craig, Cocoanut, and Record onions, all clean and well finished. Some finely-preserved apples were exhibited by Messrs. J. Peed and Son, West Norwood, S.E., and the collection of about thirty dishes contained fine specimens of Lane's Prince Albert, Hambling's Seedling, Tyler's Kernel, Bismarck, Withington Fillbasket, Annie Elizabeth, Tebbutt's Pearmain, Lord Derby, Belle de Pontoise, and Hawthornden.

AWARDS.

Award of Merit.—To Nephrolepis exaltata Amerpohli, from Messrs. H. B. May and Sons, Upper Edmonton; to Blickling pear, from Mr. W. Allan, gardener to Colonel the Hon. C. Harbord, Gunton Park, Norwich; Cypripedium Mr. F. Sander, from F. Wellesley, Esq., Westfield, Woking; C. Fairieanum Cookson's var., from N. C. Cookson, Esq., Oakfield, Wylam-on-Tyne; Cymbidium Gattonense, from Mr. W. P. Bound, gardener to Sir J. Colman, Bart., Gatton Park, Reigate.

MEDALS.

Silver-Gilt Knightian. — Mr. Gentle, gardener to Mrs. Denison, Little Gaddesdon, Berkhamstead.

Silver-Gilt Banksian.—Messrs. H. B. May and Sons, Edmonton.

Silver Flora.—Messrs. H. Cannell and Sons, Swanley; Messrs. Sutton and Sons, Reading; Messrs. J. Waterer and Sons, Bagshot; Messrs. W. Cutbush and Son, Highgate; Messrs. Charlesworth and Co., Bradford; Messrs. J. Cypher and Sons, Cheltenham; Messrs. J. and A. McBean, Cooksbridge, Sussex; Mr. Balmforth, gardener to J. Mentieth Ogilvie, Esq., Oxford; and Messrs. Armstrong and Brown, Tunbridge Wells.

Silver Knightian. — Messrs. J. Peed and Son, West Norwood, S.E.

Silver Banksian.—Messrs. Hugh Low and Co., Bush Hill Park, Enfield (one for orchids, and one for carnations, etc.); Mr. H. Burnett, Guernsey; Mr. L. R. Russell, Richmond; Messrs. James Veitch and Sons, Chelsea; Messrs. J. W. Moore and Co., Rawdon, Leeds.

Croydon Gardeners' Society.

The annual dinner of this flourishing society was held on Wednesday evening last at the Greyhound Hotel, Croydon, when the president, J. J. Reid, Esq., filled the chair, and Mr. John Heal, V.M.H., was vice-chairman. Dr. T. Jackson, Dr. Voelcker, and Messrs. Oxtoby, Gregory, P. Bunyard, W. Humphreys, W. A. Cook, H. Boshier, W. Bentley, and R. B. Leach, were among those present.

The tables were charmingly decorated; indeed, the flowers are always a pleasing and very fine feature of this annual function.

Following the loyal toasts, Mr. John Heal proposed "The Society," and, in so doing, complimented the society on its achievements and its admirable management; he urged the wider use of such societies, and asked that the elder experienced men should welcome and assist the younger members. He appealed to the young men not to be copyists, but keen observers. Mr. Heal spoke of the good resulting from visits to horticultural establishments, and concluded with an appeal for a little help for the Gardeners' Orphan Fund. Mr. Oxtoby responded, and said he thought the old adage that "an ounce of practice was worth a pound of theory" was too rigidly adhered to by many men.

Mr. P. F. Bunyard proposed "Kindred Societies," and alluded to the fact that it was from the Croydon Society that the idea of drawing all horticultural mutual improvement societies into one federation emanated. They were always glad to welcome members from other societies to their lectures or their social functions. Dr. Voelcker, Analyst to the R.H.S., and Mr. Squire, of the Sydenham Gardeners' Guild, responded, the former expressing the opinion that the subject of the utilisation of atmospheric nitrogen for soil fertilisation had advanced but little during the past two or three years.

Mr. Mills proposed "The Horticultural and Local Press," and Dr. Jackson proposed "The Chairman."

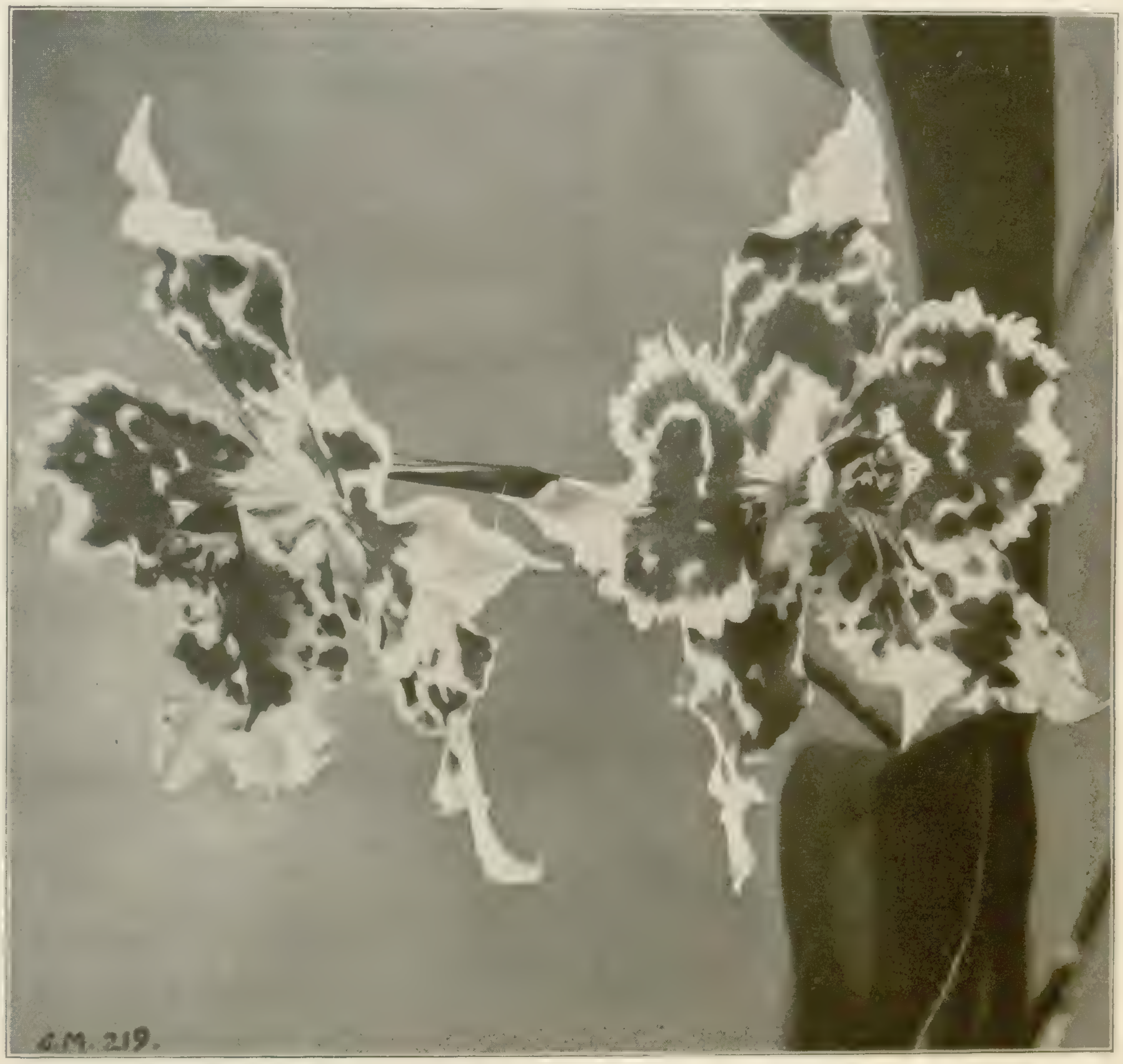
Royal Oxfordshire Horticultural Society.

The seventy-seventh annual meeting of members was held recently at the Municipal Buildings, Oxford. The Mayor (Alderman Ansell) presided, and there were about a score of subscribers present. The report, which had been printed and distributed, indicated the general good quality of the productions staged in competition, and regretted that, owing to the very showery weather on the occasion of the June and August shows, the result of the year's work was a loss of £90. The society has, however, a cash reserve of £114. James Herbert Morrell, Esq., Headington Hill Hall, was chosen president, and the society's fixtures are: Commemoration show, June 23; autumn show, August 27.

Liverpool Horticultural Association.

The annual meeting of this society was held on Saturday last at the offices in Victoria Street, Liverpool. The accounts submitted to the members proved the most unfavourable known for many years. The income from the spring show was £76 4s. 4d., the chief items being door and tickets, £43 19s. 10d.; and special prizes, £24 8s. 6d.; against expenditure £213 3s. 9d., including prize money £99 18s. 6d. From the autumn show were received by door and tickets £60 8s. 5d.; special prizes, £12 12s.; total income, £83 16s. 10d.; expenditure, £272 13s. 5d., including prize money, £150 1s. The general account showed a balance from last year of £162 15s.; subscriptions, £268 10s. 9d.; advertisements, £27 12s.; making, with other items, a total of £465 5s. 6d. On the other side were: Loss on spring show, £136 19s. 5d.; loss on autumn show, £188 15s. 6d.; other items, £88 11s. 1d.; making a total of £412 7s. 10d., leaving a balance of £52 17s. 8d., or a loss on the year's working of £109 17s. 4d.

The accounts were passed, and, after some discussion as to the future, the meeting was adjourned so that the statement of accounts might be sent to all subscribers with a circular pointing out the importance of united help if the society is to continue its two shows on the present basis. Surely Liverpool will answer the call of the committee, as it would be disastrous to the cause of horticulture if the magnificent spring exhibition held under the auspices of the association were to cease.



ODONTOGLOSSUM CRISPUM JEAN LINDEN.
Exhibited by Messrs. Linden and Co. at R.H.S. Meeting on Tuesday last. Flowers blush-white, with heavy red-brown markings.

Abingdon Horticultural Society.

This society, under the chairmanship of Mr. Councillor Brewer, held its annual meeting recently, but very few members were present. The report announced a satisfactory year's working, the "gate" at the August show being regarded as a record. Entries showed an improvement, each division of the schedule being well represented. The accounts gave a gain on the year of £17, and the reserve fund stands at £25 15s. 2d. The Right Hon. the Earl of Abingdon was elected president, and the date of the show was fixed for August 13.

Horsham Horticultural Society.

The past year has proved an exceptionally good one for this society; the summer and autumn shows held in connection therewith having proved a record in every way, resulting in a profit on the year's working of about £20. The balance now accredited to the society amounts to £47 5s. 3d. There was a slight falling off in subscriptions, but this was made good by extra attendance, induced by greater attractions at the shows. The dates fixed (provisional) for holding the shows during the present year are August 27 for summer show, and November 11 and 12 for the autumn one.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

COCKROACHES.—J. P., Bewdley: Yes, the specimens sent represent the pest that is all too well known under the name of cockroach. We are glad to have your experiences, and pleased to know you are achieving success.

PLATYCODON GRANDIFLORUM. — J. K., Essex: The plant named cannot be considered as inferior or superior to the Canterbury Bell, as it does not come into competition or comparison with it. Platycodon grandiflorum is a close relative of the campanulas, and was introduced in 1782. It is a native of China and Japan. The type rarely grows more than a foot high, but it produces many large and broad blue flowers. It is a species, and not a florist's production, and is usually cultivated in the front of a herbaceous border or on the rock garden. If seed is obtainable it will be probably through those firms who make hardy plants a speciality.

SWEET PEAS.—R. B. G., Redditch: The best advice we can give you is that you purchase "Sweet Peas and Their Cultivation" (1s. 2d. post free; W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.), and join the National Sweet Pea Society. The hon. secretary, Mr. C. H. Curtis, Adelaide Road, Brentford, will be pleased to forward particulars if you send him a postcard asking for them. In our own columns we pay considerable attention to the needs of sweet pea lovers, but, necessarily, there are many other subjects and interests to be considered.

ERECTION OF SUN-DIAL.—G. O., Harrow: If it is a horizontal dial, already marked and fixed, then when it is placed in position it must be made perfectly horizontal, and be correctly oriented. A spirit level will serve to show correct levelling, and the dial plate is turned until the shadow cast by the stile indicates the time shown by a correct watch. If your dial has the usual triangular stile, about a quarter of an inch thick, then the solar time indicated by the shadow will be one minute fast in the morning, and one minute slow during the afternoon. The hour lines of one dial will not suit all latitudes, hence a dial ruled for the London district would not be suitable for Glasgow. Perhaps your better plan will be to obtain the services of some competent firm, such as those who advertise sun-dials in our columns.

UNDERGROWTH. — W. B., Sydenham: The wood is too well drained by reason of its position, and the deep paths cut through it. But even if this is granted the charming wild flowers you name should grow under the trees if the leaf-soil is not removed. Oxalis, hardy cyclamens, pulmonarias, daffodils, snowdrops, ornithogalums, squills, etc., should do well near the paths if some little care is taken to plant them in good soil. Further, by extending the work over several years there is no doubt the undergrowth could be materially improved by planting groups of various berberis, mollis azaleas, rhododendrons, Leycesteria formosa, Symphoricarpus racemosus, etc., in the best positions and in good soil on prepared sites. these should all receive needful attention for a year or two until thoroughly established. Could not cuttings be made in the sides of the paths to carry surface water into the woodland among the trees and undergrowth, instead of carrying it all away? If this is possible there should be considerable improvement as a result, and the moisture-loving subjects could be grouped near these outlets.

SEEDLING LETTUCES FOR SALAD.—S. H. J., Wellington: Select a strong-growing cos variety, and sow the seeds rather thickly in shallow boxes of rich sandy soil. Cover the seeds very lightly with soil, water them in, and then stand the boxes in a cucumber pit or other structure where there is a temperature of from 60 to 75 degrees. Germination will soon take place. There is no need to place the boxes close to the glass, as one wants to secure tender leafage as quickly as possible, and a little "drawing up" will assist this object. When the seedlings are three or four inches high they may be cut over like mustard and cress. A few boxes of seedling lettuces to follow each other in this way may often tide one over an awkward gap between crops.

FORCING PARSLEY.—F. P. C., Warminster: Parsley is rarely forced in the usual sense of the word, but it often happens that the supply of parsley runs short early in the year. The shortage is due chiefly to the fact that all the foliage produced last autumn has been picked and the cold, dull weather has not encouraged new growth. If this is the case, then lift a few dozen roots carefully, remove old useless leaves, and trim the roots slightly; place these in pots or deep boxes, in sandy leaf-soil made firm, and then set the pots or boxes in a warm greenhouse. If much heat is given the end in view will be defeated; but a temperature of 55 deg., rising a little by sun-heat, will soon cause the plants to break into new growth. If any of the plants throw up flowering stems cut these back, as new leafage will be produced at the base in the plant's attempt to flower.

MOSCHOSMA RIPARIUM.—S. T. B., Walton: Cut back the plants as soon as they have ceased to flower, and begin to look shabby. Stand them on a warm greenhouse shelf, water sparingly, and in a few weeks as signs of growth are apparent, place them in a warmer, moister house. When the new growths are three inches long remove them, with a heel of old wood, by means of a sharp knife, and insert them in pots of sandy soil. If these cuttings are placed over gentle bottom heat in a close pit, they will root readily. They must be potted singly when well rooted, and as soon as they have taken hold of the new soil they must be removed from the pit to a light place in an intermediate house. During the summer they need little artificial heat. Pinch out the points of growth about twice during the earlier period of growth; if pinched oftener more spikes of bloom will result, but these will be small and ineffective.

. . THE . .
GARDENS
IN AND ABOUT
HORSHAM.
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SOUTH LODGE,
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DENNE PARK,
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Offices: 148 and 149, Aldersgate Street, London.

TO PREVENT CLUBBING. — H. E., Wells: The fungus that produces "clubbing" in the roots of plants of the Brassica famil is one that retains its vitality for a lon time, and one, also, that can be conveyed fro plot to plot or garden to garden on one' boot soles, by horses' hoofs, by barrow cart wheels, on tools, and in many other ways. It is a horribly insidious pest. Heavily dre the land with fresh gas lime, breaking th down finely and spreading it over the s surface. Then proceed to dig or trench t plot, allowing the surface to remain roug for six weeks afterwards. After this peri has elapsed fork down the surface and s or plant any but a brassica or turnip cro. Lime is very useful for combating clubbing, and if the ground is in good condition otherwise, and does not contain an excess of lime, then use this material freely for a year or two.

MAKING A SMALL HOUSE PROFITABLE.—E. A. H., Hornsey: Whatever the crop grown the profits from so small a house would naturally not be large, though they might be good relative to the money invested and the labour expended. However, so much depends upon the care bestowed, knowledge possessed, and opportunities for the sale of the produce, that we cannot give you a decisive answer. You do not tell us the position of the house, or whether it is heated or not, so that we have little informatio to proceed upon. If one has a circle friends who possess small gardens, somethin may be done by raising good batches of seedlings of popular summer flowers and selling the plants at so much per dozen; many people would be glad to be relieved of the trouble and risks attendant upon seed sowing of annual and biennial subjects. Tomatoes could follow these, and bulbs, gently forced, follow the tomatoes, if the house in a light position, and provided with suitable artificial heat.

FLOWERING HEDGE. — J. C., Brentwood: The position receives so little sunshin that the success of a flowering hedge is somewhat doubtful. If the thorn is at all ta or dense then two-thirds of the hedge wi receive only the sunshine that filters throug it during the morning. Sunshine is necessary to ripen up the wood to induce freedo of flowering in a hard-wooded subject. lilac hedge would do fairly well, but it is useless if severely trimmed in; if the positio is sheltered from east winds Berberis Darwi might be tried, but it also would not prov effective if severely clipped, and the same remark applies to practically all flowerin hedges. Pyrus or Cydonia japonica shou succeed as well as most things, but it rather slow growing at first. If the soil heavy and moist your difficulties will be increased, but if moderately light and wel drained then fair success with the subjec indicated should be obtained.

NAMES OF PLANTS.

O. J., Cardiff.—Send again when in flower

C. R. C., Epworth.—1, Luculia gratissima 2, Aralia Chabrieri; 3, Plumbago rosea; Maxillaria stricta.

L. E. B., Maidenhead.—1, Euonymus radicans variegata; 2, Chimonanthus fragrans 3, Viburnum Tinus lucida.

B. M., Bradford.—1, The Kumquat variety of Citrus japonica; 2, Ardisia crenulata; 3, Oncidium pubes; 4, Begonia fuchsioides; 5, Galax aphylla.

A. D. T., Saltaire.—1, a fine form of Anthurium Schertzerianum; 2, Azolla pinnata 3, a very good form of Primula obconica, it gives no evidence of hybrid descent.

NAMES OF FRUIT.

F. E. B., Leicester.—Appears to be shrivelled specimen of Cellini.

H. T., Torrington.—1, Mère de Ménage; 2, not recognised; 3, Allington Pippin.

M. S., Newark.—1, Emperor Alexander Court Pendu Plat; 3, Beurre Rance; 4, Ca lac.

G. K., Brockhampton.—1, Lane's Prince Albert; 2, Claygate Pearmain; 3, Dumelow's Seedling.

GARDENING AND GARDENERS.

Time and again discussion arises in the horticultural Press upon the status or social standing of the gardener. What is the outcome of it all? It seems to me that all these discussions and agitations over raising the position of the gardener just fizzle out like the small boy's fireworks, and leave things pretty much as they were before. The reason is that the subject is not handled in a right spirit. There is always something of selfishness lurking in the arguments and suggestions put forward, and while this is so no good will come.

Almost invariably one of the first things brought forward by writers on this question is some sort of scheme whereby all those who are dubbed "labourers," "interlopers," or "outsiders" should be driven from the ranks so that the "Profession" may be reserved for qualified men only. This, surely, is selfishness, and more than that, it is foolishness.

For years there has been an outcry of "Back to the Land." The working man has been urged to refrain from crowding into the city or town, and to follow the healthier pursuits of land work. Now comes the suggestion that gardening should be reserved for the qualified gardener. Suppose this came about. What are those to do who are cast out? Further, who is going to select the qualified from the unqualified? To suggest examination as a fair means is just twaddle. What might suit the examiner might not suit the employer, and vice versa; and, after all, the employer is the one to judge of a man's capabilities. So long as a man discharges the duties that devolve upon him to the satisfaction of his employer, no power in Britain (who boasts her freedom) has a right to cast that man aside as incapable.

I have been from boyhood engaged in gardening, and have worked my way as best I could. As to the respect that has been shown me I have nothing to complain, for I do not think the fact that I am a gardener has made any difference to other people's opinion of me. That there is plenty of room for improvement in the financial position of the gardener I readily agree. The gardener is by no means the only one who could well do with a larger share of this world's goods. I believe, too, in elevating the profession to the highest possible position, but I am convinced this will never be accomplished by any barricading scheme.

Better far foster more of the "Help one another" spirit, and thus give each other a kindly lift. To all who would see the position of the gardener improved I would say, give greater support to the Gardeners' Mutual Improvement Societies, where such exist, and where they do not, set about organising them. Study more, impart the knowledge gained to others. Stand by the GARDENERS' MAGAZINE and other journals which are a power for good, and finally make the best of your own opportunities, and you'll find there is not so very much wrong after all.

A GARDENER.

When the Wallflowers Have Been Killed. — The winter has been a very trying one for wallflowers, many of the strongest of the old stagers in my garden having collapsed along with the youngsters. Fortunately, my beds also contain bulbs, so that I still look forward to a good display. But where a bed contains—or did contain—nothing but wallflowers and these have been so reduced in numbers as to be ineffective, I have found, from past experience, that there is nothing better to take the place of the dead than St. Brigid anemones. These can be planted at any time, and, though they would not bloom from a present planting so early as would wallflowers, they are so beautiful when in flower that nobody should mind waiting for them. My strain contains a good percentage of bright red doubles, and nothing makes a finer display in the garden at any season.—E. J. K.

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		s. d.		s. d.
Acacia	per doz. bun.	9 0	to	12 0
Adiantum cuneatum	per doz. bun.	4 0		6 0
Anemones	per doz. bun.	2 0		5 0
Arums	per doz.	2 6		4 6
Asparagus	per doz. bun.	1 6		6 0
Azalea	per doz. bun.	3 0		4 0
Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	4 0		5 0
Carnations	per doz. blms.	2 0		3 6
"	per doz. bun.	7 6		12 6
Cattleyas	per doz.	10 6		12 6
Chrysanthemums	per doz. bun.	10 0		15 0
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	5 0		8 0
Cypripediums	per doz. blms.	2 0		3 6
Daffodils	per doz. bun.	3 0		6 0
Eucharis	per doz.	2 6		4 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	2 6		3 0
Hellebores	per doz.	1 0		2 0
Hyacinths, Roman	per doz. bun.	6 0		10 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 6		5 0
Lilium auratum	per bun.	2 6		3 0
" tigrinum	per bun.	1 0		2 0
" speciosum	per bun.	1 3		2 6
" longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		6 0
" yellow	per doz. bun.	2 0		4 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	2 0		6 0
Odontoglossums	per doz. blooms	2 0		3 0
Pancratiums	per doz. blooms	3 0		5 0
Pelargoniums	per doz. bun.	4 0		6 0
Pernettya	per bun.	0 9		1 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0
Tuberoses	per doz.	0 4		0 6
Tulips	per doz. bun.	2 0		12 0
Violets	per doz. bun.	2 0		3 6
" de Parme	per bun.	1 6		3 0

Fruits.

There is a good demand for grapes, apples, and oranges.

		s. d.		s. d.
Apples, cooking	per bush.	4 6	to	12 0
" dessert	per ½-bush.	4 6		14 0
" American	per barrel	14 0		24 0
Bananas	per bun.	5 0		10 0
Cranberries	per case	7 0		8 0
Cob Nuts	per doz. lb.	4 0		5 0
Figs	per doz.	0 6		1 6
Filberts	per doz. lb.	3 6		4 0
Grapes, Alicante	per lb.	0 8		1 9
" Muscats	per lb.	2 6		7 0
" " Canon Hall	per lb.	2 6		5 0
" Gros Colmar	per lb.	1 0		2 0
" Channel Islands	per lb.	0 9		1 0
" Almeria	per barrel	10 0		20 6
Lemons	per case	8 0		14 0
Oranges	per case	9 0		12 0
Pears, French	per crate	10 0		14 6
" English	per bush.	3 6		8 6
Pineapples	each	2 0		5 0
Walnuts	per doz. lb.	4 0		5 0

Vegetables.

A steady demand continues for forced produce and greenstuffs.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	4 0
Asparagus, Paris green	per bun.	3 6		4 0
Asparagus, sprue	per bun.	1 0		1 6
Aubergines	per doz.	1 6		2 6
Beans, French	per lb.	0 6		0 8
Beet	per bush.	1 3		2 0
Brussels sprouts	per ½-bush.	1 3		2 0
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
" French	per pad	2 3		3 0
"	per bag	2 6		3 0
Cauliflowers	per tally	5 0		10 0
Celery	per bundle	0 9		1 0
Celeriac	per doz.	1 6		1 9
Chicory	per lb.	0 3		0 4
Cucumbers	per doz.	4 0		9 0
Endive	per doz.	1 6		2 0
Greens	per bag	1 6		2 6
Horseradish	per doz. bun.	10 0		12 0
Leeks	per doz. bun.	1 6		2 6
Lettuce, cabbage	per doz.	1 3		2 0
Mint	per doz. bun.	0 9		1 0
Mushrooms	per doz. lb.	7 0		12 0
Onions, Valencia	per case	5 0		6 0
Parsley	per doz.	1 6		1 9
Rhubarb	per doz. bun.	1 0		1 3
Seakale	per doz. pun.	10 0		12 0
Tomatoes	per doz. lb.	2 3		3 6
Watercress	per doz. bun.	0 4		0 6

LONDON POTATO MARKETS.

Prices show a little variation, but in most instances they have an upward tendency.

		s. d.		s. d.
British Queen	per ton	90 0	to	100 0
Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		130 0
Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	95 0		105 0
Langworthy	per ton	90 0		110 0
Lincoln Maincrop	per ton	95 0		115 0
Lincoln Up-to-Date	per ton	90 0		105 0
Royal Kidneys	per ton	80 0		95 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. January 12 to January 18.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 12—Sunday	6 50	19	19	37	17
" 13—Monday	6 10	23	22	41	19
" 14—Tuesday	0 25	40	39	45	23
" 15—Wednesday	0 55	42	42	50	39
" 16—Thursday	—	50	48	51	42
" 17—Friday	2 25	50	48	53	49
" 18—Saturday	6 0	37	36	49	37
Means	3 15	37	36	47	32

Date. 1908. January 12 to January 18.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg
Jan. 12—Sunday	—	35	38	42	9
" 13—Monday	—	34	38	41	16
" 14—Tuesday	—	34	37	41	22
" 15—Wednesday	—	34	37	41	18
" 16—Thursday	0.01	35	37	41	39
" 17—Friday	—	40	39	41	46
" 18—Saturday	0.01	41	40	41	27
Means	(total) 0.02	36	38	41	27

Date. 1908. January 19 to January 25.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 19—Sunday	—	33	33	38	29
" 20—Monday	4 20	36	36	43	33
" 21—Tuesday	—	27	27	35	24
" 22—Wednesday	—	34	34	41	27
" 23—Thursday	—	34	34	39	31
" 24—Friday	—	32	32	34	31
" 25—Saturday	—	30	30	46	29
Means	0 40	32	32	39	29

Date. 1908. January 19 to January 25.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg
Jan. 19—Sunday	—	39	40	41	26
" 20—Monday	—	39	40	42	29
" 21—Tuesday	—	37	40	42	23
" 22—Wednesday	0.01	37	39	42	27
" 23—Thursday	0.01	37	39	42	27
" 24—Friday	—	37	39	41	31
" 25—Saturday	0.01	37	39	41	29
Means	(total) 0.03	38	39	42	27

FORTHCOMING ENGAGEMENTS.

MONDAY, February 3.—National Chrysanthemum Society, annual meeting, at Essex Hall, Strand, W.C., 7 p.m.

WEDNESDAY, February 5.—Society of Arts meeting, 8 p.m.

THURSDAY, February 6.—Linnean Society meeting, 8 p.m.

TUESDAY, February 11. — Royal Horticultural Society, annual meeting, 3 p.m.; meeting of Floral, Fruit, and Orchid Committees, 12 noon; Scientific Committee, 4 p.m.

Horticultural Club annual meeting, 5 p.m.; annual dinner, 6 p.m.

WEDNESDAY, February 12.—Society of Arts meeting, 8 p.m.

FRIDAY, February 14.—Royal Gardeners' Orphan Fund, annual meeting and election, at "Simpson's," Strand, W.C., 3 p.m.

WEDNESDAY, February 19.—Society of Arts meeting, 8 p.m.

THURSDAY, February 20.—Linnean Society meeting, 8 p.m.

WEDNESDAY, February 26.—Society of Arts meeting, 8 p.m.

CATALOGUES RECEIVED.

BAKERS, WOLVERHAMPTON.—Seeds, Florists' Flowers, Trees and Shrubs.

F. C. HEINEMANN, ERFURT, GERMANY.—Seeds.

AMOS PERRY, ENFIELD, MIDDLESEX.—Japanese Lilies.

R. WALLACE and CO., COLCHESTER.—Bulbs and Plants for Spring Planting.

JOHN JEFFERIES and SONS, CIRCENCESTER.—Seeds.

HUGH LOW AND CO., BUSH HILL PARK, ENFIELD.—New Holland and Stove Plants.

F. S. VALLIS, BROMHAM FRUIT FARM, CHIPPENHAM.—Japanese Chrysanthemums.

G. COOLING AND SONS, BATH.—Garden Seeds.

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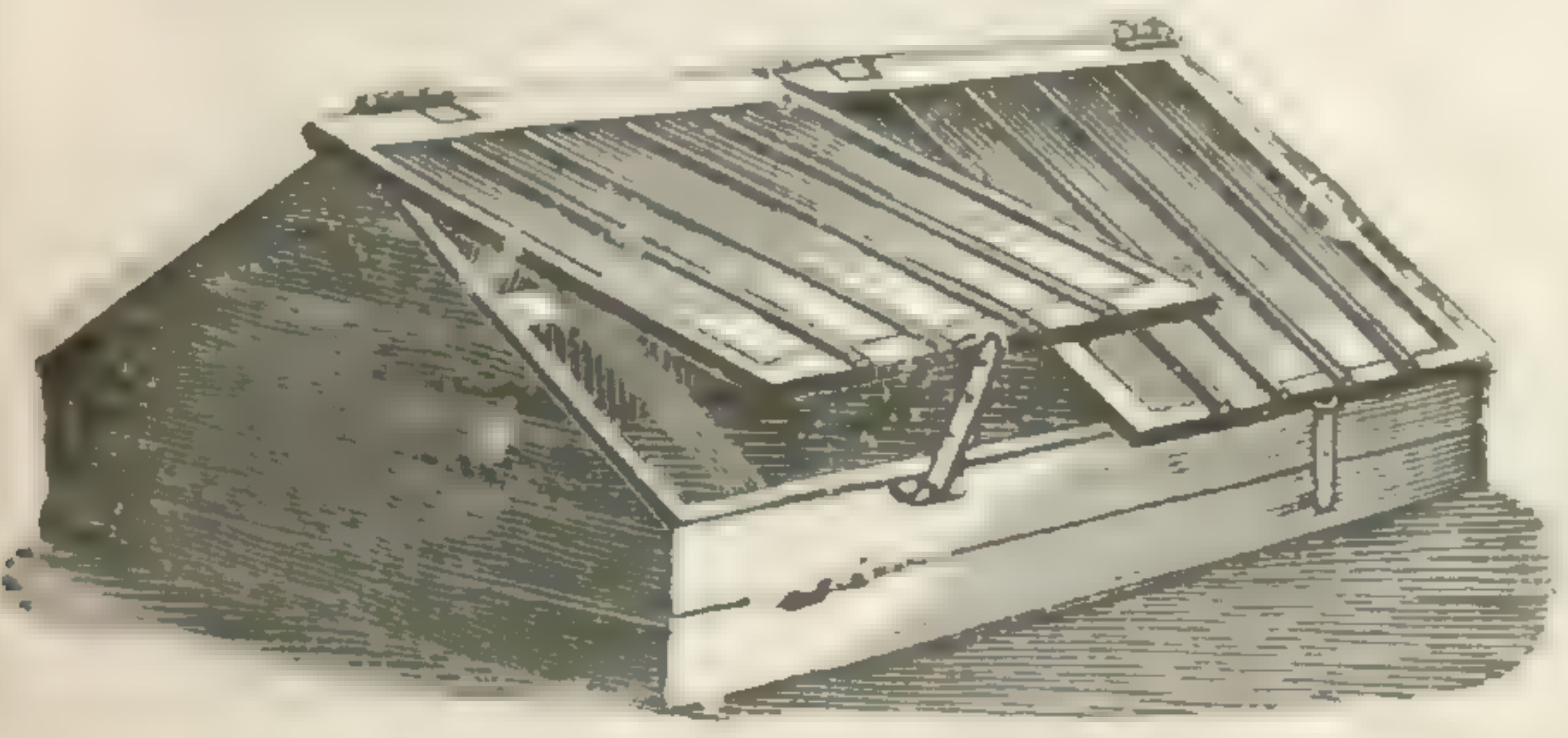

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12 ft. " 6 ft. "		5	12	6

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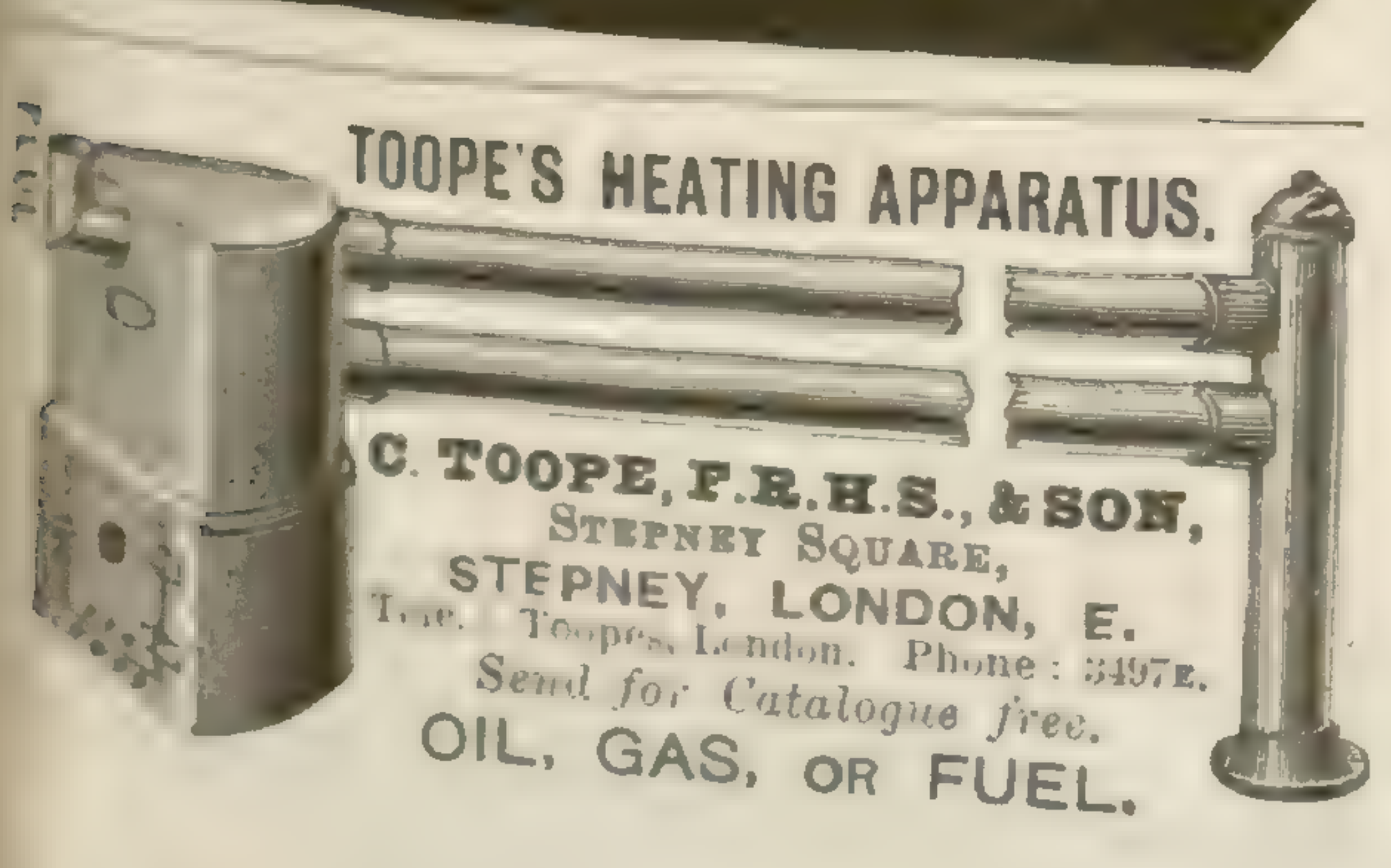

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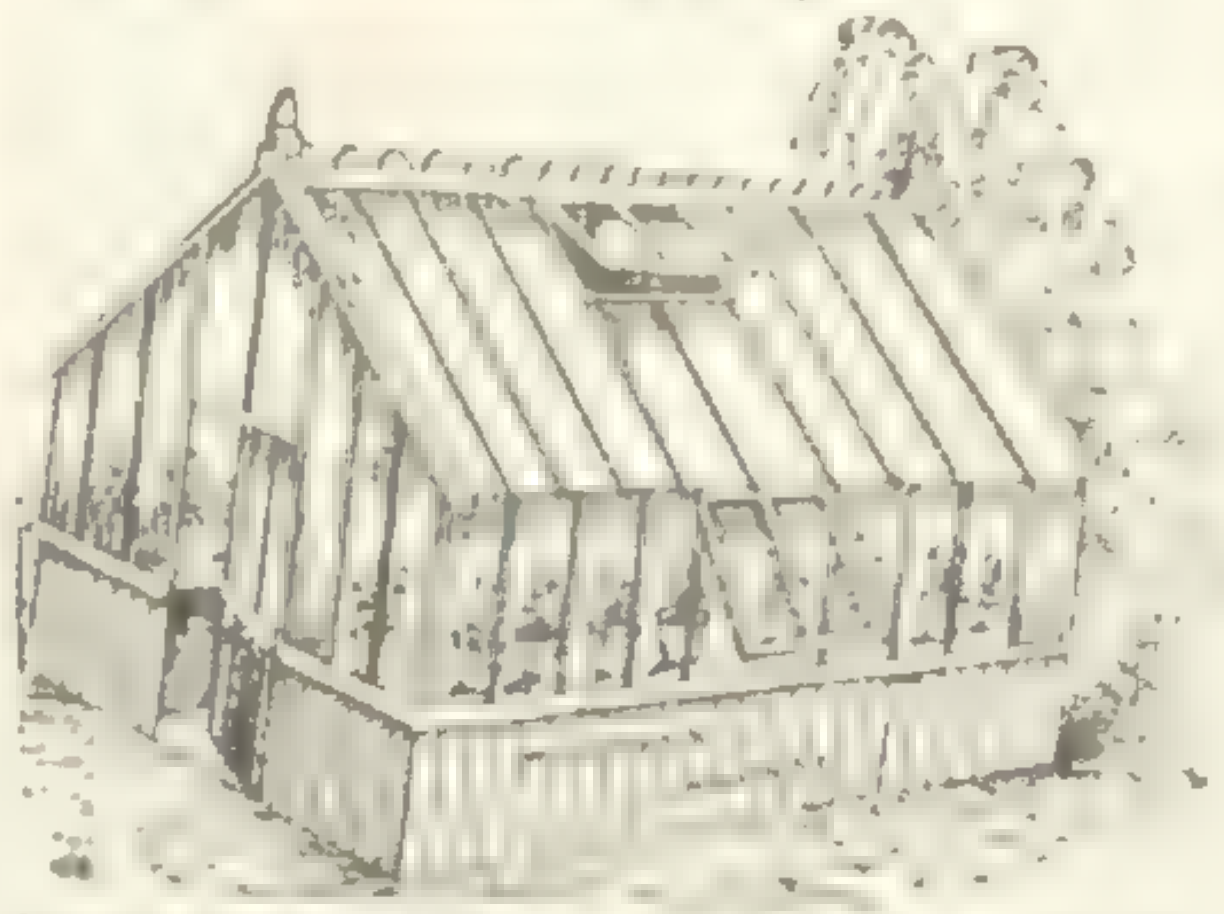

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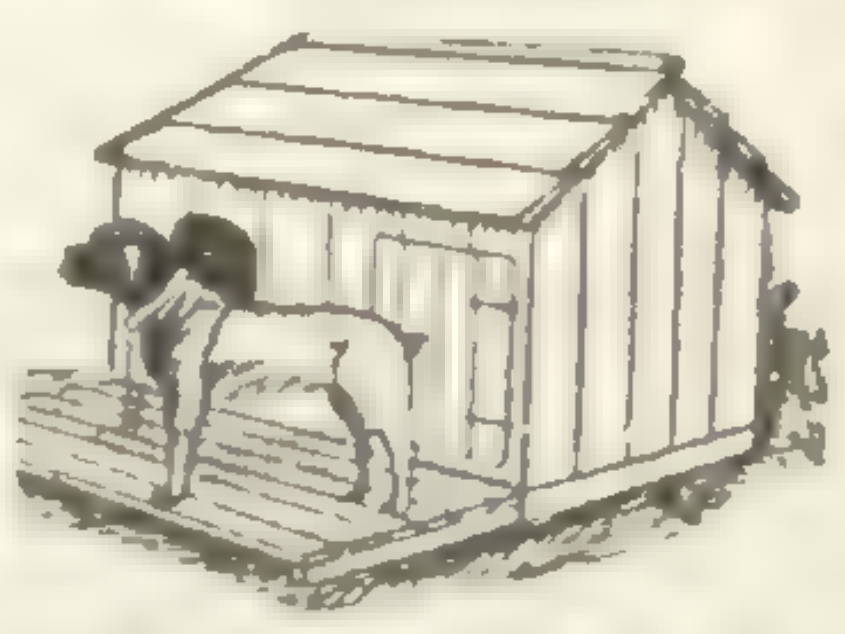

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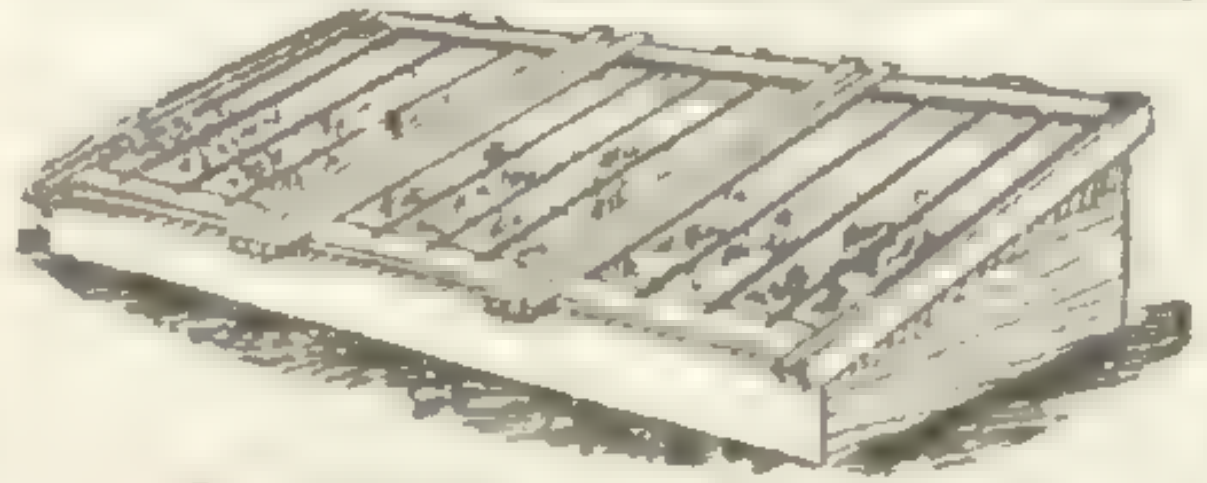

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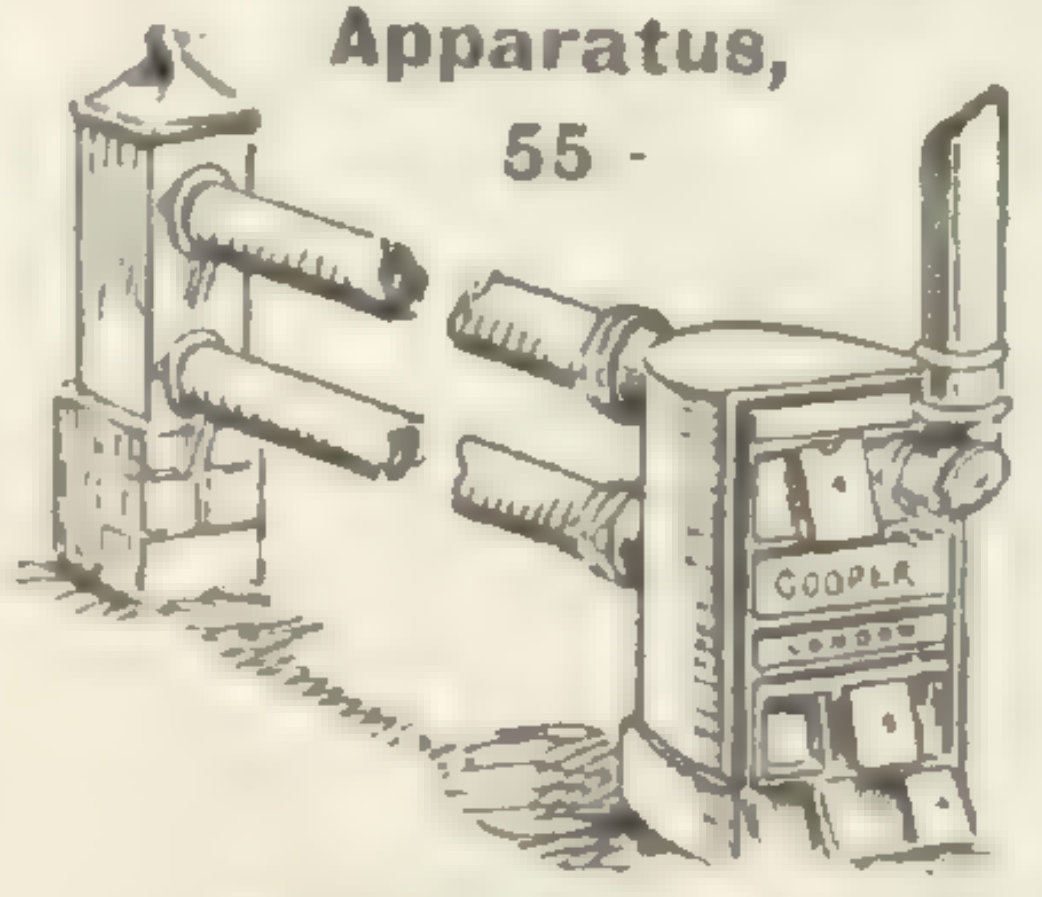

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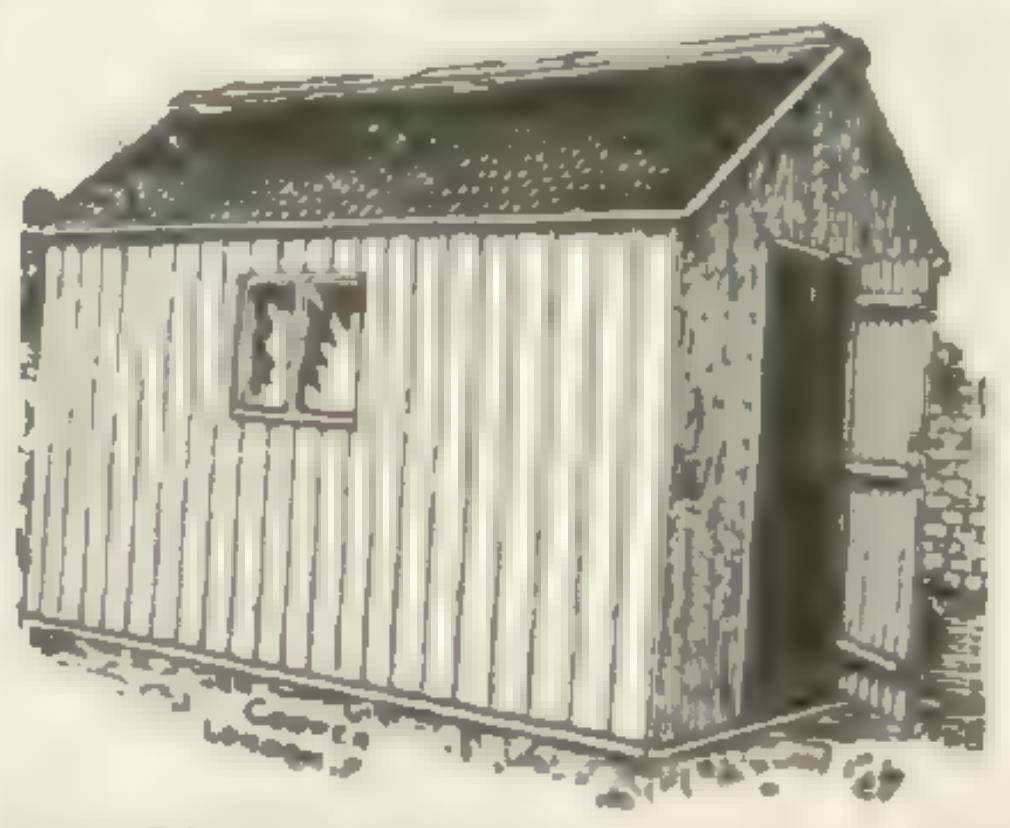

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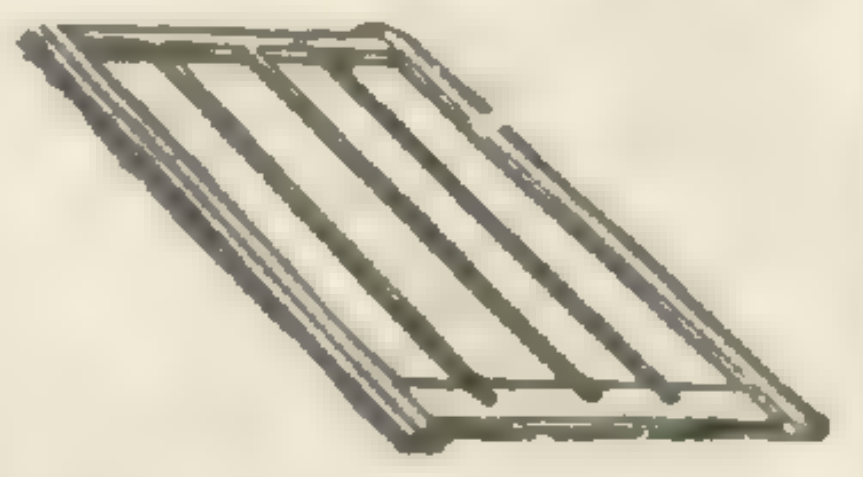

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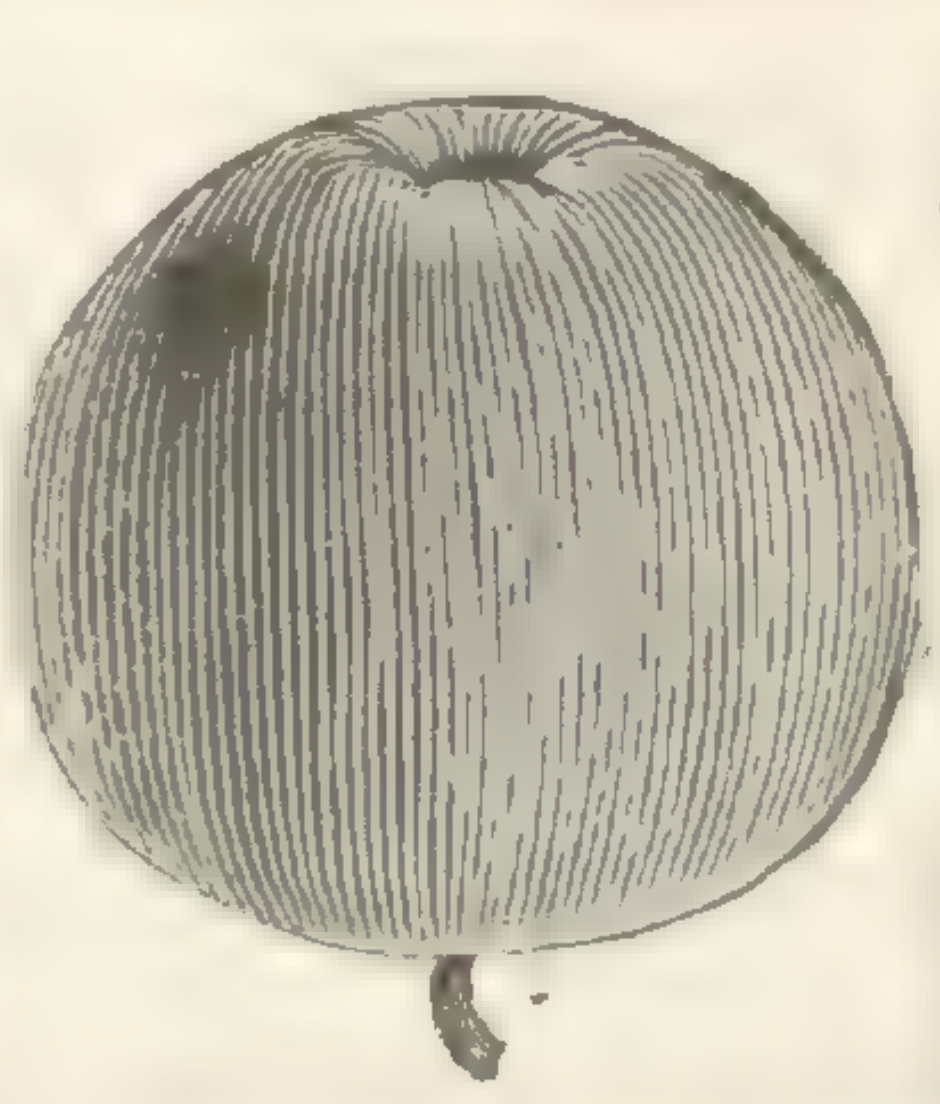

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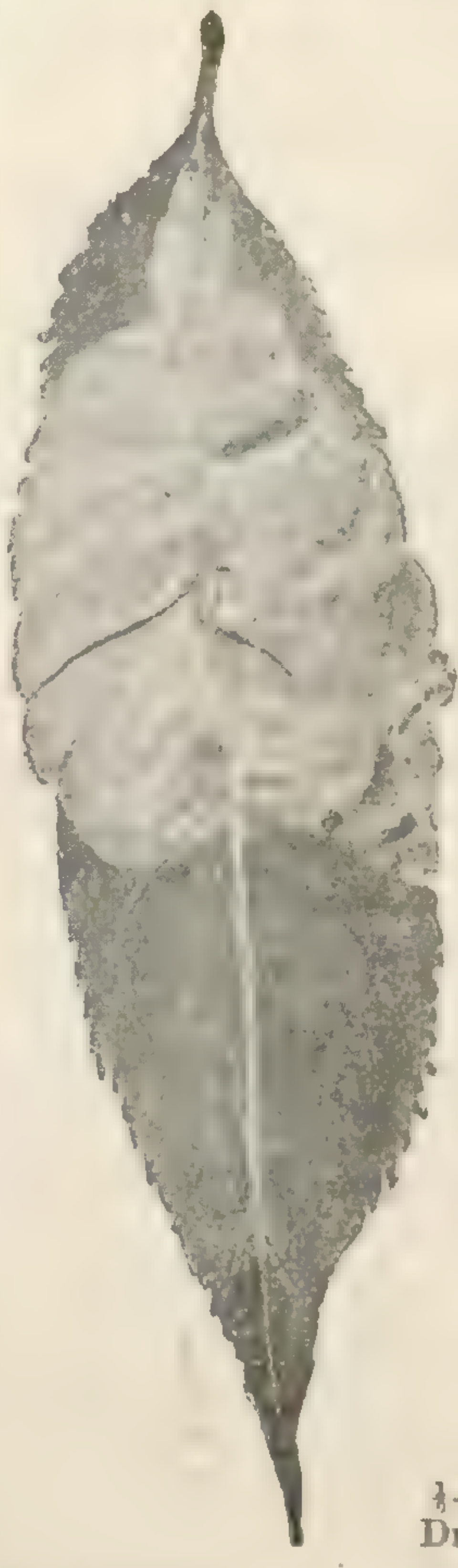

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Dahlias, Cactus, mixed	12/6
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Gladiolus Gandavensis, mixed	3/0
Gladiolus, Surprise ...	2/0
Hemerocallis (Day Lily), mixed	8/0
Hyacinth. Candicans, white	4/0
Iris, Japan, mixed ...	3/6
Iris Germanica (Flag Iris), mixed	3/0
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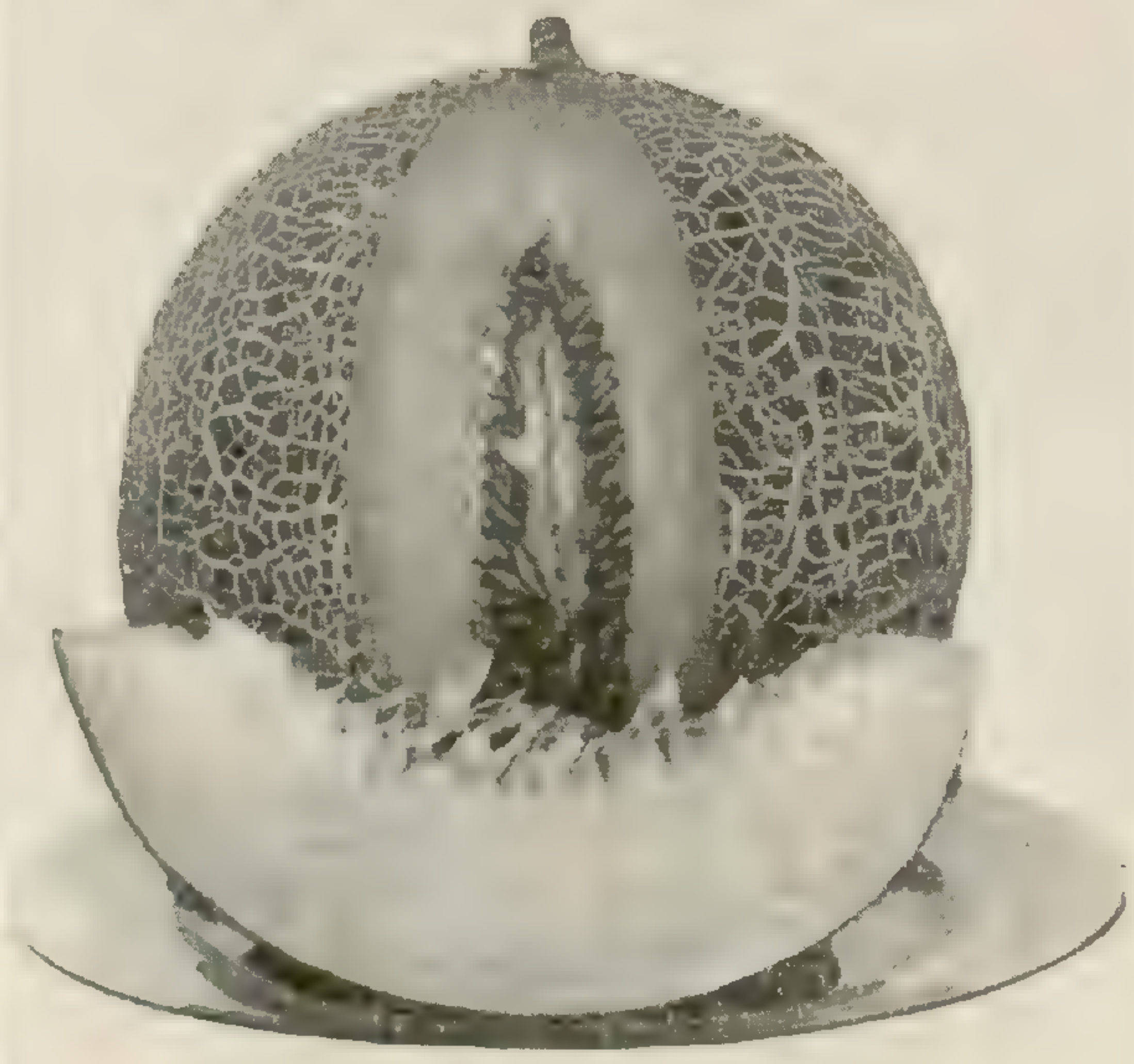

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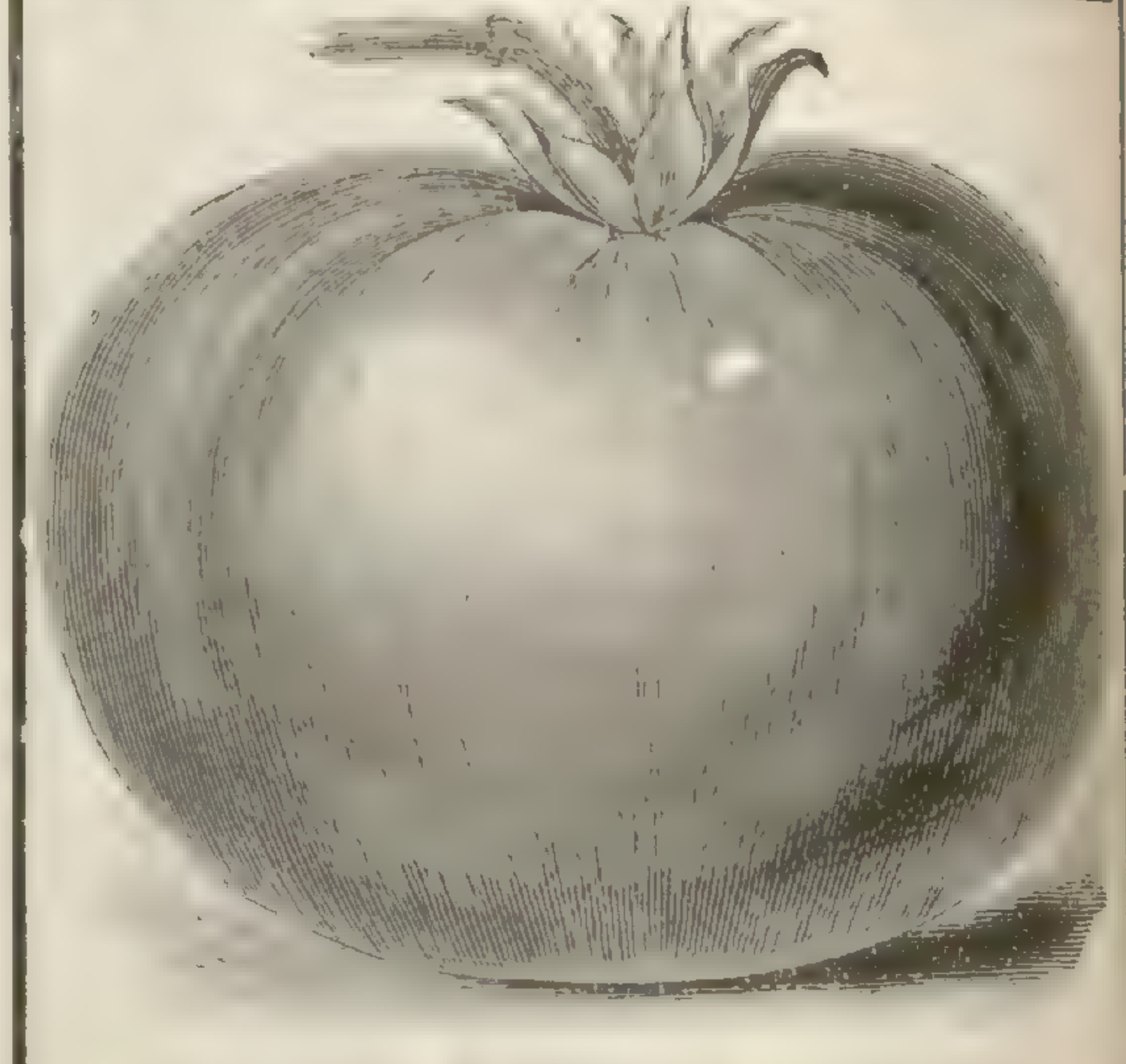

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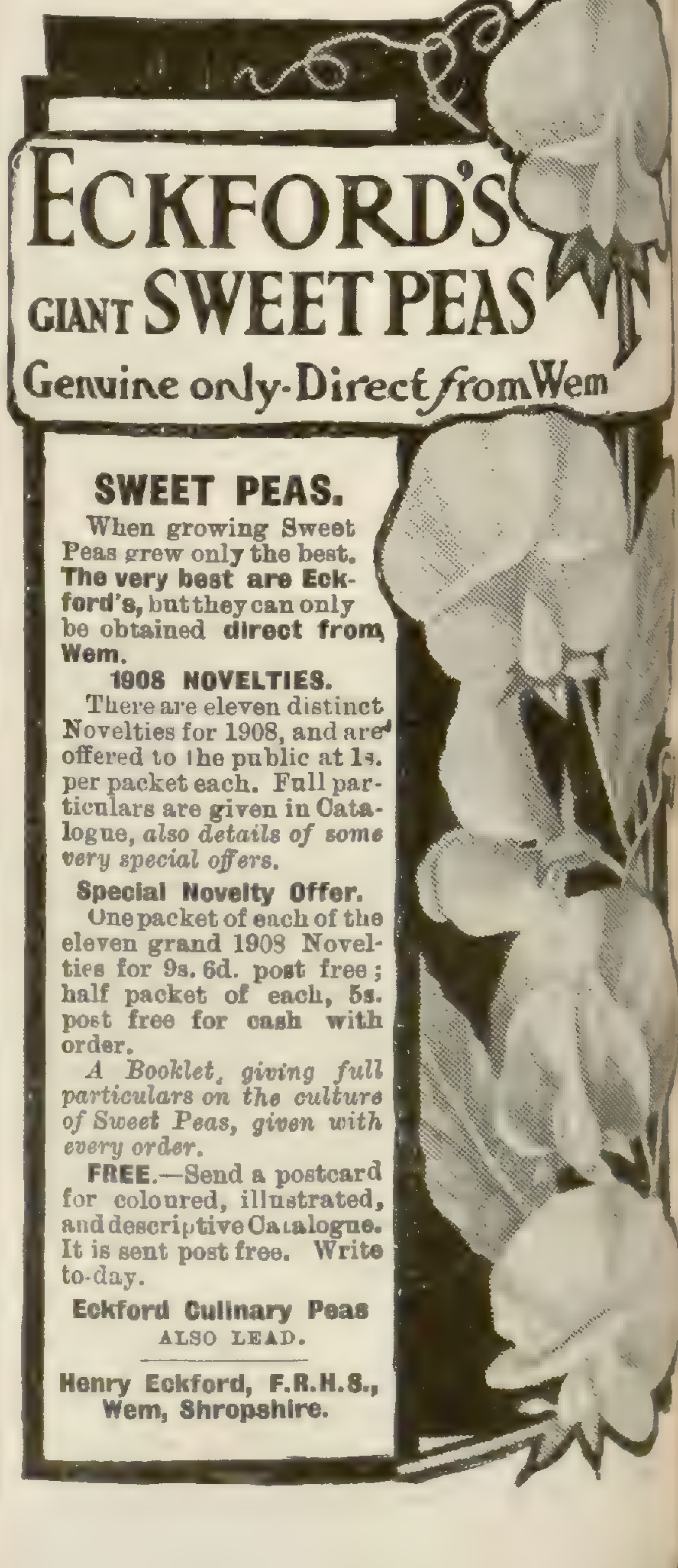

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VOL. LI.—No. 2,832. SATURDAY, FEBRUARY 8, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The National Chrysanthemum Society.

The report and financial statement that were presented to the members of the National Chrysanthemum Society at the annual meeting, held on Monday last, indicate a state of affairs that fully justifies considerable apprehension with regard to the future. There was, it is true, an increase of £6, plus a few shillings, in the amount received as subscriptions, and this, as far as it goes, is satisfactory; but, unfortunately, this trifling improvement is outset by the statement that the comparatively large sum of £70 had been transferred to the general account to meet current expenditure. According to the balance-sheet this transfer leaves the society with a balance of £53 15s. 4d. with which to commence the current year's work. Notwithstanding the society's position, we look in vain in the report for any mention of such change of policy as would be likely to effect an improvement in the society's affairs. It is stated in the report that the committee "have, however, resolved to re-transfer not less than £25 to deposit account from the current year's income, and to continue the same policy until that account is restored to at least its original figure," which, at the commencement of last year, was £120. This resolution is an excellent one, but it is necessary to point out that a resolution, however good, cannot assist materially in the restoration of the society to prosperity unless practical effect can be given to it. The committee may have formulated a scheme, of which we know nothing, for accomplishing this, but if the £70 required for restoring the balance of income and expenditure, and the £25 for investment, are wholly obtained by a reduction of the prizes, there will be a falling off in the competitive classes sufficiently serious to injuriously affect the reputation the society has enjoyed for the excellence of its exhibition. Some reduction in the prize list will, of course, be necessary, but there will have to be reductions in other directions apart from the abolition of the judges' fees. We are inclined to the opinion that a complete reorganisation of the executive would be advantageous, but as so drastic a measure as this is not likely to be taken, we suggest that an endeavour be made to reduce the cost of administration, which appears to us out of proportion to the annual income. Some of our readers who take an interest in chrysanthemums are greatly perplexed by the present position of the society, but to us there appears no difficulty whatever in correctly assigning the cause of the decline in its popularity and financial resources. The National Chrysanthemum Society is now suffering from the failure of the executive to recognise the fact that a society which claims to be national in its aims, as well as in name, should do something more than hold exhibitions, and should differentiate its functions very clearly from those of a local organisation. When by strenuous efforts the society had some twenty years ago been placed in a strong position, financially and otherwise, a few members of committee with advanced views formulated a scheme for the preparation of a catalogue which would serve as a work of reference on matters of classification, which was then in an unsatisfactory state. This scheme was accepted by the committee, the catalogue was prepared, and published, and proved a huge success Members, as well as the outside public, were charged for the catalogue, and a big profit resulted from the sales. Two or three editions were subsequently issued, but when the publication ceased to be a source of profit the issue of literature was abandoned until within quite recent years. In this connection two mistakes were made; one was charging the members for the catalogue instead of presenting it to them as part of the advantages they received in return for their subscriptions, and the second was the disbursement of the profits on literature in prizes. At that time the members of the society were distributed in large numbers over the whole of the kingdom, and as many of them were unable to either compete for prizes or visit the shows, they, in course of time, became tired of subscribing annually merely for "the good of the cause." It is all the more surprising the majority of the committee should in those days have failed to appreciate the necessity for giving members something more than the ticket of admission, seeing that the literature had the effect of placing the society at the head of all the other organisations associated with the chrysanthemums, and of enormously increasing the number of societies in affiliation. The society is now suffering not only from a failure to adopt a policy that would appeal to a wide circle of those interested in chrysanthemums, but also from a want of prudence in not having formed a substantial reserve fund when at the zenith of its prosperity, as was so strongly urged at the time by a few who were able to see beyond

MR. WILLIAM F. E. S. STEPHENS,
Treasurer of the Dahlia Union.

the range of vision of those forming the majority of the committee. At that time the formation of a reserve fund of £500 or more would have been a comparatively easy matter, and with some such sum as this available, there would, we should imagine, be no great difficulty in initiating and carrying out a policy that would greatly improve the fortunes of the society. As matters now are the difficulties in the way are such as to require the greatest care on the part of the committee, and the liberal support of those who are specially interested in chrysanthemums.

Mr. William F. E. S. Stephens, of St. Andrews, Spring Grove, Isleworth, is an amateur who is already well known among dahlia growers, but who, if given health and strength, is likely to be more widely known in the near future among lovers of roses and sweet peas. For about twenty years Mr. Stephens has been a successful exhibitor of flowers and fruits, but cactus dahlias are his favourites, and with these he has won many prizes at the old Royal Aquarium, at the Crystal Palace, and Regent's Park, as well as at local shows. He has been a member of the National Dahlia Society's Committee for many years, and has acted on the governing body of the London Dahlia Union since its inception; he is now the treasurer of that body, and at its exhibition in 1907 he won the Hobbies' Challenge Cup in excellent style. Mr. Stephens is a Fellow of the Royal Horticultural Society, a member of the National Sweet Pea Society, and a member of the National Rose Society. In this latter connection we may observe that Mr. Stephens has recently planted two hundred H.P. and H.T. roses with a view to exhibiting. Mr. Stephens is an ardent amateur horticulturist, and cultivates his large garden with great skill, finding in it a splendid source of health and recreation after his trying work as clerk to the Brentford District Board of Guardians.

R.H.S. Meeting on Tuesday next will have a special attraction for those who take an interest in potatoes, whether as cultivators or raisers. Messrs. Sutton and Sons will exhibit a collection of potatoes remarkable alike for its magnitude, its representative character, and its high quality. The exhibit will include, not only all the best varieties in cultivation, but the finest collection of the wild types yet brought together.

American Carnation Society.—The annual exhibition and conference of this society was held at Washington on January 28, and proved highly satisfactory, the display produced being extensive and of high quality, while the conference was of much interest. Mr. F. H. Lemon, of Richmond, Indiana, the president of the society, gave an excellent address at the opening of the conference, and touched upon several matters of interest to growers of carnations in this country. With reference to the discussion that has taken place with regard to the value of the society's certificates, he endorsed the opinion of Mr. W. N. Rudd, that "the certificate is nothing except an opinion of the quality of the flower shown at the exhibition. The commercial value of the carnations must be shown in other ways." He further pointed out that it is beyond the province of the society to attempt to say whether or not a certain carnation shall prove a profitable investment to the buyer. With a view to a recognition of varieties that prove of value to growers, Mr. Lemon suggested that the raiser of any variety which wins the first prize in an open class for three consecutive years should be granted the society's gold medal, suitably engraved. Mr. Lemon also urged the importance of the American Carnation Society's providing classes for collections in pots and decorative displays, and in his remarks pointed out that both would materially enhance the utility and interest of the exhibitions. With regard to the success which is being achieved in this country in the raising of new varieties, Mr. Lemon said that, taking into consideration this fact, it would be an advantage to make some arrangement whereby new English varieties could be sent to America for testing their adaptability to the climate and market conditions that obtain in the United States. He thought probably an exchange of novelties could be made between growers in America and in England. The address necessarily contained much that was of immediate importance to American growers, but the points to which reference is here made are of equal interest to growers on both sides of the Atlantic, and we commend them to the consideration of our readers.

Royal Gardeners' Orphan Fund.—The annual meeting of this charity will be held at "Simpson's," 100, Strand, W.C., on Friday, the 14th inst., when thirteen children will be elected to the benefits of the fund. The chair will be taken by Mr. H. B. May, chairman of committee, at 3 p.m., and the poll will close at 4.30 p.m. There are seventeen candidates. The friendly dinner of the committee and friends will take place at "Simpson's" on the evening of the same day.

Royal Horticultural Society.—The following list of president, vice-presidents, members of council, and officers for election on Tuesday next has been circulated among the Fellows, in accordance with Bye-law 74: President, Sir Trevor Lawrence, Bart., K.C.V.O., V.M.H.; treasurer, Mr. J. Gurney Fowler; secretary, the Rev. W. Wilks, M.A.; members of council, the Hon. John Boscawen, Mr. E. A. Bowles, M.A., F.L.S., Mr. J. Gurney Fowler, and Mr. W. Marshall; vice-presidents, the Right Hon. Joseph Chamberlain, the Right Hon. the Earl of Ducie, the Right Hon. Lord Rothschild, Baron Sir Henry Schröder, Bart., V.M.H., Sir John T. Dillwyn-Llewelyn, Bart., V.M.H., and Leopold de Rothschild, Esq.; auditor, Mr. Alfred C. Harper. As the number of names proposed does not exceed the vacancies to be filled, there is no need for a ballot.

Gardeners' Royal Benevolent Institution.—Lord Aldenham has accepted the invitation to preside at the anniversary festival dinner in aid of the funds of this institution at the Whitehall Rooms, Hotel Metropole, June 24.

Black Scab Disease of Potatoes.—From the South-Eastern Agricultural College, Wye, we have received a copy of Mr. E. S. Salmon's brochure on the black scab, or warty disease of potatoes, caused by the fungus known as Chrysophlyctis endobiotica. The disease is fully described and illustrated, and an account of its present distribution is given. Mr. Salmon urges potato growers and merchants, farmers, market and private gardeners, and allotment holders, to take immediate steps, by means of resolutions or deputations, to awaken the Board of Agriculture to the necessity for taking steps to repress this new potato disease before it is too late.

Forestry at Cambridge.—A chair of forestry has been established at Cambridge, and Dr. A. Henry, who has contributed so materially to our knowledge of the flora of Yunnan, has been appointed Professor of Forestry to the University.

The Gardeners' Company.—The Court of this company has decided to confer the honorary Freedom upon the Duke of Teck, president of the Royal Botanic Society; the Earl of Meath, chairman and founder of the Metropolitan Public Gardens Association; Lord Monkswell, chairman of the Kyrle Society; Professor W. A. Herdman, F.R.S., president of the Linnean Society; and Mr. F. S. W. Cornwallis, trustee and ex-president of the Royal Agricultural Society. A formal resolution in connection with the presentation will be submitted at a Court meeting at the Ritz Hotel on Tuesday, March 24, and the presentations will take place on May 19, at a ladies' dinner to be given by the Master, Sir Thomas Dewar—probably at Fishmongers' Hall.

Blickling Pear.—This good late dessert pear was exhibited by Mr. W. Allan, the veteran gardener at Gunton Park, Norwich, at the recent meeting of the Royal Horticultural Society, and on the official list of awards it was recorded as having received an Award of Merit. This was evidently an error, as the variety gained such award early in 1907, and was figured on p. 40 of the GARDENERS' MAGAZINE of that year.

Midland Counties Sweet Pea Society.—From the schedule of this newly-formed society we learn that the Right Hon. the Earl of Plymouth is president of the society, while among the vice-presidents and members of the Floral Committee we find many noted enthusiasts, including several connected with the National Sweet Pea Society. The society's first show is to be held in Wolverhampton on July 29, 1908, and the prizes offered amount to £70. In addition to this, several medals will be awarded. The hall where the show is to be held is a fine one. The hon. secretary is Mr. Owen F. Trott, 104, Waterloo Road, Wolverhampton.

R.H.S. Trials at Wisley.—The trials at the Royal Horticultural Society's Wisley gardens during 1908-9 will include herbaceous phloxes, cannas for bedding, early-flowering chrysanthemums, cactus dahlias, asparagus, beet, Brussels sprouts, cabbage, parsley, and potatoes.

Interesting Botanical Study.—At the recent conference of teachers who work under the London County Council the subject of Nature Study occupied a large portion of the programme, and that portion of the subject dealing with botany was freely discussed. The chief points urged for making botany a more interesting and educational study were that pupils should study living plants, making notes and sketches of these at intervals over a lengthened period, and that they should themselves make experiments with living plants. It was further urged that teachers should prepare the lessons with great care, but at the same time leave as much as possible for the pupil to do; and that teachers should not forget the beauty and value of living plants while studying them or using them for teaching.

A Berlin Rose Garden.—According to a correspondent of "La Tribune Horticole," a new rose garden has been formed in the vicinity of Berlin, which is described as the largest garden of its kind in the world. The garden will, it is stated, be not only attractive during the season of roses, but will serve as a place of instruction in the art of rose culture.

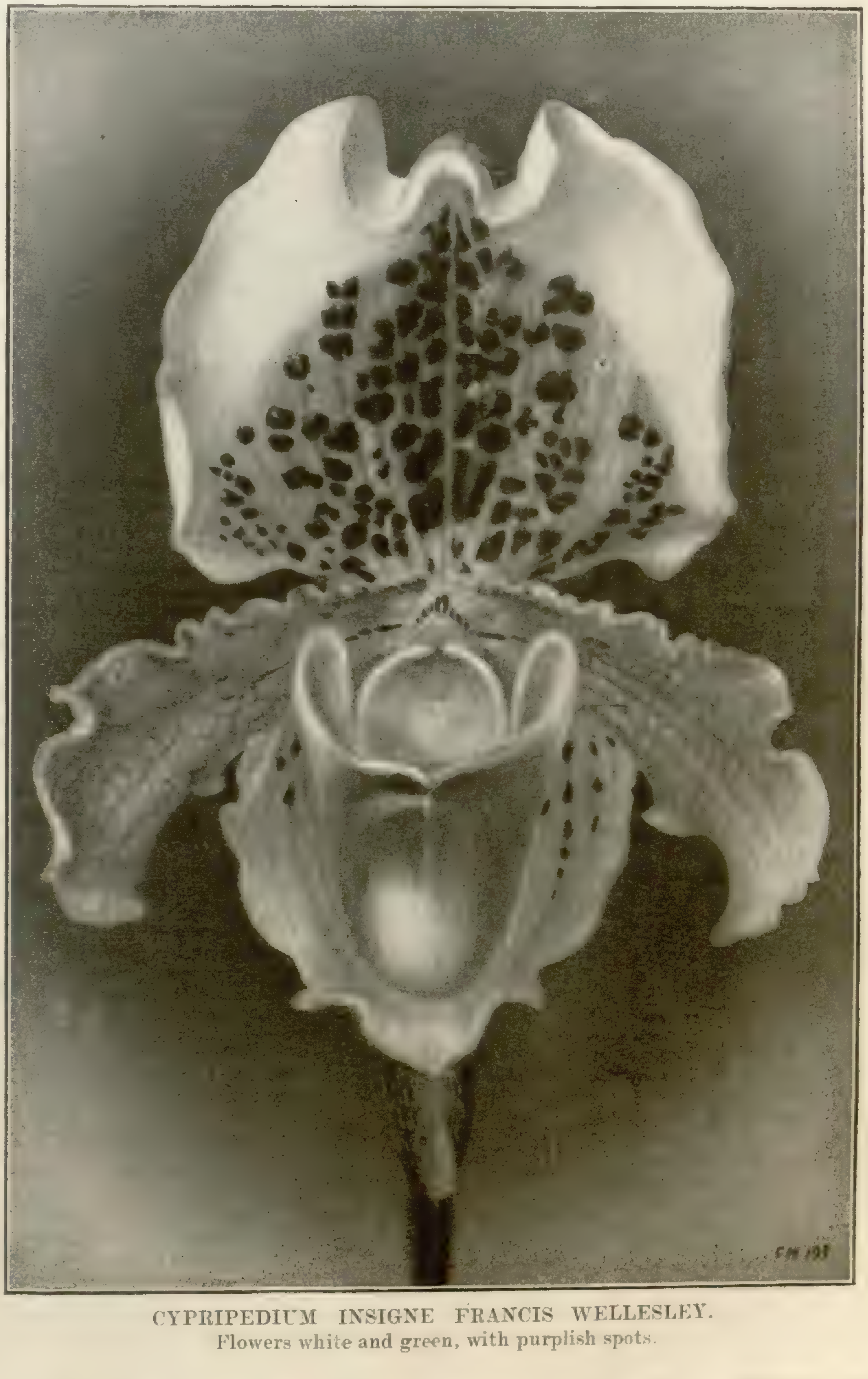
Croydon Gardeners' Association.—The programme for the first half of the current year includes the following papers: February 4, "Mushrooms," by Mr. Benger; February 18, "Insects," by Mr. H. Withers; March 8, "Flowering Shrubs," by Mr. A. E. Thatcher; March 17, "Grapes," by Mr. W. Lintott; April 7, "Peaches and Nectarines," by Mr. Seabrook, and April 21, "Ventilation," by Mr. Harris. The exhibition of spring flowers will be held on Wednesday, May 6. Mr. J. Gregory holds a class on Friday evenings at 60, Canterbury Road, Croydon, for preparing objects and materials for the microscope.

Origin of the Cultivated Potato.—The paper on the origin of the cultivated potato, presented to the Linnean Society by Mr. A. W. Sutton, V.M.H., is of special interest for the prominence it gives to the fact that so far it has proved impossible to identify the wild species to which we owe the innumerable varieties in commerce, since the earliest evidences of its introduction into Europe, and particularly a beautifully executed coloured illustration dated 1585, and authenticated by Charles de l'Escluse, indicate that it was the already cultivated plant which was introduced, and not the wild and presumably Chilian type. Mr. Sutton for many years has collected and grown all the known wild tuber bearing species, with a view to identification, but none agree at all closely in their specific characters with Solanum tuberosum, the name given to the potato by Linnæus. The nearest is a species, anomalously named, as well be seen, S. etuberosum, or the non-tuber-bearing potato, and it is this plant which has recently given evidence strongly pointing to its being the parental form of the cultivated varieties, in spite of certain specific differences in the foliage and habit, since not only does it produce edible tubers indistinguishable in size and flavour from medium-sized commercial potatoes, but after twenty years' sterility it produced in 1906 a seed berry, whence a batch of seedlings have resulted, which practically cannot be distinguished from a batch of ordinary potato seedlings. This fact is the more remarkable as the seeds of wild types yield, as a rule, true offspring generation after generation, while those of cultivated varieties produce mixed and variable progeny, and can only be propagated truly through their tubers. S. etuberosum was received by Mr. Sutton from the Edinburgh Botanic Gardens, as a wild specie whose habitat has not been recorded, but is undoubtedly Chilian. S. etuberosum has been growing at Reading year after year for twenty years, every year in close proximity to and under the same conditions as numerous varieties of ordinary potatoes, all of which have been subject to and suffered from disease season after season. In spite of this there has never been noted a trace of disease either in the foliage or in the tubers, S. etuberosum having withstood infection and remained immune during the whole time.

Site Selection for Fruit and Potato Crops.—It is generally understood by gardeners that a low-lying site is by no means an ideal one for fruit and potato crops, because of its liability to rapid falls of temperature at critical periods of the crop's life. That this understanding is well founded has been proved by experiments recently made near the river Stour, by Messrs. Vinson and Russell, of the Wye Agricultural College. Those experiments showed that the higher ground was much less liable to frost than the low ground not far from the river. The results are published at length in the "Journal of Agricultural Science."

GIANT CYPRIPEDIUMS.

There are several cypripediums that may reasonably be grouped as the giants of their race. Some have tall growth, and are giants when compared with the growth of others, and in this respect one may contrast C. longifolium with C. niveum. But it is to those that have very large, bold flowers that one wishes to draw attention, and here visions of C. Rothschildeanum, C. Gowerianum magnificum, C. Mrs. F. Wellesley, C. Beekmani, at once rise in the mind's eye. Two that also stand out conspicuously for their size, substance, and good form head and shoulders above their brethren, are C. insigne Harefield Hall variety, with its massive blooms and striking combination of white, green, and purple, and the newer C. insigne Francis Wellesley. The latter variety, now figured, even surpasses the splendid Harefield Hall variety, which it closely resembles in many respects. The illustration gives a very fair idea of this grand cypripedium, and shows particularly well the great breadth of the dorsal sepal and the manner in which this organ is broadened at the base. This latter feature is one in which it differs from the Harefield Hall variety. The broad green petals, wide ventral sepal, and capacious labellum are other features of interest, while the pure white band around the green, purple-spotted area on the dorsal sepal make the colouring most effective and distinctive. This fine new cypripedium is the property of Mr. Francis Wellesley, of Westfield, Woking, whose collection contains so many rare and beautiful plants.



CYPRIPEDIUM INSIGNE FRANCIS WELLESLEY.
Flowers white and green, with purplish spots.

Japan Wax.—It appears that the fatty material known commercially as Japan wax is obtained from the fruits of Rhus succedanea. Before germination the seeds contain fat but no starch, the latter being formed during germination.

PREPARING VEGETABLES FOR FORCING.

Where the necessary conveniences are available, no great deal of skill is required to force vegetables provided they are properly prepared for the purpose. It is on the culture of such vegetables as asparagus, seakale, etc., the plants for forcing, that success chiefly depends, though it does not appear at all times to be sufficiently considered, indeed, it is not at all an uncommon thing for plants considerably past their best bearing condition to be lifted for forcing. It is useless to expect material of this character, that in reality is unfit to yield good crops where grown in beds outdoors, to furnish those of high quality after being lifted and forced, but if young, vigorous plants are prepared, there will be no question about the quality of the produce. Then forcing will be of secondary importance.

Asparagus.

Of all vegetables commonly forced, the asparagus is perhaps the most highly esteemed, unfortunately it is rather particular about soil, being especially impatient of a stiff cold one, while it succeeds best in well-drained, deep, light loam—no other can be better than an alluvial one of this description—and in soils of this kind suitable plants for forcing can be readily prepared. Plants are raised from seed, which should be sown early in April, upon land that has been heavily dressed with good short manure, and deeply trenched in the previous autumn or early winter. When preparing the soil for the seeds it should be finely broken for a few inches in depth, and have its surface levelled, and the drills drawn fifteen inches apart and two inches in depth, to receive the seeds which should be thinly distributed, and carefully covered.

Summer treatment simply consists in keeping the ground clear of weeds, and lightly stirring the soil between the rows of plants with a Dutch hoe. In autumn as soon as the plants have matured their growth, they should be carefully cut down to the ground level, and as a winter protection be lightly top-dressed with decayed horse droppings, or coarse leaf-soil.

Transplanting should be done when the plants are either one year or two years old, the earlier time is however the best, because planting can then be done with less injury to the roots, and consequently less check to the plants, than in the other case. The most suitable season for the work is when growth commences, which is usually early in April. Transplanting should take place in an open situation, upon land treated in like manner to that recommended for seed sowing, the plants being placed two feet apart. When planting stretch a line across the plot and cut with a spade on either side of it, in such a way as to leave a low ridge beneath the line; upon this ridge the plants should be placed with their roots divided and spread out on either side. The soil should be firmly filled in, and levelled, and when the work, which should be done when the soil is dry, is completed, the crowns of the plants should be two inches beneath the surface of the soil. Subsequent treatment entails weeding, watering when necessary, assisting the plants with liquid manures, or top-dressing during showery weather with Peruvian guano, and cutting the plants down, and lightly mulching them in autumn with rich short manure. With careful attention upon these lines vigorous plants in excellent condition for forcing can be grown in four years.

Seakale.

Seakale can be readily raised either from seeds or roots. In adopting the latter means strong, healthy pieces of root about four inches in length, selected from plants while being lifted for forcing, and having their ends cleanly cut, should be arranged in a heap, and covered with fine ashes or light soil. Early in April these cuttings will have started rooting, and they should then be planted if intended for lifting for forcing, fifteen inches asunder in rows two feet apart, with the crown just beneath the soil. If the plants are to be forced on the ground where grown they should be placed at least two feet apart each way. At an early stage of growth the shoots must be reduced to one or two upon each plant, the strongest being reserved. The crop should have necessary supplies of water during summer, and after they are well rooted, soakings of liquid manure will assist in promoting vigorous growth and large crowns.

When raising plants from seed—by which means large quantities can be easily secured sowings should be made early in April, in drills placed about fifteen inches apart. Sow thinly, and thin the young plants early to six inches apart. Early in the following spring lift the plants, replant, and subsequently treat them in a similar manner to that recommended for plants raised from root cuttings, but before growth commences in spring cut the crown of each plant off, to prevent them running to seed; new growths will be quickly made.

Rhubarb.

Very commonly old plants of rhubarb are lifted for forcing, though far better results can be obtained by growing young plants for the purpose. The best course to follow is to divide strong plants at the time they are about to start into growth, securing a few good crowns to each and planting them three feet apart. With liberal treatment these will be fit for forcing the following winter.

For seakale and rhubarb land should be prepared thoroughly, because unless robust young plants are provided the forced produce cannot be of the best quality.

T. Coomber.

The Hendre Gardens.

Planting "Spiky" Flowers.—The great prevalence of bushy, flat-topped flowering plants in gardens during the summer must be noticeable to all observers, and it is, of course, due to the tremendous numbers in which the great composite family is represented in our gardens. To relieve this flatness, I hold that it is the duty of all real garden lovers to plant what I call spiky flowers, viz., verbascums, delphininums, foxgloves, larkspurs, antirrhinums, gladioli, lilies, montbretias, hollyhocks, etc. By making a note of this now and planting such things as they can be obtained from the nursery, the appearance of the garden can be greatly improved in the summer before us.—E. J. K.

Chrysanthemum, Mrs. J. Hygate.—If Mr. Barnes wishes to adhere to principle in maintaining each section of the chrysanthemum, he will place Mrs. J. Hygate amongst the Japanese varieties, where the introducer has placed it; grow it as well as he can, and he will find he will not regret putting it in the front row of a board, even if F. S. Vallis at the back is 16 inches in diameter. If he obtains the latter at the size quoted, and will give me an invitation to call and see it, I will with pleasure accept, no matter where; or, if he knows of any other grower with such blooms, I will go and see them, as I should consider I was spending my time very well indeed in doing so.—E. Molyneux.

BEAUTIFUL DWARF IRISES.

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I. Bakeriana.

This lovely little netted iris, although recognised as a distinct species, having a cylindrical eight-ribbed leaf, comes well under these notes. It is, however beautiful, not a reliable garden plant for the open, and many who were induced to purchase it through seeing a coloured-plate of the species, have had to bewail its loss. I. Bakeriana, which blooms very early indeed—January to March—suffers in our climate, and usually dwindles away in a year or two if in the open. It is simply exquisite, with its fragrant flowers of a beautiful blue, cream-colour or yellow, dotted with violet, and its yellow markings. It is very dwarf, and one of the irises which are perfect gems in the rock garden. It is a choice subject for pots.

I. Danfordiæ.

There is some difference of opinion as to whether this and I. Bornmuelleri are synonymous or not. All the bulbs I have had under either name were much the same, and all had the fault of I. Bakeriana that of not standing our winters well. It blooms from January to February, and gives small yellow flowers dotted with brown.

I. Vartani.

Of still less value is I. Vartani, a late autumn and winter-flowering species from the neighbourhood of Nazareth, with leaves which may be called four-sided, and rather dull-coloured lavender blooms, marked with yellow or white. It seldom blooms when in the open until well into winter, and is not a long liver in the garden, as it does not stand frost well. It is more suitable for the alpine house or the frame than the open.

Cultivation.

The greater number of these, and also the reticulata irises previously referred to, like any good garden soil, but ought not to be in too dry a place. The most vigorous plants of any of these irises I have cultivated were on the margin of a water lily tank, well above the water, but where the moisture was partly soaked up by the soil, but not to any extent. Here, the irises were more vigorous than in a drier place and this accounts for the preference apparently shown by them for peat, which holds the water longer than some soils. I prefer planting now about three inches deep as early as the bulbs can be purchased. They require little further attention except where the troublesome fungoid disease, to which this iris is subject shows itself. This is revealed by the premature withering of the leaves, and on the bulbs being lifted some of them will have been entirely destroyed, all but a husk covering a black powder or dust. Some of the bulbs will have black patches on the outside, and it is, in my opinion, safer to burn these, although some practice a simple removal of the coats and replanting the bulbs in a separate part of the garden. There is, however, great danger that this disease may be spread from such infested bulbs, and destruction is the only safe method. It may be added that in such weather as we generally have early in spring a handlight over the flowers will preserve them considerably longer in beauty than when left unprotected by glass. They are all charming when grown in pots. Such beautiful irises as these deserve all the care they require, and afford a vast amount of enjoyment to those who see them in the early months of the year.

Dumfries. S. Arnott.

FORESTRY AND THE PRESS.

The rapid development of modern enterprise and industry is already linking up various phases of life and work which hitherto had been practically strangers to each other. To the ordinary mind the connection between "Forestry" and "The Press" must at the first glance appear to be somewhat "far fetched." But really it is not so, for the marvellous developments of the Press, especially in the case of the daily papers and the cheap periodicals, has resulted in an enormous demand for paper, so that for some considerable time the forests of Europe have been laid under demand to provide the material necessary for the making of this class of paper.

Thus you see the connection between "Forestry" and "The Press." Now the point is this, only certain trees are suitable for making wood pulp, "the greatest component in the manufacture of paper, and chief among these is the white spruce. Abies, or (Picea) excelsa, one of the most widely dispersed trees of Northern Europe. Expert opinion has recently given us the news that the forests of Norway and the adjacent countries are being rapidly denuded of this Norway spruce, so quickly in fact as to point to a famine in this particular wood in the near future. Already one of the great publishing companies have formed a syndicate to take over the spruce forests of Newfoundland in order to insure themselves against this threatened famine in wood pulp.

Now, in view of the various schemes for reafforestation which are set forth from time to time in this country, surely a place ought to be given to the spruce fir, especially as properly planted stretches of land would provide a good investment for the future. It is estimated that thirty years are required for the young forests to arrive at maturity, and at the end of that time they will be in good condition for converting into the daily paper. To the forester and those who have the management of woodlands and estates, these notes will necessarily appeal, and where the position and soil will allow, the spruce should be readily planted. It will be understood that although good, clean, quickly grown timber is always at a premium, yet for the making of wood pulp, timber of a second-class description will be quite suitable. This, however, should not deter anyone putting their best work into this forest-planting, but should rather lead to the planting of sites which cannot be regarded as quite first-class.

The soil for the Norway spruce should be cool and moist, not necessarily deep, but the moisture must be there. They will grow well at fairly high altitudes, provided the position is not too much storm swept and exposed.

Undoubtedly on many of the larger estates, and the Crown lands, there is much waste ground, largely heathland, where the soil though fairly cool, is generally poor, and deficient in organic matter. It has been proved, however, that on such soils, with a proper system of manuring, spruce as well as other trees can be grown profitably and well. In manuring nothing answers so well as basic slag, which can be used up to the quantity of 15cwt. per acre. A much smaller quantity of kainit can be used with the basic slag, say about 2cwt. per acre, this combination giving splendid results. Manuring should be carried out before planting.

The mode of reafforestation of waste heath-land in Belgium calls for a brief notice. The heather is cleared in strips where the rows of trees are intended to be planted, then a good dressing of basic slag is given on the cleared strips, and is incorporated thoroughly with the soil by the operations of digging the trenches and planting the trees. In other cases, after the ground has been cleared and given a dressing of basic slag, a crop of lupins is sown, and is grown, and then ploughed in as green manure, thus providing a food basis for the trees which are afterwards planted. Sometimes following the green manuring of the lupins a crop of rye or oats is taken, and the ground is thereby in good cultivation by the time the forester is ready with his trees.

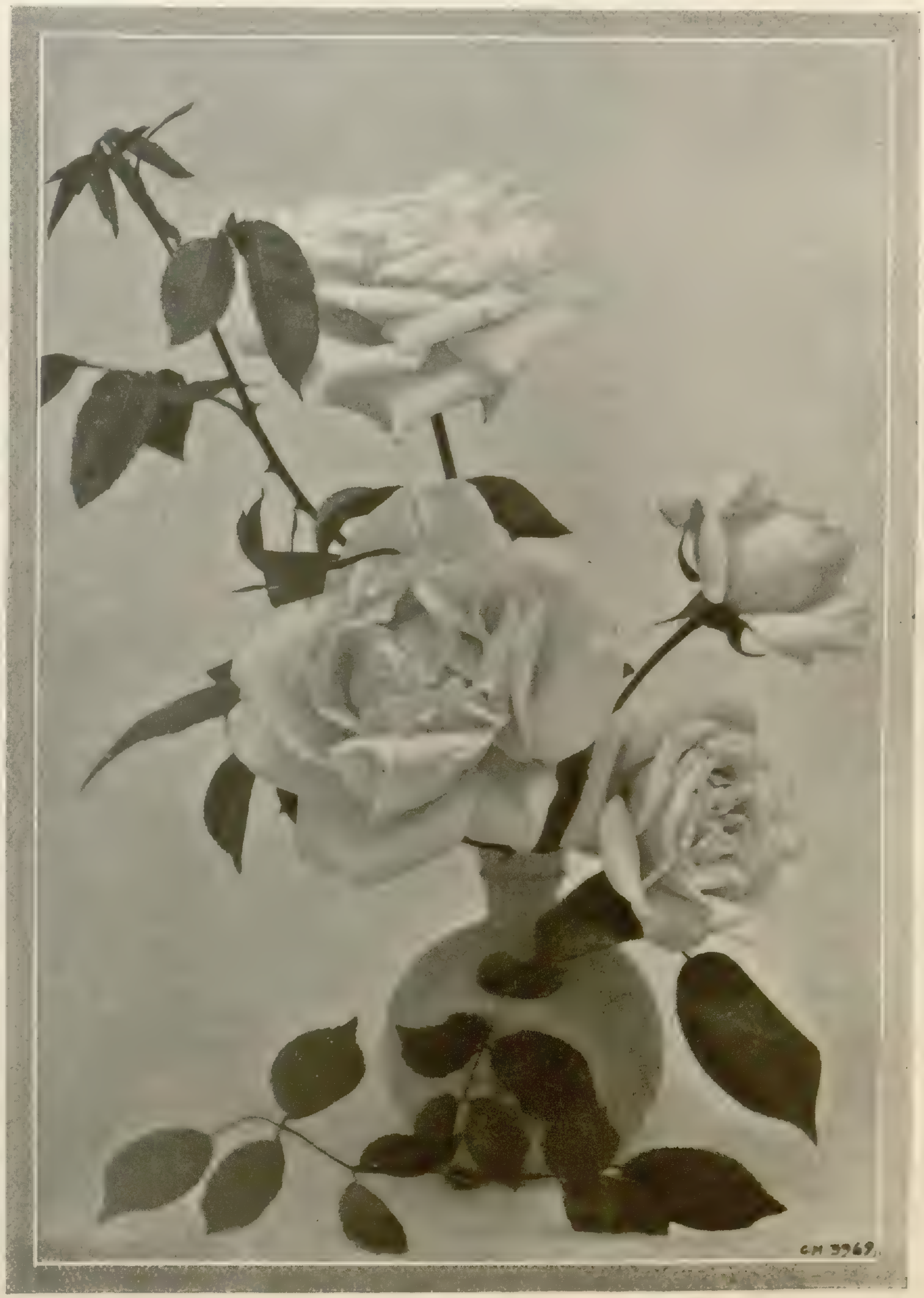
The questions of timber, and of reafforestation will come to the forefront very shortly, and all thoughtful lovers of the country, especially those who are interested in forestry, will assuredly give their full support to any thorough scheme for the advancement of the cultivation of timber trees in this country.

In its woodlands Britain has a smaller percentage, according to her area, than any country in Europe except Portugal, and it is estimated that we have about fifteen million acres of heath and mountain land to select from for planting. With the wide range of subjects for the various positions, soils, etc., there is surely no reason why this England of ours should not be a better-wooded and much larger timber producing land than it is at present.

P. S. Hayward

ROSE MRS. DAVID McKEE.

This charming hybrid tea rose is classed in the catalogue of the National Rose Society as "an exhibitor's rose." We have no doubt as to the correctness of this description, but we contend the variety has also much merit for garden decoration. It is a creamy-yellow rose, of a shade none too prevalent among roses, and it was introduced by Messrs. Alex. Dickson and Sons, of Newtownards, in 1904. It is a moderately vigorous grower, producing large, full blooms, made up of broad, smooth petals, and it belongs to what may be called the Kaiserin Augusta Victoria type. At Woburn Place, Addlestone, the residence of E. Mocatta, Esq., this new rose does well, and Mr. T. Stevenson, the gardener, who is an excellent cultivator, is also something of an artist, as the accompanying illustration from his photograph shows.



[Photo: T. Stevenson.

H. T. ROSE, MRS. DAVID McKEE.

Creamy-yellow flowers.

HIPPEASTRUMS.

The cultivation of hippeastrums, commonly called amaryllis, has attained to such large proportions that in many gardens the plants are represented by hundreds.

To those conversant with these subjects the reason of their increased popularity is self-evident, their culture from first to last is simplicity itself; they are robust in habit, bold and stately in form, and for the most part refined in their colouring, which, in a large percentage, partakes of a bright scarlet or crimson, thereby making the flowers welcome during winter and spring.

To such perfection have hippeastrums been brought that one has every confidence in recommending the raising of plants from seed, such as is offered by our leading nurserymen, with the full assurance that the results obtained will demonstrate the care and skill bestowed upon this work of improvement by English seed houses.

As hippeastrums ripen their seed in autumn they may be sown at once; my own practice however, is to sow in January, using light soil and barely covering the seeds. The pots are plunged in a propagating case and kept close until germination takes place. As soon as the seedlings are large enough to handle they are potted off singly into three-inch pots and placed in a minimum temperature of 55 degs. Growth begins to be more rapid as the seedlings take to the soil, and when these pots are well filled with roots a shift into the flowering size is given, which may be 5-inch, 6¼-inch, or 7-inch pots according to the individual strength of the plants.

The soil requires to be made richer as each successive shift is given, so that in the first potting a compost of rough loam well enriched with manure from a spent mushroom bed, to which is added a small quantity of bone-meal, and one of the good fertilisers advertised in the GARDENERS' MAGAZINE, provides a suitable rooting medium. The majority flower the second spring from seed. The results are always more satisfactory and stronger plants are obtained when the pots can be stood for the greater part of their time over a medium bottom-heat, where, at the same time, the plants receive the maximum amount of sunlight, while the free use of the syringe among the plants and a certain humidity of the atmosphere within the house are conditions favourable to full development.

It is a good plan to occasionally examine the pots when in the hotbed, so that the roots may be prevented from entering the plunging material. When the growth has been satisfactory the first season the same treatment may be accorded the seedlings the second year as is given to the old flowering bulbs. By growing both batches together, the seedlings are gradually inured to a lower temperature, and as signs of ripening become apparent in autumn water must be gradually withheld and ultimately discontinued and the plants allowed to rest until there is fresh evidence of growth in spring.

From this time forward their treatment is in all respects that of established flowering bulbs.

In conclusion let me remark that hippeastrums are most accommodating plants for amateurs, even where facilities are absent for applying artificial heat throughout the year. By starting with fire-heat in spring and husbanding the sun's heat in a deep pit or frame throughout summer and autumn, the strongest plants will flower the second year and the remainder in the following winter and spring. Under these conditions the grower has less control over the plants, consequently the flowering is more erratic, and as often happens, the plants flower in succession over a period of five or six months, an advantage which those requiring only a few examples will readily appreciate.

THOMAS SMITH.

Walmsgate Gardens, Louth.

EARLY TOMATOES.

To obtain ripe tomatoes towards the month of February seed must be sown about August 10, and the plants grown as coolly and as sturdily as possible up to the middle of October, by which date they should be removed to their winter quarters, where a night temperature of 60 degrees to 65 degrees can be maintained, according to external conditions.

A low span house is preferable, running north and south, so that every gleam of sunshine, and a maximum of light can reach the plants while in flower, and also assist to ripen the fruit. Some people sow six weeks earlier, and have the fruit swelling by the date mentioned for bringing them indoors, but the ripening process is very slow during November and December. Plants flowering during the months just named must be kept dry overhead, and the flowers pollinated daily, and even then a satisfactory set is not always obtained should the weather prove sunless for some days, as it often does during winter.

We grow our tomatoes in ten-inch pots, and grow them as single stems, pinching out all side shoots and part of any leaf if it shades the fruit at all, but defoliation is never allowed. Weak liquid manure is applied to the roots now and again, but overfeeding is harmful in midwinter, neither is much root watering required unless the hot water pipes dry up the soil.

A sowing may now be made, putting two or three seeds in each three-inch pot, if but a dozen or so plants are required, reserving only the stronger one; keep them near the glass, and in a night temperature of 65 degrees. The formation of roots at this date is slow, and very little water necessary until a rough leaf is made. Transplant into 5½-inch pots as soon as they become fit, still keeping them near the glass in the same temperature, securing the plant to a stake, and lightly fumigating if white-fly appears. Shift them into ten-inch pots when ready, and if no proper house be at command a few plants can generally be accommodated in an early vinery or peach house, where ripe fruit may be expected during April and May.

J. MAYNE.

Bicton.

Verbenas. — Collections of verbenas seem to have become a thing of the past, yet the scarlet, white, and purple varieties are still grown for bedding. Stock plants that have been kept in a cool house through the winter may now be put into warmth, and they will soon provide cuttings. These succeed best in a good brisk bottom heat, and a rather low top heat. Not long after the cuttings are rooted they will require stopping, and the tops will make better cuttings than can be obtained from the old stock. When kept clean and healthy verbenas are very useful in the flower garden, but it often happens that they become infested with thrips and fly before being planted out, and then they rarely grow out of it. For mixed colours, seedlings are most satisfactory. Seeds sown about the middle of February produce good plants for summer bedding, and if a good strain of the compact varieties is obtained, these will give a mass of bloom throughout the summer and continue until frost sets in in the autumn.—T. B. FIELD, Ashwellthorpe Gardens.

THE GREAT SEA LAVENDER.

Statice latifolia is generally considered the finest of the hardy sea lavenders, and it certainly is well called the "great" sea lavender, by reason of its superiority in size to other members of the genus. The statices are essentially a family of sea-loving plants, as is shown by our wild British species, which grow in close proximity to the sea, or, at least, to salt water, and, therefore, a sandy soil, well exposed to the sun, may be regarded perhaps as ideal for these plants. As a matter of fact, however, the great sea lavender seems to thrive in any ordinary garden soil, and it grows in the greatest luxuriance with me in a heavy clay, receiving, like the rest of the border, liberal quantities of animal manure every year, with a dressing of basic slag to supply the phosphate and remedy the natural deficiency of lime in the soil.

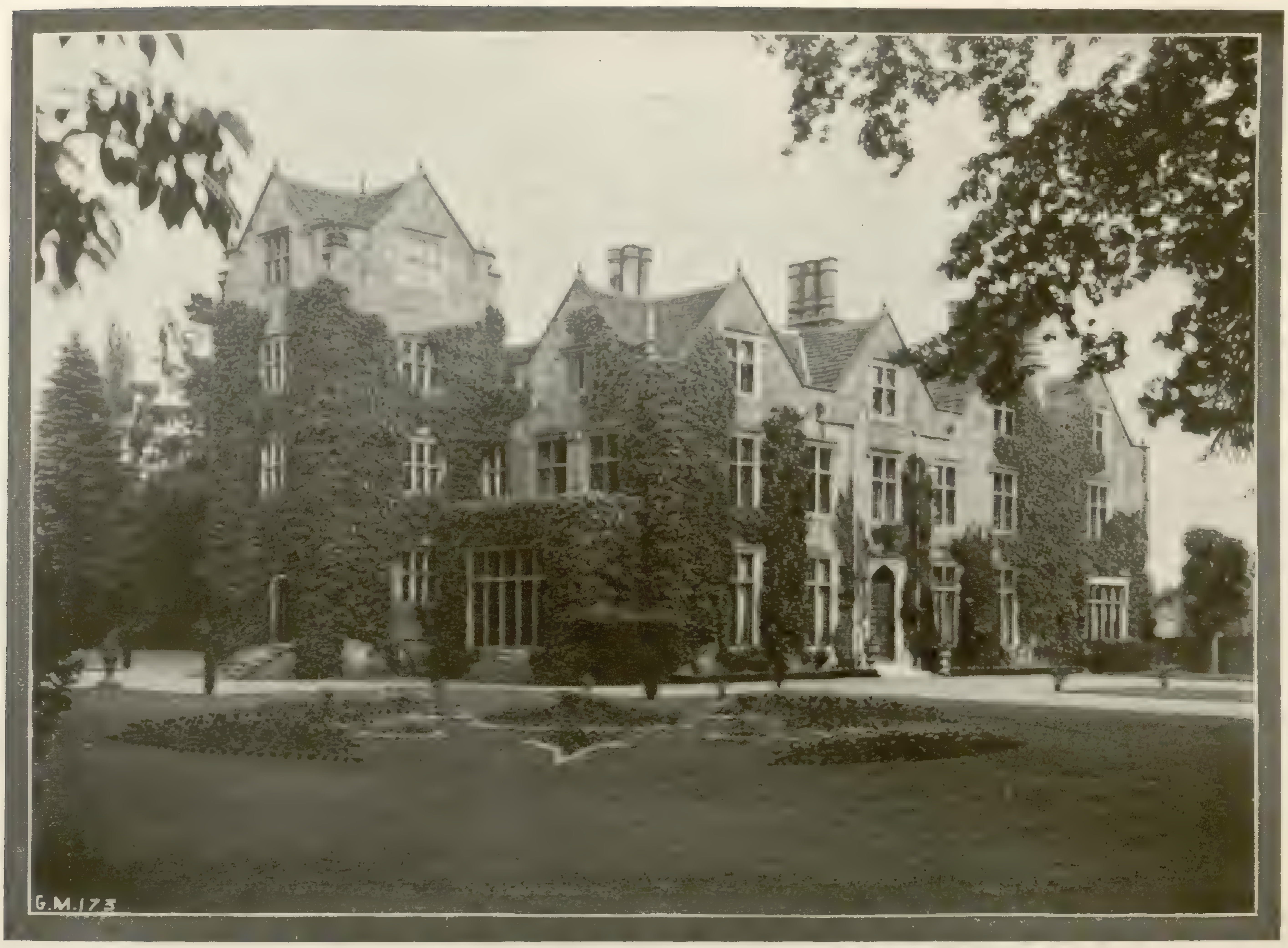
It is distinguished from all other sea lavenders with which I am acquainted by its very large shining leaves, which remain more or less green through the winter—unless very severe weather comes—thus forming a welcome plant in the mixed border, which is apt to present a rather dreary spectacle in the winter season. It sends up strong branching flowering stems, which bear a profusion of small lavender-blue flowers, forming a sort of blue haze when viewed at a distance. With many of the family these blue flowers, if cut as soon as they are open, persist, that is, dry up without much alteration of appearance, and so remain indefinitely. With this species, however, the flowers dry up and fall off after lasting in bloom a considerable time, leaving the white calyces, which are not ineffective for winter decoration when mixed with other similar things. If cut soon after the flowers come out they may persist to some extent, but do not retain much of their colour. At least, such is my experience, though it may only be due to unfavourable soil and an inland situation.

This sea lavender is very deep rooting, and consequently does not bear moving well, having a strong perpendicular tap-root of unknown length. It is, therefore, best to plant it where it may remain undisturbed for years. It may be propagated by taking side shoots with a little piece of root attached, these being put in pots with a little sand, and set in a frame or house. Any attempt to take up the plant and divide it may result in disaster. Seed may be obtained, but the seedlings are a long time before they make effective flowering plants, and as one does not usually want a large number of them, it is better to buy two or three plants and propagate from them if necessary. The placing of them in the mixed border needs a little consideration from the point of colour effect, as blue flowers do not "go" with everything, especially with those of a bright red, magenta, or purple colour.

For table decoration Statice latifolia comes in very useful, flowering, as it does, in August and early September, when Gypsophila paniculata is over, and the graceful feathery sprays of the Michaelmas daisies have not yet come on. Its blue colour is the more welcome, too, as so many of the late summer flowers are yellow—sunflowers, coreopsis, etc.

A final word as to planting. This perennial takes up a good deal of space in the summer with its large spreading leaves, and, therefore, it is advisable to use some of the space between the clumps for spring bulbs, as the leaves can be cut in at the approach of spring.

ALGER PETTS.



DENNE PARK: THE MANSION.

SOME HORSHAM GARDENS—I.

"In Sussex there is a pretty market town called Horsham, and near unto it a great forest, called St. Leonard's Forest," writes the compiler of a remarkable pamphlet, published in 1614, relating to "a monstrous serpent or dragon," that was said to have made its appearance in the big tract of woodland to the east of the town to the dismay of the inhabitants of the district. What was true at the beginning of the seventeenth century is hardly less so at the present time. There is still in Sussex a market town that is decidedly pretty, and known as Horsham, and there is also a large tract of land extending some miles eastward that on the maps is designated St. Leonard's Forest. This area is no longer "a vast and unfrequented place, heathie, vaultie, full of unwholesome shades and overgrown hollowes," as when the dragon was supposed to have its home within its solitude. It has long since been divided and much of it brought into cultivation, and where once brushwood and timber trees had undisputed sway there are well-planned estates, with stately mansions and extensive well-kept gardens that have long had a foremost position among the horticultural establishments of the United Kingdom. These are by no means the only gardening features of the Horsham district, for to the south, west, and north of the town are gardens of more or less importance, and within the borough are gardens innumerable that afford evidence of the strong love for flowers that exists among the residents.

Denne Park.

Denne Park, the ancient and stately residence of E. M. Eversfield, Esq., is within a comparatively short walk of the town; and its gardens, so long famous for their roses, afford much to interest whatever may be the trend of the taste of the visitor. Owing to the high ground on which the mansion and gardens stand a fairly stiff climb is necessary to reach them, but the walk is extremely pleasant, and affords several views of surpassing beauty. Not the least beautiful of these is that of the town nestling amid the trees in the hollow below.

The general style of the mansion, as will be seen from the accompanying illustration, is of the Stuart period, but the front is of more modern date, and quite in keeping with the older portions. Situate among trees of noble proportions, the mansion presents a stately appearance, and from the high ground on which it stands magnificent views are obtained over the North Weald, Leith Hill being the most conspicuous of the landmarks. The approach from the London and Worthing road is through a magnificent avenue of beeches, the length being over half a mile, and the trees equally remarkable for their large size and splendid development. The lawn on the side of the house facing the avenue is bounded by elegant gates and railings in wrought iron, and these are of much interest for they are not less than four hundred years old, and were made from iron smelted in one of the Sussex forests. Here we have evidence of Mr. Eversfield's taste for roses, as over the light and elegant railings climbing roses fling with unrestricted freedom their long and graceful branches, that when we had the pleasure of seeing them were enwreathed in their attractively-coloured blossoms. Especially attractive, on a wall to the left of the gateway, were large finely-flowered specimens of Marie Van Houtte and Caroline Kuster.

On the east side of the mansion is a wide expanse of lawn so admirably kept as to at once attract the attention of those who fully appreciate the charm of level, soft, and rich green turf. There are a few flower beds on this, as on the other side, to give colour to the scene without breaking up, as it were, the delightful open space; but the distinguishing feature of this part of the pleasure grounds is formed by the numerous finely-developed specimen trees. Here are cedars of Lebanon, whose wide-spreading branches suggest considerable age; a specimen of Wellingtonia gigantea, planted in 1859, that pierces the sky at a height of about one hundred feet, and examples of various cupressus and thuias of great height and perfect in their development. The deciduous trees are not less noteworthy, and chief among them is a weeping ash that rises to a height of thirty feet, and with its long flexile branches sweeping the lawn presents the appearance of an exquisite fountain of verdure.

Mr. Eversfield has long occupied a prominent position among amateur rosarians, and those who have seen the finely-developed roses from Denne Park at the exhibitions of the National Rose Society and elsewhere will not be surprised to learn that the rose garden forms a feature of much interest. This is situate a short distance from the mansion, and is so arranged that it does not come into view until the belts of trees that shelter the roses from the north and east winds are passed. The garden is open to the south and west, on which sides it is bounded by a fine old orchard, and in the sheltering belts of trees are numerous thuias, large in size and perfect in development. In accordance with the usual practice, the roses are grown in long narrow beds for convenience in giving the blooms the attention necessary to ensure perfect development. Standards, half-standards, and bushes are grown in due proportion; and as will be readily understood, the varieties include all the finest of those held in high estimation by the general body of cultivators for exhibition purposes. While not a separate department of the garden the roses are under the charge of a grower who devotes his whole time to them, and, like Mr. Harris, the able head gardener, is not less enthusiastic than he is skilful.

LEONARDSLEE: SUBTROPICAL VEGETATION.

The kitchen garden lies to the south or south-east of the mansion, and is equally remarkable for its antiquity and the skill with which modern methods of culture are carried out. The substantial walls with which the garden is enclosed are said to be a thousand years old, and there is nothing to give rise to a difficulty in accepting the statement. But whatever may be their age, they are well clothed with fruit trees of the most approved kinds. Alongside the intersecting walks are fruit trees and herbaceous plants in variety, all of which contribute their share to the interest associated with a visit to these fine old gardens. The plant and fruit houses are not less interesting in their way than are the outdoor departments, but it must suffice to say that they bear the impress of the skill that is evident on all sides.

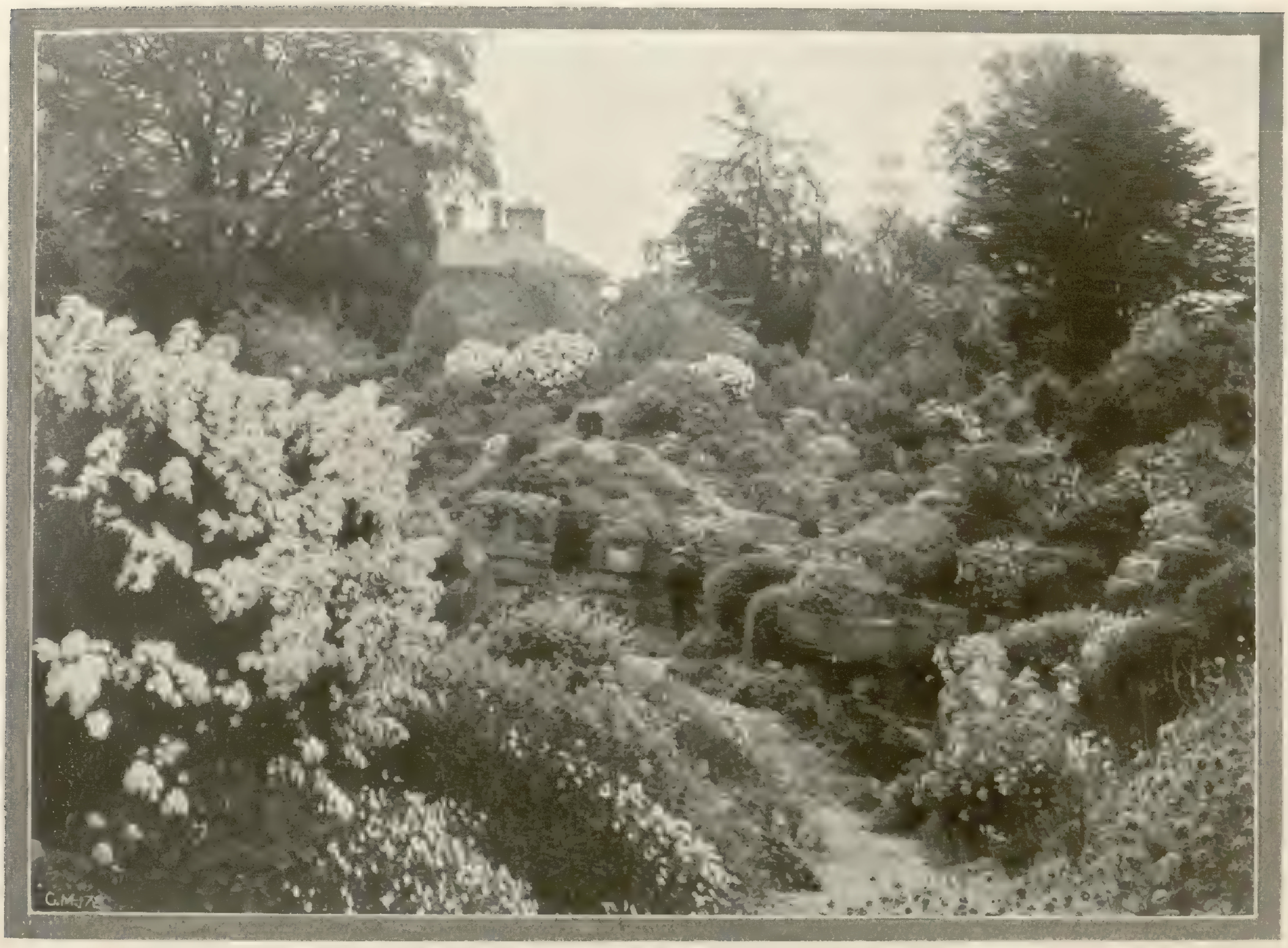
Leonardslee.

To the general body of horticulturists Leonardslee, the seat of Sir Edmund Loder, Bart., is known by the many interesting plants that have been sent from them to the exhibitions and meetings of the Royal Horticultural Society. These will have served as an indication of the exceptional interest that is associated with them, and their richness in plants that are more or less rare. They will have done much to make the gardens known, but a personal visit only will enable one to have an adequate idea of their extent, their interest, their characteristics, or their wondrous beauty. This fine seat is situate in St. Leonard's Forest, some four or five miles to the south of Horsham, and the walk or drive there abounds in points of interest, and as the road occupies high ground for the greater part of the way a succession of views is obtained of scenery of a charming character. Those who have an opportunity of visiting the gardens of Leonardslee will be well advised in driving out. Their area is enormous, they give plenty of stiff climbs, and there is so much deserving of attention that the strongest athlete might well be excused were he to show signs of a slackening of interest after a few hours' exploration, if previously he had had a long walk. Yes, the visitor who would enjoy to the full the many attractions should come fresh—let it not be said to his task, for that word would be inappropriate; but a leisurely inspection of these wondrous gardens.

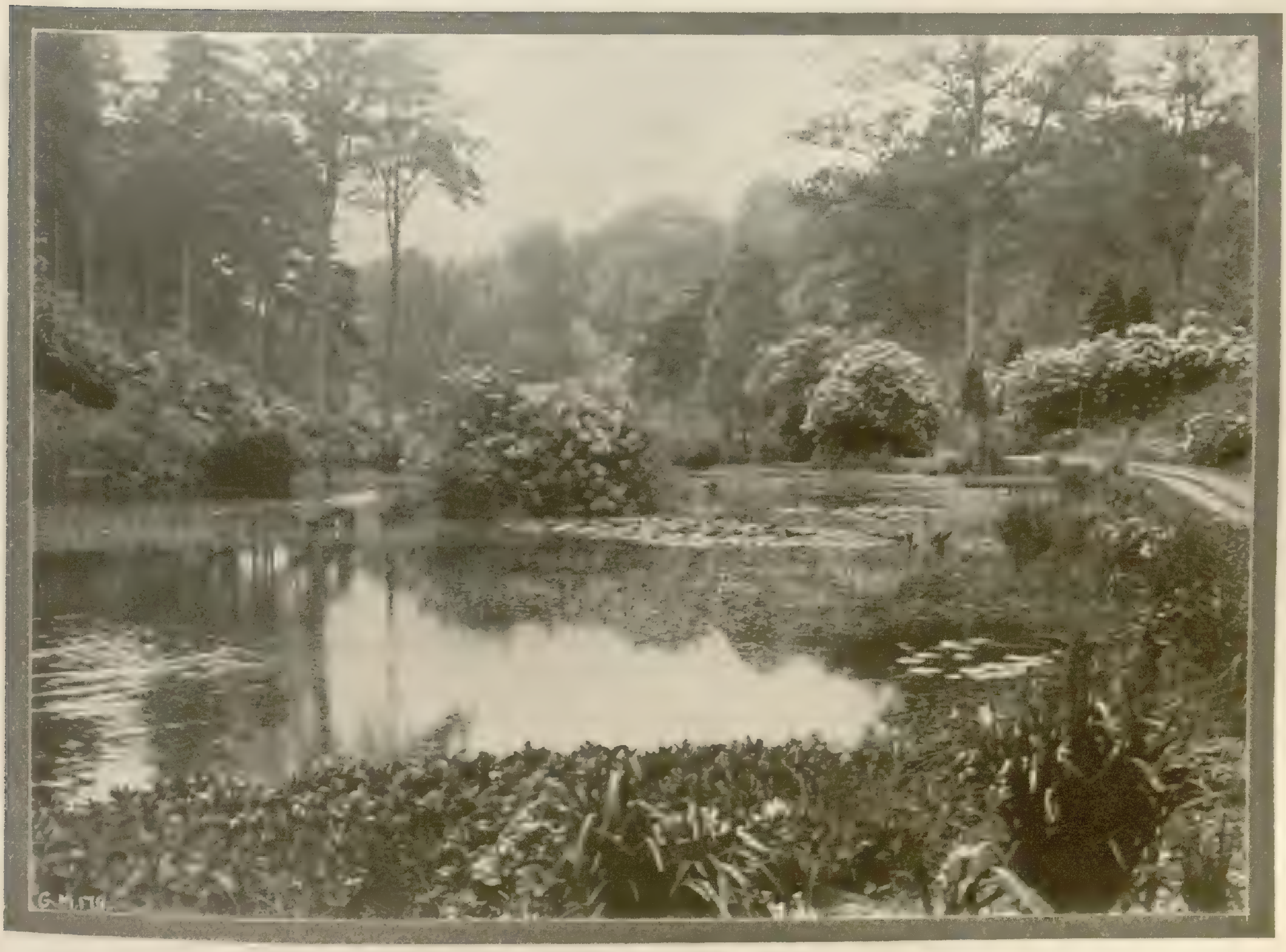
So distinct in character from the horticultural establishments with which we are generally acquainted are the gardens of Leonardslee, that it is not an easy matter to convey a clear idea of their general scope or of their distinctive characteristics. Let the reader imagine for a moment a deep valley with a sharp slope on either side extending for a mile or so. Then in imagination clothe the greater part of the slopes with beeches and oaks, larches and pines, and other trees that usually have a place in the English woodland. Having accomplished this, proceed, still in imagination, to beautify the open spaces on the slopes with the choicest of shrubs and the most beautiful of hardy perennials: clear away the greater part of the brushwood from beneath the trees and replace it with thousands of mollis and Ghent azaleas, and rhododendrons innumerable. The reader, if he is endowed with such powers of imagination as will enable him to accomplish these things, will have obtained a rough idea of the general scope of the gardens. But before it is possible to realise their charms and interest many details will have to be filled in, and to accomplish this successfully one had need have the intimate knowledge of plant life possessed by their owner.

The trend of the valley is from north-west to south-east, and along the lower parts flows a stream of water, which has been expanded into a series of lakes, several with an area of eight or nine acres. These and the connecting stream provide in their water and on their banks a home for one of the most comprehensive collections of moisture-loving plants that has yet had a place in a private garden. The mansion occupies a commanding position on the south-west side of the valley, and is surrounded by lawns and pleasure grounds that, while free from any trace of wildness, are highly picturesque and without a trace of formality. On the eastern front are tastefully disposed groups of trees and shrubs of the choicest description, the finest of the green and variegated hollies, berberis, and rhododendrons predominating.

In a sheltered position on the eastern lawn is a tastefully arranged enclosure devoted to roses. This is known as Lady Loder's rose garden, for herein her ladyship evinces her skill in rose culture, and indulges her taste for the fragrant blooms in their diversity of form and colouring. It would appear from the evidence to be found in the rose garden that Lady Loder does not restrict her appreciation of roses to any one section. Hybrid perpetuals, hybrid teas, and teas all represented in bush and standard form; and on pillars, arches, and other supports ramblers and climbers display their charms. Near the south-east corner of the mansion is a tulip tree of such remarkable proportions that it is regarded by the leading authorities as one of the finest trees of its kind in the country. When measured last spring the height was found to be ninety-seven feet. On the terrace, at the north-east corner of the mansion, is probably the finest outdoor camellia in England, or for the matter of that the finest specimen, whether under glass or in the open. Occupying one of the most exposed positions in the garden, this specimen has assumed the form of a round-headed bush, has a height



LEONARDSLEE: VIEW IN ROCK GARDEN.



LEONARDSLEE: WOODLAND LAKE.

of twenty feet, and a circumference of sixty feet, and was bearing when it first came under my notice, in the spring of 1907, 10,000 blooms. Ten thousand blooms is a large number to be borne by one specimen, and although based on an estimate, there was no great difficulty in accepting the number, for the whole of the growths, to a depth of about two feet from the outer surface, were simply wreaths of flowers. Some day my readers will probably have an opportunity of seeing a photographic reproduction of this unique camellia bush.

Right and left of the Mansion are long borders devoted to choice shrubs, intersected by a central walk, and enclosed between sheltering belts of evergreen and deciduous trees and shrubs of robust habit. Growing with great vigour in the enclosure on the right, or south side of the mansion are a considerable number of camellias, ranging from ten to twelve feet or more in height, in the most vigorous condition, and annually producing a profusion of flowers. Among them was the Double White, and it was interesting to note the purity of its flowers. These borders are not alone of interest for their camellias, as within them are finely furnished examples of Chamaerops Fortunei, rising to a height of twenty feet or more, great masses of the New Zealand flax, huge specimens of Aralia Sieboldi, and other subjects that suggest a warm corner in a Cornish or Devonshire garden. Here also are several of the most rare and beautiful of the Himalayan and other rhododendrons, notably the unique specimens of R. Thomsoni.

The corresponding border on the north-east side of the mansion is a short distance therefrom, and is approached by a broad walk, with continuous arches of roses on either side, and through a strip of lawn that in the spring season is given up chiefly to daffodils. On the grass, at short distances apart, several hundred small beds have been formed, and these are filled with choice daffodils, forty to fifty bulbs of one variety in each. The effect is much the same as that produced by daffodils springing from the grass, with the advantage that Mr. Cook is able to lift the bulbs and deal with them in such manner as may be considered desirable. About a million of narcissi are grown. In the enclosed borders beyond may be found large clumps of such choice daffodils as King Alfred and White Queen, numerous rare rhododendrons of comparatively low growth, and many other choice shrubs that bloom early in the year. In another enclosure immediately behind this are other choice rhododendrons, notably the numerous examples of R. Thomsoni, which in April produce a fine display of brilliant crimson flowers.

Proceeding onwards, through the well-wooded slopes that are practically a continuation of the gardens north-west of the mansion, we have a choice of paths. There is, however, no occasion for perplexity as to which to take, for alongside each of them there is plenty to charm the eye and interest the mind. These slopes form a huge garden, for in the great open spaces are huge rhododendrons, associated, it may be, with palms of varying heights, some being of quite exceptional proportions. In the smaller clearings are big groups of the finest of the Himalayan and other rhododendrons, of camellias, Indian azaleas, and other shrubs, not usually seen out of doors, and so arranged as to suggest that they are part of the native flora. In suitable positions also are the stronger-growing rambling roses, loosely trained to lofty poles until they reach the top, when they are allowed to grow naturally, according to their own sweet will. Continuing down the slopes until the stream is reached that flows along the valley, a spot is found that is given over chiefly to flowers that belong to the spring season, and a more exquisitely beautiful floral picture it would be difficult to conceive than that formed by the flowers of the thousands of iris, polyanthuses, primroses, etc., that have been naturalised. The slopes on the left or north-east side of the valley have been enriched by many thousands of hardy azaleas and rhododendrons, and the brilliant display that is annually made is one that lingers long on the memory.

The chain of lakes and pools that extend through the valley forms a water garden probably unequalled in its area, and certainly not surpassed in the facility it affords for the cultivation of plants that thrive in and contiguous to water. An enumeration of the moisture-loving plants grown at Leonardslee would probably exhaust the list of those available in this country, and include not a few that are rarities. The general character of the water garden is shown in two of the accompanying illustrations, and from these is will be seen that the stately gunneras and the elegant bamboos have been freely utilised in the planting of the margins. One might linger long enjoying the charms of the varied forms of plant life growing in and around the lakes and pools, but the rock garden has yet to be seen, and it is not possible to do more than have a mere peep at the great breadths of the North American pitcher plants (Sarracenia purpurea) that luxuriate in the bog on the sunny slopes not far from the unique specimen of Picea morindoides, of which an illustration was given in the GARDENERS' MAGAZINE of January 18.

The rock garden is undoubtedly one of the finest of its kind, and constitutes a feature immensely interesting and highly attractive. It is spacious enough to provide accommodation for a comprehensive collection of alpines, and it is so arranged as to admit of the several kinds having the aspects and soils most favourable to a healthy growth. An illustration is given herewith of one part, but half a dozen pictures would no more than suffice to show its general character and the vigour of growth of the numerous alpines that occupy the various slopes, and the freedom with which they yield of their wealth of beauty. To particularise is not now possible, but it must be said that the collection of alpine pinks, which occupies one of the largest and sunniest of the slopes, forms an extremely beautiful feature, and that the dwarf coniferous trees, placed in suitable positions, materially enhance the general effect.

Of the large collection of Himalayan rhododendrons under glass, in which Sir Edmund Loder and his able gardener, Mr. A. W. Cook, take special interest; of the plant and fruit houses, and of the admirably managed kitchen and fruit gardens it would be pleasant to write, but space forbids. It will, however, be readily understood that under the charge of so skilful a gardener as Mr. Cook everything represents culture of the highest class. This brief account would, however, be wanting in completeness were it not said that Sir Edmund Loder is not less keenly interested in animal than in plant life, and that in the enclosures contiguous to the mansion are light-footed gazelles and ponderous kangaroos, and that one of the lakes in the valley is given up to beavers, where they are allowed to display their skill in cutting down trees and dam making without let or hindrance.

Holbrook Park.

Of a quite distinct character from either of the foregoing is Holbrook Park, the charming residence of H. Alan Scott, Esq., which lies some three miles distant to the north-west of the town. The dominant features of the gardens are the wide-spreading lawns, the stately trees, and the profusion of garden roses. From the garden front of the mansion the wide expanse of lawn stretches away in the distance, if not as far as the eye can reach, far enough to suggest almost illimitable space. To the right and left of this magnificent stretch of turf are fine belts of trees, in which are oaks and beeches of exceptional magnitude, and in suitable positions are groups of rhododendrons in the rudest of health, with flower beds of large size and tastefully furnished.

There are two rose gardens, the smaller of which is formed in the angle of the mansion, with sunken beds, as herewith illustrated, and devoted chiefly to tea-scented varieties and hybrid teas. The other is on the far side of the stream, shown in the second of the two illustrations, and here strong-growing varieties are well represented, and allowed to grow more or less naturally. This rose garden extends some distance back from the water, and is bounded on the far side by a hedge of the popular Crimson Rambler that has probably no equal. It has a length of many yards, and is nine feet in height, and when the plants are in bloom there is so brilliant a display of colour as to startle one by reason of its intensity. A noteworthy feature of these gardens is the long pergola clothed with rambling roses, of which a glimpse is seen on the left-hand side of the illustration of the water scene. The framework is of rough oak branches, and the roses grow with so great a vigour and bloom with such profusion as to prove to demonstration that Mr. Dancy, the able gardener, fully understands their requirements. As the pergola is of great length, and extends over two distinct levels, it has an appearance very different to that presented by pergolas on ground that is level throughout their whole length, but it is pleasing nevertheless, and is naturally much admired by visitors, especially so by those who see it in the season of roses.

On the other, or outer side of the hedge of Crimson Rambler rose that forms one of the boundaries of the larger rose garden there is an extensive orchard, in which the most approved kinds of the fruits usually grown in standard form are admirably represented. This orchard is intersected by a fruit pergola nearly two hundred and fifty feet long, which is approached through an opening in the rose hedge, and is well furnished with cordon apple and pear trees. As it is hoped that an opportunity will occur at no distant date for making further reference to the pergola, it will suffice to say that the trees present a most attractive appearance when in bloom, and also when the fruits are approaching their full development. On the east side of the orchard about half an acre is planted with choice daffodils, and as the conditions are favourable to their full development they annually produce a beautiful display.

In the fine old kitchen garden there is much to interest, for Mr. Dancy is especially well versed in the art of vegetable culture, as exemplified by his success in many a keen contest, more particularly with onions. Here we find large breadths of the vegetables in general use in the best possible condition, and on one side a long border of hardy herbaceous plants. In a corner, with yew hedge for a background, there is a selection of the finest of the delphiniums, these being highly effective by reason of the high quality of the varieties and splendid development of their spikes.

Within the kitchen garden are numerous plant and fruit houses, all of which are evidently fully utilised in the cultivation of the several subjects to which they are devoted. Figs in pots are, it was noticed, grown with much success, as also is the loganberry in the open. Not less noteworthy is the wire trellis, over which red currants are trained, for the crop annually obtained is so heavy as to surpass those produced by bush trees occupying a greater space. **GEORGE GORDON.**

⁂ The second of the two illustrated articles on noteworthy gardens in the Horsham district will be given in our next issue (February 15).

LOOKING BACKWARD.

In these days of progress it is well for one sometimes to look back over the past and note the various changes that have taken place. I was reminded the other day, by a letter that I received from an old journeyman of mine, who is now in business for himself, that it was in 1875 he first came to live with me. A third of a century ago! What changes have take place since then! When I look back on my early days and think of the difference there was in the treatment of young men then and now it almost makes me wish I had not been born so soon.

In those days there was no electric light in the bothy for the young men to study by, nor bathroom where he could take a plunge after a hard spell at stoking. In many instances the rooms were ill-lighted, cheerless, damp, and situated at the end of the stoke-hole or potting shed, where all the fumes of sulphur entered, for the only means of approach was through such places. No wonder then that the germs of rheumatism early settled in one's bones. The light provided, in many instances, was so meagre that one was often glad to resort to the stoke-hole, where, by the aid of the fire, sufficient light was provided whereby one could read of the doings in other places. Gardening papers in those days were not so plentiful as they are now, and the GARDENERS' MAGAZINE, though the oldest, was by no means so popular as it is at the present time, for during recent years this paper has undoubtedly become the best of all the gardening periodicals published.

It was by the aid of the stoke-hole fire in a noble Duke's establishment that the writer was enabled to master the most difficult problems in Euclid during the long winter evenings many years ago. The bothy had ground for the floor, and was approached first through the potting shed, then across a plank over the boilers, through another shed to the bothy door, the only air and light that was admitted being by this means, as there was no window in the room. As the days lengthened the work became more arduous, the hours of labour during the summer months were not restricted, and there was no pay for overtime. Often when one went in to tea at a late hour, before tea was presentable it was necessary to climb some tree to procure dead wood to make a fire. There were no half days off on a Saturday then; one was obliged to work from Monday morning until Saturday night, and if a half day were asked for to go and see some neighbouring garden, the time granted had to be made up. Going to see gardens in those days was by no means an easy task, as the whole journey had to be undertaken on foot; there were no bicycles then, and third-class trains were like stars on a stormy night—few and far between.

Such then were those "good old times" that some would have us go back to, the times when young men in the garden used to slave the whole week, Sunday included, for a pittance of 12s. a week. In those days, too, very few were allowed to enter the bothy who could not pay a premium to the gardener, and as in some instances this could not be provided by his friends, 2s. per week was stopped out of the man's wages, and he had 10s. to clothe and feed himself.

LEONARDSLEE: JAPANESE BRIDGE AND WATERSIDE VEGETATION.

Times have changed since then, and in most places comfortable lodgings are provided, though still, in many gardens, there is much to be desired. To procure the best and most respectable young men some inducement should be held out to give them more interest in their work. Surely a foreman in a large establishment is worth as much as an ordinary bricklayer or carpenter? But his pay does not amount to the same, and there is no reason why the young men in the gardens should work overtime without being paid any more than they should in any other walk of life. In many ways young men in the gardens are better off now than formerly. There is not the constant drudgery with the watering pots, as in most places there is now an ample supply of water, and one man can do with hose that which in days gone by would take several to perform. When water had to be carted from a distance it was but sparingly used, and in some instances many crops had to take their chance.

Gardening in those days was quite different to now. Hard-wooded plants were all the rage. What has become of those fine specimens of Cape heaths and pimelias that graced the show tents? No novice could grow such plants, yet they were grown without the aid of hot-water pipes, the old flues then being the chief means of heating. How many young men of the present day have had to strip and work in a pine stove? Not many of them would known anything about such work. Cheap carriage and differences in taste have brought about quite a revolution in gardening, as in other things; but in looking backward one is glad to find that with the progress of time there is also an advance in wages, and though, as a body, the same class of young men may not enter the craft as formerly, there are still some fine young fellows following our most ancient and useful calling. **RUSTICUS.**

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in THE AMATEUR'S GREENHOUSE, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

ARAUCARIAS.

The cultivated species of araucaria are characterised by exceeding beauty of form, but, with two or three exceptions, are not sufficiently hardy to live an out of door life in this country. Araucaria Cunninghami and A. Bidwilli appear fairly happy in those genial parts of the country that boast a fairly equable climate, but it is very doubtful whether they will settle down as naturalised British subjects with a good grace. In all probability they would come to grief in the event of a severe winter unless well and very carefully protected.

The monkey puzzle, Araucaria imbricata, is certainly one of the most widely known subjects, and, speaking generally, does well over the greater part of the British Isles. It is true that most miserable and dilapidated specimens are met with very frequently, and these failures may be traced to a combination of unfavourable circumstances — the position being exposed and wind-swept, and consequently atmospherically dry, as compared with a secluded nook or corner, the evil being aggravated by very porous soil and inattention to artificial watering in times of drought. Shelter and a moist root run are the keynotes to success in the cultivation of this very distinct species, whose native habitat is the mountainous districts of Chili.

A. braziliana, as its name implies, hails from Brazil, and is scarcely worth attention, being of ungainly and straggling growth. From New Caledonia we get A. Balsamæ, which is exceedingly attractive in its young state, but it develops a straggling and undesirable habit with age. Grown in pots it is of great decorative value, and the same remark applies to all the species, the more tender of which should be grown to form handsome and imposing specimens for central groups in the conservatory or temperate house. When planted out under these conditions they flourish amazingly, and they may also be very successfully grown in large tubs, and in this case they may be utilised to play their part in the sub-tropical arrangement in the outside garden in summer.

A. Bidwilli and A. Cunninghami, already mentioned, are both distinctly handsome, but to have them at their best they must be cultivated under glass in this country, and these remarks are applicable also to A. Cooki, which is characterised by its columnar habit of growth. It is gratifying to know that nearly all the species are now met with in good gardens, and it is difficult to explain why they were to a great extent ignored over a long period.

The Norfolk Island pine, A. excelsa, has become one of the most popular of market plants, and enormous quantities are grown in the great trade establishments. Small wonder that they find a ready sale, seeing how beautiful they are in pots. Until recently I was under the impression that the vast majority were raised from seeds, but I am told by a large grower that 90 per cent. are raised from cuttings; also that the habit of growth, or arrangement of branch, is very different to that of plants grown from seeds. The difference lies in the fact that the tiers of branches are about three inches apart in the former, and are produced in this way, or at a slightly greater distance, over a couple of years or more, while in the latter they are divided by from fourteen to twenty inches of stem even in a young state, and consequently are vastly less ornamental and attractive than plants from cuttings. There are several varieties of A. excelsa, but neither approach the type in beauty or general utility.

Walter H. Aggett.

HOLBROOK PARK: SUNK GARDEN OF TEA ROSES.

THE VALUE OF THE LAURUSTINUS.

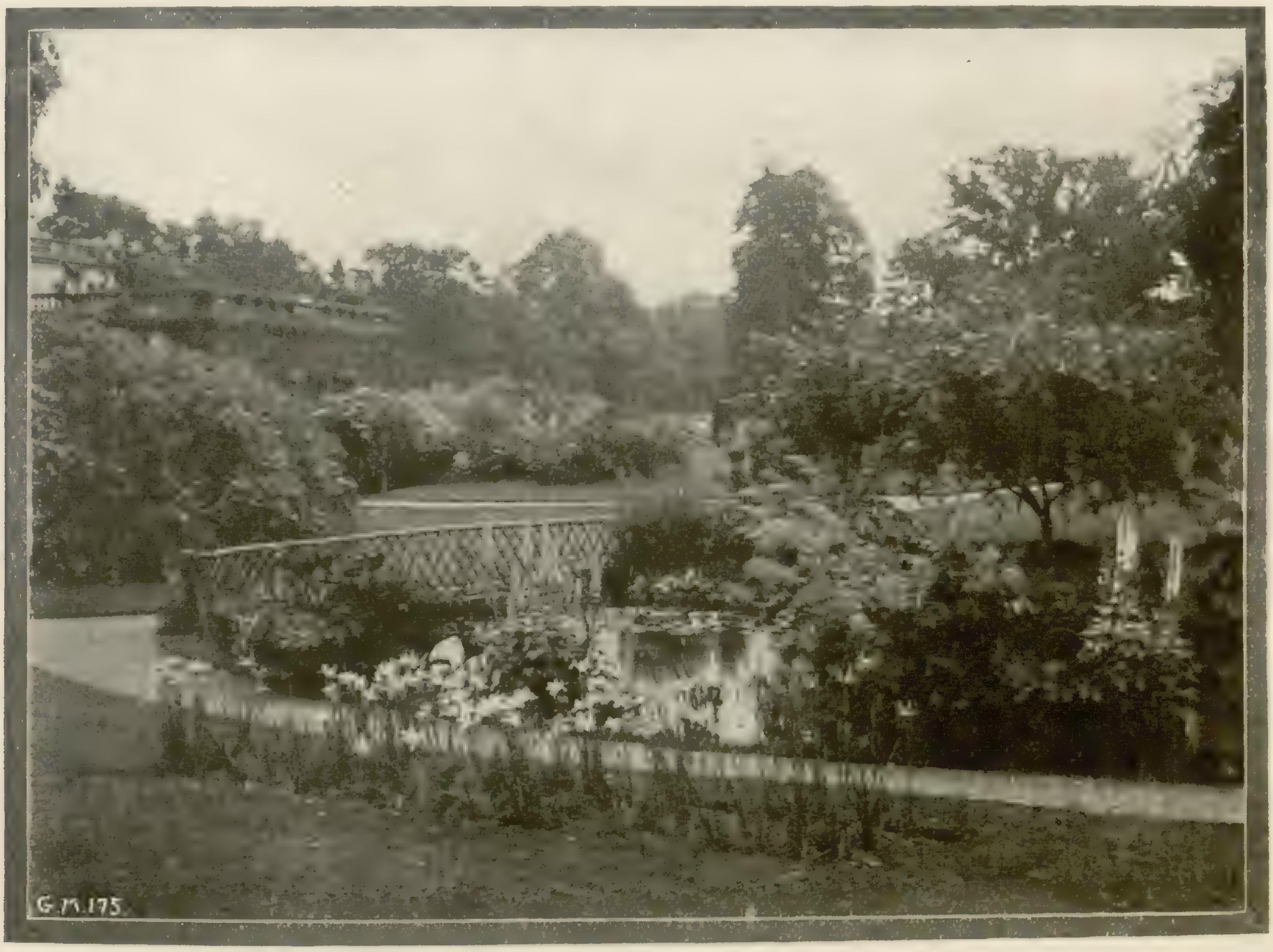
Considering the great beauty and utility of the laurustinus, especially in winter, I think it is somewhat strange that we see so little use made of it in gardens. Most large gardens contain their quota, though it is not such a big one as it should be, but the small garden often ignores it altogether. And yet, I question if a more generally useful shrub can be grown, taking one season with another.

Last autumn was, of course, an exceptional one in many ways, but it is worth recording that in my garden the laurustinus bloomed for several weeks before Christmas, and that on Christmas eve I cut a large armful of well-bloomed sprays. The subsequent snow and frost have bade it be quiet for a while, but the buds are not in the least injured, and a few hours of sunshine will again make the shrubs a sheet of white. As shown in the timely illustration and note on page 67, the laurustinus is entitled to rank high as a cut flower among the blooms which winter grudgingly allows us, for not only has it a pretty effect by any kind of light, but it lasts a surprisingly long time in good condition.

To see the flowers at their best, however, one must grow the plant in a cool greenhouse or conservatory. It makes an elegant pot specimen, and is among the best of all winter occupants for a quite cool house. Under glass the flowers open of a beautiful white, while in some plants they are so large that many people scarcely believe them to be laurustinus blossoms. I do not, however, hold with keeping the plants under glass all the year, as I have had much finer results by turning them out; if the pots are plunged to their rims in an outside border, watering need not give very much trouble in an ordinary season.

When planted in the outside garden, the laurustinus is often so huddled up among other shrubs that it has little chance of showing what it is really capable of. I have used it to crown a grass bank with the happiest results, to form a round bed in the centre of a lawn, and even to make a formal hedge. The latter was a great success, and I can confidently recommend the adoption of the idea to anyone who wants an uncommon hedge, and has a position or a garden not very much exposed to cold winds. Not that I think the laurustinus is as tender as many folk seem to imagine. I have seen it growing in some very wind-swept places near the sea, and the hedge mentioned above bore the brunt of south-west gales, notorious for their fierceness, with the loss of only an immature shoot or two. Soil of a heavy nature suits it admirably, but I have had the best results on the chalk.

E. J. KINGSHOME.



HOLBROOK PARK: A CHARMING GARDEN SCENE.

Names of Winners on Challenge Cups.—Those who have had the pleasure of holding, or even of beholding the challenge cups offered in competition by various horticultural societies, know full well that it is not the invariable custom to inscribe the tentative winner's name on the cups. Some cups, of course, do bear such records, and I think that all should do so. The fact that cups are so inscribed adds very greatly to their interest in the eyes of the spectator, while the holder must feel a glow of pride that his name should go down to posterity with those of other great ones. With a non-inscribed cup all records of the winners vanish, save so far as they are remembered by the record-makers or a few friends. May I commend this matter to horticultural secretaries?—E. J. K.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

PHAIUS.—P. grandifolius and its allies will now have their flower spikes in a forward condition. We grow practically all our phaius under comparatively cool intermediate house conditions. In fact, the winter-flowering cypripediums are cultivated in the same house, where the night temperature during winter is normally about 55 deg. I mention this because plants that have been grown under warmer treatment may possibly be in a more forward state, and thus my remarks may be considered out of place. We aim at having the bulk of this section and the Madagascar species P. simulans (better known in gardens as P. tuberculosus), with the hybrids derived from the influence of the last-mentioned, in flower about the month of March, and when they are well grown there are no orchids that give greater satisfaction. Here we use our specimen plants, often with upwards of a dozen spikes of flower on a plant, as ordinary subjects for decorative or furnishing purposes in the house. I have had some of our best plants from a month to six weeks in the house without their suffering the least injury. Indeed, it has appeared to us that taking the plants into the house while in flower has provided a natural rest that has proved more beneficial than otherwise. I am drawing particular attention to these orchids because I consider them a class that should be more generally grown in gardens. I know they are not favourites with orchid specialists generally, any more than are the deciduous section of calanthes; but, as we find the last-mentioned genus more successfully cultivated in general establishments where there are no special facilities or claims for orchid culture, we may also anticipate the same success in the cultivation of phaius. I find in gardens in this district that, where a few of the plants are grown, gardeners are in every way satisfied with the results, and grow them among the occupants of an ordinary stove.

PRESENT TREATMENT.—As the spikes advance, the plants should be placed in such a position that they may obtain full benefit from the available light. If placed at too great a distance from the glass the scapes are liable to become drawn and weakly, which must be avoided if possible, as the effect of the flowers being at too great a distance apart destroys the uniformity of the spike when fully expanded, and the texture and colour of the flowers are also poor. Give the plants every encouragement by supplying ample moisture, both at the roots and in the atmosphere, also until the flowers have expanded, and when the outside conditions permit. The best time to attempt any resting is immediately after the plants pass out of flower, but they must not at any time be permitted to suffer from want of root moisture. I hope to deal with potting requirements at a later season.

OTHER PHAIUS HYBRIDS, that is, those which have P. Humbloti as one parent, are even more easily grown than the above. Treated under the same conditions they are far more vigorous, and altogether superior in the quality of the flowers; they are also later in producing their flowers, and thus supply a useful succession. They are not nearly so plentifully distributed as the earlier hybrids, but I am sure that when their qualities are better known, they will become general favourites.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CAMELLIAS.—As a consequence of the rage for chrysanthemums, camellias have been ousted from many gardens, and in others they have been pushed into the background. This is to be regretted, for nothing can really take their place in the season at which they bloom. Not many years since a collection of camellias might be found in almost every garden of any pretensions, the central beds in many old-fashioned conservatories being devoted to them. To grow camellias well, care and regularity are necessary, as they soon fall a prey to scale and other insects if neglected. Healthy young plants can be purchased at a reasonable price, and these should be shifted into pots one size larger, draining them well, and using a compost of sound, rather strong fibrous loam, a sixth part of well-rotted manure, and rough sand or road grit. Firm potting is essential, and the plants should have the benefit of a comfortable temperature, and overhead syringing twice daily when sunny. Camellias enjoy a little shade, and do well beneath vines, provided the latter are planted some distance apart, and the trellis is not too densely covered with foliage.

MARGUERITES.—The main stock of these should be propagated during the autumn, but as the plants require stopping about this time the tops may be utilised, as these make the best of cuttings, and will be in time for bedding out; while those not required for that purpose make good plants for flowering in pots the following autumn and winter. Cuttings root freely in any cool pit, where they can be kept close, but I prefer to give a little bottom•heat from fermenting materials. A half spent hotbed will keep up enough moisture to prevent the cuttings flagging, and will also hasten root action.

PANICUM VARIEGATUM.—For the edging of stages or groups of fine foliaged plants, there is nothing more effective than this pretty grass. It is not of much value during the winter, except in the stove, but during the summer it may be used in the conservatory or in the greenhouse, and will do good service. Cuttings put in now will soon make useful mâterial; put about six cuttings in a 3in. pot in light, sandy soil, keep them close in the propagating frame, and in a few weeks they will be ready for potting into 5in. pots. With ordinary care they will keep in good condition throughout the season. Used alternately with Isolepis gracilis, they make a fine finish to any group.

PRIMULA VERTICILLATA.—This is a charming primula for the greenhouse in winter. It bears flowers of a beautiful yellow hue, borne in whorls or spikes 15 inches or more high. The delicate clear yellow of the flowers and the silvery tone of the foliage associates very pleasingly; the latter, more particularly underneath, is covered with a white mealy powder. This plant is preferably raised from seeds sown in February, in pans filled with finely-sifted sandy soil. Place them in a moderately warm house, cover with glass, and shade from the sun. When the seedlings are large enough to handle, transfer three of them into a 3in. or 4in. pot, according to their size. Allow them to remain in the same temperature until fairly well rooted. Then throughout the summer quite cool treatment should be afforded. All flowers that show during summer and autumn should be pinched off, thereby ensuring the production of vigorous flower scapes later. These pretty plants, when they are in full flower, are always much admired in the greenhouse during winter and early spring.—T. B. FIELD, Ashwellthorpe Gardens.

HARDY FRUITS.

PRUNING AND PLANTING.—As the season advances it will bring its own work, so that whatever pruning and planting remains to be done it should be pressed forward as fast as possible. If fruit culture is judiciously planned and carried out, I feel sure good results will follow, and it is quite possible that within a short space of time there will be higher prices for our English fruits, and a larger demand. When planting, it is as well to provide against the roots going down into a cold unhealthy subsoil by placing pieces of slate, tiles, or bricks below the roots, as this will help materially. In some soils little or no manure is required at the planting time, beyond a good mulching over and about the roots, but there are other soils in which manure is needed, otherwise the young trees become stunted and fail to make headway for years.

ORCHARDS.—When planting orchards do not omit to include some good late varieties. Bramey's Seeding, Newton Wonder, Dumelow's Seedling, Round Winter Nonsuch, Belle de Pontoise, and Northern Greening are all dependable. Earlier varieties are Lord Derby, Tower of Glamis, Warner's King, Stone's, Waltham Abbey Seedling, and Ecklinville. For dessert select Cox's Orange Pippin, King of the Pippins, Duke of Devonshire, Lady Sudeley, Scarlet Nonpareil, Worcester Pearmain, Cox's Pomona, Summer Golding, Adam's Pearmain, Ribston Pippin, etc.

ESPALIERS.—These need very careful attention with regard to pruning when in a young state, so as to form neatly-trained trees, after which the ordinary summer and winter pruning will suffice to keep the branches well studded with fruit buds. In the case of old trees, which may have been somewhat neglected, and the branches studded with long, useless snags, the latter should be gradually removed, cutting away more or less each year until the whole of the branches or tiers have been cleared. Young shoots and fruit buds will quickly form, and the trees will yield better and cleaner fruit. Apples and pears may be served in the same manner, and when in good bearing should be well supplied with manure, both in liquid and solid form.

GOOSEBERRIES.—If, owing to the destruction of the buds by birds, these have, so far, been left unpruned, the work should be taken in hand without further delay. Large bushes should be kept well thinned out, so that ample space is allowed for the admittance of air and light. In some instances a few of the old branches may be removed entirely, leaving clean, healthy last year's shoots to take their place. The aim should be to keep a neatly shaped bush, moderately thin, with plenty of young fruiting wood. Cut back to within a few buds of the base all inner shoots not required, and shorten the long shoots back, more or less, according to the length and strength of the growth. In most cases fifteen inches will be ample. After the pruning and thinning is finished, grub out any suckers which may have sprung up about the stems, remove a little of the top soil beneath the bushes, and then give the heads a thorough dusting with lime and soot; top-dress if needed, and mulch with good rotten manure. Birds are very destructive at times, so that repeated dustings of soot and lime will be necessary, and if strings of black cotton be fastened over and about the bushes it will help to keep the birds away. Last year's cuttings may be lifted and replanted, giving them more room to form neat bushes. Cuttings of gooseberries, red, white, and black currants, etc., should be made and put in firmly in rows twelve inches apart.

NEW TREES.—Before it is too late a careful inspection should be made of all kinds of garden trees, and fresh ones ordered to take the places of any which may have to be grubbed out in a few years. These should be trained neatly in the part of the garden most suitable for them. I always prepare young trees for the different purposes a few years previous, so that large spaces of wall, etc., may be filled at once, and fruit gathered sometimes the first year after planting. Peaches, nectarines, plums, pears, etc., all lend themselves readily to lifting, and in some cases the trees greatly benefit when lifted three or four years after having been planted.—H. MARKHAM, Wrotham Park Gardens.

THE FLOWER GARDEN.

EFFECTS OF THE RECENT SEVERE WEATHER are now becoming more and more apparent, many plants in bad positions being killed outright. Where such is the case, and a reserve supply of plants is on hand, filling in should be done as soon as possible. With us Myosotis dissitiflora and M. sylvatica, on our heavy cold soil, have suffered more than the wallflowers. Cistus crispus and Phlomis fruticosus have also been very badly crippled.

DIGGING.—Where spring bedding is not practised, all beds should now be well manured and deeply dug in readiness for summer bedding, every effort being made to keep well ahead with all work.

HERBACEOUS PLANTS. — Planting should be completed as soon as possible to enable the plants to flower well during the ensuing season. Lobelia cardinalis should be divided, and boxed or potted up, and remain under glass for some time longer in a quite cool, airy frame. Any remaining deciduous shrub and tree planting should also be finished, taking care not to allow the roots to be exposed a minute longer than necessary. Neatly cut over damaged roots with a sharp knife before being planted, and see that everything is securely staked or supported to prevent damage by winds.

CLIMBERS on pergolas and walls should also be planted during this month, care being taken that colours are properly blended, habits of plants suitable for their position, and soil suitable for each variety or kind of plant. The beautiful Tropæolum speciosum would give a very pleasing effect if planted more generally in a cool, but not water-logged or heavy clay soil; it does not mind strong sunshine on the top, and will in many cases, grow freely, producing a mass of its bright scarlet flowers during the season.

VIOLAS, ETC.—Rooted plants, in frames, of calceolarias, violas, antirrhinums, pentstemons, etc., should at once have their tops pinched out to induce bushy growth. Established clumps of violas, Dactylis glomerata, Festuca glauca, etc., may be divided and re-planted, and even if extra numbers are not required, it is better to divide and replant the youngest portion rather than allow them to become old and stubby, with bare centres.

SWEET PEAS.—A sowing of the ever-popular sweet peas should now be made. Sow a few seeds in pots under glass, and grow the plants quite sturdily until ready for planting out towards the end of March. Overcrowding should be avoided, though, as early flowers are always appreciated, thicker sowing for this than for succeeding batches may be practised; this applies more especially to those also now sown in permanent quarters outside, as their many enemies, ranging from pheasants and wood pigeons down to slugs, will probably take a heavy toll of them. A dozen good varieties are: Dorothy Eckford, Nora Unwin, White Spencer, David R Williamson, Duke of Westminster, Frank Dolby, Lady G. Hamilton, Coccinea, Evelyn Byatt, Gladys Unwin, King Edward VII., and Queen Alexandra.

DAHLIAS.—A batch of dahlia roots should now be placed in gentle heat for the production of cuttings; avoid a too high temperature, and when growths are about three or four inches long cut them off with heel attached or at a joint, and insert singly in small pots. Place in a close frame, or handlight in moderate heat. Also proceed with the propagation of lobelias, alyssums, ageratums, heliotropes, fuchsias, coleus, iresines, etc.

WALKS AND LAWNS.—See that all walks are kept well rolled, and lawns also well swept and rolled, and verges rolled and cut. When cutting with edging iron, guard against too thick a cut being made, as this speedily makes walks much wider than their allotted width, and spoils the effect. Merely straighten the verge edge. If any settlement or unevenness in lawns has occurred, the turf should be peeled and rolled back (or if the space is large, taken right off and laid aside), the top soil dug out, some rough soil placed in the bottom, and made firm, and the top soil and turf replaced, making all thoroughly firm and level. By returning the top soil to its original position a patchy appearance is avoided. When worn patches are made good, the new turf used should be as nearly as possible of the same kind of grass as the old turf.—E. F. HAZELTON, Knowsley Gardens, Prescot.

ROYAL HORTICULTURAL SOCIETY.

Annual Report.

The report of the council of the Royal Horticultural Society that will be presented to the Fellows on the occasion of the annual meeting, which will be held on Tuesday next, the 11th inst., has been issued. It need hardly be said that it is of an eminently satisfactory character; but we are pleased to have the additional proof which it affords of the splendid success achieved by the society during the past year. The report is of much interest throughout, but space will not admit of our doing more than give the following short extracts:

Research Station and Laboratory at Wisley.

The most important feature of the year's work, and one which, it is hoped, will be productive of far-reaching results, is the completion of the Laboratory and Scientific Research Station at Wisley. The opening ceremony was kindly performed by the Right Hon. Lord Avebury, P.C., F.R.S., on July 19, when several representatives of Government Departments, prominent men of science and horticulture, and members of the Surrey County Council, were present. The occasion was one of great gratification, for it brought the realisation of a long cherished, but long deferred desire for a scientific station under the direct control of the society, for research into the problems affecting plant life and plant disease at present confronting and baffling the gardener. Several very interesting speeches were delivered on the occasion which will be reported in the "Journal."

Among the first subjects to be investigated are soil-sterilisation by steam as a means of destroying those pests of plants which live in the soil; the influence of sterilisation on the plants subsequently cultivated in the soil; the bacteria of the soil; etherisation of plants; and certain definite plant diseases. Each of these subjects will entail a large amount of laboratory work, as well as of experiment in the garden.

Mr. Frederick Chittenden, from the Chelmsford Laboratories of the Essex C.C., and for some years secretary of our society's Scientific Committee, has been appointed director, having under his care both the research work and the students' laboratory, the latter at present accommodating 24 young men. The students training has thus been extended and improved, with a definite syllabus, and a time table apportioning their work between the gardens for practical work, and the laboratory for scientific study.

Prizes and Scholarships.

The council acknowledge with heartiest thanks the receipt of the £100 offered by Mr. Arthur W. Sutton, J.P., V.M.H., to inaugurate a prize scheme for the students at the gardens; and also the gift of an excellent photographic outfit for use at Wisley from Mrs. Hornby Lewis.

With reference to the prize scheme, which has not yet been definitely formulated, it is hoped that further donations will be forthcoming sufficient to secure an annual income of £15 to £20, so that the books or apparatus, given as prizes, may be worth working for, and serve as a real stimulus to the young men. The council would also welcome the foundation of scholarships.

Wisley Gardens.

The new garden is gradually being brought into thorough working order. Much, however, still remains to be done. Various trials of flowers and vegetables have been carried out, and Mr. George Massee, V.M.H., has conducted some original research work.

The number of visitors to the gardens admitted by Fellows' tickets during the year 1907 amounted to 8,818, as compared with 8,147 in 1906. This is exclusive of horticultural parties which were admitted by special arrangement, and would increase the total to over 10,000. The number would, no doubt, have been even larger but for the very unsettled weather of the summer of 1907.

The work in connection with the office of superintendent has so greatly increased that it has been found necessary to appoint an assistant superintendent, and Mr. Arthur C. Smith has been selected for the post.

Union of Gardeners' Associations.

The Union of Mutual Improvement Societies is another development of the past year. The council hope, by thus drawing the many isolated, but exceedingly useful, Horticultural Mutual Improvement Societies into federation with our society, and with each other, to strengthen and encourage them, and generally to promote their welfare. It is intended under this scheme to gather from existing societies the most suitable rules and regulations and general constitution for the information of newly starting societies, to keep a list of lecturers willing to assist them, and to furnish them with printed lectures, when a lecturer cannot be secured, or unavoidably fails to fulfil his engagement. All affiliated societies are included in the union.

Masters' Memorial Fund.

The council wish to commend the "Masters' Memorial Fund" to the support of the Fellows of the society. In the latter part of the year a meeting was held to consider in what way the late Dr. Masters' memory, and his work for scientific horticulture, could be most suitably perpetuated, and it was at once felt by all that the most fitting memorial would be to establish foundation lectures on the application of science to horticulture, to be called "The Masters' Memorial Lectures," similar to existing foundation lectures in law, medicine, and other sciences. The council gladly accepted the suggestion, and a circular letter was sent out to the Fellows, in response to which about £320 has thus far been received. It is greatly hoped that further donations may yet be made to the fund, in order that three lectures at least may be adequately endowed and so carry on Dr. Masters' memory to succeeding generations of gardeners.

Annual Progress.

The following figures will show the society's progress in regard to numerical strength during the past year: Loss by death in 1907, number 156, £216 6s.; loss by resignation, etc., number 520; income, £654 3s.; total loss number 676; income, £870 9s. Fellows elected in 1907, 1,209; income, £1,774 10s.; deduct loss, £870 9s. Net increase in income, £904 1s.; new Fellows, etc., 1,209; deduct resignations and deaths, 676; numerical increase, 533; total on December 31, 1907, 10,000. The council are pleased to record that the total number of Fellows, honorary or corresponding members, associates and affiliated societies is now 10,000, which is believed to be the highest number belonging to any British Royal Society.

The Temple Show.

By the renewed kindness of the treasurer and Benchers, the society held its great show for the twentieth year in succession on May 28, 29, and 30, in the gardens of the Inner Temple. The attendance was again a record one. In 1908 a similar show has been arranged for May 26, 27, and 28, when there will be a private view open to Fellows' tickets only, on Wednesday, May 27, between the hours of seven a.m. and noon. Fellows are particularly requested to notice that there will be no admission by payment to this private view; it will be reserved only for the annual tickets, transferable and non-transferable alike. This arrangement has been made to meet the wishes of many Fellows, and to obviate as far as possible the unpleasantness of overcrowding.

Deputations.

The council have with much pleasure received and accepted invitations to send deputations to the Cornwall Spring Flower Society on April 7, 1908; to the Jubilee meeting of the Yorkshire Floral Society on June 16, 1908; and to the Durham, Northumberland, and Newcastle-upon-Tyne Society's show on July 1, 1908.

Reduced Railway Fares.

At the request of a large number of Fellows, the council prepared a petition to the railway companies of Great Britain, asking for similar privileges of reduced railway fares to those granted to some other societies. The petition was signed by nearly 3,000 Fellows, and met with a courteous but decided refusal.

Committees.

The hearty thanks of the society are again due to the members of the committees, the judges, the lecturers, the writers of papers communicated to the Journal, the compilers of abstracts, and last, but by no means least, to the several examiners, and to others who, by their self-denying work in the society's service have largely contributed to the success of the past twelve months, and to the high position held by the Royal Horticultural Society among the practical and scientific societies of the world.

BRASSICA CROSSES.

The following are the results obtained by Mr. A. W. Sutton in his experiments in the crossing of brassicas under scientifically controlled conditions:

Types experimented with: Rape (Brassica Napus), Ragged Jack kale, and Asparagus kale—these appear to be closely allied to the Rape (? Brassica Napus); kohl rabi, Thousand-headed kale, and Drumhead cabbage (Brassica oleracea); swede, round, white-fleshed, swede, round, yellow-fleshed, and Swede Tankard, yellow-fleshed (Brassica campestris); turnips, yellow-fleshed and turnips, white-fleshed (Brassica rapa).

Crosses which failed to produce seed: Kohl rabi, Thousand-headed kale, Drumhead cabbage, x swedes, turnips, rapes, rape-like kales, and the reciprocal crosses; Ragged Jack kale and Asparagus kale x white turnips.

Crosses which produced seed, which, however, failed to germinate when sown in the open ground: White and yellow-fleshed turnips x white-fleshed swede; white-fleshed turnip x yellow-fleshed Tankard swede.

N.B.—Under artificial conditions some of these seeds germinated, but the resulting plants were sterile.

Crosses producing hybrid plants in F1, which hybrid plants, however, when put out for seed, were either sterile or were killed by the winter: Yellow-fleshed Tankard swede x Asparagus kale; Asparagus kale x white-fleshed turnip; yellow-fleshed Tankard swede x Ragged Jack kale; Ragged Jack kale x yellow-fleshed round swede; yellow-fleshed Tankard swede x rape; white-fleshed round swede x rape; rape x white-fleshed turnip; rape x yellow turnip; Ragged Jack kale x yellow turnip; white-fleshed swede x white turnip; yellow turnip x rape; yellow swede x yellow turnip; Ragged Jack kale x yellow turnip; white swede x yellow turnip; white turnip x yellow turnip; white swede x white turnip; yellow turnip x white turnip; yellow swede x white turnip.

Crosses which have been carried through F1, and have produced plants in F2: Thousand-headed kale x kohl rabi; kohl rabi x Thousand-headed kale; Drumhead cabbage x kohl rabi; kohl rabi x Drumhead cabbage; Drumhead cabbage x Thousand-headed kale; white swede x Ragged Jack kale; Ragged Jack kale x white swede; Asparagus kale x round yellow swede.

General note.—It will be seen that the cabbage types (Brassica oleracea) will freely intercross, but will not cross outside the B. oleracea class, while the rapes, rape-like kales, swedes, and turnips (Brassica Napus, B. campestris, and B. rapa) crossed with each other and produced hybrids, though many of these hybrids failed to produce seed in F2.

One of the most interesting scientific results obtained from the experiments has been that in nearly all of the cases in which plants have been produced in F2, these plants have reproduced the original forms or types used in the first crosses in definite proportions which agree with Mendelian ratios to a very large extent.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

National Chrysanthemum Society.

This society held its annual meeting in Essex Hall, Essex Street, Strand, on Monday, February 3, at 7 p.m. In the unavoidable absence of Mr. C. E. Shea, Mr. T. Bevan was elected chairman of the meeting.

After the usual formalities had been disposed of, the report and balance-sheet, of which we give the leading features in an abbreviated form, were taken as read, and adopted.

During the year seventy-seven new members (twelve Fellows and sixty-five ordinary members) were added to the roll, as compared with sixty in the previous year. In February and March, 1907, some thousands of leaflets were distributed setting forth the objects of the society and the privileges and conditions of membership, and the best thanks of the society are due to those members of the trade who kindly gave valuable aid in the distribution of these circulars.

The strength of the society must not of course be measured entirely by the number of individual members on the roll. The list of affiliated societies is in itself a tower of strength, and in this matter the National Chrysanthemum Society occupies a unique position amongst societies which are devoted to the culture of one particular flower. On December 31 there were 110 suburban, provincial, and colonial societies on our register of affiliated societies.

Exhibitions were held in October, November, and December at the Crystal Palace as in former years. Your committee are pleased to report that the number of entries in the various classes showed an increase of about 33 1-3 per cent. over the previous year.

The shows for 1908, which will be held at the Crystal Palace, have been fixed for Wednesday and Thursday, October 7 and 8; Wednesday, Thursday, and Friday, November 4, 5, and 6; and Wednesday and Thursday, December 2 and 3.

Twenty-six meetings of the Executive Committee and sub-committees were held in 1907. Members were also in attendance at the society's shows at the Crystal Palace and Covent Garden, and the hon. foreign corresponding secretary also attended the French Society's shows in November at Paris and Orleans.

Seven meetings of the Floral Committee were held during the season, four at Essex Hall and three at the Crystal Palace. Mr. D. B. Crane presided over all the deliberations of the committee. The meetings of this committee are always of exceptional interest, and your committee would be pleased to see more of the members of the society availing themselves of the privilege of attending these meetings, when the various novelties introduced into the chrysanthemum world are to be seen in their earliest days.

During the season 215 entries were recorded and the following awards were made, viz.: Thirty-two first-class certificates and eleven commendations, whilst in several cases the exhibitors were asked to submit the blooms to the consideration of the committee on a future occasion. Silver medals were also awarded to Mr. W. J. Godfrey, Exmouth, and Mr. H. W. Thorp, Worthing, for interesting collections of new varieties submitted at the meeting held on October 28.

As foreshadowed in the last report, the society's Year Book was issued early in 1907 and was well received by the members. The best thanks of the society have already been tendered to the honorary editors, Mr. C. Harman Payne, F.R.H.S., and Mr. Charles H. Curtis, F.R.H.S., and also to each of the contributors. This publication assisted materially in keeping the society under the notice of the public, but from a financial point of view it must be admitted that the results were disappointing. All members received free copies, but the sales to the general public were very small and the income from advertisements was not as large as had been hoped. For this reason your committee decided with regret that it was inadvisable to incur this expense again in 1908.

The ordinary income of the society showed an increase over the previous year, but, having regard to the special expenditure, the committee deemed it advisable to transfer £70 from deposit account to general account. They have, however, resolved to re-transfer not less than £25 to deposit account from the current year's income and to continue the same policy until that account is restored to at least its original figure. The prize money in respect of all the shows has been paid.

Your committee received with the deepest regret the announcement of the President that, in consequence of continued ill-health, he would be unable to continue to fill that office after the close of 1907. Mr. Shea has been president of the society for the past five years, and your committee wish to place on record their sense of indebtedness to him for the many valuable services he has rendered to our society. Under these circumstances your committee have much pleasure in announcing that Sir Albert Rollit, D.C.L., LL.D., has consented to be nominated for the office of president during the coming year, and his name will be submitted to the members at the annual meeting.

FINANCIAL STATEMENT.

RECEIPTS.

Dr.

To Balance at Bank brought forward	£38	0	0
Petty Cash brought forward	5	4	8
Annual Subscriptions, 1906	11	19	0
Annual Subscriptions, 1907	153	16	0
Annual Subscriptions, 1908	5	3	0
Donations and Special Prizes, 1906 (Balance)	16	16	6
Donations and Special Prizes, 1907	48	0	0
Crystal Palace Company—			
October Show, 1906	25	0	0
November Show, 1906	162	10	0
December Show, 1906	25	0	0
October Show, 1907	25	0	0
November Show, 1907	150	0	0
Entry Fees, 1907	18	12	6
Affiliation Fees, 1906 (Balance)	4	4	0
Affiliation Fees, 1907	48	6	0
Medals, etc., Affiliated Societies, 1906 (Balance)	9	7	0
Medals, etc., Affiliated Societies, 1907	39	0	6
Medals, etc., Market Show, etc., 1906 (Balance)	25	8	0
Year Books and Catalogues Sold	2	18	2
Advertisements in Schedule, 1906 (Balance)	3	7	0
Advertisements in Schedule, 1907	19	9	0
Advertisements in Year Book, 1907	9	11	6
Space, 1906 (Balance)	4	7	0
Space, 1907	10	1	0
Transfer from Market Show Account, 1906 (Balance)	4	5	6
Sale of Dinner Tickets	22	0	0
Balance of Outing Account	0	17	6
Transfer from Deposit Account	70	0	0
	£958	3	10

PAYMENTS.

Cr.

By Prize Money, October, 1906	£48	18	6
Prize Money, November 1906	236	19	1
Prize Money, December, 1906	38	15	0
Prize Money, October, 1907	48	3	0
Prize Money, November, 1907	213	11	6
Prize Money, December, 1907	37	10	0
Printing and Stationery	61	6	6
Medals and Engraving	52	2	11
Judges' Fees	10	10	0
Judges', etc., Luncheons	10	10	5
Dinner—Artistes	3	13	6
Holborn Restaurant	18	19	0
Fruit and Flowers	1	5	0
Secretary's Expenses	1	6	0
Hire of Rooms	5	5	0
Premium on Secretary's Guarantee Bond	1	10	0
Advertising	7	1	9
Secretary's Salary	100	0	0
Postage and Telegrams	32	12	3
Carriage	1	13	0
Sundries	2	13	0
Bank Charges and Cheque Books	2	6	6
Balance of Petty Cash	1	2	4
Balance at Bank	20	9	7
	£958	3	10

ASSETS AND LIABILITIES.

LIABILITIES.

To Medals and Engraving	£23	15	0
Printing and Stationery	69	17	1
Hire of Rooms	4	5	0
Honorarium to Editors of "Year Book"	10	10	0
Balance of Assets over Liabilities	53	15	4
	£162	2	5

ASSETS.

By Balance at Bank	£20	9	7
Balance on Petty Cash	1	2	4
Balance on Deposit Account	50	0	0
Balance on Reserve Current Account	6	8	0
Arrears, Members' Subscriptions, Estimated to Produce	5	0	0
Arrears, Affiliation Fees	6	16	6
Due for Space	8	12	6
Due for Advertisements	1	10	0
Due for Medals	11	17	0
Due for Special Prizes	1	1	0
Due from Market Show Account	3	10	0
Due from Crystal Palace Company—December Show	25	0	0
Various Properties at the Crystal Palace	10	0	0
Stock of Medals	10	15	6
	£162	2	5

In connection with the report, Mr. Simpson asked what was the loss on the Year Book issued in 1907. The Treasurer replied that the net cost of the Year Book was about £50.

After thanks had been accorded the various officers, Sir Albert K. Rollit was unanimously elected president for the ensuing year; Mr. John Green was re-elected as treasurer; Mr. T. Bevan as chairman; Mr. E. F. Hawes as vice-chairman; Mr. C. Harman Payne as hon. foreign corresponding secretary; and Mr. R. Witty as secretary. Mr. Joseph Lake and Mr. R. F. Scammell were elected auditors for 1908.

Mr. Charles E. Shea, the retiring president, was accorded an especially sincere and hearty vote of thanks for his services to the society, and he was unanimously elected a vice-president.

The election of one-third of the committee followed. Nine of the retiring members were eligible by virtue of regular attendance, for re-election. Retirements, etc., rendered other seats vacant, so that it was necessary to elect fifteen members. Six new nominations were made, and for the first time within our recollection there was no need for a ballot. The newly-elected members are: Messrs. R. Ballantine, W. H. Cull, W. Newton, R. F. Felton, G. Springthorpe, and J. Emberson, and the re-elected members are Messrs. W. Cassidy, P. A. Cragg, D. B. Crane, C. H. Curtis, A. J. Foster, J. McKerchar, E. Prickett, A. W. Seabrook, and J. Tyler.

The next business was to consider, and, if approved, to adopt, the following resolution, viz.: "That in Rule 16 the words 'No member of any committee shall be eligible for nomination as a judge at any of the society's exhibitions' be deleted, and that the word 'Honorary' be inserted at the beginning of the rule."

The new rule would then read as follows: "Honorary judges at the various exhibitions shall be appointed by the Executive Committee. The votes shall be taken by means of voting papers." This alteration was moved by Mr. Ingamells and Mr. Hawes, and supported by Mr. Simpson and Mr. J. Green, the latter showing that financial reasons had a good deal to do with the subject. Mr. Bevan said that possibly the amateurs would judge the trade classes, and vice versa, as at the National Rose Society's exhibitions.

Mr. Newman, of the Eastbourne Society, referred to the work done among children by his society in the distribution of plants and the provision of prizes at the November shows. Other speakers stated that similar encouragement was given at a number of the local shows around London.

A vote of thanks to the chairman brought the proceedings to a close within the hour.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, January 28.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Professors Percival and Boulger, Rev. W. Wilks, Messrs. W. Cuthbertson, H. T. Güssow, C. T. Druery, G. Massee, W. C. Worsdell, G. Gordon, E. M. Holmes, A. W. Sutton, J. Odell, A. Rolfe, J. T. Bennett-Poë, J. Douglas, F. J. Chittenden (hon. secretary), and numerous visitors.

INHERITANCE OF PIGMENT IN PISUM SATIVUM.—Mr. C. C. Hurst, F.L.S., communicated the following note from Mr. E. A. Bunyard, of Maidstone, on "The Inheritance of Pigment in Pisum sativum." "The green and yellow colours of the cotyledons of Pisum sativum were selected by Mendel as one pair of constant differentiating characters, and from their apparent alternative inheritance the theory of gametic purity was deduced to explain results obtained in this species. The lack of any definite examination of the two colours in question led me to make some chemical and photo-chemical experiments as below, the pigments of the cotyledons alone being considered. The green pigment is, of course, chlorophyll, and thin sections mounted in glycerine show the chloroplasts well, and give the well-known 'hypochlorin reaction' when treated under the cover glass with glacial acetic acid. An alcoholic extract also gives the well-known bands in the red when spectroscopically examined, and the painted bands in the blue and violet. The yellow colour is due to a pigment of the xanthophyll series, pigments which are always found in association with chlorophyll in the green parts of plants. The point, however, which is of importance is the gradual fading of the green (Sachs' 'Degradation of chlorophyll'), and the presence of the xanthophyll. The green chloroplasts, as the seeds attain maturity, gradually lose their green pigment, and when it has entirely vanished they are left in the cell as pale-yellow globules. The yellow xanthophyll has, however, been present from the beginning, and the disappearance of the chlorophyll green has merely rendered it visible. The simultaneous presence of the two colouring matters can be demonstrated in this way. When a number of green cotyledons are steeped in alcohol a green extract, as referred to above, is obtained, and this fluid retains its green colour only so long as it is kept from light. When it is exposed to daylight, or even gaslight, it rapidly loses the green colour and fades to a yellowish tint. Upon examining this spectroscopically it is found to have absorption bands in the blue and violet identical with that of an alcoholic extract made from yellow cotyledons. This fading of the green is seen in the autumnal colouring of leaves, and in an inverse order the slow development of cholophyll when etiolated plants are exposed to light. These facts, I venture to think, render it necessary to modify Mendel's original conception in this special case, as it is evident that the conception of a factor for green and one for yellow, and the alternative inheritance of each is hardly in harmony with the facts. As all cotyledons pass through the green stage, and certain only pass through to the yellow, I would suggest that the factor may be not a factor of 'quality,' but a factor which extends or limits development."

Commenting upon the foregoing, Mr. Hurst wrote: "The above note by Mr. E. A. Bunyard is a valuable contribution to our knowledge of the nature of Mendelian characters in peas. According to Mr. Bunyard's results, green peas contain invisible yellows at all stages of their development, while yellow peas contain green in the early stages only. A yellow pea may, therefore, be regarded as due to the presence of a factor which causes the green to fade at an early stage of development, while in the green pea this factor is absent. The Mendelian units concerned are, therefore, not simply yellow and green, as Mendel supposed, for all green peas contain the yellow element as well as the green, but would appear to be rather the presence and absence of a factor which causes the green to fade."

HYBRID BRASSICAS.—Mr. A. W. Sutton read a paper which he illustrated by means of lantern slides, upon "Hybrid Brassicas," giving details of a large number of interesting experiments which have led to important results, although no forms of commercial importance have been produced. It is particularly interesting to note that Brassica Napus (Rape) would not cross with B. oleracea (the cabbage, thousand-headed kale, etc.), nor would B. rapa (the turnip and swede); and of further interest is the fact that the kales Ragged Jack and asparagus kale would not cross with the cabbage group, but crossed with B. napus, thus indicating that they were nearly related to that species. In all the crosses made, where crossing could be accomplished, the seedlings proved to be, as a rule, somewhat like both parents, and were practically all alike. Reciprocal crosses, however, did not always give identical results, but a question put by Mr. Chittenden elicited the fact that the same individuals were not always used in making these reciprocal crosses, i.e., the seed parent in the one case was not always the pollen parent in the other. In the second generation, segregation occurred in every case where it was possible to obtain seedlings (many of the F. generation proved sterile), and plants approaching in appearance the original types were produced. Thus when Ragged Jack kale was crossed with swede in the first generation plants somewhat intermediate were produced; but when seed from these was sown, of the resulting 198 plants, 160 had bulbs, 38 had none, 142 had swede-like foliage, 38 had Ragged Jack-like foliage, and 18 were intermediate. In some cases the figures obtained indicated that the characters segregated in the simple Mendelian proportions of 3 to 1, or 9 to 7, but it seemed evident that in other cases the matter was more complicated. In some of the crosses it is interesting to note that the hybrids developed a purple colouration, though in the foliage this was not to be seen in either of the parents. In the discussion that followed, Professor Percival and Messrs. W. Cuthbertson, J. W. Odell, and C. T. Druery joined, and it was remarked that in no case, although the type of plant was regained in the second generation, did the progeny approach in excellence of development the original parents; and, as Mr. Odell remarked, it was singular that the only plants that promise anything of commercial value among all the crosses raised were the result of more or less promiscuous interbreeding.

DISEASED PLANTS, INSECTS, ETC. — Specimens of injured plants, etc., were received, and will be reported on at the next meeting.

Bristol Gardeners' Association.

The best attended meeting of the present session was held on Thursday, January 30, at St. John's Parish-room; Mr. J. C. House in the chair. "Begonia Gloire de Lorraine" was the subject for discussion, and it was very ably introduced by Mr. T. Parrott, representative of the Bath Society. In his opening remarks the lecturer briefly referred to the origin of this beautiful begonia, giving B. socotrana and B. Dregei as its parents. It was most useful, he said, for table decoration, especially if the white variety was used with the pink, the two blending together well under artificial light. The best mode of propagation, Mr. Parrott said, was from leaf cuttings, which were preferable to stem cuttings. They made the best plants because plants grown from leaves do not throw flowers during their growing period as do plants from ordinary cuttings. Well-matured leaves should be inserted in boxes of sand or cocoanut fibre in December and January, and given bottom heat of from 75 to 80 deg.; they must be kept close and only watered sparingly; on the appearance of growths pot them in 3 in. pots, and finally in 6 in. pots, using a compost of two parts cocoanut fibre, one of leaf-soil, and one of fibrous loam, adding sand and charcoal. The soil should not be made firm; keep the plants in a cool house in summer and flower them in a temperature of about 60 deg. This was the gist of the paper. A good discussion followed, after which a very hearty vote of thanks was accorded to Mr. Parrott. For three plants in flower Mr. Curtis was first, and Mr. Wakefield second. Mr. Curtis was again first for two orchids, and Mr. Spry second. A certificate went to Mr. Jennings for Cypripedium villosum aureum.

Croydon Gardeners' Association.

At the opening meeting for the current session Mr. R. Edwards, Beechy Leys Gardens, Sevenoaks, read a paper on "Apples and Pears." Mr. Edwards is a successful grower, as evidenced by his exhibit of seventy-two varieties, all of which were excellent, which he staged for the purpose of illustrating his paper. In introducing his subject he directed attention to the all-important question of choosing the site and soil. Oftentimes when making an orchard sufficient depth of soil is not found, especially where chalk forms the subsoil, and the first thing to do is to make the soil up by trenching and the addition of other good soil and manure. A depth of 18 to 24 inches of soil should always be prepared for the reception of the tree, and care should be taken also that fairly good drainage is provided, for if the ground is waterlogged many varieties will not succeed. Standard trees should also be planted at least 26 to 30 feet apart. Bush fruit or strawberries may occupy the space between the rows, thereby making most use of the ground at one's disposal. In most gardens pyramid trees are the most useful

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these carrying excellent crops, and are kept within bounds better than standards. Wall trees are also serviceable, especially with pears. Mistakes are often made in pruning, especially with some varieties, and he advised studying the peculiarities of the varieties to a very great extent before attempting to use the knife. The end of July and beginning of August is a good time for summer pruning. Mulching and the application of good liquid manure during the hot summer were also spoken of as essential. Mr. Edwards advised that when making a garden a plan of the area should be made and the trees duly marked on it as they are planted, then, with the aid of a register of each one growing, notes may be kept of the progress made by each individual tree, and should occasion demand the removal of a tree to another part of the garden, or another tree substituted, one has always this record on hand to refer to. Excepting for a few early sorts of apples he advised leaving the fruit on the trees as long as possible, which would insure the keeping qualities to a greater extent, and preventing the shrinking and shrivelling of the specimens when stored. The fruit room was fully dealt with, and in this structure it should be made to maintain a uniform temperature. Fortunately for him he is not troubled with insect and fungoid pests to any great extent, however those he had had trouble with were eradicated by remedies given. The treatment of pears is very similar to that of the apple.

The members joined in a brisk discussion, and terminated the meeting with a warm and hearty vote of thanks to Mr. Edwards.

Besides Mr. Edwards' exhibit there was a fine seedling amaryllis, staged by Mr. H. Peckham. Mr. M. E. Mills put up a vase of white chrysanthemums, Nellie, and a fine specimen of the Cypripedium insigne, and Dr. Jackson sent three dishes of pears. The exhibitors were accorded a vote of thanks.

Sandhurst Gardeners' Association.

The usual meeting was held in the Church Schools, Sandhurst, on Tuesday, January 21. Mr. J. Evans presided over a large attendance. The paper for the evening was on "Mulching, Topdressing, and Liquid Stimulants," by Mr. W. J. Townsend, of Sandhurst Lodge Gardens. This was a most exhaustive paper, and contained a large amount of sound information on the subject. The mulching of freshly-planted shrubs, the topdressing of roses and other plants, and the proper uses of liquid stimulants were fully dealt with. A good discussion took place, and a hearty vote of thanks was accorded Mr. Townsend for his paper.

Mr. Townsend staged freesias and lachenalias in pots, and forced seakale, asparagus, rhubarb, and potatoes.

Cardiff Gardeners' Association.

The fortnightly meeting of the above association was held at the Philharmonic Restaurant on Tuesday, the 21st inst., Mr. H. R. Farmer presiding. Mr. Powell, the representative of the Newport Gardeners' Mutual Association, delivered a very interesting lecture, which was greatly appreciated by the members on "Miscellaneous Grouping."

Mr. Graham opened the debate, which produced a very keen discussion. The heartiest thanks of the meeting were accorded Mr. Powell, who said it would give him great pleasure to give another lecture at a future date.

The Chairman referred to the loss the society would sustain in losing Mr. J. Graham, who is leaving the neighbourhood. Mr. Graham has been associated with the society for a number of years, and at one time was chairman. A very high tribute was paid him, and the sincerest wishes of the members for every success and prosperity in the future were tendered. For a lady's spray of violets the first, second, and third prizes were awarded to Messrs. Went, Malpass, and Wicker respectively.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

ERECTION OF SUN-DIAL.—Will "G. O., Harrow," please send name and address? We have destroyed previous letter.

WHITE TEA-SCENTED GARDEN ROSES.—D. R., Rugby: You will find White Maman Cochet and Souv. de S. A. Prince a pair of excellent white tea-scented roses for garden decoration.

FAILING ARAUCARIA.—M. B., Cromer: In a room heated and lighted by gas day after day during the winter few plants will live, let alone thrive. The gas fumes are the chief source of trouble, but drought at the roots and a very dry atmosphere are other causes of failure.

SLUGS AND CHRISTMAS ROSES.—S., Norwich: Place a ring of coal ashes round the plants, and dust soot over the ground within the ring. Sliced carrot, lettuce leaves, etc., may be used as traps, but they must be frequently examined for many successive days until the slugs within the ring of ashes are exterminated.

PELARGONIUM LEAVES.—A. G. M., Carisbrook: Some of the leaves suggest that the plants have been poisoned by the use of water or soil containing some deleterious matter. Others, the fresher ones, indicate damage by frost or very low temperature; perhaps the plants were too near the glass during the recent very cold weather. We do not understand your reference to Weed Killer.

MUTUAL IMPROVEMENT SOCIETIES. B. G. J., Towcester: You will find a complete list of Horticultural Mutual Improvement Societies and Gardeners' Associations in the "Gardening Year Book" for 1908 (1s. 2d. post free, from Messrs. W. H. and L. Collingridge, 148-149, Aldersgate Street, E.C.) With these are also included horticultural and botanical societies, and in every case the name and address of the secretary is given.

DEAN HOLE MEMORIAL MEDAL. —A. A. L., Winchester: We cannot tell whether you refer to the Dean Memorial Medal or the Dean Hole Memorial Medal. The former is a medal awarded by the London Dahlia Union at its autumn show; this year it will be for pompon dahlias. The Dean Hole Memorial Medal belongs to the National Rose Society, and is "awarded by vote at a meeting of the General Committee, or at the annual general meeting of the society, for some special purpose, as occasion might arise." So far as we are aware the Dean Hole Memorial Medal has not yet been awarded to anyone.

HORTICULTURAL CLUB.—G. S., Southend: The Horticultural Club is an association of amateur and professional horticulturists. It has rooms at the Hotel Windsor, Victoria Street, S.W., and holds a club dinner and conversazione on the first Tuesday of each month, when there is a R.H.S. meeting. The Horticultural Club and the Royal Horticultural Society are intimately associated, and always have been. The annual subscription to the club is one guinea. Candidates for membership must be proposed and seconded by members, and their names are posted in the club room from the time of proposal to the time of election or rejection. Mr. E. T. Cook (address as above), will forward all particulars if requested.

HERBACEOUS PLANTS.—R. S. H., Heslington: Wait until the end of March or beginning of April before moving and replanting your herbaceous plants. If the plants are to be put back in the same border careful arrangements should be made to thoroughly trench and manure the ground, and allow it to settle for a few days. Tread the ground firmly before planting. The plants lifted must be carefully looked after; if placed in a cold frame or shelter, and kept well watered, and shaded from bright sunshine they should take little harm, if their roots are covered with soil. Part them up just previous to planting. If you have the conveniences for so doing you might lift, part, and pot up a stock of the various subjects, keep them in cold frames, and proceed with the trenching at once. Large specimens should be placed in a frame, and sheltered from severe weather.

SWEET PEAS ON SAME SITE.—F. M., Epsom: A change of soil and site is good for all plants. In the case of sweet peas and other annuals, especially those raised under glass and planted out in early spring, the ground has ample opportunity to recover, and the cultivator has plenty of time to trench and manure the ground and ridge it up so that winter cold may sweeten it between the removal of one crop in autumn and planting the succeeding crop in spring. In a very real sense all leguminous plants fertilise the soil in which they grow, and they do this by means of the bacteria that find a home in their root nodules, and convert free atmospheric nitrogen to the uses of the plant. Never pull up pea and bean crops; always cut them down, and leave the nodules in the ground. If your ground has been well cultivated and sweetened you need not hesitate to grow sweet peas thereon again; we know a garden where for at least ten years sweet peas of splendid size and colour have been produced annually on the same plot of ground.

NAMES OF PLANTS.

L. C. W., Oxford.—Brassavola Digbyana.

H. S., Warminster: A variety of Cratægus Crus-galli.

B. F. K., Stanton. — 1, Cupressus macrocarpa; 2, Arbutus Unedo.

N. A., Keighley.—1, Cypripedium nitens; 2, Cattleya Percivaliana; 3, Asparagus verticillatus.

C. G., Rochester: 1, Colletia cruciata; 2, Hamamelis arborea; 3, Cypripedium insigne; 4, C. Harrisianum; 5, C. villosum.

F. H. S., Gerards Cross.—1, Nephrolepis exaltata; 2, Nephrodium molle corymbiferum; 3, Russellia juncea; 4, Centropogon Lucyanus.

FORTHCOMING ENGAGEMENTS.

TUESDAY, February 11. — Royal Horticultural Society, annual meeting, 3 p.m.; meeting of Floral, Fruit, and Orchid Committees, 12 noon; Scientific Committee, 4 p.m.

Horticultural Club annual meeting, 5 p.m.; annual dinner, 6 p.m.

WEDNESDAY, February 12.—Society of Arts meeting, 8 p.m.

FRIDAY, February 14.—Royal Gardeners' Orphan Fund, annual meeting and election, at "Simpson's," Strand, W.C., 3 p.m.

WEDNESDAY, February 19.—Society of Arts meeting, 8 p.m.

THURSDAY, February 20.—Linnean Society meeting, 8 p.m.

WEDNESDAY, February 26.—Society of Arts meeting, 8 p.m.

Index to Volume of the Gardeners' Magazine," 1907.—Those of our readers who have preserved the 52 numbers of the Gardeners' Magazine for 1907 with a view to having them bound for future reference, can obtain Handsome Cloth Binding Cases from the publishers, 148 and 149, Aldersgate Street, London, price 2s. post free. The index with title page is now ready—price 2d., or by post 2½d. The volume bound complete will also be ready in a few days, price 12s. 6d., by post, 13s. 4d.

Guides to Garden Work.—The publishers of the Gardeners' Magazine will be pleased to forward a catalogue of their gardening books, setting out full particulars of the contents of each work. The books, which are thoroughly practical, up-to-date, and well bound, will be of particular service to those interested in flowers, the greenhouse, or the garden. A copy of the catalogue will be sent post free to any reader who addresses a postcard to the Publishers, The Gardeners' Magazine, 148 and 149, Aldersgate Street, London.

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		cubic feet.		*each.*
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No. 4 size Bot.—4 oz.	**more effective.**	8,000		**3/-**
No. 4½ size Bot.—¼ oz., new size, sufficient for		4,000		**1/8**
No. 5 size Bot.—1 oz. "sample"	,,	2,000		**10d.**

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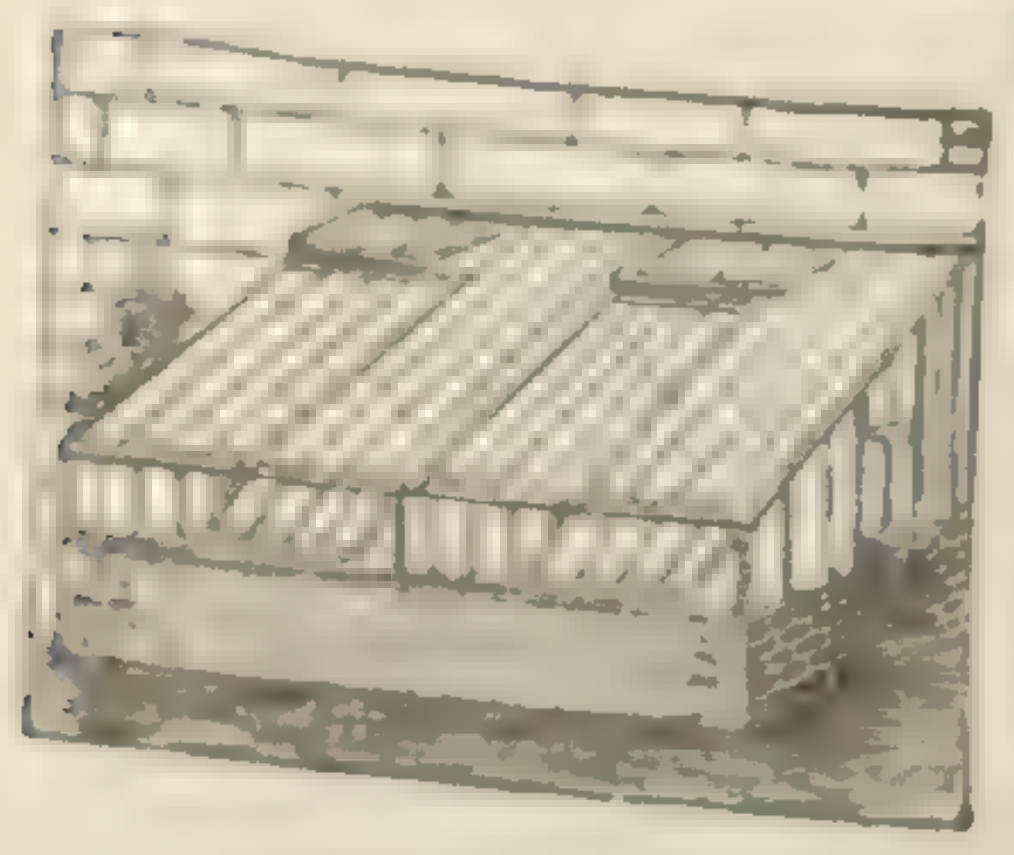

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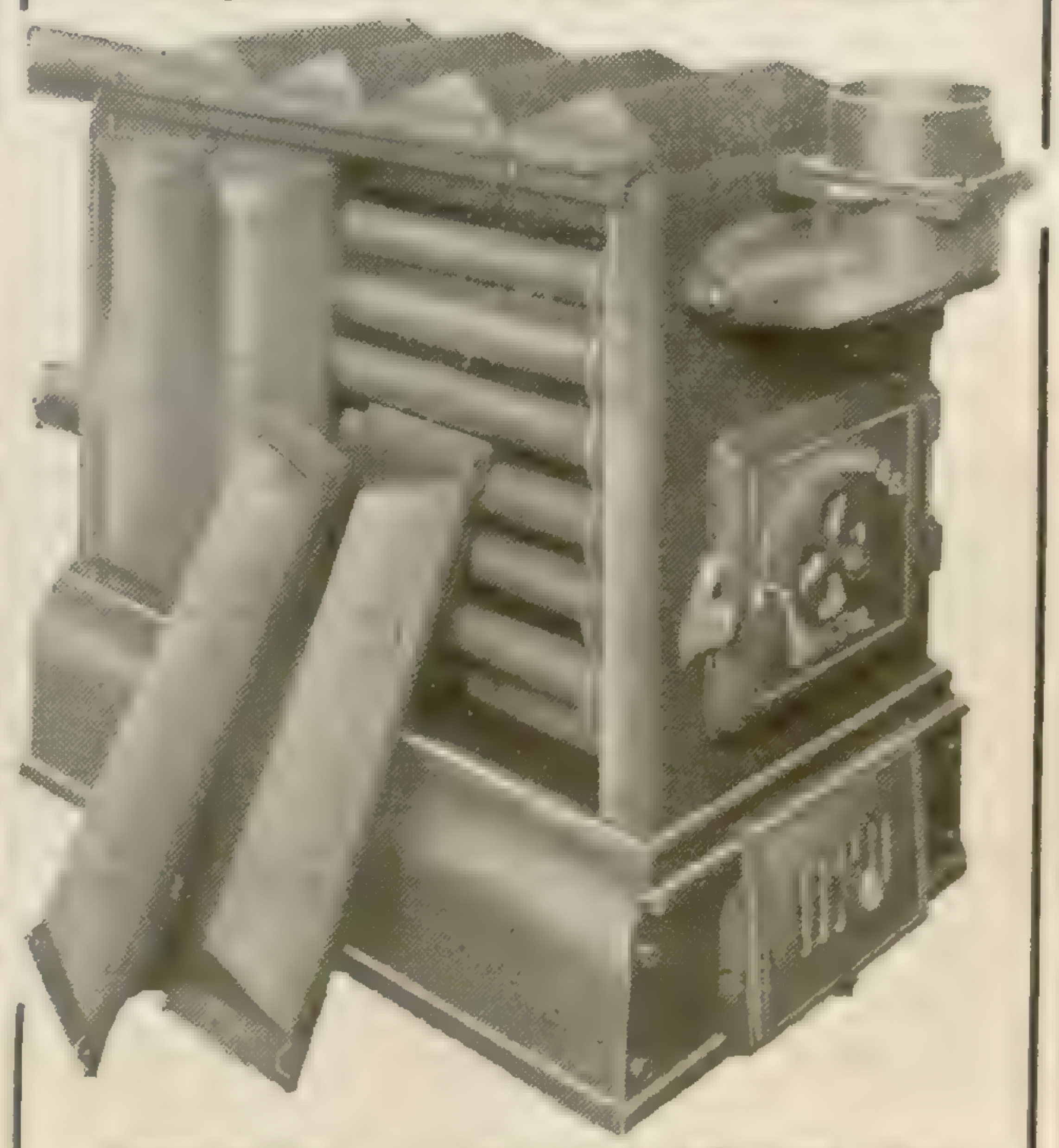

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360 ft., 4 in. Pipe	8	0	0	2,000 ft., 4 in. Pipe	28	0	0
800 ,, ,, ,,	14	15	0	3,000 ,, ,, ,,	42	0	0
1,200 ,, ,, ,,	18	0	0	CARRIAGE PAID.			

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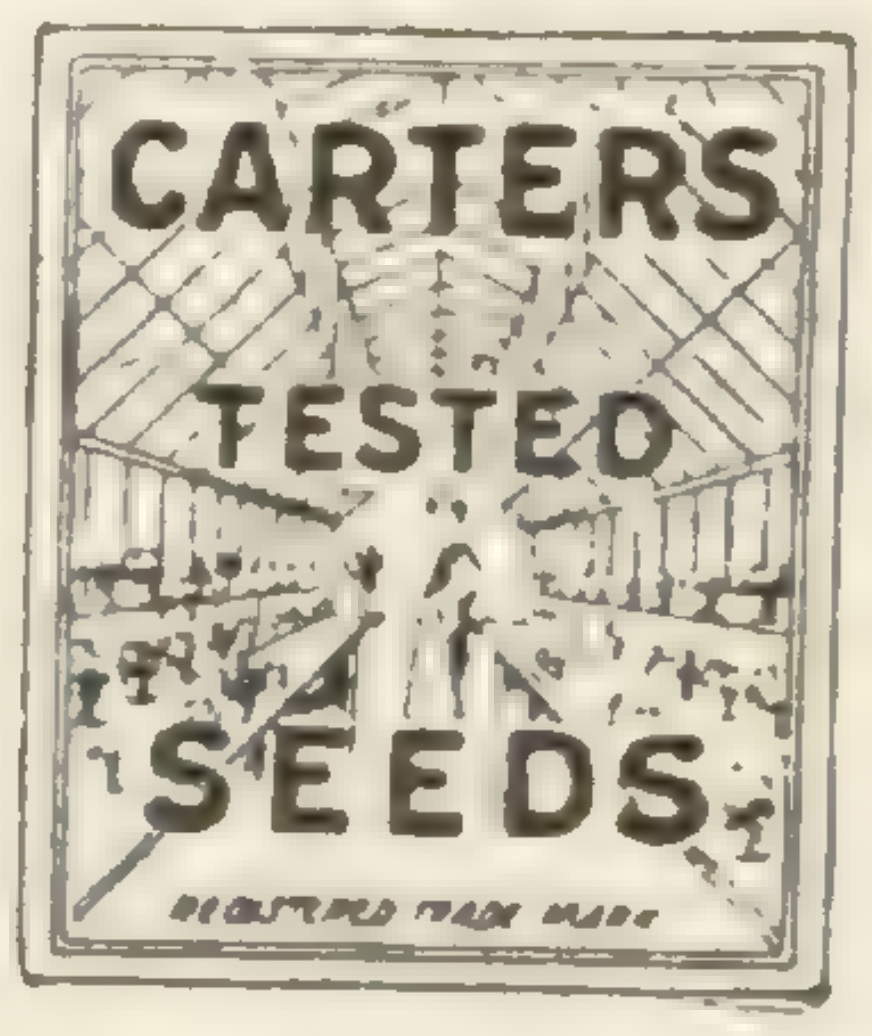

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Business continues brisk, but prices are higher and firm.

		s. d.		s. d.
Acacia	per doz. bun.	9 0	to	12 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 6		5 0
Arums	per doz.	2 6		6 0
Asparagus	per doz. bun.	1 6		6 0
Azalea	per doz. bun.	3 0		5 0
Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	5 0		8 0
Carnations	per doz. blms.	1 6		3 6
,,	per doz. bun.	7 6		12 6
Cattleyas	per doz.	10 6		12 6
Chrysanthemums	per doz. bun.	10 0		18 0
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	5 0		8 0
Cypripediums	per doz. blms.	2 0		3 6
Daffodils	per doz. bun.	5 0		10 6
Eucharis	per doz.	2 6		4 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	3 0		6 0
Hellebores	per doz.	1 0		2 0
Hyacinths, Roman	per doz. bun.	6 0		10 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 0		5 0
Lilium auratum	per bun.	2 6		3 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		6 0
,, yellow	per doz. bun.	2 0		4 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	2 0		6 0
Odontoglossums	per doz. bloome	2 0		3 0
Pelargoniums	per doz. bun.	5 0		9 0
Pernettya	per bun.	0 6		1 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0
Snowdrops	per doz. bun.	1 6		2 0
Tuberoses	per doz.	0 4		0 6
Tulips	per doz.bun.	6 0		18 0
Violets	per doz. bun.	2 0		3 6
,, de Parme	per bun.	1 6		4 0
Wallflowers	per doz. bun.	2 0		3 0

Fruits.

Prices are firm, with a steady trade. Cape fruits sell fairly well.

		s. d.		s. d.
Apples, cooking	per bush.	5 0	to	12 0
,, dessert	per ½-bush.	5 0		14 0
,, American	per barrel	14 0		22 0
Apricots, Cape	per box	1 0		3 0
Bananas	per bun.	5 0		12 0
Cranberries	per case	7 0		9 0
Cob Nuts	per doz. lb.	4 0		5 0
Filberts	per doz. lb.	3 6		4 0
Grapes, Alicante	per lb.	0 8		1 9
,, Muscats	per lb.	2 6		7 0
,, Gros Colmar	per lb.	1 0		2 0
,, Channel Islands	per lb.	0 9		1 0
,, Almeria	per barrel	10 0		16 0
Lemons	per case	8 0		20 0
Oranges	per case	9 0		20 0
Peaches, Cape	per box	7 0		12 0
Pears, French	per crate	8 0		10 0
,, English	per bush.	4 0		8 6
Pineapples	each	2 0		5 0
Plums, Cape	per box	4 0		6 0
Walnuts	per bag	7 0		8 6

Vegetables.

Moderate supplies meet a large and steady trade.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	4 0
Asparagus, Paris green	per bun.	3 6		4 0
Asparagus, sprue	per bun.	1 0		1 6
Aubergines	per doz.	1 6		2 6
Beans, French	per lb.	1 0		1 3
,, Madeira	per bskt.	2 0		3 0
Beet	per bush.	1 3		2 0
Brussels sprouts	per ½-bush.	1 3		1 9
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
,, French	per pad	2 3		3 0
,,	per bag	2 6		3 0
Cauliflowers	per tally	6 0		8 0
Celery	per bundle	0 9		1 0
Celeriac	per doz.	1 6		1 9
Chicory	per lb.	0 3		0 4
Cucumbers	per doz.	4 0		9 0
Endive	per doz.	1 6		2 0
Greens	per bag	1 6		2 6
Horseradish	per doz. bun.	9 0		10 0
Leeks	per doz. bun.	1 0		2 0
Lettuce, cabbage	per doz.	1 3		2 0
Mint	per doz. bun.	0 9		1 0
Mushrooms	per doz. lb.	7 0		12 0
Onions, English	per cwt.	3 0		3 6
Parsley	per doz.	1 6		1 9
Rhubarb	per doz. bun.	1 0		1 3

LONDON POTATO MARKETS.

Supplies are moderate and trade fairly brisk.

		s. d.		s. d.
British Queen	per ton	90 0	to	105 0
Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		130 0
Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	95 0		105 0
Langworthy	per ton	90 0		110 0
Lincoln Maincrop	per ton	95 0		115 0
Lincoln Up-to-Date	per ton	90 0		115 0
Royal Kidneys	per ton	80 0		95 0
Reading Giant	per ton	80 0		95 0
Sir J. Llewelyn	per ton	85 0		105 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY SURREY.

Height above Sea-level, 150 feet.

Date. 1908. January 26 to February 1.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Jan. 26—Sunday	—	46	44	52	30
,, 27—Monday	—	52	50	54	45
,, 28—Tuesday	1 35	47	44	46	42
,, 29—Wednesday	6 0	35	32	42	35
,, 30—Thursday	1 20	33	31	40	32
,, 31—Friday	1 55	40	38	46	33
Feb. 1—Saturday	6 35	38	35	42	37
Means	2 30	42	39	46	36

Date. 1908. January 26 to February 1.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg
Jan. 26—Sunday	0.07	38	39	41	31
,, 27—Monday	—	42	40	41	43
,, 28—Tuesday	0.07	42	42	41	37
,, 29—Wednesday	—	40	42	42	29
,, 30—Thursday	0.01	38	41	42	27
,, 31—Friday	—	39	41	42	31
Feb. 1—Saturday	—	39	41	42	31
Means	(total) 0.15	40	41	42	33

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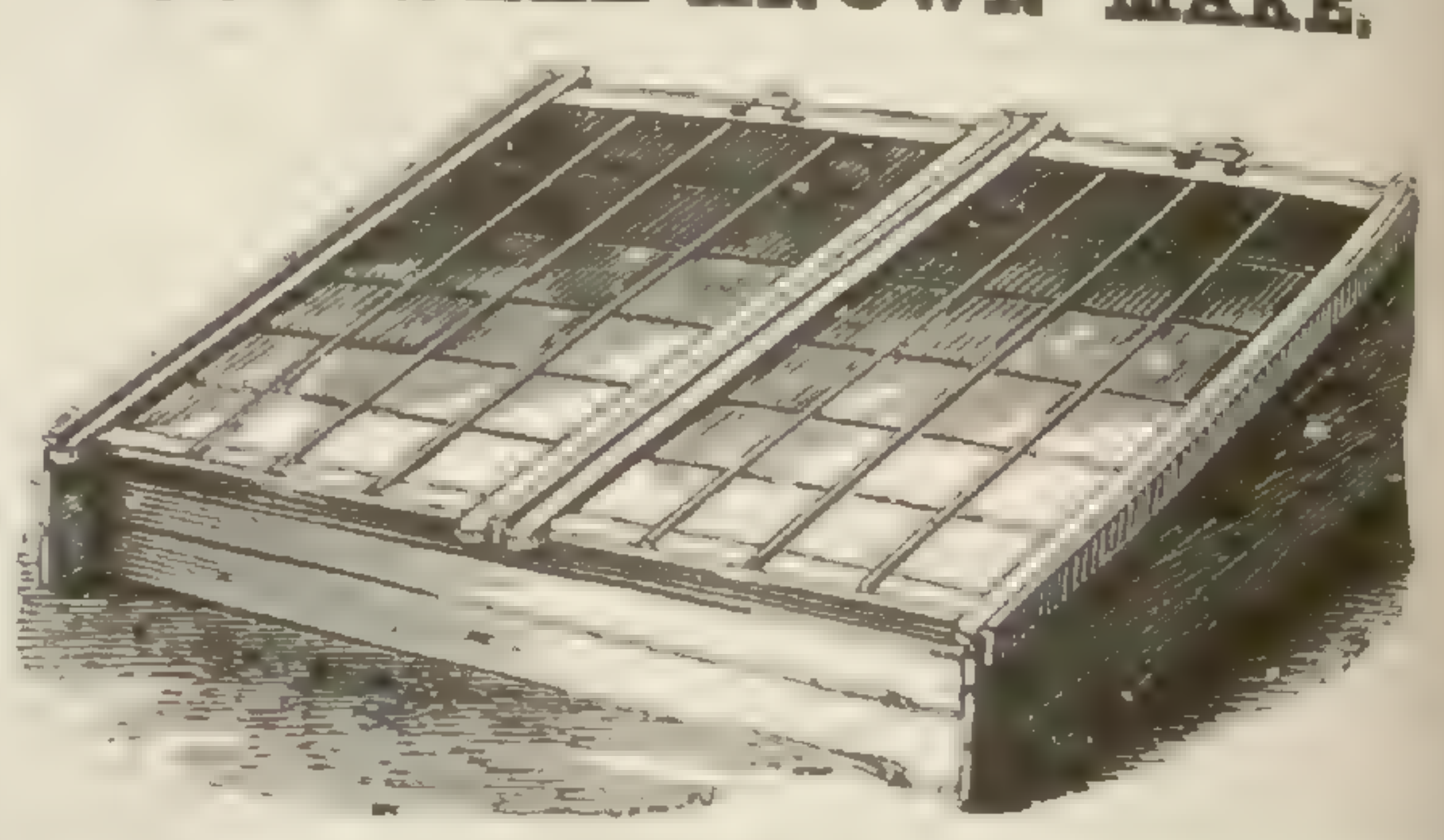

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5-light	20 ft. by 6 ft.		6 7 6
6-light	24 ft. by 6 ft.		7 10 0

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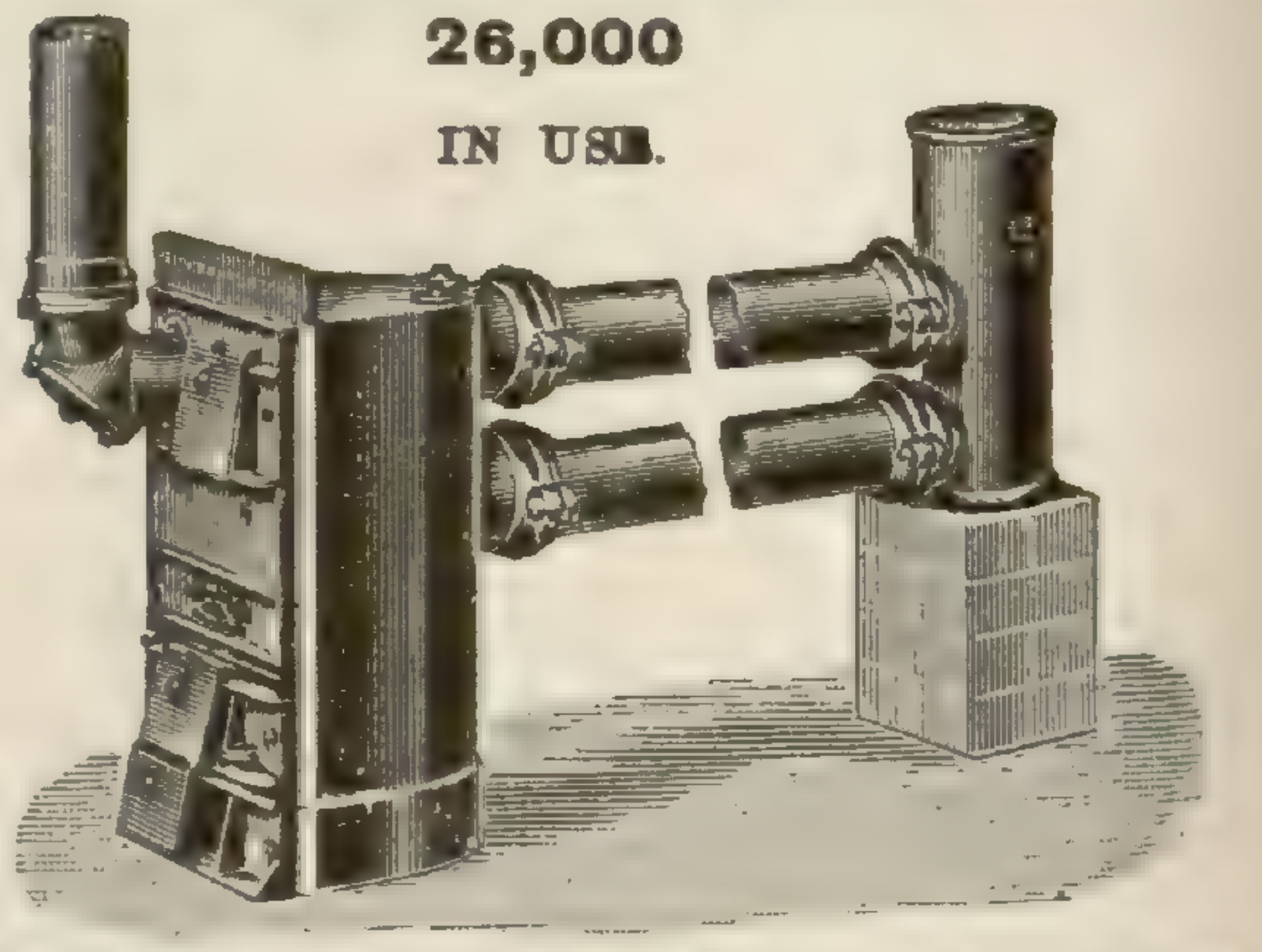

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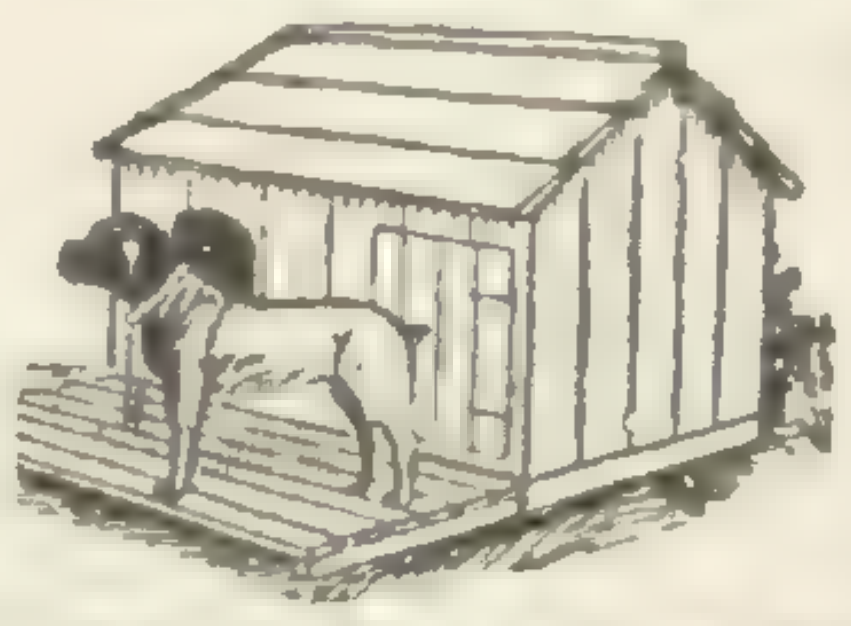

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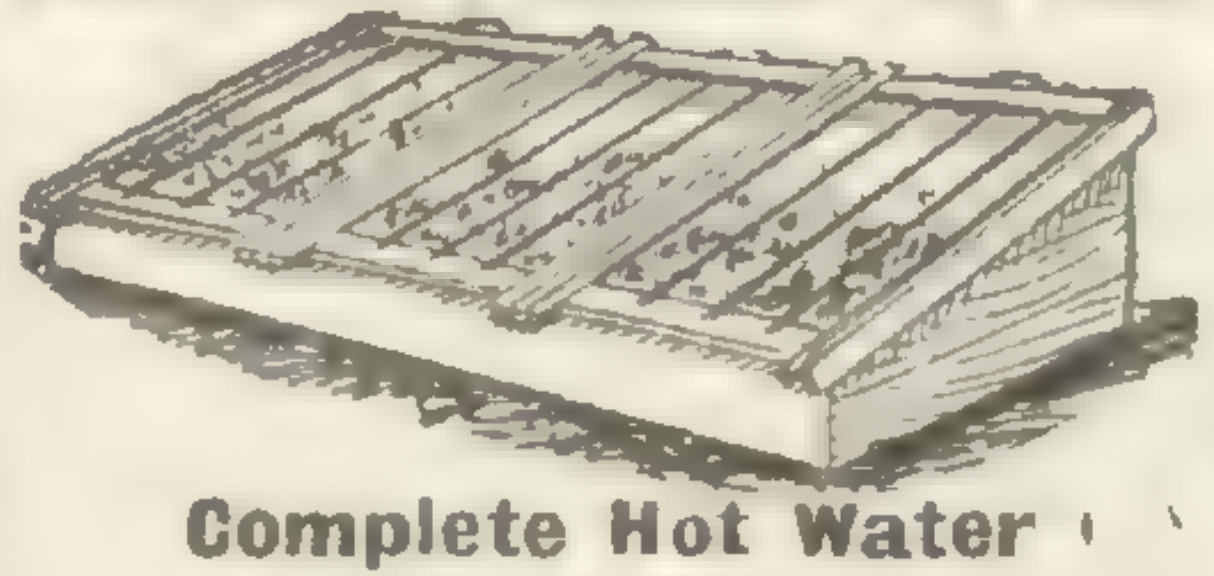

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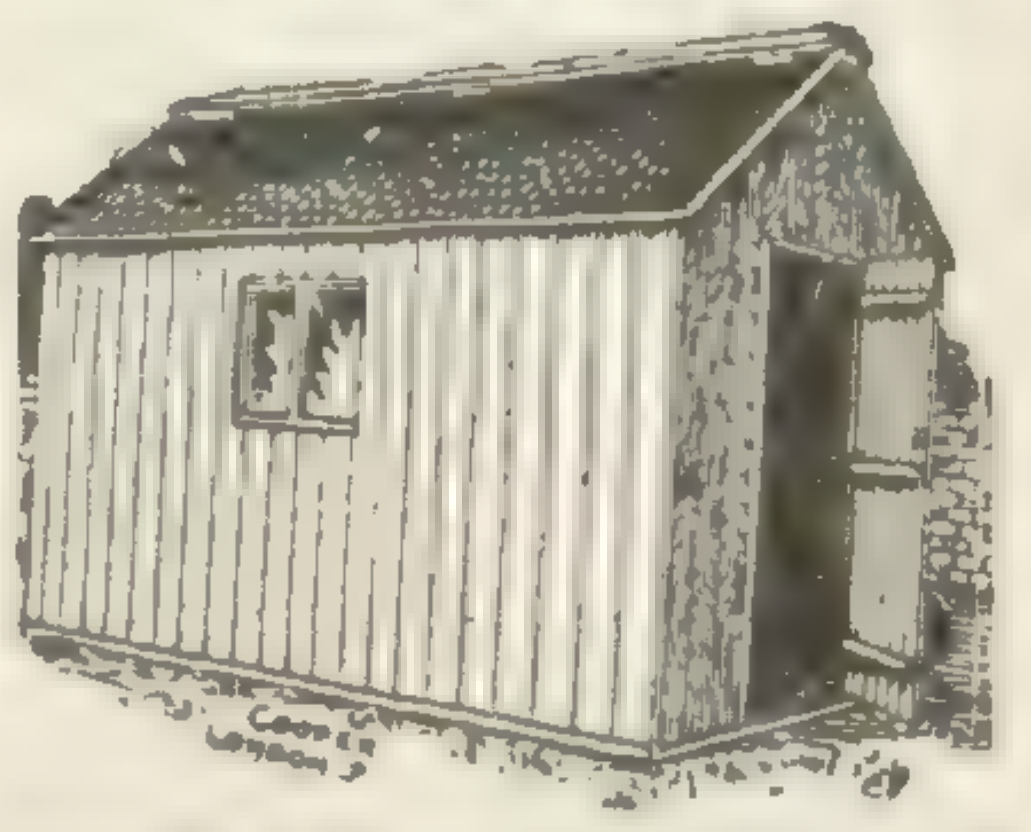

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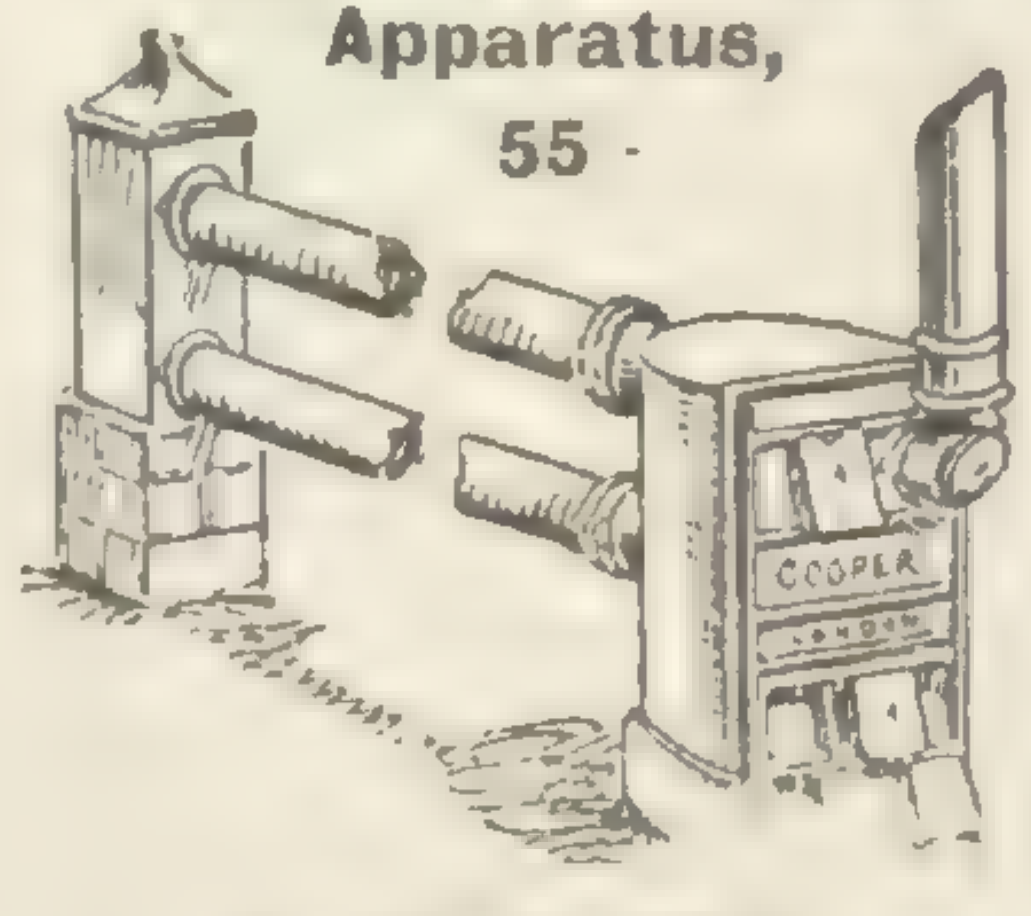

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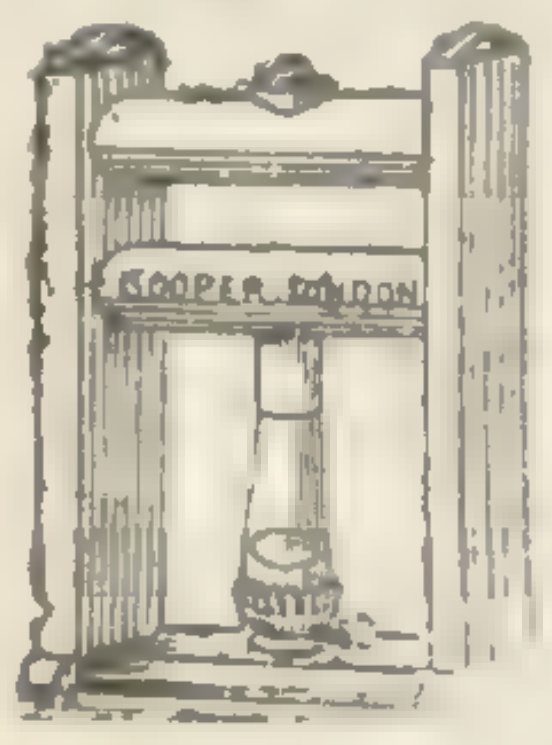

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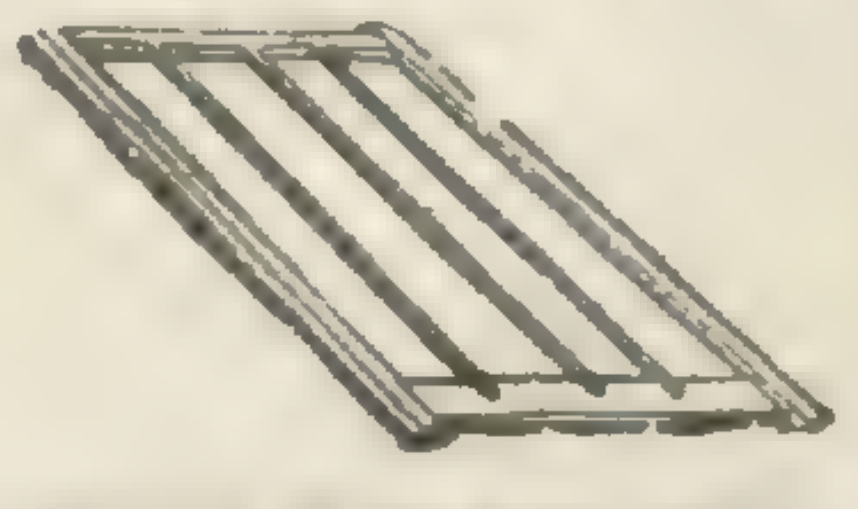

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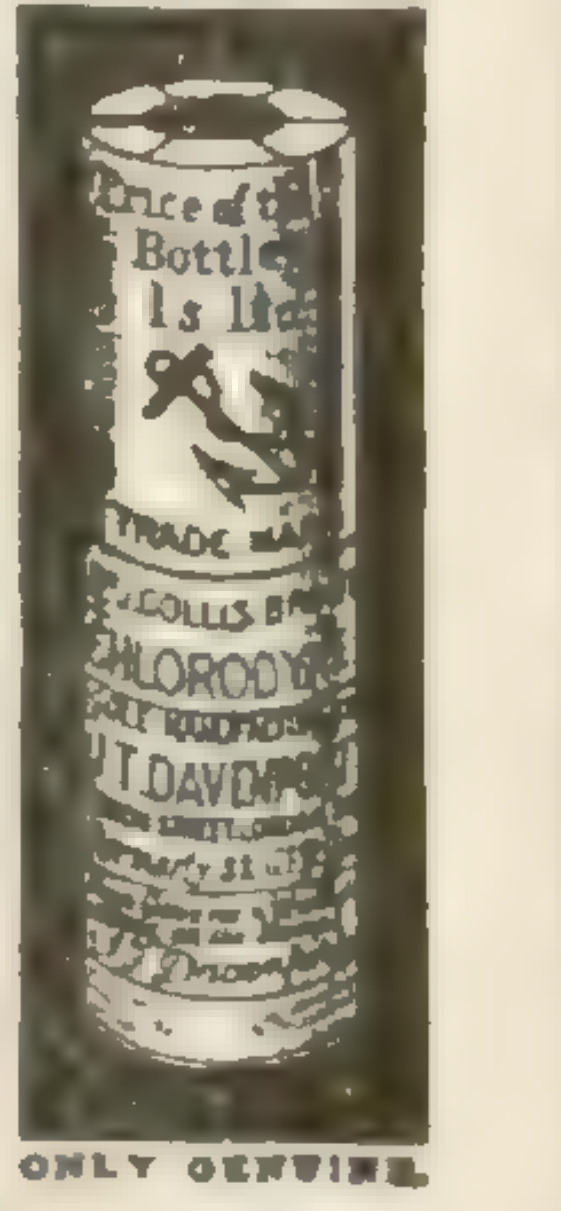

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GARDENER (Single-handed or with help); 11 years' experience inside and out; good references; single; age 26. S. C., 38, Belfast Road, Stamford Hill, N.

GARDENER (good Single-handed, or with help); experienced in fruit, flowers, and vegetables; age 39; married; good character. W. LYONS, Townsend Cottage, Bovey Tracey, Devon.

GARDENER (Single-handed, with help); 6½ years' experience as Foreman in last place; death cause of leaving; single, age 32; excellent references. G. EUSTON, Shrubs Hill, Sunningdale, Ascot, Berks.

GARDENER (Single-handed or otherwise); 11 years' experience inside and out; good references; age 24. F. PINK, 1, Terrace Cottages, White Hart Lane, Tottenham.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

COL. MALTHUS strongly recommends H. GADD (24) for SECOND where three or four gardeners are kept; he is hard working, sober, steady, and obliging; has been six years in present situation. Col. M. will gladly answer any questions as to character, either personally or by letter. Address H. GADD, Dalton Hill Gardens, Albury, Guildford.

GARDENER (Second), where several are kept; 12 years' practical experience in good establishments; good references; age 27. C. E., Northington Down Farm, Alresford.

GARDENER (Second, Inside and Out, or good Single-handed); Second of seven in present place; married; age 26; twelve years' experience; good references. J. HARRIS, The Gardens, Dyffryn, Neath, S. Wales.

GARDENER (Second), experienced in Plant and fruit houses, kitchen and pleasure gardens; ½ years last situation; well recommended; sing. age 27. HILLS, Bochanger Cottages, Kenningt Ashford, Kent.

GARDENER (Second), where four or five are kept; Inside or Inside and Out; nine years' good reference; age 27; married when suited. W BLOGG, Grantchester, Cambs.

GARDENER (Second), Inside or Inside and Out; age 26; 10 years' experience; well recommended; 3 years in present place. H. JENNINGS, Claremont Gardens, Esher.

GARDENER (Under); five years' experience Inside and Out; satisfactory reference; bothy preferred; age 19. S. CRUTTENDEN, 2, Camden Grove, Chislehurst, Kent.

GARDENER (Under), age 24, nine years' experience, seeks Re-engagement, Inside and Out; well recommended and good references; Bothy preferred. D. ROSE, Strumpshaw Hall Gardens, Norwich, Norfolk.

FOREMAN (Working); well up in winter-flowering and Border Carnations, Tomatoes, Herbaceous, etc.; 13 years with R. H. Bath, Ltd., Wisbech; highest reference; disengaged. J. NEWMAN, Old Walsoken, Wisbech.

FOREMAN (Inside), age 26; 11 years' good practical experience gained in the followin establishments: Barford Hill, Morville, Barf House; well recommended. A. WICKS, The Gardens, Eynsham Hall, Witney, Oxon.

FOREMAN (Inside). — Mr. W. HOO Rookcliff Gardens, Lymington, Hants, highly recommends J. PIKE as above; 3 years present situation as Foreman; age 24; abstainer; 9 years' experience. Apply J. PIKE, Rookcliffe Gardens, Lymington, Hants.

FOREMAN (Inside or Inside and Out); 12 years' experience; well recommended; age [illegible] years; disengaged. E. MOORS, c.o. Mr. De Ba Gloucester Street, Faringdon, Berks.

JOURNEYMAN, age 20, seeks SITUATION inside under Foreman; 7 years' experience inside and out; 4 years' good reference present place. V. ALLEN, The Gardens, Dyffryn, Neath, S. Wales.

JOURNEYMAN (First), Inside, in good establishment; age 23; height 5ft. 10in.; 9 years' experience; well recommended. R. BROWN, The Gardens, Elsham House, Grantham, Lincs.

A GARDENER wishes to recommend good strong, willing YOUTH as IMPROVER; 2½ years' experience outside. Apply H. DALDY, The Gardens, Cliffville, Stoke-on-Trent, Staff.

HEAD GARDENER wishes to recommend his Son as IMPROVER; age 19; 4 years' experience; Bothy preferred. M. JARRETT, The Wakes Gardens, Selborne, Hants.

NURSERY MANAGER of wide experience in all branches of Commercial Horticulture seeks RE-ENGAGEMENT. Testimonials will be submitted which prove capability to entirely control an extensive Business. Would be pleased to interview Proprietors, or Gentleman prepared to Finance a new concern. Apply S. K., Office of this Paper.

MANAGER, small Nursery; age [illegible]; married; life experience Grapes, Cucumbers, Tomatoes, Chrysanthemums, Bedding Plants, and general Pot and Cut Stuff, Bulb Forcing, Asparagus, Ferns. C. S., 2, Oddfellow Cottages, Meopham, Kent.

MR. C. SIDEN, The Gardens, High Le Hoddesdon, Herts, can with every confidence highly recommend ALBERT ROSE as first journeyman inside, experience in fruit and plant houses; 12 months in present situation; 8 years' experience; age 24.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For FEB. 22, 1908.

Please Repeat my Advertisement.

Name..

Address..

....

Date ....

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

RICHARD SMITH and CO., LTD., beg to announce that they are constantly receiving applications from Gardeners seeking Situations, and that they will be able to supply any Lady or Gentleman with particulars, etc. St. John's Nurseries, Worcester.

THE DOWAGER LADY HILLINGDON can highly recommend her FOREMAN, who has been here 3½ years, to any Lady or Gentleman in want of a Head Working Gardener; experienced in first-class gardening; excellent references. Apply A. STEWART, Wildernesse Gardens, Sevenoaks, Kent. No circulars.

W. THEOBALD wishes to recommend W. COOKE as SINGLE-HANDED or KITCHEN GARDENER; married when suited; good references from present and past situations. Apply W. COOKE, Hatchford Park Gardens, Cobham, Surrey.

YOUNG MAN, age 25, seeks SITUATION as Single-handed, or where help is given; life-long experience Inside and Out; good reference; married when suited. G. RAPLEY, Hilders Court, Chiddingly, Sussex.

YOUNG MAN, age 21, seeks SITUATION in Kitchen Garden or Pleasure Grounds; life experience; 16 months last situation; 3½ years previous; can be well recommended. Abstainer. Apply N. CURD, 6, Heath Cottages, Potters Bar, Middx.

YOUNG MAN (26) seeks SITUATION in kitchen garden or pleasure grounds; 7 years' experience; reference. A. BUSBY, Finstock Heath, Charlbury, Oxon.

YOUNG MAN, age 20; can be highly recommended for Kitchen and Flower Garden; can take Sunday duty; 7 years' experience; Bothy preferred. S. ANDERSON, Heligan Gardens, Pentewan, R.S.O., Cornwall.

YOUNG MAN, age 19, requires SITUATION, inside or inside and out; 4½ years' experience; height 5ft. 10in.; well recommended. G. SPENCER, The Gardens, Elsham House, Grantham, Lincs.

Situations Vacant.

GARDENER WANTED, experienced, for grape house, rose garden, and general pleasure grounds about 3 acres); unmarried man preferred. Apply to MANAGER, Grand Hotel, Hayling.

GARDENER-GROOM WANTED, single, age about 21; must have had experience in greenhouse, vines, etc.; boy kept. Room, gas, firing. Apply FITCH, Woodside, Muswell Hill, N.

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A splendid, safe, non-poisonous Wash, with pleasant delicate odour. Fatal to all forms of filth. Suitable for general use under glass.

3 galls., **8/-** per gall; 1 gall., **9/-**; ½ gall., **5/-**; 1 quart, **3/6**; 1 pint, **2/-**.

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A very powerful, perfectly safe, and cheap fumigant. Strongly recommended.

1 quart bottles (80,000 cubic feet), **29/-**; 1 pint bottles (40,000 cubic feet), **15/-**. No. 2 bottles (16,000 cubic feet), **7/-** each.

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The most valuable of all Vine Manures for top-dressing. Rich and safe.

In bags, 1 ton, **£15**; 10 cwts., **£7 15s.**; 5 cwts. **£4 2s. 6d.**; 1 cwt. **17/-**; ½ cwt. **9/6**. Tins, **3/-** each. In casks, **1/-** per cwt. extra. Carriage paid on **7/6** orders and upwards.

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Extra Frilled Single Begonias. Seed, 1/-, 2/6, and 5/-.

IN HIGHEST QUALITY, ALSO AT ALL PRICES FOR BEDDING OUT, ETC.

AWARDED 16 GOLD MEDALS, 6 SILVER CUPS.

SEED IN SEALED PACKETS.

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Double, 5/-, 12/6, and 30/- per doz. Single, 4/-, 8/-, and 20/- per doz. Mixed Doubles, 3/6, per doz., 25/- per 100.

Semi-Doubles (cheapest bedders), 10/- per 100.

Mixed Singles, 2/6 per doz., 17/6 per 100.

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CARNATIONS.

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Special Offer during March and April of one dozen rooted Cuttings of American Carnations, in 12 choice varieties, for 6s.

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New Tomato "VICTOR."

This Tomato, the result of several years careful crossing and selecting, is, we have no hesitation in saying, the most prolific variety yet sent out. The fruit, which is of medium size, rich colour and splendid flavour, is borne in trusses of from 12 to 25 at every joint, and the plants are remarkably short-jointed. The flesh is wonderfully solid, and the seeds are few in number. Per packet, **1/-**

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Corporation Street, MANCHESTER.

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Lily White, Solid Ivory and Purple.

Extra Strong, **14/-** and **18/-** per 100.
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Extra Strong, **20/-** and **25/-** per 100.

DICKSONS, Nurseries, CHESTER.

SEEDS of Rare and Choice HARDY PLANTS, &c.

THOMPSON AND MORGAN

Beg to inform those interested in the above that their

NEW SEED CATALOGUE

is published and may be had free on application. Particulars of an extra special cheap offer of surplus **Alpine and Rock Plants** are given on page 3.

Hardy Plant Specialists, Ipswich.

J. J. THOOLEN,

Bulb and Plant Grower,

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Has the honour to announce that his **Illustrated Price List, Spring, 1908, of Bulbs and Plants,** in English, at lowest prices, will be sent post free on application. No charges for packing. Orders of **10s.** and above entirely free to destination in England, Scotland, and Ireland; first quality guaranteed. Established 1884.

Some sorts of Bulbs noted out of Price List for Spring Planting. 25 at price per 100 rate.

	Per 100.		Per 100.
Anemones, single, mixed	1/2	**Hyacinth. Candicans**, white	4 0
Anemone, The Bride...	1/2	**Iris**, Japan, mixed ...	3 6
Anemone, Japan, white	4/6	**Iris Germanica** (Flag Iris), mixed	3/0
Anemone, Japan, rose	4/6	**Iris Sibirica**, mixed ...	3/0
Anemone, Japan, red..	10 0	**Lilium Tigrinum** (Tiger Lily)	8 0
Herb Lily, in mixture ...	6/0	**Lilium lancifolium roseum**	15/0
Tuberous Begonias, single, mixed, 1st size	10/0	**Lilium lancifolium rubrum**	15 0
Tuberous Begonias, double, mixed, 1st size	15/0	**Ranunculus**, French, mixed	1 0
Dahlias, single, mixed..	6/6	**Montbretias**, mixed ...	1/0
Dahlias, double, mixed	10/0	**Calla alba maculata**, with white spotted leaves	8/0
Dahlias, Cactus, mixed	12/6	**Oxalis**, mixed	0/6
Ferrarias (Tiger Flower), mixed... ...	4/0	**Poppies orientalis**, mixed	10 0
Funkias, in fine mixture	8/0	**Phlox decussata**, mixed	8 0
Gladiolus Bronchleyensis, scarlet	3/0	**Phlox decussata**, white	10/0
Gladiolus, The Bride ..	3 0	**Potentilla**, mixed ...	10 0
Gladiolus, Lemoine, mixed	3/0	**Trollius**, mixed	10 0
Gladiolus Gandavensis, mixed	3 0	**Lilium auratum**, large	40 0
Gladiolus, Surprise ...	2 0		
Hemerocallis (Day Lily), mixed	8/0		

FIVE BEAUTIFUL NOVELTIES

A LOVELY ORANGE DAISY FROM SOUTH AFRICA.

Dimorphotheca aurantiaca, a very large and beautiful annual from Namaqualand, having Daisy-like flowers of a glossy salmon-orange colour with black central ring, flowering in the garden for months in succession. Height ¾ ft. Per packet, **2s. 6d**

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Antirrhinum "Sunset," the most beautiful of all Snapdragons, producing a most brilliant effect in the garden; flowers of the most delightful art shades of orange and fiery orange-scarlet. Height 1 ft. Per packet, **2s. 6d.**

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Barr's Giant White, flowers measuring ins. across, very double and snowy white, dwarf and compact, grand for edgings. Per packet, **1s.**

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Barr's New Giant Streptocarpi, with very large trumpet-shaped flowers of clear delicate shades of rose and lavender to white. Seed sown now produce flowering plants this summer, for greenhouse decoration. Per packet, **2s. 6d.**

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Primula Sinensis, Barr's New Salmon Beauty, quite a new break, flowers large and of beautiful form, of a lovely soft rose shading to a glowing salmon-red: foliage rich green, tinged bronze; an exquisite flower. Height, ¾ ft, Per packet, **3s. 6d.** and **5s. 6d.**

Descriptive Catalogue sent on application.

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The Perfection of Quality at Reasonable Prices.

Collections to suit Large or Small Gardens at all Prices from 5s.

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And the **Burpee Business Grows.**

Last year (our 31st) we sold more seeds than ever before in any one year and in 1908 we shall sell even more. You will understand "the reason why" when you read

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THIS complete book, bound in lithographed covers and containing also six superb coloured plates painted from nature, is YOURS for the asking provided you have a garden and will mention where you saw this advertisement. It is an elegant book—the best seed catalogue we have yet issued—and offers some most remarkable "NEW CREATIONS" in Vegetables and Flowers, which can be obtained only *direct from us.* Many a winter's evening can be spent profitably in planning your garden, by a careful study of this book. Shall we send you a copy? If you appreciate *Quality in Seeds* you will say *Yes!*

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Genuine only-Direct from Wem

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There are eleven distinct Novelties for 1908, and are offered to the public at 1s. per packet each. Full particulars are given in Catalogue, *also details of some very special offers.*

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One packet of each of the eleven grand 1908 Novelties for 9s. 6d. post free; half packet of each, 5s. post free for cash with order.

A Booklet, giving full particulars on the culture of Sweet Peas, given with every order.

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Our plants were awarded the Silver-Gilt Cup (value 55 guineas), as the most meritorious exhibit at the great Temple Flower Show, 1904; also Gold Medals 1906 and 1907.

	Per Doz.	Per 100.
Plants in 8 inch pots for forcing and greenhouse culture	24/- to 42/-	180/- to 300
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Exhibition Plants in large pots, bush and pillar form, half-specimens and specimens, 7/6 to **42/-** each.

WM. PAUL & SON,
ROSE GROWERS TO H.M. THE KING.
Waltham Cross, HERTS.

VOL. L.—No. 2,833. SATURDAY, FEBRUARY 15, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The Royal Horticultural Society.

As will have been gathered from the extracts that were given in our issue of the 7th inst., the report presented to the Fellows at the annual meeting on Tuesday last was of a most gratifying character. The Council were able to show that an immense amount of useful work had been accomplished during the past year, and that there had been a material increase in the number of Fellows and a considerable augmentation of income. As so well stated in one of the earlier paragraphs of the report, the most important feature of the year's work was the completion of the Laboratory and Scientific Research Station at Wisley. The opening of the station was an occasion for much gratification to those who are specially interested in the scientific side of the society's work. It not only brought the realisation of a long-cherished desire for a scientific station under the direct control of the society for the investigation of problems affecting plant life, but it immensely improved Wisley as an educational centre. Hitherto the training the society has been able to give the students in its gardens has fallen considerably short of the present-day requirements, owing to the impracticability of including practical scientific work in the curriculum. With the opening of the well-equipped Laboratory and Research Station, all difficulty in this matter has been removed, and the curriculum has been extended and improved by carefully proportioning the work of the students between practical work in the gardens and scientific study in the laboratory. Knowing how great was the ability displayed by Mr. F. Chittenden, the director, during his occupancy of an important position in the Chelmsford laboratories, we have no doubt that much scientific work of far-reaching importance will be accomplished at the Research Station. Not less gratifying is it to turn to that part of the report showing the losses and gains during the year. As we gave a summary of these in our last issue, there is no occasion to do more than express the gratification we feel, in common with others who appreciate the importance of a strong organisation, that the number of Fellows at the close of the year was 10,000, representing an income from subscriptions in round figures of £13,000. In this connection it is interesting to observe that there is a continuous increase in the accession of two guinea Fellows, 510 having been elected last year, as compared with 600 one-guinea Fellows, because it shows a greater appreciation of the value of the privileges of Fellowship by those able to pay the higher fee. As for several years previous the Temple Show gave a handsome profit, this last year being £1,062, plus a few shillings. On the other hand, the expenditure on the Holland House show exceeded the amount received for admissions by about £20, but this cannot be regarded as a loss seeing that the whole of the Fellows had free admission. While the two great summer exhibitions have been steadily increasing in public favour, the fruit show has been declining in popularity, and last year the amount received for admission was small as compared with the expenditure and the character of the display. The attendance of paying visitors was in deed such that, had the Council taken a narrow view of their responsibilities, the autumn show would probably have had no place in this year's programme; but they have not done so, and the exhibition remains in the schedule. It should be possible to infuse greater interest into, and also increase the educational value of the gathering by organising a conference on the first of the two days. On the second day there will be a meeting of delegates of gardeners' societies. The hall continues to increase in popularity, as evidenced by the fact that the net income from lettings amounted to £2,051 10s. 10d., a sum sufficient to pay ground rent, rates and taxes, gas and electric lighting, insurance, water, and depreciation, a result that is eminently satisfactory. On the year's work there is, after investing a considerable sum, a balance of £6,477 12s. 8d., and we allude to this for the purpose of mentioning that, with an income of £20,000, there is precisely the same care in the administration of the funds as when the income was £2,000, and in this respect, as in many others the Council have set an excellent example.

MR. T. H. COOK.
Head Gardener to His Majesty the King, at Sandringham.

Mr. T. H. Cook, whose portrait we have the pleasure of giving in this issue, is especially deserving of a place in our gallery of notable horticulturists and botanists, for he occupies one of the most important positions in the United Kingdom, and fills it in such manner as to prove to demonstration that he possesses administrative ability and cultural skill of an exceptionally high order. Some seven or eight years have elapsed since His Majesty the King appointed Mr. Cook his head gardener at Sandringham, and during this period he has fully justified the anticipations of those friends who were acquainted with the splendid work he had accomplished at Gosford, the fine seat of the Earl of Wemyss and March, during the seven or eight years he occupied the position of gardener there. The ability displayed by Mr. Cook during the period he had charge of the Gosford gardens was such that, although a quite young man, he became known as one of the foremost gardeners in Scotland. Even more remarkable have been the abilities that he has brought to bear upon the Royal Gardens at Sandringham during the period they have been under his charge, and as the result, the maintenance is such as to both delight and surprise those who have had opportunities for visiting them.

Foreign Fruits were imported in smaller quantities in January last than in the corresponding month for several years past, the decrease being more general than is usually the case. In the imports of apples there was again a considerable increase, the aggregate having been 336,212 cwt., of the value of £190,467, against 323,758 cwt., of the value of £187,541 in January, 1907. In the imports of apricots and peaches there was a very large increase, the total being 3,608 cwt., of the value of £9,776, as compared with 229 cwt., of the value of £1,803. Bananas dropped from 452,266 bunches in January, 1907, to 318,776 bunches last month, the values being £122,975 and £88,753 respectively. In the imports of grapes there was a decrease in quantity of 196 cwt., and an increase in value of £385, the total having been 1,622 cwt., of the value of £4,475. The decrease in the imports of lemons was 35,091 cwt., representing a drop in value of £11,179. In the case of oranges the decrease was 387,759 cwt., of the value of £155,900. Pears and plums, on the other hand, were received in larger quantities. The imports of the first-named fruits were 2,871 cwt., of the value of £4,111, against 1,323 cwt., of the value of £1,399, and of plums 362 cwt., of the value of £847, as compared with 6 cwt., of the value of £28. In the imports of unenumerated fruits there was a drop of 6,579 cwt., of the value £13,124, the total having been 1,536 cwt., of the value of £2,638. The total value of imported fruits, inclusive of nuts, during last month was £638,483 or a decrease of £198,862.

Royal Botanic Society.—The Council of the Royal Botanic Society state in their quarterly publication that from January 1 last the Royal Botanic Club ceased to exist as a separate organisation. In the place of the previous complicated arrangements the Council propose that the annual subscription should be raised to £3 3s. per annum; and that every Fellow of the society have all the privileges hitherto appertaining to the club. As under the new arrangement the council will have full control of the club rooms, they propose to utilise them for the purpose of botanical lectures, and of concerts. Professor Bottomley, King's College, will accordingly lecture on the following Thursday afternoons at four o'clock: March 5, "Various Marriage Customs of Plants"; March 19, "Soil Fertility and Bacteria." Mr. George Gordon, V.M.H., will lecture on Thursday, February 20, at four o'clock, his subject being "Gardens of Roses." These lectures will be illustrated by limelight views.

Prizes for Hyacinths.—As some years have elapsed since there has been in London a competition for prizes for hyacinths, it is a matter of considerable interest that the Royal Dutch Bulb Growers' Society at Haarlem have presented to the Royal Horticultural Society liberal prizes for these flowers. There are twelve prizes in all, and these are offered in six classes, three for amateurs and gentlemen's gardeners and three for nurserymen. The first group comprises classes for eighteen, twelve, and six, and the first prizes are £8 8s., £6 6s., and £4 4s., and in the second the classes are for twenty-four, eighteen, and twelve, with prizes of the same value as in those for private growers. The second prize in each class is exactly one-half the amount of the first prize. It is stipulated in the conditions that, each bulb must be in a separate pot, the size of which is optional; no exhibit may contain more than two specimens of one variety, and no exhibitor may compete in more than one class.

N.C.S. Year Book.—It is a cause for great regret that the National Chrysanthemum Society cannot, for financial reasons, issue a Year Book during 1908, but what is still more regrettable is that so many members have looked upon the issue of 1907 as a commercial undertaking. In discussing any question of profit or loss on the printing and publishing of such a book its value to the members is the first and chief consideration. A question raised at the annual meeting drew the information that the net cost of the Year Book for 1907 was £50. This was regarded as a £50 loss on the publication. In round figures, the society has 400 members and 100 affiliated societies, so that 500 copies of the Year Book were sent out as part of members' privileges. These, at the modest value of 1s. each, would be worth £25, so that the "loss" is at once reduced by one-half. Further, the peculiar position of the society when the Year Book was being prepared, retarded publication. Earlier publication would, possibly, have resulted in more advertisements and wider sales. However, we are glad to see the committee has strong hopes of continuing the publication. If the members' privileges of attending the exhibition were disregarded in the same way, then the shows of 1906-7, allowing £25 for the last December show, and including special prizes and donations, show receipts amounting to £487 18s., and an expenditure of £623 17s. 1d., not including anything for secretarial work and printing. On the face of it this shows a loss of £135 19s. 1d. on the exhibitions, or of £67 19s. 6½d. for 1907 alone!

Lord Avebury has been elected president of the Royal Microscopical Society, and at the March meeting will deliver an address on "Seeds, with special reference to British Plants."

London's Open Spaces.—At the monthly meeting of the Metropolitan Public Gardens Association, a letter was read from the London County Council regretting that they were unable to purchase St. Peter's Square, Hammersmith, as a public garden site, owing to the high price asked. Various applications from poor localities for assistance in organising window garden competitions were granted. Progress was reported regarding the association's work of tree pruning in Kensington thoroughfares, and tree planting operations in East Ham and Walthamstow roads, and in Southwark Cathedral Yard. As regards several purchase schemes in which the association is engaged, it was reported that £600 was still required for 3½ acres of the Grove Hall estate, Bow, towards which donations of £20 each were announced from Lord Tredegar and Sir John Brunner, M.P.; £1,800 for nine acres in Barking Road, East Ham; and over £2,000 for the 30 acres at Gipsy Road, Norwood; while, as regards a proposed addition of 12 acres to Ruskin Park, S.E., it was stated that the Bishop of Southwark had become the chairman of a local committee, and that £8,000 were needed from voluntary sources.

Darwin Celebration.—The Council of the Senate of the Cambridge University has in a recent report expressed an opinion to the effect that a Darwin Celebration should be held at Cambridge next year. In support of this opinion, the Council direct attention to the fact that Charles Darwin was born February 12, 1809, and that the "Origin of Species" was published November 24, 1859. It would thus be possible to celebrate the hundredth anniversary of Darwin's birth and the fiftieth anniversary of the publication of his important work next year. The week commencing June 20 is considered the most suitable for the celebration.

Sunderland Gardeners' Association held its annual dinner the other evening with the Rev. Dr. Randell in the chair, and the function proved very enjoyable to those present. Mr. T. W. Bolam, in responding to the principal toast, said the past year's work of the association as regarded papers, discussions, and exhibitions, had been highly successful. The discussions had been taken part in by men of considerable experience; and their exhibitions, particularly the exhibition of sweet peas in August, were such as to give much pleasure to visitors and satisfaction to the executive. The committee were arranging in their programme for the coming year not only an exhibition of sweet peas but also a chrysanthemum exhibition, both of which, now that they had been able to obtain more commodious quarters, would be on a somewhat extended scale.

R.H.S. Guild.—At a meeting of old Chiswick men and past and present Wisley men, held at the Royal Horticultural Hall on Tuesday last, Mr. C. H. Curtis presided. A decision to form a guild of those who have been or are being employed in the R.H.S. Gardens was unanimously arrived at. A draft set of rules will be sent to all eligible members whose addresses are known, and a sub-committee has been formed to consider suggestions so that the rules may be placed before a general meeting to be called for the evening of the second day of the Holland House Show. Mr. Wallis, R.H.S. Gardens, Wisley, Ripley, is the hon. secretary of the movement.

The Imports of Vegetables during January were somewhat above the average, owing chiefly to the largely increased quantities of potatoes that were received from abroad. Of these tubers the imports were 372,184 cwt., of the value of £68,052, or an increase in quantity of 285,408 cwt., and in value of £50,380. Tomatoes were also imported more largely, the total having been 73,409 cwt., of the value of £60,773, the increase in quantity being 17,387 cwt., and in value £11,706. Onions, on the other hand, were imported in smaller quantities, the imports aggregating 603,782 bushels, of the value of £67,499, these figures representing decreases of 82,179 cwt., and £8,704 respectively. In the value of unenumerated vegetables there was a decrease of £9,280, the total having been £22,526.

Potato Experiments have been carried out under the auspices of the Education Committee of the Surrey County Council for the purpose of determining the relative merits of sets obtained from different parts of the kingdom. Tubers were obtained from four sources, and were planted in rows of equal length. The yield was: Irish, 666lb.; Scotch, 571lb.; Lincolnshire, 193lb; Surrey, 156lb.

Sherwood Silver Cup, which was founded by Mr. N. N. Sherwood, V.M.H., will this year be offered for twenty-four bunches of roses, to be shown with their own foliage, in vases, by amateurs, at the Holland House Show, July 7 and 8.

International Botanical Congress.—At the International Botanical Congress, held in Vienna in 1905, it was decided to accept the invitation of the Belgian Government to hold the third conference at Brussels in 1910, and Messrs. T. Durand and L. Errera were appointed chairmen of the Organising Committee. Early in 1907, owing to the deaths of M. L. Errera and Comte de Kerchove, the Belgian Government suggested that the fourth congress, in 1915, should be held at Brussels, instead of the third. Subsequently it was decided to carry out the original arrangement, and a short time since a meeting was held in the Botanical Gardens, Brussels, to form a committee for making the necessary arrangements.

Derivation of Angiosperms through the Gymnosperms.—Botanists, more especially those who favour the view that the derivation of the angiosperms should be traced through the gymnosperms, will be much interested, says "Nature," in the theory with regard to the embryo sac advanced by Dr. O. Porsch, of Jena. The original and essential points in the argument lie in the interpretation of the antipodal cells as an archegonial complex, and in homoligising the polar nuclei with ventral canal cells. This postulates an archegonium consisting of an ovum and two neck cells, and a vestigial ventral canal cell nucleus at each end of the embryo sac. Dr. Porsch bases his arguments on a sequence starting from the condition of numerous archegonia found in Sequoia through types of the Cupressaceæ and Ephedra, where the archegonia are reduced in number and complexity, to a hypothetical case of two archegonia, at first juxtaposed, but subsequently located at the poles of the embryo sac.

Change of Seed in Potato Culture.—With a view to demonstrate the advantages to potato growers of a change of seed from Ireland, the Irish Department of Agriculture made arrangements in 1906 with several agricultural colleges to conduct a series of experiments in England, Scotland, and Wales, with Irish seed, as compared with English and Scottish seed. The results were so satisfactory as to induce the department to repeat the trials last year, when experiments were carried out in fifteen English counties and four Welsh counties. The potatoes used in the experiments were purchased for the department by Messrs. Sutton, through the ordinary sources of supply, the only stipulation made being that in every case the tubers had been grown for at least the two previous years on the same farm. This method of procuring the seed was adopted in order that the supplies should be typical of the produce of the respective countries. The results of the experiments showed that Irish seed is equal to Scottish, and much superior to English. The average yields at 32 English centres were 9 tons 10 cwt. 1 qr. per acre from Irish, and 9 tons 5 cwt. from Scottish seed of the British Queen, and 11 tons 0 cwt. 1 qr. from Irish, and 11 tons 5 cwt. 3 qr. from Scottish seed of Up-to-Date, while at five Welsh centres the positions were reversed, the Scottish being superior in the British Queen and the Irish in Up-to-Date. The differences are slight as between the Scottish and Irish seed, but it is again demonstrated that a frequent introduction of fresh seed from a colder climate is advisable on the part of the English grower.

MELONS IN PERFECTION.

Although not liked by everyone melons are a valuable addition to the dessert table from early in May to the end of October. The past year was not an ideal one for high-flavoured fruit, as melons need plenty of sun while swelling and ripening, and without this finely flavoured melons are an impossibility. It must not be inferred that no other agency is required to add flavour to the fruit, there are many details connected with growing melons which, if overlooked, will result in insipid fruits. An excess of water at the roots, especially of a stimulating nature, and insufficient fresh air just when the fruits are on the point of ripening must be rigidly avoided.

It is a waste of labour, and likewise fuel, to attempt to cultivate melons unless a night temperature can be maintained of 65 degrees from the time of sowing the seed, and the middle of February is quite soon enough for an early summer crop. Seeds may be sown till the end of May, when the night temperature may chiefly be maintained by husbanding the sun in the afternoon. Fill some 3in. pots with fibrous loam with just a dash of leaf-mould, pressing moderately firm, and place two seeds in a pot, these to be covered with half an inch of soil, and stand the pots on a hotbed if at command, but wherever placed the seed will soon germinate in a temperature of about 65 degrees, five degrees higher being nothing to their disadvantage. Providing the soil is fairly moist no water will be necessary until the seedlings are through the soil, and even then much care will be necessary in applying water or the young seedlings will collapse. The syringe will keep them moist enough for several days together. The grower must keep the plants as short jointed as possible from the first, standing them near the glass. Support with a neat stake betimes, after pulling out the weaker plant, and keep a watchful eye on the tender foliage, that neither thrip or red spider effect a lodgement. If either pest does, sponge very carefully with warm water.

While the plants are being prepared the structure must be thoroughly cleansed and the walls lime-washed.

Bottom heat is necessary for melons, and may be provided by hot-water pipes or a bed of fresh gathered leaves. In our case we have both, but I have seen good crops of melons grown with the soil resting on slate slabs, with hot-water pipes some eighteen inches below. It must now be determined whether the melons are to be grown in pots or planted out on a ridge or mound of soil. In the former case 12in. pots are the most suitable. These must rest on a firm base if plunged in the leaf bed, or the plants will be pulled up by the roots as the bed sinks with decay, in fact, a similar catastrophe may happen on the planted out system, therefore, a close watch is necessary where fermenting materials are used, and the vines loosened if necessary. A bed ten to twelve inches in depth and twelve to fifteen in width will be required. Good loam, inclined to be retentive rather than sandy or of a light texture, should be used, and to it should be added a little bonemeal and finely broken mortar rubble or old plaster. Make the bed very firm with a rammer.

Reverting to the young plants, it may be mentioned that they should be ready to shift into 5½in. pots, or be transferred direct to their permanent quarter within a month of sowing. I usually shift them, first seeing that they are moist at the roots, and keep the ball of roots a trifle higher than the surrounding soil, for if much of the stem is buried there is greater liability of canker. If they are grown as single cordons, which is the best method, 20 inches should be allowed between the plants, and the leader trained to a trellis within one foot of the glass roof, and not stopped until within six inches of its allotted space, which ought not to be less than a six feet run. Rub off the lower laterals as they appear, and pinch the points of the others one leaf beyond the female flower; these usually show at the first leaf. If they do not the point should be nipped out, when often a fruit will show on the sub-lateral. Syringe in the morning and early in the afternoon until the female flowers expand, when artificial fertilisation must be effected until a crop has been secured, selecting two to four of the most even fruits so that all may swell away together, these to be supported to the trellis with nets or thin pieces of square board, with a hole at each corner to take pieces of copper wire.

Melons grown in pots require liberal supplies of water, often twice a day during bright weather, but under the bed system two or three times a week will usually suffice, but the soil should be tested each day to be on the safe side. As regards stimulants, weak guano water or diluted drainings from stables or cow stalls at each alternate watering will assist to swell up the fruits. Surface roots may be covered with fresh loam or horse droppings, although it is seldom we do this here, and our crops are always satisfactory. To maintain a supply seed need to be sown every three weeks, and from the date of sowing to cutting the fruit twelve to fourteen weeks will usually elapse, so that the end of July is quite late enough for the final sowing. Seed may also be sown in the prepared pot or bed if ready for it, the results will amount to about the same.

Varieties are numerous, some preferring the green flesh while others pin their faith to the scarlet, so that it is best left to the cultivator, with the exception of stating that Sutton's Scarlet, Ringleader, High Cross Hybrid, and Gunton Orange are good early varieties.

Bicton, Devon. James Mayne.

Thunbergia laurifolia. — This plant appeals to all flower lovers when in bloom, but to those who have not a warm house the beauty of this stove climber is denied. The flowers are light blue, and borne in clusters all over the plant. Cuttings of half-ripened wood strike readily, and, if potted on in a mixture of sandy loam, when rooted, they will soon develop into good plants. Here we grow them in ten-inch pots, and the results are very satisfactory. Perhaps it might succeed even better planted out; possibly some one might tell us of its behaviour when so treated.—W. D. Pope, Wareham.

Breaking up Chalk.—It is curious what a deep-rooted prejudice the ordinary garden labourer has against breaking up the chalk subsoil in a garden. In my experience I have never met with a man of this class who would willingly break up chalk. The objection is not based upon the hardness of the task—though that may, perhaps, occasionally weigh—but upon the idea that once the chalk is loosened it will drain—or such, as an old Kentish labourer put it—all the moisture out of the top soil. Of course, the theory is ridiculous; more moisture is likely to be lost through evaporation from soil above unbroken chalk than is ever lost by drainage through broken ditto. Anyhow, I've had enough chalk broken up, and always with the happiest results.—E. J. K.

SPRING FLOWERING TREES AND SHRUBS.

A careful perusal of any good tree catalogue brings forcibly to our mind the advance made in recent years among trees and shrubs, and that with the facilities now offered to planters to acquire a knowledge of them they must before long be instrumental in producing improved results in gardens where at present box, yew, laurel, and privet usurp and impoverish the land. At best, these produce a dull and uninteresting effect, not only by depriving the garden of the means, but also the power to stimulate and sustain the interest of their owners. As windbreaks and hedges these coarse shrubs have a valuable and distinct use at all times, but indiscriminate mixing them with finer shrubs should always be avoided.

At no period can the garden be more effectively brightened by trees and shrubs than in the spring season, and as the work of planting is seasonable, I have penned the following notes upon some of those which flower during these months, and where liberally employed they produce marvellous effects in the garden and adjoining landscape. They are recommended for the beauty of their flowers, though several also produce handsome fruit, while many are resplendent in autumn with richly-coloured leaves.

They are all hardy, though wind-swept positions should be carefully avoided and shelter first secured by planting common trees suitable to that particular district. In some cases other kinds will naturally suggest themselves to those best acquainted with arborescent vegetation. As a rule, I have named those most distinct, and having particular merit, and the remarks on the height and habit must be taken as applying to the type and not to the richer coloured forms that have but recently been put in commerce, consequently only represented in gardens by small specimens.

Amelanchiers include two fine trees valuable in the garden for their flowers and autumn tints. They are generally grafted standard high upon some allied stock, though also sold as dwarf bushes. A. canadense is the oldest, but in beauty is closely followed by A. oligocarpa, which is the most vigorous of the two. Flowers white in bunches.

The barberries are a host in themselves, with very good qualities. Berberis concinna is a small deciduous shrub, densely spiny, while the undersides of the leaves are silvery white, the flowers are yellow, like small pendant balls, distinct. B. Darwini is a well-known evergreen species, the flowers are rich orange-yellow, and most effective in a mass. B. stenophylla is a hybrid barberry, with branches of a pendulous habit; the flowers are yellow, and borne so freely as to almost hide the shoots. B. japonica succeeds best in partial shade, the stems are erect and sparsely branched; flowers yellow, surrounded by a rosette of stout leathery leaves.

Cercis siliquastrum, commonly known as the Judas tree, has round leaves with unbroken margins, and are glaucous green; flowers rosy-purple, produced in great freedom upon the naked branches. It makes a handsome and distinct specimen up to twelve feet.

The flowering cherries produce some of the finest effects in spring and should be given prominent positions in shrubberies or as lawn specimens, the double varieties flower equally as free as the single forms, and remain in perfection much longer, so that preference should be given the former in planting. Cerasus avium multiplex is the double white form of the wild cherry. C. pseudo-cerasus is an immense favourite in Japan, and it shares with the peaches the distinction of being among the finest spring flowering trees. It can be had in several shades of colour, mostly of a pink or rose carmine hue. Watereri and James H. Veitch are the two best named forms, and have very large flowers. The Mexican Orange (Choisya ternata) has bright glossy evergreen leaves, and the flowers are white and produced freely. It succeeds best upon limestone soils, where it soon forms a large specimen, but requires the shelter of a wall in cold districts.

Cydonia japonica makes effective spots of colour in the garden during spring. The type produces bright scarlet flowers. Cardinalis has flowers of a bright rose cardinal colour. Maulei, with very rich scarlet flowers. Of the white varieties Maulei alba is the best. Cydonias are effective shrubs when growing against walls, and are useful in positions which receive the minimum of sunlight, such as north walls.

Forsythia suspensa is a charming subject, and should be grown upon a pole, and the flowering shoots pruned to a couple of buds when the flowers fade, so treated it is a veritable cascade of gold in spring. It associates well with the bright forms of ribes, though a good background of evergreens helps out the effect, as both plants flower in advance of the leaves.

Magnolias require great care in planting, as winds are their greatest enemy, the slightest friction damages the flowers, which are wax-like in substance. Magnolias grow freely in any good soil free from lime, and plenty of room should be allowed at planting for future development, as established specimens resent transplanting. Three inexpensive sorts which are of great beauty are M. conspicua, with large cup-shaped white flowers, M. Soulangeana somewhat similar with a ruddy purple colour suffusing the outer surface of the petals; both make large bushes, and M. stellata has smaller flowers, which clothe the naked branches like great white stars. Young plants bloom very freely.

Amygdalus persica magnifica fl.pl., is one of the best and earliest of flowering trees, the flowers are deep carmine-red and quite enwreath the branches in spring. As a standard or lawn specimen this fine double-flowered peach produces a unique effect in its season.

The plums include many good trees, the best known being Prunus Pissardi, the purple-leaved plum. The flowers are snow-white. P. spinosa fl.-pl. has pure white double flowers, and P. triloba fl.-pl. bears blossoms of a delicate pink colour.

P. malus floribunda and the fine dark-flowered form known as atrosanguinea make fine dwarf standard trees, and if kept to regular heads they can be accommodated in very small gardens. Of the fruiting crabs, the best and most distinct is the Dartmouth, which produces fruit like a small King pippin, but brilliantly coloured crimson-purple. It crops freely in a young state. John Downie and Montreal Beauty are pretty small fruiting sorts, resembling the Old Siberian. A distinct crab is P. Neidzwetzkana, the leaves and bark are coloured a deep purple, and, although I have not fruited it, yet I can recommend it on the best authority.

Ribes sanguinea is an old plant in gardens, and still worth growing, as it flowers freely upon a north wall in the poorest soil, the form sold as atrosanguinea is the best. Lovers of choice shrubs will appreciate speciosum with its deep crimson flowers and leaves resembling gooseberry foliage.

The spiræas are so numerous that it is difficult to limit one's choice. Arguta is the best, whether seen on banks, in the rock garden or in ordinary shrubberies it succeeds under every condition and yields its rich harvest of white flowers with no niggard hand. Confusa is a good second, and, although a more vigorous shrub, is never coarse. Prunifolia fl.-pl. completes the trio. It flowers best in moist soil open to the sun, and in such positions the autumn colouring of the leaves is very rich.

Staphylea colchica produces pure white sweetly-scented flowers. It makes a large bush 8 to 10 feet high, but is more often employed as a forcing shrub than as a subject for permanent planting.

Viburnum plicatum is a very fine guelder rose from Japan, the growth is moderate, and the habit of the plant compact, while the flowers are produced with great freedom. It is a shrub for extensive planting, not only for its flowers but for the autumn colour of the leaves.

Xanthoceras sorbifolia.—This beautiful Chinese shrub must have a sheltered corner, the flowers are white, with a soft crimson eye, and are produced in small spikes resembling the horse chestnut, the leaves resemble the mountain ash, but are much finer cut. Old specimens do not move well, so that careful planting is imperative in the first instance. It flowers freely in a young state, and should be planted in soil free from lime.

THOMAS SMITH.

Walmsgate Gardens, Louth, Lincs.

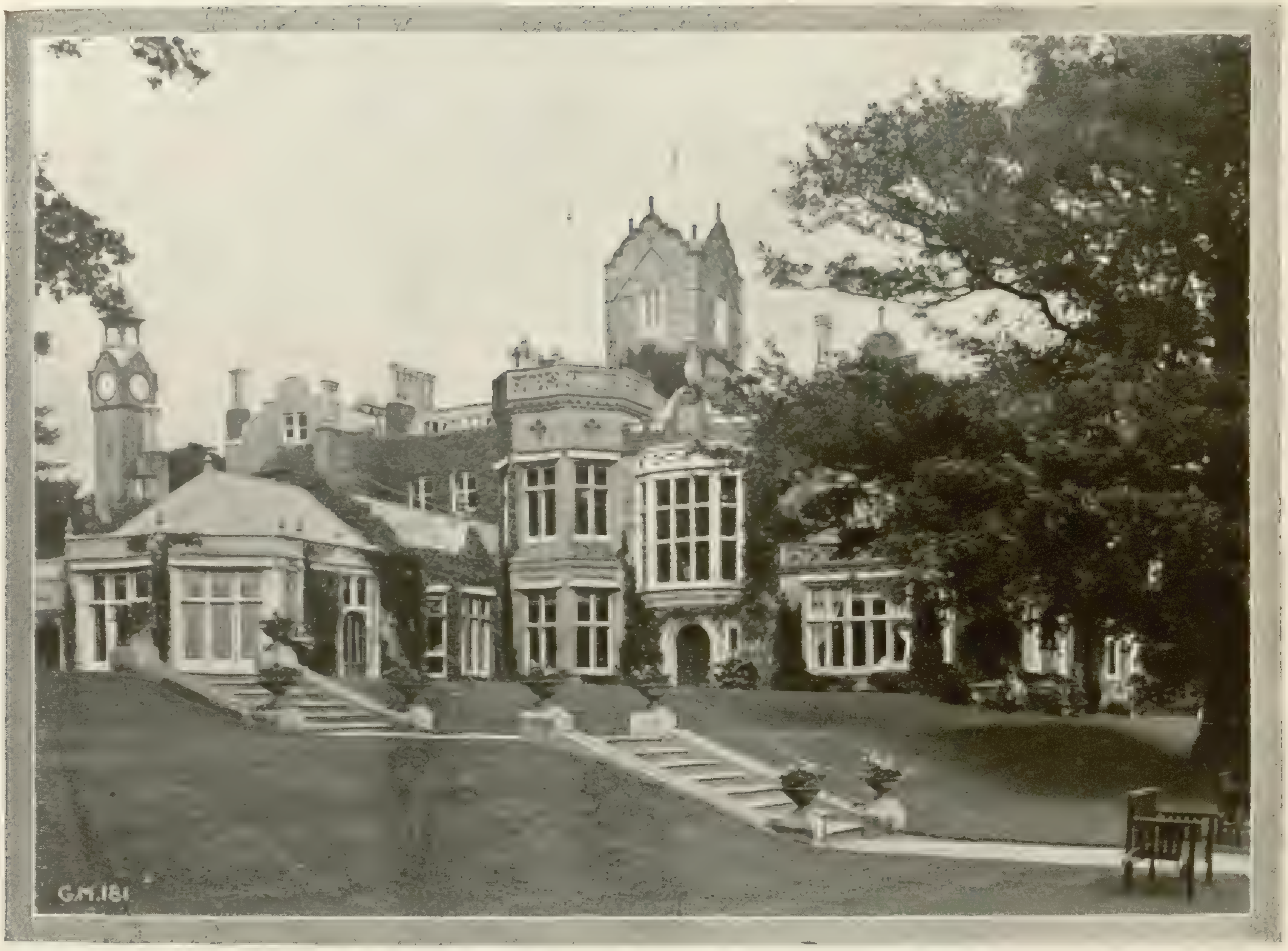
INULA ROYLEANA.

There have been several new additions to the inulas of late that bid fair to outrival the older I. grandiflora and I. glandulosa in size of flower, but not, I think, in general usefulness. I. Royleana, a sturdy Himalayan species, is particularly worth the attention of gardeners on account of the remarkable refinement and finish of its enormous flowers. I have tried for several seasons to grow it in a heavy loam overlying clay, but have been wholly unsuccessful. Last autumn I saw it in several gardens, the soils of which were all light and sandy, and in each case it presented a picture of rare beauty everyone could admire. It had broad and somewhat coarse leaves that recall some of the lesser mulleins, stout stems, generally a yard high, rarely branched, but often in clusters of six or eight, all well leaved, and each bearing a large deep yellow flower at least six inches in diameter; the large disc, packed with thousands of florets, looked and felt like velvet pile, whilst the narrow petals, literally in hundreds, formed a delightful fringe of pale orange.

Although quite disinclined to recommend it as a good garden plant for heavy soils—experience proving its unsuitableness for such—there is no doubt of its value in light soils. Rarely have I seen such an imposing plant, and at a time (August and September) when many border flowers had passed their best. Although recommendable for light soils, it is doubtful if it will thrive in poor ones, the leafage and strong stems bespeak ample plant food, and in the gardens where it thrives deep trenching and ample manuring of the borders is carried out every three years. Seedlings are best with which to start a colony; they flower in the third year.

G. B. MALLETT.

Everyone interested in a garden should obtain a copy of the ALPHABET OF GARDENING, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, bedding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price 1s. 6d. net, by post 1s. 9d.; cloth, 2s.; by post 2s. 3d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.



WARNHAM COURT: THE MANSION.

SOME HORSHAM GARDENS—II.

Warnham Court.

Between three and four miles to the north-west of Horsham is the picturesque village of Warnham, with which much that is of interest is associated. In their bright green setting the well-built houses form a charming picture as seen from the distance, and the admirably kept gardens with which they are surrounded can hardly fail to give much pleasure to those who are interested in horticulture when passing through the village. Near to the village are Warnham Court, the fine seat of C. J. Lucas, Esq., and Warnham Lodge, the residence of Sir Henry Harben, both of which have gardens of high repute.

The first-named of these two seats has long been famous for its magnificent park, with its stately oaks and fine herd of deer, and for its gardens, in which both ornamental and useful plants have been cultivated with exceptional skill, and the hybridisation of orchids carried out with much success. The stately Elizabethan mansion, of which an illustration is given, was built by Sir H. Pelly, and occupies a commanding position in the highest ground in the park. From the principal windows and from the terrace on which the mansion stands views of wide extent and surpassing loveliness are obtained. Not only are there beautiful views from the mansion, but this is so placed that it stands out boldly from amid the stately trees with which it is associated as to present a charming appearance when seen from some miles distant.

The pleasure grounds, as befits so stately an edifice, are of large extent and great beauty, and they also abound in interest. The walk shown in the illustration of the terrace wall, with its wreaths of clematis and examples of other climbing plants, extends westwards for many hundred yards, and connects the mansion with the principal departments of the gardens. For two or three hundred yards it runs alongside a tall wall, clothed with exceptionally fine specimens of the handsome evergreen Magnolia grandiflora. On the closely-shaven lawn in front of the wall are excellent examples of the art of topiary, and numerous flower beds that are usually filled with leaf plants quiet in colouring, lest, we presume, the colours of flowers should be too bright to harmonise with the several shades of green that predominate. In proceeding westward we pass a group of large beds filled with the finest of the rhododendrons, which here, as elsewhere in the district, grow vigorously and bloom profusely.

Continuing a westward course we meet also with an old orchard of apple trees, that instead of having been destroyed when a new orchard was probably provided elsewhere, was converted into a rambling rose garden. In carrying out the idea so happily conceived by Mr. Lucas, who takes a keen interest in his gardens, rambling roses in variety were planted at the foot of the apple trees, one variety to each, and their growths trained up the stems. Some amount of regulation was probably done during the earlier stages to ensure a proper distribution of rose growths among the branches of the trees, but beyond that the roses have been allowed to grow in their own way, and a charming way it is. The effect produced by these old apple trees bearing their precious burden may probably be better imagined than described, and were a description attempted one might be thought to be indulging in exaggeration. Therefore it may be better to suggest that those who have old apple trees past the production of good fruit should follow the example that has been set at Warnham Court, and clothe them with roses, and then ask themselves whether in speaking of their charms exaggeration would be possible. While all the roses presented a beautiful appearance, Thalia, Euphrosyne, and Carmine Pillar appealed most strongly for admiration. Mention must also be made of the fact that the charms of this old orchard are not limited to the season of roses; the grass under the trees is full off daffodils and other bulbs, and these provide a feast of flowers during the spring months. Still continuing westward we have evidence that hardy herbaceous plants are fully appreciated, and their cultivation well understood. This evidence is obtained from a spacious border, in which the finest of the hardy perennials have attained to a degree of development that is by no means common even in these days of hardy plant culture.

At the western extremity of the pleasure grounds a wild garden, extending over a large area, has recently been formed, and already this constitutes a delightful feature. When it has reached full development it will be one of the most remarkable gardens of the kind in the United Kingdom. For the purpose of this garden a field was selected with an irregular slope to the south, and containing clumps of trees, and within its boundaries have been formed big irregular beds of strong-growing roses, spiræas, heaths, honeysuckle, polygonums, and other subjects suitable to a garden formed in imitation of Nature's handiwork. Bulbs will largely contribute, in their several seasons, to the attractions of the garden, for in the winter of 1906-7 25,000 were planted. At the upper end a pavilion has been formed with old oaken timber, and the roof tiles have been covered with plants suitable for growing in such position, while others rise from between the flagstones forming the floor. From this pavilion, and looking over the garden, a charming view of the pastoral scenery hereabouts is obtained.

Returning in the direction of the mansion we pass through the spacious walled-in kitchen garden, which is intersected by a broad walk flanked on either side with borders of flowers. As shown in the accompanying illustration of this beautiful feature the borders are chiefly devoted to violas, and at the back are climbing roses, these latter being trained to a wire fence. Violas are cultivated with much success by Mr. Duncan, and it may be useful to mention that Countess of Hopetoun, Chancellor Walters, Mrs. Chichester, Kitty Hay, John Quarton, Devonshire Cream, Primrose Dame, Blut Tit, The Mearns, J. B. Riding, Goldfinch, and Duchess of Fife comprise some of the best in their respective lines of colour. The roses, it will be seen, bloom with great profusion, and especially conspicuous among them when the photograph of the border was taken were Allister Stella Gray, and Leuchtstern.

WARNHAM COURT: TERRACE WALL WITH CLEMATIS, ETC.

To the north of the mansion is a large pinetum containing a representative collection of coniferous trees. Here we find all the finest of the species and their golden and glaucous varieties in the most robust state of health. There is so large a number of beautiful forms, and their development so perfect that one cannot avoid a feeling of regret in finding it impossible to do more than thus briefly refer to them. Extensive, interesting, and beautiful also is the rock garden, and as it affords many object lessons of value, one would have liked to briefly sketch its principal features.

The glass department is of great importance; it occupies a considerable area, and much valuable work is annually accomplished within the structures. Mr. G. Duncan, the head gardener, is well known as a pastmaster in the art of fruit culture under glass; and of late years the gardens of Warnham Court have become notable for the hybrid orchids raised in them. Mr. Lucas is especially interested in orchids, and in the creation of new forms, with the result that several large houses once devoted to fruit production are now given over to them. The hybrid orchids that have been raised here and have obtained distinction would make a rather lengthy list, and it must therefore suffice to mention such fine forms as Lælio-cattleya Fascinator, L.-c. Lucasi, L.-c. Geoffrey, L.-c. Lawrie, L.c. Warnhamense, Brasso-cattleya Eric Lucas, Sophro-cattleya Warnhamense, Cattleya Iris Warnham Court variety, Cypripedium Edith Lucas, C. Warnhamensis, and C. Harlequin.

Warnham Lodge.

Not far from the centre of the village is Warnham Lodge, the residence of Sir Henry Harben, with its extensive, interesting, and admirably kept gardens, in which, as elsewhere in the district, are to be found object lessons of much value in their relation to modern methods of garden management. The mansion is of handsome elevation, occupies high ground, and from some parts of the gardens charming views are obtained of the surrounding country. Perhaps the finest of the prospects is that from the terrace which has been formed at the back of the kitchen garden. Here one has magnificent views of the ranges of hills that contribute so materially to the beauty of the scenery of the southern parts of Surrey. This terrace is a noteworthy feature of the gardens, and undoubtedly contributes in no small degree to the enjoyment they are so well able to afford. The ground slopes sharply at the back of the kitchen garden, and, taking advantage of this, a terrace some twenty feet wide was formed and supported by a wall with low balustrade. The wall at the back is clothed with ivy, and the whole appears so essentially part of the pleasure grounds that few visitors would imagine that the cultivation of fruits, flowers, and vegetables are being carried out on a large scale on the other side of the wall.

The pleasure grounds are extensive, and within their boundaries large numbers of the most beautiful of the deciduous and evergreen trees and shrubs have a place. Some are arranged in groups, and others singly, but, speaking generally, the shrubs are grouped in such manner as to produce a tasteful effect, while the trees are so disposed as to enable them to attain full development, and display their distinctive characteristics. Alongside that part of the carriage drive which intersects the pleasure grounds are many splendid examples of abies, cupressus, thuias, and other coniferous trees. The number of these is large, and not one came under notice that was otherwise than well furnished from the apex to the ground line, the distance between these points being in many instances represented by a goodly number of feet. Roses and ivy and other climbing plants are used with much taste in clothing the walls, as so well shown in the illustration herewith of the beautiful garden entrance.

Contiguous to the dressed grounds, and indeed forming part of them is a large area of finely-kept grass surrounded on two sides by a belt of firs and devoted in part to cricket and in part to choice trees. Sir H. Harben takes a keen interest in cricket, and the ground devoted to this summer game is so spacious and admirably kept that it is very properly regarded as the finest private ground in the Horsham district. The ground is made full use of, and is the scene each season of many splendid matches. The choice trees form an extensive arboretum, in which one might linger with pleasure and profit for a considerable period. Many notes were made, but for the present one can only say that one of the most noteworthy features is the group of three trees of Van Houtte's golden elm, which, as seen against the background of dark firs produces a rich effect, and demonstrates the value of this richly-coloured tree in the creation of garden scenery. The spacious rose garden, with its large circular beds of dwarf teas, hybrid perpetuals, and hybrid teas testify to the skill with which these fragrant flowers are cultivated, and, indeed, to the estimation in which they are held. Flowers of other kinds abound, for there is a long border in which hardy plants grow with amazing vigour, and there are groups of beds that are devoted to spring and summer flowers in their respective seasons, tuberous begonias of dwarf growth being used with surprisingly good effect in summer.

WARNHAM COURT: KITCHEN GARDEN WALK WITH BORDERS OF VIOLAS AND TRELLISES OF ROSES.

The kitchen garden is of special interest, for therein may be seen crops of the highest order of merit. There is no occasion to particularise where everything is so good, but it is not possible to refrain from making mention of the successful results obtained by Mr. Edwards in the production of late summer crops of peas. Strawberries are also grown with a success of which it is difficult to speak in measured terms. They are grown as annuals, and planted twelve inches apart in rows eighteen inches asunder. The crops of all the varieties were simply prodigious, and the fruits large and of high quality. On the fine walls and in the open fruit trees were in the best possible condition, as also were those under glass. The most noteworthy of the structures devoted to fruit culture was the span-roof orchard house, which has a length of ninety feet, a width of sixteen feet, and a height of twenty feet, and is splendidly furnished with peach and nectarine trees.

South Lodge.

Seldom are two such fine gardens as those of Leonardslee and South Lodge in close association, and still less frequent is it to find gardens that are, as it were, placed side by side so distinct in their several features. The road alone divides the two estates, and that of South Lodge must have been on the fringe of St. Leonard's Forest, if not actually within its ancient boundaries. South Lodge is the seat of F. D. Godman, Esq., and as will have been gathered from the foregoing observations is between four and five miles distant from Horsham, and reached by the same road as that described in connection with Leonardslee.

The mansion occupies a prominent position in an extensive park richly furnished with splendidly grown trees, such as oak, beech, and other kinds, and from the pleasure grounds that form its setting glorious views in the direction of the Sussex Downs are obtained. On the walls are many fine climbers; the plants that interested us most were the camellias, which grow here with great vigour, and produce in the spring their waxen flowers in great profusion. The features of the pleasure grounds, that extend almost as far as the eye can reach, are many, they are full of interest, and should be dealt with in far greater detail than is now possible.

The lover of hardy flowers who visits the gardens of South Lodge will find much to engage his attention in the magnificent border, of which an illustration is given herewith. It is no mere figure of speech to describe it as magnificent. The illustration indicates to some extent its magnitude and the high development to which the occupants have attained, but a few figures will help to make it more clear. Let it then be said that it has a length of 260 yards, not feet, and varies from ten to thirty feet wide. Commencing near the entrance gates, the border reaches the rock garden, around which it extends, and proceeds 140 yards beyond. Within this large area all the finest of the hardy perennials are represented, and it may be added at their best. Mr. Godman takes an active interest in hardy flowers, and Mr. Moody, who has charge of these fine gardens, is thoroughly conversant with all that relates to their selection and successful cultivation. Hence the splendid demonstration of the value of hardy plants that is found at South Lodge. Delphiniums, eremuri, phloxes, pæonies, monardas, achilleas, thalictrums, pentstemons, ostrowskias, and a host of other subjects abound, and, arranged as they are in bold groups, and attaining dimensions that are quite exceptional, the effect produced is such that lovers of hardy flowers visiting the gardens are not likely to forget.

The rock garden, as already intimated, is in close association with the herbaceous border, and is on a very large scale. There is no occasion to give figures for the purpose of showing its dimensions, as it will be seen from a glance at the illustration that the area occupied is a large one. Were it not that the vegetation with which the slopes are clothed far exceeds in diversity that which one meets with in mountainous districts, the visitor might without much difficulty give full play to his imagination and suppose for the moment that he was enjoying the charms of some specially favoured Alpine valley. With such large masses of choice subjects as those seen on all sides there is a strong temptation to enumerate them. The number is too large to admit of any considerable number having more than their names mentioned, and to do this would necessitate space being used with but little advantage to the reader. The handsome Carpenteria californica, as depicted in the illustration, grows to the size of a big bush, and blooms in great profusion. Skimmia japonica grows with a vigour that is quite exceptional, and annually bears a heavy crop of its brilliant scarlet berries. The rare Chinese orchid, Bletia hyacinthina, is found in a vigorous condition, and blooms abundantly every year, as does the little Chilian crocus, Tecophylæa cyano-crocus, producing annually hundreds of its intense blue flowers. Especially noteworthy is the rare Celmesia spectabilis, Crinodendron Hookeri, ramondias, blue and white, meconopses in variety, and the elegant Shortia glacifolia. The rock garden is particularly rich in primulas and androsaces, and of saxifragas there are about eighty species and varieties.

WARNHAM LODGE: ENTRANCE FROM GARDENS CHARMINGLY DECORATED WITH ROSES, ETC.

Beyond the rock garden is the extensive wild garden, in which the various ferns and flowering plants suitable for cultivation in a natural manner are arranged in bold masses and growing luxuriantly. To speak in detail of this charming feature is not now possible, but it must be said that the garden has been so judiciously planned and so skilfully managed that it constitutes a feature of much interest. The garden terminates in a small woodland lake, of which an illustration is given. Higher up in the garden the ostrich fern has been used with singularly good effect alongside one of the streams from which the lake derives its water.

The kitchen garden is of large extent, and, as one might expect from Mr. Moody's reputation, well planned and admirably managed. The fruit houses are numerous, and the occupants evince high-class cultural skill. Outside the walls of the kitchen garden are numerous plant houses with span roofs, of moderate dimensions, and so arranged as to admit of the various classes of plants that are in most request being grown by themselves. That the occupants were flourishing under the conditions that have been provided them was evident. Orchids form a strong feature of plant culture under glass, and contribute in no small degree to the high reputation the gardens so deservedly enjoy. Altogether seven houses are devoted to these fascinating plants, and it matters not what may be the season the visitor will be sure to find much that is of interest and an abundance of attractions. The collection is thoroughly representative, and the splendid condition of the plants throughout bear ample testimony to the skill of Mr. Giles, who has them under his charge. Many examples of exceptional merit might be mentioned, but space will not permit of further reference to this important department of the garden than to say that the cattleyas, cypripediums, dendrobiums, odontoglossums, and phalænopsis are of so high an order of merit that but few who are acquainted with orchids would venture to look for their superiors.

Wimblehurst.

A pleasant walk of a mile or so in a northern direction brings one to Wimblehurst, the charming residence of Mrs. Von Hartmann. Although less in size than some in the district, the gardens are of goodly dimensions, eminently attractive, and rich in interest. There are many notable features within these delightful gardens, but the one that will appeal the most strongly to the tree lover is that formed by the conifers tastefully disposed on the lawns, through which the carriage drive passes as it approaches the house. Here we find Douglas's fir, the Atlantic cedar, the Chinese juniper, and other conifers fifty feet or more in height, and absolutely perfect. Not less remarkable for their handsome appearance and perfect development are Pinus cenbra and Wellingtonia gigantea, and conspicuous by reason of its rich glaucous hue is the beautiful Picea pungens glauca. Deciduous trees specially adapted for garden ornamentation are plentiful, and by their growth suggest that the conditions which obtain are eminently favourable to them, especially conspicuous among them being the Camperdown elm, which sweeps the lawn with its flexile branches.

Roses are evidently great favourites of Mrs. Von Hartmann, for over the entrance to the mansion is a huge specimen of William Allan Richardson that annually produces a rich harvest of its attractively-coloured flowers, and in the pleasure grounds are roses in beds and trained over arches sufficiently numerous to annually produce a wealth of blossom. Another charming feature is the rockery, on which many of the choicest of the alpines make vigorous growth, and produce a profusion of their exquisitely beautiful flowers. Beyond the rockery is a pretty dell, in which various bulbs produce delightful colour schemes in the spring months, and the fine apple trees form a picture that could not well fail to appeal to even those who care but little about flowers.

Leaving the pleasure grounds with their manifold charms, we find in the kitchen garden ample evidence of skill in vegetable culture. We find also that Mr. Sparkes, the gardener, is an enthusiastic and successful cultivator of sweet peas, and that he is an accomplished fruit grower. In vineries and peach houses alike is there evidence at all seasons of health and vigour, and in the season of fruitage are abundant crops of grapes, peaches, and nectarines distinguished by high quality. In the open hardy fruits are admirably grown, especially interesting being the cordon pears, both on the walls and on trellises. In the conservatory a bright effect is produced by the zonal pelargoniums, which have been planted in the borders and allowed to rise to the staging.

In bringing these notes on the gardens in the Horsham district to a close, it remains for me to acknowledge, and I do so with much pleasure, the value of the assistance rendered me by Mr. Riley Scott, who is so well known as one of the trustees of the United Horticultural Provident and Benefit Society. Mr. Scott, who for a considerable period had charge of an important gardening establishment in Regent's Park, resigned that position some years ago, and purchased the Station Nursery at Horsham. Here his ability and energy displayed in the management of private gardens have stood him in good stead, and as the result the nursery has been greatly extended, the latest extension being the addition of six or eight acres about a year since.

George Gordon.

STOCKS FOR POT CULTURE.

The delicate perfume of these flowers, together with the length of time they remain in perfection, makes them particular favourites with most ladies. They are alike useful for cutting and for greenhouse decorations, and by making several sowings of the different kinds they may be had in bloom for the greater part of the year.

The first sowings should be made early in February, choosing such kinds as All the Year Round, Princess Alice, Monarch, Perfection, and Princess May. The seeds should be sown thinly in shallow boxes or pans, and afterwards placed on a shelf in the greenhouse, late vinery, or some similar place where they will germinate freely. When large enough to handle, or about an inch high, they should be pricked off into other boxes at a distance of about an inch apart, and when three or four rough leaves have been formed they should be transferred to four-inch pots, as when they have grown to any size they resent having their roots disturbed. If intended for growing on in pots they will need a shift into those of a size larger as soon as the soil in which they were first potted has become filled with roots, but if for planting out then they may be transferred to the open ground in April, as soon as all danger of severe frost is past.

When potted the plants should be stood in a cold frame to make their growth, but should have all the air possible in favourable weather. If well looked after these will give a wealth of bloom during the early summer months. A second sowing should be made in a cold frame in April. Plants from this sowing will bloom throughout the summer, and into the autumn if some of the intermediate varieties are chosen. They must, however, be potted up when small, and if the pots are plunged in the soil up to their rims this will keep them cool, and render unnecessary so much watering. As autumn approaches those not having flowered should have lights placed over them to ward off the heavy rains, as these spoil their blooms.

For winter flowering such kinds as Beauty of Nice, All the Year Round, Winter Pink, and the like are most useful. These should be sown in July or August, and kept growing without a check. Some prefer sowing the seed in the pots in which the plants are intended to flower, and when the seedlings appear thin to three in each pot, but we sow the seed in the open, then pot them up singly, for often when the plants are thinned the weakly ones are drawn and the strong ones left. These usually produce single flowers, whereas by potting them up this, in a measure, is avoided.

For spring flowering such kinds as East Lothians and Bromptons are most useful. The seed of these being sown at the latter end of July or early in August. As these plants will have to withstand the winter they should be grown as sturdy as possible through the autumn while the weather is favourable, that they may be the better able to resist the damp during the short dull days. When potted they should be placed in a cold frame having a southern aspect, that all the sun possible may act on their foliage. The lights should be put over them to ward off heavy rains, otherwise the soil would in all probability become saturated, but air must be freely admitted on all favourable occasions. In spring, when the plants begin to show signs of flowering, weak liquid manure should be given to induce them to throw up stronger spikes, for the longer these are the more useful will they be for cutting. No attempt should be made at forcing the plants into flower, but should they be required at any special date they may be introduced into an airy greenhouse or vinery, where the temperature ranges from 40 degrees to 45 degrees, as this will suit them admirably.

Wintered in a structure of this kind the flowers will be clean and fresh looking, and for decorative purposes most useful. Stocks thrive best in a good rich compost, and some of the kinds, when well grown, will produce spikes from a foot to eighteen inches in length. The white-flowered kinds are the most useful of all, as these come in for a variety of purposes, therefore it is well to grow a good batch of them.

H. C. Prinsep.

BUDDLEIA ASIATICA.

Visitors to the winter meetings of the Royal Horticultural Society will be well acquainted with the value of Buddleia asiatica for flowering at this season of the year, but there are doubtless many who have not yet had it brought under their notice. Although it is only within the last two or three years that this buddleia has been generally grown, it was in cultivation in this country over thirty years ago, and was figured in the "Botanical Magazine" in 1877. It would then appear to have been lost, until re-introduced by Mr. E. H. Wilson. when collecting in Western China. This buddleia belongs to the same group as most of the species that we have received from Western China of recent years, the best known of all being Buddleia variabilis. This last-named, however, is hardy, while B. asiatica is tender, and valuable only, at least in this country, for greenhouse decoration. On the Riviera it has, I believe, already become popular. Grown in pots it forms a freely-branched specimen of rather slender growth, clothed with lanceolate leaves, finely serrated. The white flowers are individually small, but densely arranged in long slender racemes, so that when in full bloom a specimen is exceedingly showy and graceful. Another desirable feature is the pleasing fragrance of the blossoms. Plants a yard high will flower well, or it may be grown double the size. Like most of its relatives, it can be readily increased from cuttings of the young growing shoots taken during the spring months. Potted in a mixture of loam, peat, or leaf-mould and sand, the young plants grow away quickly from the time they are rooted.

W. T.

SOUTH LODGE: BORDER WITH HERBACEOUS PLANTS.

CELERY.

Serviceable heads of this useful vegetable can be produced with comparative ease during eight months of the year. The beautiful specimens so often seen at exhibitions during August show what good cultivation can achieve in the production of supplies thus early.

Earliest Supplies.

To have finished and highly blanched heads in August an early beginning is necessary. A sowing of seed has to be made early in the year, and considerable care has to be exercised in pricking out and potting or boxing on the young plants, and preventing them from becoming weak during the dull days of February. This procedure in growing celery is only for producing heads for some special purpose, and is not generally adopted, for providing the main crop, which means, speaking generally, to carry over a supply from September to March.

SOUTH LODGE: VIEW IN ROCK GARDEN.

In the production of the main crop seed should be sown in March, and for the first lifting we find the old variety Sandringham White very good, with Wright's Grove pink and red varieties to follow, the latter being excellent for their keeping properties. The seed should be sown thinly in boxes or pans filled with a sandy, porous compost, and placed in a temperature of about 50 degrees. Germination of the seed is somewhat slow, and better results will be secured by placing a slate or sheet of brown paper over the boxes or pans to keep it in darkness till seen to be germinating. It should then be gradually exposed to the light. When able to bear full exposure place the young plants near the roof glass, plenty of light from the beginning being essential. It is important that they should develop slowly and sturdily, especially in their early stages. When the plants have attained to about an inch high, and are commencing to expand their leaves, they will be large enough. After being hardened off for a few days in a cool temperature they will be in a condition for

Pricking Out.

A light, shallow, cool frame, standing on a hard firm surface will be the best place for them. A bed six inches high should be formed in the frame, and this should consist of two-thirds finely chopped turf, one third of leaf-mould or spent mushroom manure, with a little sand mixed with it. They will soon commence to root freely, and grow vigorously. Put them six inches apart each way, and firmly fix each one in the soil as the work proceeds. Afterwards give a watering through a rose to settle the soil about them. Keep the atmosphere of the frame rather moist for a few days by giving but little ventilation. When it is seen that the plants have commenced root action in their new material gradually increase the ventilation. When they have become thoroughly established it will be beneficial to fully expose them during fine warm days, but a watchful eye will be necessary to avoid exposing them to biting cold winds or frosts, as exposure of either kind will impose an injurious check to growth.

Making and Preparing the Trenches.

There are several ways of preparing and arranging these. The single row trench, the double row trench, and the wider trench to carry three or more rows. After various experiments I find, taking all points into consideration, that the double row system is the most satisfactory with me for producing the ordinary culinary heads. It is economical in the matter of space, the celery can be easily watered, and the trenches are handier for moulding, and protecting purposes than the wider trenches. Moreover, the spaces between are utilised for growing various salad plants during the early part of the season. The trenches are more satisfactory when made early, whilst sufficient moisture is in the soil to give it a firm holding. About eighteen inches in width is considered sufficient for a free root run, and the soil stirred to about two feet deep. With some cold clayey subsoils considerable care is required in preparing the depth of the trenches to prevent the roots coming into contact with an objectionable stagnant subsoil. Where this is found it should be entirely removed, and fresh mould put in its place from the top. The celery plant luxuriates in, and indeed must have, a rich and liberal root run to give good results. Therefore, the best procurable farmyard manure should be used in forming the trenches, and thoroughly incorporated with the soil.

Planting Out.

About the beginning of June will find the plants in vigorous growth, with their roots running freely through the soil in the frames, and ready to be removed to their permanent quarters. In doing this it is essential that it should be carried out with the least damage or check to the plants. They must be thoroughly hardened off by full exposure for a week at least before planting out. Previous to removal give the roots a sufficient watering to well soak the bed of soil in which they are growing. It will then be possible to cut them out with a ball of soil adhering to the roots and convey them to the prepared trenches. They should be planted twelve inches apart, and if handled with care they will hardly feel having been transplanted. As the trenches are planted give another soaking of water. A dull day is preferable for planting, but not altogether necessary if carried out with proper method. Should the sun be hot a few boughs may be lightly laid over the trenches to break the strongest rays, and this will be all that is required. Attention will be needful with regard to water during the growing season. The amount to give will depend upon the rainfall of the season, but on no account should the soil be allowed to become unduly dry, as this, with other checks, is a fruitful cause of the plants running to seed. Be careful to keep the leaves during the summer and autumn dusted over with soot to prevent the celery fly laying its eggs upon them.

CHARLES FLACK.

Cholmondeley Castle Gardens.

SOUTH LODGE: BEAUTIFUL WATER SCENE IN WILD GARDEN.

Early Antirrhinums. — By sowing seeds now under glass of one of the named bedding varieties of antirrhinum, first-rate plants that will flower early may be had for bedding out in May. After the seedlings are up, the plants should have comparatively cool treatment, and should have their tops pinched out if they get at all leggy. By the beginning of May the plants should be established singly in small pots, and should be then hardened off in a cold frame preparatory to planting outdoors.—E. J. K.

Splitting up Phloxes.—The transformation effected in an old and neglected phlox clump by breaking it up and replanting in well dug and dunged ground is one of those things which must be seen to be believed. The flowers are quite doubled in size, while the erstwhile flat-topped flower trusses assume a deep, pyramidal shape. In splitting up a clump, only the best of the outer portions should be used, and these should be so reduced in size that only two or three shoots are left on each. If such pieces are planted in a triangle, 1ft. apart, they will make a brave display the first season, and a better one still the next.—E. J. K.

KNIPHOFIA JOHN BENARY.

The increased interest taken of late in the development of the informal garden—a garden in which bold grouping becomes almost a law—has opened up a use for bold-habited plants that have the power of making headway under adverse conditions, and will give a strong colour note which distance cannot well depreciate. Kniphofias (torch lilies) are invariably chosen for grouping, but a difficulty arises, if I may judge from numerous enquiries, as to which of the hundred or more varieties is the best for this purpose. Typical K. aloides, the common torch lily, lacks many good features a garden plant should possess; it is coarse, its leafage is abnormally strong when compared with hybrids, and when growing in poor soils the flower spikes are poor and ill-developed.

The old-time hybrid, named John Benary, studied in competition with more recent productions, proves the best for general display. Its leafage is moderately strong, and held sub-erect. Its flower spikes are the longest of all red torch lilies, and the colour note—a rich fiery red—is quite unsurpassed. It is a floriferous plant withal; I have counted thirty spikes from one three-year-old clump, all models of perfect finish, there being little trace of the glaucous tint that characterises many torch lilies, little also of the pale orange shade many display when fading, and the disfigurement of a mass of clinging spent flowers is wanting, the plant producing but few seeds. I once collected and germinated a handful of seeds of this variety, and the plants flowered in due course. I have no hesitation in declaring John Benary the best coloured tritoma I have seen; the seedlings it gave me probably the worst.

G. B. MALLETT.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

SMALL SEEDLINGS.—There can be no question but that the treatment afforded in the early stages of growth has a very material bearing on the satisfactory development of seedling orchids, especially if we have in view the production of flowers within a limited time from sowing the seeds. Those who consider natural versus artificial conditions, will find that to follow Nature's laws in respect to the usual seasons of rest and growth will result in a period of from ten to twenty years elapsing before flowering plants are produced. The more rapid flowering of seedling orchids during late years has been accomplished by growers realising that, after all, orchids are but plants, and require practically the same conditions and treatment as other kinds, and so, by keeping the seedlings in an active state of growth until the flowering stage is reached, they have found a very considerable advantage over the old system.

YOUNG PLANTS taken from their seed beds last spring and summer will now be found more or less active. With such kinds as cattleyas and allied genera it is advisable to examine their condition, and, should the compost be in any way decomposed, or the plants require more rooting space, repotting should be attended to without delay. The pots used must be clean. For drainage purposes use just a single potsherd over the hole at the bottom of the pot, and fill the pots to about one-half their depth with chopped bracken roots. The potting compost consists of about two-parts fibrous orchid peat, and the remaining portion of about equal parts of broken oak or beech leaves and chopped sphagnum-moss, with sufficient silver sand added to render the whole porous. We use such a compost for plants of this class in practically all stages, but as the plants grow older and advance towards the flowering stage we use coarser material. It will be scarcely necessary for me to add that, to keep the plants in an active state at all seasons of the year, growing conditions must be maintained. No hard and fast lines can be laid down, because of the varied conditions that obtain, so the cultivator must be guided to success by the particular circumstances with which he has to deal.

SMALL PLANTS from late summer and autumn sowings may now be taken from their seed-beds and pricked out, several together or separately. I advocate pricking off separately if possible, because the plants can be the more easily treated. Small pots are procurable from an inch in diameter, and these may easily be plunged into larger pots, several together if necessary, so that they will occupy little or no more room than when pricked out several together in larger pots. In affording root moisture care should be observed to ascertain that the water used be as warm as the temperature of the house.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

ACHIMENES IN BASKETS.—These beautiful plants well deserve more extensive cultivation in baskets, for which purpose, by reason of their free-flowering and general habit they are so admirably adapted. To provide successional batches of plants in flower the tubers will require to be started at intervals commencing with the first batch early in February. Prepare an open porous compost of loam and peat in equal parts, with about one-sixth part of charcoal, coarse sand, and dried sheep manure. Prepare the baskets with a lining of sphagnum moss, and fill up with the compost to within an inch of the surface. Place the tubers about an inch apart evenly over the surface, and cover with rather fine soil. The number of tubers used will be determined by the size of the baskets. Give sufficient water to settle the soil, but no more until the plants are growing freely. Suspend the baskets from the roof of the intermediate stove; this position will insure a strong short-jointed growth so essential to success.

BOUGAINVILLEAS.—For general decorative purposes Bougainvillea glabra still retains its high position, and is most valuable for covering back walls or over the roof of the stove. In either position, if allowed sufficient room for the development of its beautiful drooping floral sprays it produces a charming effect, and is most useful for cut flowers. Bougainvilleas do not require a long season of rest, and may now be pruned back and started into growth. They are all strong-rooting, and require a fair amount of root room to allow the full development of their characteristics. Hence they succeed best in a compost which will remain in good condition for a considerable period. An excellent compost is prepared with two parts of strong fibrous yellow loam, one part of peat, and sufficient charcoal and sand to keep it porous. After the plants show signs of growth those in pots should have the greater part of the old soil carefully removed from the roots and be repotted, using pots a few sizes smaller. Firm potting is indispensable to produce short-jointed growth.

STEPHANOTIS FLORIBUNDA. — There are few stove plants more worthy of the popularity enjoyed than this easily-grown and profuse blooming stephanotis. Having a naturally twining habit it succeeds best as a roof climber, a position which displays the sweet-scented blooms to advantage. If it is desired to grow the stephanotis in specimen form on a balloon-shaped trellis, the plants ought to be given a position near the glass or have the growths trained on strings over the roof. In this way the growths can be readily removed from the roof when fully developed, and trained into the desired shapes. Stephanotis succeed best in strong soil, similar to the compost recommended for the bougainvilleas, and also require a firm potting. Plants which are growing in large pots may have a few inches of the old soil removed, and top dressed with soil as recommended for potting.

WATERING AND VENTILATION.—Careful attention in watering of newly-potted plants is essential, and it must be remembered that too liberal applications to the roots at this stage will be disastrous. Judicious and thoughtful manipulation of the ventilators is also very important as fluctuations in temperatures must be avoided. Care must be exercised in the regulation of the hot-water apparatus, more particularly when the sun is likely to be strong, or much damage will be caused to the young foliage.

SYRINGING AND DAMPING of the stove will require to be done more frequently than has been necessary for some time past. All permanent borders for stove climbing plants should be given attention, and a few inches of the old soil replaced with a fresh rich compost.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

VINE EYES. — A few varieties of these should be started, more especially Black Hamburgh and Foster's Seedling, for planting in new early vineries and for stocks on which to graft almost any other grape. Select stout plump buds which were well ripened last season. They should be free from all insects, and, when prepared, be placed singly in small pots filled with good sandy soil. Plunge these in a good bottom heat. As soon as the growth appears wood-lice will attack them, and soon destroy the whole stock, unless a close watch is kept and the necessary precautions taken.

LATE VINERIES.—All cleaning and top-dressing should be finished by now, and the vines may be started as required. Muscats take somewhat longer to finish than the other varieties, and they should be given a longer time. The glass should be washed on the outside as the vines break, especially where fogs are prevalent.

MELONS.—The house for these should have the necessary preparation previous to planting. Keep the hotbed and soil well up to the glass, as the plants will not have so far to grow before they can fruit. A mixture of good fresh cut turfy loam, wood ashes, and plaster rubble will be the most suitable for forming the beds, and a little soot may be added. For early crop plant fairly close together, about two feet apart being best, and the width of soil should be eighteen inches, as these only require a moderate root run. In placing the soil on the bed it can be made to form a high ridge. If the plants are at all weakly, let them grow on in the pots for a short time longer For early supplies pots may be used, but I prefer planting out. If the sun is very strong they will, perhaps, require to be shaded during midday; a sheet of thin paper may be placed above each plant over the wires. This should not be done unless necessary as undue shading weakens them. Syringe paths, walls, and other things in the house when dry, and maintain a buoyant atmosphere and a temperature of 70 deg. at night, and from 75 to 80 deg. by day. Very little ventilation will be required for a time, especially if the house is well charged with moisture.

EARLY PEACH AND NECTARINE HOUSE.—After the crops are set a rise of 5 deg. may be given at night and day, but a steady temperature must be kept at all times. If the border will not require watering till after the stoning period so much the better, disbudding must be done gradually; syringe and shut the house up early. A very light fumigation should be given when the swelling of the fruit can be seen to keep away greenfly.

EARLY STRAWBERRIES. — Plants that are well set with fruit may be given some weak liquid manure. Sheep manure forms one of the best liquids. Place it in a bag in a tub, and it should be stirred round after watering every day so that it will be clear the following day, it being important that no sediment settles on the surface of the soil. —A. B. Wadds, Paddockhurst Gardens, Sussex.

THE KITCHEN GARDEN.

ASPARAGUS FORCING.—Batches of this delicious vegetable may still be started on a mild hotbed in frames, being careful to select the strongest and most prominent crowns. By careful management of ventilation and watering, good succulent heads will be produced, and these should be cut daily as they become ready, and placed with their ends in water.

PERMANENT BEDS.—By erecting a rough framework over the whole or part of a bed, and placing some spare lights over it now, and giving the bed a few waterings with liquid manure, good asparagus will be ready for cutting quite three weeks in advance of the unprotected beds.

BRUSSELS SPROUTS AND CABBAGE. —A pinch of seed should now be sown in boxes of each of these two most useful vegetables. Sow thinly, so that the seedlings may have plenty of room to develop. If large quantities are required, a frame will be the most suitable place to make the sowing in, but usually for the first batch only a small quantity is required.

CELERY.—This is always appreciated, and, where it is required early, seed should now be sown in boxes or pans, in light rich soil. Cover the seeds very lightly, and water through a fine rose. Place the seed in a structure in which a temperature of 55 deg. is maintained.

ESCHALLOTS.—These should now be planted in good rich soil which has been well worked and manured. Place the bulbs a foot apart in rows. The small cluster variety is a good one for pickling, and the Russian variety grows to a large size, and is most serviceable for flavouring purposes.

EARLY CAULIFLOWERS.—Young seedlings from last month's sowing will now require to be pricked off into other boxes, or on a slight hotbed. Another sowing may be made for succession, and those planted in cold frames in the autumn must have all the air that is possible to give them. If a few are potted up in eight-inch pots they will give some early heads.

JERUSALEM ARTICHOKES. — Where there is a considerable demand for these it is prudent to devote a large quarter to them and give good cultivation. If the soil is in a fit state, they should be planted without delay. Select fair-sized tubers, and plant them in rows two feet asunder. The newer white variety seems to be the sort most appreciated. To obtain good-sized tubers it is necessary the ground should be liberally manured.

STACHYS TUBERIFERA.—The tubers of this vegetable are of excellent flavour, and are liked by many when properly cooked and served. The tubers also make a change late in the autumn, when there are not many varieties of vegetables to select from. It usually commences to grow very early in the year, and therefore it is important to plant the tubers at once. Their brittle growths are liable to be broken off during planting if they are far advanced. The same treatment as advised for the Jerusalem artichoke will suit this also, except that they can be planted closer together: good distances are fifteen inches from row to row, and a foot apart from each tuber.

RHUBARB.—Some of the large roots growing in permanent quarters may now be covered with boxes or old barrels, and have a good thickness of long litter or leaves placed round them. The mild warmth from the fermenting materials will stimulate the growth, and the result will be a good crop of full-sized sticks. These will be of better flavour and have a good colour when brought on gently, as in this case.

BROAD BEANS.—A few single rows of these should be planted for succession, choosing an open quarter, and where the soil is a little strong it will suit them quite as well.—T. W. Birkinshaw, Hatley Park Gardens, Sandy.

SUTTON'S CYCLAMEN.

Twenty years or so ago the superior cultivation of cyclamens was regarded as a matter of unusual interest and importance, and the man who could grow big plants from old corms and flower these freely for several years in succession was regarded with some amount of awe. Cyclamens were a test of cultural ability in those days, and the horticultural Press of that time will show how great was the interest that surrounded these "perennial" plants. Following on this period was one wherein the cyclamens took a secondary place; forced bulbs and plants came very strongly into favour for winter-flowering, and somewhat pushed the elegant cyclamens out of their former high place. The raising and cultivation of late-flowering chrysanthemums also helped materially in this direction.

Fortunately, during this period the seedsmen who knew the value of cyclamens did not cease their efforts to improve the size, and colour or purity of the flowers, and the habit of the plants. The market growers did not lose their faith in cyclamens, though they dropped primula culture in most cases. The cyclamens carried well to market, and lasted well when sold, hence they were always more or less in demand. However, the private grower, whose name is legion, has recently awakened to the fact that cyclamens are at just as valuable as late chrysanthemums and forced bulbs, perhaps a trifle better, and so during the past five or six years there has been a renaissance of cyclamen cultivation. Now, however, the grower rarely cultivates his plants for more than one season, and scarcely ever more than two seasons.

Messrs. Sutton and Sons, of Reading, have done splendid work in both the improvement and the cultivation of these charming winter flowers. They sow the seeds in pans in the late autumn, placing these seeds carefully an inch apart in the soil—which consists largely of sterilised leaf-mould. A warm greenhouse temperature suffices, and the seedlings are kept near the glass, and at this season of the year, February, they are sturdy youngsters, soon to be potted up singly, and they will give a gorgeous display of extremely [illegible] and elegant blossoms from about Christmas-time until the end of March next, just as their predecessors are doing now.

All the world, the horticultural world at any rate, knows that the Messrs. Sutton have done wonders in carefully selecting and fixing the various colours of the ordinary type of cyclamens. Their Salmon Queen is an exquisite shade of salmon pink, and one that is seen at its best under artificial light. A few plants in a group or a few flowers in small specimen glasses give a very pleasing touch of colour to the decoration of a home. Vulcan, the fiery crimson, seems never so bright as when the rays of the setting sun fall upon the conservatory, room, or house in which it is flowering, though here again, just a few blooms in small glasses are very handsome on the dinner table. Phœnix is a cherry red variety that gives an intermediate shade of colour, and it has its favourites. As a white, this firm's White Butterfly is difficult to surpass, and it has the merit of being one of the most floriferous varieties known.

But not content with improvement in this direction, the Messrs. Sutton and Sons, some years ago, selected out a giant strain of cyclamens, just as they have selected out, perfected, and fixed a giant strain of Chinese primulas. In these giant cyclamens the flowers are of wonderful size and substance, and when batches of these, in their several colours, are seen in perfection, as they may be at present at Reading, they so surpass the ordinary type that one expects to find them much more extensively grown in the near future than at present. However, high cultivation, close breeding, and selection have their drawbacks, and the drawback in connection with giant cyclamens is one for the raiser to trouble about rather than the grower. Nature exacts her toll, and so, while she cannot stay the hand of improvement in respect to increased size and substance in the flowers, she steps in a little later and makes the raiser pay for his success by limiting the seed crop. The same thing has occurred here as with the giant primulas; extraordinary size and substance are grudgingly yielded at the expense of seeds. There is, therefore, no very near prospect of any material reduction of the price of seeds of these giant strains; indeed, they are only maintained by incessant vigilance.

The giant cyclamens are Giant White, Giant Cherry Red, Giant Mauve, Giant Rose Pink—a delightful shade of colour, Giant Salmon Pink, a large counterpart of Salmon Queen; Giant Crimson, and Giant Purple. Giant Crimson and White is a beautiful variety, with pure white flowers that are crimson at the base.

Another type of cyclamens upon which the Messrs. Sutton and Sons are expending a great deal of care is the fringed group. The old Papilio varieties do not open kindly, and when they open they mostly hang their heads as though ashamed. But at Reading this has been altered, and a fine series of fringed varieties is in the making. Already a fine strain of mixed colours is offered, and in this the flowers are erect, and have their petals more or less fringed. But in the special selections that have been made from this strain there are some of the most beautiful cyclamen flowers we have ever seen. One blush, crimson-based flower, with petals as large and broad as any seen in the finest giant forms, and all exquisitely frilled and fringed, is so beautiful that one is tempted to foretell an eclipse of the smooth type. In any case, there is ample room for these newcomers, whether they be self-coloured, shaded, or tipped and striped with colour. There is little doubt, however, that, thanks to the enterprise of the Reading firm, there will soon be a greater range of colour and form in these delightful winter flowers than was thought possible only a few years ago.

Not only are cyclamens making a brave show at Reading just now, but Chinese primulas are particularly fine. As with the cyclamens, so with the primulas, every possible care is taken to keep the varieties pure and true to character, whether it be the blue Czar or the charming Duchess, or the more plebeian Star varieties.

MESSRS. SUTTON AND SONS' FINE STRAIN OF GIANT CYCLAMEN.
As grown in the Trial Grounds of the firm at Reading, and arranged in blocks of distinct colours.

Increasing Choice Michaelmas Daisies.—One does not, as a rule, get a very tremendous plant when buying a new Michaelmas daisy, and, after the plant has revealed its merits by flowering, there may come the desire to increase it. The best way to do this is to detach the young growths early in spring, each with, if possible, a few roots attached, and place them singly in small pots. These pots should then be stood in a close cold frame, and the plants encouraged to make all the growth possible. If potted up now nice stuff should be available for planting out again in April in the garden. If required for flowering indoors, the plants should be repotted.—E. J. K.

NEW BOOKS.

ROSES: THEIR HISTORY, DEVELOPMENT, AND CULTURE.

By the Rev. Joseph H. Pemberton. (Longman, Green, and Co., 39, Paternoster Row, London.) Price, 10s. 6d.

The Rev. J. H. Pemberton is so well known as a keen and successful rosarian and able writer that we feel assured we shall not surprise our readers when we state that the work now before us is of such remarkable merit as to be one of the most valuable contributions to the literature of the rose that has yet been made by an amateur. From the day we first heard from Mr. Pemberton that he was busily engaged in the pleasurable, but by no means easy task of writing a book on roses, we anticipated with much interest and some degree of eagerness its appearance. Knowing how thorough is his knowledge of all that is associated with the rose and its cultivation and development, and well acquainted with his graceful style, we felt that we had full justification for expecting a work that would not only be widely different from the numerous books on roses that have been published within recent years, but that it would be of so high a character as to at once take a prominent position among the best of the works on the fascinating subject with which it deals that have been published. Our expectations were high, and it gives us much pleasure in stating that they have been more than realised. There is no other work with which it can be compared; it stands alone, a mine of information on roses and rose culture, with its treasures so placed that those who resort to it for advice can obtain it with the smallest possible amount of trouble to themselves.

The work is not only graceful in style and sound in teaching, but it is so comprehensive that all that relates to roses is dealt with so fully as to render it wholly unnecessary to refer to other books when making an endeavour to solve some difficult problem. In the interesting introduction we are taken back to the days when Mr. Pemberton was a child in petticoats, and admired the closely-packed nosegays of such old favourites as Duchess of Sutherland, Leopoldine d'Orleans, Félicité et Perpétué, and Aimée Vibert, which the old gardener to the family was fond of arranging. We are reminded of the time when he had a small garden all to himself, with three standard roses, which he had the pleasure of pruning. Mr. Pemberton briefly refers to his commencing to show roses in 1874, when in a class for twelve he obtained second prize. He also mentions that he has exhibited at every show of the National Rose Society, including the first held in St. James's Hall, where, in a class for twelve, in which there were forty competitors, he obtained the second prize. Nothing, however, is said of the champion trophies he obtained, or of the first prizes well-nigh innumerable he has won during the thirty-two years he has taken an active part in competitive gatherings. We admire the reticence of the author with regard to his successes, although we know that a sketch of them would have been most interesting.

The brightly written chapter on "The Rose, the Flower of England" is an excellent preparation for the substantial reading provided in the chapter on "The Botany of the Rose," by which it is immediately followed. In this the several parts of the plant and its flowers are scientifically, yet pleasantly described, and a synopsis of the several types, according to the classification of M. Crèpin, and an analysis of the known species are given. In the two succeeding chapters the species indigenous to this country, and the wild species of other countries are described with sufficient fulness to enable the reader to obtain a clear idea of their distinctive characteristics, and also to readily recognise them when in bloom. The chapter on the "Summer-flowering Roses" is of much interest, as also is that devoted to "Autumn-flowering Roses," the latter especially so because of the large amount of information relating to the development of the several classes it contains. The designation of the varieties that bloom but once, as summer-flowering, and those blooming throughout the summer and autumn is not particularly happy. The hybrid perpetuals, the hybrid teas, and the teas are usually at their best during the summer months, and consequently belong just as much to the summer as do the Cabbage, the Damask, and others that have a short season of flowering. Mr. Pemberton is not, of course, responsible for this division of varieties; he has simply followed the classification that has so long been used, and, while we should like to see a change made, there can be no doubt as to his having acted wisely in not attempting it in his book.

The remaining chapters are devoted to cultural matters, hybridisation, and the raising of seedlings, the prevention and eradication of insects and fungoid pests, exhibiting and judging. As the author is well versed in every detail essential to success in the cultivation and exhibition of roses, is sound in his views with regard to the creation of new varieties, and has the ability of readily imparting his knowledge to others the cultivator will have no difficulty in finding information upon every point about which he may be in doubt.

The book has for its frontispiece a coloured plate of the dog rose, and is illustrated with line drawings of the older types of roses and with pen and ink sketches of such operations as budding and grafting, the latter being the work of Miss Florence Pemberton.

LIST OF BRITISH PLANTS.

By George Claridge Druce, M.A., F.L.S. (Clarendon Press, Oxford). Price, 2s. 6d.

In the preparation and publication of the list of plants found either as natives or growing in a wild state in Britain, Ireland, and the Channel Isles, the secretary of the Botanical Exchange Club of the British Isles has rendered a service of immense value to botanists, and, indeed, to all who are interested in British plants. In the compilation of this work, which is the outcome of over thirty years' field work in every British county, the author has endeavoured to bring together all the plants which are natives of the British Isles, or which have been found in a wild state in them; that is, plants ranging from the most absolute natives to the merest ballast waif, and in this endeavour he has been remarkably successful. The names of the species, sub-species, and varieties are arranged under their several natural orders, in accordance with botanical usage, and by the employment of different types and a few marks the reader is able to at once see whether the plant is a native, a doubtful native, or an escape from cultivation. The authorities for the names and the counties in which the plants are found are given, and where the plant is an alien the name of the continent or country in which it is a native is indicated.

The "List of British Plants" contains 1,390 British species, 401 sub-species, 89 species somewhat doubtfully native, as the elm, 144 alien species now well established, and 940 alien species more or less fugitive. There are 1,430 varieties enumerated, as well as 259 hybrids. Of the 1,084 aliens, 751 are natives of Europe, 102 are Asian, 162 American, 6 Australasian, and 30 cultivated species. The British species are composed of 52 trees, 210 shrubs, 7 climbing shrubs, 1,020 perennials, and about 350 annuals. The work, we would add, has an excellent index, and is well printed.

LES PLANTES VIVACES DE PLEINE TERRE.

By Jules Rudolph. (Charles Amat, Librairie des Sciences Agricole, 11, Rue de Mézrèes, Paris.) Price, 5 francs, in paper covers.

An excellent book on the selection and cultivation of hardy perennials. It consists of about five hundred pages, and is divided into two parts, the first being devoted to a general sketch of their cultural requirements, and the second to the description of the finest of the hardy plants in cultivation, with particulars of their propagation, and the positions in the garden for which they are best suited. We fail to find some of the more noteworthy plants of recent introduction, but the book, nevertheless, is highly meritorious, and may be recommended to those lovers of hardy flowers who understand the French language. So good a book deserves a more substantial cover than one of paper.

LIVE STOCK JOURNAL ALMANACK, 1908.

(Vinton and Co., Lim., 8, Breams Buildings, Chancery Lane, E.C.) Price 1s.

The issue of this almanack for 1908 fully maintains its high position as a complete annual chronicle of the doings of the studs, herds, and flocks of the United Kingdom. The current issue contains upwards of fifty special articles dealing with the various classes of live stock, and is consequently a veritable mine of up-to-date information relating thereto.

VINTON'S AGRICULTURAL ALMANACK AND DIARY.

(Vinton and Co., Lim., 8, Bream's Buildings, Chancery Lane, London.) Price, 1s.

In a new and improved form, this well-known and excellent year book for farmers and landowners has just been issued. The size has been altered, while the number of pages have been considerably increased. The main feature, however, is the inclusion of a diary for the year, with cash receipt and expenditure accounts. A review of the agricultural year and a monthly calendar of the operations of the farm are given, with a very large and complete collection of statistics, tables, etc.

NEW PLANTS, ETC.

CYPRIPEDIUM F. SANDER.

This very bold and handsome cypripedium, of unrecorded parentage, has evidently descended from C. insigne. It has a rounded dorsal sepal with broad white apex and light green base, the central area being freely marked with brownish spots. The broad petals and full lip are greenish-yellow, shaded with brownish purple. A.M., R.H.S., January 28; Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking.

CYPRIPEDIUM FAIRRIEANUM COOKSON'S VAR.

Now that C. Fairrieanum is abundant in collections the species is found to vary somewhat in colouration. In the present variety the small flowers are of very dark hue. The dorsal sepal is almost wholly deep claret purple, a little white showing towards the base. The petals are also darker than usual, as also is the lip. A.M., R.H.S., January 28. Mr. Chapman, gardener to Norman Cookson, Esq., Oakfield, Wylam-on-Tyne.

CYMBIDIUM GATTONENSE.

A distinct hybrid, obtained by crossing C. Lowianum with the bold C. Traceyanum. It suggests C. giganteum. The lip is creamy white with brownish-red markings; the sepals and petals are bright yellow-green with thick red veins. A.M., R.H.S., January 28. Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate.

NEPHROLEPIS EXALTATA AMERPOHLI.

This is a very pretty variety of American origin, and one that has become popular in the United States. As shown, it was much dwarfer than most of the new forms, but it lacks nothing in beauty. The fronds are densely plumose, and present an appearance best described as "mossy." The variety appears to have a deeper green colour than most of its near relatives, though this may be due to culture. A.M., R.H.S., January 28. Messrs. H. B. May and Sons, Edmonton.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

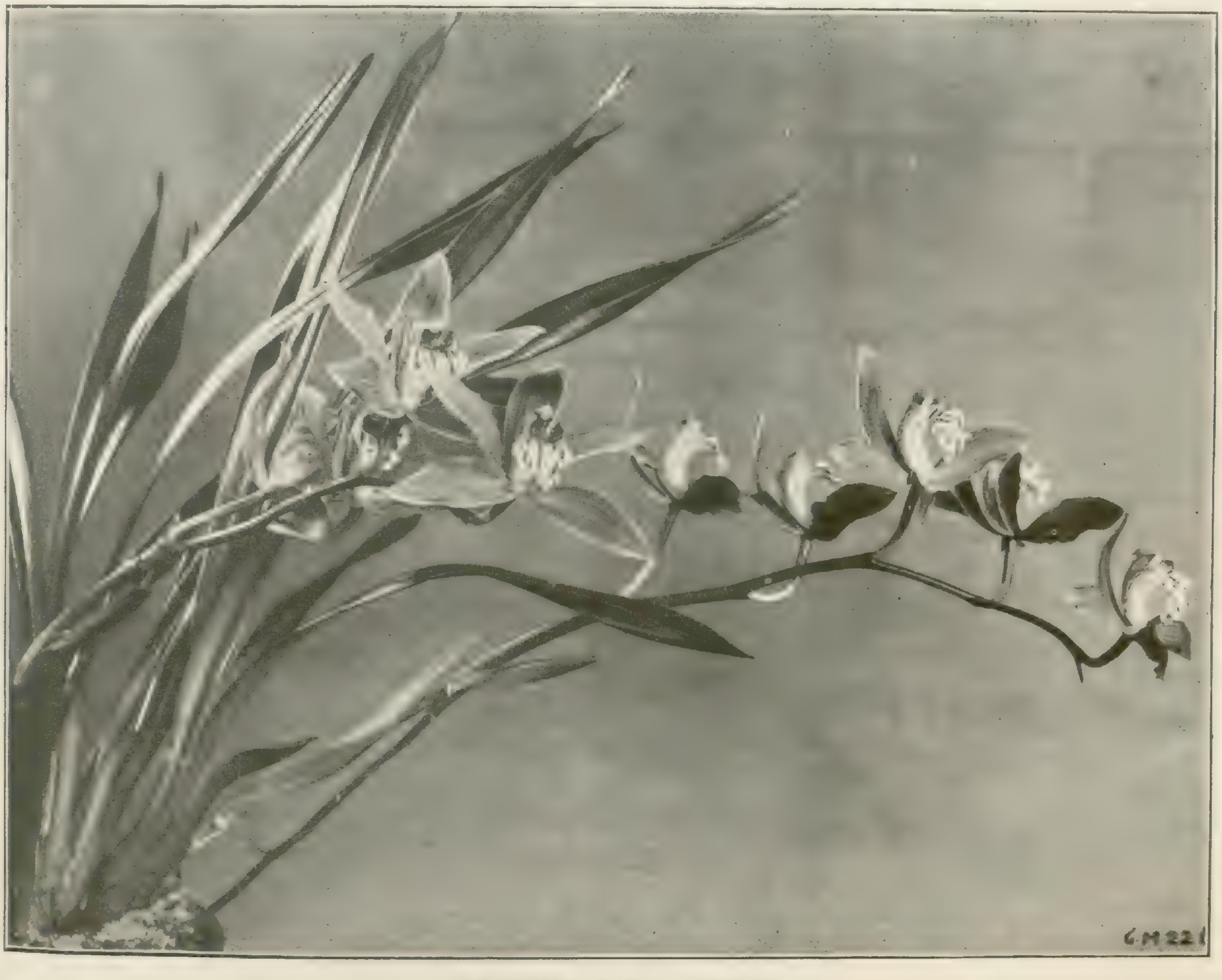
EXHIBITIONS AND MEETINGS.

Royal Horticultural Society.

On the occasion of the annual meeting there is always a very fine display at the Royal Horticultural Society, and February 11 was no exception to the general rule. Orchids, hardy flowers, forced shrubs, primulas, potatoes, oranges, and carnations were the chief features of a fine exhibition that was well attended.

FLORAL COMMITTEE.

Messrs. Sutton and Sons, Reading, made a fine display of primulas, filling a long table with their special varieties, such as The Czar, Giant Crimson, Giant Pink, Improved White Fern Leaf, Royal White, Reading Blue, Crimson King, The Duchess, Giant Salmon Pink, Snowdrift, Coral Gem, and a group of Duchess hybrids. The deep purplish blue Czar is a fine variety, and it showed up well in the centre of the group. Mr. W. H. Page, Tangley Nurseries, Hampton, filled one corner of the hall in a very pleasing manner with Lilium longiflorum, L. speciosum, and carnations in pots; behind, on the an- [illegible] front. Mr. Page had tall vases of beautiful flowers of Enchantress, Mrs. T. W. Lawson, Harlowarden, Britannia, and other fine varieties of carnations, and also filled in the front with these fragrant blooms.



CYMBIDIUM LADY COLMAN.

A beautiful hybrid exhibited by Mr. W. P. Bound, Gatton Park Gardens, at the meeting of the Royal Horticultural Society on Tuesday last, when it received an Award of Merit. The flowers are very large, the sepals and petals are cream colour suffused with green, and marked with broken lines of red, and the lip is white marked with red.

Hardy and forced flowers were largely shown by Messrs. Wm. Cutbush and Son, Highgate, who staged most of their plants in rock garden form. They had Iris reticulata, I. sindjarensis, Tulipa Kaufmanniana, Saxifraga Griesbachi, Colchicum montanum, C. hydrophyllum, and other very interesting subjects. Their forced shrubs included Prunus triloba, Wistaria sinensis, lilacs, and magnolias. The same firm had also a very pleasing exhibit of the choicest winter-flowering carnations. The Chinese primulas shown by Messrs. H. Cannell and Sons, Swanley, were remarkable for the wonderful size and beautiful colours of the flowers; the several forms were not named, but the strain as shown is a splendid one. Messrs. H. B. May and Sons, Edmonton, contributed a most interesting exhibit of hardy ferns, showing fine forms of scolopendriums, lastræas, polystichums, etc.

Some splendidly-grown cyclamens were exhibited by the St. George's Nursery Co., Hanwell, a firm that fully understands the culture of these flowers. They staged fine plants covered with fine flowers. Messrs. Jas. Carter and Co., High Holborn, displayed Chinese primulas, submitting batches of Holborn Coral, Holborn Crested, Holborn Scarlet, Aurora, Carter's Princess May, and King Edward. From Messrs. J. Peed and Son, West Norwood, S.E., came batches of lachenalias, Primula obconica, and alpines. The Misses Hopkins, Mere Gardens, Shepperton-on-Thames, showed a small collection of hardy flowers, and their coloured primroses and hellebores were the chief features. Messrs. Barr and Sons, Covent Garden, sent up some handsome seedling hellebores, chiefly from H. colchichus; they also showed H. punctatus and H. fœtidus, and a set of early crocuses and irises.

Perpetual-flowering carnations were again largely shown by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, this firm setting up large vases of fine blooms of the popular varieties, and batches of flowering plants in pots. Britannia, Mrs. T. W. Lawson, Enchantress, Aurora, White Perfection, Oriflamme, and Beacon. Besides these the Enfield firm had dracænas, Otaheite oranges, daphnes, and cyclamens. Mr. W. Seward, Hanwell, put up some beautifully-grown cyclamens, making a large group of wonderfully free-flowering plants.

From the Guildford Hardy Plant Company, Guildford, came a collection of hardy heaths and veronicas; the New Zealand V. Hectori and V. cupressoides were especially attractive. Mr. R. Sydenham, Tenby Street, Birmingham, showed tulips, hyacinths, and lily of the valley in undrained pots in fibre and shell mixture. Mr. G. Reuthe, Keston, Kent, displayed Cyclamen Coum, coloured primroses, early crocuses, Iris stylosa, I. reticulata, hardy heaths, camellias, and small plants of Himalayan rhododendrons.

The corner of the hall close to the gallery stairs was most delightfully filled by Messrs. R. and G. Cuthbert, Southgate, with forced flowering trees and shrubs. The group was composed of Azalea mollis, very finely flowered, Magnolia conspicua, Pyrus atrosanguinea, Prunus triloba, Staphylea colchica, and a suitable accompaniment of palms, ferns, and Japanese maples; a charming display.

Chinese primulas were finely shown, and well set up by Messrs. James Veitch and Sons, Chelsea; Brilliant King and Chelsea Favourite were particularly pleasing. This firm had also batches of Indian azaleas, freesias, the very useful Primula Kewensis, the fragrant Cheiranthus Kewensis, and the blue Coleus thyrsoideus; they also had a group of the pale-fruited Aucuba japonica fructoalba. A collection of semi-double primulas in various colours was shown by Mr. W. W. Palmer, Andover, Hants. Ornamental kales were exhibited by Messrs. Barr and Sons, Covent Garden.

A beautiful exhibit of perpetual-flowering carnations was set up by Messrs. James Veitch and Sons, Chelsea; Victory, Mrs. H. Burnett, Fair Maid, Winsor, Fiancee, Beacon, and Rose Pink Enchantress were all very finely shown. Freesia Chapmanni, the bright yellow form, raised by Mr. H. Chapman, Rye, was admirably represented; there were also a number of very pretty seedling freesias in various colours, and a few new irises of the reticulata type. Mr. Grandfield, gardener to E. A. Hambro, Esq., Hayes Place, Hayes, set up a large exhibit of cyclamens and a splendid large-flowered strain of Primula obconica.

Hardy ornamental trees and shrubs, chiefly those with variegated foliage, were staged by Mr. L. R. Russell, Richmond. Conifers of a distinctly ornamental character were shown well by Messrs. J. Waterer and Sons, Bagshot; they had Pinus flexilis, Abies balsamica hudsonica, Abies excelsa aurea, A. ajanensis, and A. concolor in the display. Varieties of Helleborus orientalis, with Primula Forbesi, hardy cyclamens, Corydalis thalictrifolia, etc., were contributed by Messrs. T. S. Ware, Lim., Feltham. A very handsome set of Himalayan rhododendrons, all from the open ground, was brought up by Mr. R. E. Gill, from Tremough, near Falmouth; R. barbatum, R. Mrs. H. Shilson, Henry Shilson, and the seedlings were the chief varieties, but the size of the flowers and their colours attracted a great deal of attention.

ORCHID COMMITTEE.

Mr. G. G. Whitelegge, gardener to J. Bradshaw, Esq., The Grange, Southgate contributed a bank of orchids, in which the white forms of Cattleya Trianæ, such as C. T. alba, C. T. Esmeralda, and C. T. Adonis were prominent. Other good things were Odontioda Bradshawiæ, with a spike of twelve blooms, the finely formed Cattleya Trianæ The Premier, Lycaste Skinneri Orion, Cymbidium Hookerianum, a fine Odontoglossum Harryano-crispum, and Cymbidium Wiganianum. M. Maurice Mertens, Mont St. Amand, Ghent, brought over a few good cypripediums, and some delightful odontoglossums of Harryanum parentage. Messrs. Heath and Son, Cheltenham, showed cypripediums, Cattleya Percivaliana, and Dendrobium Wardianum.

A bold group of orchids came from Messrs. Cypher and Sons, Cheltenham. Cypripediums figured largely, but the group also contained some good odontoglossums, white Lælia anceps, Angræcum sesquipedale, Cattleya Trianæ varieties, and Cymbidium Winnianum. Messrs. Moore, Lim., Rawdon, Leeds, submitted a number of cypripediums, Odontoglossum Insleayi, Ada aurantiaca, and some white ground O. crispums. Messrs. Stanley and Co., Southgate, sent a small group of cattleyas and cypripediums.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, had a small group of orchids, and here the leading subjects were Cattleya Percivaliana, Dendrochilum glumaceum, and cypripediums. Messrs. Sander and Sons, St. Albans, had in their group of orchids some good forms of Cattleya Trianæ, cypripediums in variety, Vanda Watsoni, and the curious Barlia longibracteata. Messrs. Charlesworth and Co., Heaton, Bradford, had a number of graceful odontoglossums, Odontioda Bohnofæ, Lycaste Balliæ, Lælio-cattleya Myra, L.-c. luminosa, Cattleya Octave Doin, C. Empress Frederick, and other fine things.

Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham, showed two fine plants of Odontoglossum coronarium brevifolium, one carrying five and the other six spikes. Odontoglossum Lambeauianum Lyoth, with brilliant red and blush flowers, was shown by Messrs. Charlesworth and Co. Mr. W. P. Bound, gardener to Sir J. Colman, Bart., Gatton Park, Reigate, showed a group of home-raised orchids, that included phaio-calanthes, spathoglottis, Cymbidium Lady Colman (A.M.), and the very interesting and beautiful Dia-cattleya Colmanæ (A.M.), the latter the result of crossing Diacrium bicornutum and Cattleya intermedia nivea.

FRUIT AND VEGETABLE COMMITTEE.

One of the most wonderful exhibits of potatoes ever set up was staged on this occasion by Messrs. Sutton and Sons, Reading. The attractiveness of the exhibit was beyond question, while its interest and educational value were both very high. There were 183 dishes of beautiful exhibition tubers, representing all the leading varieties, and there were 118 dishes of "seed" potatoes. The collection of tubers of species, hybrids, and rare varieties was exceptionally interesting, and we regret that in the present issue limits of space prevent further reference to this Gold Medal group.

Mr. Roupell, West Norwood, showed dishes of well-kept Smart's Prince Arthur, Newton Wonder, and Chelmsford Wonder apples. Messrs. T. Rivers and Son, Sawbridgeworth, Herts, set up quite an orange grove along the front of the stage; the plants were of various sizes, but all were carrying fine crops of fruit, while in the front centre of the group there was a quantity of picked fruits. This method of growing oranges in pots is one to be commended on the lines of orchard house fruits.

AWARDS OF MERIT.

To Lycaste Skinneri Orion, from Mr. J. Bradshaw, The Grange, Southgate; Cymbidium Lady Colman, and Dia-cattleya Colmanæ, from Mr. Bound, gardener to Sir J. Colman, Bart., Gatton Park, Reigate; Sophro-lælio-cattleya Antiochus rubra; and Cyclamen Salmon King, from Messrs. Hugh Low and Co., Bush Hill Park, Enfield.

MEDALS.

Gold.—To Messrs. Sutton and Sons, Reading, for potatoes.

Silver-Gilt Flora.—Mr. Whitelegge, gardener to J. Bradshaw, Esq., Southgate; Messrs. J. Veitch and Sons, Chelsea; Mr. W. H. Page, Tangley Nurseries, Hampton.

Silver-Gilt Banksian.—Messrs. H. Cannell and Sons, Swanley; Messrs. R. and G. Cuthbert, Southgate; Messrs. Sutton and Sons, Reading (primulas); Messrs. H. Low and Co., Enfield (carnations, etc.); Mr. W. Seward, Hanwell.

Silver Knightian.—Messrs. T. Rivers and Son, Sawbridgeworth.

Silver Flora. — Messrs. W. Cutbush and Son, Highgate; Mr. E. A. Hambro, Hayes; Messrs. H. B. May and Sons, Edmonton. Mr. R. E. Gill, Tremough, Cornwall; Messrs. Sander and Sons, St. Albans; Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham.

Silver Banksian.—Messrs. Stanley and Co., Southgate; Messrs. H. Low and Co., Enfield (orchids); Sir Jeremiah Colman, Bart., Reigate; Messrs. Moore and Co., Rawdon, Leeds.

Bronze Banksian. — Mr. L. R. Russell, Richmond; Messrs. T. S. Ware, Feltham; St. George's Nursery Company, Hanwell; Mr. Roupell, Harvey Lodge, Roupell Park, Norwood.

ANNUAL MEETING.

In the unavoidable absence of Sir Trevor Lawrence, Bart., the treasurer, J. Gurney Fowler, Esq., presided at the annual meeting, which was held during the afternoon in the lecture hall. The hall was filled to its utmost capacity, and with so satisfactory a report and financial statement as were presented by the council, it is not surprising the proceedings should have been comparatively short and of the most pleasant character. The report was taken as read, and

The Chairman, in moving that it should be received and adopted, passed under review the work that had been accomplished both in London and at Wisley during the past year. He referred to the splendid exhibitions that had been held in the Temple Gardens, Holland House, and the Horticultural Hall, to the continued success of the fortnightly meetings, and to the opening of the laboratory at Wisley. In dealing with the financial results of the year's work the Chairman showed that they were thoroughly satisfactory. They had, he said, been able to carry on their work in the most efficient manner, to make considerable additions to the invested funds, to set aside the sum necessary for depreciation both at Westminster and Wisley, and to carry forward a balance of between £6,000 and £7,000. The expenses of the "Journal" were, he said, comparatively heavy, but that was owing to their having published the report of the Hybrid Conference, and to their having provided for the cost of the part of the "Journal" now in the press.

Sir J. T. D. Llewelyn briefly seconded the motion for the adoption of the report and financial statement, and in the course of his remarks congratulated the society on having a fully equipped laboratory at Wisley in which to investigate the many scientific questions associated with horticulture.

Mr. H. J. Elwes, F.R.S., V.M.H., congratulated the society on the financial results of the past year, and expressed the opinion that a much larger sum should have been spent on the library. He thought also the library should receive more attention from the council, and that Mr. Hutchinson, who has charge of it, should be raised to the status of librarian. Mr. Elwes further expressed his opinion that the fund now being raised for founding lectures in memory of the late Dr. Masters should be devoted to the library.

The Rev. G. H. Engleheart, V.M.H., referred to the awards made at the fortnightly meetings, and said that, in his opinion, the medals were distributed too freely.

Mr. A. W. Sutton, V.M.H., said it was most important the medals should only be awarded for contributions of a high degree of excellence.

Rev. J. H. Pemberton suggested the monthly publication of the "Journal."

Mr. R. Wallace pointed out that the utmost care was displayed by the committees in the awards of medals, and as the result of raising the standard numbers of collections at each meeting received simply a vote of thanks.

The Chairman having briefly referred to the points raised, the Rev. W. Wilks said there was a grave objection to devoting the Masters' Memorial Fund to the library. The library was a memorial to Dr. Lindley, and was known as the Lindley Library, and, therefore, could not well be a memorial to Dr. Masters.

The chairman, having announced that under the bye-laws a ballot for officers and the four members of council was not necessary, a hearty vote of thanks was accorded him, and the proceedings were brought to a close.

Horticultural Club.

The annual meeting and dinner of this club was held at the Hotel Windsor on Tuesday evening. Mr. H. J. Veitch, V.M.H., presided at both functions, in the absence of Sir John T. D. Llewelyn through ill-health.

As is customary, the attendance of members was small at the annual meeting. The honorary secretary, Mr. E. T. Cook, having read the minutes of the previous annual meeting, presented the report and balance-sheet for the past year. Both were of a most satisfactory character, and were unanimously adopted, for the losses that had been sustained from deaths and resignations had been more than counterbalanced by the election of new members. During the year Sir Albert Rollit and Sir Frank Crisp had been elected vice-presidents. Reference was made to the papers that had been read at the monthly meetings during the year, and these, it was said, and properly so, were of a high order of excellence.

The several officers and members of committee were re-elected, and Professor Farmer was elected a vice-president.

At the annual dinner Mr. H. J. Veitch was supported by Sir Albert Rollit, Sir Frank Crisp, Mr. W. A. Bilney, and other gentlemen well known in horticultural circles, and there were about seventy members and their friends present, the proportion of ladies being somewhat larger than usual.

The Chairman, in proposing the toast of "The Horticultural Club," expressed regret that Sir John T. D. Llewelyn was unable to attend, and said that this was the first time since he was elected many years ago that Sir John had been absent from the annual dinner. He was very pleased to say the club was in a most flourishing condition, the number of members was well sustained, the financial position was most satisfactory, and the work of the past year had been most successful.

Professor Farmer responded, and in doing so directed attention to the immense value of the club in bringing scientific and practical horticulturists into close association.

Rev. J. H. Pemberton submitted the toast of "The Royal Horticultural Society," and in the course of his speech referred to the splendid work that is being done by the society, and expressed a hope that some day it would have a Rose Committee.

Sir Albert Rollit acknowledged the toast in a graceful manner, and said he regarded the success of the society as largely due to the combination of amateurs, practical growers, and business men.

The remaining toasts were "The Chairman," proposed by Sir Frank Crisp, "The Honorary Secretary," proposed by Mr. H. J. Veitch, and "The Visitors," proposed by Mr. W. A. Bilney, the last being acknowledged by Mr. P. Anderson Graham and Colonel Lewis.

The musical arrangements were under the direction of Mr. Frank Morrison, and these contributed materially to the evening's enjoyment.

Birmingham Gardeners' Association.

The spring session was opened on January 27 by the president, Mr. Walter E. Collinge, M.Sc., F.E.S., with an address upon "The Action of Frost on Plant Life."

There was a good attendance, and, after the minutes had been read, the Chairman introduced the lecturer, who remarked that ere long he would be leaving Birmingham, but said that whenever he might revisit the city he would certainly try to attend the association's meetings.

Adverting to his subject matter, Mr. Collinge stated that we were now rapidly approaching the season of the year when fruit growers and others stood in great dread of the early spring frosts. Almost every year thousands of pounds' worth of fruit and vegetables were ruined owing to the lack of protective measures. As is well known, the air contains moisture; at a considerable elevation this becomes condensed and forms clouds. If condensation takes place actively, and the temperature is above freezing, rain is produced, or snow if the temperature is below freezing point. When the moisture close to the earth is condensed at temperatures above freezing dew is formed; if below, frost is deposited. We may, therefore, define frost as the moisture of the air close to the earth's surface, condensed below freezing point temperatures upon plants and other bodies. Wherever frost is deposited, the plant or other body must possess temperatures below freezing point. In the case of plants the temperature is reduced by radiation, and the evaporation of moisture.

Mr. Collinge next indicated the conditions most favourable to frost, and the conditions under which it was less likely to do serious damage to plant life. The action and effect of clouds were described at some length, and likened to a blanket over the stratum of lower air. The action of frost on plants is to cause an expulsion of moisture from the inter-cellular spaces in the plant tissues, which causes drooping of the leaves, as the moisture is not replaced because the root is chilled. Apart from the advantages to be derived from geographical situation, the grower must depend upon artificial appliances, and very many and varied these are. Screens formed of cloth, laths, or glass, covering the plants with straw, smudge fires, and many other devices have been suggested. After examining these different appliances the essayist stated that, acting on his advice, an Evesham fruit-grower had recently patented a special stove and fuel, which, in his opinion, was far superior to anything yet put forward. It had been tried in Worcestershire, and it was found that twenty-one stoves per acre were sufficient to fight nine degrees of frost. One man was sufficient to ignite and look after such fires on twenty acres of orchard. The cost of fuel was about 15s. per acre, and the fires burnt about six hours. The inventor claims for these stoves that they not only warm the atmosphere, but that they also give off a good smoke, which acts as a screen, and so protects the fruit from the sun's rays. In the lecturer's opinion there remained little doubt that ere long British fruit-growers would be as successful as those in the United States in protecting their crops and trees from the late spring frosts, which would mean much to the fruit-growing industry of this country.

The foregoing is the gist of a lengthened, deeply interesting, and instructive address that gave rise to practical remarks, more or less coincidental with those of Mr. Collinge, and in which Messrs. Walter Jones, T. Humphreys, W. Gardiner, C. R. Bick, C. H. Herbert, and A. R. Christie, severally took part. A hearty vote of thanks was accorded Mr. Collinge. Several new members were elected. Mr. A. Webb, gardener to Byng Kenrick, Esq., Metchley Lodge, Edgbaston, was awarded a cultural certificate for three plants of Primula stellata.

Manchester Horticultural Improvement Society.

At the fortnightly meeting, held at the Memorial Hall, Albert Square, Mr. F. Robinson presided, and Mr. H. J. Clayton, consulting horticulturist, Wharfe Bank, Ulleskelf, York, gave a very interesting and instructive lecture on "The Culture of Hardy Fruit." The lecturer imparted some useful hints on the culture of these fruits, such as should prove valuable to the members present. Several members having spoken, Mr. Clayton was accorded a hearty vote of thanks for his lecture.

Reading and District Gardeners' Mutual Improvement Association.

One of the most interesting meetings held in connection with the above association was the one taken by Mr. T. J. Powell, of Park Place Gardens, Henley-on-Thames, who gave a practical demonstration on the artistic arrangement of flowers. The first object lesson placed before the members was the decorating of a dinner table. The table had been laid to seat twelve persons, complete with cutlery, glass, candelabras, and silver vases. The central display consisted of an arch around the pillars of which was trailed asparagus Sprengeri, intermingled with sprays of Gloire de Lorraine begonia. Under the arch was a splendid plant of Salmon Queen cyclamen. At intervals were placed smaller arches decorated with similar foliage and flowers. The whole presented a most charming effect in pink. By request Mr. Powell followed with the making of a lady's spray and gentleman's button-hole with violets, also a small hand bouquet with the same flower. When these had been finished the time had arrived for closing the meeting, and it was proposed, seconded, and carried unanimously that the meeting should be adjourned. Therefore, the subject will be brought on again towards the latter part of this session, thus showing that practical demonstrations are exceedingly popular, and tend to make such societies a benefit to both old and young members of the gardening profession.

Mr. H. Wilson, The Gardens, Lower Redlands, staged a magnificent collection of apples, consisting of the following varieties: King of the Pippins, Golden Noble, Annie Elizabeth, Blenheim Orange, Potts' Seedling, Warner's King, Bismarck, The Queen, etc. The association's certificate of cultural merit was awarded to the exhibit. A hearty vote of thanks was accorded to Mr. Powell for his lecture, to Mr. Phillips for use of glass and cutlery, and to Messrs. Bracher and Sydenham for candelabras, silver vases, etc.

Sutton (Surrey) Chrysanthemum and Horticultural Society.

The fourteenth annual meeting of this energetic society was held on Friday, January 31, at the Cock Hotel, Sutton, Mr. A. Spencer Jackson presiding, and a very satisfactory report was submitted. The balance-sheet showed receipts (including previous year's bank balance), £114 17s., and expenditure £105 10s. 7d., leaving a balance of £9 6s. 5d. in hand. The Aston Silver Cup for twenty chrysanthemum blooms, won outright at the last show, is being replaced by the generosity of Mr. E. J. Holland, C.C.

The election of officers for 1908 resulted as follows: Major E. F. Coates, M.P., re-elected president; Mr. A. Spencer Jackson, chairman; Mr. H. A. Cooke, hon. secretary and treasurer; and Mr. A. W. Southard was elected vice-chairman. Mr. C. Osman, who had occupied the vice-chair for many years, retires with the thanks of the committee and members. Messrs. T. E. Roberts and V. R. Bromage were added to the committee.

Liverpool Horticultural Association.

The adjourned annual general meeting of this association was held on Saturday last at the Common Hall, Liverpool.

The meeting was adjourned to enable a statement of the accounts and a circular to be sent to all subscribers and members, drawing attention to the state of the finances of the society, chiefly through the loss in entrance fees at the autumn exhibition, which was held in a drill hall instead of the usual central St. George's Hall.

The grave position of the society only attracted a small attendance. Mr. T. Foster, who occupied the chair, briefly laid the position of affairs before the meeting, and requested the opinions of those present on the position of the association, and on the question of what shows should be held during the current year. A few offers of assistance were made, but, after considerable discussion, it was decided to hold only the autumn show.

The officers were re-elected, with their sanction to a considerable reduction in their salaries. A hearty vote of thanks was accorded to the officers and committee for their services during the past year.

Cardiff Gardeners' Association.

The fortnightly meeting of the above association took place at the Philharmonic Restaurant, Mr. H. R. Farmer presiding. The evening was devoted to "Questions" by the members. Many questions were put forward, and these created an interesting discussion. Some questions were: "What are the reasons we do not get better results from the hardy fruit garden?"; "Is there any remedy for the cucumber spot?"; "What are the advantages of summer and winter pruning of fruit trees?"; "What is the cause of Foster Seedling grapes cracking?"; "What is the best remedy for eelworm?"

These questions were thoroughly and practically discussed, with the exception of "cucumber spot," no one being able to suggest anything very effectual as a remedy.

The annual dinner of the society took place in the same building on January 29, when E. Batram, Esq., took the chair, and fifty members spent a most enjoyable evening. After dinner the usual toast list was gone through, and the members were entertained with a good programme of music.

Woolton Chrysanthemum Society.

The annual meeting was held at the Mechanics' Institute on Friday, the 1st inst., when Mr. Neil Gossage occupied the chair. The report gave evidence of a good year's work. The statement of accounts was also satisfactory, the income, including subscriptions, £77 17s. 6d.; advertisements, special prizes, and interest, £32 18s. The expenditure included prize money, £68 18s. 6d.; printing and hire of halls, £14 1s.; music, judges' fees, etc., £25 18s. 3d.; leaving a gain on the year's working of £1 17s. 9d., and making a total balance in the bank of £34 16s. 1d. Reference was also made to £3 15s. contributed to the Liverpool Auxiliary of the G.R.B.I. The officers elected are: Messrs. N. Gossage, hon. treasurer; R. G. Waterman, Woolton, assistant hon. treasurer; and W. D. Skinner, Gateacre, hon. secretary. A vote of thanks to the chairman terminated the proceedings.

Beckenham Horticultural Society.

On Friday week Mr. J. B. Hunter, of Elmhurst Gardens, Bickley, gave a lecture on "Peach Culture." There was a good attendance, and the practical instruction was very closely followed, and evoked a very lively discussion. A tree suffering from "silver leaf," under the charge of the lecturer, has been completely cured by lifting the roots and applying artificial manures liberally, i.e., Peruvian guano, basic slag, etc., and another case was made known in the discussion where it was said a cure was effected by a liberal application of lime to the roots. At the close a hearty vote of thanks was accorded Mr. Hunter.

Redhill and Reigate Gardeners' Society.

This Mutual Improvement Association held its fortnightly meeting, as usual, at St. Matthew's Parish Rooms, Redhill. A capital paper was read by Mr. W. Turnham (representative of the Reading Gardeners' Association) on "Trenching and its Advantages." A lively discussion ensued, and from it much valuable information was obtained. A very hearty vote of thanks was accorded Mr. Turnham for the admirable way in which he dealt with his subject.

GARDENING ENGAGEMENTS.

Mr. R. Armer, for several years foreman gardener, Scott Park, Burnley, has been appointed superintendent of the Weston-super-Mare Parks and Gardens.

Mr. Ernest Paiton, from Queen's Park, Burnley, succeeds Mr. R. Armer at Scott Park, under Mr. R. Murray, superintendent of Parks and Gardens, Burnley.

Cestrum (Habrothamnus) aurantiacum.—The qualities of this charming greenhouse plant are by many gardeners decidedly underrated. Its easy culture and vigorous free-flowering habit, strongly recommend it both for pot culture and for planting out in the greenhouse or conservatory. When trained to a wall or pillar the effect of this species is very pleasing. The bright orange-yellow flowers are freely produced, usually commencing about July and August, and the plants often remaining in bloom till late in October. Propagation is easily effected by cuttings in the spring. It is a gross feeder, and requires plenty of room to develop its roots. It will grow and flourish in practically any soil, though a good mixture of loam, peat, and sand suits it best. During the summer liquid manure may be liberally applied. After flowering the plants should be pruned hard back to encourage the production of new growths, as the old ones do not flower well a second time.—C. H. MIDDLETON, Kew.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

BEAUTIFUL TREES AND SHRUBS.—R. H. J., Cheltenham: A very handy little book on this subject, well illustrated, and not too large for one's pocket, is "The Book of Shrubs," by Mr. G. Gordon, V.M.H., (2s. 6d., John Lane, Bodley Head.)

PELARGONIUM LEAVES.—A. E. M., Carisbrooke: The weed killer would quite account for the trouble. An overdose of the fertiliser would not act in the same way; it would, as in the case of an overdose of guano, kill the roots, and cause collapse.

SMALL GARDENING DICTIONARY.—G. C., Sutton-in-Ashfield: The best work of the character you desire is Mr. Sanders' "Encyclopædia of Gardening," which may be obtained, post free, for 3s. 10d., from Messrs. W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.

SULPHIDE OF POTASSIUM.—F. B., Exeter: It is probably not yet fully understood that sulphide of potassium deteriorates when exposed to the air. It should always be kept in an air-tight vessel when stored; glass jars or bottles, well corked, make suitable receptacles.

YELLOW SWEET PEAS.—S. J. S., Buckingham: There are not any really yellow sweet peas, but there are several varieties with a yellow shade of colouring, and the chief of these are Mrs. Collier, Hon. Mrs. E. Kenyon, Dora Breadmore, Clara Curtis, Primrose Waved, Burpee's Primrose Spencer, and James Grieve. How far these last four differ from each other we are not prepared to say at present.

MAGNOLIA GRANDIFLORA.—T. G., Parkstone: The branches that are extending beyond the limits assigned them should be cut back close to where they start from a stout stem. Do not cut or trim the branches level with the height of the wall, but cut out the smaller extending branches as suggested, and bend down and tie in a few others so that no gaps appear. The work should be done at once.

QUASSIA MIXTURE.—N. E. G., Wycombe: Immerse one pound of quassia chips in three or four gallons of water for twenty-four hours; then remove them, and boil them for an hour in as much water as can be conveniently used. Meanwhile dissolve one pound of soft soap in boiling water. Add the dissolved soft soap to the strained extract from the boiled chips, and to the water in which the chips were previously soaked. Add sufficient clear water to make up ten gallons of mixture

STOVE FERNS.—K. D., Kidderminster: The newer nephrolepis, N. Whitmani, N. Piersoni, and N. todeaoides are extremely beautiful stove ferns, and grow to a large size. A few others of attractive character are Davallia fijiensis, D. dissecta, D. polyantha, Adiantum æthiopicum, A. amabile, A. cardiochlæna, A. Farleyense, A. macrophyllum, A. Lathomi, Asplenium longissimum (for baskets), Goniophlebium subauriculatum (baskets), Phlebodium aureum, Platycerium grande, Lygodium dichotomum (climber), and most of the gymnogrammas, notably G. schizophylla gloriosa.

PEACH TREES ON WALLS.—W. H., Tenterden: The work should be done at once because the flower buds will soon be swelling up, and if pruning and training is left until then there is a real danger of these buds being broken off or damaged. Further, the rising sap is being wasted if it invigorates those shoots that have to be removed. Then also cleaning is best done while the trees are quite dormant; indeed, there is so much work to be done now in the garden that all pruning, training, and cleaning should have been accomplished before this date, so as to leave one free for the business of the moment.

GOOSEBERRIES.—Machany: Excellent varieties of gooseberries for market purposes are Whinham's Industry, Keepsake, Crown Bob, Whitesmith, and Lancashire Lad. Smaller, but of good flavour is Early Sulphur, while for dessert purposes Langley Gage is hard to beat. The quantity of plants needed per acre depends entirely upon the size of the plants purchased and whether the land is to be devoted solely to gooseberries. Planted two feet apart each way, allowing room around the sides, about 10,000 plants will be needed per imperial acre. If there is more land to be filled subsequently, it is a rather good plan to secure two-year-old plants, and place them thus closely together, removing alternate plants the following season and alternate rows the subsequent season, so as to eventually leave the plants four feet apart. We incline to the practice of placing the two-year-old plants three feet apart each way, or about 4,840 per acre, and plant lettuces, or sow turnips, spinach, dwarf beans, beet, or other low-growing and quickly-maturing crop between the rows for the first year or two. Such intercropping keeps the ground well worked and clear of weeds. Two-year-old gooseberries can be purchased true to name at 3s. per dozen, and probably very much cheaper than this in quantity. Your best plan would be to advertise in our columns for tenders for the quantities you need.

NAMES OF PLANTS.

E. H., Taunton.—Cyclamen coum.

S. W. B., Lincoln.—We feel quite sure, from the description, that your plant is Agave americana variegata.

L. A. C., Bath.—1, Abutilon Thomsoni; 2, Asparagus Sprengeri; 3, Phrynium variegatum; 4, Saintpaulia ionantha.

N. F., Guildford.—1, Symphoricarpus racemosus; 2, Helleborus orientalis; 3, Hamamelis arborea; 4, Gaultheria procumbens.

G. S. L., Northampton.—1, Thuia gigantea; 2, Cupressus Lawsonianus; 3, Cedrus atlantica; 4, Cestrum elegans; 5, Moschosma riparium; 6, not sufficient for identification.

Index to Volume of the Gardeners' Magazine," 1907.—Those of our readers who have preserved the 52 numbers of the GARDENERS' MAGAZINE for 1907 with a view to having them bound for future reference, can obtain Handsome Cloth Binding Cases from the publishers, 148 and 149, Aldersgate Street, London, price 2s. post free. The index with title page may be had —price 2d., or by post 2½d., and the volume bound complete, price 12s. 6d., by post, 13s. 4d.

Guides to Garden Work.—The publishers of the GARDENERS' MAGAZINE will be pleased to forward a catalogue of their gardening books, setting out full particulars of the contents of each work. The books, which are thoroughly practical, up-to-date and well bound, will be of particular service to those interested in flowers, the greenhouse, or the garden. A copy of the catalogue will be sent post free to any reader who addresses a postcard to the Publishers, THE GARDENERS' MAGAZINE, 14 and 14 Aldersgate Street, London.

GARDENING AND GARDENERS.

The "hot and cold" effusion from the correspondent who signs himself "A Gardener" in your last issue (p. 97) makes strange reading—strange, at least, to the professional gardener. Your correspondent evidently dislikes those who have not been trained as gardeners being dubbed and treated as "labourers," "interlopers," and "outsiders" by the professional. I really wonder if your correspondent is "a gardener" at all in the proper sense of the term, or whether he is one who fears that he would be "driven from the ranks of the profession" if he were to submit himself to a test imposed by qualified gardeners. It is quite as easy a matter for qualified gardeners to pick out those who know or do not know the business, as it is for a doctor, lawyer, bricklayer, or carpenter to tell the trained man from the "quack." The British Gardeners' Association has been established for this particular purpose in the gardening profession, and it is a pity it was not established half a century ago. If such had been the case, the profession would not have been degraded below the level of the ordinary unskilled labourer—as it too often is at the present time.

Your correspondent evidently thinks the gardener ought still to continue to allow himself to be injured by unscrupulous people. He considers that the gardener who endeavours to protect himself, and to obtain a fair remuneration for the many years spent in learning his business is not only "selfish," but also "foolish." He does not say what adjectives he would apply to the "interloper" who has not spent a farthing or an hour in learning gardening or any other business, but who calls himself a gardener. Such an interloper will work for any wage and spoil the prospects of the real gardener. There are plenty such in the gardening ranks at the present day, and they know absolutely nothing in regard to the culture of fruits, flowers, or vegetables. If these men want to go "back to the land," by all means let them go, but not at the expense of men who know what "back to the land" really means in these days.

I should say that the man who pretended to be a gardener when he knew he was not was nothing short of being an imposter and dishonest—an imposter because he wilfully deceives innocent employers, and dishonest because he does not scruple to take money that he has not honestly earned. Your correspondent, I have no doubt, would think these harsh terms, but, if so, he had better give up his present position of "gardener," and let one of these interloping individuals take his place.

Until the gardener takes a greater pride in his profession, and makes a stronger effort to uphold its dignity, he may be perfectly sure that untrained men will continue to "play the cuckoo" with him. The only chance for the professional is to join the B.G.A., and help to make it into a great national organisation of trained gardeners.

J. Weathers, Secretary, B.G.A.

Those correspondents who have criticised my article in the Gardeners' Magazine appear to have missed the essential point of my suggestions as to the method by which the gardener's lot may be improved. Although I attached great importance to education, I suggested that, without unity of purpose, little would be accomplished, and it is in this direction that the B.G.A. offers great opportunities. I also suggested that, in grading the workers, mere ability to pass examinations should stand for little unless backed by experience, and a combination of experience and ability is what gardeners should endeavour to attain.

Your correspondents agree with me as to the advantage of education, and need for improvement, but they differ as to whether unity, education, and the consequent grading of workers would effect the financial improvement that we desire, but whatever the result only good could possibly accrue from the exertions of young men in the direction that I have suggested, and I maintain that a decided improvement of conditions can and will be achieved through the medium of unity and education, for a combination of these will surmount almost any obstacle.

An examination on the lines suggested by your correspondent "L. B.," in order to be more fair to older men, might easily be arranged if so desired; in fact, a very similar test is arranged by the Board of Education for candidates who desire to obtain a pass in the honours stage for horticulture. But we must break away from the sentimental idea that any change will be unjust to older men in the profession, for the process need not be revolutionary. In the main it would be very gradual, and the only men who would have any cause for complaint are those who are at present content to drift through life (as a jelly fish drifts through the sea), with the least possible trouble or exertion on their own part, and it is my desire to arouse in these some recognition of their responsibility.

A. G. B.

Feeding Hyacinths in Glasses.—The consequences of feeding hyacinths growing in vases of water are generally so disastrous that it is much better to leave well alone, and not feed. Chemical manures are so highly concentrated that the merest pinch in a hyacinth glass is likely to cause trouble, and I have never yet met the cultivator who could give pinches small enough to do good, and not harm. If plenty of rain water and a little charcoal are forthcoming, there is no need to attempt feeding with artificials.—E.

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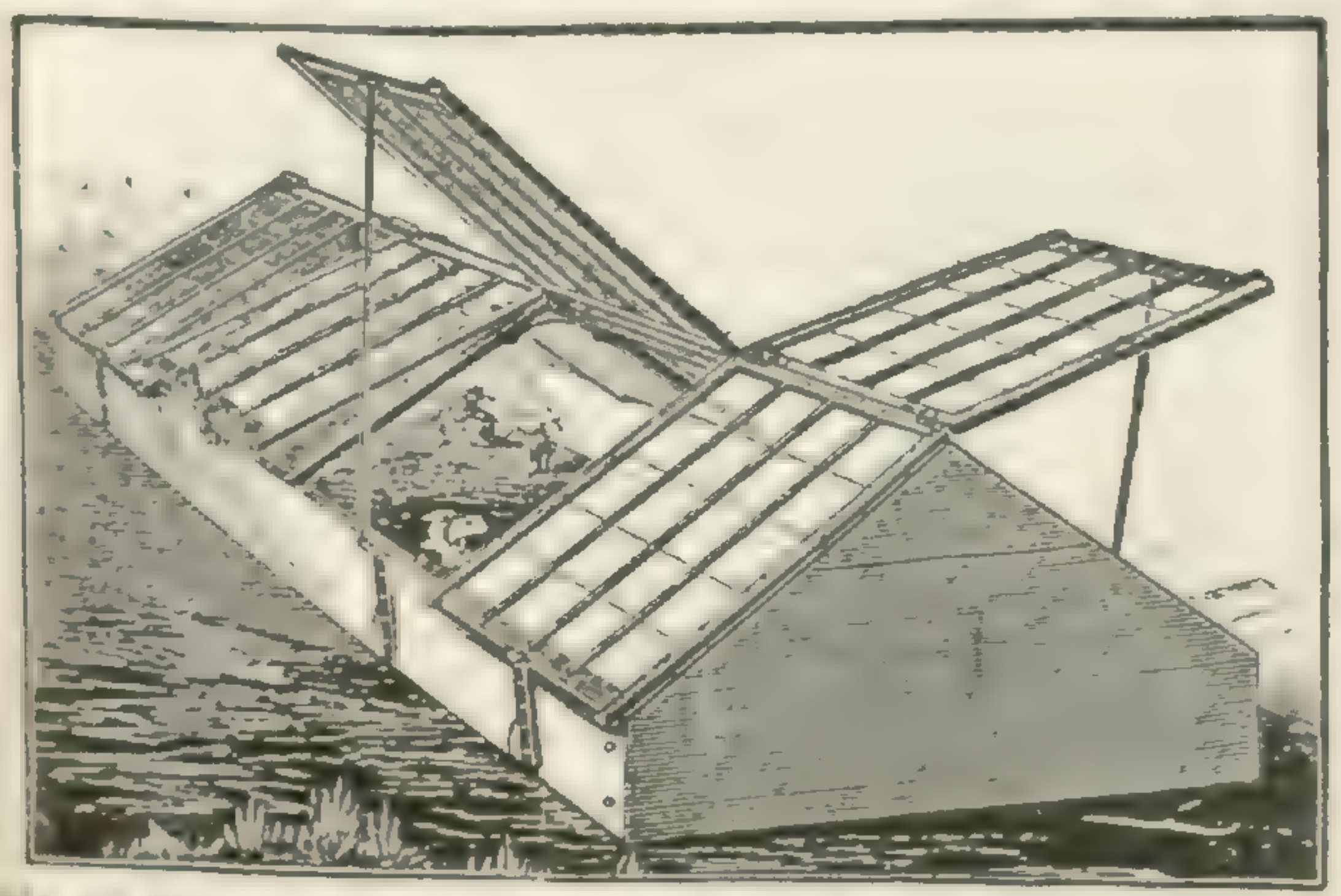

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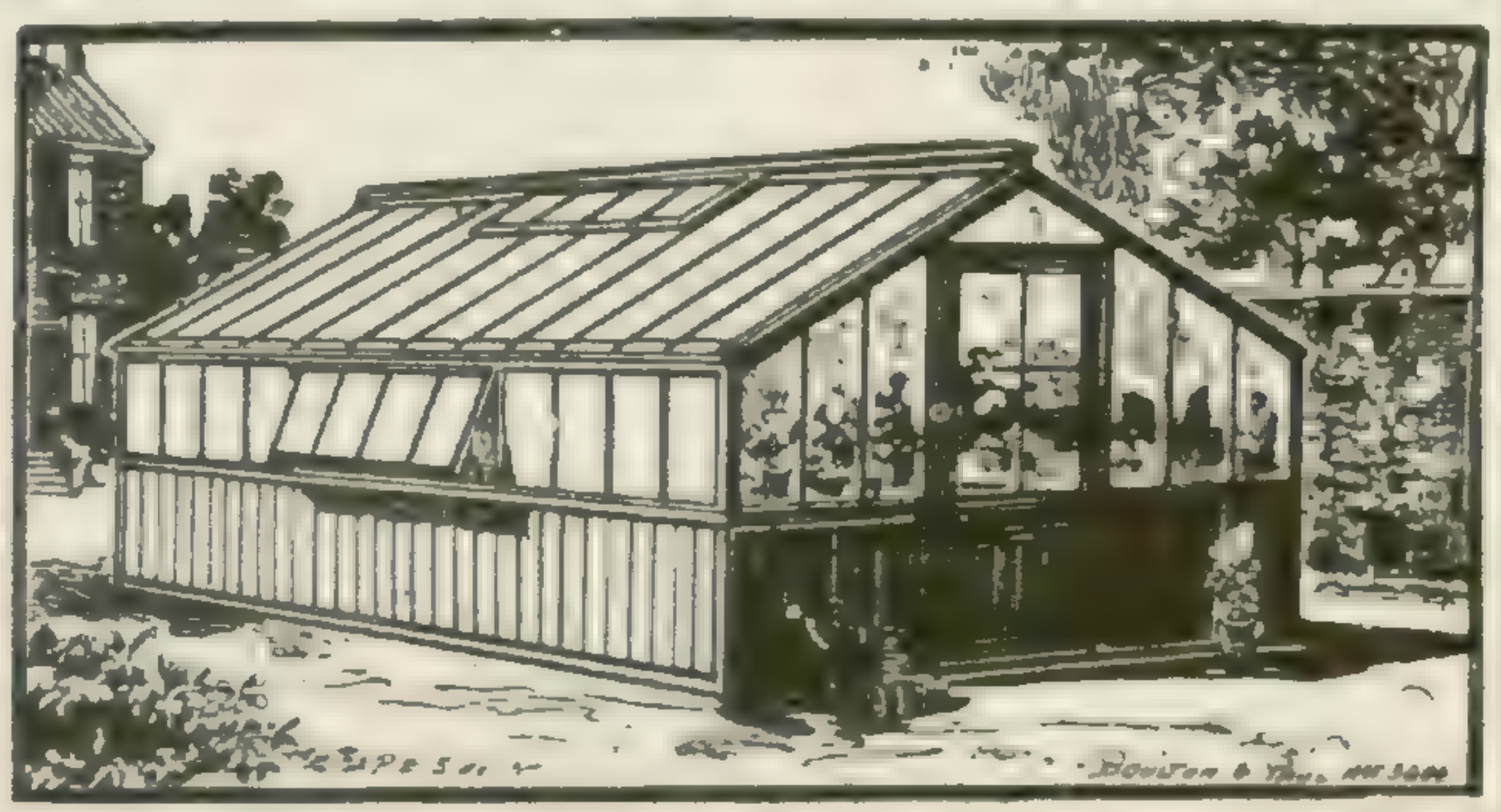

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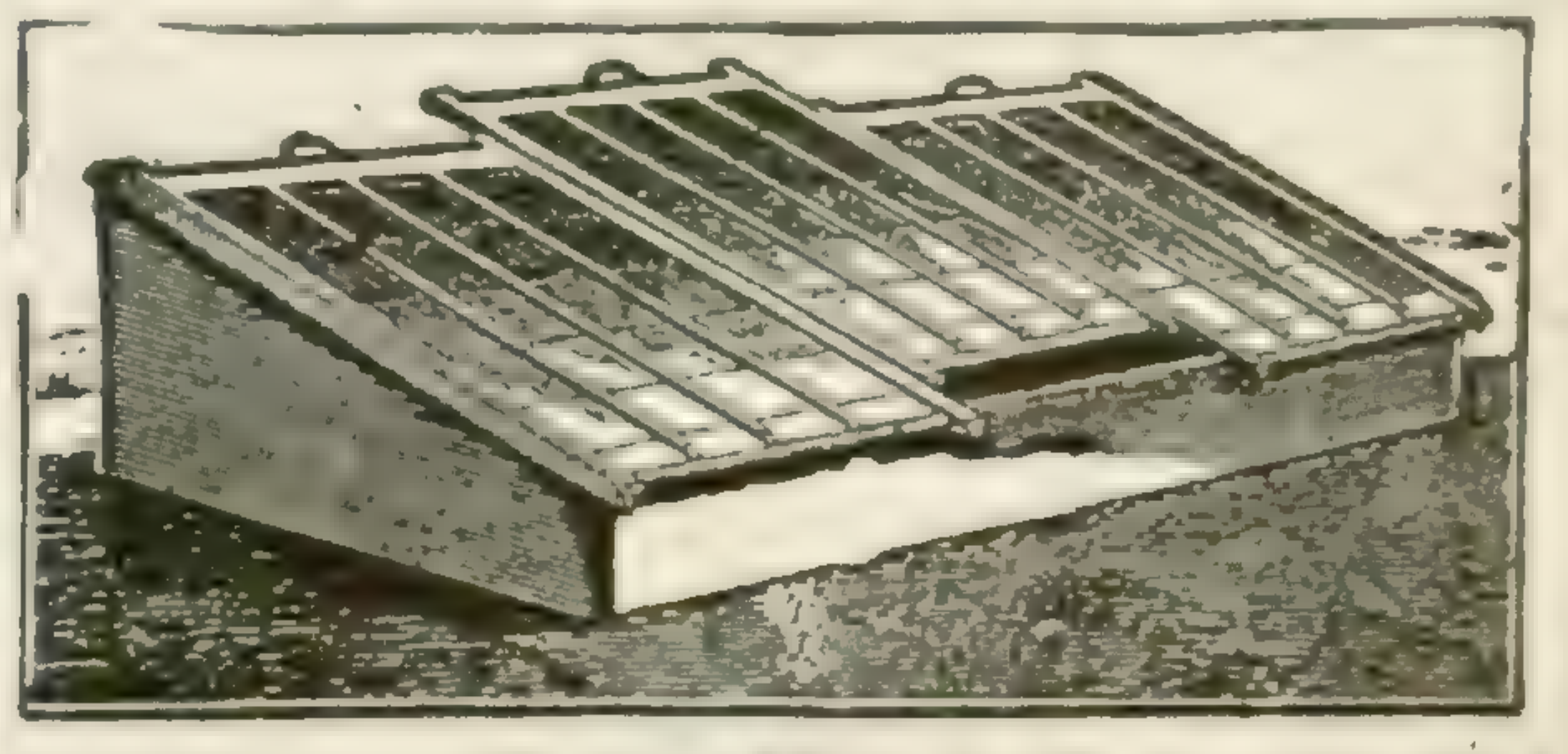

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Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	5 0		8 0
Carnations	per doz. blms.	1 6		3 6
,,	per doz. bun.	7 6		12 6
Cattleyas	per doz.	10 6		12 6
Chrysanthemums	per doz. bun.	10 0		18 0
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	5 0		8 0
Cypripediums	per doz. blms.	2 0		3 6
Daffodils	per doz. bun.	3 0		8 6
Eucharis	per doz.	2 6		4 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	3 0		6 0
Hellebores	per doz.	1 0		2 0
Hyacinths, Roman	per doz. bun.	5 0		10 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 0		5 0
Lilium auratum	per bun.	2 6		3 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		6 0
,, yellow	per doz. bun.	2 0		4 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	2 0		6 0
Odontoglossums	per doz. blooms	2 0		3 0
Pelargoniums	per doz. bun.	5 0		9 0
Pernettya	per bun.	0 6		1 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0

Fruits.

A keen business is being conducted, and prices are very firm.

		s. d.		s. d.
Apples, cooking	per bush.	5 0	to	12 0
,, dessert	per ½-bush.	5 0		14 0
,, American	per barrel	14 0		22 0
Apricots, Cape	per box	1 0		3 0
Bananas	per bun.	5 0		12 0
Cranberries	per case	7 0		9 0
Cob Nuts	per doz. lb.	4 0		5 0
Filberts	per doz. lb.	3 6		4 0
Grapes, Alicante	per lb.	0 8		1 9
,, Muscats	per lb.	3 6		7 6
,, Gros Colmar	per lb.	1 0		2 0
,, Channel Islands	per lb.	0 9		1 0
,, Almeria	per barrel	10 0		16 0
Lemons	per case	8 0		20 0
Oranges	per case	9 0		20 0
Peaches, Cape	per box	7 0		12 0
Pears, French	per crate	8 0		10 0
,, English	per bush.	4 0		8 6
Pineapples	each	2 0		5 0
Plums, Cape	per box	4 0		6 0
Walnuts	per bag	7 0		8 6

Vegetables.

Greenstuffs sell readily at fair prices; sprouts and cauliflowers are in great request, as also are leeks and onions.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	4 0
Asparagus, Paris green	per bun.	3 6		4 0
Asparagus, sprue	per bun.	1 0		1 6
Aubergines	per doz.	1 6		2 6
Beans, French	per lb.	0 8		1 3
,, Madeira	per bskt.	2 0		3 0
Beet	per bush.	1 3		2 0
Brussels sprouts	per ½-bush.	1 3		1 9
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
,, French	per pad	2 3		3 0
,,	per bag	2 6		3 0
Cauliflowers	per tally	6 0		8 0
Celery	per bundle	0 9		1 0
Celeriac	per doz.	1 6		1 9
Chicory	per lb.	0 3		0 4
Cucumbers	per doz.	4 0		9 0
Endive	per doz.	1 6		2 0
Greens	per bag	1 6		2 6
Horseradish	per doz. bun.	9 0		10 0
Leeks	per doz. bun.	1 0		2 0
Lettuce, cabbage	per doz.	1 3		2 0
Mint	per doz. bun.	0 9		1 0
Mushrooms	per doz. lb.	7 0		12 0
Onions, English	per cwt.	3 0		3 6
Parsley	per doz.	1 6		1 9
Rhubarb	per doz. bun.	1 0		1 3
Savoys	per tally	3 0		3 6
Seakale	per doz. pun.	10 0		12 0
Tomatoes	per doz. lb.	2 3		3 6
Turnips	per doz. bun.	2 0		2 6
Watercress	per doz. bun.	0 4		0 6

LONDON POTATO MARKETS.

Trade is good and prices are well maintained.

		s. d.		s. d.
British Queen	per ton	90 0	to	105 0
Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		130 0
Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	95 0		105 0
Langworthy	per ton	90 0		110 0
Lincoln Maincrop	per ton	95 0		115 0
Lincoln Up-to-Date	per ton	90 0		115 0
Royal Kidneys	per ton	80 0		95 0
Reading Giant	per ton	80 0		95 0
Sir J. Llewelyn	per ton	85 0		105 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. FEBRUARY 2 TO FEBRUARY 8.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Feb. 2—Sunday	7 20	32	29	41	29
,, 3—Monday	0 10	37	37	45	30
,, 4—Tuesday	5 30	36	33	42	33
,, 5—Wednesday	3 5	30	32	43	29
,, 6—Thursday	3 10	41	40	52	30
,, 7—Friday	—	40	40	49	35
,, 8—Saturday	7 35	38	37	47	37
Means	3 50	36	35	46	32

DATE. 1908. FEBRUARY 2 TO FEBRUARY 8.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg
Feb. 2—Sunday	—	37	40	42	22
,, 3—Monday	0.03	36	39	42	23
,, 4—Tuesday	—	36	39	42	27
,, 5—Wednesday	—	37	39	41	23
,, 6—Thursday	—	38	39	41	27
,, 7—Friday	—	38	40	41	27
,, 8—Saturday	—	40	40	41	31
Means	(total) 0.03	37	39	41	26

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, February 19.—Society of Arts meeting, 8 p.m.

THURSDAY, February 20.—Royal Botanic Society, Lecture by Mr. George Gordon, V.M.H., on "Gardens of Roses," at 4 p.m.

Linnean Society.—Meeting, 8 p.m.

WEDNESDAY, February 26.—Society of Arts meeting, 8 p.m.

CATALOGUES RECEIVED.

WILLIAM DEAL, BROOKLANDS, KELVEDON.—Seed Potatoes.

JOHN CHARLTON, 35, 37, PANTILES, TUNBRIDGE WELLS.—Seeds.

ALEX. DICKSON AND SONS, LIM., 55, ROYAL AVENUE, BELFAST.—Garden Seeds, etc.

VILMORIN-ANDRIEUX AND CO., QUAI DE LA MEGISSERIE, PARIS.—Seeds and sundries.

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CHAS. SHARPE AND CO., LIM., SLEAFORD AND GRANTHAM.—Seeds.

JAMES COCKER AND SONS, ABERDEEN.—Seeds.

W. T. PRATT, WELLINGTON ROAD, DUDLEY.—Horticultural requisites and fanciers' appliances.

PAUL AND SON, WORMWOOD STREET, OLD BROAD STREET, E.C.—Seeds and plants, sweet peas.

HARRY BARKER, ROSEMOUNT, WHITTLESFORD, CAMBS.—Plants.

RYDER AND SON, HOLYWELL HILL, ST. ALBANS.—Seeds.

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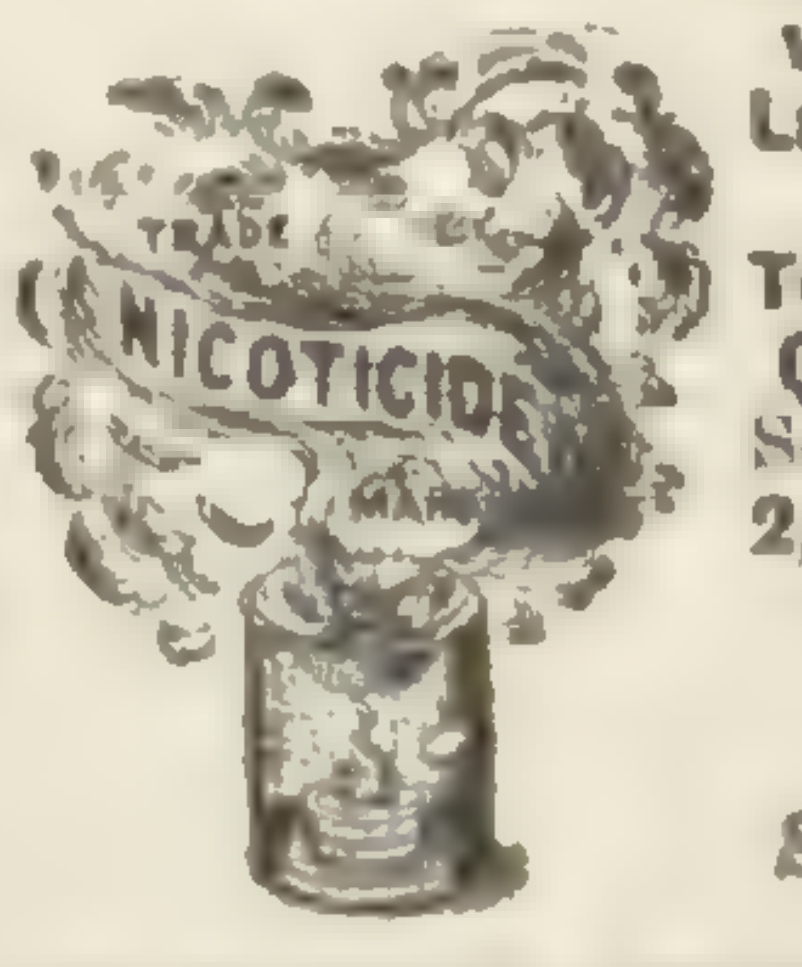

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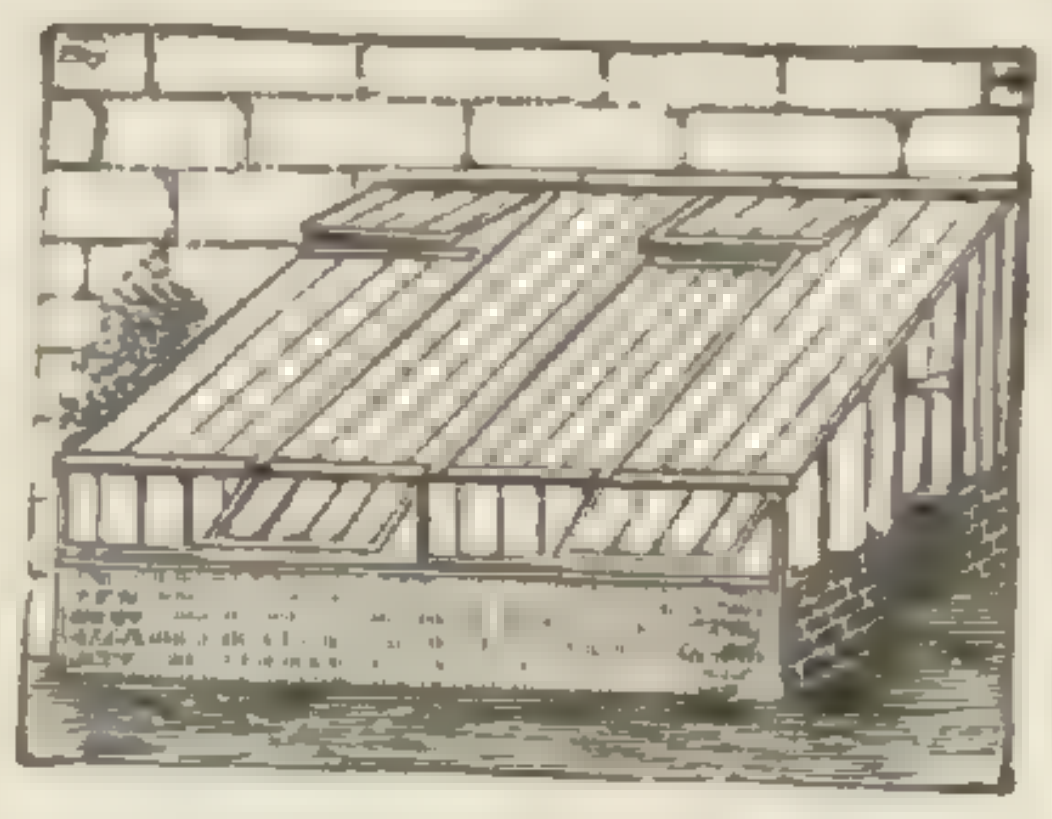

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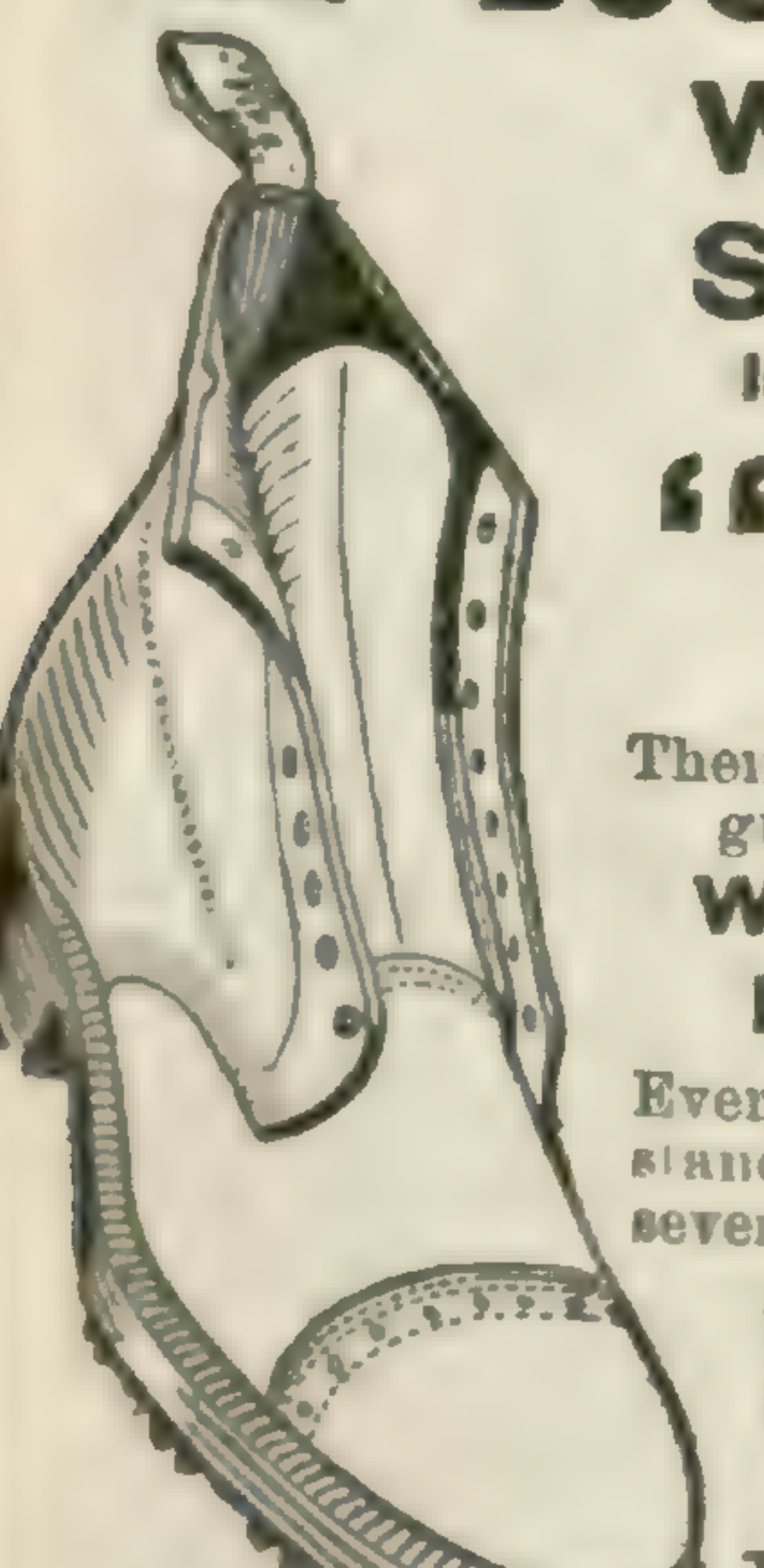

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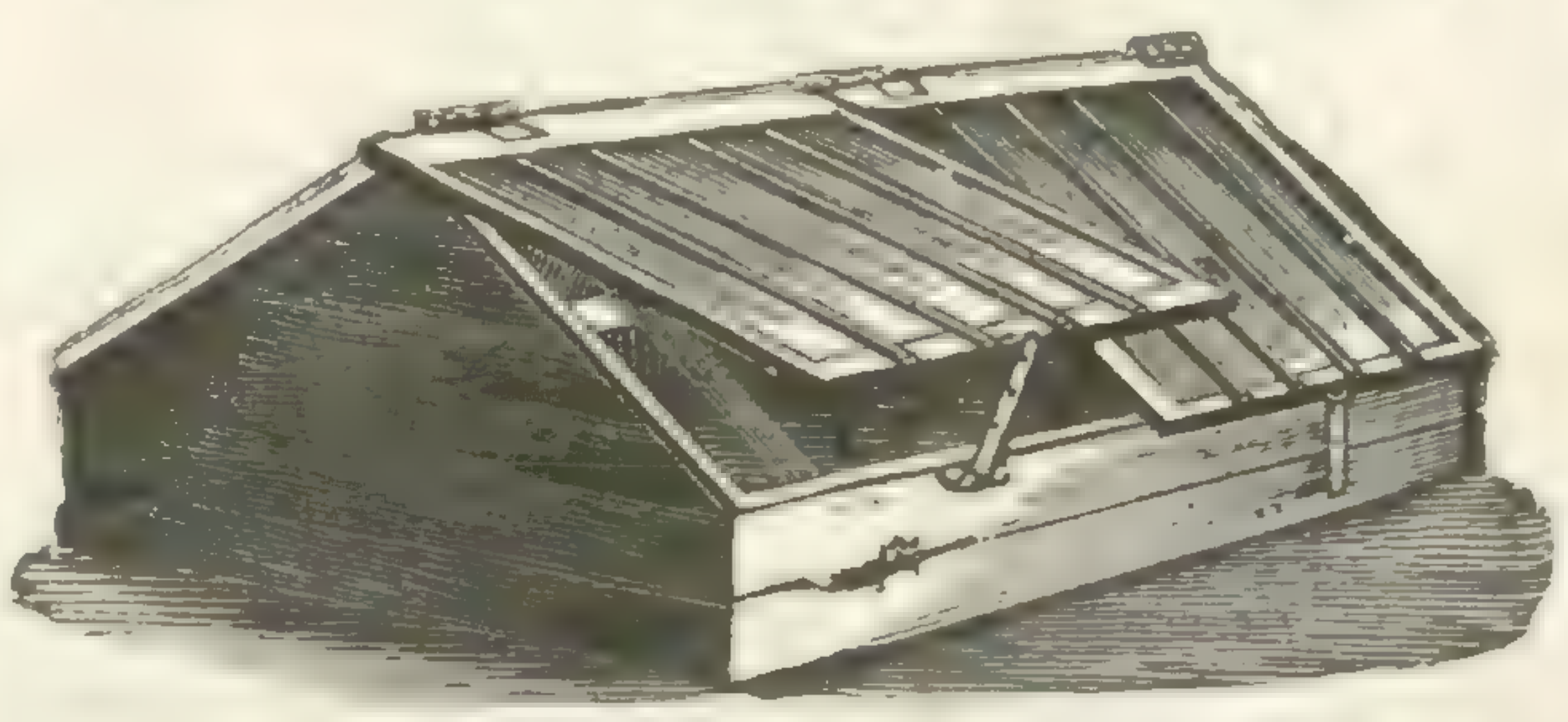

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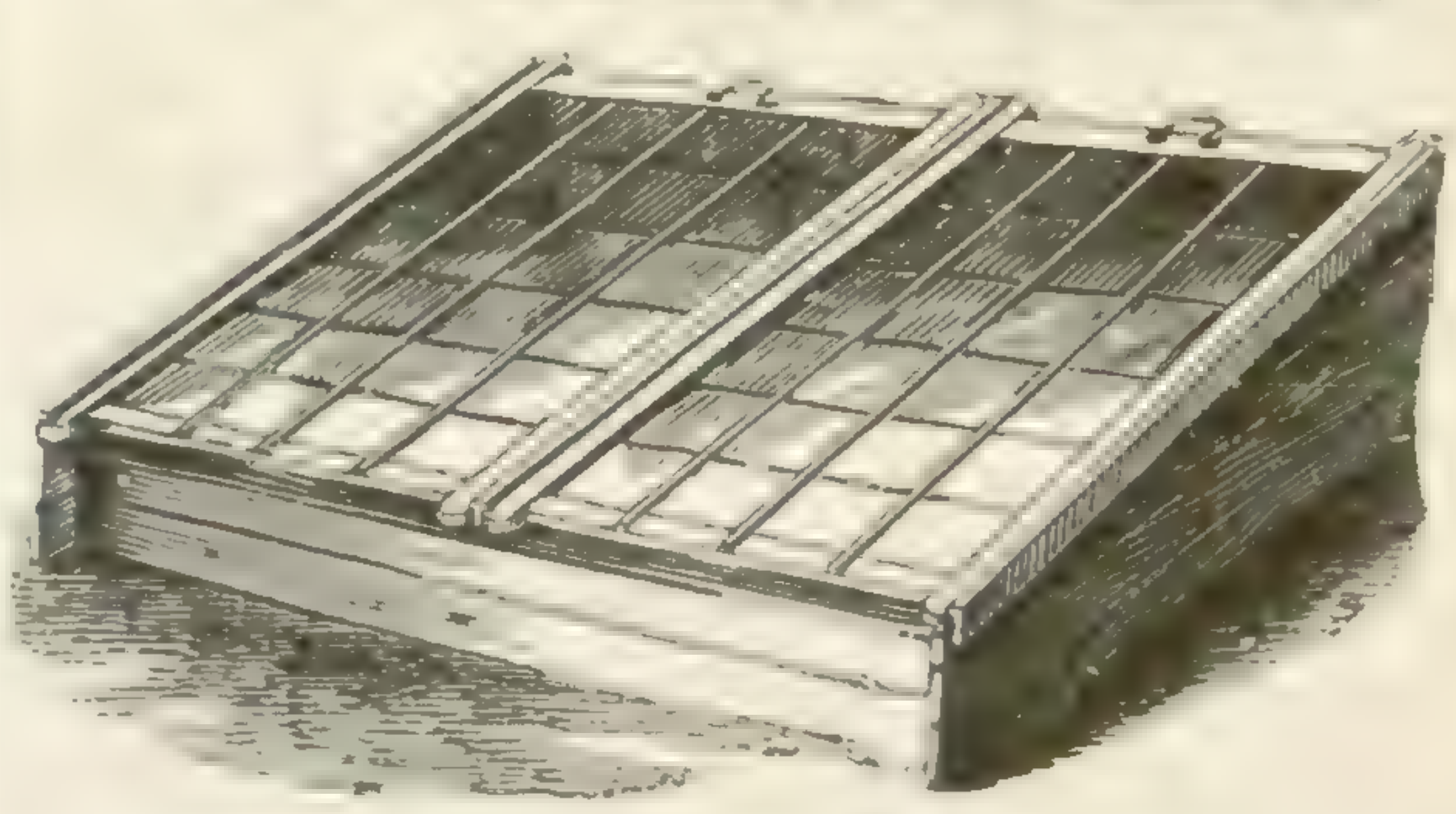

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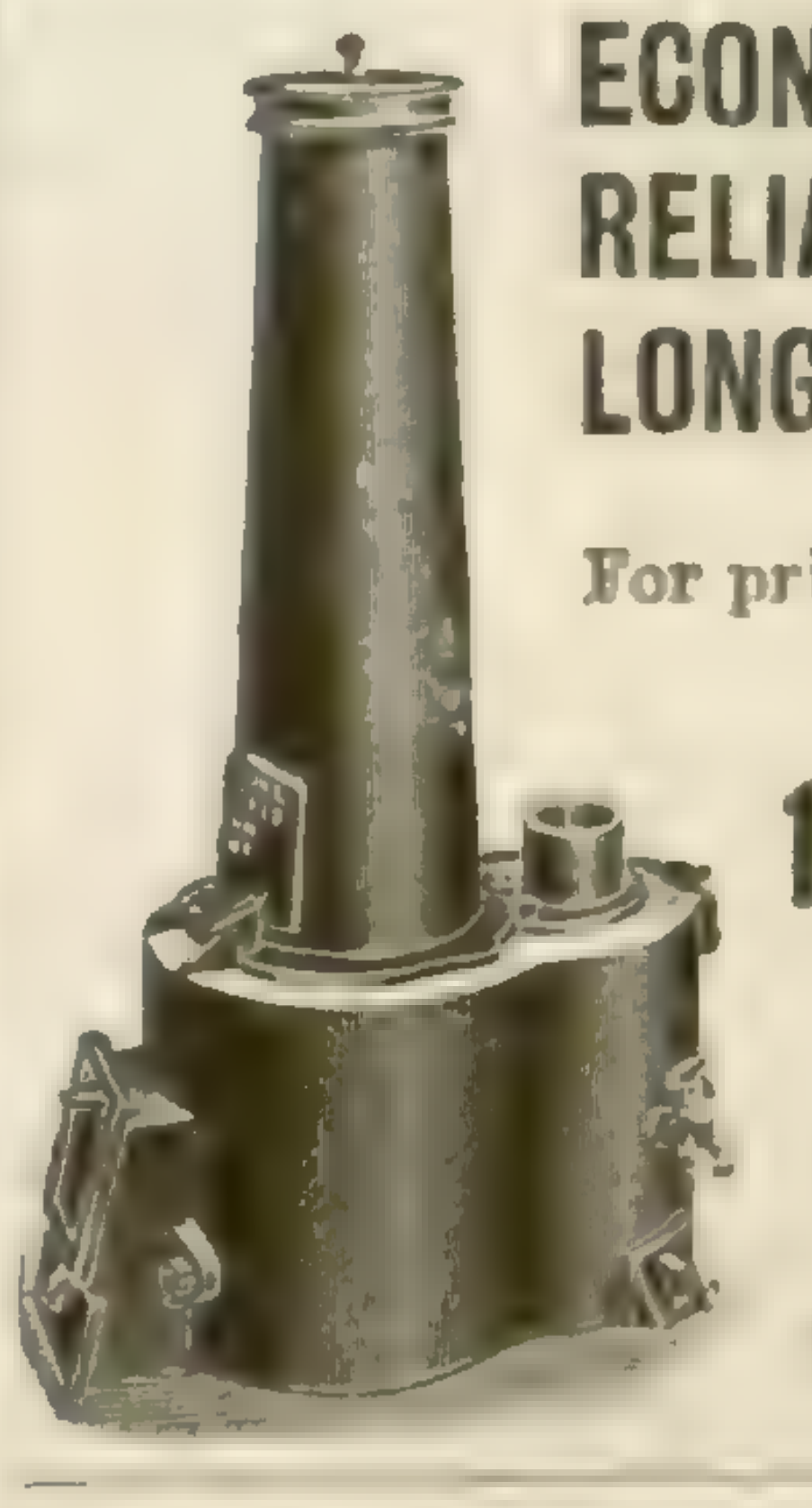

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Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

A LADY highly recommends a strong, active, middle-aged Man as HEAD WORKING GARDENER, who has had the entire management of an estate of 70 acres, gardens included; married, family grown up; 20 years' personal character; leaving through death. F. W., Triangle House, Taplow Common, Taplow, Bucks.

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GARDENER (Head Working where two or three are kept), life experience Inside and Out, in grapes, peaches, stove, and kitchen garden; first-class recommendations, including Tortworth Court, Stoke Park; age 28; married when suited; life abstainer. LUDGATE, The Gardens, Germains, Chesham, Bucks.

GARDENER (Head), life experience in all branches, including indoor and hardy fruits, carnations, kitchen and flower garden, roses, stove, and greenhouse plants, and the general run of a well-kept establishment; excellent references. Apply H. EDWARDS, Beechy Lees, Sevenoaks, Kent.

GARDENER (Head Working, where three or four are kept); life experience in the general routine of well-kept establishments; last place head of four; five years and four months' good reference; disengaged; married, age 40. Address F. FITTALL, 26a, Quill Lane, Putney, S.W.

GARDENER (Head) or FOREMAN in Private establishment or Public Park (home or abroad); 14 years' experience Inside and Out; age 29; married when suited; Kew Certificate. CANTAB, 57, Peel Street, Kensington, W.

GARDENER (Head Working, where three or more are kept), life experience in all branches; early and late forcing fruit, flowers, and vegetables; age 36; married; no children; disengaged; 6 years as head last place; first-class characters. NAISH, Village Road, Alverstoke, Hants.

GARDENER (Head, where one or two are kept), 17 years' practical experience, Inside and Out; good references; married; no family; age 32. EMMONS, Meynell Langley, Derby.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working), where two or more are kept; life experience in all branches, Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references, etc. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head, where two or three are kept); thoroughly experienced in all branches, Inside and Out; cows and poultry if required; good references; married; age 38. A. GOODFELLOW, Gardener's Cottage, The Warren, Wanstead.

GARDENER (Head Working), age 40; thorough practical life experience in all branches; could lay out new place, or remodel neglected garden; grass land, cows, poultry, bees. Wife excellent needlewoman. H. W., 12, Croftdown Road, Highgate, N.W.

GARDENER (Head Working) age 33, married; thoroughly experienced in all branches of gardening, Inside and Out; excellent testimonials; well recommended by present employer. E. LATIMER, Heverham, Kemsing, Kent.

GARDENER (Head Working, or good Single-handed with help); married; age 40; thoroughly experienced in all kinds of Fruit, Flowers, and Vegetables, Inside and Out; good character. J. W. S., 5, White Cottages, Clay Hill, Enfield.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working); life experience in Vines, Peaches, Chrysanthemums, and Carnations, Early and Late Forcing, Inside and Out; age 35; married, no family; excellent references. A. K., The Lodge, Vale Lodge, Leatherhead.

GARDENER (Head, or good Single-handed); thorough experience in all branches inside and out; age 37; two boys, age 6 and 11 years; 9 years' good reference from present employer. F. BALCOMBE, Hollings Hill, Mathon, Malvern.

GARDENER (Head Working).—W. MOSELEY desires ENGAGEMENT where reliable, trustworthy man of thorough practical experience and ability is required. 19, Penns Road, Petersfield, Hants.

GENTLEMAN recommends his GARDENER, as Head of three; has been with him 8 years; life experience in all branches, including Orchids; age 32; married, one child, age 4. South preferred. G. SUMMERSELL, 12, Barron Terrace, Boundary Road, Woking.

MR. D. FAIRWEATHER, Head Gardener, Bifrons, Canterbury, wishes to recommend A. MUNDAY as HEAD WORKING GARDENER, where others are kept. Thoroughly experienced in all branches, Inside and Out; 2½ years here; age 27; married; abstainer. Address either of above, The Gardens, Bifrons Park, Canterbury.

GARDENER, life's practical all-round experience, open to engagement where the services of a competent and thorough workman is required; please state wages; age 32; 2 children; good character. E. NORRIS, 66, Sandholme Road, Brislington, Bristol.

GARDENER (Single-handed or with help), or GARDENER and CARETAKER; life experience inside and out; age 26; good reference; married when suited. E. BARNDEN, The Mount, near West Malling, Kent.

GARDENER (Single-handed or with help); 11 years' experience inside and out; good references; single; age 26. S. C., 38, Belfast Road, Stamford Hill, N.

GARDENER (Single-handed, with help); 6½ years' experience as Foreman in last place; death cause of leaving; single, age 32; excellent references. G. EUSTON, Shrubs Hill, Sunningdale, Ascot, Berks.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER (Single-handed or with help), 40; Wife Laundress or help; good references; cottage; near London. L., care of 10, Sydney Road, Wood Green.

GARDENER (Single-handed), 11 years' experience, Inside and Out; 2 years in present place; age 24; good references. F. PINK, 1, Terrace Cottages, White Hart Lane, Tottenham.

GARDENER (Second), where four or five are kept; Inside or Inside and Out; 9 years' good reference; age 27; married when suited.—W. BLOGG, Grantchester, Cambs.

GARDENER (Second), where several are kept; 12 years' practical experience in good establishments; good references; age 27. C. E., Northington Down Farm, Alresford.

GARDENER (Second), experienced in Plant and fruit houses, kitchen and pleasure gardens; 5½ years last situation; well recommended; single, age 27. HILLS, Bechanger Cottages, Kennington, Ashford, Kent.

GARDENER (Second), Inside or Inside and Out; age 26; 10 years' experience; well recommended; 3 years in present place. H. JENNINGS, Claremont Gardens, Esher.

GARDENER (Under), age 24, nine years' experience, seeks Re-engagement, Inside and Out; well recommended and good references; Bothy preferred. D. ROSE, Strumpshaw Hall Gardens, Norwich, Norfolk.

GARDENER (under), nine years' experience Inside and Out; good references from good establishments. G. CREASEY, The Lodge, Thorn's Barton, Berkhamstead, Herts.

GARDENER (two or three kept.) Late employer can highly recommend W. HURST, twenty years' experience; all branches; left for no fault; excellent references and personal character; age 35; married. The Lodge, Grove House, Dulwich Common, S.E.

FOREMAN.—Mr. KNOWLES can highly recommend YOUNG MAN, age 27; good experience in Fruit and Plants, Decorating, etc.; abstainer. H. WALTERS, Bagshot Park Gardens, Surrey.

FOREMAN (Inside), age 27, 13 years' experience in good establishments, House and Table Decorations; good references. J. JEFFERIES, Cholderton House, near Salisbury, Wilts.

JOURNEYMAN, age 20, seeks SITUATION inside under Foreman; 7 years' experience inside and out; 4 years' good reference present place. V. ALLEN, The Gardens, Dyffryn, Neath, S. Wales.

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A GARDENER wishes to recommend good strong, willing YOUTH as IMPROVER; 2½ years' experience outside. Apply H. DALDY, The Gardens, Cliffville, Stoke-on-Trent, Staff.

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MR. F. RICH, The Gardens, Elfordleigh, Plympton, Devon, will be pleased to highly recommend his FOREMAN, NORMAN KENNARD, who has been with him over five years, for a similar position in a good establishment. Apply as above.

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W. F. GORE LANGTON, Esq., highly recommends R. SIZELAND as GARDENER where one other is kept; age 44; 16 years' personal character. Address SIZELAND, Padbury, Buckingham.

W. THEOBALD wishes to recommend W. COOKE as SINGLE-HANDED or KITCHEN GARDENER; married when suited; good references from present and past situations. Apply W. COOKE, Hatchford Park Gardens, Cobham, Surrey.

YOUNG MAN (26) seeks SITUATION in kitchen garden or pleasure grounds; 7 years' experience; reference. A. BUSBY, Finstock Heath, Charlbury, Oxon.

YOUNG MAN, age 19, requires SITUATION, inside or inside and out; 4½ years' experience; height 5ft. 10in.; well recommended. G. SPENCER, The Gardens, Elsham House, Grantham, Lincs.

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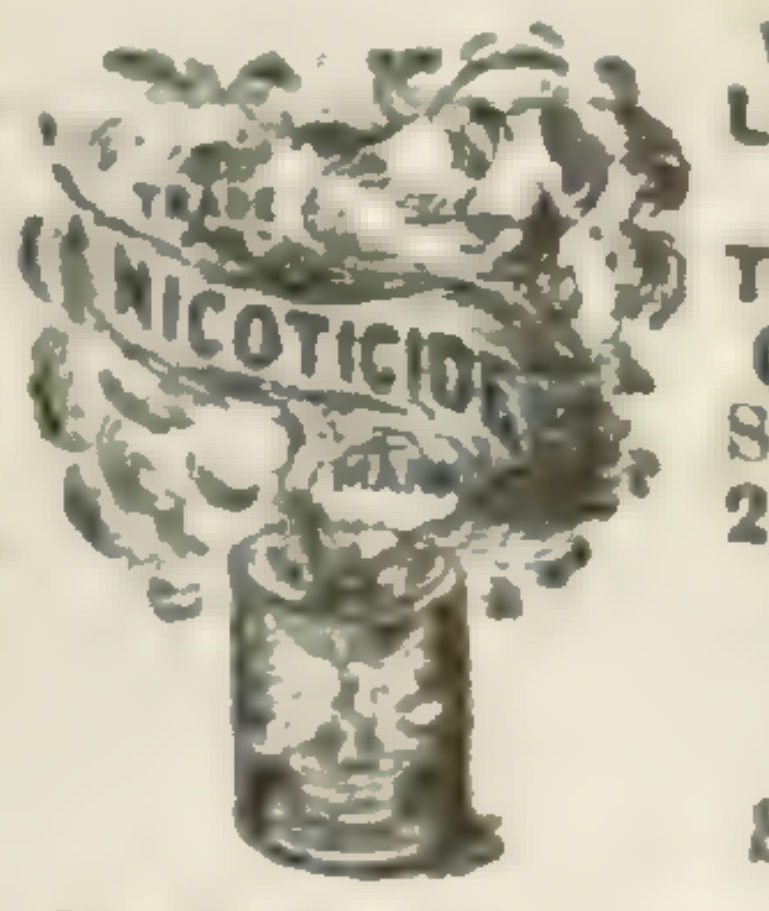

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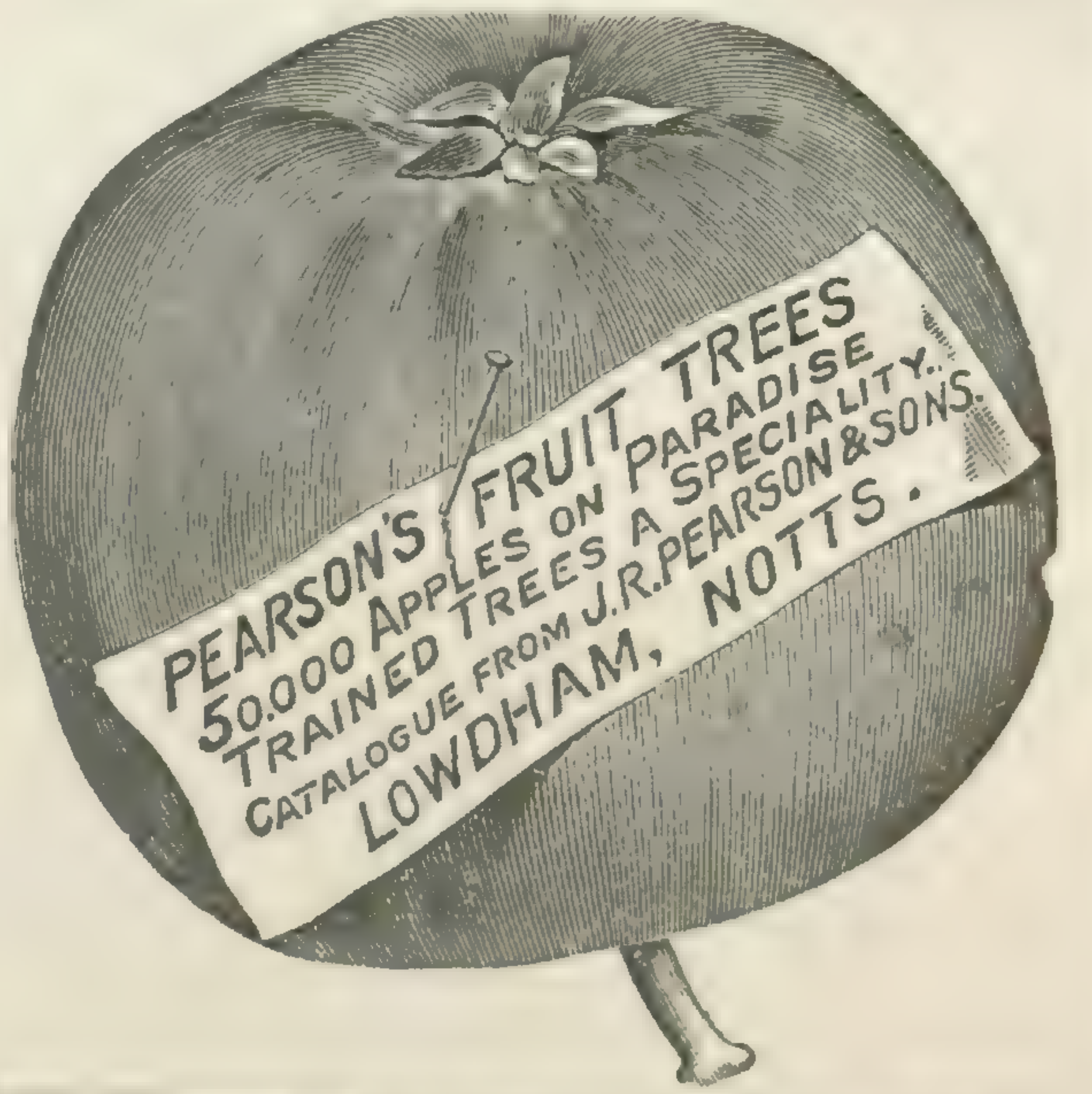
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Roses in pots, half specimens, and specimens for exhibition purposes, **7/6** to **42**/- each.

ROSE GARDENS.—The formation and rearrangement of Rose Gardens a speciality. Rose experts sent any distance to advise, and designs and plans furnished to suit ground of any shape or size.

BOOKS ON ROSES.—"The Rose Garden," 10th edition, 21 Coloured Plates, 26/-, without Plates, 9/-. "Roses and Rose Culture," 10th edition, 1/-. All post free.

Wm. PAUL & SON,
(Rose Growers by Appointment to His Majesty the King),
WALTHAM CROSS, HERTS.

VOL. LI.—No. 2,834. SATURDAY, FEBRUARY 22, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Winter Growth.

When we consider that warmth and light are recognised as the chief factors in plant growth, and that at the approach of winter as the flood of sunshine wanes and the temperature consequently falls the greater part of vegetation falls asleep as it were, it is somewhat of a puzzle that other plants seize upon that very time to waken up and grow actively in preparation for early spring-flowering; some, indeed, like the hellebores and the winter aconite actually flowering in the depth of winter. We see this phenomenon in all our spring flowering bulbs, tulips, hyacinths, daffodils, scillas, and all their kin. Roughly speaking all these may be said to remain perfectly dormant and impervious to all the vivifying influences of summer sun and shower, and only to wake up and start growth about November. It is, however, mainly the root system which acts thus, and in some cases, daffodils for instance, we shall find undisturbed bulbs showing visible root development even as early as August, a curious fact when we remember that the leaves will not push until fully six months later, so that it is somewhat difficult to understand what office the roots can perform for the major part of the time, especially in the case of good plump bulbs in which are already compactly stored the future foliage and flower. It is probable that the roots of many other plants are more or less active in the presumed dormant season. Ferns, for instance, may give evident signs of awakening long before a definite upward rise of the fronds occurs, the crowns swell and fatten as it were as a preparatory step, and this, of course, is an indication that the roots are busy. Such plants, too, as roses, clematis, aucubas and other shrubs, which seize upon every mild spell in the winter to push out their buds and shoots in a most improvident fashion, can also only do so by virtue of root energy, which in exotic plants is due to inheritance of tendencies less fitted for our climate than for their native ones. In this connection it is curious how difficult or even impossible it appears for some imported plants to accommodate themselves to the altered climate. Thus we see the rosy-pink blossoms of the almond open persistently at a time of year which is almost invariably incompatible with fruit-producing fertilisation, while our native trees on the other hand, persistently resist the blandishments of sunny winter or even spring days, and keep their buds tightly closed until they are fairly safe from nipping frosts. Even in these cases, however, it is probable that the root systems are at work long before the period when the buds shown signs of bursting; there is most likely a slow accretion of vital force and of sap within the system of the plant, in preparation for the wonderful activity which is evinced when we see the thousands and tens of thousands of buds on a large tree all simultaneously breaking out into bunches of leaves and probably of catkins and flower buds in addition. The work to be done by the roots at this period must be enormous, and judging by what we note in other plants, it is hardly likely that during the winter, in the protected and warmer depths of the soil, no reserve of force is being laid up for the coming task. That we see no evidence of root vigour in the shape of leafy excrescence during the so-called dead season, is no proof that the root system is entirely dormant. If we consider a large tree with its broad, naked expanse of trunk, branches, and twigs exposed to a dry north-easter in midwinter, we must assume that the drain set up by evaporation must be neutralised by true movements of sap, for if we severed a branch and exposed it to such conditions for any length of time it would be perfectly dry and killed, a proof that the roots must still be active and prepared for such a call upon their resources.

MR. H. B. MAY.
Chairman of the Committee of the Royal Gardeners' Orphan Fund, and of R.H.S. Narcissus and Tulip Committee.

Mr. H. B. May, whose portrait we have much pleasure in giving in this issue, is well-known to those engaged in commercial horticulture as one of the leading exponents of the difficult art of market culture; and in horticultural circles he is recognised as possessing administrative abilities of an exceptionally high order. For many years past Mr. May has been a member of the Council of the Royal Horticultural Society, and notwithstanding the exacting requirements of a large and highly successful business he has been so unremitting in his attention to the duties of his office as to be held in the highest estimation by his colleagues; not only has he been a member of Council, but he has for a number of years been the chairman of the society's Narcissus and Tulip Committee, and a vice-chairman of the Floral Committee, and in both of these positions he has by reason of his ability and tact won golden opinions from the members of these two bodies. In addition to the offices he holds in connection with the Royal Horticultural Society, Mr. May is the chairman of the Royal Gardeners' Orphan Fund, a position he has occupied since the retirement of Mr. William Marshall, V.M.H., many years ago; and it may be added with singular advantage to the charity. The high estimation in which Mr. May is held by his colleagues was exemplified by his unanimous re-election at the meeting of the committee on Wednesday last. Mr. May has, in the conduct of his extensive market growing establishment at Edmonton, been exceptionally successful with the several classes of subjects that he has taken in hand. He has, perhaps, devoted more attention to the nursery side of market culture than is customary, and he has shown rare judgment in seizing on good things and then developing them in such manner as to prove to demonstration their value. The beautiful Campanula Mayi, and the finest of the crotons and ixoras may be mentioned as examples. Mr. May is also an extensive grower of exotic ferns, as exemplified by the comprehensive and finely grown collections exhibited at Westminster, and he has raised a considerable number of new varieties of these elegant plants. Of late years much attention has at Edmonton been devoted to British ferns, which we are pleased to know are beginning to receive the attention they so well merit. Some two or three years since Mr. May's two sons were taken into partnership, and were it within the province of this note to speak of them, it would be our pleasant duty to say that they are following closely in the footsteps of their father. Higher praise it would be difficult to give.

The "Gardeners' Magazine" Spring Number will be published on March 7, and the arrangements that we have made are such as to enable us to suggest that it will be the most interesting and attractive of the issues specially associated with the spring season we have yet published. The contents will include "Some Famous Cornish Gardens," "Deciduous Calanthes," "Sweet Peas for Exhibition," "A Garden of Annuals," "Recent Advances with Lilacs," "Advantages of Winter Spraying," "Weeping Standard Roses," "Long Keeping Apples," "Garden Seats," "Pyramidal Ivy-Leaf Pelargoniums in the Flower Garden," "The Care of Garden Tools," "Moon Daisies," and "Winter-flowering Carnations for Private Gardens." The spring number will be profusely illustrated, and in addition a plate in colours of early-flowering tulips will be presented with every copy. As we anticipate a large demand, we would suggest that those of our readers who require extra copies should give their orders well in advance of the date of publication.

Acreage of Hardy Fruits in Great Britain.—The increasing importance of fruit culture in Great Britain has given rise to a demand for more detailed statistics than have hitherto been collected by the Board of Agriculture. The returns annually obtained of the total area under orchards and small fruits have afforded a rough measure of the growth of the industry as a whole, and show an increase during the past ten years of 25,000 acres of orchards, and 12,000 acres of small fruits. In 1907 an endeavour was made by the board to obtain more detailed returns, while at the same time maintaining the continuity of the statistics. Occupiers were asked to return the small fruits under four, and orchards under five, headings, and as there has been a ready response to the request the returns are of greater value and interest than in previous years. The returns show that in 1907 there were in Great Britain 27,827 acres of strawberries, 8,878 acres of raspberries, 25,590 acres of currants and gooseberries, and 19,880 acres of other kinds, making a total of 82,175 acres of small fruits. The areas under orchard fruits was as follows: 173,643 acres of apples, 8,911 acres of pears, 12,027 acres of cherries, 14,901 acres of plums, and 41,694 acres of other kinds, total of orchard fruits, 250,176 acres. Adding the two totals and deducting the 23,492 acres of small fruits in orchards, the area under fruits of all kinds was 308,859 acres. As compared with 1906 there was an increase of 2,489 acres under orchards and an increase of 1,949 acres under small fruits.

Royal Horticultural Society.—At the general meeting on Tuesday, March 3, Mr. E. White will lecture on "Bulbous Plants of New Zealand," the chair as usual to be taken at 3 p.m. On March 5 and 6 the society will hold an exhibition of Colonial grown fruit and vegetables, both fresh and preserved. As a matter of considerable interest, it may be mentioned that 96 new Fellows were elected at the annual meeting on the 11th inst., making a total of 192 since the beginning of the present year.

Gardening Books at Croydon.—The Croydon Public Libraries Committee, recognising the importance of keeping the residents within the borough fully informed as to the books under their charge, hold from time to time exhibitions of books, drawings, etc., relating to the different trades and professions. On Saturday, the 15th inst., they held an exhibition of books on gardening and allied subjects, which was of much interest, as indicating the fine collection of horticultural works in the Croydon Library. The books were arranged on three tables in the lecture room, which was open to the public, and many gardeners and others interested in gardening visited the exhibition during the afternoon and evening. To still further increase the usefulness of this section of the library, the chief librarian sends to each meeting of the Croydon Gardeners' Society a selection of books that relate to the subject of the evening, and the members of the society can obtain one or two volumes on loan till the following meeting, or they can exchange the books at the library for others during the interval. A library talk on "The Old Gardens of Croydon," illustrated by lantern slides, will be given at the library by Mr. John Gregory on April 7.

English and Italian Gardens.—A few evenings since Mr. T. H. Mawson read a highly interesting paper on "English and Italian Garden Architecture" before the members of the Leeds and Yorkshire Architectural Society. In Mr. Mawson's opinion that, as illustrating the art and science of landscape gardening, French and Italian examples were superior to the English; but for mere lovable beauty, nothing could approach the English garden. The charm of an English garden was the refreshing carpet of green grass. In the Italian garden there was no such keynote, but the reverse. This was necessarily so, because after the fierce sun of June only a few extreme sun-delighting flowers, such as pelargoniums or a few subtropical flowers continued to bloom throughout the remaining hot months, and these flourished best where they could gain a welcome shadow from a friendly wall or hedge, and so an abundance of adornment in the shape of walls, balustrades, fountains became a necessity, and supplied the interest that grass and flowers yielded in our home gardens.

Gardeners' Royal Benevolent Institution.—Under the will of the late Mrs. Rylands, of Manchester, this institution has received a legacy of £3,000.

National Chrysanthemum Society.—The fourth annual dinner of the members of the society and friends who are specially interested in the market show will dine together, under the presidency of Mr. R. Ballantine, at Lyons' Popular Café on Monday next, the 24th inst., at 7 p.m. Tickets (price 4s.) may be had from the secretary, Mr. R. A. Witty, St. James's Villa, Swain's Lane, Highgate, N.

Water for London Gardens.—At the meeting of the Metropolitan Water Board, held on the 14th inst., a report on the supply of water to gardens was brought up by the Appeal and Assessment Committee and discussed at some length. The committee recommended that where the rateable value of the premises exceeds £200, or a sprinkler is used, the water for the garden should be separately supplied by meter at the trade rate, but without imposing a minimum rent; and for gardens where the rateable value is less than £200, the following should be the scale of charges for the season: Not exceeding £50, ten shillings; not exceeding £100, fifteen shillings; and not exceeding £200, twenty shillings. The recommendations of the committee were adopted.

An Examination in Elementary Horticulture for lads and young men under 19 years of age will be held under the auspices of the Royal Horticultural Society on Wednesday, March 25, in as many different centres in Great Britain and Ireland as circumstances may demand. The general conduct of this examination will be on similar lines to that of the more general examination. Intending candidates should write at once for a copy of the syllabus to the secretary, Royal Horticultural Society, Vincent Square, London, S.W.

Smethwick Horticultural Society.—As the outcome of a small flower show held last year in the West Smethwick Park, a horticultural society has been formed at Smethwick with Mr. G. F. Chance as president, Dr. Broughton as treasurer, and Mr. J. D. Bexon as secretary.

Ruffled Gladioli are among the most recent plant novelties that have originated in the United States. The ruffling does not, we need harly say, refer to a disturbance of the feelings of the plant, but to the frilling of the margins of the segments of the flowers. This frilling or ruffling is not very pronounced, judging from the illustrations that have come under our notice, but the raiser is said to have other varieties in which this characteristic is more highly developed.

British Gardeners' Association.—A public meeting will be held by the Richmond and District Branch of this association in the Wesleyan Schoolroom, Evelyn Road, Kew Road, Richmond (nearly opposite the County School), on Tuesday, February 25, 1908, at 8 p.m. An address will be given by Mr. J. Weathers, secretary of the association, supported by other members of the executive council. The chair will be taken by Mr. E. F. Hawes, treasurer of the association.

Exhibitions and Meetings at Regent's Park.—The Council of the Royal Botanic Society have made the following arrangements for exhibitions and meetings during the current year. Monthly flower shows, Wednesdays, March 25, April 22, May 20, and October 7. The Great Horticultural Exhibition, Wednesday, Thursday, and Friday, June 17, 18, and 19. The National Rose Society's Metropolitan Rose Show, Friday, July 3. Messrs. Waterer's annual exhibition of rhododendrons at the beginning of June. Afternoon musical promenades, Wednesdays, June 24 to July 29, 3.30 to 6 o'clock; and illuminated evening fêtes on the evenings of the same days, from 8 to 11 o'clock. Wednesday, July 15, the Women's Agricultural and Horticultural International Union will hold their annual exhibition of produce. An exhibition of the society's collection of chrysanthemums during November in the conservatory and corridor. Fellow's meetings for the election of new subscribers, scientific discussions, etc., on the fourth Fridays in the month, at 4.15 p.m. from November to March, and at 4.45 p.m. from April to July. Anniversary meeting will be held on Monday, August 10, at one o'clock.

Cure for the Orange Fly in Tasmania.—In many countries where oranges are largely grown serious damage is often done to crops by the Orange Fly (Ceratitis capitata), a pest that also infests peaches, apricots, and even apples, pears, and plums. It has recently been found that the flies are attracted in a most powerful manner by kerosene, and when the latter is placed in shallow vessels among the branches of the trees, especially in dry weather, the flies enter it and are killed. We understand that the orange fly has made its appearance in the neighbourhood of Paris upon peaches; we therefore urge growers of peaches, etc., who are resident in the south-eastern counties to keep a sharp look-out for any new insect that may appear.

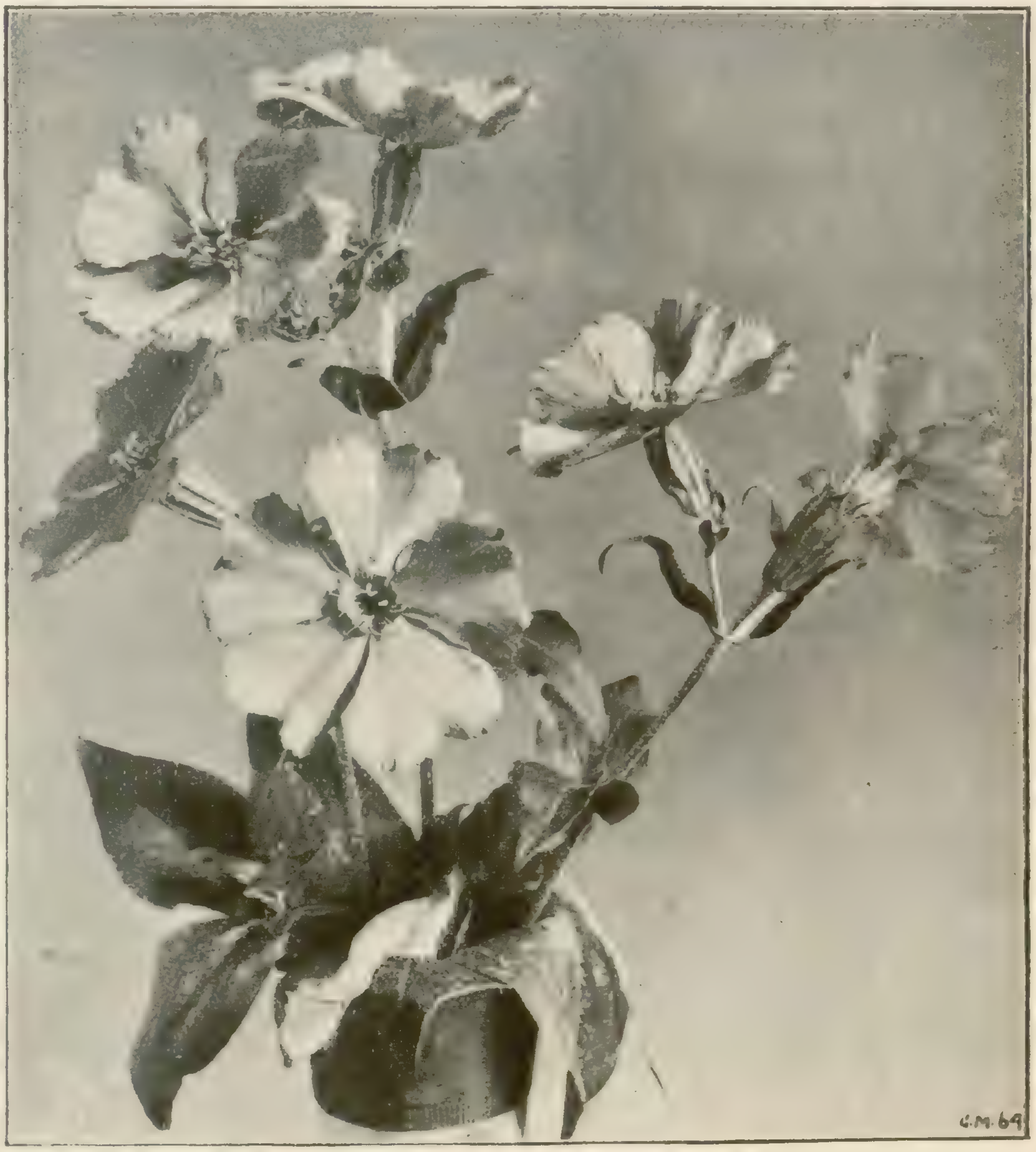
National Rose Society.—The following are the dates of the exhibitions, committee meetings, and annual dinner arranged for the current year: Metropolitan Show at Royal Botanic Gardens, Regent's Park, Friday, July 3; Provincial Show at Manchester, Tuesday, July 21; Royal Horticultural Hall, Thursday, September 17; annual meeting, at 3.30 p.m., and annual dinner, at 6 p.m., December 10; general committee meetings, March 3, April 14, May 12, June 9, October 13, November 10, at 3 p.m.

The Value of Cross Fertilisation as a means of infusing greater vigour into the constitution of various races of plants has been brought into prominence in the course of the experiments that have been made in the United States in the raising of Lilium Harrisi from seed. In California the best success has, it is stated, been obtained with seedlings which were obtained by crossing the red-stemmed Lilium longiflorum giganteum with Lilium longiflorum Harrisi. The progeny is remarkably strong and in some localities totally free from disease. One grower bloomed a large number of seedlings in the spring of 1907. Although the seedlings were only about three inches high when planted out in June, 1906, some of them had twenty-eight flowers to a single stem in June, 1907. Two years ago another grower had some two-year-old seedlings of the same cross, one of which had thirty-five flowers to a stalk. In one case the grower had during May, 1907, hundreds of plants with twenty or more flowers to a stem.

LYCHNIS GRANDIFLORA.

Lychnises, as a whole, are among the brightest and most effective border flowers, and their value to the majority of gardeners is greatly increased by the form of the flowers, which give an excellent contrast to the almost superabundance of composite plants in the garden late in summer and autumn. As everyone knows, the colours of many are of the brightest imaginable hues, and looking at some of these one can well understand why the name has been applied to these plants, originating, it is said, from the flame-like colouring of the blossoms.

Many of these lychnises have been in British gardens from time immemorial, but there is still room for more good species or varieties, and thus a hearty welcome awaits a really good and distinct one when it becomes available.


LYCHNIS GRANDIFLORA.
Flowers rose-salmon suffused with crimson.

Such a welcome awaits the beautiful and showy Lychnis grandiflora, which is here figured, and which was exhibited by Mr. Amos Perry at the meeting of the Royal Horticultural Society on September 3 last, when its merits received due recognition by the Award of Merit made by the Floral Committee. Although not a new plant, it has not been generally in commerce, and appreciation awaits it from the many hardy flower lovers who read this journal. Its general appearance is well indicated by the illustration, but the brush of the painter is required to give an idea of the bright colouring of the flowers, which are about three inches across, and are of a hue variously described as deep salmon, or rosy salmon, with almost a crimson shade. The formation of the flowers is pleasing, and the slight irregularity of the petals is rather a virtue than a defect in the taste of the present time. The height is about two feet, so that the plant is one suited for the small garden as well as the large one.

The cultivation of Lychnis grandiflora presents no great difficulty, but, like others of the race, it is the better for frequent renewal, either from cuttings or seeds, the latter giving more vigorous plants. It likes a border with a fair amount of moisture, and there it will be longer lived than in a dry one.

The nomenclature of these lychnises from China and Japan, whence this species comes, is somewhat involved, and difficult to unravel. L. grandiflora is, however, considered to be a true species, and is given specific rank both in the "Index Kewensis," and in the "Handlist of Herbaceous Plants," issued from our great national establishment at Kew. According to some, L. grandiflora is synonymous with the plant known as L. fulgens grandiflora, which, again, has been held as synonymous with L. Bungeana. This is not in accordance with the authoritative publications already quoted.

It may be added that another lychnis grown by Mr. Perry as L. striata, resembles L. grandiflora, except in the colour of its flowers, which are bright scarlet with white stripes. Both L. grandiflora and L. striata are good garden plants, and the writer's experience with the former, formed from the cultivation of a plant received from a Continental source a few years ago, is of a favourable nature.

S. Arnott.

CALADIUMS.

As ornamental foliage plants to decorate our warm stove houses from April to October caladiums are unequalled, their cordate or sagittate leaves and gorgeous colours rivalling many a flowering plant, and they are even more appreciated by many a plant lover. Visitors to the Temple Shows at the end of May can see them staged to perfection by several well-known firms, who of late years have made a special feature of these plants. As decorative subjects for the dwelling house they need to be gradually hardened as growth matures, or the cold draughts from doors and windows causes them to droop, and then their beauty disappears.

The small silvery Caladium argyrites is a gem for dinner table decoration, for the front row when setting up a group, and for filling baskets or stands within the mansion.

The time is now with us when a part of the stock of caladiums should receive attention, and if growth has not yet commenced they should be watered and stood near the glass in a temperature of 65 degrees by night; here new growths will soon be apparent, and then the corms should be turned out of their pots, divested of all soil, and cleaned, any decaying parts being cut away with the knife, rubbing a little dry flowers of sulphur over the cuts. If it is desirable to increase the stock, cut the tubers into small pieces, making sure that each piece has a crown; very serviceable plants can thus be had in one season, and the variety argyrites lends itself well to this treatment. Use clean pots, well drained, varying in size from four inches to eight inches in diameter. It is best not to put the plants into large pots at once, but rather to transfer the more robust varieties into eight-inch pots when they have filled the smaller size with roots, the former pots being large enough to grow good specimens in.

The usual soil, peat, loam, and leaf-soil, with clean river or silver sand added, that will grow stove plants generally will suit caladiums well. Place the soil in the house where the plants are growing a day or so previous to potting. Rather more than half fill each pot with soil, make it moderately firm with the fingers, add a pinch of sand for the corm to rest on, and then put in sufficient soil to just cover the corm. If a gentle bottom heat can be afforded, such as fresh leaves or tan give out, growth will be accelerated, and a smaller amount of water be necessary until the roots permeate the new soil.

Caladiums stand the sun fairly well, although a very thin shade from early in May onwards for a few hours daily will prove beneficial. As soon as the pots become full of roots weak liquid cow, sheep, or deer manure may with advantage be given twice or thrice a week. Overhead moisture is also good for them, but the syringe must not be used with any degree of force or the leaves will quickly be broken, which means disfigurement for the whole season. Some varieties are prone to throw up flowers at an early stage of growth; such stems should be pulled out as soon as detected. Stand the plants as near the glass roof as possible, so that all the light can reach them, and as many produce massive leaves a thin stake must be provided betimes, care being taken that these are not stuck into the corm.

There are numerous varieties, all more or less beautiful, so there is no need to particularise. A visit should be paid about midsummer to any nurseryman who makes a speciality of them, and selections made when they are in their full glory. Many tubers are lost through the winter, either through being kept too dry or too wet, and in some instances in too low a temperature; but where the thermometer does not recede below 55 degrees or advance much above 70 degrees, and a happy medium is maintained as regards moisture in the soil, losses will be very small. Lightly fumigate if aphis obtains a footing, and sponge the leaves carefully if mealy bug puts in an appearance. J. Mayne.

Bicton Gardens, Devon.

EARLY CUCUMBERS.

At this time of the year cucumbers are rather difficult to obtain, old plants may be encouraged to make a little fresh growth by giving some good rich soil mixed with horse manure and applied as a top-dressing. With this assistance they will perhaps give a few fruits till the earliest plants raised from seed sown some weeks ago are ready for planting or bearing. This very often means getting rid of the old stock to ensure a clean house, that is, suitable for raising early cucumbers. The house for receiving early plants should be thoroughly cleaned, the walls and pipes sealed with hot water, the walls whitewashed and the pipes painted, if possible, to get rid of red spider and other insects.

Then proceed to put in fermenting materials consisting of half stable manure and fresh leaves for bottom heat. The hotbed is desirable, even if there is artificial bottom heat underneath. Keep the bed well up to the glass, treading it down firmly.

Cover the surface with a layer of fresh cut turf grass side downwards, and proceed to prepare the mixture for the bed. A suitable compost may be formed with turfy loam cut up from a pasture, and some old spent mushroom bed added to it. In breaking up the loam all wireworm should be picked out. When the soil is warm enough to receive the plants and the bed is well settled down, they may be at once planted, taking care not to break the ball of soil.

Where the old stock cannot be spared and the room is limited, three or four plants, or as many as can be found room for may be shifted on into 10 or 11 inch pots, and placed in a warm house suitable to give a few early fruits. These like plenty of heat and moisture; a temperature of about 70 degrees at night, and up to 80 degrees by day, will be the most suitable. They must not have much air or mildew will occur. Keep the paths, wall, and other things in the house well damped over. Where there is no propagating pit the early cucumber house is a splendid place for raising all seeds.

Paddockhurst. A. B. Wadds.

Dividing Rhubarb Clumps.—This is work that should be undertaken as soon as the state of the ground enables it to be done under comparatively pleasant conditions. Only a portion of the plantation should be operated on, as it is not advisable to pull leaves in the first season after dividing. First, a piece of ground should be made ready for the divisions, and, as they will not be disturbed again for several years, it is well to give the ground a thorough preparation by deeply digging it, and placing plenty of fat manure well down below the surface. An axe is a useful tool for dividing real tough old clumps, but a sharp spade will answer for others. The clumps should be divided into single crowns, and these should be trimmed into shape a bit with a knife. The broken roots should also be cut off slantingly, and then the crowns planted so that their noses just protrude above the soil, 2ft. to 3ft. apart.—E. J. K.

THE QUEST OF THE YELLOW SWEET PEA.

Of all the phases of the sweet pea cult the quest of the yellow sweet pea is perhaps the most fascinating, and certainly the most elusive. There is no doubt that the pure yellow sweet pea (when it comes) will bring a golden harvest for the raiser, but at present the "game is anybody's," and there are many enthusiasts who are working assiduously to obtain it.

But as the sweet pea is so sportive in character, and so many notable varieties are certainly sports, the yellow sweet pea may perhaps turn up in an unexpected and unconventional manner, to gladden the heart of some plodding florist who may have never considered the likelihood of such a prize falling to his share.

It was not really long ago that we were praising the Hon. Mrs. E. Kenyon as being the variety which seemed to point the way toward the yellow sweet pea; last season Mrs. Collier was the prime favourite in this shade, and now Eckford's primrose-hued James Grieve provides us with the nearest approach to yellow. It is real progress, certainly, for there is a great difference between the first-named and the last varieties, but for all this we are still a good way off the pure yellow variety.

It may, however, be quite possible for the new cream-coloured and primrose forms of Countess Spencer to break again into sports of a decided yellow hue, for the possibilities of the Spencer group are so well known that no one would be surprised if further advances came from such a source. On the other hand, a series of crosses between these creamy Spencer forms and James Grieve would provide an interesting task for an enthusiast, and perhaps furnish a further improved race of seedlings, some of which might be reasonably expected to surpass their parents. The finest of these seedlings, interbred, using only the very finest for this purpose, should bring the worker another step forward, and well in sight of the yellow sweet pea.

Selection of existing varieties also affords a means of advance, for in the majority of the sweet peas, however perfectly fixed, forms may be met with that are larger in size and richer in colouring than the majority of their fellows, and if these are isolated and the resulting seed saved, a moderate amount of success may be reasonably expected, especially if these finer forms have been carefully hand fertilised.

Although one would advise the inter-crossing of primrose with primrose, or primrose with cream, yet there is a possibility of the yellow sweet pea coming from another source, namely, from those buff, salmon, and apricot shadings which are to be met with in some varieties. These shadings are often the offspring of * yellow flowers, and there is just the possibility that the yellow is lying dormant under one or other of these hues. A series of crosses with white and cream-coloured varieties would probably settle the question, using these same salmon, apricot, and buff shades both as pollen parents and as seed bearers.

In conclusion, we can but rejoice that the "cult of the sweet pea" has become so popular, for besides providing a feast of interest, and a wealth of new colourings which are appreciated by all, it gives a big lift to the horticultural trades in general, and provides attractive exhibits for the summer shows. P. S. Hayward.

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* Referring to other groups of plants, in which yellows have been noted for their tendency to produce seeds which embrace the shadings spoken of.

WEBBS' GOLD MEDAL PRIMULAS

AWARDED PREMIER HONOURS AT THE LEADING EXHIBITIONS OF THE KINGDOM.

WEBBS' NEW SNOW QUEEN.

Pure white. **2/6** per packet.

"Webbs' Snow Queen is a giant Primula producing very fine trusses of large white flowers."—*The Garden.*

WEBBS' EXQUISITE.

Mixed colours. **2/6** per packet.

"At the Hartlepool Show I gained First Prize with your Exquisite Primula in the Open Class. The strain is splendid."—Mr. G. Waterworth, The Gardens, Meadowcroft.

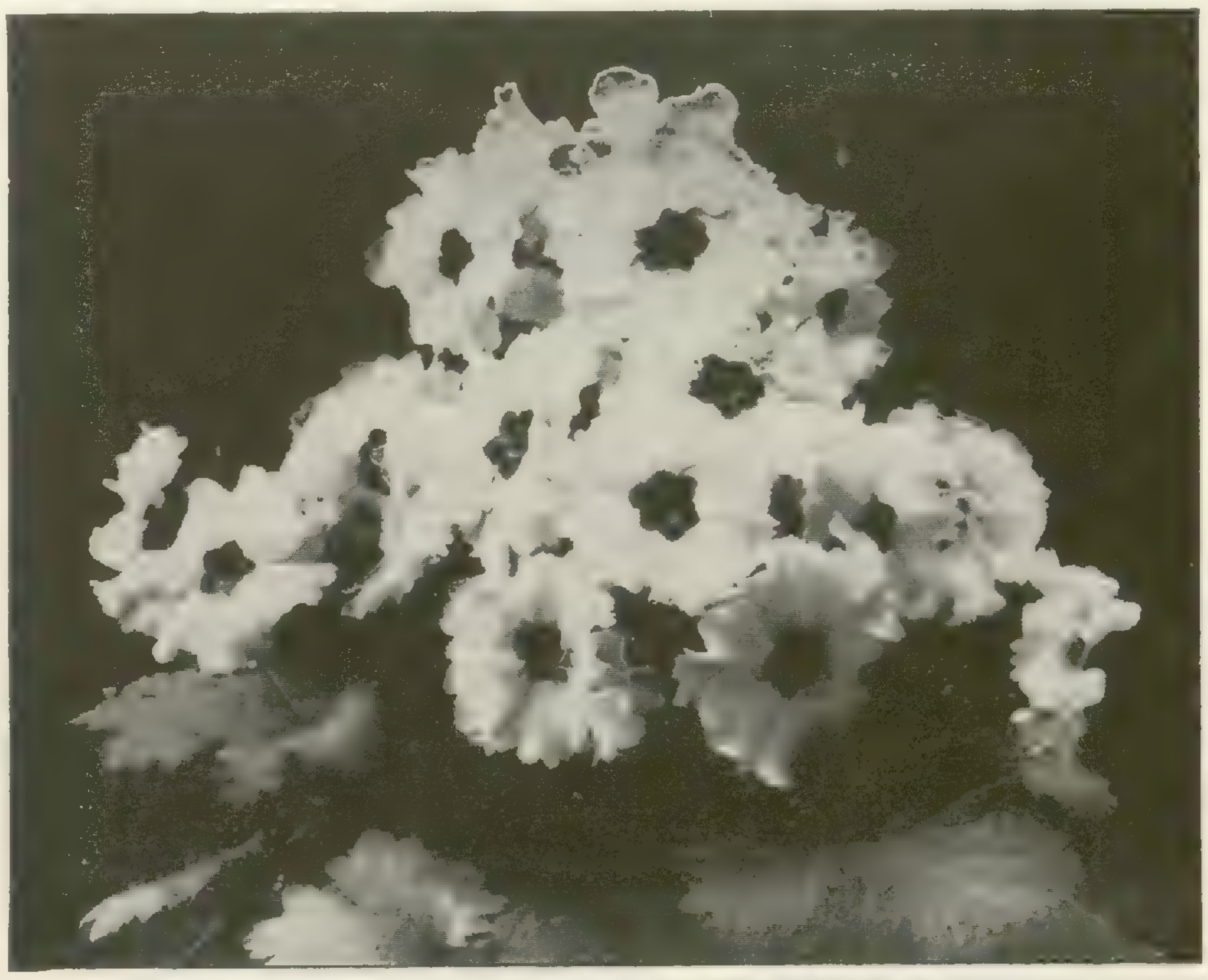
WEBBS' NEW METEOR.

Salmon-rose. **2/6** per packet.

WEBBS' DOUBLE.

Double white, double red, double salmon, and double mixed.

Each ... ... **2/6** per packet.



WEBBS' NEW AVALANCHE.

Pure white, with a greenish-yellow eye. **2/6** and **5/-** per packet.

"I am charmed with Webbs' New Avalanche Primula, and consider it by far the best white Primula that has come under my notice."—Mr. E. Beckett, The Gardens, Aldenham House, Elstree.

WEBBS' NEW RUBY QUEEN.

Rich ruby. **2/6** per packet.

"I took First Prize at Windsor Show with your Primulas, against 10 competitors."—Mr. B. Campbell, Gardener to Her Grace the Duchess of Sutherland.

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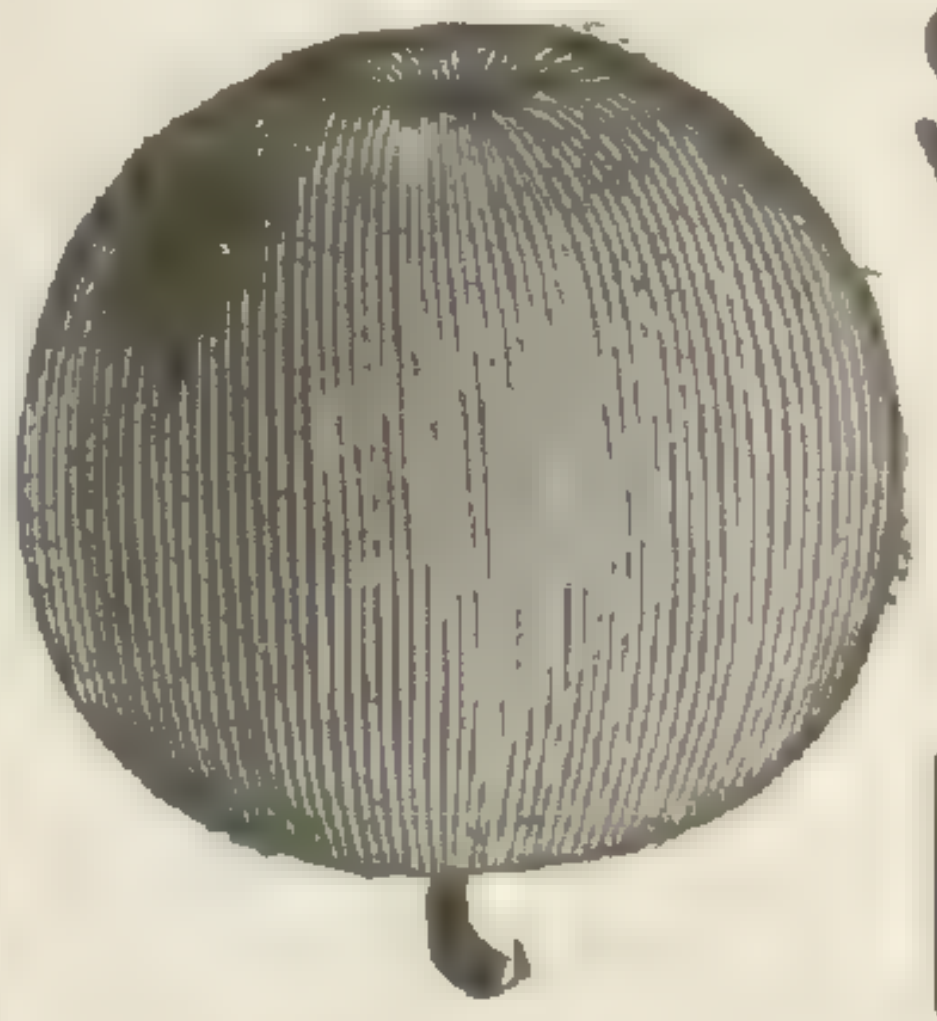

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THE ACCENTUATION OF GARDEN FEATURES.

It is a mistake to add other features to a garden until those that already exist are, as far as possible, perfected. Many a half-filled rockery, ill-kept rosery, and unrepresentative water garden may be found even upon estates where floriculture is regarded rightly as one of the fine arts.

Perhaps in lesser pleasure grounds it is the rosery that most often needs improving: when varieties prove unsuccessful, owing to peculiarities of soil, climate, or position. They should never be left to struggle on, the subjects of disease, but should either be sacrificed altogether or removed to kitchen garden borders, waste land, or shrubbery spaces, where possibly their requirements might be satisfied, and they prove capable of yielding fair flowers after all. Occasionally new varieties of roses prove disappointing, or of colours that clash with their neighbours; these also should be moved to other quarters. A rosery needs to be viewed as a whole, so individual roses, even if charming, that spoil the general effect, ought to be transferred to localities where their merits will prove useful. Weedy ground in the rose beds sometimes reproaches the gardener; when no carpeting plant is permitted weeds are certainly terrible to keep under during wet periods of mild weather.

Rockeries should not possess any bare pockets or expanses of soil, while the presence of a dead or dying alpine here and there quite spoils the appearance of hosts of the beautiful living! For smallest spaces there are gay coloured miniature perennials in plenty: Potentilla villosa, with its silver-haired leaves and yellow flowers, is but three inches high; so, too, are Primula viscosa (rose), Primula viscosa nivalis (white); Saxifraga juniperifolia, with elegant foliage and spikes of yellow; Saxifraga coriophylla, a mixture of silver and snow; Sedum Ewersi, pink; Soldanella montana, fringed, and pale blue; and Gypsophila cerastioides, white, veined with red. When a rock garden is lacking in sufficient tall plants it presents a very unfurnished appearance; I always advise a free planting of the smallest-blooming kinds of perennial asters, since it is generally in autumn that rock plants blossom least, and the graceful effect of these light-growing "daisies" proves of great value. Liliastrums, montbretias, schizostylis, Linum narbonense, L. maritimum, L. hologynum, and L. flavum, statices, Ranunculus amplexicaulis, and the grass-leaved Sisyrinchium grandiflorum (purple), and S. grandiflorum album, are admirable light growers of considerable importance.

The water garden, to be perfect, must imitate the lavish planting of Nature; we do not find bare soil in naturally moist ground, but rather a prodigality of blossom and leaf, the most minute mossy subjects keeping their place without difficulty at the feet of giant reeds, rushes, and other robust growers. Immediate improvement results from the planting out of seed-raised Artemisia annua, a feathery green foliage plant that becomes covered after awhile with fluffy yellow florescence of very long duration. This hardy annual grows rapidly, reaches a height of three feet, and does not object to a very damp soil. Permanent improvement can be carried out with irises of many sorts, including the great yellow water iris, with solidagos, spiræas, Ranunculuses aconitifolius fl.-pl. and speciosus, myosotis, Mimulus cardinalis, Gunnera manicata, and G. scabra (where space permits), trolliuses, astilbes, and calthas.

M. H.

NEW PLANTS, ETC.

◆

CYCLAMEN SALMON KING.

Under this title Messrs. Hugh Low and Co., Enfield, have now an excellent strain of cyclamen. The plants have a good habit, the leaves are neat and well marked, and the flowers rise well above the foliage, borne on stout stems. The flowers are of fine size and substance, and their colour is very bright reddish salmon, with deeper shading at the base. A.M., R.H.S., February 11; Messrs. Hugh Low and Co., Bush Hill Park, Enfield.

MESSRS. HUGH LOW AND CO.'S NEW SALMON KING CYCLAMEN.
Flowers large, the colour rich reddish-salmon.

CYMBIDIUM LADY COLMAN.

This fine new hybrid is the result of crossing C. eburneo-Lowianum with C. Traceyanum. The latter has lent size to the former, and has modified the colour. The flowers are of large size, and four or five are produced on a spike (See p. 133), though doubtless as the plant gains strength the spikes will be larger. The ground colour is creamy-white tinted with green, and on this are faint broken lines of red-purple. The bold lip is white with red-purple markings. A.M., R.H.S., February 11. Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate.

DIACRO-CATTLEYA COLMANÆ.

A most interesting and pretty hybrid raised by crossing Diacrium (epidendrum) bicornutum and Cattleya intermedia nivea. The habit of the plant closely resembles that of the Diacrium parent, and the spike is similarly produced, erect, and bearing three buds and one expanded flower. The latter is white, three inches across, and its shape shows the influence of both parents. The lip has a pale creamy disk, and a very pale tinge of pink at the apex. A.M., R.H.S., February 11; Sir J. Colman, Bart., Reigate.

LYCASTE SKINNERI ORION.

A beautiful and shapely variety of this old favourite orchid. Sepals blush-coloured; petals rosy-red with white markings; lip white. A.M., R.H.S., February 11. Mr. Whitelegge, gardener to J. Bradshaw, Esq., The Grange, Southgate.

SOPHRO-CATTLEYA ANTIOCHUS RUBRA.

This form of the hybrid between S.-c. Cleopatra and C. Warscewiczi differs from the original in having more deeply-coloured sepals and petals, and a very rich ruby-purple lip. The flower opens out well, and is very effective. A.M., R.H.S., February 11; Messrs. Charlesworth and Co., Heaton, Bradford.

Beurre Rance Pear.—This variety is not always a success for dessert, as from some soils it is gritty, but I let the fruits hang on the trees until very late; indeed, they had one or two degrees of frost on them before they were gathered in November. They are now ripening in the fruit-room, and are sent to the dining room daily, where they are much appreciated. It is a very juicy and sweet pear, and valuable at this date. The tree is of vigorous growth, and generally bears a fair crop of sizable fruits, if planted against a south wall.—T. W. Birkinshaw.

EARLY PEAS ON WARM BORDERS.

Not all gardens are provided with sufficient glass structures to grow certain classes of early vegetables in, therefore recourse must be had to other means, whereby growth may be advanced by a week or two. Since the days of cheap glass market growers have been able to put the finest of early vegetables on the market much in advance of supplies in private gardens, and this sometimes causes unpleasantness, as it is difficult to explain that houses by the acre are put up specially for these early crops, peas being one of them.

Though glass may not be provided wherein these early vegetables can be grown, much can be done by way of forwarding them in their early stages, and by taking the precaution to protect them later on in the season when planted in the open ground. For many years we have given up growing the old round-seeded varieties of peas, as we find the marrowfats, though not quite so hardy, may be had as early by sowing the seed under glass and protecting the young plants until it is safe to transfer them to the open ground. We use about five hundred four-inch pots for raising the early batch for planting on warm borders. This number is sufficient to take five pints of seed, and to plant twenty-five rows each twelve feet long. Most gardeners have a warm south border on which they can grow a few early peas, but the quantity grown must be regulated by the requirements of the establishment and the amount of space available. A pint of peas contains between eleven and twelve hundred seeds, therefore if a hundred pots are prepared by filling them three parts full with rich soil, there will be sufficient peas in a pint to allow about twelve seeds for each, and sufficient room for them to be placed about an inch apart. When the seeds have been placed in the pots cover them with fine soil. The pots may then be stood in a cold peach house, vinery, or frame, where they can remain until the plants are about an inch high, when they should be freely aired whenever the weather is favourable, to harden them off previous to planting out.

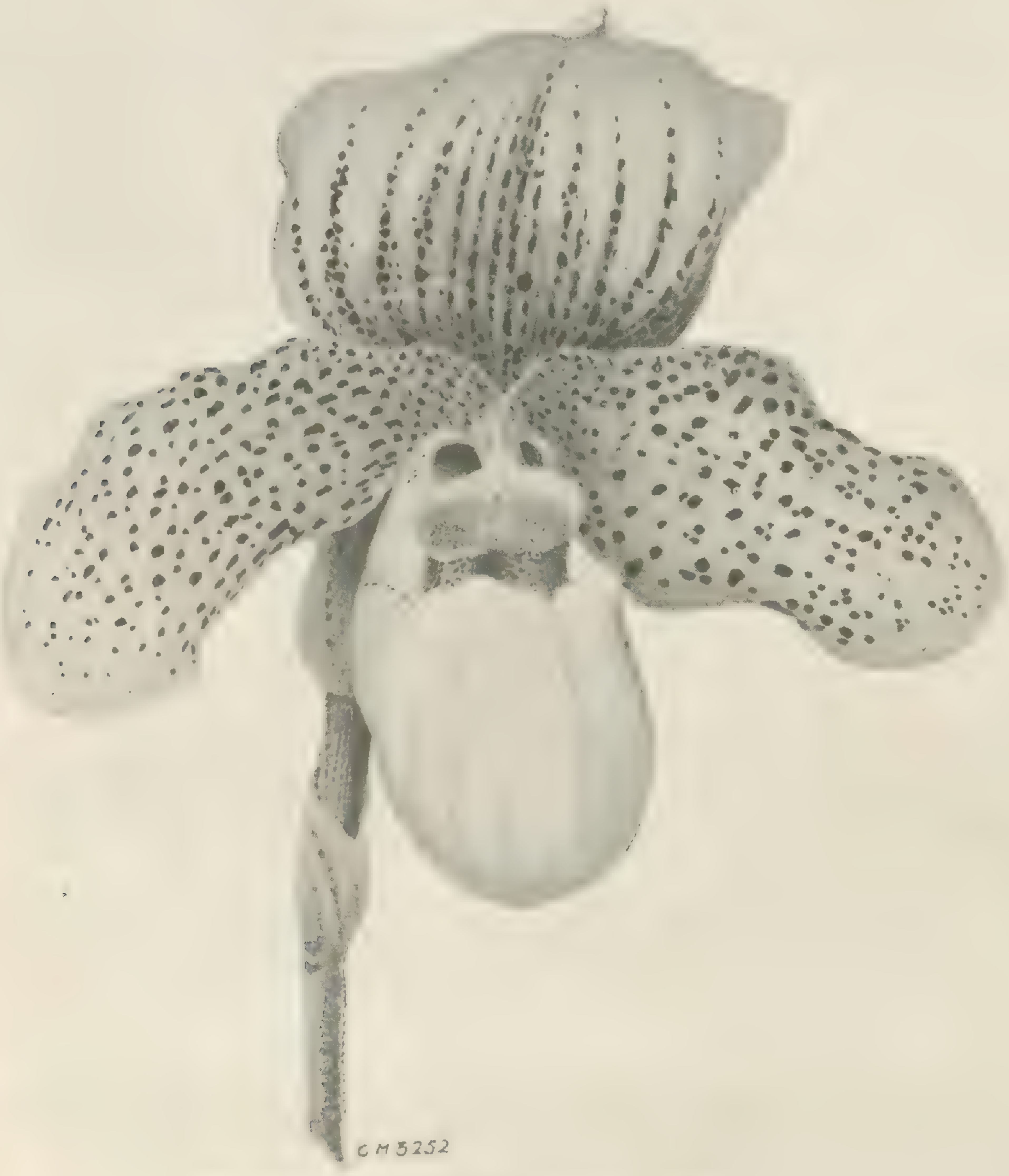
We sow about the first or second week in February. Dwarf kinds are used for early borders, as these may be planted closer together, though I am no advocate for close planting, as there is nothing gained by it. If the soil has been well prepared what are termed dwarfs should grow from two feet to two feet six inches in height. I have seen William Hurst and Chelsea Gem go up near three feet, and well clothed with pods for the greater part of the length of the haulm, therefore it is best to allow not less than three feet between the rows, so that light may be available on both sides. Early lettuce may be planted between the rows as soon as the sticks are put to the peas. For narrow borders we grow such kinds as Chelsea Gem, Early Forcing, World's Record, Little Marvel, Pioneer, and the like, while for the open ground taller kinds are grown, such as Gradus, Edwin Beckett, Early Morn, and Early Giant.

As, however, we are now dealing with warm borders, it is well to confine oneself to remarks connected therewith. Seed that is sown the first week in February and treated as advised should produce plants ready to put out the first week in April, or a little earlier should the weather be favourable. There being only twelve plants in a pot these should be sturdy and well rooted, therefore should there be no check to growth these will soon make headway. We put sticks to them as planting proceeds, as these will afford some protection against the cold winds should there be any at that time. The taller varieties should be sown a week later, as these grow much faster than the dwarf ones. It is useless to try to grow good early peas unless the soil has been well prepared, i.e., deeply dug and liberally manured. If it can be dug in the autumn so much the better, but this is not at all times convenient, as trees against walls have to receive attention, and not infrequently there is a winter crop on the ground. These early sowings are, as a rule, gathered before the soil becomes very dry, but finer results will be obtained if the plants are liberally treated while they are growing, for often the month of May is dry, therefore give them a soaking once a week with liquid manure.

I am no advocate of dwarf varieties that cannot be induced to grow more than a couple of feet, for this height, even in pots, is not inconvenient, and most so-called dwarfs will reach this height if liberally treated when young.

In low-lying districts it may be necessary to protect the plants when in bloom, as late frosts are sometimes very injurious, but this can readily be accomplished by spreading a piece of thin canvas over them at night. H. C. Prinsep.

Buxted Park Gardens.



CYPRIPEDIUM DOM CARLOS REX.
Flowers white, with purple markings.

CYPRIPEDIUM DOM CARLOS REX.

One of the most distinct of the several hybrid cypripediums raised from the interesting C. Godefroyæ leucochilum is C. Dom Carlos. The second parent was C. Lawrenceanum, this lending size and breadth to the substance and roundness of the other parent. The ground colour of C. Dom Carlos is creamy-white, with a tinge of pale green over the dorsal sepal, but the whole of the flower is pleasingly strewn with very fine red-purple dots. An Award of Merit was granted this hybrid on December 13, 1904, but at the Temple Show of 1905 the same exhibitor, Mr. Chapman, gardener to N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne, showed a finer form of the same hybrid, calling it C. Dom Carlos Rex. In this the flowers are larger than in the type, and the ground colour is whiter, while the spotting and the shading of the lip are bright purple. The illustration serves to show the character of this handsome and interesting seedling that has proved so amenable to cultivation at Oakwood. C. Dom Carlos Rex was awarded a First Class Certificate by the Royal Horticultural Society on May 23, 1905.

Pruning Young Trees.—The theories set forth are somewhat perplexing to some of the more inexperienced growers. Some advocate no pruning the first year, and do but very little after. My advice is to prune moderately annually. Young standards should be very carefully attended to for a few years, first selecting from three to five young shoots, as equidistant as possible, to form the main or permanent branches of the trees: prune each shoot, say, from 10 to 15 inches in length, always cutting just above a bud pointing outwards, and where the next year's young growth is required. This should be repeated annually for a few seasons, and any young shoots not required may be shortened back to within a couple of inches of the base. As the trees increase in size, other shoots may be left to fill up and form a well-balanced head, after which only a slight thinning of useless wood will be required.—H. Markham.
Wrotham Park Gardens.

HOLLYHOCKS FROM SEED.

In making a brief reference to hollyhocks for the purpose of showing how readily a stock may be raised from seed, one might well say with John Parkinson, "I shall not neede to make many descriptions of hollihockes, in regard the greatest difference consisteth in the flowers, which are in some single some double, in some of one colour and in others of other colours." Hollyhocks have, in common with many other flowers, been greatly improved by the untiring efforts of florists, but they have not been so greatly altered in the process as in the case of some other subjects that were regarded with much favour by flower lovers in the nineteenth century. Their habit is much the same as when Parkinson wrote his "Paradisus" three hundred years ago, and, as will be seen from the foregoing extract, there were then, as now, both single and double-flowered varieties. The colours would appear to have been much the same in their main lines, but during the last century the raisers, by means of skilful crossbreeding and judicious selection, succeeded in obtaining a race in which the principal colours were more pleasing and effective than they were at the commencement thereof, and in creating a considerable number of intermediate shades of the most charming character.

AN EFFECTIVE GROUP OF SEEDLING HOLLYHOCKS. [Photo: F. Mason Good.

Quotations might well be made from the old writers who had a predilection for these flowers, in support of their great value for beautifying the gardens of all classes, but the object of the writer is not so much to sing their praises as to show how easily the plants can be raised, and how the cultivator may checkmate the dreaded disease. It may, however, be said that the hollyhock is equally suitable for the cottage and the ducal garden. Nothing could well impart a greater charm to the cottage garden than a few clumps of hollyhocks, and no hardy plants could produce a more striking effect on the terrace garden of a stately mansion than these when in a robust state of health and judiciously arranged in bold groups. Hollyhocks are also of much value for the herbaceous border, and they are decidedly effective when arranged in open spaces along the front of the shrubbery border. In whatever position they are placed they must enjoy full exposure to the sun, and have a rich root run.

There are several ways of propagating these plants, but the only one to which reference will now be made is the raising of seedlings. This method of propagation is recommended because seedlings possess so great a degree of vigour that they are not liable to suffer materially from the attacks of the fungus causing the disease, which in so many instances is most destructive in its effects on plants raised from cuttings and eyes. Plants can be raised and flowered well within twelve months, and those raised from seed that has been saved from a good strain can be depended upon to produce flowers of good form and pleasing in colour. There is no difficulty in obtaining seed saved from strains of undoubted excellence, and at a moderate price. There is no occasion to express an opinion on the relative merits of double and single varieties. It is simply a matter of taste, and cultivators should grow the section which they or their employers prefer. Both singles and doubles are extremely beautiful, and as they are equally useful for the production of bold effects, those who have not a special preference for either should grow them in about equal proportions.

Seed may be sown in February in heat, and in June in the open, but seedlings raised from seed sown during the current month will, with good cultivation, produce finely developed spikes at the end of the summer or early in the autumn. The seed should be sown in pans or shallow boxes that have been efficiently drained, and filled with a light rich compost. To avoid waste of seed or injury to the seedlings from overcrowding before they are of a suitable size for transplanting, place the seeds an inch apart, and cover to the depth of about a quarter of an inch with fine soil. When sown in this way there will be no occasion to disturb the seedlings until they are touching each other, and then they will be of a convenient size for transplanting. A temperature of about 65 degrees will be the most suitable for promoting a quick germination, and until the seedlings are making their appearance above the surface a piece of paper should be laid over the pans or boxes. It should then be removed, and a few days afterwards the boxes or pans be removed to a light position near the glass.

The next stage is to prick the seedlings off into three inch pots, and this should be done when they have made sufficient growth to touch each other. Keep rather close and shaded for a few days, gradually inure to light and air, and then remove to an unheated frame or pit, which, after a few days, should be freely ventilated. Early in May will be a good time to transfer the plants to the beds and borders in which they are to bloom, and if they become pot-bound two or three weeks before they can be planted out shift into six-inch pots. The best compost for potting is one consisting of turfy loam four parts, well decayed manure two parts, and leaf-mould one part.

With regard to planting out, the cultivator will be guided by the condition of the plants and the state of the weather. It will be better to wait for a week or ten days than to put them out before they are thoroughly hardened, or when the weather is decidedly unfavourable. They should be arranged in groups of three or four plants each, and the sites selected must previously be liberally enriched with manure, and be deeply dug.

O. P. Q.

POLYGONUM AMPLEXICAULE VAR. SANGUINEUM.

The aggressive weediness so abundantly manifest in many species of polygonum, and which is not altogether wanting in typical P. amplexicaule, finds no place in a pretty form recently named sanguineum. I have had a colony of it under cultivation for four seasons, and can recommend it as a refined plant of attractive colouring peculiarly fitted for free grouping on the shrubbery margins, in the bolder types of rock gardens, and for the broad herbaceous border. The habit is semi-prostrate, literally a loose carpet of trailing stems a square yard in area; the leaves are broadly arrow-shaped, and pea green throughout summer, changing in mid-autumn to the brightest autumn tints. The flowers are in stout, erect spikes, and are coloured blood-red, the seed vessels which follow the flowers being scarcely less brilliant, and at the distance of a few yards flowers and seed spikes appear exactly alike.

The plant's hardiness and easy adaptation to all manner of soils and situations are helpful features the landscape gardener cannot afford to ignore. It will thrive in the poorest of soils, and should prove of considerable service as a free carpeting plant for beds of Magnolia stellata, shrubby spiræas, and other shrubs whose bases are not usually well leaved. This polygonum rarely exceeds a foot in height, does not run inordinately at the root, and is in no wise intractable. The flower spikes are very attractive cut and mixed with their own foliage in vases, but are seen at their best grouped on the shrubbery margin, giving one a light haze of red in the distance that deepens with advancing autumn to crimson, the golden-yellow, crimson-edged leafage joining in the colour display. G. B. Mallett.

Aster sinensis.—This is one of the most, if not the most, pleasing of the recently introduced types of annual asters. Its single flowers, which are white, blue, and other colours, are much more useful for decorative purposes in a cut state than the other types, the effect produced in the garden being very pleasing. Anyone who has not yet grown the single forms of this aster should not fail to do so. It is well to plant in rich soil, and give them plenty of room. Here in 1905 on one plant I counted eighty-eight flowers and buds, besides a large number of lateral buds that were developing. The specimen was three feet wide, thirty-three inches high, and continued in bloom a very long time—in fact, until frost cut it down.—E. F. Hazelton, Knowsley Gardens.

VIVIPAROUS FERNS.

One great distinction between ferns and flowering plants is the general absence of such buds as in the latter we find in the axils of the leaves, i.e., at the points of junction of leaves and their supporting stems, main or secondary. If, for instance, we examine a tree, we invariably find an incipient bud in such situations, and it is one of the functions of the immediately adjacent leaf to nourish this bud, so that when the leaf falls, it is suceeded by an outgrowth originating from this bud and capable of producing a branch, or if separated and properly treated, of developing into an independent plant. In ferns, even if we select a large tree fern with immense wide-spreading fronds, we shall search in vain for any such buds, incipient or developed, the entire frond, however large, being in point of fact the equivalent of a single leaf, and not as in the branch of a tree a multitude of individual ones.

Ferns, however, do produce buds and in very varied ways. There is, for instance, the familiar Asplenium bulbiferum, so largely used for room decoration, upon the fronds of which there are produced under healthy conditions a large number of young plants, which appear, first of all, as minute pimples on the upper surface of the frond divisions. These then develop into somewhat scaly knobs, whence fronds speedily arise and unfold, and even when quite small will, in their turn, bear pimples and young plants, so that two generations may appear, both being entirely dependent upon the parent and grandparent. These last terms, however, are hardly correct, since the buds being asexual, i.e., not produced by any act of fertilisation, they are merely parts of the original plants. Under humid conditions it will be found on examination that these young plants do not merely consist of fronds, but that they possess a bunch of incipient roots, and hence it is only necessary to cut off the piece of frond to which they are attached, and insert it in soil, for the plant to establish itself without difficulty.

There are a number of allied asplenia which act similarly, and our common Harts-tongue (Scolopendrium vulgare), which is nearly related to this family, has produced several curious viviparous varieties, some of which bear bulbils, as these growths are called, on the edges of much-divided fronds, while one, S. v. cristatum viviparum O'Kelly, found in Ireland, produces them on the surface in precisely the same way as A. bulbiferum. It is also a very common occurrence with many other varieties of the Harts-tongue to find surface bulbils produced on accidentally crippled fronds, both on the stalks and on the damaged fronds. In all such cases these bulbils can be used for propagation by cutting off the bulbil with a piece of frond attached, and inserting it so that the bulbil touches the soil. The edges of pots in which other ferns are growing form capital sites for such insertions.

Woodwardia orientalis presents another example of superficial bulbil growths, but goes a step farther, since while all those cited above are firmly attached and require separation and special planting for propagative purposes, W. orientalis has its little plants so slightly attached that when they have formed two or three little fronds they are easily detached by friction with neighbouring foliage, and then, using their rounded fronds as parachutes, sail to the soil, right side up, and, if fortunate, root where they fall. W. radicans, a near relative, adopts a different plan. It has long pendulous fronds with one or two large fleshy bulbils near the tips, and these develop into fair-sized and consequently heavy plants, which bend down the tip until it touches the soil, into which they root. This fern is a type of a number of others which in like fashion bear rooting bulbils at their frond tips, and thus, as in the case of the so-called American Walking Fern (Camphosorus rhyzophyllus), stride, as it were, over the ground and propagate themselves.

Some of the prettiest examples of this kind are of the Adiantum or Maidenhair genus, such as Adiantum lunulatum, A. caudatum, and A. dolabriforme, all of which form beautiful hanging plants, the fronds bearing several generations produced successively in this way. Our native Shield Ferns (Polystichum) have produced numerous varieties of a viviparous nature, bulbils being developed more or less freely on the fronds and their subdivisions, not, however, on their surfaces, but at the points of junction of their subdivisions, forming in point of fact the nearest approach to the axillary buds of flowering plants. Most of the very finely divided varieties of P. angulare, the soft Shield Fern, are prone to produce such bulbils on the stalks near the base of the fronds, but the normal forms are never bulbiferous.

Cystopteris bulbifera affords an unique example in the viviparous line by producing bulbils provided with such a generous store of nourishment for their independent support when detached that they resemble oval green berries, larger sometimes than fat grains of wheat, and consisting of two lobes between which the bud nestles. These "berries" fall off, and, reaching the soil, give rise at once to decent-sized plants, so that under suitable conditions the fern becomes a weed. In addition to the forms of viviparousness described, most of which, as we have seen, are specific characters, and affect only normal plants, in some abnormal forms, or "sports," we find bulbils appearing on the frond backs associated with the spores. This has been found on several plumose varieties of our native Lady Fern, but in Lastrea prolifera, it is a normal character. Obviously, all these forms of viviparousness are beneficial to the fern by providing a means of survival as well as propagation should the parent plant be seriously damaged, and in this connection we may fitly close by pointing out that Nature has endowed some ferns, probably many, for the point has been little studied, with the faculty of producing viviparous buds from the remains of mutilated caudicles or crowns, whose original axis of growth has been entirely destroyed.

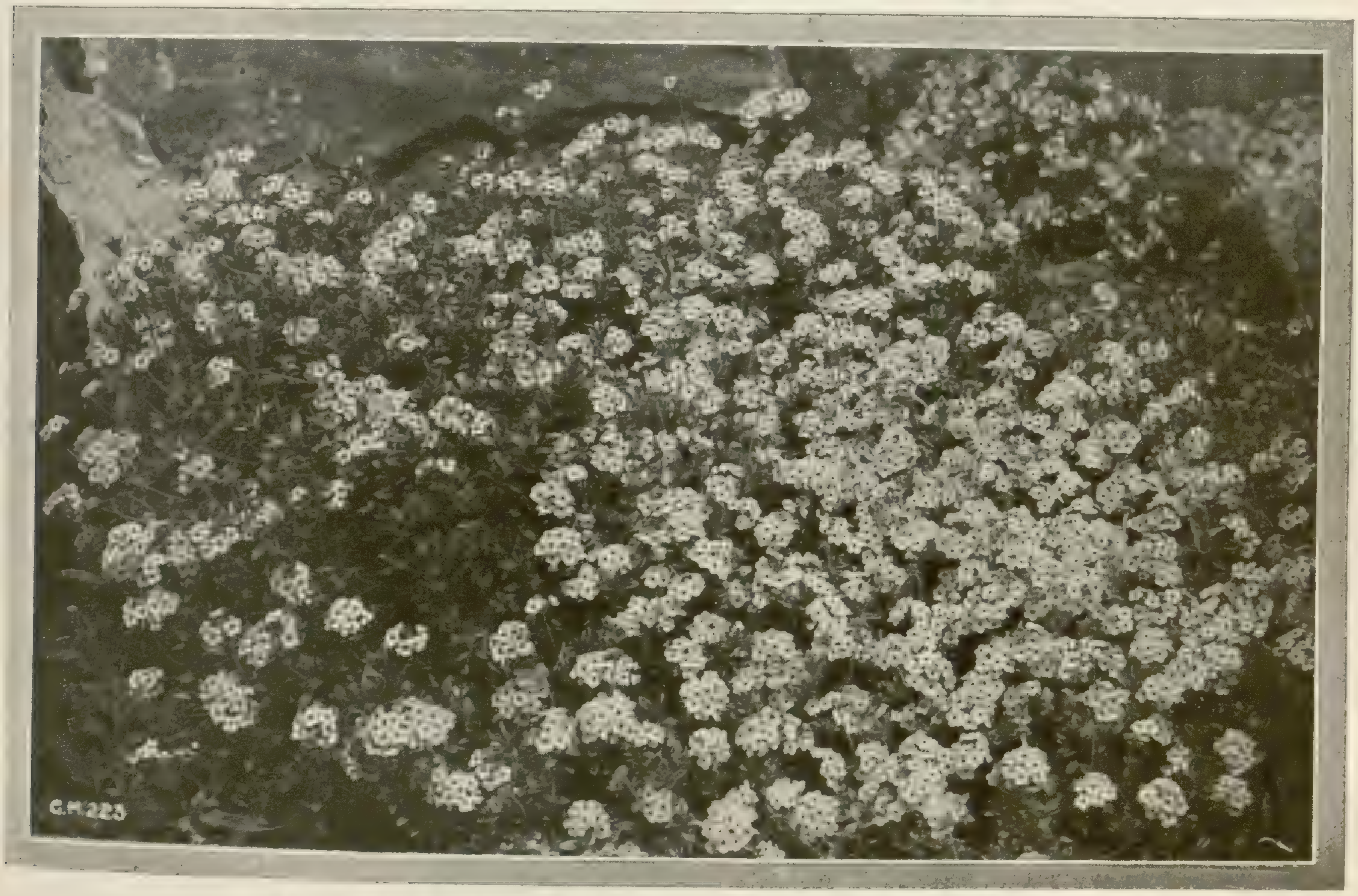
Thus we may take a crown-forming fern, such as a Shield Fern, and shave the entire growing centre away, apparently killing it, and yet placed in damp soil or cocoanut-fibre refuse, bulbils will be developed, and possibly scores of plants may in time result by subsequent careful separation. The late Mr. G. B. Wollaston told the writer of a case where a very rare and beautiful variety of Shield Fern had gone wrong and was treated by him in this way, and under warm treatment no less than eighty plants rewarded his apparent sacrifice of one.

Chas. T. Druery, V.M.H., F.L.S.

Damsons.—These are less grown than they should be, seeing that the fruits are exceptionally useful, and when bottled can be kept in good condition for some time. The trees are hardy, and can with advantage be planted to form screens for less hardy fruits. The heads need a little pruning annually, and the roots, after the trees are in full fruiting, should be fed.—H. Markham.

THE ANDROSACES.

These charming denizens of the Alps, the Pyrenees, the Himalayas, and other mountain ranges are among the most beautiful of rock plants when growing freely and blooming profusely. Unfortunately, however, they are not, as a race, easy of culture, for, although in certain gardens some species will flourish to perfection, the same plants will absolutely refuse to grow under apparently precisely similar conditions, even when treated with the most solicitous care. Our English winters, with their alternations of frost and damp are doubtless chiefly responsible for their disappointing behaviour. In their native lands, though the winter frost is severe, they are generally covered with a thick mantle of snow, which keeps them dormant and snug until it is melted by the strengthening sunshine.



ANDROSACE LANUGINOSA IN MR. FITZHERBERT'S GARDEN.
A beautiful alpine plant with silvery leaves, and bearing clusters of rose-lavender flowers.

As a preventive of undue winter moisture large panes of glass, fixed in a slanting position above the plants, will keep the rain from falling on their leaves, and, if they are of large size, a spare light tilted over them will give them adequate protection. Surfacing the soil with stones is also effective in rendering the foliage less liable to become saturated. A deep root-run of porous soil, well mixed with rough grit and stone chippings should be provided, so that the root-fibres may remain cool and moist while the foliage and flowers are revelling in the hot summer sunshine, a good compost being peat, leaf-mould, and loam in equal proportions, though specimens often do well in sandy loam. All species are partial to having stones sunk deeply in the soil about them, round which the roots may creep, and some can only be satisfactorily grown in rock fissures.

Of the Himalayan species the following are the most noteworthy: A. lanuginosa—This is without doubt the loveliest of the androsaces when seen in large masses covered with flower. Its rosy-lavender blossoms, with yellow eyes, commence to expand in May, and are at their best about midsummer, but continue well into the autumn, it being no uncommon occurrence to see an example still in bloom in November. The silky foliage is greyish-white in colour, and large specimens have the appearance of cascades of silver falling over the rocks. The mass here illustrated, which measures over four feet each way, is the outcome of two tiny plants put out from thumb-pots three years ago, on a sunny bank, in soil mixed with a large proportion of small stones and grit. In neighbouring gardens this androsace has refused to grow. As an instance of the capriciousness of this species it may be mentioned that what was probably the finest example in England, which formed a cataract of bloom over six feet long and three feet wide down a series of rocky ledges, and whose owner described it as one of the easiest of rock plants to grow, suddenly died a few years ago, since which time it has absolutely refused to live in the same garden, although good rooted cuttings have been annually planted and fresh compost of the most approved description has been provided.

Androsace lanuginosa makes prostrate stems a foot or so in length. Cuttings may be made of these, and, if they are placed in pure sand and kept close for a short time, will soon root. Planted in the spring, a few inches apart, these will soon form an effective mass. Old stems cut back make stronger growth, and bear larger heads of bloom. The best position for this androsace is one where its growths may hang over perpendicular rocks. A. sarmentosa is of stoloniferous growth, and has round, silvery-green rosettes ramifying from each other that often cover many feet of ground. If stones are placed on the threadlike runners these will root into the soil. The verbena-like flowers are pink in colour with yellow eyes. The foliage is very woolly, and the plants often suffer much from damp in wet winters. They should therefore be covered with glass in order to prevent the leaves being affected by overhead moisture.

A. Chumbyi is a variety of the last-named, with neater growth and brighter-coloured blossoms. A foliosa is a coarse-growing species bearing large rosy-lilac flower-heads on stems six inches or more in height. It is of comparatively easy culture. A. sempervivoides is a pretty plant from Western Thibet, not so silvery in foliage as those already mentioned, with neat growth and rose-pink flowers.

Of the Alpine section some of the species are among the most difficult of all rock plants to grow satisfactorily. Of these A. imbricata and A. glacialis may be singled out as especially impatient of garden culture. A. imbricata, or argentea, lives at great elevations in the dry crevices of sunny precipices, forming little rosettes of grey foliage which bear white flowers, the roots of the tiny plants often penetrating many feet into the rock. In this country the only hope of success lies in planting in a rock-fissure, but it is generally impossible to spread out the long roots evenly in such a confined space, and it is therefore usually advisable to build a rock-crevice. Where this is done large masses of stone should be used, and the soil rammed tight, so that the action of the winter frosts and rains may not displace the material.

A glacialis, or alpina, is found growing in rocky débris at a great elevation. It is unlike A. imbricata, which lives in the narrow chinks of the cliffs, an easy plant to collect, but rarely lasts more than a season or two in England. A steep, sunny slope and a compost of gritty peat mixed with sandstone chips offer the most likely conditions for its well-being. Its flowers are soft rose-pink and large masses in profuse bloom afford beautiful pictures in the high Alps. A. helvetica, with white flowers, is less exacting than the two last-named, as are the white yellow-eyed A. pyrenaica and the yellow A. Vitaliana, while the pink A. carnea and the rose A. Laggeri are of comparatively easy culture.

A. chamæjasme, with blush-white flowers, is a limestone plant, while A. obtusifolia, white with yellow eye, is a lime-hater and a granite-lover. A. Wulfeniana and A. ciliata, from the Tyrol, bear pink flowers. A. villosa, a Pyrenean plant, is very lovely, and has blush-white blossoms, and other European species are A. arachnoidea, A. coronopifolia, A. cylindrica, and A. pubescens. S. W. FITZHERBERT.

CHIMONANTHUS FRAGRANS

Among the several shrubs that blossom during the first weeks of the year there are five or six remarkable for the fragrance of their flowers, in fact it is doubtful whether their delicious perfume is equalled by a similar number of shrubs selected from the many that blossom two or three months later. Of these few, the Winter Flower (Chimonanthus fragrans) is one of the most fragrant. It is a native of China and Japan, and is related to the American genus, calycanthus; in fact, Linnæus placed it among the calycanthuses with the name of C. præcox. Though perfectly hardy it is often given a position on a wall, so that the flowers are afforded some little protection.

When grown against a wall the best culture to adopt is that of a vigorous spurring back as soon as the blossoms fade; this encourages the production of long young shoots, which produce blooms from almost every bud. When cut flowers are required these shoots, two feet or more long, will be found excellent for arranging with other flowers on account of the perfume. Grown in the open border, bushes six or eight feet high are formed, with somewhat stunted branches, which bear flowers freely. When out of blossom there is nothing uncommon about the shrub, but when the flowers are fully expanded in January the plant is much admired. The flowers may have either cream or golden sepals, with brownish petals. There is a variety, grandiflora, with rich golden flowers, larger than those of the type. It is a difficult shrub to propagate, and the type is usually increased by means of seeds, whilst the variety is grafted on stocks of the type. W. DALLIMORE.

Narcissus obvallaris.—For pot culture in the greenhouse this sturdy trumpet daffodil is one of the most attractive. I have just now some of them flowering in a quite cool greenhouse, where the average night temperature has been about 45 degrees. It is surprising the progress the bulbs have made in this temperature, considering they were only introduced to the greenhouse about the end of December. The rich golden-yellow of the expanded trumpet is very beautiful, and, indeed, for colour, this variety has no equal among the early daffodils. One point in favour of thus gradually bringing these into flower is that the plants quickly recover when planted out again, while those that have been subjected to a forcing temperature take several years to recover. These daffodils are so easily grown that every amateur should try a few pots in the greenhouse in this way. Grown thus they last a long time in good condition.—T. B. FIELD, Ashwellthorpe Gardens.

SWEET PEAS IN CLUMPS AND ROWS.

For the main batch of sweet peas to supply cut flowers or for the decoration of the garden, experience proves that there is no sowing period quite so good as about the middle of March. Earlier sowings have a tendency to rot, the white-seeded varieties especially; later ones may be overtaken by hot, dry weather before they send their roots well down in the cool manure provided for them.

By the middle of March the soil is generally in such a condition that sowing may be performed under almost ideal conditions. Mellowed by exposure to winter's rains and frosts, it breaks down under fork or rake to a beautifully fine mould, delightful to work, and an ideal nursery for the seeds. On the other hand, the soil still retains a goodly quantity of moisture, and this acted on by the increasingly powerful sun, sets up germinative conditions of the highest order. If a mid-March sowing is supplemented by another at the middle of April, or as soon as the first sowing is well through the soil, the chances of failure are very remote, and those of a fine and a prolonged display correspondingly good.

If the soil is still in the rough condition in which it was left at the winter digging, a fork should be used to break it down. A fork is infinitely to be preferred to a rake for this purpose as it lightens and aerates the soil, whereas a rake compresses it, and closes the interstices. On soils that are naturally light and loose I strongly advise a good treading before sowing the seed, as there is no question that the sweet pea likes a firm root run. Tread well over the whole plot, then with the fork loosen up and level the top three or four inches of the bed. On heavy soils treading will not be needed, but the fork should be used to break down clods and make the surface fairly level.

If possible, a day or two should intervene between this forking and the sowing of the seed; it is so much more pleasant working when the soil does not cling persistently to rake, boots, and fingers. With the surface dry and crumbly proceed with the rake to prepare the stations for the seeds. If clumps are favoured, scrape away a basin-like depression about two feet wide and two inches deep. If rows are preferred, stretch the garden line, and with the rake make a shallow trench along its course, about a foot wide and two inches deep. The effect of these operations will be that the seeds, and ultimately the plants will rest in a depression a little below the general ground line. This is to ensure that they retain as much as possible of what rain falls, and to assist the application of food and water later on.

With regard to the actual sowing, it is now generally recognised that sweet peas give better results at a foot apart than they do at, say, three inches. To make sure of a crop it is the usual practice to sow at about the latter distance, and then thin out the plants as required, and although more trouble I think the following is a better plan. After the shallow trench has been made go along it and drop down two seeds, in pairs, at distances of about one foot apart all through the row. Next, go again along the row and press each seed down as far as it will go with the forefinger: those with tender fingers will find a blunt-ended piece of stake a capital substitute. When finished, cover the holes with the rake, and firm the soil over them with the back thereof.

For clumps this system is equally good, each clump being seeded, sown, and raked before another is begun. Labelling should follow sowing, each clump or each section of a row being labelled as the seeds are put in. In case any reader should think this system a long-winded and troublesome one, I would like to say that last year I sowed over 1,000 feet run of row in this way in a single morning, and found it quite pleasant work. After sowing, dust a little fresh soot over the site, and near woods and fields a few strands of black thread should be strained across the seeds to keep away birds.

There are two ways whereby the germination of a good percentage of the seeds may be secured, and these may be briefly mentioned. Mice, birds, and wireworms all have a great liking for sweet peas; the two former will carry them away wholesale, the latter will bore into them and ruin them. All may be checked, if not quite frustrated, by soaking the seeds in paraffin oil. Just how long they are soaked does not seem to matter much, as the oil has never been known to penetrate to the germ of the seed; but a few minutes will generally be sufficient. My practice is to throw the seeds into a jar of paraffin while I am getting the trench ready, take them out when the trench is finished, lay them in an earthenware saucer, and sow from that. I find this is enough to save them from mice and birds, though I have lost some from wireworm after this treatment. To make assurance double sure the damp seeds may be rolled in a little red lead before sowing.

The second way of ensuring or assisting germination is to nick a notch in the skin of the seed with a sharp knife. Only the black or dark-seeded varieties need this assistance, and it is a moot question with many growers whether they really need it this year. Last year the hot summer of 1906 had so hardened the seed coats that chipping was generally practised throughout the country; 1907 was nothing like so sunny, therefore the argument is that no nicking or chipping is required. However, I have already sown some hundreds of seeds in pots, and as I have had to take many of these up and chip them before they would germinate, I advise readers to adopt this simple precaution—at least with all expensive seeds. E. J. CASTLE.

DAPHNE MEZEREUM GRANDIFLORA.

The mezereon and its varieties provide a number of beautiful flowering shrubs that are of exceptional value, for they blossom at a time when few other shrubs are in flower. The type is well known by reason of its profusion of fragrant red blossoms, which make their presence known from a considerable distance during February and early in March by their delicious scent. The variety grandiflora, however, is less frequently met with though it has qualifications which warrant its extended culture. It is of sturdier appearance than the type, somewhat similar as regards height, with rather larger and deeper coloured flowers. As a rule flowers commence to open in October, through which reason the name of autumnalis is sometimes applied to the plant, but it is not until the early part of January that the majority of the blooms expand and throughout January branches are wreathed with the densely-clustered flowers, which are quite as fragrant as those of the type. As in the case of the species the flowers of this variety are succeeded by bright red fruits, which add a further period of beauty. Those who are fond of variety should obtain D. mezereum alba; this is recognised by its white flowers and golden fruits. W. DALLIMORE.

A WONDERFUL POTATO EXHIBIT.

Beyond all question, the splendid exhibit of potatoes arranged by Messrs. Sutton and Sons, Reading, at the Royal Horticultural Hall, on Tuesday, February 11, was the finest of its kind ever seen. Not only was it unusually attractive, but it was intensely interesting, the tubers being of good size and perfect shape and colour. To growers and exhibitors of potatoes the display was one of unusual educational value, for not only were the varieties, about two hundred, all shown in fine style, but they were true to character—a point of considerable importance. Moreover, the "seed" potatoes served a very useful purpose, as they indicated the most desirable size of sets for planting.

Spectacularly and horticulturally the exhibit merited and received the highest encomiums, but from another point of view, the scientific, it possessed great value. By no means the least interesting feature was the most remarkable collection of wild types of potatoes, and their crosses, numbering no less than seventy-nine. It is safe to say that no such display of the wild forms of the tuber-bearing Solanums has ever before been brought together. The gathering of such a collection must have taken years of patient work, and naturally the greatest interest was shown in them. Full details of these wild types and hybrid-seedlings raised from them are appended:

"Solanum tuberosum" (of Mexico) grown from tubers raised from seed received from Vermont Agricultural Station, United States, 1906.

"Solanum tuberosum" (another form from Mexico) grown from tubers raised from seed saved at Vermont, 1906.

Hybrid-Seedling — "Solanum tuberosum" (of Mexico) x Solanum etuberosum (of Chili).

Hybrid-Seedling — Solanum Commersoni (Dunal) (flowers white) x "Solanum tuberosum" (of Mexico).

Solanum polyadenium (Greenman) grown from tubers raised from seed received from Vermont, 1906.

Solanum Maglia (Schlechtendahl) grown from tubers received from Mr. Baker at Kew in 1886.

Hybrid-Seedling—Solanum Maglia (Schlechtendahl) x Potato of Commerce.

Hybrid-Seedling—Solanum Maglia (Schlechtendahl) x Potato of Commerce x Potato of Commerce.

Solanum etuberosum (Lindley)—pot culture. Grown from tubers received from the Royal Botanic Gardens, Edinburgh, 1886 and 1897.

Solanum etuberosum (Lindley) — open ground culture. Grown from tubers received from the Royal Botanic Gardens, Edinburgh, 1887 and 1897.

Solanum etuberosum (Lindley), Seedlings from pot culture.

Solanum etuberosum (Lindley), Seedlings from open ground culture.

Papa d'Amarilla—grown extensively on the Andes.

Hybrid-Seedling — Solanum Commersoni (Dunal) (flowers white), x "Solanum tuberosum" (of Mexico).

Hybrid-Seedling — Solanum Commersoni (Dunal) (flowers white), x Potato of Commerce.

Solanum Commersoni (Dunal), from Uruguay (flowers violet). A very interesting group consisting of plants of the Papa Silvestre, the wild potato of Uruguay, which Messrs. Sutton and Sons have lately received from a correspondent in Uruguay. The plants, of which five different consignments have safely reached Messrs. Sutton and Sons, were in each case collected in the wild state under various conditions of soil and locality, and very far from any cultivated land. In each case there is every reason to conclude that the several consignments of tubers represent one and the same species. With the first consignment Messrs. Sutton and Sons received a note from Senor Arechavaleta, Professor of Botany and Director of the National Museum of Montevideo, certifying that the tubers were the true Solanum Commersoni (Dunal), being in fact the plant introduced by Commerson in 1767. Senor Arechavaleta further stated that all the wild potatoes found in Uruguay were of one and the same type. In the "Histoire de la Pomme de Terre" by Monsieur Ernest Roze, Lauréat de l'Institut et de la Société nationale d'Agriculture de France, published in Paris in 1898, there appears on page 17 an engraving accurately representing the dried specimen of the original plant introduced by Commerson in 1767, and this engraving corresponds in every respect with the Papa Silvestre shown by Messrs. Sutton and Sons. It is noteworthy that the plants recently grown in France and England under the name of "Solanum Commersoni" have mostly, if not in every case, been of a different type, bearing white flowers.

Solanum Commersoni (Dunal) (flowers white).

Solanum Commersoni (Dunal), from Mr. Fitz-Herbert of Uruguay.

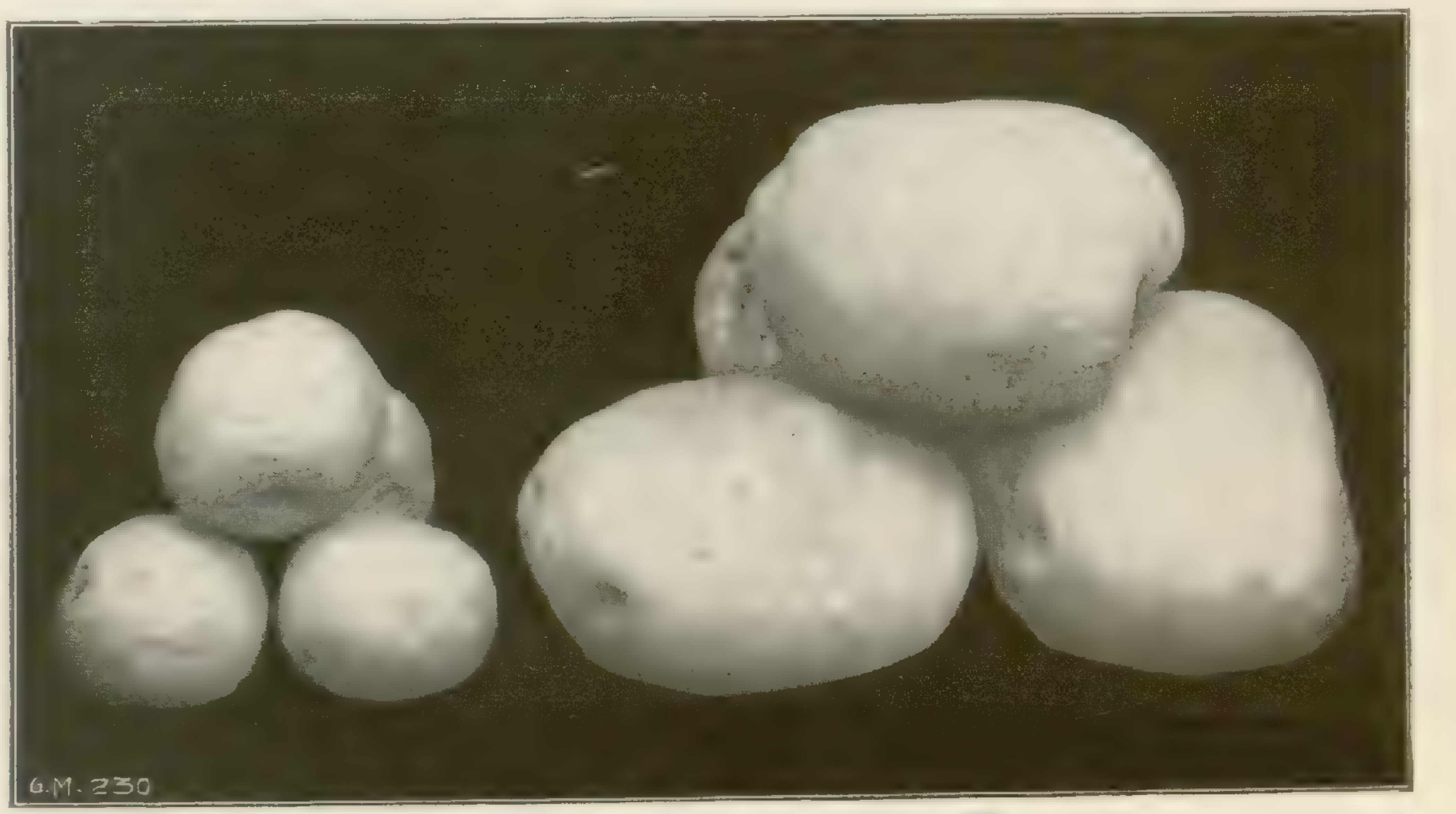
Solanum, a wild species from Mexico.

Solanum Ohrondi (?) (Carrière).

Potato — "Solanum Commersoni violet" (Labergerie).

Seedlings from "Solanum Commersoni violet" (Labergerie).

Hybrid-Seedling — "Solanum Commersoni violet" (Labergerie), x Solanum Commersoni (Dunal) (flowers white).



SOLANUM ETUBEROSUM, AS EXHIBITED BY MESSRS. SUTTON AND SONS.

A.—Tubers as originally received.
B.—Tubers after twenty years cultivation, except that these are often relatively twice as large.

Potato—Blue Giant (Paulsen).

Seedlings from Blue Giant (Paulsen).

A South African Potato, No. 3.

Seedlings from South African Potato, No. 3.

A South African Potato, No. 1.

A South African Potato, No. 2.

A Chilian Potato, No. 1.

A Chilian Potato, No .2.

(Several of the wild types named above were shown in growth.)

Whether we are within measurable distance of settling the question of the original type from whence the potato of Commerce has arisen it is, perhaps, too early to say with certainty, but such a collection of wild forms provides great possibilities in research work of this kind, and we understand that some extremely interesting facts have been brought to light during the past year or two which will, we hope, encourage Messrs. Sutton to continue their enquiries.

There is no better guide to the kitchen garden than Vegetables and Their Cultivation, by T. W. Sanders. It is a complete treatise on the general management of the garden, and the successful culture of vegetables, saladings, and herbs for home use. Price 5s. net, by post, in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEASONABLE REMARKS.—With the sun daily gaining more power shading must have consideration. The blinds should now be put into working order, and they will thus be ready for use when required. In the cool house and for newly-potted plants one has to be particularly careful to observe the angle at which the sun's rays reach the foliage of the plants, so that the blinds may be brought into use at any moment during the hottest part of the day, or at any time when there is a danger of scorching. For cool house orchids, and where large growths and pseudo-bulbs are obtained, I find with the greater amount of root space and moisture-retaining compost afforded that the plants, when properly established, will stand more light than was the case with shallow potting. I mention this particularly here, to illustrate the necessity of proper discretion being used as to when shading is necessary, and to see that it is removed as soon as it can be dispensed with.

VENTILATION.—The methods of admitting air to our houses are pretty generally understood, but one or two observations may be of service. It is all very well to advise ample ventilation when the outside conditions permit, but these conditions are often misunderstood, or at any rate carelessly acted upon, even with an outside thermometer at hand, which may be consulted. Even with bright sunshine at this season of the year, there is always a chilling briskness in the atmosphere, and thus we have two factors to guard against—the sun raising the temperature to an undesirable degree, and the admission of cold draughts. No hard and fast rules can be laid down, and one can only expect that those in charge of the houses must use discretion in such matters. Another item I might mention in respect to ventilation; it is the desirability of avoiding checks unfavourable to young and tender growth. It is only natural that when the sun has been shining on the houses for some hours before the blinds are brought into use, the temperature will have risen so much that a considerable amount of ventilation has been brought into use. Bringing the blinds into use immediately reduces the temperature inside the house, and where lath roller blinds are used the fall is exceedingly rapid. This is where the observant and careful cultivator will be found on the alert, and will immediately reduce the ventilation, so that any chilling effects likely to occur may be counteracted to a great extent.

DAMPING DOWN.—Affording moisture by wetting the floor, staging, etc., must now also have careful consideration. There are many plants in a more or less active state of growth, and needing encouragement, and the moisture in the atmosphere of our houses is one of the chief factors in assisting renewed vitality. Our aim must therefore be to provide, as far as possible, suitable conditions for development. The outside conditions must govern the amount of atmospheric moisture we may safely afford. The greatest difficulties are perhaps experienced during prolonged mild and dull weather; but with a discreet use of artificial heat and ventilation these may be counteracted.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CLIVIA MINIATA.—No collection of greenhouse plants can be considered complete that does not include a few clivias. Amongst the most easily grown of all indoor plants these are also among the most brilliantly coloured of those that flower early in spring. The large trusses are now rapidly expanding, and the flowers, of a brilliant orange-scarlet, provide a colour of which there is at this season no exact counterpart. Clivias are free-rooting, robust subjects, and now, when the flower spikes are pushing, occasional supplies of liquid manure are beneficial. The potting material should be rich loam, leaf-soil, and silver sand, but care should be taken not to overpot the plants. It is not so much the amount of roots as the proportionate size of pot and plant that must be considered. During autumn the plants should be kept rather dry, as this checks leaf growth, and aids in the formation of the flower trusses. Clivias may be grown and flowered in an ordinary vinery or greenhouse, but prefer a slightly warmer place.

CLEMATIS INDIVISA LOBATA.—This pretty greenhouse climber is now coming into bloom. The pure white star-like flowers, which are produced in long racemes, are very effective. As it blooms at a season when few greenhouse climbers make much show it is all the more desirable, and no collection of greenhouse plants should be without it.

MAIDENHAIR FERNS FOR CUTTING.—Plants of the Maidenhair Fern, Adiantum cuneatum, should now be examined. Unless the supply of cut fronds is required at one particular time of the year only it is needful to have a succession, for to use the same plants throughout the season does not answer, at least not in private establishments. If the stock is now mixed, it can easily be separated. Some will be starting away into growth much earlier than others, and these may be made the earliest; continuing the process of selection, it will be easy to thus make at least three batches. The earliest one should be encouraged to make its growth as quickly as possible, so as to be ready for cutting in good time. However, strong heat and any great amount of moisture are not desirable, neither the one nor the other being productive of hard enduring fronds. One of the best places now would be a vinery, where the vines are just breaking, or a peach house in which the fruit is about set, a shelf in either instance being the preferable position. Those plants forming the second and third batches should for the present be kept cool, the later ones receiving scarcely any water for a few weeks longer. Of course, to expose such plants to sunlight and air would not be advisable. Neither of these later lots need have so much heat as the first. The latest will, in all probability, start kindly in a close frame without any heat to excite them.

IRIS RETICULATA. — This charming little iris is also well adapted for pots, and amateurs who have nothing but an ordinary greenhouse can have it in flower very early in the year by potting the bulbs in autumn, removing them under glass, or covering them with leaf-mould to the depth of three or four inches, and taking them into the greenhouse as soon as half an inch of growth has been made. Much heat ruins it. It does not even care for an intermediate house, but comes on rapidly and strongly in a temperature of from 40 to 45 degrees at night. The blooms last some time in full beauty, and look charming when cut and arranged in small glasses with some of their own foliage.—T. B. FIELD, Ashwellthorpe, Norwich.

THE FLOWER GARDEN.

ALL CLIMBERS on walls, pergolas, arches, etc., should at once be pruned and tied in. Ampelopsis should have all loose branches cut away, unless there is room for laying them in, when they should be neatly secured to walls. Wistarias should be extended where there is room, and have other growths pruned back to two or three good flowering buds from the old wood. Planting may still be done, but complete it as soon as possible. Clipping or cutting ivy may be left until next month.

ROCKERY.—Planting should now be completed; planting in masses has a much better effect than single plants, due regard for each kind being given. Arabis, alyssum, iberis, etc., must be planted nearer the summit than primulas, cardamines, prunellas, acænas, and helianthemums. Ramondia pyrenaica should be planted in the clefts of rocks, where colonies of them are very pleasing. Saxifraga Wallacei should have a favourable position in every rockery, and on the summit some of the taller-growing plants and shrubs, such as Rubus phœnicolasius, Wichuraiana roses, broom, gorse, cistus, kniphofias, and arundos (in good soil), etc., should be placed. The little Bambusa pygmæa is well suited for rambling in the lower parts, and if the position is favourable it will spread rapidly. See that the rockery is well cleaned all through, and any necessary top-dressing given before growth begins.

HERBACEOUS BORDERS.—All planting should now be finished as growth is starting. As the eremurus appear above ground it is advisable to cover them with nine or more inches of leaf-soil, to protect them from severe late frosts. Hepaticas and the earlier bulbs are now showing more and more of their beauty. Kniphofias may now be divided and replanted, but avoid severing more of the roots than is absolutely necessary. Carefully disentangle the roots, and plant in well-prepared, good, deep soil, but not in a waterlogged one.

SEEDS of matricarias, larkspurs, salpiglossis, alonsoa, petunias, nicotianas, coreopsis, annual chrysanthemums, etc., etc., may now be sown in gentle heat; do not sow seeds thickly or place in too strong heat, sturdy vigorous growth from its earliest stages being much the best. Continue to prick off seedlings from previous sowings. Kochia scoparia is among the most beautiful of the narrow-leaved ornamental foliage plants for warm districts; unfortunately I do not find it a success here, as it does not assume its proper autumn colour.

CANNAS may now be divided and started in gentle heat; use the outside growths of clumps, and not inside ones, as these do not readily start into growth.

PROPAGATING.—Continue to propagate fuchsias, salvias, heliotropes, ageratums, cupheas, coleus, lobelias, etc., cuttings of these should be inserted as recommended in previous notes, and where carpet or pattern bedding is still practised, alternanthera and other cuttings may now be inserted. Autumn-struck zonal pelargoniums should be potted and grown on in a genial, but not high temperature, giving all the light possible except for a few days immediately after potting, though where they were struck singly in small pots this does not apply.

STANDARD PLANTS of fuchsias, heliotropes, plumbagos, etc., should be carefully cut back, cleaned over, and started in gentle heat. Where a young batch is to be grown up a start may now be made; select the varieties and plants most suitable, and grow to a single stem until the desired height is reached, when they must be pinched or stopped.—E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

PEACH AND NECTARINE TREES.—In some gardens, where the trees are not numerous, pruning and nailing is left till rather late, but where there is a deal to be done the work must be taken in hand at once and completed before the buds are too forward. If the trees were well attended to last summer in the matter of disbudding and carefully selecting suitable shoots for fruiting this season, very little pruning should be required at the present time. In the case of neglected trees, it will be well to take from the walls all the branches, cut out those not required, and train in younger wood. See that all the main branches are as evenly balanced as possible, so as to give the individual tree a good appearance. Young shoots should then be neatly secured to the walls or wires as straight from the base as possible. Do not use too many nails, be careful not to injure the bark when driving the nails into the walls, and allow plenty of space between the nail heads and the wood, otherwise much harm may be done to the bark. Finish with a good syringing with soapsuds to cleanse the trees of insect pests. Young trees may now be put into order. If planted before December the soil will by this have become settled; but to be on the safe side, before nailing the branches to the walls give the soil a good trampling. All peach trees should have ample room for development, and the young shoots must be kept thinly placed.

APRICOTS.—These being amongst the first of hardy fruits to bloom, the flowers are very liable to become damaged by frost, and considering that the buds are plumping up fast no time should be lost in putting the trees into good order. If the spurs are numerous and long some may be removed to give the others a better chance. Secure the young wood neatly at intervals all over the trees, as this will, in a couple of years give the best fruits, and will also serve to fill up any gap which may take place at any time. In some gardens the apricot seems to thrive well, producing fine fruits annually, the wood and trees generally being a picture of health. But in other gardens no sooner is a good tree formed than gumming sets in and destroys some of the best-placed branches. Good fibrous loam, well drained, with plenty of chalk and old mortar, is the most suitable soil for apricots. See that all the protecting material is made in readiness for use as soon as there is danger of damage to the buds by frost.

ALPINE STRAWBERRIES.—These may be increased by runners, divisions, and from seed. Seed may be sown in well-drained pans at the present time; the pans should be clean, dry, and filled with sandy soil, sweet and fresh. Cover the seed thinly with fine soil, and place the pan in a gentle warmth, covering it with a square of glass and brown paper till the seed begins to germinate. If the soil is fairly moist at the time of sowing no water will be required for some time, and when water is given every care should be taken not to wash the seed bare. In fact, after each watering, and until the plants are nicely up a sprinkling of sand over the surface will be an advantage. Prick the seedlings off when large enough, and encourage them to grow, first in pans, and then in boxes. The plants may then be gradually hardened, and finally planted out in June on a well-prepared piece of land made firm. These plants do not require a too rich soil, and should be allowed about twelve inches between the rows and the same distance from plant to plant. See that a good strain is obtained from some good firm.—H. MARKHAM, Wrotham Park Gardens.

EXHIBITIONS AND MEETINGS.

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Royal Gardeners' Orphan Fund.

FEBRUARY 14.

On the occasion of the annual meeting of this excellent charity at Simpson's, Strand. Mr. H. B. May, chairman of committee, presided over a small number of members. The number of members present was probably smaller than at any of the annual gatherings since the origination of the fund, and was no doubt due to the satisfaction of the members with which the committee and officers discharge their respective duties. The notice convening the meeting, and the minutes of the previous annual meeting having been read by Mr. B. Wynne, the secretary, it was decided to take the report and financial statement for the past year as read.

REPORT AND FINANCIAL STATEMENT.

The following is the report, in a somewhat abbreviated form, presented by the committee: In presenting their twentieth annual report, which practically brings the official record of the operations of the fund since its establishment up to its twenty-first birthday, the committee most heartily congratulates all past and present supporters on another year of steady progress and increasing prosperity and usefulness, and on a record of good work accomplished during the twenty years of the existence of the fund, such as none could have anticipated, who, in the early months of 1887, took part in laying its foundation.

At the end of the first year a very modest start was made with the election of eight candidates at a cost of £139 15s. At the end of 1907, the number of children in receipt of the full allowance, granted after election, was 95, while nineteen others were receiving much-needed financial assistance while waiting for advancement to the full pay list, the total amount distributed during the year being £1,511 10s., or £100 more than the previous year's total. At the commencement of 1907, there were 95 children receiving the full allowance, and nineteen were added to the list at the annual meeting in February, bringing up the total number of orphans elected during the twenty years to two hundred and thirty-six, while the total sum expended in allowances and grants in aid during the same period amounted to no less a sum than £17,884 12s. 6d. The total amount of the receipts from all sources up to the end of 1907 is £36,884, to which, besides providing the large sum distributed in accordance with the objects for which the fund was established, has enabled the committee to provide a reserve fund of over £11,000, all well invested, and the dividends accruing from which more than provide for all necessary working expenses.

As regards the accounts of the past year, which show an increase in receipts over 1906 amounting to £69 18s. 10d., an increase of £100 in the children's allowances, an addition of £120 16s. 11d. to the amount invested in Consols, an addition of £50 to the deposit account, and a larger sum carried forward; the committee have again to deplore the one weak spot, i.e., the comparatively small sum received in the form of annual subscriptions, and once more most earnestly appeals for a larger measure of support under this heading.

Under the genial, and so happily appropriate, presidency of "the children's Lord Mayor," Alderman Sir William P. Treloar, Bart., the annual festival dinner held at De Keyser's Royal Hotel, E.C., on May 23, was again both socially and financially an unqualified success, the chairman's list for the second time in the history of the fund exceeding £1,000, while the attendance of friends and visitors was also larger than heretofore.

With the utmost possible satisfaction the committee make the announcement that in order to fittingly celebrate the coming-of-age of the fund, the noble president, the Duke of Bedford, K.G., has most kindly consented to preside at the forthcoming festival, which has been arranged to take place at the Hotel Cecil on Tuesday, May 12, when it is earnestly hoped that all friends and supporters will unite with the committee in their efforts to render the festival worthy of such an auspicious occasion.

The warmest thanks of the committee are again most heartily accorded to all who have assisted in promoting the welfare of the fund during the past year, and especially is grateful acknowledgment due to the Right Hon. Mary, Countess of Ilchester, Sir Frank Crisp, and Major John W. Dent, for so kindly opening their private gardens to the public, in aid of the charity, to the stewards at the annual dinner, the honorary local secretaries, and the many good friends in such centres as Altrincham, Chesterfield, Bradford, Reigate, Chislehurst, etc., who have again sent up most acceptable contributions.

With very sincere regret the committee records the fact that the fund has suffered grievous losses during the year by the lamented deaths of so many constant and valued supporters. From the role of vice-presidents the names of Lord Battersea and Dr. Maxwell T. Masters, F.R.S., will be greatly missed. Lord Battersea will be specially remembered for his graceful advocacy of the claims of the charity to the support of all lovers of horticulture at the annual dinner in 1900, while Dr. Masters from the inception of the fund had wholeheartedly supported it in every way, and specially rendered most valuable assistance in the drafting of the rules which, largely owing to his sagacious counsel, have since been found to work so smoothly. Very deeply indeed do his old colleagues deplore the loss of Mr. John Assbee, who for nineteen years was one of the most regular attendants at the meetings of the committee, and an enthusiastic and sympathetic worker.

During the year the committee has again been much gratified by the generous assistance rendered to the fund and the keen interest taken in its management by the treasurer, Mr. Edward Sherwood, who is hereby most gratefully thanked, and very cordially nominated for re-election.

The members of the committee who retire by rotation are Mr. W. R. Alderson, Mr. George H. Barr, Mr. George H. Cuthbert, Mr. William Howe, Mr. John Lyne, Mr. William Poupart, Mr. Thomas W. Sanders, and Mr. William P. Thomson, and, all being eligible, offer themselves for re-election. For the vacancy created by the death of Mr. Assbee, the committee has great pleasure in recommending the election of Mr. Edward Parsons, of Messrs. Parsons and Co., Lim., Fruit Market, Covent Garden, a gentleman who for some years past has been a generous supporter of the charity, and a regular attendant at the annual festivals.

The auditors, Mr. M. Rowan and Mr. P. Rudolph Barr, are again most cordially thanked for the carefulness with which they have made the annual examination of the accounts, a duty most cheerfully rendered, though annually making a greater demand upon their time owing to the steady growth of the institution.

FINANCIAL STATEMENT.

RECEIPTS.

To Subscriptions: General ...	£309 17 2	
Subscriptions: Local Secretaries	68 11 6	
		£378 8 8
Donations: General	257 2 0	
Donations: Local Secretaries	17 10 2	
		274 12 2
Subscription List at Annual Dinner	1,004 19 7	
Less Expenses	189 19 9	
		814 19 10
Legacies: Mr. Hugh Aiton ...	10 0 0	
Mr. E. Poole ...	63 0 0	
		73 0 0
Advertisements in List of Subscribers ...		28 18 6
Dividends on Stock and Interest on Deposit		359 8 9
Income Tax returned		5 7 3
Miscellaneous Receipts		11 15 0
		1,946 10 2
Balance from last Account		771 19 8
		£2,718 9 10

EXPENDITURE.

By Allowances to Orphans ...	£1,411 0 0	
Grants in Aid	87 10 0	
"Emma Sherwood Memorial"	13 0 0	
		£1,511 10 0
Secretary's Salary and Clerical Assistance		130 0 0
Printing and Posting List of Subscribers		38 10 2
Rent and Insurance	26 3 6	
Printing and Stationery ...	44 15 5	
Advertising	7 15 6	
Annual General and Committee Meetings, etc. ...	21 7 3	
Postages	22 1 8	
Bank Charges	2 15 1	
Sundry Expenses (Petty Cash)	4 13 11	
		129 12 4
		1,809 12 6
Purchase of £120 16s. 11d. 2½ per cent. Consols... ...		100 0 0
		1,909 12 6
Balances: Cash at Bank	504 19 4	
Cash in hand	3 18 0	
Cash on Deposit	300 0 0	
		808 17 4
		£2,718 9 10

Note.—Investments:

3 per cent. London and County Consolidated Stock	£7,240 15 10
3 per cent. Canada Stock	2,000 0 0
L. and N.-W. Railway 4 per cent. Preference Stock	340 0 0
Great Indian Peninsula Railway Guarantee 3 per cent. Stock	514 0 0
2½ per cent. Consols	757 0 4
"Thomson Memorial Trust"—	
East Indian Railway B. Annuity of £14, cost	430 11 0
"Emma Sherwood Memorial"—	
Metropolitan Water (B) 3 per cent. Stock	516 15 11

The Chairman, in moving the adoption of the report and financial statement, said it would not be necessary for him to speak otherwise than briefly, for the past year had been rather uneventful. The fund had received the same generous support as in previous years, and had been able to give substantial and much-appreciated assistance to a large number of the orphans of gardeners and others engaged in horticultural pursuits. There had also been the same unanimity and devotion to the interests of the fund by the members of the executive, which had so largely contributed to the splendid success that had been received. Reference was also made to the development of the charity during the past twenty years, and to the losses from death that had been sustained during the past year. As evidence of the value of the assistance rendered by the charity to orphans, the Chairman read a letter from a lady subscriber, who has taken a keen interest in two children who are participating in the benefits of the fund. He also read an interesting letter from Mr. H. J. Clayton, late of Grimston Park Gardens, who, in 1887, made, with Mr. J. Udale and the late Charles Penny, a proposal that a fund for the support of gardeners' orphans should be founded as a memorial of Queen Victoria's reign.

In the course of his letter, Mr. Clayton wrote:

"It was extremely fortunate that the germ fell upon such good soil, which, being diligently tilled and tended, has brought forth results which none of those who helped to set the fund upon its feet could have believed possible. Still, great as the success of the fund has been, and so able its management, I think more might have been done to nourish and strengthen it by my brother horticulturists of all grades. The annual subscription of five shillings means only a trifle over a penny per week, and such a sum surely cannot be much of a burden to the many who have not hitherto helped in the good cause. To want of thought rather than to want of heart, must, I think, be attributed their lack of interest in our institution, the objects of which should appeal to all.

"In the letter to which I have referred, I remarked that while there may be some who are opposed on principle, I venture to think wrongly, to the granting of pensions to old or disabled horticulturists, there are surely none so stony-hearted as to grudge or refuse to help unfortunate children in need of food and guidance. I think so still.

"I trust I may not be considered presumptuous if I make the suggestion to your committee, and beg for it their most favourable consideration, that advantage should be taken of the twenty-first birthday celebration to organise a poular shilling collection among all classes of workers in horticulture, with a view to obtaining a handsome birthday present with which to head the noble chairman's list. Taking them in the bulk at, say, 10,000, am I too sanguine in thinking that as many shillings could be obtained if only there is the will to make the effort to collect them? Think what a grand gift it would be to the charity—and to be obtained at such a trifling individual cost to the contributors. The fact that the noble president, the Duke of Bedford, is to take the chair on May 14, and the knowledge so obvious to all that the fund has been admirably managed in the past, and is now so firmly established on a sound financial basis, should be a strong incentive to effort in the direction I have indicated.

"I do not venture to make any suggestion as to how such a special collection should be organised; I hope only that the committee may be disposed to try it, as I feel sure that if they will, and the gardening papers will give it their blessing and support, the secretary will know how to deal with the matter, and—I hope and trust—make it a success if at all possible.

"With every good wish for the continued prosperity of the fund in every way, and that God's blessing may rest upon the good work."

Mr. William Marshall, V.M.H., seconded the motion, and, in the course of his remarks, congratulated the committee on the splendid financial results of the past year. On being put to the meeting, the motion was unanimously adopted.

On proceeding to the election of officers and committee, Sir W. Treloar, Bart., was elected a vice-president, Mr. Edward Sherwood was re-elected treasurer, Mr. Rowan re-elected auditor, Messrs. W. R. Alderson, G. H. Barr, G. H. Cuthbert, W. Howe, J. Lyne, W. Poupart, and T. W. Sanders, were re-elected members of committee. Mr. Parson was elected a member of committee to fill the vacancy caused by the death of Mr. Assbee; and Mr. B. Wynne was re-elected secretary. The several motions were made or seconded by Messrs. W. Poupart, Bull, Lyne, Roupell, Castleton, Gordon, Dean, McLeod, Ingamells, W. Cutbush, Bates, and the Chairman.

The meeting was then adjourned until 4.30 p.m., the time fixed for closing the poll. On reassembling, Mr. W. Poupart reported the results of the ballot as follows: P. E. S. Warwick, 377; Lucy M. Claxton, 367; Alice Arnold, 361; Herbert E. Smithers, 358; Jeanie M. Lamond, 353; John M. McCullum, 322; Edward J. Ward, 294; Hilda E. Tickner, 257; Bessie Seaman, 221; Thomas H. Thomas, 182; Ethel M. Blackmore, 133; Dorothy Wiggins, 130; William H. N. Mullens, 127; Violet G. Randall, 102; Algie R. Gascoigne, 71; Reginald G. Grist, 64; and Ellen Ashton, 60. The Chairman then declared the thirteen candidates who obtained the largest number of votes duly elected, and, on the motion of Mr. George Gordon, a vote of thanks was accorded the scrutineers for their services.

Mr. H. J. Veitch, V.M.H., said, in view of the fact that the fund had entered on the twenty-first year of its useful work, he would like to suggest that the four unsuccessful candidates be elected to the benefits of the fund. On the Chairman having intimated that if it was the wish of the meeting that this should be done, the committee would not raise any objection. Mr. Veitch then formally moved a resolution in accordance with his suggestion, and this having been seconded by Mr. T. W. Sanders, was carried unanimously.

On the motion of Mr. H. J. Veitch, a vote of thanks was accorded the chairman.

In the evening the officers and members of committee with a few friends dined together at Simpson's, and this brought a pleasant day's work to a close.

National Chrysanthemum Society.

A well-attended committee meeting was held at Carr's Restaurant, Strand, W.C., on Monday, February 17, Mr. T. Bevan presiding. Sir Albert Rollit, the new president, was present, and he brought up the question of holding exhibitions in London, and asked the members to carefully consider the fact that membership had fallen during recent years, and why this was so, and to endeavour to find methods of retaining and increasing membership.

Barry and Newcastle Societies were admitted to affiliation, and several new members were elected. A budget for 1908 was submitted by the secretary, and this showed receipts amounting to £492 12s., and expenses £444 12s., leaving an estimated balance of £27, or really of only £2, allowing for the replacement of £25 to the reserve fund. The estimates were agreed upon, and the schedules of the 1908 shows were passed; the prizes offered at the October show will amount to £56 9s.; November show, £288 3s.; December show, £46 8s. The election of members to the Floral Committee resulted in the re-election of Mr. C. H. Curtis (22), Mr. G. Prickett (22), Mr. F. G. Oliver (21), and Mr. W. Higgs (18), and the election of Mr. R. Felton, Mr. Springthorpe, and Mr. Gilks to fill vacancies arising.

Messrs. P. Cragg, D. Ingamells, and J. W. Moorman were re-elected, with the officers, to form the Finance Committee. Messrs. C. H. Curtis, P. Cragg, D. B. Crane, W. Howe, D. Ingamells, E. Jones, J. W. Moorman, F. G. Oliver, and E. Prickett were re-elected as the Schedule Revision Sub-committee, and Messrs. C. H. Curtis, D. B. Crane, A. Foster, D. Ingamells, and E. Jones were re-elected to form the Publications Committee, though their duties will probably be very small this year.

The question of a summer outing was discussed, and July 27 was considered to be about the best date for it; the matter was left in the hands of the officers.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Rev. W. Wilks, Dr. M. C. Cooke, Dr. A. B. Rendle, Professor G. S. Boulger, F. D. Godman, W. B. Hemsley, H. T. Güssow, W. C. Worsdell, A. W. Sutton, W. Hales, L. H. de B. Crawshay, G. S. Saunders, H. J. Elwes, J. T. Bennett-Poë, C. T. Druery, G. Gordon, W. Cuthbertson, J. Douglas, and F. J. Chittenden (secretary).

RED CURRANT TWIGS TWISTED.—Mr. H. T. Güssow showed shoots of red currant twisted and curled at the tips, arising from the confinement of the young growths under nets.

MICROLOMA LINEARE.—Mr. J. O'Brien sent specimens of this uncommon asclepiad, showing how it climbs over bushes in its native home in South Africa. The plant was figured some time ago, but is very rare in cultivation.

BIGENERIC ORCHID HYBRID.—Sir Jeremiah Colman showed a hybrid raised between Diacrium bi-cornutum and Cattleya intermedia nivea. The colour of the diacrium had been almost entirely lost except for a tinge of sulphur in the labellum. The parent species are usually regarded as being widely separated in natural relationship, but a hybrid between D. bi-cornutum and Lælia cinnabarina was awarded a botanical certificate on March 14, 1905.

NOMENCLATURE OF HYBRID ORCHIDS, ETC.—Some discussion took place place with regard to the naming of hybrids between species assigned to two or more genera. The general opinion was that such hybrids should, when raised between plants belonging to two different genera, have the names of both genera indicated; but where the progeny was the result of crossing a bigeneric hybrid with a plant of another genus altogether, a purely conventional name should be assigned, preferably with a distinctive termination. The further discussion of the matter was adjourned to another meeting.

DISEASED SWEET WILLIAMS.—Lady Hopkins, of Romsey, sent sweet williams in a dying condition with pale brown spots upon their leaves, which were due to the attacks of the fungus Puccinia dianthi. This fungus frequently proves fatal to the sweet william, and the infection is said to be carried in the seed, so that whole batches are killed. The particular variety in the present case was Pink Beauty, and the present is the second year in which the trouble has occurred, though in different spots in the same garden.

INSECTS ON OLEANDER, ETC.—Mr. G. S. Saunders reported that he had examined the insects found upon various plants in a greenhouse, and sent by Mr. Stanton Brown, A.R.H.S. They belonged to the family Psocideæ, and were specimens of the uncommon species Cæcilius Dali. This species is not known as a plant pest, but is said to feed upon fungoid matter of various kinds, mould on palings and rust fungi on leaves, etc. It is most frequent upon the bark of trees.

Maidenhead Chrysanthemum Society.

The tenth annual general meeting of this society was held in the small Town Hall on Thursday evening, the 13th inst., and there was a good attendance of members and others. Mr. D. Ingamells, vice-chairman, presided. The report and balance-sheet were most satisfactory. The entries in local classes were thirty-seven in advance of the number in the previous year. The competition in the amateur and cottagers' classes was also much better. The show was, in fact, a great success, and the balance in hand is £16 13s. 10d. The Right Hon. Lord Boston was re-elected president; C. de M. Caulfeild Pratt, Esq., was re-elected chairman; Mr. D. Ingamells, vice-chairman; Mr. George Mattingley, treasurer, and Mr. J. W. Richardson, hon. secretary. The exhibition is fixed for Thursday and Friday, October 29 and 30, and will be held in the Drill Hall, Maidenhead.

East Anglian Horticultural Club.

There was a very large gathering of members at the February meeting of this club held at the Boar's Head Hotel, Norwich. It had been arranged that an interchange of lectures should take place between this club and the Ipswich Gardeners' Association, and as an outcome Mr. W. Messenger, The Gardens, Woolverston Park, came along and gave a most practical and interesting paper upon "Wall Fruits." The subject was dealt with in every phase and detail, from the preparation of soil and building of walls to the storing and subsequent placing of the fruit upon the table. His points upon planting, pruning, and treatment of pests were most carefully explained. The paper throughout was most understandable, and even the most uninitiated present could not go away having learnt something. A most interesting discussion followed, Mr. L. Smith, Shotesham Park Gardens, and Mr. H. Goude, The Grange Gardens, Catton, adding some interesting local points of culture. Other debaters were Messrs. T. B. Field, E. Peake, J. C. Abel, J. Powley, and H. Perry.

The exhibits did credit for so early a date. Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, staged some splendid bulbous and other plants, and choice apples and pears. Mr. F. Williams, gardener to Louis Tillett, Esq., M.P., had some choice exhibits, the most noteworthy being a grand pot of Tulip Kreizers Kroon. The stewing pears and cooking apples staged by Mr. G. Moore, Hethersett Hall Gardens, were splendidly plump, showing great care in storing. Other exhibits came from Messrs. C. H. Fox (Catton), C. Hines (Trowse), C. Burtenshaw (Norwich), E. Grand (Cringleford), and W. Laws. Mr. T. B. Field brought up from Ashwellthorpe a bunch of Winter Sweet (Chimonanthus fragrans), which was very charming, the individual flowers were very large, and were quite attractive by reason of their delicious perfume.

British Gardeners' Association.

The monthly meeting of this association was held on February 11, at the R.H.S. Hall, Westminster, Mr. Charles Foster in the chair. Twenty-four new members were elected, bringing the total up to 1,163. The secretary submitted a detailed statement estimating the receipts and expenses of a monthly "Journal." The question was thoroughly discussed, and it was decided by eight votes to three that a monthly "Journal" should be established in April, after the next issue of the present quarterly.

A request to hold a meeting for the benefit of gardeners employed in the London parks having been received, it was decided that one be held at Carr's Restaurant, on Saturday, March 7, at seven p.m., and the secretary was deputed to give an address on that occasion.

It was also decided to send a delegate to address a meeting at the Wesleyan School, Evelyn Road, Richmond, Surrey, on Tuesday, February 25, at eight p.m., when Mr. Hawes will be in the chair. The secretary was instructed to procure a die for the new certificate.

Sandhurst Gardeners' Association.

The usual meeting was held on February 14, and there was a large attendance of members, presided over by Mr. J. Evans. The paper read was on "Herbaceous Plants," by Mr. L. T. Petty, of The Gardens, Tylney Hall, Winchfield, who showed he was well acquainted with his subject. The various modes of propagation, time of planting, watering, and general treatment of the various kinds of plants were all most fully dealt with, and a few notes were given concerning the newer introductions of hardy plants. A good discussion followed, which was sustained by Messrs. Townsend, Moyes, Chapman, Evans, C. W. Goddard, M. Goddard, and Gear. Mr. Petty was heartily thanked for his excellent paper.

Mr. Townsend, Sandhurst Lodge Gardens, staged some splendidly-flowered cyclamens; Mr. Chapman, Hilfield Gardens, Yateley, sent eupatoriums, and Mr. Dupond, Crowthorne Nurseries, showed lily of the valley.

Bristol Gardeners' Association.

The usual fortnightly meeting was held on Thursday, February 13, at St. John's Parish Rooms. Mr. J. C. House presided over a very good attendance. Mr. Baily, representative of the Reading Society, introduced the subject of "Budding and Grafting," giving a short paper upon each that was full of interesting matter.

The lecturer then gave a practical demonstration fully proving his knowledge of these operations, and brief explanatory remarks while working, and he afterwards handed round the examples of his work. The best stocks to work, the various modes of grafting for different purposes, were each taken in turn and graphically described. Grafting by approach, rind, cleft, saddle, half-saddle, wedge, and tongue grafting, for fruit, forest, and ornamental trees; these were the modes and subjects dealt with, the lecturer keeping the audience exploding with hilarity at his witticisms. Mr. Baily was deluged with questions, the answers to which were equally as instructive as the lecture, and richly earned for him the hearty vote of thanks at the close.

For two cyclamen the first prize was awarded to Edgar Watts, Esq., The Priory (gardener, H. Woodward); the second to Alderman Howell Davis, M.P. (gardener, J. T. Curtis). There was only one exhibit of violets, the judges awarding first prize to the first-named for one bunch each of Princess of Wales and Marie Louise.

Commons and Footpaths Preservation Society.

At the monthly meeting of this society it was reported by Lord Eversley, who presided, that the society's Public Rights of Way Bill was set down for second reading for May 29, and that promises of support had been received from leading representatives of all parties. The main object of the Bill is to enable the provisions of the Prescription Act to be used in connection with the proof of highways and to simplify and cheapen litigation in footpath cases. It was decided to prepare a Bill to facilitate the regulation of rural commons, and Sir John Brunner consented to introduce the Bill on the society's behalf. It was pointed out that in many neighbourhoods commons formed the camping grounds of vagrants who could not be satisfactorily dealt with without bye-laws made under a regulation scheme, and it was felt by the society that the time had arrived when privileges of compulsory regulation similar to those enjoyed by the Metropolis since 1866, with proper safeguards of the rights of the lord of the manor and commoners, should be extended to the whole of the country. The solicitor reported that eleven railway and water Bills now before Parliament affected common lands and open spaces, the total area proposed to be absorbed exceeding 1,614 acres. Twenty-one other Bills affected commons and rights of way.

It was decided to press for the insertion in the Burnley Corporation, Monmouthshire County Council, and Pontypridd Waterworks Bills, under which large areas of common lands have been scheduled, of clauses to provide for the public right of access to the commons. It was also decided to support the local opposition to the Fishguard and Rosslare Railways and Harbours Bill, which seeks to absorb the whole of Goodwick Moor, and to oppose, if necessary, the London and Windsor Motor Roads, Tramroads, and Tramways Bill, which would involve serious injury to Ravenscourt Park, Stamford Brook, and Back Common, Chiswick, and other open spaces. The Secretary reported that the society was dealing with 120 cases of encroachment on commons or obstruction of rights of way, and that since the last meeting several footpaths had been reopened as a result of its efforts. It was decided to oppose a scheme for the enclosure of Coopers Hill Common, Gloucester, a beautiful open space, 136 acres in extent.

Shrubs.—Pruning should now be completed, and where there are no roots lightly fork the ground over, but avoid digging where there are roots. In the latter case give a dressing of short, well-decayed manure and leaf-soil, but do not place it quite close to the edge of the bed, or birds will probably soon scratch it over, causing an untidy appearance. From variegated shrubs cut away any green, badly-coloured, or erect growths that may appear. Such shrubs as Spiræa Douglasi, symphoricarpus, willows, Rosa rugosa, purple hazel, and others of similar habit are best cut quite down every year, or every alternate year.—E. F. HAZELTON.

Thunbergia laurifolia.—With reference to the note on Thunbergia laurifolia in the issue of the GARDENERS MAGAZINE for February 15, I am able, from personal experience, to inform your correspondent that Thunbergia laurifolia thrives with most satisfactory results planted in borders in the croton house. It gives a splendid display of flowers during January and February; the delicate colour of the flowers producing a pleasing effect. After flowering attention should be given to pruning, and the growths should be well cut back. To be successful in cultivation a rather rich soil is essential; a mixture of three parts of good loam to one of leaf-soil and one of well-decayed manure, with a liberal sprinkling of coarse sand and charcoal, being in every way suitable.—R. W., Sandringham.

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ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

DODDER.—N. L., Keighley: The most important British Dodders are Cuscuta europæa, C. epilinum, C. epithymum, and C. trifoli, the latter being by far the greatest pest.

BEECH COCCUS.—M. M., Dorking: Spray the trees at once with the caustic soda and potash mixture, and give two other sprayings with the same kind of mixture, at intervals of three days.

BRITISH GARDENERS' ASSOCIATION. —Young Foreman: Mr. J. Weathers, Talbot Villa, Isleworth, is the secretary of this association, and he will give you the particulars you require. The annual subscription is 2s. 6d.

SNOWY FLY.—L. E. G., Hornsea: Fumigate or vaporise the house on calm evenings at intervals of a few days for a fortnight. Excessive heat has probably had something to do with the increase of the pest at this season of the year.

ADVERTISING.—N. C., Liverpool: The most complete list of horticultural societies and their secretaries with which we are acquainted is the one published in the "Gardening Year Book," to be obtained (1s. 2d. post free) from the GARDENERS' MAGAZINE office, 148, 149, Aldersgate Street, E.C.

LIFEBUOY SOAP FOR MILDEW ON ROSES.—L. E. B., Reading: We have no experience of the use of Lifebuoy soap as a preventive of mildew on roses, but we understand it has been so used, and with success. The proportions are half a bar of soap dissolved in three gallons of soft water.

DISEASES AND INSECT PESTS. — S. E. R., Ipswich: We can strongly recommend you to purchase "The Book of Garden Pests," by Mr. R. Hooper Pearson (2s. 6d., John Lane, Bodley Head). It is freely illustrated, and contains concise descriptions of insect and fungus pests, and remedies and preventives.

GRAFTING WAX.—A. F., Exmouth: For use either warm or cold an excellent grafting wax can be made by melting equal parts by weight of Burgundy pitch, kerosene wax, and tallow. Melt these together in an old saucepan, and mix well together. An old paint brush will serve to distribute the wax when warm, while a putty knife is a good tool to use when the wax is cold.

RUST OR MITE ON BEGONIAS.—F. F., Shepperton: The rusty appearance of the leaves is due to the presence of a mite that is so small as only to be detected by means of a microscope. The best remedy is that of dipping the affected plants in tobacco-water, to which a little soft soap has been added to make it adhesive. Dipping should be practised several times at intervals of about a week.

SPOTTED SYCAMORE LEAVES. — S. E. G., Wokingham: You should have sent us leaves for examination last autumn. So far as we can gather, the spots or blotches on the leaves were caused by a fungus named Rhytisma acerinum. These blotches appear yellowish at first, towards the end of June, and gradually grow darker until they are quite black at the end of the season. Infection is caused by allowing these diseased leaves to remain upon the ground where they fall, because the spores produced in spring from the black patches are those that spread the disease. Diseased leaves should be removed and burned as soon as they fall, and should on no account be allowed to remain, or be used for leaf-mould. Repeated attacks, if allowed to go unchecked, will enfeeble the tree, and permit it to fall a prey to one of the canker fungi.

ARTIFICIAL MANURE FOR ROSES.— C. C., Leicester: A good manure for roses growing in light soils that lack lime is made up by mixing up two parts of Peruvian Guano, one part each of bone-meal and dried blood, and a half part each of sulphate of potash and nitrate of soda. All these substances should be in as fine a state as possible, and be thoroughly mixed. Use at the rate of 5oz. per square yard early in spring, spreading the manure over the whole surface of the rose border, and not placing it in a ring or patch close to each plant. Hoe or rake the surface after applying the manure.

HARDY FERNS.—H. R. M., Matlock: We are glad to hear you have profited by the articles on hardy ferns that have appeared from time to time in our columns, and especially from those in which the desirability of selecting the finer varieties for planting has been emphasised. Your plan is an excellent one, and we can only suggest that to the staple you have to deal with a fair quantity of peat and leaf-mould should be added. These materials will render the soil warmer, and also lighten it, without making it excessively porous. We feel quite sure that choice hardy ferns are at last coming into popularity; indeed, with the advance of water gardening, rock gardening, and semi-wild gardening, that has been so marked during the last few years, it was inevitable that hardy ferns should be more largely grown. We have consistently taught that a choice variety is no more difficult to cultivate than a wild type, whereas its beauty and grace are incomparably greater.

GRUBS IN MUSCARI BULBS.—G. B., Yeovil: It has been discovered recently that the whitish grub of a beetle named Malacosoma lusitanicum makes its home in the bulbs of muscaris and narcissi. These grubs eat out the soft substance of the bulbs, inducing rottenness, and killing or spoiling the bulbs. This pest has become rather common in central France, and in the beetle stage it is seen among various flowers during May, as the larva pupates in April, and the perfect insect emerges in May. The beetles are poor fliers, and therefore are easily caught. Catching the perfect beetle as early as possible and disinfecting the soil in which a crop of infested bulbs has been growing, with bi-sulphide of carbon at 240lb. per acre, or by heavy gas-liming, are remedies suggested, and likely to prove useful.

FRAGRANT ROSES.—H. G., Folkestone: The competition is a novel one, and we should like to have full particulars of it in due course. The difficulty in arriving at a proper judgment lies in the judges themselves, for, however willing they may be to act rightly, they will be unable to give a satisfactory decision, if they have not a keen sense of smell. Further, what is fragrance to one person is a more or less evil odour to another. For instance, some folks love musk odour, others hate it; some are fond of patchouli, others detest it. So that it is just possible the delicate odour of some of the tea-scented roses would not receive their full points when tested by the side of a very richly-scented crimson H.P. However, difficulties are but to be overcome, and the competition promises to be interesting. The following are fragrant roses: Alfred Colomb, red, H.P.; Camille Bernardin, crimson, H.P.; Chas. Lefebvre, crimson, H.P.; Cherry Ripe, light crimson, H.T.; Cheshunt Hybrid, carmine, H.T.; Countess Annesley, rosy salmon, H.T.; Countess of Caledon, carmine, H.T.; Dr. Andry, bright crimson, H.P.; Dupuy Jamain, cerise, H.P.; Exposition de Brie, crimson, H.P.; Exquisite, bright crimson, H.T.; E. Y. Teas, red, H.P.; General Jacqueminot, scarlet-crimson, H.P.; Heinrich Schultheis, pink, H.P.; Hugh Dickson, crimson-scarlet, H.P.; La France, silvery rose, H.T.; Marquise Lita, rose, H.T.; Mdme. Isaac Periere carmine, Bourbon; Maiden's Blush, flesh pink (albà); Marie Baumann, soft red, H.P.; Mrs. John Laing, rose-pink, H.P.; Pio X., creamy-white, H.T.; Red Damask, red, D.; Richmond, crimson, H.T.; Senateur Vaisse, crimson, H.P.; Ulrich Brunner, red, H.P.; Viscountess Folkestone, white, H.T.; and Zéphirine Drouhin, pink, B.

NATURE STUDY.—G. S. G., Wisbech: We sympathise with you; the work is often difficult, especially among the adults. In school gardening there is a sort of gospel that finds expression in Professor L. H. Bailey's "The Nature Study Idea," as follows: "I dropped a seed into the earth. It grew, and the plant was mine. It was a wonderful thing, this plant of mine. I did not know its name, and the plant did not bloom. All I know is that I planted something apparently as lifeless as a grain of sand, and there came forth a green and living thing unlike the seed, unlike the soil in which it grew. No one could tell me why it grew, nor how. It had secrets all its own, secrets that baffle the wisest men; yet this plant was my friend. It faded when I withheld the light, it wilted when I neglected to give it water, it flourished when I supplied its simple needs. One week I went away on a vacation, and when I returned the plant was dead; and I missed it. Although my little plant had died so soon, it had taught me a lesson; and the lesson is that it is worth while to have a plant."

HERBACEOUS PÆONIES. — C. P. F., Saffron Walden: Herbaceous pæonies are less particular as to the character of the soil than is commonly supposed. They will grow more vigorously in a deep rich loam than in a shallow sandy soil, but in the latter they will grow freely and produce an abundance of bloom of good quality, provided it is well prepared and its fertility maintained. The soil should, whatever its character, be liberally enriched with well-decayed animal manure, and be deeply dug. If broken up to a depth of two feet, so much the better; and if the subsoil will not permit of the spade going so deeply, the digging should be as deep as the subsoil will permit. Subsequently the beds and borders should be enriched with manure annually, where the soil is naturally light and poor, and every second year in other cases. The planting may be done at any time from the end of September till about the middle of March. Golden daffodils should be planted rather closely to the crowns of the pæonies, as their flowers are produced when the young growths are rising, and present a rich contrast to them. The following will form an excellent selection of varieties: Admiral Dewey, Agnes Kelway, Alexander Dumas, Cavalleria Rusticana, Duc de Wellington, Duke of Devonshire, Lady Curzon, Lady A. Duff, Leonard Kelway, Miss Mary Best, Mrs. A. F. Hayward, Olivia, Peter-the-Great, Princess Irene, Reine de Francaises, Rose d'Amour, Sir T. Lipton, and Venus.

NAMES OF PLANTS.

J. M.— No. 2, Aloe verrucosa.

J. L. W., Faversham.—The true Freesia refracta alba.

F. J. L., Richmond.—1, Pinus monticola; 2, Galax aphylla; 3, Oncidium varicosum.

R. D., Hertford.—1, Primula frondosa; 2, Iris histrioides; 3, Exacum affine; 4, Spiræa confusa.

A. R., Ilkley.—1, Pteris cretica; 2, P. scaberula; 3, Woodwardia radicans; 4, Todea superba; 5, Alsophila australis; 6, Adiantum cuneatum grandiceps; 7, Davallia hirta cristata.

D. P., Grosmont. — 1, probably Oxalis rosea; send when in flower; 2, Pinus Laricio austriaca; 3, not recognised; 4, Thuia orientalis; 5, probably Picea Albertiana; 6. Cupressus Lawsonianus albo-spica.

Guides to Garden Work.—The publishers of the GARDENERS' MAGAZINE will be pleased to forward a catalogue of their gardening books, setting out full particulars of the contents of each work. The books which are thoroughly practical, up-to-date and well bound, will be of particular service to those interested in flowers, the greenhouse, or the garden. A copy of the catalogue will be sent post free to any reader who addresses a postcard to the Publisher, THE GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, London.

CARNATION HYBRIDISING.

Following the remarks made in our columns recently by Mr. P. S. Hayward and Mr. T. Slade, the following paper, by Mr. Richard Witterstaetter, Cincinnati, O., read before the American Carnation Society at the Washington Convention, January 28 to 30, 1908, will be of interest to our readers.

Some sixteen years ago, when I first undertook the work of hybridising the carnation, I had very little knowledge of Nature's laws regarding the results to be expected from crossing the standard commercial varieties of that date, and concluded that experiments, with a complete record of the parentage and the results, were necessary. As regards colour, size, stem, form, habit, freedom, etc., I found, while we had some very good seedlings that pointed up well in everything except colour—and colour is a very important factor in a commercial carnation—that we had quite a few variegated, purples, and off colours, and very few identical to the parent colour. I concluded, therefore, that this must be Nature's law in plant life, the same as in the human race, and that blood would tell. Hence subsequent breeding was carried on with that point in view, namely, scarlets in a race by themselves, whites in theirs, and so on, always selecting for future work that which came nearest to an ideal as to colour and commercial value.

Difficulty with Scarlets.

Some have held that by following this method you lose constitution. We have proven this to our own satisfaction to be untrue, if a selection of really vigorous parents is made. This opinion may have arisen from the fact that a very brilliant scarlet has no vigour to back it up, our most vigorous scarlets being only a pale or dull red, and if a good constitution and a brilliant colour are combined the result is apt to be a slow and shy bloomer, not up to the commercial requirements. As most of my endeavours have been devoted to the scarlet race—amounting to about one-third of the number of the seedlings raised—I have taken the pessimistic view that it would be an impossibility to produce a brilliant scarlet of free blooming quality, backed up by a vigorous constitution. Of late years, however, I have observed that this will not be an impossibility.

Qualities Sought in Breeding.

In breeding for form we always selected those that had produced themselves in that point for two or three generations, choosing one or the other of the parents, preferably the seed parent, and using the same as a seed parent. In pink we do not hold so closely to the colour line, but are very particular that whatever colour is used shall be of good, clear, strong, and lively tone, not subject to fading into dull colours, nor easily affected by the sun.

In breeding for size we do not hesitate to use a small flowered variety as a seed parent, provided its progenitors of the first and second generations past were large flowered varieties, neither do we fear to use it as a pollen parent, if it has all the other attributes of a good commercial variety.

In breeding for stem and calyx I like to select a variety that has inherited these good points from one or two generations past, with the bloom bordering on the semi-double, or not too many petals to insure a good setting of seeds; also guarding against parents with flowers containing too many petals, as the result will be too many extremely double flowers, with no calyx to speak of.

Vigour of Constitution.

Constitution, next to colour, is the most important factor of a commercial carnation, from a grower's point of view, and should be given the utmost consideration. The parents should be selected and bred to such varieties as are noted for their healthy and vigorous constitution. We believe that in order to gain the best results this crossing should be done during the months of March and April, when plants are making their most vigorous and rapid growth, insuring well-developed and ripened seed.

We sometimes question whether the condition and class of food with which we supply the mother plant when crossing, and up to the time of ripening the seeds, are not responsible, to some extent, for our failures or successes, as the case may be.

Regarding any other points of hybridisation, I might suggest a strong, well-rooted love for the work, untiring patience and perseverance, with a studious observation of the results and with a fair sized bank account at your disposal, until your aim has been attained.

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METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. February 9 to February 15.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Feb. 9—Sunday	0 25	40	40	47	36
„ 10—Monday	6 10	40	39	52	39
„ 11—Tuesday......	0 30	36	35	49	29
„ 12—Wednesday..	8 10	35	34	49	34
„ 13—Thursday ...	1 20	25	25	45	22
„ 14—Friday	2 55	44	44	51	25
„ 15—Saturday ...	—	47	46	49	39
Means	2 47	38	38	49	32

Date. 1908. February 9 to February 15.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg
Feb. 9—Sunday	0.02	40	41	41	29
„ 10—Monday	—	40	41	42	33
„ 11—Tuesday......	—	39	41	42	25
„ 12—Wednesday..	—	40	41	42	27
„ 13 Thursday ...	0.01	38	41	42	21
„ 14—Friday	—	39	41	42	29
„ 15—Saturday ...	0.06	40	41	42	29
Means ...	(total) 0.09	39	41	42	28

Outdoor Seakale. — This may be blanched like celery by heaping up a pile of earth over the crowns, or packing them round with sweetened, aerated ashes from the stokehole. Earth is, however, preferable, as it gives a nuttier taste to the produce. It should be used in a fairly dry condition, and it is well to look out for slugs during the process. When the heads are fit to cut they will indicate the fact by cracking their covering. This outdoor blanched seakale is often superior in flavour to that produced in the greenhouse.—E. J. K.

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		s. d.		s. d.
Acacia	per doz. bun.	6 0	to	9 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 6		5 0
Arums	per doz.	2 6		6 0
Asparagus	per doz. bun.	1 6		6 0
Azalea	per doz. bun.	3 0		5 0
Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	5 0		8 0
Camellias	per doz.	1 6		2 0
Carnations	per doz. blms.	1 6		3 6
,,	per doz. bun.	7 6		12 6
Cattleyas	per doz.	10 0		12 6
Chrysanthemums	per doz. bun.	10 0		18 0
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	5 0		8 0
Cypripediums	per doz. blms.	2 0		3 0
Daffodils	per doz. bun.	3 0		6 0
Eucharis	per doz.	2 6		4 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	3 0		6 0
Hellebores	per doz.	1 0		2 0
Hyacinths, Roman	per doz. bun.	5 0		9 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 0		5 0
Lilium auratum	per bun.	2 6		3 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		6 0
,, yellow	per doz. bun.	2 0		4 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	1 6		6 0
Odontoglossums	per doz. blooms	2 0		3 0
Pelargoniums	per doz. bun.	5 0		9 0
Pernettya	per bun.	0 6		1 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0
Snowdrops	per doz. bun.	1 0		2 0
Violets	per doz. bun.	2 0		3 0
Wallflowers	per doz. bun.	2 0		3 0

Fruits.

Apples are dear, but grapes sell freely and a good demand continues for oranges.

		s. d.		s. d.
Apples, cooking	per bush.	5 0	to	12 0
,, dessert	per ½-bush.	5 0		14 0
,, American	per barrel	14 0		22 0
Apricots, Cape	per box	2 0		6 0
Bananas	per bun.	5 0		12 0
Cranberries	per case	7 0		9 0
Cob Nuts	per doz. lb.	4 0		5 0
Filberts	per doz. lb.	3 6		4 0
Grapes, Alicante	per lb.	1 3		2 6
,, Muscats	per lb.	3 6		7 6
,, Gros Colmar	per lb.	1 0		2 0
,, Channel Islands	per lb.	0 9		1 0
,, Almeria	per barrel	10 0		16 0
Lemons	per case	8 0		20 0
Oranges	per case	9 0		30 0
Peaches, Cape	per box	5 0		12 0
Pears, French	per crate	8 0		10 0
,, English	per bush.	4 0		8 6
Pineapples	each	2 0		5 0
Plums, Cape	per box	4 0		6 0
Strawberries	per lb.	6 0		10 0
Walnuts	per bag	7 0		8 6

Vegetables.

Supplies are fairly good, and the demand has improved; there is a keen request for forced produce.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	4 0
Asparagus, Paris green	per bun.	3 6		4 6
Asparagus, sprue	per bun.	0 7		1 6
Beans, French	per lb.	0 8		1 0
,, Madeira	per bskt.	2 0		3 6
Beet	per bush.	1 3		2 0
Brussels sprouts	per ½-bush.	1 3		1 9
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
,, French	per pad	2 3		3 0
,,	per bag	2 6		3 0
Cauliflowers	per tally	6 0		8 0
Celery	per bundle	0 9		1 0
Celeriac	per doz.	1 6		2 0
Chicory	per lb.	0 3		0 4
Cucumbers	per doz.	5 0		9 0
Endive	per doz.	1 6		2 0
Greens	per bag	1 6		2 6
Horseradish	per doz. bun.	9 0		10 0
Leeks	per doz. bun.	1 0		2 0
Lettuce, cabbage	per doz.	1 0		2 0
Mint	per doz. bun.	0 9		1 0
Mushrooms	per doz. lb.	7 0		12 0
Onions, English	per cwt.	3 0		3 6
,, Spanish	per case	5 0		6 0
Parsley	per doz.	1 6		1 9
Rhubarb	per doz. bun.	1 0		1 2
Savoys	per tally	3 0		3 6
Seakale	per doz. pun.	9 0		12 0
Tomatoes	per doz. lb.	2 3		3 6
Turnips	per doz. bun.	2 0		2 6
Watercress	per doz. bun.	0 4		0 6

LONDON POTATO MARKETS.

There are practically no alterations in prices or business since last advices.

		s. d.		s. d.
British Queen	per ton	90 0	to	105 0
Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		130 0
Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	95 0		105 0
Langworthy	per ton	90 0		110 0
Lincoln Maincrop	per ton	95 0		115 0
Lincoln Up-to-Date	per ton	90 0		115 0
Royal Kidneys	per ton	80 0		95 0
Reading Giant	per ton	80 0		95 0
Sir J. Llewelyn	per ton	85 0		105 0
New, French	per lb.	0 2		0 2½

FORTHCOMING ENGAGEMENTS.

MONDAY, February 24.—National Chrysanthemum Society, Market Show Dinner at Lyons' Popular Café, Piccadilly, 7 p.m.

TUESDAY, February 25.—British Gardeners' Association Meeting at Wesleyan Schools, Richmond, Surrey. Address by Mr. J. Weathers, 8 p.m.

WEDNESDAY, February 26.—Royal Society of Arts Meeting, 8 p.m.

FRIDAY, February 28.—Beckenham Horticultural Society, lecture on "How Plants Feed," 8 p.m.

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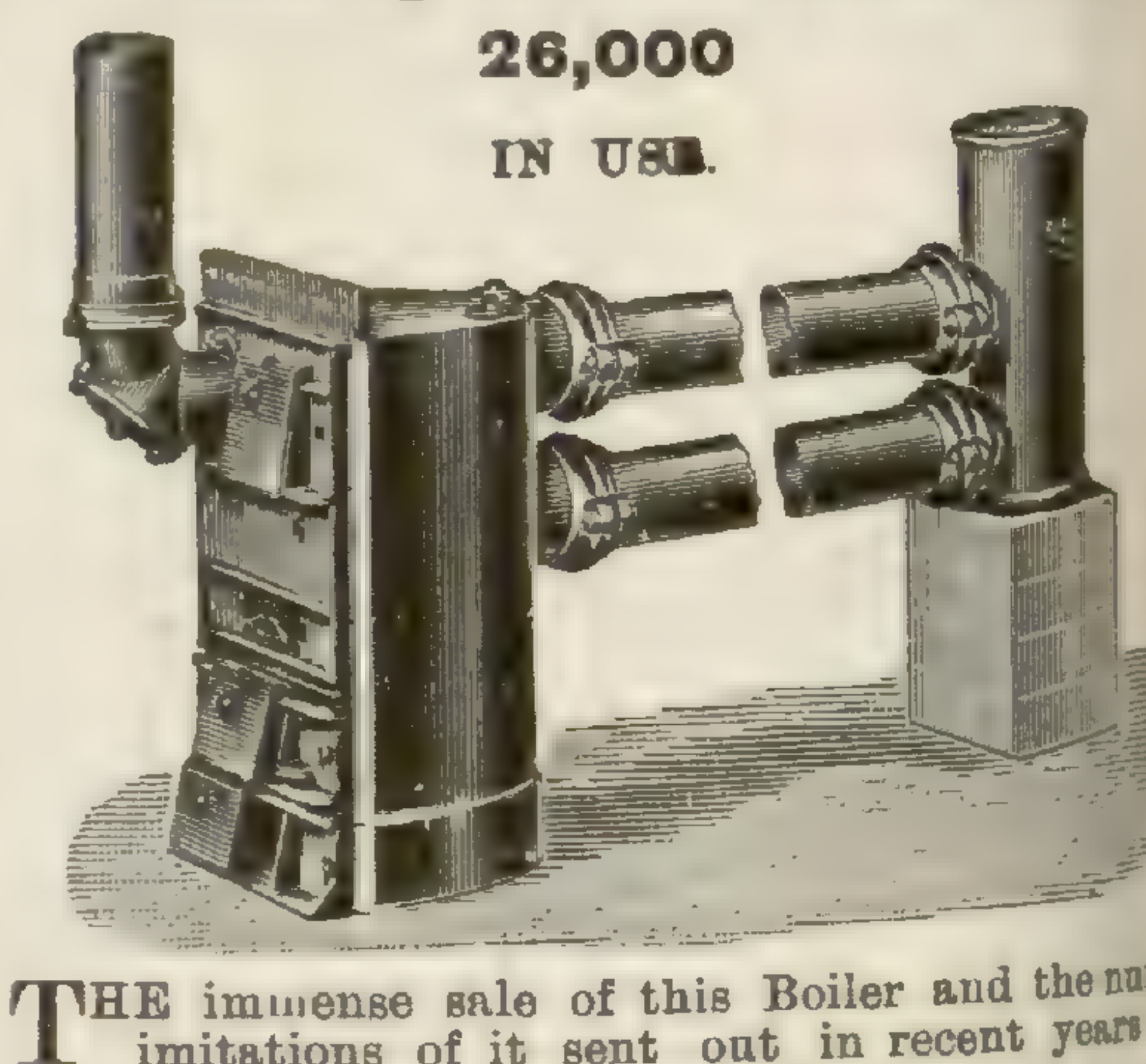

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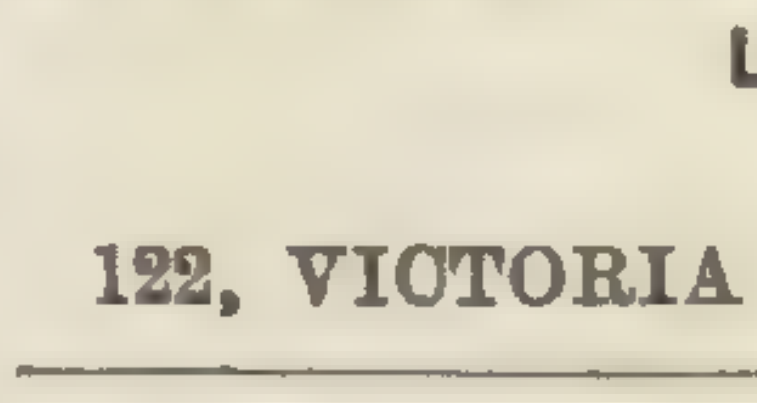

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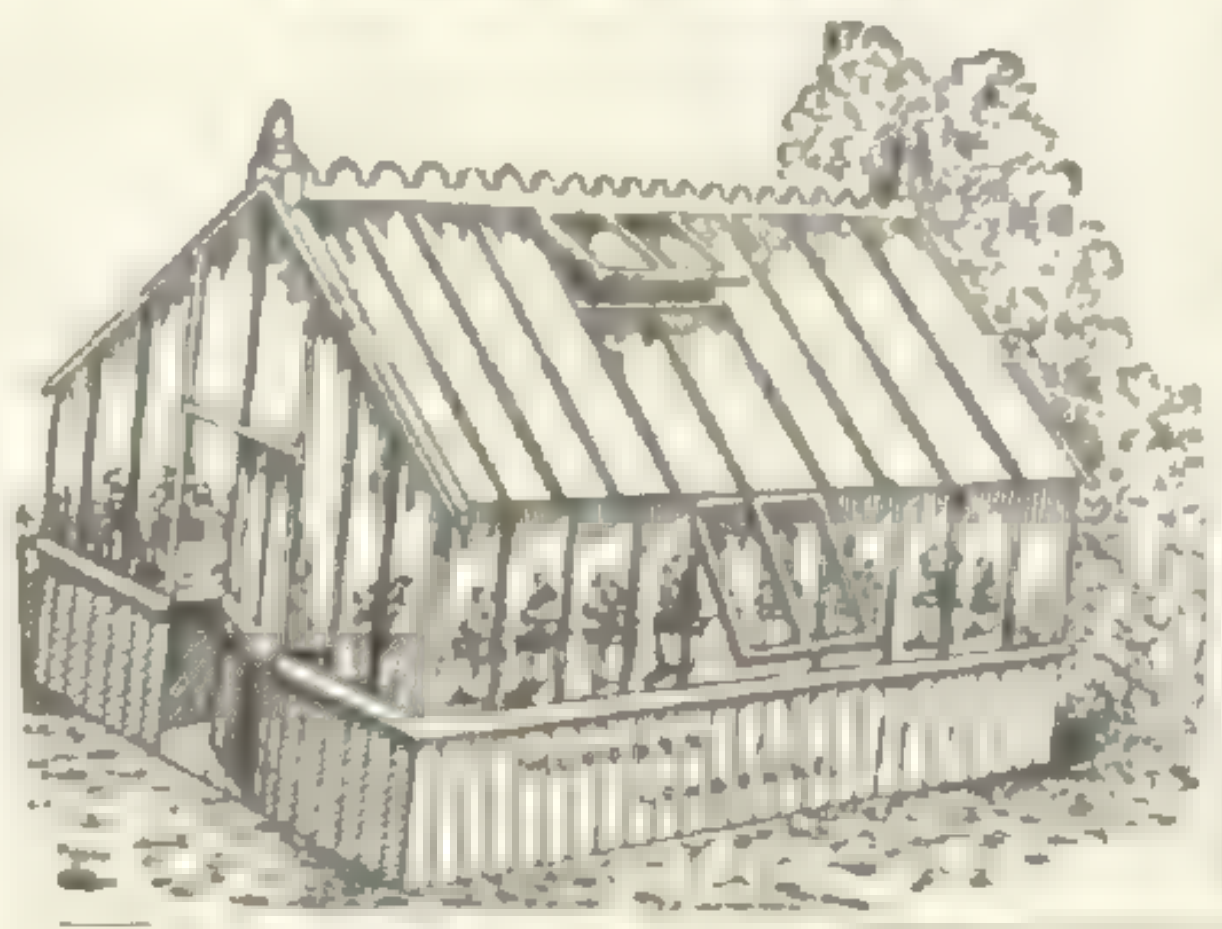

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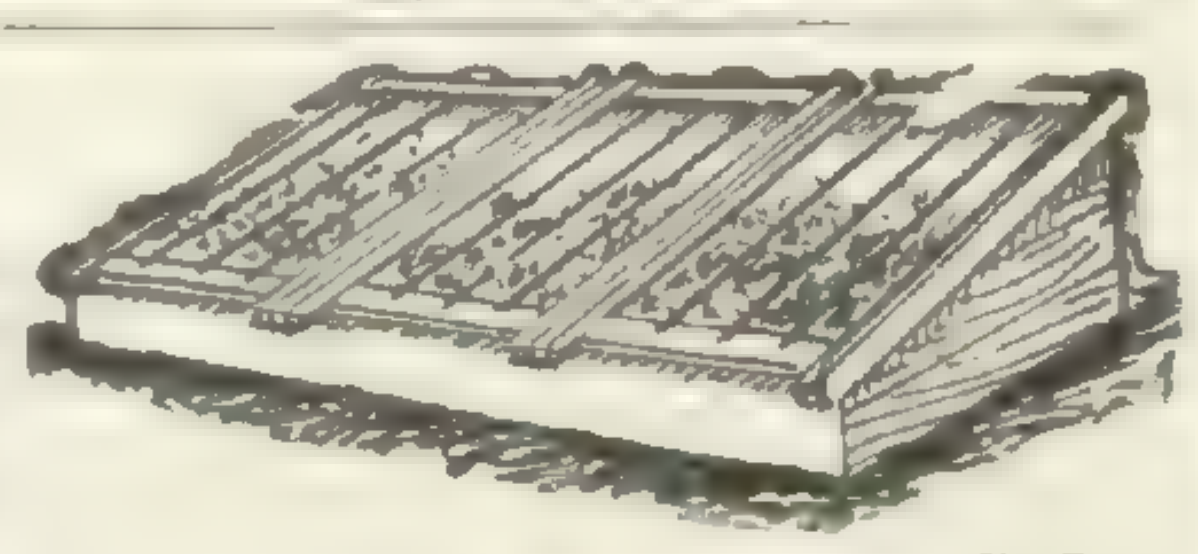

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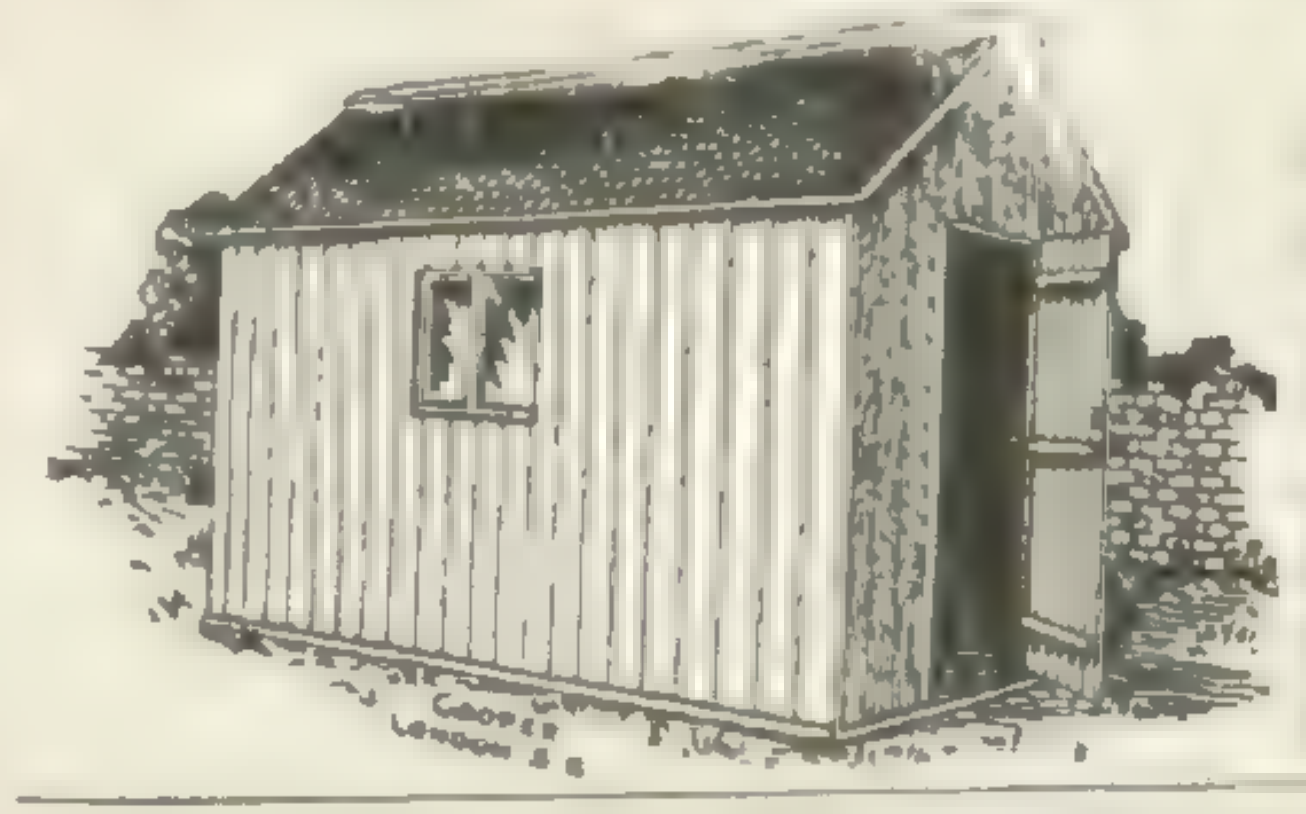

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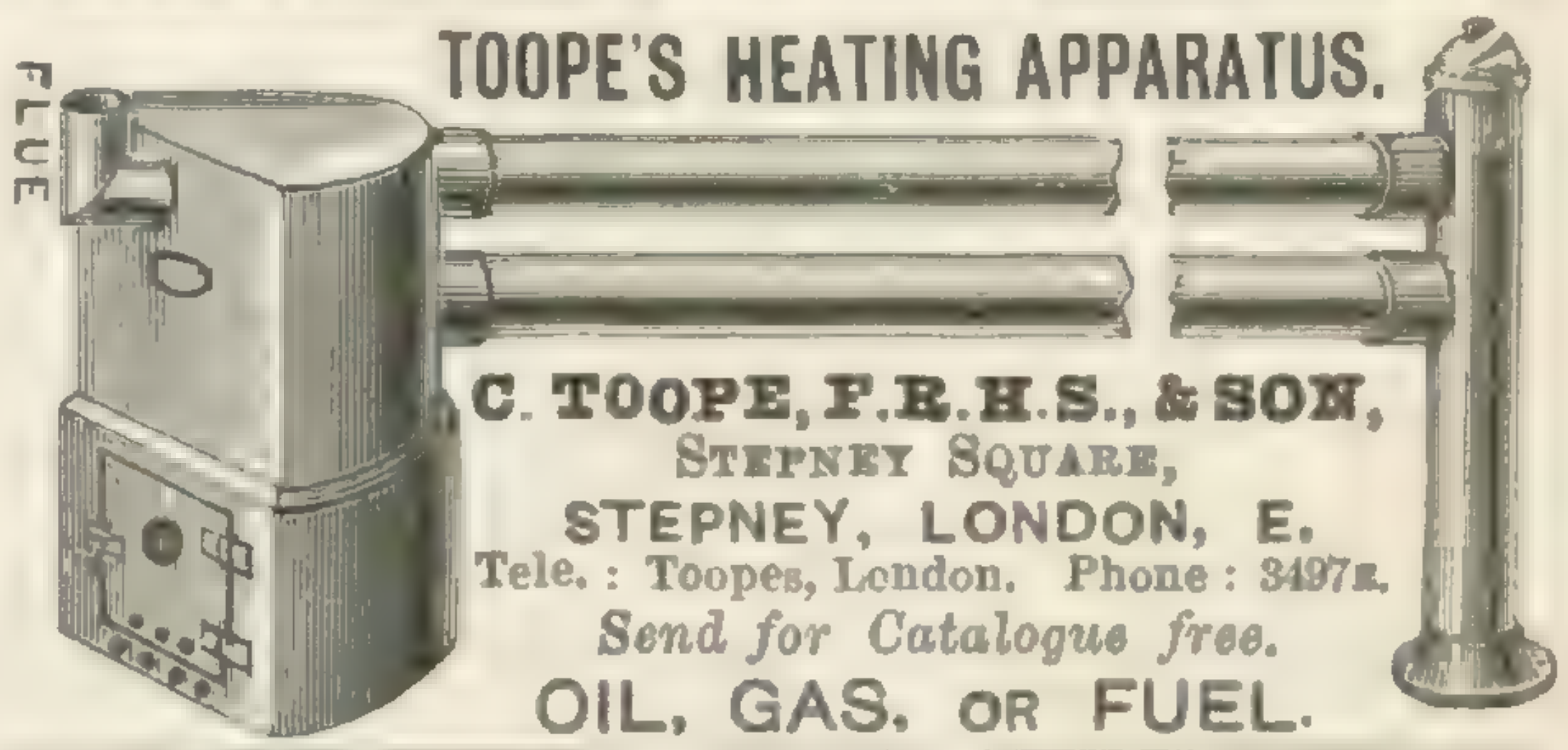

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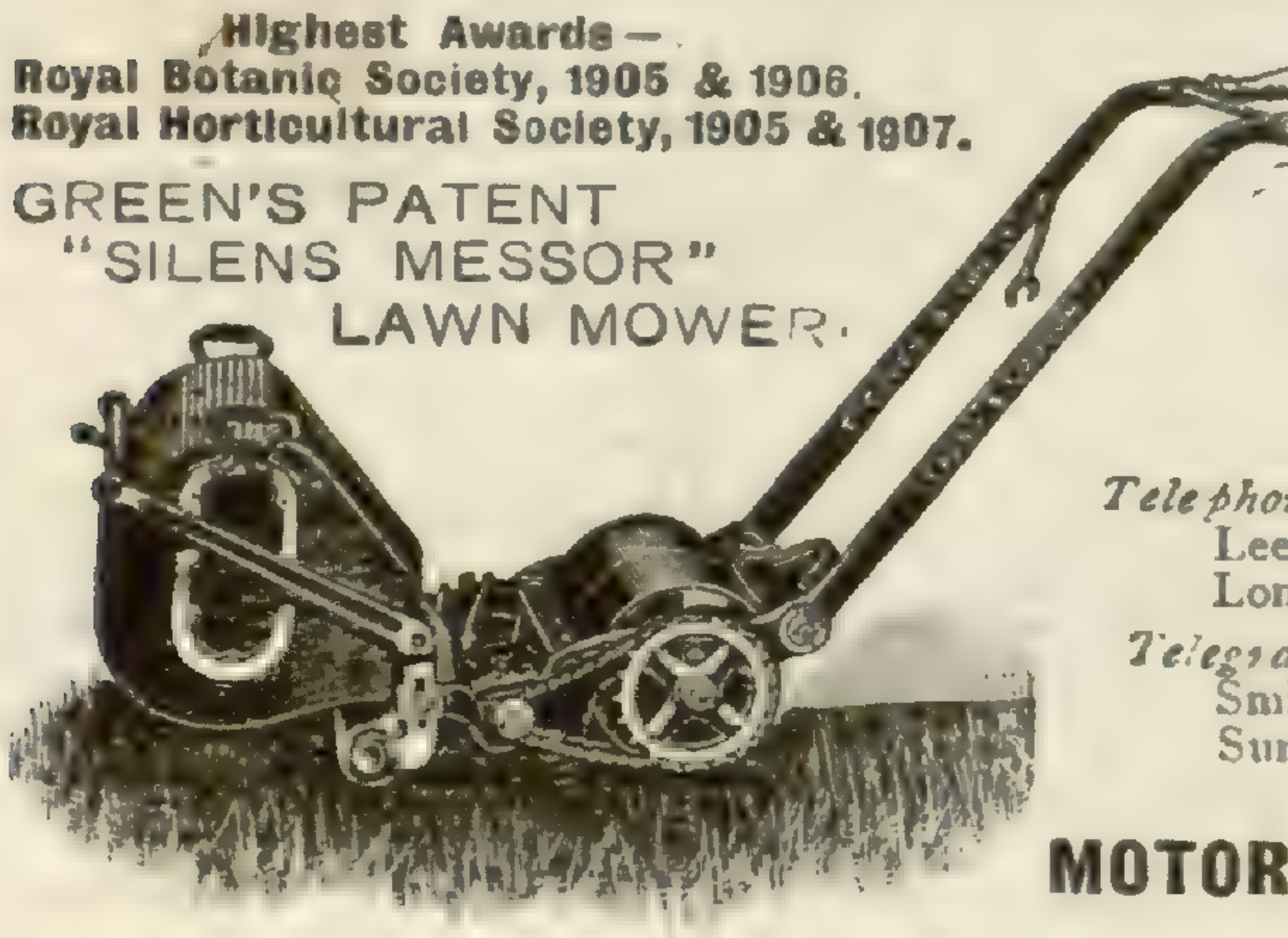

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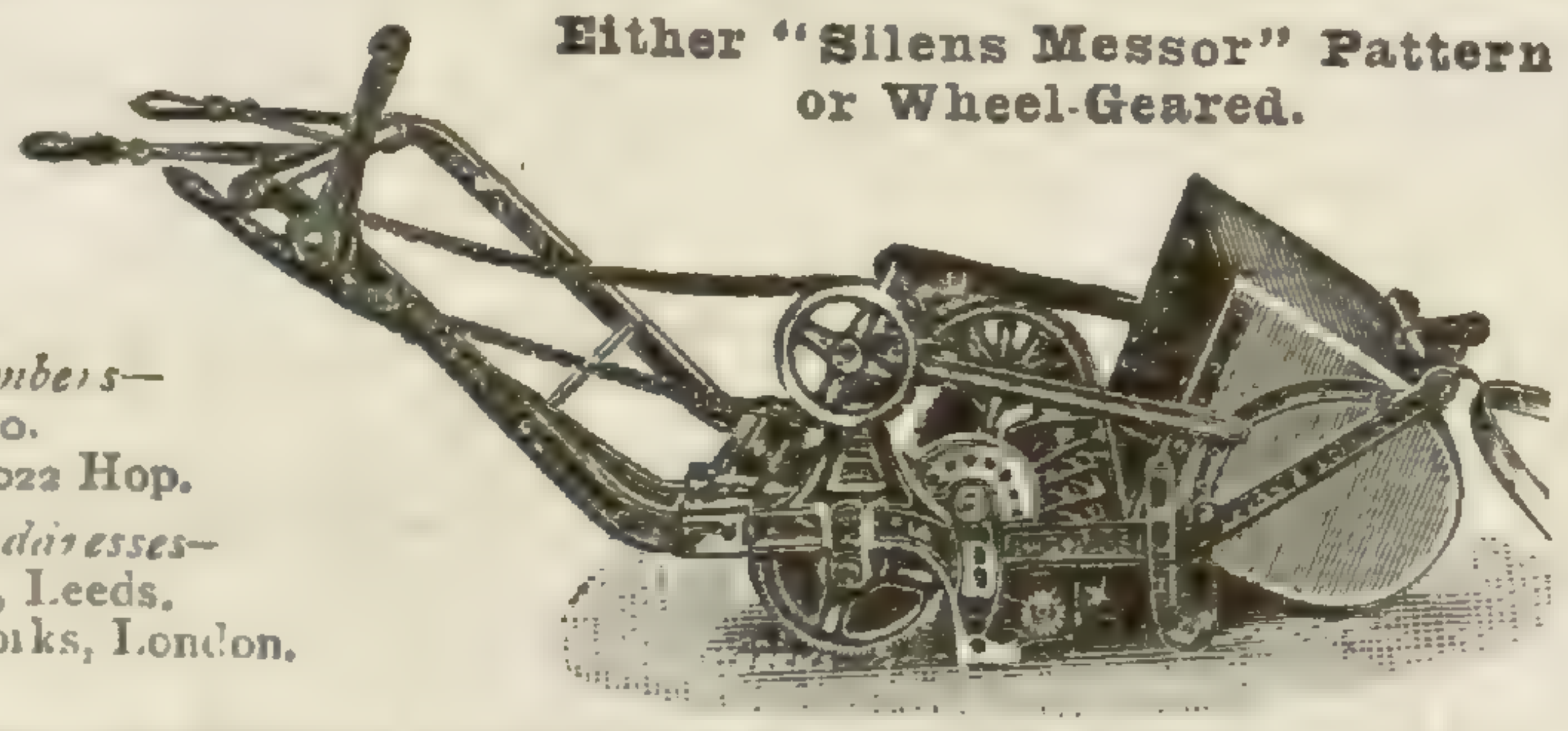

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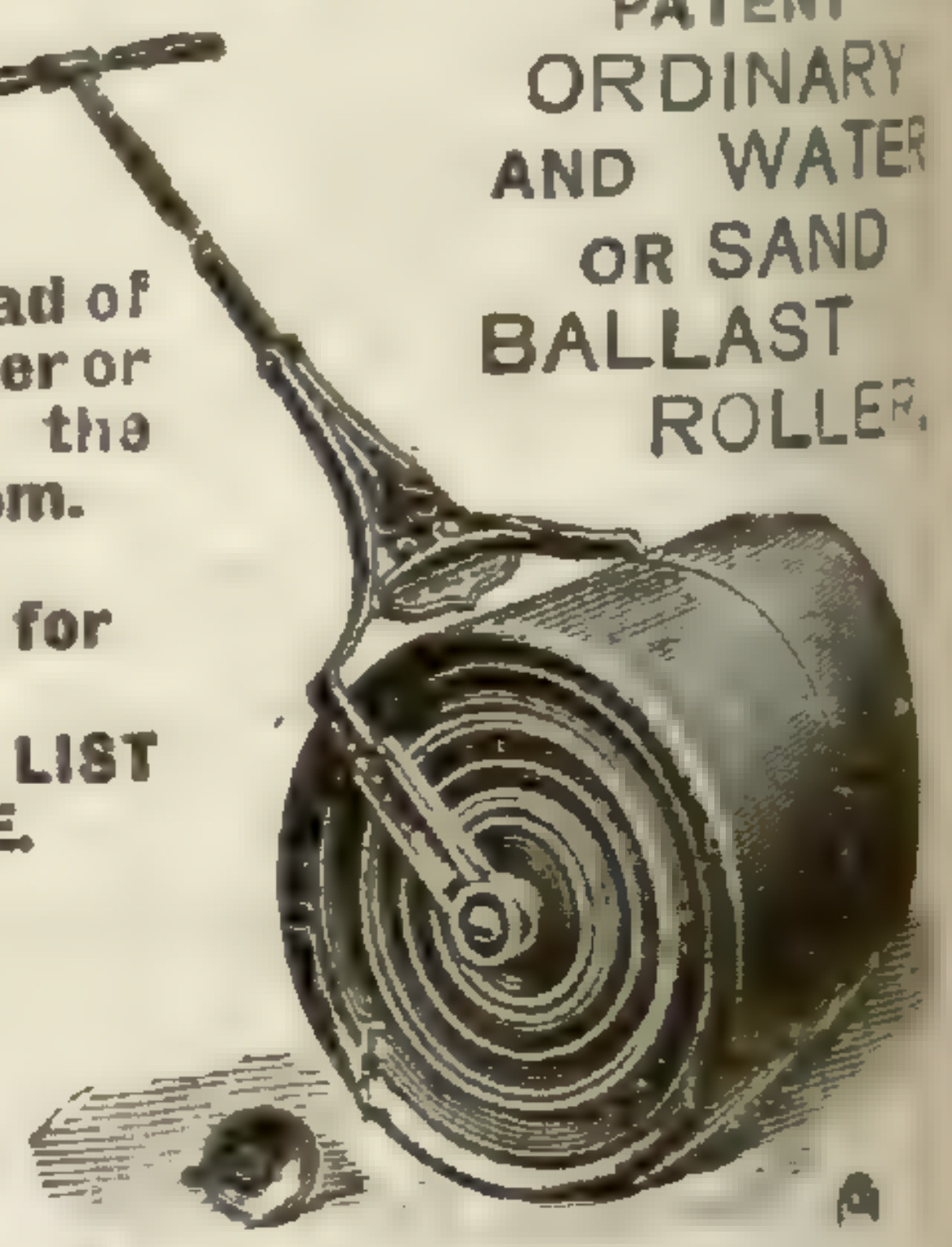

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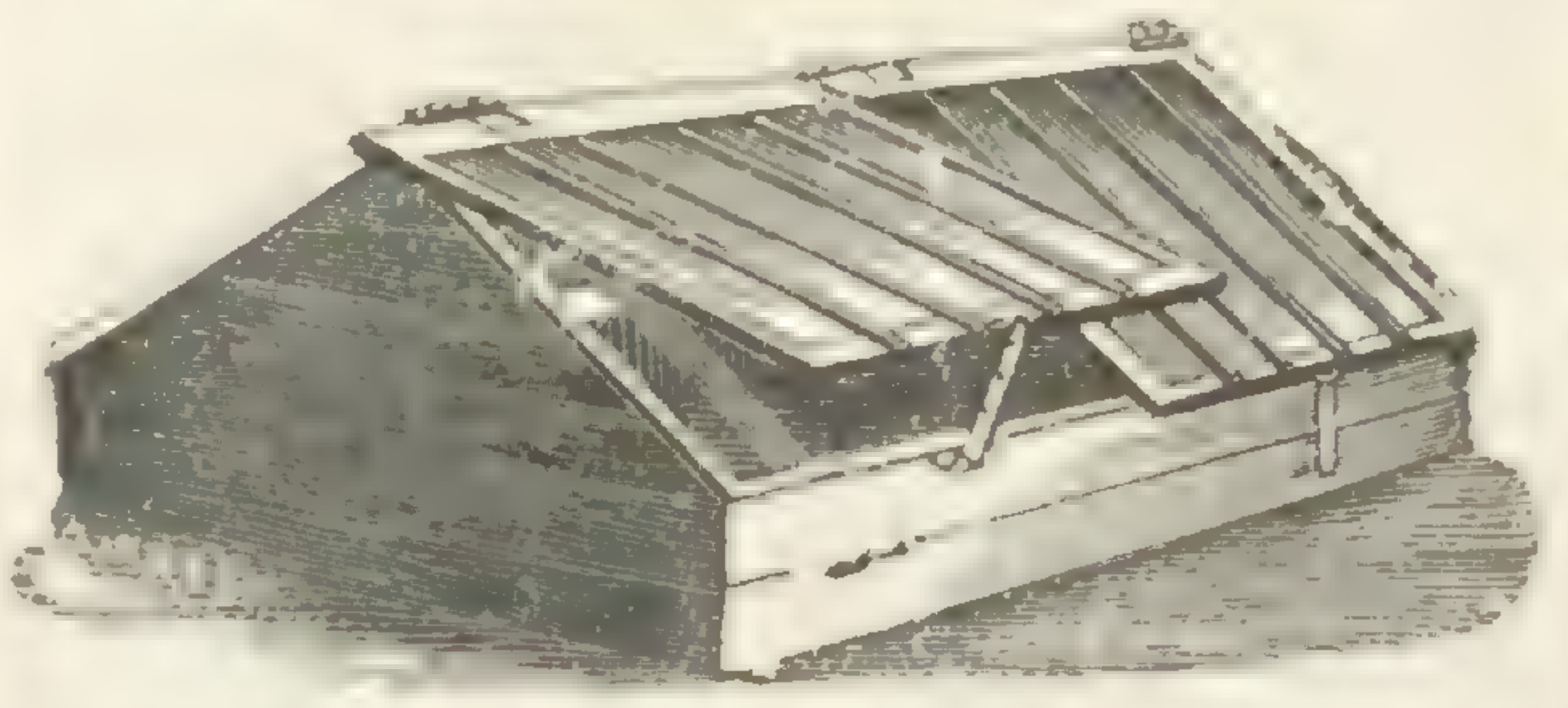

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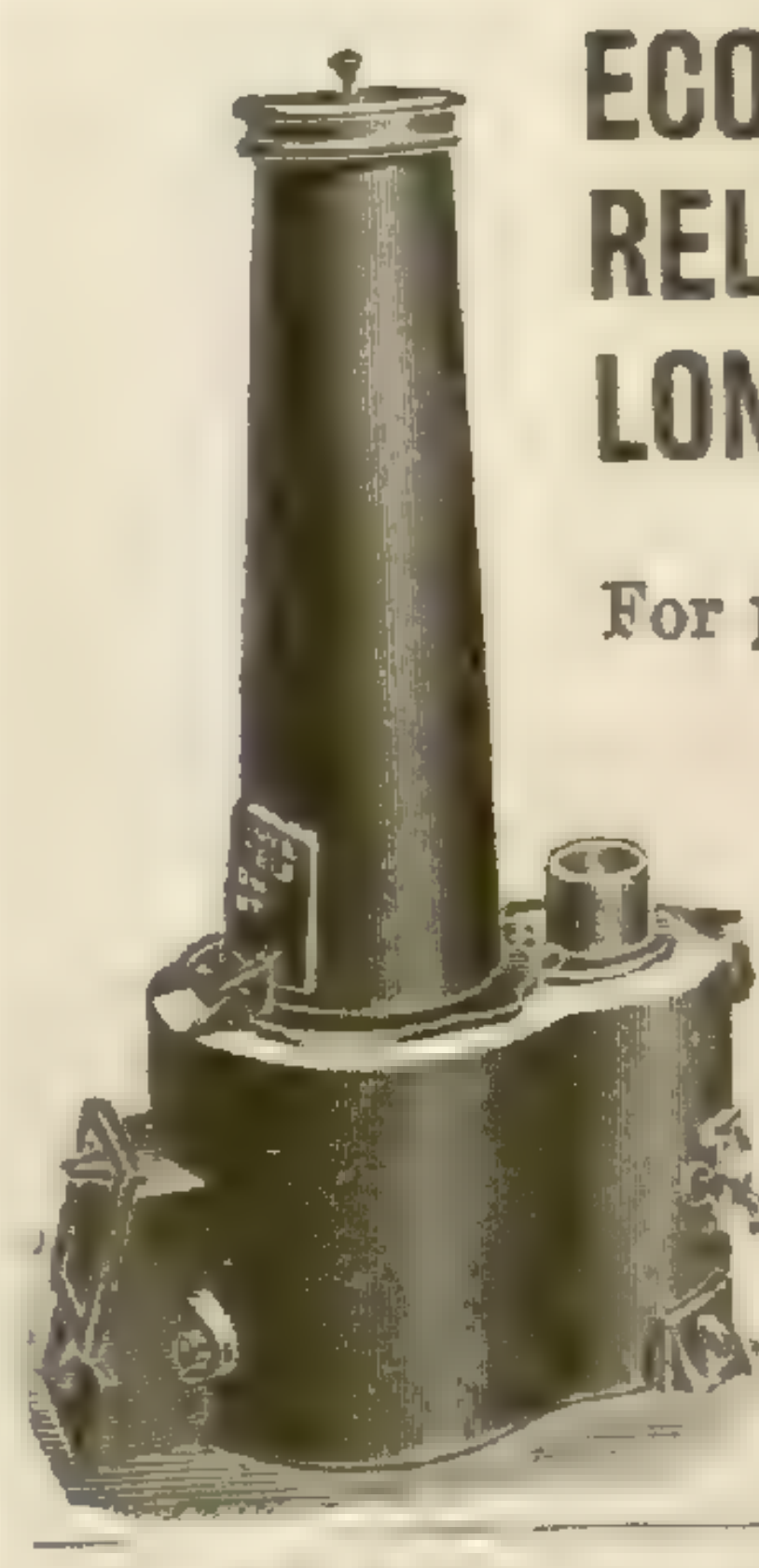

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Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head), age 33.—SYDNEY BURGOYNE, 3 years General Foreman in Wentworth Woodhouse Gardens, Rotherham, previously 4 years Foreman, Harewood House, Leeds, can be highly recommended to any Lady or Gentleman requiring thorough practical Man; all branches. Address as above.

JAMES COATES, Esq., can highly recommen his HEAD GARDENER, JOHN LESLIE, who seeks Situation where others are kept; thoroughly experienced in all branches of Gardening; Grape Culture a speciality; good references and testimonials as to character and abilities; disengaged through place being sold. Address, The Gardens, Piteullen House, Perth.

AS HEAD WORKING GARDENER where three or more are kept; twelve years' experience in vines, peaches, stove and greenhouse plants, flower and kitchen garden; age 26; nearly six years in present situation as second; can be well recommended; married when suited. Apply W. H. JONES, Aberbaiden, near Abergavenny.

A LADY highly recommends a strong, active, middle-aged Man as HEAD WORKING GARDENER, who has had the entire management of an estate of 70 acres, gardens included; married, family grown up; 20 years' personal character; leaving through death. F. W., Triangle House, Taplow Common, Taplow, Bucks.

GARDENER (Head Working), where several are kept; life experience in all branches; 10 years as Head in last situation; excellent references; age 38; married, one boy, age 7. O. BEAL, 39, Mayfield Road, Hampton Park, Southampton.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head Working); married; age 39; thorough knowledge of fruit, flowers, and vegetables; life experience; highly recommended, sixteen years' head; economical manager. PENFOLD, 15, Helvetia Street, Catford.

GARDENER (Head Working, where three or four are kept); life experience in the general routine of well-kept establishments; last place head of four; five years and four months' good reference; disengaged; married, age 40. Address F. FITTALL, 26a, Quill Lane, Putney, S.W.

GARDENER (Head) or FOREMAN in Private establishment or Public Park (home or abroad); 14 years' experience Inside and Out; age 29; married when suited; Kew Certificate. CANTAB, 57, Peel Street, Kensington, W.

GARDENER (Head, where one or two are kept), 17 years' practical experience, Inside and Out; good references; married; no family; age 32. EMMONS, Meynell Langley, Derby.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head, where two or three are kept); thoroughly experienced in all branches. Inside and Out; cows and poultry if required; good references; married; age 38. A. GOODFELLOW, Gardener's Cottage, The Warren, Wanstead.

GARDENER (Head Working); age 30; Situation as above; thoroughly experienced in all branches of gardening; can be well recommended; married when suited. OAKLEY, The Gardens, Heath Lodge, Englefield Green, Surrey.

GARDENER (Head Working), age 40; thorough practical life experience in all branches; could lay out new place, or remodel neglected garden; grass land, cows, poultry, bees. Wife excellent needlewoman. H. W., 12, Croftdown Road, Highgate, N.W.

GARDENER (Head Working) age 33, married; thoroughly experienced in all branches of gardening, Inside and Out; excellent testimonials; well recommended by present employer. E. LATIMER, Heverham, Kemsing, Kent.

GARDENER (Head Working); sixteen years' experience; four years present situation; highly recommended by present and past employers as a thorough, reliable, and practical man in all branches of gardening; age 30, married, no family. H. JOHNSON, Pennington Hall, Leigh, Lancs.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working). — Mrs. VENESS having sold her property heartily recommends her excellent GARDENER, with her four years; experienced in all branches; 38; married, two girls, 11 and two. GARDENER, 3, Claremont Road, Sidley, Bexhill.

GARDENER (Head Working); life experience in Vines, Peaches, Chrysanthemums, and Carnations, Early and Late Forcing, Inside and Out; age 35; married, no family; excellent references. A. K., The Lodge, Vale Lodge, Leatherhead.

THE DOWAGER LADY HILLINGDON can highly recommend her Foreman, who has been here three and a-half years, to any lady or gentleman in want of a HEAD WORKING GARDENER; experienced in first class gardening; excellent references. Apply A. STEWART, Wildernesse Gardens, Sevenoaks, Kent.

GARDENER (Head or good Single-handed); life experience Inside and Out; age 29, married, no children. H. B., Lodge, The Park Southend, Catford.

MR. D. FAIRWEATHER, Head Gardener, Bifrons, Canterbury, wishes to recommend A. MUNDAY as HEAD WORKING GARDENER, where others are kept. Thoroughly experienced in all branches, Inside and Out; 2½ years here; age 27; married; abstainer. Address either of above, The Gardens, Bifrons Park, Canterbury.

GARDENER (Head, or good Single-handed); thorough experience in all branches inside and out; age 37; two boys, age 6 and 11 years; 9 years' good reference from present employer. F. BALCOMBE, Hollings Hill, Mathon, Malvern.

GARDENER (Head), or GROWER; Market Nursery (Middlesex experience); Tomatoes, Cucumbers, Mushroom Ridge, Chrysanthemums, Soft-wooded Plants, Budding, Grafting; age 42; no small children. BLOOMFIELD, Staplehurst.

GENTLEMAN recommends his GARDENER, as Head of three; has been with him 8 years; life experience in all branches, including Orchids; age 32; married, one child, age 4. South preferred. G. SUMMERSELL, 12, Barron Terrace, Boundary Road, Woking.

C. J. HOWELL can recommend R. CHILDS, Gardener (good single-handed), with help; or Second of four or five; life experience Inside and Out); 3½ years' good character, present place (married). Apply, GARDENER, Langton Gardens, Alresford, Hants.

GARDENER (Single-handed or with help); 11 years' experience inside and out; good references; single; age 26. S. C., 38, Belfast Road, Stamford Hill, N.

GARDENER (Single-handed or otherwise), experienced Inside and Out; 6½ previous, 2½ last situation; middle age; married, one son; abstainer; good references; recommended by last employer. W. KING, 2, Yester Villa, Strafford Road, Hounslow.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (Single-handed or otherwise); 26; experienced in Flowers and Kitchen Garden; 8 years last place; married when suited. W., 33, Heatherton Terrace, Squires Lane, Finchley, N.

GARDENER (Single-handed, with help), 6½ years' experience as Foreman in last place; death cause of leaving; single, age 32; excellent references. G. EUSTON, Shrubs Hill, Sunningdale, Ascot, Berks.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall, married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER (Single-handed or with help, 40; Wife Laundress or help; good references; cottage; near London. L., care of 10, Sydney Road, Wood Green.

GARDENER (Single-handed), 11 years' experience, Inside and Out; 2 years in present place; age 24; good references. F. PINK, 1, Terrace Cottages, White Hart Lane, Tottenham.

GARDENER (good Single-handed, or with help); experienced in fruit, flowers, and vegetables; age 39; married; good character. W LYONS, Townsend Cottage, Bovey Tracey, Devon.

GARDENER (Second, Inside and Out); 1 years' experience; age 25; 4 years present place. I. PULLINGER, The Gardens, Rapkyns, Horsham, Sussex.

GARDENER (Second), where several are kept; 12 years' practical experience in good establishments; good references; age 27. C. E. Northington Down Farm, Alresford.

GARDENER (Second), experienced in Plant and fruit houses, kitchen and pleasure gardens; 5½ years last situation; well recommended; single, age 27. HILLS, Bochanger Cottages, Kennington Ashford, Kent.

GARDENER (Second), Inside or Inside and Out; age 26; 10 years' experience; well recommended; 3 years in present place. H. JENNINGS, Claremont Gardens, Esher.

GARDENER (Under), age 24, nine years' experience, seeks Re-engagement, Inside and Out; well recommended and good references; Bothy preferred. D. ROSE, Strumpshaw Hall Gardens, Norwich, Norfolk.

UNDER GARDENER seeks SITUATION (Inside and Out); age 21; eight years' experience; excellent testimonials. E. ORME, Glenfield near Leicester.

GARDENER (Under), age 20, seeks SITUATION in Kitchen and Flower Garden; some Inside work preferred; 6 years' experience; good character. Apply C. MORRIS, Riverbridge, Sedlescombe, Sussex.

GARDENER.—Gentleman can recommend W. HURST; life experience, all branches; left for no fault; good references and personal character age 35; married. HURST, The Lodge, Grove House Dulwich Common, S.E.

GARDENER.—SITUATION required by Young Man (Single-handed) in small place or otherwise Under; 2½ years' good character; age 30, single. J. H., The Cottage, Staneway, Ewell, Surrey.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
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For MARCH 7, 1908.

Please Repeat my Advertisement.

Name..

Address..

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Date..

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

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GENTLEMAN recommends a steady and industrious Man, with 4 years' good character, as GARDENER or GROOM-GARDENER (Single-handed), or where two or more Gardeners are kept. RECTOR, West Hanningfield, Chelmsford.

FOREMAN in Kitchen Garden.—Mr. SMITH, Hill House Gardens, can highly recommend a Young Man as above, age 25. H. HOUNSOM, The Gardens, Hill House, Stanmore.

FOREMAN (Inside), age 25, life experience. A. JEFFERIES, Moor Hall Gardens, Harlow, will be pleased to highly recommend his late Foreman; well up in fruit and plant culture; steady and reliable. M. SHORT, Lilliput House Gardens, Parkstone, Dorset.

FOREMAN (Inside), age 27, 13 years' experience in good establishments, House and Table Decorations; good references. J. JEFFERIES, Cholderton House, near Salisbury, Wilts.

MR. F. RICH, The Gardens, Elfordleigh, Plympton, Devon, will be pleased to highly recommend his FOREMAN, NORMAN KENNARD, who has been with him over five years, for a similar position in a good establishment. Apply as above.

AS UNDER GARDENER.—Colonel A. PRATT, C.B., can strongly RECOMMEND William Kelly, just 18, good scholar, for EMPLOYMENT in large garden, where several are kept; been three years under good gardener; fruit, flowers, vegetables. Broom Hall, Shooter's Hill, Kent.

W. F. GORE LANGTON, Esq., highly recommends R. SIZELAND as GARDENER where one other is kept; age 44; 16 years' personal character. Address SIZELAND, Padbury, Buckingham.

JOURNEYMAN (First), Inside, in good establishment in Fruit and Plant Houses under Foreman; age 21; 7 years' experience; good references. T. SPARROW, Ilsington Gardens, Piddletown, Dorchester.

JOURNEYMAN (Inside); age 21; 6½ years' experience in present place; good reference; Bothy. H. JONES, Warens Gardens, Lyndhurst, Hants.

JOURNEYMAN, age 21, seeks SITUATION; 7 years' experience (Inside and Out); can be well recommended. H. BEES, The Gardens, Crown East Court, Worcester.

JOURNEYMAN seeks SITUATION, Inside and Out); age 22; eight years' experience; can be well recommended from good establishments. Apply O. MOORE, The Gardens, Nantyffrith Hall, Wrexham.

IMPROVER.—Gardener's Son seeks SITUATION as above (Inside and Out); age 17; with Bothy; 3½ years' excellent reference. HENLEY, Saxham Hall, Bury St. Edmunds.

MR. J. VESSEY, The Gardens, Kenwick Hall, Louth, Lincs, wishes to recommend respectable YOUTH, age 18, as IMPROVER; Inside and Out; 3 years in present situation.

NURSERY MANAGER of wide experience in all branches of Commercial Horticulture seeks RE-ENGAGEMENT. Testimonials will be submitted which prove capability to entirely control an extensive Business. Would be pleased to interview Proprietors, or Gentleman prepared to Finance a new concern. Apply S. K., Office of this Paper.

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THOS. COOTE, gardener to D. E. Taylor, Esq., The Rocks, Marshfield, Chippenham, wishes to place his Son, age 18, in good Gardens as IMPROVER; 4 years' experience here with Grapes, Orchids, Chrysanthemums; Bothy preferred.

SITUATION required by a middle-aged Scotsman who has had a life experience in all branches of horticulture; has held important positions in Scotland, England, and Ireland, and can be highly recommended for a post as supervisor of private or public gardens. Apply, J. M., Office of this paper.

WANTED, by Two Young Men, Situations together to manage all the work in small [illegible] in the country; ages 21 and 17; life experience; good references. Apply G. HODGINS, 1, [illegible] Cotts., Coldblow, Bexley, Kent.

YOUNG MAN, age 20, seeks SITUATION as JOURNEYMAN (Inside and Out); 2 years' [illegible] character; abstainer; Bothy preferred. D. [illegible], The Gardens, Langtons, Alresford, Hants.

T. WELCH, Grove Gardens, Retford, Notts, wishes to recommend YOUNG MAN, age 19, as Improver (Inside and Out): Bothy preferred.

Situations Vacant.

WANTED, YOUNG MAN, who has a knowledge of plant and office work, for keeping [illegible] cataloguing, preparing lists, etc., etc.; [illegible] employment and good opportunities to a [illegible] persevering Young Man. Wages to [illegible] 21s. per week. SANDER and SONS, St. [illegible]

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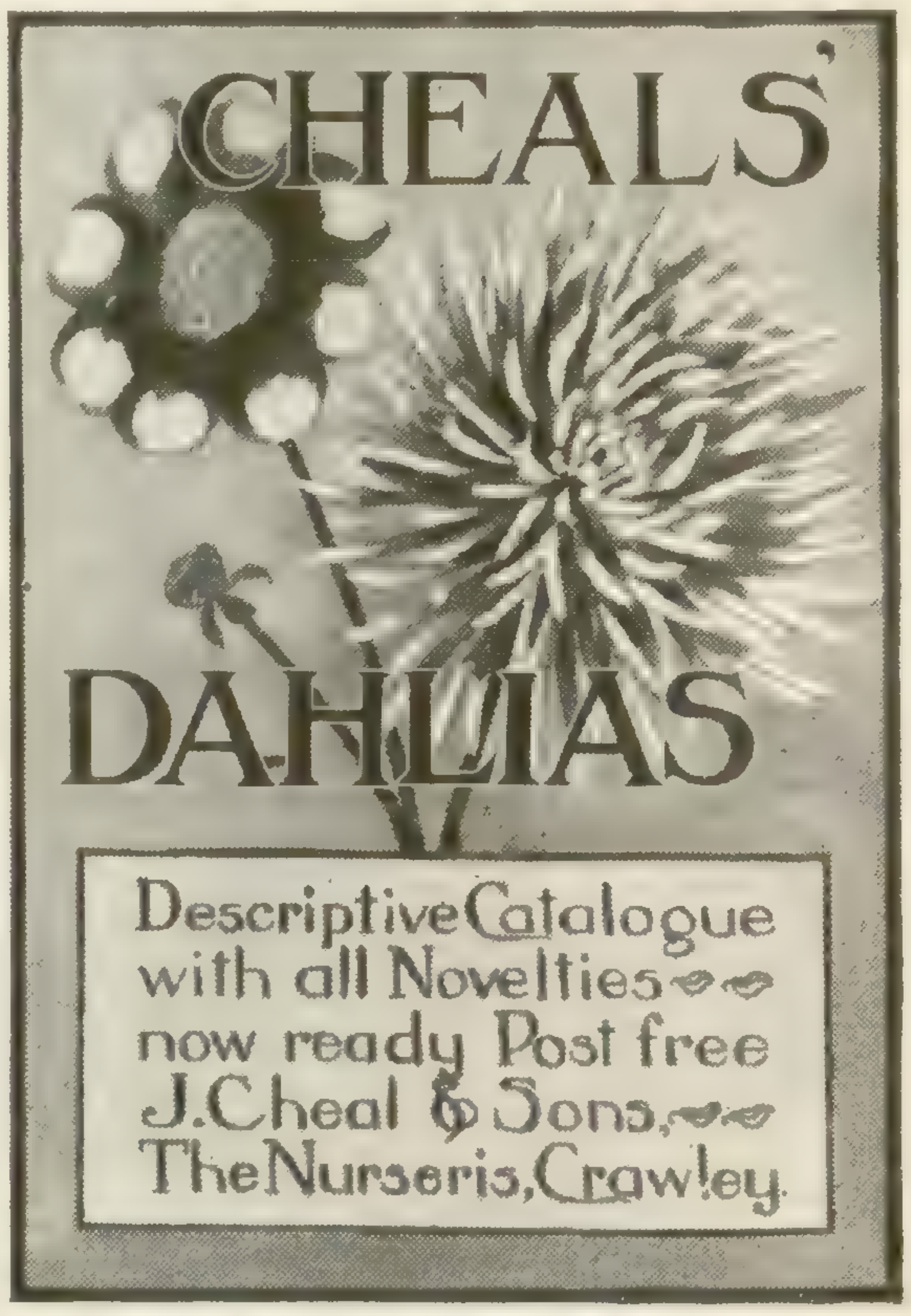
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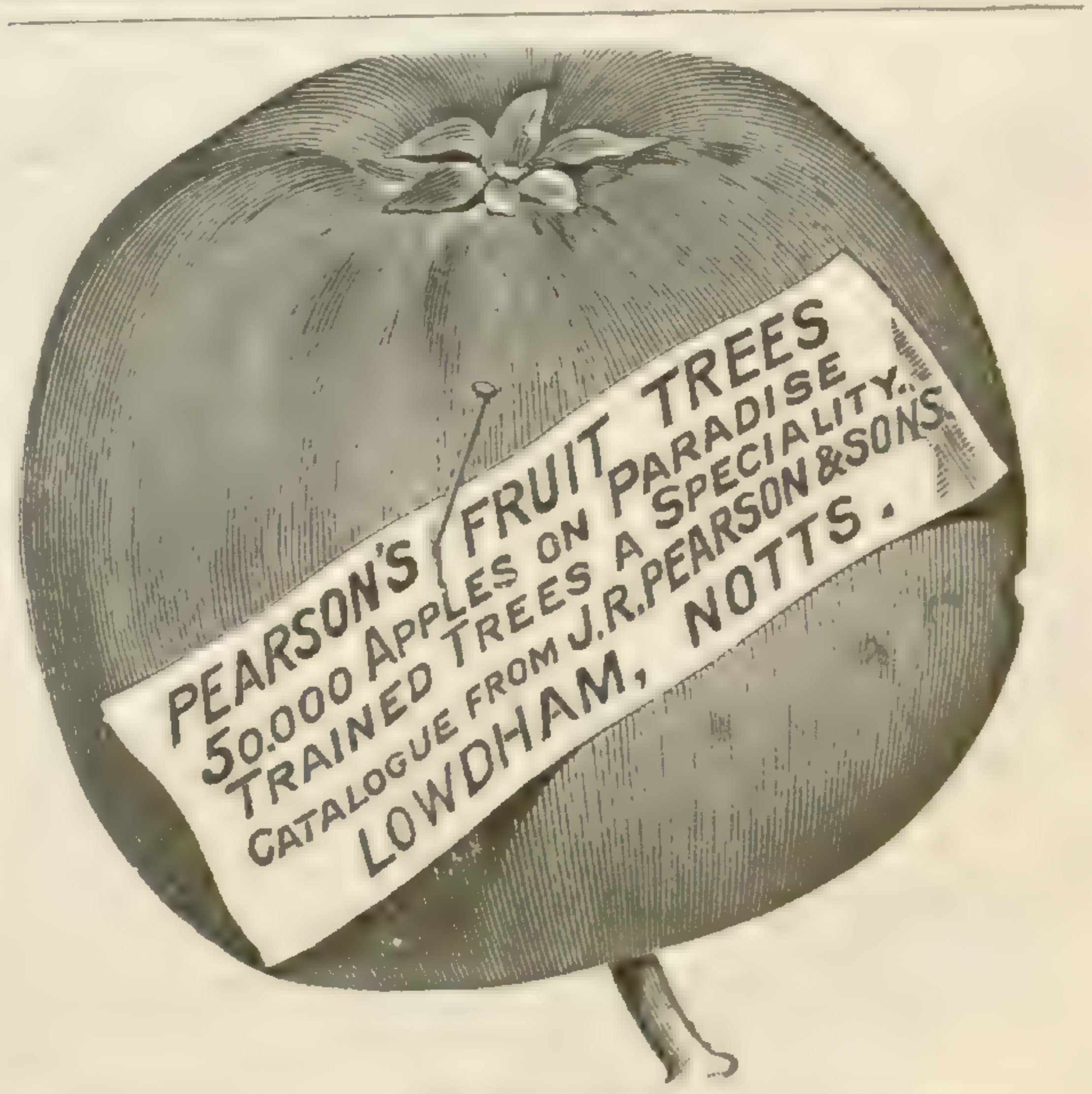
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VOL. LI.—No. 2,835. SATURDAY, FEBRUARY 29, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

◆

Solanum etuberosum.

Mr. A. W. Sutton's paper read at the Linnean Society on Thursday, the 20th inst., although dealing with all the recognised species of tuber-bearing Solanums which he had been able to acquire and study had for its backbone, so to speak, the quite recent results of sowing seed of S. etuberosum which, after twenty years absolute sterility, had eventually yielded a single apple or seed-vessel, whence twenty plants had been successfully raised. When it is considered that all potato raisers sow seed from time to time as a means of obtaining new varieties, since the potato plant apparently does not produce bud variations yielding new forms, the mere fact of this sowing of S etuberosum appears to be of trifling importance, but in point of fact by its results it promises to be of very great importance indeed. In the first place it has always been a puzzle to those who take an interest in vegetable pedigrees, to know which of the known wild species of Solanum now existing had given us our culinary potato, which, as everyone knows, has become one of our greatest and most valuable food and industrial factors. The desire to know this became also accentuated when it was considered that as continued artificial cultivation tended to weaken the constitution and render it more and more liable to the well known potato disease, a hark back to the original wild stock might probably give a fresh lease by infusing some of the original vigour and resistant power. S. etuberosum though differing from S. tuberosum, i.e., our common potato, in the haulm and other specific characters, was the only accepted wild species which yielded tubers at all like the commercial ones. When first tested twenty years ago these were no bigger than marbles, and from its botanical name which really means the tuberless solanum, it is assumed that under wild and starved conditions they might be still further reduced so far as to be some justification for the name. Now, however, after twenty years, the tubers have become much larger, and rank, indeed, with fair sized ordinary ones in appearance, and even in flavour. One very essential feature, however, apart from the minor specific differences already alluded to, is that the pollen grains of S. etuberosum agree with those of all truly wild species in being evenly oval, a long egg-shape; while those of the cultivated potato are irregular and vary much in size. The most extraordinary fact has, however, transpired from the one sowing which has been so far possible, that despite these differences, that of the pollen included, which is the most important, the batch of offspring resulting exactly resemble in their general character and their varied nature, a batch raised from the common potato S. tuberosum. No expert, ignorant of their origin, would hesitate in pronouncing them to be S. tuberosum pure and simple. The pollen grains, however, in the one plant examined in this connection, were of the wild oval even form. It must have been a revelation to many of those who were privileged to inspect the parallel crops raised under like conditions from the two plants, viz., S. tuberosum (var. Blue Giant) and S. etuberosum that such a varied brood could issue from one seed pod. Twenty different forms resulted from as many plants raised, varying in size, shape, and colour; white, red, purple, rose, etc., while one was actually purplish-black throughout precisely like a well known S American cultivated variety. Naturally the Mendelians are all agog to know what the next generation will yield, a curiosity which Mr. Sutton may be relied upon to satisfy without delay. Was this batch due to a natural cross by means of pollen from S. tuberosum in other parts of the field, is a legitimate question, this, however, Mr. Sutton considers not to have been likely, self-fertilisation appearing to be the rule. In any case the evidence strongly points to the origin of our precious potato having been found at last, and since, in addition, during twenty years' cultivation, the disease has failed to find a single weak spot in S. etuberosum, the primary object of research, a disease-resisting tuber would also appear to be attained.

MR. EDWIN MOLYNEUX, V.M.H.

Mr. Edwin Molyneux, V.M.H., whose portrait we have the satisfaction of giving in this issue, is so well and widely known in both horticultural and agricultural circles as to render it wholly unnecessary to make otherwise than the briefest reference to the splendid work he has accomplished in the course of an extremely active life. Possessing in an eminent degree the determination characteristic of the higher type of Yorkshireman, and ability of a high order, he was not long in taking a prominent position among practical horticulturists after he had the sole responsibility of a garden placed upon his shoulders. There is no occasion to pass under review his training during the early part of his gardening career, for it is sufficient to know from his subsequent achievements that it must have been thorough, and on lines that conduce to a keen interest being taken in both the scientific and practical aspect of garden management. Many years ago, when the Kingston Chrysanthemum Society was at the zenith of its popularity, a valuable challenge vase, which had to be won three times, was annually offered for competition, and of these vases Mr. Molyneux, who was then head gardener at Swanmore Park, succeeded in winning several. These splendid achievements, and the winning of innumerable prizes in other classes at Kingston and elsewhere, placed him at the head of chrysanthemum growers, and this position he held until he retired from the arena. It may be of interest to mention that Mr. Molyneux's successes as an exhibitor were largely due to his appreciating the necessity of a proper balance between size and finish, and in the latter attribute must be included colour. While growing and exhibiting chrysanthemums with such remarkable success, Mr. Molyneux obtained much distinction as a cultivator of fruits and vegetables, and the gardens under his charge formed an excellent model of what a horticultural establishment of the highest class should be. When, many years ago, a change was made in the management of the Swanmore home farm, this, as well as the gardens, were placed under his charge by his appreciative employer, W. H. Myers, Esq. Mr. Molyneux held the dual position for several years, but as that involved too great a strain upon him he was relieved of the responsibilities of the garden. It would be difficult to say whether Mr. Molyneux has achieved the highest success in the garden or on the farm, nor is it necessary we should make the attempt. We can, however, say that while wholly engaged in agricultural matters, he has in no way changed in the strong affection he has had for the garden from his youth upwards.

Our Spring Number.—As announced in our issue of the 22nd inst., the Spring Number of the GARDENERS' MAGAZINE will be published on March 7, and be of quite exceptional interest. The first of two profusely illustrated articles entitled "Some Famous Cornish Gardens," will be given, and this, we venture to suggest, will constitute a feature of much interest, for the information it will contain relating to the many beautiful plants that have a place in the principal gardens of Cornwall. The other contents will also be such as to strongly appeal to those who are concerned with the garden and its management. Mr. Prinsep will describe the method by which he has achieved so much success in the cultivation of deciduous calanthes. Mr. Stevenson, who achieved so high a degree of success at the exhibition of the National Sweet Pea Society last year, will write on the cultivation of sweet peas for exhibition; Mr. S. W. Fitzherbert will contribute an essay on garden seats; Mr. George Woodgate will state the advantages of spraying fruit trees in winter; Mr. A. Petts will describe the method of procedure by which gardens may be beautified with annuals. Mr. E. Molyneux will write on the advances that have of late years been made in the improvement of lilacs; Mr. T. Coomber will give a short list of the finest long-keeping apples, and Mr. T. H. Slade will give a selection of winter-flowering carnations of special value for private gardens. The care of garden tools, the use of ivy-leaved pelargoniums grown in pyramidal form in the flower garden, moon daisies, standard weeping roses, and some other subjects will also receive attention. In addition to the numerous illustrations in black and white, a plate in colours of garden tulips will be presented with the issue.

Horticultural Club.—The next house dinner of this club will take place on Tuesday next, March 3, at six p.m., at the Hotel Windsor. The lecture will be by Mr. C. E. Pearson on "Bird Eggs and Evolution of Protective Colour," and will be illustrated with lantern slides.

Beech Coccus at Burnham Beeches.—That most destructive of woodland pests, the Beech Coccus (Cryptococcus fagi) has been found in considerable numbers at Burnham Beeches, and the City of London's Coal, Corn, and Finance Committee is taking active steps to stamp it out. The pest has also been discovered among the beeches on a neighbouring estate, the owner of which has consulted the Board of Agriculture on the subject. The committee, alive to the insidious and destructive nature of the attack, has appointed a special sub-committee to deal with the pest by the washing and spraying the affected trees and by other treatment; and it is confidently hoped that the scourge will be stamped out before any permanent or extensive damage is done.

Damage to Trees at Sandringham.—The severe gale that passed over almost the whole of the country on Saturday evening last left its mark in many districts. On the King's estate at Sandringham the fury of the gale wrought great damage to the trees, blowing down large numbers of fine oaks and beeches, some of these crashing through the estate walls in their fall. Sir Dighton Probyn hurried to Sandringham early in the week to inspect the damage and make arrangements for its repair so far as possible.

Pecan Nuts.—The Pecan nut trees are occupying the attention of planters in the South Atlantic and Gulf States of America almost to the exclusion of other nut-bearing trees. The Pecan (Carya olivæformis) is a close relative of our walnut, and several members of the genus Carya are known commercially as Hickories. The Pecan is hardy at Kew, but we do not know whether it has ever ripened fruits there. The nuts are very hard-shelled, but as they are now being cracked and graded by machinery, they are forming a very considerable industry in the Southern United States. There are several varieties cultivated, these having fruits or nuts of varying size and shape; popular sorts are Bradley, Dewey, President, The James, Randall, Daisy, Stuart, and Frotcher. Young trees are rather expensive to produce, but the demand has to be met, and consequently methods have improved. With the exception of C. amora, the Swamp Hickory, all the Caryas are tap-rooted, and almost fibreless, hence the difficulty of successful transplantation. This is overcome by sowing the nuts in trenches in the bottom of which is laid a strip of fine wire-netting or wire cloth; this prevents the formation of strong tap-roots, and it is said that from every indentation made in the root by the wire, strong roots start when the plant is set out in the orchard. Of course, budding or grafting are necessary to obtain the best varieties. From two to five years are necessary for the production of a saleable tree.

United Horticultural Benefit and Provident Society.—The annual meeting of this society will be held at the Royal Horticultural Society's Hall, Vincent Square, Westminster, on Monday, March 9, when the chair will be taken at 8 p.m.

Messrs. James Carter and Co., High Holborn, have received the Royal Warrant of Appointment as seedsmen to his Majesty the King of Siam.

Irrigation in Egypt.—At the Royal Society of Arts, under the presidency of Lord Cromer, Sir Hanbury Brown read a most interesting paper on "Irrigation in Egypt under British Direction," on Tuesday, February 25. Sir Hanbury Brown showed how largely the prosperity of Egypt depended upon a thorough system of irrigation, and he pointed out that the cotton crop had doubled in quantity and value till it now realised £15,000,000, the cultivatable area had increased by a million acres, and land had doubled in value since 1883. The Assouan Dam and its connections were increasing the prosperity of Middle Egypt, and the huge reservoir insured the cotton crop of Lower Egypt. Lord Cromer added that £20,000,000 might advantageously be spent on irrigation works in Egypt during the next fifteen or twenty years.

Baltic Rose and Sweet Pea Society. — Under this title a horticultural society, devoted to the culture of the rose and the sweet pea, was organised last year in the City of London, the association being open only to members of the Baltic Mercantile and Shipping Exchange, Lloyd's, and subscribers to the Corn Exchange, with the clerks in their employ. The first exhibition was held in July, and as a result a sum of £20 was afterwards divided between the Corn Exchange Benevolent Society, the Cereals, the Shipbrokers' Benevolent Society, and the Oilseed Benevolent Association. It is proposed to hold a second show in July next. The hon. secretaries are, Mr. B. Hugo and Mr. F. T. Barker, the Baltic, St. Mary Axe.

Basic Slag and Lime.—In an interesting report on manurial experiments on grass land, issued from the University College, Reading, Professor Percival points out that on grass land manured with basic slag, the cattle ate the herbage bare, neglecting plots manured with other substances. Professor Percival suggests the use of basic slag in place of lime or chalk, but while basic slag is most certainly helpful on land in which lime is short or deficient, it by no means follows that the lime it adds is sufficient to render direct liming unnecessary.

Home-Grown Telegraph Poles.—In answer to a question put to him in the House of Commons recently, Mr. Buxton replied that telegraph poles were imported because suitable poles could not be obtained at home. He had invited tenders from all parts of the country, and had, as yet, only been able to place a small order for larch poles with a Welsh firm.

Small Holdings.—We understand that in Buckinghamshire about 330 applications have been made for small holdings, the total area applied for being 6,[illegible] acres. In Wiltshire there are about 3[illegible] applicants for a total of about 6,000 acres, and in Kent there are 281 applicants for 3,805 acres.

Women's Horticultural Exhibition.—The Women's Agricultural and Horticultural International Union is organising an exhibition and sale of farm and garden produce in the gardens of the Royal Botanic Society, Regent's Park, London, N.W. There will be classes for groups of flowers, roses, carnations, sweet peas, choice fruits, hardy fruits, designs for country and suburban gardens, and for decorative effect of flowers. The exhibition will be held on Wednesday, July 15.

Sulphur and Wireworm.—It is now being suggested that seeds fumigated with sulphur fumes may prove the salvation of the resulting crop from wireworm attacks. In the "Agricultural Gazette," a letter from Mr. A. Creasy, Great Bentley, Colchester, shows that the fumigation of seed corn with sulphur has proved a preventive of wireworm attacks over a period of five years in the case of land previously infested with the pest.

Leaf Insects in Captivity.—During the early part of October the Royal Botanic Society accepted as a donation from Mr. W. H. St. Quintin, of Scampston Hall, near York, a number of living specimens of the interesting leaf-insect (Pulcriphyllum curifolium), brought as ova from the Seychelles and hatched in this country. On their arrival they were placed in the Victoria Water Lily House, as being nearest in temperature and other conditions to their native habitat, and there they have remained, a source of interest to Fellows and visitors to the gardens. In their own country these insects feed upon the leaves of the wild guava; here they seem to do equally well upon Quercus ilex, the evergreen oak. Although only partly developed, they are about two inches in length, and should, when fully grown, reach four inches. In form they are somewhat diamond-shaped, the flattened body pale green, with comparatively narrow wings of vivid green. Each wing forms half the leaf, the outer wing carrying the midrib; branching veins run from centre to the edge, in the same way as in feather-veined leaves, and when the insects are at rest upon foliage it is a difficult matter, even when close to them, to distinguish the one from the other. A curious feature is the large flattened appendages found upon each joint of the legs; it looks as if the insect had tried to decorate itself with pieces of leaf torn off. The object is probably to steady it in its flight from tree to tree.

British Association.—The meeting of the British Association will be held at Dublin in September next, under the general presidency of Mr. Francis Darwin, F.R.S. The president of the botanical section, Section K, will be Dr. F. F. Blackman, F.R.S., Professor of Botany, in the Leeds University.

The Irish Potato Crop of 1907 was remarkable for its diminished area and the relatively small yield. The area under potatoes in Ireland was 590,998 acres, as compared with 616,107 acres in 1906. The weight of last year's crop was according to the official returns estimated at 2,246,488 tons, against 2,660,581 tons in the previous year. The falling off in the yield per acre was very great, dropping as it did from 4.3 tons per acre in 1906 to 3.8 tons per acre last season, a yield that is considerably below the average of the ten years immediately preceding, which was 4.1 tons per acre. There was a considerable falling off in the most favoured districts and on the best cultivated land; and on heavy, low-lying land, where planting could not, on account of the saturated condition of the soil, be done until late, the reduction in the yield was very great, and in some instances the crop was practically a failure.

Use of Calcium Cyanamide.—The experiments conducted at Rothamsted, with a view to ascertain the best method of using this new nitrogenous manure, are reported upon by Mr. A. D. Hall in the current issue of the "Journal" of the Board of Agriculture; and the report is of great practical value.

EREMURUS.

The value of eremurus for grouping in the plant border and garden landscape has been abundantly proved within the last dozen years, and it is now possible to see thriving colonies in every county of Britain south of the Dee that are a source of pride to those who own them, thriving with but little cultural assistance, and that mainly in the form of protecting the rising spikes from winds and frosts. They are noble liliaceous plants whose giant spikes, towering high above their own leafage and neighbouring plants, prove more than ordinarily attractive, and many experiments carried out at Kew and elsewhere in the matter of grouping eremurus among low shrubs for the shelter these give to the rising leaf clusters and for the leafy environment, have been very encouraging, and it is possible that, as the cost of flowering roots decreases, we may see plenty of this form of natural grouping in the near future.

EREMURUS ROBUSTUS. [Photo: F. Mason Good.
Flowers soft pink.

In common with many plants from drier climates than our own, there has been difficulty in "timing" their growth with our seasons, but this difficulty has been worn away by rearing the plants from seeds, and the home-reared examples have proved more tractable under cultivation than the imported specimens. Although it is common usage to discuss eremurus as consisting of one type, there are really two, and, as important cultural possibilities are involved, I take this opportunity of again noting the differences and what they teach.

One group, of which E. Bungei, E. Olgæ, and E. Warei, and several intermediate hybrids are examples, are quite different in habit and requirements from E. robustus (see illustration), E. Elwesianus, E. himalaicus, and their forms.

E. Bungei and its Allies.

The kinds of which E. Bungei is the type have long whip-like roots that travel a yard or more from the small crown; tough sedge-like leaves of greyish hue in loose tangles, and flower spikes produced in July. The inflorescences are extremely light and elegant, and often dip to the ground immediately. The plants enjoy a light soil well charged with lime rubble, and will thrive in quite open situations, provided there is shelter from winds, while the need for protection of the rising crown is not marked.

E. Bungei (or aurantiacus) is the oldest species. It has lovely symmetrical spikes of pale yellow flowers seven to eight feet long, one-third of the spike being densely clothed with flowers. A very beautiful plant, the lightest and most elegant of all eremuri. Its forms are: Præcox, an early-flowering mountain form of slender habit; Shelfurd, a hybrid between this and

E. Olgæ, of copper-bronze colouring; Tubergeni, a hybrid with E. himalaicus, with dense and conical spikes of sulphur yellow flowers.

E. Olgæ is a charming species, whose roots are stouter than those of E. Bungei, leaf growth similar, and whose flowers are coloured peach blossom pink. The spikes are clothed with flowers for two-thirds of their length, and are models of perfect symmetry. A good garden plant of ready increase.

E. Warei is a rare plant from Turkestan, with the root-stock and leaves of Bungei. The inflorescence is a very slender spike of orange-salmon flowers with purplish exterior, giving a curious and attractive colour note. Its varieties are Mrs. Reuthe, with pale yellow spikes that are close to E. Bungei præcox, and even more elegant. A striking feature is the prominent orange-red anthers that recall the finest species of hypericum. There are, in addition, two French hybrids I have not seen.

E. robustus and its Allies.

The plants of this group have huge root-stocks, not unlike a cart wheel, minus its tyre. The leaves are in broad funnel-shaped clusters, and are green throughout, somewhat brittle, and are like those of the maritime squill in many respects. The spikes are stout and upstanding, often 10ft. high, and are covered for quite half their length with many hundreds of showy flowers. These plants enjoy a deep, well-worked loam, full of humus, and it is only in such soils that one can secure the finest growth. The rising crown is peculiarly susceptible to damage by frosts, and all the species in this group need the protection of bracken strewn about and over them till the spike is well advanced. This group needs the most sheltered positions, and in one garden at least I know of, the greatest difficulty is experienced in bringing eremurus spikes to maturity, owing to the bad position of the site.

E. himalaicus is an old garden favourite with the habit of E. robustus, but somewhat denser in the spike, and as the flowers finish the top of the spike keels over. Quite a familiar white eremurus, and often 10ft. high. E. him-rob is a hybrid between this and robustus, with the palest pink flowers, really a blush-pink, and identical with E. himalaicus var. robustus.

E. robustus is a magnificent species with stout stems of soft pink flowers, often exceeding 10ft. in height. It is among the first species to grow, and is peculiarly susceptible to injury from frosts. The spikes quickly follow the leafage, and when they are a foot or more high should have bracken strewn about them, and lightly placed over them at night. The varieties are Elwesianus, a superior plant to the type, with rose-pink flowers of particularly massive outline which develop a week after robustus; the leafage of this form is much more rigid and the crown is not so conical; albus, nearly pure white and distinct from himalaicus in many respects; Elwesianus albus, a rarity I have only seen once, differs from the latter variety in all those points which separate Elwesianus from the type.

The rearing of eremurus from seeds although literally a seven years' business is really a matter the average gardener can take up. Every species and many of the hybrids produce seeds freely, and these germinate in the following spring if sown in the autumn of the year in which they ripened. Choose a light soil in a slightly shaded situation, and cover the seeds with an inch or two of soil. The first year's growth is a pallid inch or two of leaf, the next year's growth is but little better, but in the third and fourth year when the familiar thonged root-stock is formed growth is very rapid. The only way of aiding the seedlings is to water them and shade them if needed—keeping them active as long as possible. Their first season's growth is little more than a month's duration normally, but shading and watering makes it three, and every month's growth so gained "tells" considerably in the long run, and shortens the seedling stage by a year or perhaps two. Lift biennially, and replant all seedlings, but established clumps are really better if quite undisturbed. It is from old-established roots that the finest and strongest spikes are developed, and as an instance of this I may cite one 15ft. spike in perfect development, and four others less tall from one crown planted five years ago.

G. B. Mallett.

DIELYTRA SPECTABILIS AS A POT PLANT.
Flowers deep reddish-rose.

DIELYTRA SPECTABILIS.

For the better part of a hundred years this fine herbaceous plant has been a popular garden subject, and though during the period that has elapsed since its introduction great improvements have been made in matters horticultural, and many have been the new and beautiful plants introduced, it does not lose anything of its popularity, but still remains one of our best border plants, and one of the most useful, elegant, effective, and easily grown of early-flowering plants. Quantities of the irregular fleshy roots are annually imported for forcing, but there seems to be no good reason why it should not be grown for this purpose at home as well as abroad. Not only is Dielytra spectabilis a most useful plant for professional gardeners who have conservatories to keep gay, rooms to furnish, and groups to arrange, but it is one of the very best of plants for an amateur to grow, because, if very early flowers are not wanted it may be grown in pots in a cool house.

In heavy soils and low-lying districts Dielytra spectabilis sometimes suffers from late spring frosts, but usually it is a success, and needs no special treatment, although a thinning out of growths when a clump is long established, the support of a few thin sticks, and an occasional thorough soaking with liquid manure are matters worthy of attention, inasmuch as they bring their reward.

The graceful racemes of rich rose-coloured, inflated flowers are too well known to need description, but well flowered growths with their own elegant leafage, are charming in a cut state for vases. Of course we all know that this old favourite should be called Dicentra but we have known it so long as Dielytra—though that title itself ought to be Diclyrta—that we adhere to the name we are familiar with.

B. C.

Pruning Outdoor Roses.—The end of March is generally a safe time to commence rose pruning in the South of England and the work can thence be gradually pushed on to a conclusion. There is no need to be alarmed or to be rushed into premature pruning because a little growth is pushed from the top buds of a few shoots. These serve a useful purpose in exciting early root action, and when they are removed in the course of pruning proper, dormant buds soon burst into vigorous growth as a result of this root activity. If plenty of flowers for cutting or garden decoration are wanted, do not be too severe with the knife; eight to ten buds per strong shoot are none too many to leave. E. J. K.

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Tuberous Begonias, double, mixed, 1st size	15/0	**Ranunculus,** French, mixed	1 0
Dahlias, single, mixed..	6/0	**Montbretias,** mixed ...	1/0
Dahlias, double, mixed	10 0	**Calla alba maculata,** with white spotted leaves	8/0
Dahlias, Cactus, mixed	12/6	**Oxalis,** mixed	0,6
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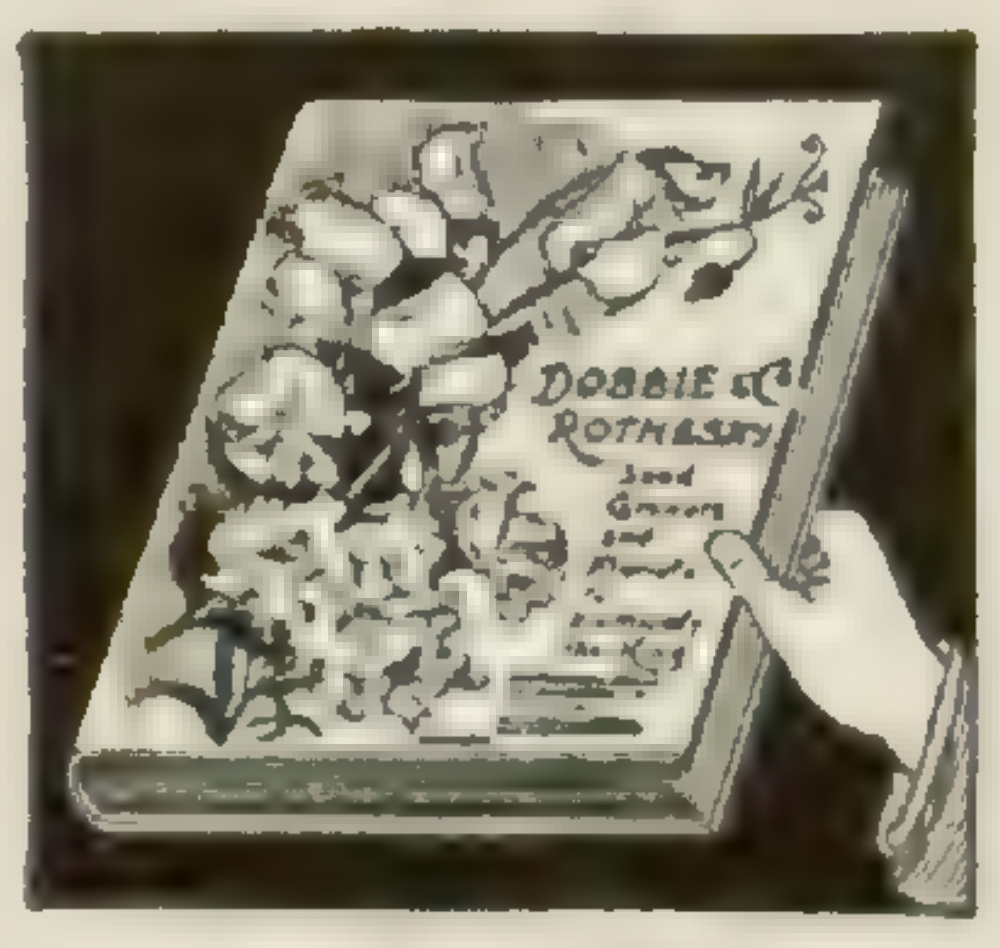

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ASYSTASIA BELLA.

The genus Asystasia contains a goodly number of known species, but few are in cultivation, and of these none is better than the subject of this note, of which I send a photograph. As a pot plant Asystasia bella, or, as it is perhaps more generally known under cultivation, Mackaya bella, is sometimes rather disappointing, but planted out it forms a fine specimen shrub of some six or more feet in height, bearing an abundance of its attractive inflorescences. The plant portrayed in the photograph is one grown here in the succulent house among such plants as agaves, dasylirions, and other plants of a xerophytic character. It receives a maximum of sunlight, which ripens the strong growths, and during winter water is withheld to suit the plants with which it is associated.

A FINE LAWN GROUP OF THE JAPANESE SNOW-BALL TREE (VIBURNUM PLICATUM) AT KEW.
Flowers snowy-white.

Perhaps the most important point found necessary, and adopted here, to insure free flowering is that of pinching or breaking out all the young growing shoots, of which an abundance are formed after the appearance of the inflorescences. This gives strength to the flowers and allows their proper development, but if these axillary shoots are allowed to remain the plant has a tendency to produce growth at the expense of bloom. After flowering the old shoots are removed to allow air to reach the young growing shoots. Under this method of treatment the plant, in the Edinburgh Botanic Gardens, flowers well every year, and during spring is for some time an interesting subject to visitors.

Mackaya bella is a native of Natal, and has been figured in the "Botanical Magazine," t. 5,797. It belongs to the order Acanthaceae, and has flowers from one and a half to two inches long, and campanulate; the throat is delicately pencilled with many lines of purple, the body of the corolla being of a pale lilac colour. Plants may be easily grown from cuttings, and a good compost of loam suits them admirably. R. L. Harrow.

Royal Botanic Gardens, Edinburgh.

THE JAPANESE GUELDER ROSE.

Viburnum tomentosum var. plicatum, when well grown and flowered, is one of the handsomest of hardy deciduous shrubs, whilst it is one that continues to improve as it advances in age, over many years, and is thus unlike some subjects, which require renewing every eight or ten years. In some respects it resembles our common guelder rose, or snowball tree, V. opulus var. sterile; it is, however, of dwarfer, more compact habit, bears larger and denser heads of flowers, and longer, plicate leaves.

The species, V. tomentosum, is in itself an ornamental plant, in fact more so than V. opulus, the flower heads being larger and the sterile flowers more conspicuous. It was introduced from Japan many years ago, but is not so well known as the sterile variety plicatum. A very fine variety, in which the heads of flowers are fertile and sterile intermixed, has been put into commerce within the last few years; this is known under the name of Mariesi, and forms an extremely ornamental shrub. A form of the variety plicatum, known as plicatum grandiflorum, is in cultivation; it is recognised by its enormous flowers and flower heads; it would, however, be impossible for it to be more floriferous than the type. The freedom with which the flowers are produced is admirably shown in the accompanying illustration of a lawn group.

Under suitable conditions V. tomentosum and its varieties grow to a height of at least eight feet, with wide-spreading heads. They thrive best in rich loamy soil, and are improved considerably by a top-dressing annually of well-rotted manure. Propagation is effected by means of cuttings during summer. These are made from four to six inches in length and inserted in pots of sandy loam in a warm propagating case. As soon as rooted they are hardened off, and kept in a cold frame until spring, at which period they are transferred to a nursery border. The inexperienced propagator may have greater success if he layers a few of the lower branches out of doors in March, leaving them without disturbance for twelve months.

For forcing early in spring V. plicatum is a very desirable plant, as it never fails to give a good account of itself. It is also one of the shrubs that may be let go for years with no other pruning than the removal of a little wornout wood now and then. W. Dallimore.

Kew.

Parsley in Boxes.—During the late severe weather a few roots of parsley in pots and boxes have been a veritable boon, especially when the snow laid deep on the ground. If the cold has not injured the outdoor parsley crop, it has doubtless checked growth, and where there looks like being a shortage it will pay well to dig up and box a few roots. A deep box should be used, so as to avoid too much shortening of the tap roots. All dead and unusable foliage should be cut away, and the side roots trimmed in to half their length. The rots should then be placed a few inches apart in the box, and filled round with some old potting soil. If watered in and stood in a corner of the greenhouse, where it is warm and moist, a plentiful supply of nice new leaves will soon be forthcoming.—E. J. K.

THE MOUNTAIN KNAPWEED.

Although one of the oldest of the occupants of the herbaceous border, the Mountain Knapweed or large cornflower (Centaurea montana) is by no means the least attractive or interesting. Growing to a height of about 2ft., the species and its varieties possess so vigorous a habit that a strong plant will form a specimen three or four feet in diameter in the course of two or three years. The comparatively short period in which a large and most effective specimen can be obtained is a great advantage where the border is spacious and bold groups desirable; it is somewhat of a drawback in the case of borders that are of limited area. It may be desirable to devote the space which borders of the latter class afford to subjects of more moderate growth; and when the Mountain Knapweed is given a place in them care must be taken to so restrict the growth as to prevent injury being done to less vigorous neighbours. To state the case generally, Centaurea montana and its varieties present an attractive appearance both in large and small borders, but they are more suitable for the former than the latter.

WHITE MOUNTAIN KNAPWEED (CENTAUREA MONTANA ALBA.)

The flowers are produced on stout stems of the height mentioned above, and the flower heads of healthy plants have a diameter of about three inches when the ray florets are expanded, as shown in the accompanying illustration of the white form. The colour of the flowers of the type are rich blue, and those of the varieties rosea and alba are rose-pink and white respectively. The best effect is perhaps produced by so arranging the several forms as to have specimens or groups of distinct colours; but as the colours harmonise there is no objection to their being intermixed. As they thrive in any ordinary garden soil there is no occasion to specially prepare the borders for them, and owing to their vigorous growth they require much less manurial matter than do the majority of hardy perennials. It is a good rule not to apply manure in the form of top-dressings or otherwise until it is seen that it is really necessary. Planting may be successfully done at almost any time between October and March, and the present is as good a time as any for lifting, dividing, and replanting, but there should not be any great delay.

O. P. Q.

Border Carnations that have been wintered in cold frames may now be planted out on well-prepared, but not freshly manured ground. On cold, heavy soils wood ashes, mortar rubbish, and leaf-soil may with advantage be given. Plant with a trowel, make the soil firm all round, and protect from damage by birds. Carnations planted in autumn should now be again examined, making the soil firm, and filling up the blanks.—E. F. Hazelton, Knowsley Gardens.

CARROTS ALL THE YEAR ROUND.

To secure an unbroken supply of fairly young carrots throughout the year at least four sowings are necessary. The first must be made in January on a specially prepared hotbed, under a pit or frame; another early in March outside. The usual maincrop one, and another to carry the supply through the winter. The forced crop will by this date be well advanced and soon provide small, but appreciated roots for the table.

What I wish to more specially allude to now are the three outside crops, it being the season when attention has to be given in the preparation of the soil and sowing of the two first. For the earliest sowing a deeply-dug, well-manured, and sheltered south border should be selected, to encourage the plants to grow and mature as rapidly as possible. The early French Shorthorn varieties are much to be preferred for this purpose, as, in a suitable position and a genial spring, they will produce useable roots in a surprisingly short time—in March. After feeling convinced that the soil is in suitable condition, draw out drills from north to south at twelve inches apart and about one inch deep; sow the seed evenly and more thickly than is usual for the main crop. Should the soil be hard or lumpy cover the seed over with sifted soil from the potting shed or refuse heap. When the young plants can be seen in the rows ply the Dutch hoe between them to aerate the soil as much as possible, and in every way encourage growth. At the highest portion of the border the first and largest roots will be found, and if these are carefully sorted out without injury to the lesser ones the plot will produce carrots over a long period.

The beginning of April will be a good time for the maincrop sowing. As this is an important crop there are several points that should be born in mind. Wireworm is often a dreaded enemy, and to keep it at bay the soil of the beds should be carefully considered. An ideal soil is one that is rather deep, open, and inclining to a sandy nature. A dry day is essential for preparing the soil for the seed, it can then be readily worked down finely with the fork and rake. This point cannot be too strongly impressed on beginners, as germination is never satisfactory and growth always sickly when seeds are sown while the ground is wet and sticky. At the time of preparing the seed bed a light dressing of soot should be stirred in. Some people sow in rows at twelve inches apart, but I prefer three inches wider to allow full leaf development.

The choice of variety is great. For all round purposes the Intermediate varieties that our leading firms offer are the best for the main sowing, and are to be preferred to the longer kinds, which often become broken. After the young plants have appeared above ground, and are about an inch high, a light dressing of nitrate of soda on a damp or dewy morning, about once a fortnight, will promote a desirable and healthy growth, and materially assist in warding off insect attacks. Green-fly is liable to show itself on the foliage, but this is not serious, as it can be easily dealt with by damping the leaves over with an insecticide. As with earlier crops, keep the surface of the soil frequently stirred by hoeing, and thin the plants gradually to at least eight inches apart. Remove all weeds as they show themselves.

If the land has been deeply dug it is not often that much watering is required crop, but if the plants are seen during exceptional drought a thorough soaking will be necessary. Should be required for exhibition frelight dressings of artificial manures, watered in, will help to swell up the large dimensions.

The late crop will require a border, and has carried an early crop of potaafford an excellent site, and the in good condition to receive the The French Shorthorn variety is this sowing. The plants will not much thinning, and the roots may and drawn as in the case of crop. By leaving the roots in through the winter, and giving protection during frosty weather, a of tender young carrots will be proil the early forced ones are ready.

C. Flack.

mondely Castle Gardens.

THE WILD GARDEN—II.

Many bulbs are well adapted for naturalising in the open ground. Of these the most effective and the most largely used is the narcissus; in fact, in many cases, the attempt at wild gardening begins and ends with the planting of these bulbs.

Narcissi should never be set out in lines, circles, squares, or in little clumps at equal distances apart. Such grouping invariably destroys the natural effect which it should be the aim to produce. The flowers should appear as informal drifts of colour on the grass, massed towards the centre of the group, and growing more scattered at the edges, with here and there an outlying colony distant a pace or two from the main body. Groups should always be composed of a single variety, and should be set at such distances apart that each forms a picture by itself. Mixed collections should never be planted, since they exhibit such diversity in colour and height as to effectually dispel the sense of repose that should ever invest the wild garden. Groups of early and late-flowering varieties may be planted close to one another without producing an unpleasing impression, as the blossoms of the former will have withered before the latter have commenced to expand. Beautiful pictures may be provided by planting narcissi of distinct varieties by the thousand in meadows, parks, orchards, and open woodland glades.

The great merit of spring-flowering bulbs is that they bloom before the grass commences to grow and the foliage is withered before the season of haymaking arrives, so that they may be planted in fields laid down to grass without interfering with the annual mowing. The wood anemone spangles many of our copses with its silver-white blossoms in the springtide of the year, and there are others of the family that may be naturalised with the most charming results. The blue Anemone apennina soon makes itself at home, and spreads rapidly in almost any situation, creating a delightful picture, with its cloud of azure thrown into relief by its green setting. The Greek A. blanda is another beautiful flower, ranging in colour from blue to purple and almost white. It is not such a vigorous grower as A. apennina, and so should not be planted among coarse herbage, as that species may be with every prospect of success, but relegated to some gently-sloping bank covered with fine grass, where it will for years afford a pleasing sight when in flower. The scarlet A. fulgens has been tried with fair success in the grass in some places, but is not to be relied on as are the other species mentioned.

The Dutch crocuses, in their hues of yellow, purple, and white, are excellent for planting beneath deciduous trees, where in the early spring they furnish a glorious display with spreading sheets of rich colour, while the autumn-flowering C. speciosus is charming on grassy banks. The chionodoxas and scillas are lovely little blue spring-flowering plants that adapt themselves readily to naturalisation. Of the former, C. sardensis, deep blue with a white eye, is the most effective for massing, and C. Luciliæ, with larger blue and white flowers, is also good.

Our native wild hyacinth, or "bluebell," which, in the late spring, veils the woodland glades with the azure of the sky, is known to all, and other species of the family, such as S. hispanica and S. italica, with the dwarfer-growing S. bifolia and S. sibirica, as well as their white varieties, will be found useful on banks. The muscaris, or grape hyacinths, are another attractive race, of which M. conicum Heavenly Blue, very rich in colour, is one of the best, and is very beautiful when spreading a sheet of deepest blue over a gentle slope.

Several of the cyclamen family are par-

A SUCCESSFUL EXAMPLE OF NATURALISED DAFFODILS IN A WEST COUNTRY GARDEN.

Hamamelis mollis.—The various of Hamamelis are deservedly popular their flowers are exceedingly and borne either in autumn, H. virginica, or from Christmas until of January. Several of them are by reason of the twisted, spiderywhich stamp them as distinct The species under notice introduction than the fails to surpass the rest in beauty. It is of Chinese is stated to attain a height of native habitat. Under cultivait appears more inclined a large bush, rather than great height. The leaves are and pubescent, and quite distinct any other species, while the from those of other sorts by golden petals straight, except hooked, whilst in the other species they are twisted. It rich loamy soil, and starts best when an addition of leafis made to the compost.—W.

ticularly good for naturalising. C. coum, with its varieties Atkinsi and ibericum, which are often in bloom with the snowdrops, are best planted on sheltered banks, where they will spread rapidly and display their lovely blossoms, ranging in tint from crimson to white. C. neapolitanum, often known as C. hederæfolium, which flowers in September, and whose beautifully marbled leaves are borne through the entire winter, is most valuable for carpeting the surface beneath trees, even growing well under the dense shade of evergreens. In Cornwall it may be seen in the best of health beneath large specimens of Pinus insignis, covering the ground from the trunk to the outer branches with its handsome foliage.

The Winter Aconite, Eranthis hyemalis, must on no account be overlooked, since it makes a charming picture when naturalised by the thousand beneath deciduous trees, where its cloud of bright gold shines afar. Of the fritillarias the Crown Imperial, F. imperialis, with drooping yellow and orange-red bells, looks well in the open spaces of woods, and the Snake's-head Fritilliary, F. meleagris, with its white variety, is lovely in damp meadows.

Many species of lilies may be planted with every prospect of success in open spaces in the woodland, where they will create a charming feature when in flower, and will benefit by the shelter and partial shade afforded by the trees. No more noble picture can be imagined than a large group of the stately lily of the Himalayas, L. giganteum, with a dozen or more towering stems, ten feet and over in height, set with the long white trumpets, which exhale a vanilla-like fragrance. On the banks of streams, or in ground through which moisture from a higher level percolates, the swamp lilies, L. superbum, L. canadense, and L. pardalinum, should flourish if planted in sandy leaf-mould, while L. candidum, L. Henryi, L. martagon, L. chalcedonicum, L. croceum, L. pyrenaicum, L. Szovitzianum, and L. umbellatum should thrive in the opener parts.

In conclusion, mention must be made of the snowdrop. There are few more beautiful sights than that afforded by countless thousands of the Fair Maid of February blossoming chastely in grassy glades and in the open woodland. Where they succeed they will increase rapidly by self-sown seed, and create a delightful picture while winter is still with us.

S. W. Fitzherbert.

Coronilla glauca. — Introduced from Southern Europe in 1722, this coronilla was much better known to the old-time gardeners than to those of the present day. It was at one time grown as a market plant, but was superseded by Cytisus racemosus, which is now cultivated in such large numbers. In the coronilla the leaves consist of from five to seven leaflets, quite smooth, and of a pleasing glaucous green tint, somewhat the same shade of colour as occurs in the leaves of the common rue. The flowers are borne in rounded clusters often throughout the winter and spring months, and are of a clear yellow colour. Compared with the cytisus, this coronilla is more particular in its cultural requirements, as it quickly resents an excess of water at the roots, and at the same time they must not be allowed to become dry. Ordinary greenhouse treatment suits it well, and it may be stood out of doors during the summer months. For the embellishment of the conservatory large bushy plants may be grown in pots or tubs, and in this way they yield a wealth of blossom. There is a form with variegated leaves which has been grown for at least forty years. Coronilla glauca forms the subject of tab. 13 of the "Botanical Magazine."—W. T.

MONTBRETIAS.

It would be very difficult to find more charming or more useful border flowers for contributing to the charms of the flower garden during the months of August, September, and October than the montbretias. For massing in beds, where a bright group is required in the months stated, the plants can be used with telling effect in the flower garden. An abundance of flowers, which last a long time in perfection, rapid growth, and a quick increase, as well as adaptability to house decoration in a cut state, render them so useful as to justify their steadily increasing popularity.

Originally montbretias came from the Cape of Good Hope, and although there are a few older kinds, Montbretia Pottsi, introduced in 1877, marked the commencement of growing these flowers in the open border. Although rich in colour, this species is too niggardly in the quantity of its flowers to be of much value in an up-to-date collection, and has not, in consequence, been largely planted of late. During the last ten years great advances have been made in the raising of new and improved forms of montbretias, with the result that numerous desirable varieties are available. Mr. G. Davison, gardener to Major Petre, Westwick Hall, in Norfolk, has devoted much attention to montbretias, and as the result of his well-directed efforts has raised a large number of extremely beautiful varieties.

Cultivation and Propagation.

The culture of montbretias is comparatively easy, for all that is required is an open space, and deeply dug, well enriched soil. That of a sandy character is preferable, and where the soil is heavy, cold, and retentive of moisture it should, if practicable, be replaced with a mixture of a porous nature, such, for example, as leaf mould, sand, turfy loam, and wood ashes, adding a little peat if possible. When once montbretias are allowed to grow into a mass, where light and air cannot reach the stems, the results are very poor in every way, as compared with those obtained by a proper system of cultivation. Ample space is important, and in making a new clump, which should be done every second year when they are growing in the border, the plants should have six inches of clear space. Plenty of moisture during the growing season is an advantage, and much benefit is derived from liberal mulchings of horse manure and half-decayed leaves. The bulbs may be planted at any time from November to March.

Propagation is effected in two ways, namely, by seed and division. The former is interesting, especially when an endeavour is made to raise new and improved varieties by cross-fertilisation. The seed should be sown as soon as ripe in sandy soil, in gentle heat. When the seedlings are large enough to handle they are pricked out in boxes and kept growing all the winter, consequently they are strong enough in May to be put out in a properly prepared position. Some of the strongest plants will flower in August, and the remainder in the year following. Although these montbretias are hardy with some surface protection, it is wise to take up the seedlings and winter them in boxes or frames in sandy soil. Early in February divide them singly, planting again in frames or boxes. By the middle of April they will be strong, with abundance of roots, and with care can be lifted and transplanted to where they are to bloom without any check.

When increasing the stock by division sort the bulbs into two sizes, and as they commence to grow in the spring the stolons, if taken off and planted for a time in boxes, grow away vigorously, and make even better plants than those produced from the bulbs.

Choice Varieties.

The following is a selection of the newer and more desirable varieties, and these, with the exception of some few sorts which I will name, are all that are necessary to grow. M. crocosmæflora, rich orange-yellow tinted with red, is a very popular, cheap, and effective variety, much used for cutting. Germania is vigorous in growth, often attaining a height of three feet, and producing graceful, free-branching flower spikes bearing large, widely expanded flowers two or three inches across. The colour is a rich glowing orange-scarlet with a red throat. M. Messidor is a distinct new seedling of French origin; the growth is tall, with much-branching spikes, colour, maple yellow passing to pale yellow; a capital variety in every way. The following are hybrids raised by Mr. Davison:

George Davison was raised from Golden Sheaf, an imported variety, and it is the seed parent of all the hybrids. The blossoms are pale orange-yellow, tinted deeper externally, and three inches across. In growth it is vigorous, being from three feet to four feet high, and much branched.

Hereward has recurved flowers, as in a martagon lily, quite three inches in diameter, very freely borne on tall erect stems. In colour they are pale orange; quite late in flowering, thus they are most valuable.

King Edmund grows from three feet to four feet high, is much branched, bearing close spikes of rich golden-yellow flowers, deeper tinted externally, and marked with six to eight chocolate spots at the throat. The flowers are quite three inches in diameter, the broad petals expanding to the fullest extent, the tips being held quite erect, thus showing the centre of each flower.

Lord Nelson is the richest in colour of all montbretias; the flowers are orange-scarlet and crimson externally, with a yellow centre. The stems are dark purple, which adds to its beauty.

Lady Hamilton has well-formed flowers, which are yellow, with a suffusion of rosy-orange in the centre when opening, changing with age to apricot. This is an erect-growing variety three and a-half feet high.

Prometheus is much the finest of all montbretias, quite a giant in growth and size of flower, reaching four feet high. The blooms are three and a-half inches in diameter. In colour they are rich orange, flushed and stained with crimson.

St. Botolph has the largest flowers of any yellow montbretia, and these are suffused with a ruddy orange exterior. The blossoms are three inches in diameter, freely produced on branching stems four feet high.

Westwick grows three feet high; in colour it is quite distinct, rich orange-scarlet flushed with deep red externally; around the clear buff-yellow centre there is a rich crimson zone, with a few markings of flame-like colouring at the throat.

In addition to the above Mr. Davison has another new variety, named Nov which is of remarkable quality. It grows to a height of three feet six inches, and is much branched. The number of branches it produces is remarkable, and what a mass of flowers is obtained from even one strong plant, which will, when established, push up three or four stems. The large flowers are rich yellow, with a deep orange-red exterior.

E. Molyneux.

LATE DESSERT PEARS.

There is considerable variety even among late dessert pears, although the quality of many is only second-rate, at least in some localities, though this is probably due somewhat to soil influence, as it seems difficult to otherwise account for the variation shown by many late varieties grown in different parts of the country.

A variety often seen in Devonshire is Huyshe's Victoria, one of a trio raised by the Rev. John Huyshe, of Clysthydon. This one is the best of the three, and is a useful free-bearing variety of excellent flavour, especially when grown on a wall. Its season, according to position, is December and January. Beurre Sterckmans is a large late pear of very good quality, and fine fruits of the variety can be obtained from cordon trees.

Le Lectier is a variety of more recent introduction, and is an exceptionally vigorous grower on the quince. It is a fairly large pear, but can scarcely be described as handsome, as it is generally a straw-yellow in colour, without any russet or warm tints. With us it can only be classed as second-rate in quality. Another large late-keeping pear is Marie Benoist, apparently a prolific bearer, but though it has the merit of size, it is only second-rate in quality, and therefore disappointing. Among late pears it appears to be only the small and medium-sized varieties that can [illegible] be described as delicious.

Knight's Monarch is generally a heavy cropper, the fruit growing in clusters that [illegible] thin themselves. Well-grown fruits can sometimes be obtained, good in quality and appearance, but the variety is not one of which many trees are required. We have had it good, but more often good-for-nothing. Nouvelle Fulvie is an excellent pear in quality, and of handsome appearance when the fruits are exposed to the sun, a first-rate pear, and good as a cordon. President Barabé is a delicious variety, melting and juicy. It is a prolific bearer, and should be in every collection. The fruits are of medium size. Olivier de Serres is one of the best-flavoured pears grown; it is not by any means a strong grower on the quince. The fruits should be thinned freely to increase their size, otherwise they come rather small.

Two late pears, which vary considerably in different soils, are Winter Nelis and Glou Morceau. The first-named does not make sufficient growth with us to produce much of a crop, and is far from satisfactory, indeed scarcely worth growing, and Glou Morceau is much the same in this respect here, yet some two miles from us I have seen fine fruits of both these pears, grown in a light and warm soil, which evidently is what these varieties require.

Duchesse de Bordeaux is very good in quality, and evidently a pear that requires good cultivation to bring it to perfection. The medium-size fruits should be well thinned. Easter Beurre is not so good as usual this season. It grows to a fair size if thinning is carried out. A delicious pear, where it is satisfactory, is the Forelle, or Trout pear. Its handsome appearance when grown in a warm position would commend it, and this, with the good quality of the fruits, should give it a place in every collection. Chaumontel is only worth growing for the sake of variety, for it is surpassed in flavour and cropping by other kinds.

Josephine de Malines is much better grown against a wall than in the open borders. The fruits are of suitable size for dessert, and if exposed to the sun they assume a handsome appearance. Passe Crassane is another very good late pear which should be planted where variety is required, and variety is more necessary for private supplies than would be the case for market. In gardens it is not the quantity of one variety that is needed so much as a constant supply as long and late in the season as possible.

There are other varieties not enumerated here which may be grown, but those given comprise the best in their season. The past year was not a good one for late pears, as the fruits have lacked colour, and the flavour has not been altogether first-rate. Many have not kept well, as there was too much moisture in the fruits and lack of saccharine matter, want of sunshine being doubtless responsible for this deficiency.

T. H. Slade.

Poltimore Gardens.

CYPRIPEDIUM FAIRRIEANUM

There is no need to again relate how for long years the orchid collections of the country were without the quaint, yet pretty, Cypripedium Fairrieanum, or how collectors hunted for the species, or even how at last the long-lost plant was discovered in quantity. It will suffice now to say that the species is plentiful in cultivation, and no collection need be without it. A firm that has been particularly successful with these, as with all other cypripediums, indeed with all kinds of plants it cultivates—is the Cheltenham firm of Messrs. Cypher and Sons. Last October the Messrs. Cypher exhibited a fine batch of C. Fairrieanum at the Royal Horticultural Hall, displaying about a hundred flowers. This, however, was only part of a batch that flowered finely at Cheltenham, and it is the whole batch of this little orchid that is figured herewith. In the picture there are no fewer than two hundred blooms, the largest number, no doubt, that has ever yet been seen together under cultivation. The species shows some amount of variation, and it is being used largely for hybridising purposes. Remembering the success that has attended the use of C. Fairrieanum and its progeny as parents, there is an excellent promise for future successes.

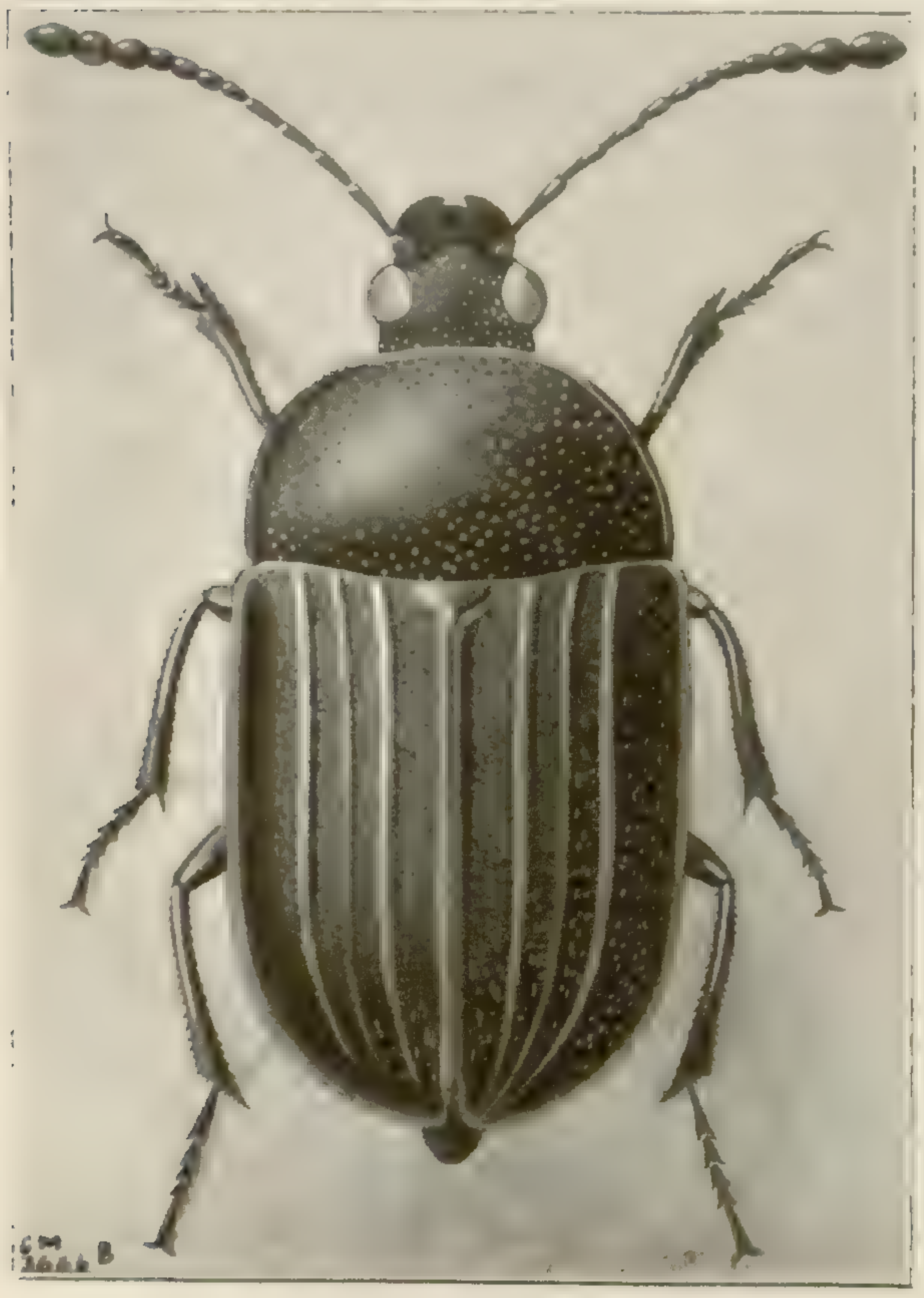
FINE GROUP OF CYPRIPEDIUM FAIRRIEANUM AT MESSRS. CYPHER AND SONS' NURSERIES, CHELTENHAM.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in Easily Grown Hardy Perennials, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

BEETLE REVELATIONS.

Gardeners suffer more from the depredations of beetles and their grubs than they are in the habit of suspecting, and more than one reason is accountable for this partial oversight. I do not, of course, infer that they are in the dark concerning their destructive attributes, but my meaning is that a far greater extent of damage may be traced to this kind of insect than believed, which is frequently considered to be the pernicious work of other creatures, especially slugs, the latter often wrongly being regarded as the most intolerable object of life it is possible to encounter. As an interlude it may be said that some species of slugs are strictly carnivorous, feeding exclusively on their herbivorous companions, worms and insects, and should therefore be encouraged.

It is customary for beetles to fly principally during the night time, so that unless they are encountered by chance, or deliberately sought for, it is seldom that they are seen. I daresay that an entomologist, with his knowledge of these and other facts, and with his methods of procedure in regard to capture, could surprise a gardener by producing an abundance of these creatures even in areas where they are supposed to be scarce. Over eighty thousand different species have been described. Note that, 80,000, each different from every other one; and yet hundreds more of various kinds are believed to have escaped the hunters after truth.



THE BEET BEETLE (SILPHA ATRATA)
Much magnified.

Out of this enormous number I select a mere half-dozen for description; but even these six are capable of inflicting immense loss when their presence and progress is unheeded or unchecked. The range in sizes of beetles is very noticeable, graduating from tiny objects, which could be pushed through fairly large pinholes, to huge things which, with their legs outstretched, can cover a human hand. Observe the magnified portraits which I have carefully drawn from life. It will be seen that as objects full of elegance and ornamental detail they have a charm and attraction, although they are pests.

Beet Beetle.

It is lucky for the gardener and other cultivators that the majority of beetles are carnivorous, feeding either on living insects and small forms of life, or else on dead animal matter, both in the winged and grub states. The beet beetle belongs to this section, but only during its mature existence does it indulge in flesh diets. This specimen is quite a giant besides the others in this set, being two-thirds of an inch long, polished black, and with a series of ribs along the wing covers.

Sometimes it will favour vegetation, but only when the latter is decaying. This point bears an importance for us, and should be noticed. Its grubs play havoc with beet and mangels, feeding on them chiefly at night time, and as the leaves decay in consequence of attack the winged beetles may be induced to remain and feed on the rotting vegetation, especially if animal matter is scarce, and thus mislead the onlookers into the assumption that they are the direct, instead of the indirect, cause of the mischief. This fact is especially regrettable, because these beetles are known to be great feeders on slugs and caterpillars, and would thus become a source of benefit sometimes, instead of the reverse. Gardeners who do not grow beet should remember these details, and befriend the beetle, or not, as conscience concerning their neighbours dictates. Other growers in the vicinity who favour beet might suffer, but—well, I am not moralising.

The grubs run about on six legs, and have a strange resemblance to woodlice.

The paraffin and soap emulsion could be employed for the eradication of the grubs, but the most valuable precaution will be to avoid the accumulation of foul-smelling manures, especially those derived from the slaughter house, which are liable to coax these beetles in large numbers to the spot.

They undergo their chrysalis transformation in the soil, and come forth perfect during the autumn, hibernating throughout the winter, after which they lay their eggs in the spring.

Clay-coloured Weevil.

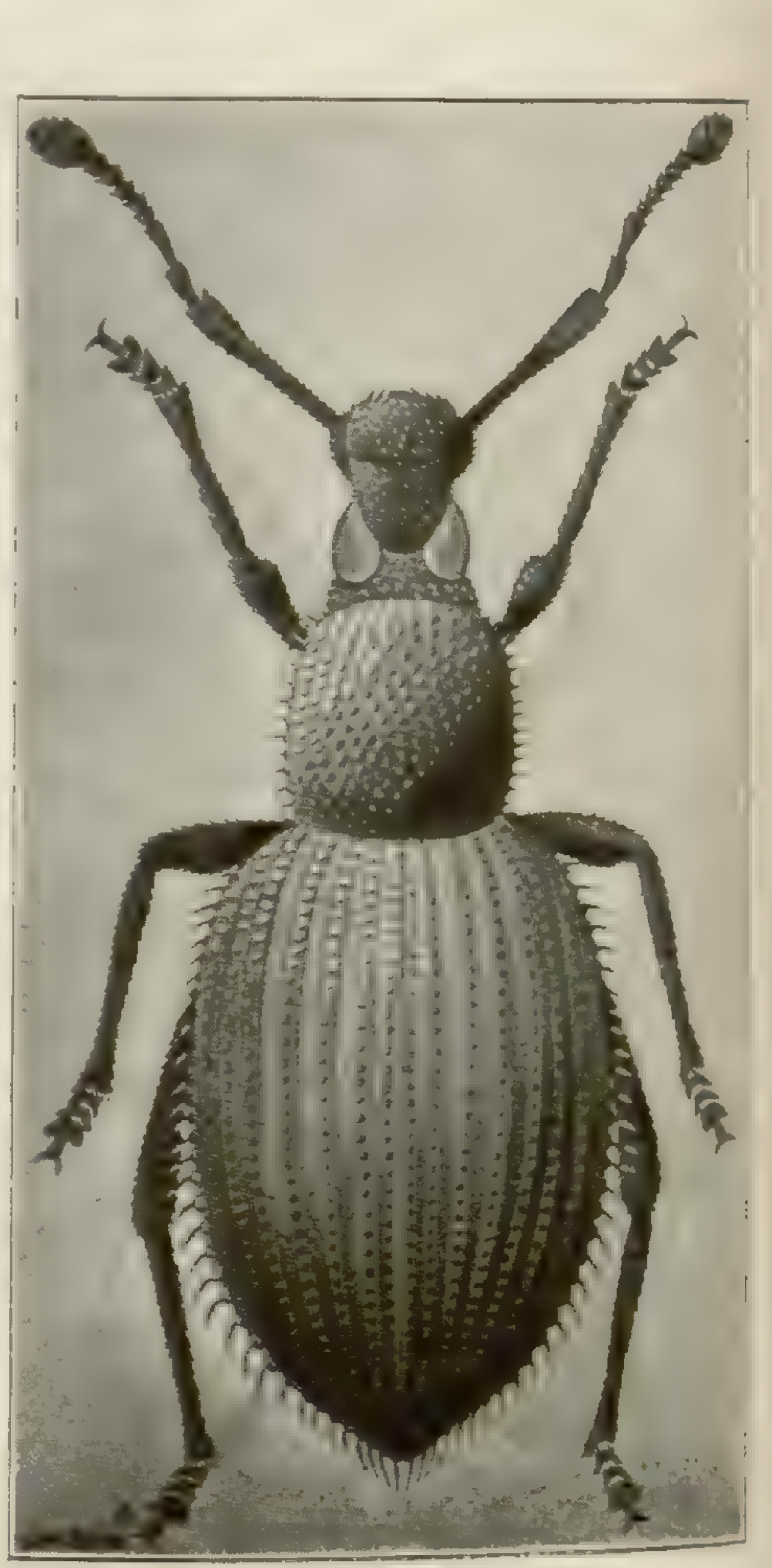
The clay-coloured weevil and its near allies are among the very worst foes that the gardener has to contend with. The first is about a quarter or a third of an inch long, and looks like a tiny ball of clay when it is on the rough ground, although magnification will bring out many picturesque details. These weevils are adepts at feigning death, so that the reader must be sceptical concerning appearances, the more so because of the amazing fact that they are so tenacious of life that little short of boiling water will destroy them. Even pungent, penetrating turpentine will only cause them to become fidgety for awhile. Powerful odours and extremes of climate are alike ignored by them, so that fumes in greenhouses cannot eradicate them effectually.

They feed on nearly everything, but favour fruit trees, and seem especially in love with vines. It is not the fruit or flowers, however, which they seek, but the tender leaves and juicy shoots, which, by being nibbled curiously in a circular manner, are frequently nearly divided into detachable pieces, thus preventing the due flow of the rich sap to sustain the forming fruit.

Roses, plums, pears, raspberries, strawberries, peaches, peas, beans, turnips, ferns, and flowers—all are alike liable to be indiscriminately attacked by the clay-coloured weevil and its mates.

While the perfect beetles are so badly industrious among the open portions of the vegetation, their grubs are busy at the roots, so that together they may cause disaster. These grubs are legless, creamy-white, and covered with brownish tufts of hairs. They go to a depth of from two to four inches in the ground to pass through their transformations.

The beetles become very active at night, having probably spent their time elsewhere during the day. Therefore, when the su has set the most favourable opportuniti for their capture are presented. All wearying trouble of the kind involved would b amply paid by results. Tarred cloths an papers should be placed in convenient situations, and branches, etc., steadily shaken, causing them to fall. By suddenly introducing bright lights into their haunts they are startled, and instinctively fall into any traps prepared, such as open umbrellas, whence they can be quickly transferred to



THE CLAY COLOURED WEEVIL
(OTIORHYNCHUS PICIPES.)
Much magnified.

pots of carbolic acid or some other destru tive medium. It would be preferable "light up" in their vicinity instead carrying a sheltered lamp or lantern fr the house, which might gradually wa them. A policeman's bull's-eye lan suddenly turned on to their abode wo work wonders in shifting them. They a among the very few beetles that are win-less, so that there is no chance of th flying away when frightened.

Soot, lime, or salt should be worked the grub-infested soil, but if an atta happens to be exceptionally severe no but the complete clearing out and burnin of it all would be of any avail, to be followed by replanting in properly prepared soil.

As the beetles conceal themselves i various odd crannies during daylight, th cracks in garden walls, vineries, and fe should be either well inspected for sepa capture of the insects, or be plugged u

Summer is, of course, the time in w to find their eggs.

JAMES SCOT

(To be continued.)

SUMMER BEDDING.

It would be well before the season is too far advanced to decide definitely what kind of plants should occupy the flower beds during the summer months, and how they should be arranged, so that the quantity required may be prepared accordingly.

There are not many gardens where tender plants alone are employed, for though there is a great variety of such useful subjects, they take up far too much room during the winter months for the amount of glass available for their protection. But there are many hardy and half-hardy kinds that are quite as useful, and these may be used to advantage, providing the stock is increased to the requisite number.

Lobelia cardinalis.

There are but few plants that make a greater display during the latter part of the summer than Lobelia cardinalis. Though this is not hardy in all places, stock plants may be wintered in a cold frame, and as soon as they commence to grow, which they will do in most places by this time of the year, they should be pulled to pieces, and each piece planted singly in light rich soil either in boxes or in a cold pit or frame, where, if treated liberally, they will make fine sturdy plants that will lift with a good ball of earth and roots by the time the flower beds are ready for them. During the summer months an abundance of moisture and an open situation suits them admirably, but to be effective they should be planted in bold groups or used as dot plants about two feet apart in large beds.

Calceolaria amplexicaulis.

Another useful plant is Calceolaria amplexicaulis, as its clear canary-yellow flowers are very attractive. Nothing could be more useful in its way than this, and few plants are more easily propagated. Cuttings inserted in a cold frame in the autumn will make fine plants by the following spring. Like the lobelia they require a rich, moist soil, and then, given liberal treatment through the summer months, they are sure to give satisfaction. The reason so many fail with this plant is because they do not transplant early enough, or allow sufficient room. They should be transplanted as soon as well rooted, which will be in February, if the cuttings were inserted in a cold frame in the autumn. If planted in light, rich soil, about six inches apart, where they can be afforded the protection of a cold frame until re-established, they will make fine sturdy stuff by the time it is safe to transfer them to the open ground. To allow them to become the least drawn in their cutting beds is a great mistake, and one of the chief sources of failure. In good soil these plants will grow a couple of feet through by the autumn, so they ought to be allowed space accordingly.

Blue Salvias.

There are but very few blue flowers that can approach Salvia patens, and as a stock is so easily grown, taking up but little room in winter, those whose glass accommodation is limited may grow it to perfection. The old roots, taken up in the autumn and stored away like the dahlia, will give an ample supply of cuttings if placed in gentle heat at the present time. These cuttings will make strong plants by the time it is safe to plant them out. There is another kind, known as S. Pitcheri, which, with us, grows to the height of four feet or more, but does not flower until late in the autumn. For several years this has been left out through the winter and has grown up quite strong again each succeeding summer.

Cannas.

The improvement in cannas during recent years has caused them to become very popular for summer bedding. The roots may be stored away during the winter in a very small space. The rich bronzy foliage of some of the varieties, too, is very telling, especially when seen in bold masses. As is well known these plants are readily increased by dividing the roots in spring and growing them in a warm house until it is safe to transfer them to the flower beds. They like rich soil, with an abundant supply of moisture during the hot weather in summer; given these, and strong healthy plants when put out, they will not fail to give satisfaction.

Swainsonias.

Swainsonias, both white and purple, make grand subjects for summer bedding. They may be either used as dot plants amongst dwarfer things, in groups by themselves, or kept pegged down so as to form a carpet for other and taller plants. If employed in this latter manner it is preferable to use young plants rooted in a cold frame in the autumn in the same way as recommended for calceolarias, or in heat early in spring. Either method will answer equally well, though the former gives the least trouble. Plants may also be raised from seed sown early in spring, but seedlings do not flower so soon as plants raised from cuttings. The plants, when rooted, should be potted, and grown freely until it is safe to transfer them to the open ground. Old plants may be wintered in cold pits or in a house where the frost can be excluded. In some districts the swainsonias will withstand the severity of our winters, and though cut down to the ground by the frost will grow up again strongly the following spring, and make growths from ten to twelve feet in length by the following autumn. It is, however, the safest plan to winter the old plants in cold pits, when, if more are required, these may be used to propagate from.

Variegated Grasses.

We have still another class of very useful plants, such as the variegated Eulalia japonica, E. zebrina, etc. These are readily increased by divisions, and if potted up and grown in gentle heat they will make useful plants for mixing with other subjects, as their light, elegant foliage makes them very attractive. Dactylis glomerata elegantissima should also be propagated now by dividing old plants and planting the divisions in a cold frame until established, they can then be transferred to the flower beds at any time when required.

H. C. Prinsep.

Buxted Park Gardens.

Pentstemons.—The value of these for a long-continued display of their bright flowers is becoming more and more appreciated, though still not so fully as their merits deserve. Good forms raised from seed can be selected and propagated annually in the same way as calceolarias, but where distinct colours are at once desired now is a good time to order named varieties. Numerous charming shades are procurable, and a few good varieties are Crimson Gem, George Horne, Phryne, General White, Ninon de l'Enclos, Talma, Daphne, Edwin Beckett, John Jennings, Lord Lister, and others. Newbury Gem and White Newbury Gem, though not bearing such large flowers, are even more continuous bloomers, and so extremely elegant that they should be included.—E. F. Hazelton. Knowsley Gardens.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

WINTER FLOWERING CYPRIPEDIUMS.—The remarkable displays of cypripediums that have been made at the Royal Horticultural Society's meetings during the past winter, have no doubt added to the popularity of the lady's slippers. I had also opportunities of seeing some displays at the Manchester and North of England Orchid Society's meetings, and the enthusiasm shown among amateurs in the Manchester district for these most desirable plants has undoubtedly given the society a renewed lease of vitality, thus illustrating a useful fact, that, in the winter-flowering cypripediums, we have subjects that can be successfully cultivated in a district where plant life in general exists under unfavourable atmospheric conditions.

RENEWAL OF COMPOST.—The present is a season at which repotting may be attended to. Such species as C. Fairrieanum, C. Charlesworthi, C. Spicerianum, and the numerous sections of C. insigne, do not require annual repotting, so that providing there is ample root room, or the plants have not outgrown their pots, they should be disturbed as little as possible. All dead and decaying leaves should be removed from the base of the growths, which will permit perfect freedom for the new growths and roots when they make their appearance, and any decomposing moss or potting material should be removed and fresh compost added. There are many hybrid winter-flowering cypripediums that resent being disturbed, particularly those which have C. Fairrieanum as one parent. I have frequently remarked that the best flowers of this section are generally produced on plants that have not been repotted the previous year. Large specimen plants, where potting is required, should be carefully turned out of their pots, so that the least possible damage may be done to the roots. Where roots have become firmly attached to the sides of the pots, they will be found much more easily removed if they have a thorough wetting previously.

REPOTTING.—When the plants are turned out of the pots carefully remove all potting compost and cut away dead and useless roots. Plants that have become hollow in the centre should be separated and the growths placed so as to make up any deficiency in this respect. The pots used should be of liberal size for robust rooting kinds, thus allowing sufficient rooting space to carry the plants for a season or two without repotting. The pots should be filled to one-third their depth with clean drainage, or, where bracken roots are used, the pots may be filled to one-half their depth with the roots chopped to convenient size. The potting compost we use is of one part turfy loam, the remaining two parts consisting of fibrous peat, chopped sphagnum moss, and sufficient coarse sand and finely-broken crocks to render the whole porous. For smoky districts less loam should be used in the potting compost. The light is so poor during the winter months that it is a very difficult matter to prevent the plants remaining wet for too long a period, where a heavy potting compost is used. After potting give rain water through a moderately coarse rose. All freshly-potted plants must be carefully shaded from strong light and the atmsophere should be kept humid.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

ACALYPHAS may now be propagated easily from cuttings of young growths, or the stems may be cut into eyes. They succeed best if placed singly in small 60-sized pots filled with a sandy compost.

Plunge the pots in a bottom heat of 70 deg.; keep close, moist, and well shaded until root action has commenced. Before removing the plants from the propagating case gradually harden them by carefully admitting light and air. The plants should at all times be accorded a position near the glass, but if necessary give them shade during the hottest part of the day. Plants raised early in spring and grown on in five-inch or six-inch pots make valuable decorative subjects for autumn use. If larger specimens are desired take out the points of the plants as soon as rooted and continue pinching out the growths until the required size is secured. A careful look-out must be kept for red spider, which appears to be partial to acalyphas, and if allowed to remain on the foliage it will quickly disfigure them.

ALOCASIAS.—Where ornamental foliage plants are appreciated the alocasias are almost indispensable; they are amongst the finest and most distinct of all our stove foliage subjects. In order to be successful with alocasias they must receive abundance of heat and atmospheric moisture; without these two essentials they do not develop their true form and character. They can be readily propagated by the removal of suckers or by division of the underground stem. The present time is a very suitable one for propagating alocasias, as old plants will require attention. Alocasias will succeed if potted in the same way as orchids. They require ample drainage, and the crowns should be packed well up above the pot rim with sphagnum and the best fibrous peat, adding a few lumps of charcoal and broken crocks. After potting the pots should be plunged in a bottom heat of 70 deg. to 75 deg. Shade at all times from the hot sun, but allow the plants to enjoy a light position. As the season advances some of the larger specimens will require larger pots. During their growing season syringe them thoroughly and sponge the leaves occasionally to keep them clean and healthy. When the pots are well filled with roots an occasional watering with weak liquid manure or clear soot water will be of great advantage.

BEGONIA GLOIRE DE LORRAINE.—Cuttings should be rooted, and for this purpose secure growths from as near the base of the plants as possible, and place them singly into small thumb pots filled with a mixture of cocoanut fibre refuse, or leaf-soil, and silver sand in equal parts. For the successful culture of this begonia the soil must not be pressed firmly about the roots. When repotting the plants care must be exercised with the roots as these are of a delicate and tender nature. The soil used for the final potting ought to be of an open and porous nature. Throughout the season the main object ought to be to keep the plants steadily growing. They succeed best, according to my own experience, when grown in a small stove where a temperature of about 60 deg. can be maintained. For general decorative use those of a pyramidal shape, tied to a central stake, are the most serviceable.

AGLAONEMAS.—These may now be easily propagated by division of the roots. They are very serviceable as an edging for the stove, and colour best when grown in small pots and regularly watered with clear soot water or weak liquid manure.

FITTONIAS are also most useful plants and of easy culture. Good plants are very soon obtained if from four to six cuttings are rooted together in small pots.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

CUCUMBERS.—With increasing light cucumbers will grow apace and should be given every encouragement to ensure early returns; as soon as the young plants get hold of the fresh soil more water may be given. If fruits are required immediately let one come on the first shoot and then stop the shoot. Cucumbers need plenty of heat and moisture and not much air; cold draughts should be avoided or mildew will appear.

FIGS IN POTS.—As the plunging material sinks renew it or fill up the bed with leaves and stable manure. Thin the fruits if there are too many for the strength of the tree. St. John's will carry more fruits than Brown Turkey or Violette Sepor. The fruits being now a good size and the pots or tubs full of roots weak liquid manure may be given. Place some strips of turf round the edge of the pots to form a deeper basin for holding water. The shoots may be stopped at the fourth or fifth leaf. At the flowering stage syringing must be reduced, especially on dull damp days; after this stage is passed the top heat may be increased and syringing should be regularly done to keep down spider.

BANANAS.—These should be tubbed or planted out, as the case may be, without delay. Some good fresh turfy loam should be selected (and this should have plenty of fibre in it), and mixed with half-inch bones, old mushroom bed manure, and a good sprinkling of soot, and plenty of lime or plaster rubble. Large, sound paraffin tubs cut down to three-quarter size make excellent receptacles for bananas; they should be charred inside before use. When tubbing leave plenty of room for water. Plants that are expected to fruit this summer should be top-dressed liberally with good turfy loam and manure. Place some zinc round the inside of the tub, about 12 inches wide, as this will leave plenty of room for water, because, through the summer too much water can hardly be given. Bananas planted out give much less trouble and better fruits are obtained; the soil in the bed can be renewed at intervals. One sucker to each plant is sufficient to retain. Suckers that were taken off those plants that fruited last season, and were put in ten-inch pots, should be ready for a good shift.

ORCHARD HOUSE.—If very bright weather occurs when pears, apples, or cherries are in bloom, it is as well to run a piece of shading over the house about midday, otherwise the flowers do not have sufficient time in which to set. Bees are excellent fertilisers and save a lot of hand work. Apricots and plums generally set well, and a damping overhead with tepid water when they are in bloom will help them. Ventilate the house at all times if possible, and before the trees come into flower they should have a good watering. Apricots are practically a failure outside in our heavy soil, but in the orchard house they always ripen off a good crop.

EARLY VINERY.—Before the vines come into flower, if the border is at all dry, give a good supply of tepid water, choosing a bright day for the watering and raising the temperature slightly. Most of the shoots will be tied down now, so remove small and badly placed bunches. The flowers should be fertilised with a soft brush, and both brush and pollen should be perfectly dry; keep the house a little drier at this stage, and admit air all the time, weather permitting. On bright mornings and all favourable occasions ventilation should keep the house sweet and the foliage a good colour; warty leaves are the outcome of bad ventilation and stuffy houses.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

PARSNIPS.—If these have not already been sown they must now receive attention. The ground should have been deeply dug, so that the roots can penetrate it easily. When the roots are required for exhibition it is most necessary, and especially so on heavy clay soils, to make holes 2ft. deep with a bar, filling them up with lighter soil such as old potting compost with a little new loam added to it. The celery ground is an ideal place for this and most root crops; allow 15 inches from hole to hole, and 18 inches between the rows. The Student and Carter's Maltese are two excellent varieties.

ONIONS form one of the most important crops and one that requires to be sown early, and for this the soil should be in a nice workable condition. If the ground intended for onions was trenched and manured some time ago it will now break down easily and make a good seed bed. If the soil is at all light it will require treading before the seed is sown and also after. Draw drills 15 inches to 18 inches apart, sow the seeds evenly, and do not cover them too deeply in the drills. In some gardens onion maggot is very troublesome, and when this is the case it is a good plan to scatter a little flowers of sulphur along each drill before the seed is put in.

VEGETABLE MARROWS are always appreciated in the dining room as early as it is possible to get them, therefore a few seeds of Moore's Cream should be sown at once, placing one seed in a three-inch pot and putting them in heat. When they have germinated they should be kept near the glass, and afterwards hardened off a little, and be planted on hillocks of loam over a half-spent hotbed, syringing them and closing the frame up with a little sun heat in the afternoon.

POTATOES IN CLAMPS.—These should now be examined, removing all diseased ones, and selecting suitable sizes for seed purposes. It is not wise to have sets too small, about 2oz. in weight is a suitable size. If these can be spread out thinly in a frost-proof shed or in boxes they will make nice strong sprouts by planting-out time. The tubers that are left for eating should be kept covered up to prevent them greening.

EARLY POTATOES.—The crops that are coming on for succession in pots and frames will want attention in the way of top-dressing or earthing up, if they have advanced seven or eight inches in growth. More air must also be given as the sun advances in power. A little sprinkling of bone-dust or basic slag given at this stage helps them on wonderfully.

PEAS.—Such varieties as Telegraph and Early Giant may now be sown, as their yield is generally superb, and they are of splendid flavour when cooked. Quite Content is a pea of exceptional size, of first-rate flavour, and most useful for the exhibition table. But it must be given plenty of room and not too rich a root run.

LEEKS.—The main sowing of these should be made either in lines or broadcast on a seed-bed. If they can occupy the same kind of site as the onions this will suit them well; but they must be transplanted early, not leaving them in the seed-bed too long, or they will become weak and stunted, and more apt to run to seed later on.

GENERAL REMARKS.—On rainy days, when the men cannot work in the garden, pea and bean sticks should be sharpened and trimmed ready for use. Large wooden labels may also be made and painted ready for the crops. Keep up a succession of French beans by making a sowing every fortnight or three weeks, according to the demand.—T. W. BIRKINSHAW, Hatley Park Gardens, Sandy.

For pretty gardens and lovely flowers read THE FLOWER GARDEN, by T. W. Sanders, F.L.S. An up-to-date work on the formation, planting and management of the garden, with description and cultivation of flowers and plants adapted for outdoor culture. Price 7s. 6d. net, by post, in box, 8s., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

CALANTHES.

Your correspondent, Mr. Mayne, of Bicton, wisely directed attention a short time since to such attractive and useful midwinter flowering subjects as Calanthe Veitchi, C. vestita rubra oculata, and C. v. lutea oculata. They are all of comparatively easy culture, and yield a wealth of choice flowers, even when growing with other subjects, as Mr. Mayne describes. It gives me great pleasure to endorse all he has written, and I should like to supplement what he has said with regard to these beautiful and meritorious orchids.

There can be no question as to their usefulness for supplying cut sprays and for decorative purposes generally in the warm conservatory and corridor, and also in the mansion. We have frequently had plants in the house during the festive season fully a fortnight (without any apparent injury to the pseudo-bulbs). When associated with ferns and other fine foliage plants their long and elegant spikes of attractive flowers are very effective. Our plants are both rested and grown suspended from the roof over the centre path of a span-roof pine stove, where the spikes have no restriction in spreading over the pines when unfolding their blooms. These, with two rows of Poinsettia pulcherrima on the back wall on either side of the path, had a warm and brilliant effect on the cold, dull days of December. The somewhat warm and dry heat of the pine house, when syringing has been discontinued, is favourable to the development of the flowers of the calanthes and the bracts of the poinsettias.

The calanthes are grown in 24-sized pots, four in each, and each bulb is allowed one spike. They have a compost consisting of fibrous loam and peat, with a little cow dung and a small quantity of chopped sphagnum, charcoal, or broken crocks to keep the whole porous. The pots are filled to about one-third of their depth with crocks. In our case we find the plants grow away better when the young growths are somewhat advanced before division and potting takes place. Very little water is required until the roots have taken to the new compost. We also find a top-dressing of moderately fresh cow dung beneficial when the spikes are in process of development, and water is entirely withheld when the spikes are nearly developed, as Mr. Mayne advised. It would be interesting to know the length of spike and number of flowers on, say the longest spike grown by Mr. Mayne, or others. I found our spikes last season both of C. Veitchi and C. vestita rubra oculata averaged 3ft. in length with thirty to forty flowers, but we have had them sometimes nearly 4ft. long, and, once only, 4ft. 6in. long, with forty to fifty flowers. Years ago the late Mr. Petch, when gardener to the late S. Mendel, Esq., of Manchester, had spikes of C. Veitchi, 6ft. in length, and bearing about fifty flowers each. I was much interested in the illustration you recently gave of a group of specimens of this hybrid grown at Buxted Park, and I am anticipating with considerable pleasure Mr. Prinsep's account of his practice.

S. Pragnell.

Broomfield Lodge Gardens, Chelmsford.

M. P. Nabonnand, the highly successful and well-known raiser of roses, has been promoted to the rank of Officer in the Order of the Merite Agricole.

THE FRANCO-BRITISH EXHIBITION.

On the occasion of a recent visit to the Franco-British Exhibition, which is creating so much interest both in this country and in France, we were much impressed by the rapidity with which advances are being made in all directions. An immense amount of work has to be accomplished before the opening in May next, but the progress that has been made since we visited the grounds in December last has been such as to suggest that little beyond a few finishing touches will be necessary on the eve of that function. Especially noticeable is the progress that has been made with the numerous palatial structures that will form so striking a feature of the exhibition, and the work of laying out the gardens. Many of the former are now rapidly approaching completion, and a much better idea can be obtained of the scope and magnitude of the exhibition than was possible two months ago. The information then available was sufficient to show that it would be comprehensive, and that the representation of the arts, sciences, and industries of Great Britain and her Colonies and Dependencies, and of France and her colonial possessions, would be of exceptional interest. But now it can be seen that the twenty or more palaces or halls provided for the display of the varied products are of vast proportion, handsome in elevation, and so arranged as to produce in combination with the numerous pavilions a striking and extremely beautiful effect. The planting of trees, the laying of turf, and other work that has been done suggests that the gardens will form an admirable setting to the handsome buildings, and be a great source of attraction to the visitors.

It is gratifying that both agriculture and horticulture should have had important positions assigned them in the comprehensive scheme formulated by the exhibition authorities. The group devoted to horticulture, arboriculture, and forestry, comprises appliances and processes used in horticulture and arboriculture; seeds and plants for gardens and nurseries; fruits and fruit trees, pomology, and cider making; trees, shrubs, ornamental plants and flowers; greenhouse and hothouse plants; appliances for gathering wild crops and products obtained; appliances and processes used in forestry; and products of the cultivation of forests and of forest industries. The classes provided in this group are 49, 50, and 51. The first of these is set apart for appliances and processes used in arboriculture—special instruments for gathering, preparing, testing, and preserving seeds; tools and appliances used in tree culture and in the forest industries, tree measuring instruments; preserving timber by creosote and other substances; examples and processes; prunings, good and bad, and their effects; malformation, curious growths of branch and root; damage by fungoid pests, insects, animals, storms, frost.

The second, for products of the forest and of forest industries—collections of fruits, seeds, cones; specimens of indigenous forest products, home-grown timber cut into boards and transverse sections, giving age and conditions of growth; comparative exhibits of timber grown under various conditions; woods for cabinet work, building, staves, cricket bats; wooden gates and fencing (not painted or varnished); basket work, wattling; tan-bark, resinous substances.

The third, for photographs, pictures, models—photographs of specimen trees and groups of trees, new or rare trees suitable for cultivation in the British Isles; also showing operations in transplanting large trees, and various operations in forestry, such as thinning (before and after), coppicing, felling, removing timber and sawing; forest and nursery topography, maps, plans, books, charts showing imports of timber; of insects and fungi injurious to trees and their effects.

There will be three horticultural exhibitions in the course of the season, and the dates of these are June 2 and 3, July 16 and 17, and September 23 and 24. The officers and committee of the horticultural and arboricultural section are as under: President, the Right Hon. Lord Blyth of Blythwood; chairman, Lieut.-Colonel D. Prain, F.L.S.; Mr. F. J. Baker, A.R.C.S., Colonel T. Bailey, R.E., F.R.S.E., Mr. Edward Beckett, V.M.H., *Mr. W. J. Bean, Mr. W. A. Bilney, Professor Boulger, M.A., Mr. George Bunyard, V.M.H., Mr. F. J. Chittenden, Mr. William Cuthbertson, Sir Thomas R. Dewar, Mr. J. R. Diggle, *Mr. H. J. Elwes, F.R.S., *Mr. J. S. Gamble, C.I.E., Mr. John Green, *Dr. A. Henry, M.A., Professor Keeble, M.A., the Right Hon. the Earl of Kinnoull, Sir Trevor Lawrence, Bart., K.C.V.O., Sir John D. Llewelyn, Bart., Sir Herbert Maxwell, Bart., Mr. H. B. May, *Mr. J. I. Michie, Mr. G. Massee, V.M.H., Mr. A. H. Pearson, Mr. Spencer Pickering, F.R.S., Sir Patrick Playfair, C.I.E., *the Right Hon. Lord Redesdale, G.C.V.O., K.C.B., Major Leslie Renton, M.P., Mr. T. A. H. Rivers, Mr. T. J. Salmon, Mr. Edward Sherwood, Professor William Somerville, Mr. Arthur W. Sutton, V.M.H., Mr. H. R. Sutton, Mr. F. V. Theobald, Mr. J. H. Turner, Rev. William Wilks, and the secretary, Mr. J. A. Alexander, F.B.S.Edin., F.R.G.S. The members of the Forestry Sub-committee are indicated by an asterisk.

One of the most attractive and useful of the many handsome buildings in the exhibition grounds is that in which the Garden Club will be located. The club will be opened concurrently with the opening of the exhibition, and should be a great convenience to those who visit the exhibition at frequent intervals, whether for pleasure or business purposes, and appreciate such advantages as club life is able to afford.

EPPING FOREST.

The report of the Epping Forest Committee on the work of the past year is highly satisfactory. The question is dealt with at some length, and a full explanation of the policy adopted is given. The Consultative Subcommittee have, it is stated, visited and carefully inspected the various woods needing attention, and have superintended the marking of the trees to be felled. The principle upon which the committee have always acted has been the preservation of the best trees, and the removal of ugly and inferior ones, and this has resulted in a very great improvement in the growth of the trees, and the general appearance of the forest. The more valuable ones, whether singly or in groups, have been given space for their full development, and no trees have been cut down because of their value for sale. In this connection it is of interest to note that the outlay on the thinning exceeds the proceeds by £70 last year.

Difficulty in disposing of some of the thinnings has been, it is stated, experienced, and consequently the committee have reverted to the ancient practice of charcoal burning, an arrangement having been made with Mr. Firminger, whose family have carried out charcoal burning in the forest for more than a century, for converting a portion of the thinnings into charcoal.

A census of the deer was taken recently. In the morning 112 fallow deer were counted in the forest, and in the evening 126. The roe deer in various coverts adjoining the forest numbered 32. This shows a diminution of no fewer than 45 fallow and 3 roe deer since the census of February, 1906—a matter which is occupying attention.

In regard to finance, the committee state that in October, 1906, they estimated the expenditure for 1907 at £5,800, and the income at £2,600. The total expenditure was, as a fact, £6,034 3s. 5d., and the total income £3,051 2s. 2d., leaving the sum of £2,983 1s. 3d. only to be provided out of City's cash.

M. H. Martinet, the editor of our excellent French contemporary "Le Jardin," has been promoted to the rank of Commander in the Order of the Merite Agricole.

NEW BOOKS.

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EIGHTH REPORT OF THE WOBURN EXPERIMENTAL FRUIT FARM.

By the Duke of Bedford, K.G., and Spencer N. Pickering, F.R.S. (The Amalgamated Press, Lim., Carmelite House, Carmelite Street, London, E.C.) Price 2s. 6d.

There can be no question as to the seven previous reports on the important work that is being done at the Woburn Experimental Fruit Farm having been of much interest and extremely useful to those who fully appreciate the value of scientific methods in fruit culture. What is true of the previous reports applies with even greater force to the eighth which is now before us, and, were it necessary to institute comparisons, we should be inclined to say that it will be found of greater practical value to the general body of fruit growers than either of its predecessors. Comparison, however, is quite unnecessary, and now as expressing our appreciation of the value of the report, it will suffice to say that we regard it as an extremely valuable contribution to the literature of plant pests with which fruit growers have to contend. The subjects with which the report deals are Bordeaux mixture, lead arsenate, emulsions, mussel scale, moss and lichen, apple sucker, adhesive power of lime-washes, caterpillars, aphis, apple mildew, woolly aphis, apple leaf spot, and the nature of the action of insecticides. These do not embrace all the subjects that have to receive attention in keeping fruit trees free from insect and fungoid pests, but they form a substantial list, and each one is dealt with so fully on scientific lines that the reader is placed in possession of all that it is necessary to know in the preparation of the insecticides and fungicides of the most importance to fruit growers.

In the introductory chapter the authors refer to the objection that is so often taken to tables, percentages, and even decimals, and state that their aim has been to substitute as far as possible exact quantitative measurements for those more crude and unsatisfactory methods usually adopted, in which the impression produced on the mind of the observer is the sole standard by which the success or failure of an insecticide is gauged. "Actual measurement is," they say, "the soul of all science, and the study of insecticides, and, indeed, of any branch of horticulture, can never aspire to be raised to the level of a science until quantitative measurements are introduced into the methods of observation." The authors further suggest, as "there is probably no insecticide or fungicide which is actually without some deleterious effect on the trees," that "spraying, therefore, should be reduced to the lowest limits consistent with keeping the trees clean." These deleterious effects are often much more than counterbalanced by beneficial results obtained by destroying the parasite; but it is well to recognise them, and in making strenuous efforts to combat the various pests, not to use the spraying machine more than is necessary.

BORDEAUX MIXTURE.

Bordeaux mixture, one of the best known of the fungicides, and somewhat extensively used in combating the potato disease, is the first of the preparations reported upon, and here we find much information of immense value. The mixture is generally made by adding milk of lime to copper sulphate (blue vitriol dissolved in water). The proportions of lime and sulphate vary somewhat according to different recipes, but usually from four to six parts of lime are added to every six parts of the crystalised copper sulphate. The strength of the mixture recommended also varies considerably, and that known in America as the normal or 1.6 mixture, is made by taking 1.6 parts of the copper sulphate for every hundred gallons of the wash (1.6lb. for ten imperial gallons of water). In this country, owing to the tissues of the leaves being softer, a mixture of a lower degree of strength has been found preferable.

It is surprising that the chemistry of the Bordeaux mixture should not have been previously elucidated, and it is a matter of considerable interest to learn from a paper read by Mr. Spencer Pickering before the Chemical Society, and given in the appendix to the report, that the statement usually made by chemists with regard to the precipitation of the copper is erroneous. Of much greater importance is the fact that, as the result of his investigations in the laboratory, and on the fruit farm, Mr. Pickering has been able to prepare a much more satisfactory mixture than that in previous use. It appears to have been well established that the fungicidal action of ordinary Bordeaux mixture does not come into play until a week or more after it has been applied to the foliage. This, as pointed out by the authors, is a serious matter; for, not only may a delay in arresting the development of the fungus, once it has appeared, be a serious matter, but it involves considerable loss of materials, much of it being washed or knocked off the leaves during the period of inactivity. The mechanical loss of material is much augmented by the grosser particles of lime still left in the Bordeaux mixture when made in the ordinary way, for such particles are easily knocked off, and carry with them much of the valuable copper compound. The length of time that elapses between the application and the action of the fungicide as ordinarily prepared, is a great disadvantage; but, as a result of his investigation of the chemistry of the mixture, Mr. Pickering has been able to show that this can be obviated. He found that when the lime added was only just sufficient to precipitate all the copper from the basic sulphate formed, it contained only one quarter of the sulphur trixoide present in the normal sulphate, and that to get a mixture of the same efficiency we need take only two fifths of the amount of copper. This, it need hardly be said, represents a considerable saving. When using milk of lime it would not, according to the report, be possible in practice to adjust the quantity to attain this end; but it is quite simple to obtain an exact adjustment by using clear lime water. The following are the instructions for making one hundred gallons of such mixture: Dissolve 6lb. 6½oz. of crystalised copper sulphate by suspending it in a piece of sacking in two or three gallons of water, contained in a wooden or earthenware pail; take some good quicklime and slake it with a little water, and put it into a tub with one hundred and twenty gallons of soft water. Stir the lime and water up two or three times, and leave it to settle till the solution becomes quite clear, with a covering over the tub. Then run off eighty-six gallons of the clear lime water, and mix it with the copper sulphate solution. This mixture is a little stronger than the "1.6" mixture when made in the usual way with 16lb. of copper sulphate to one hundred gallons of water. To reduce it to the same strength, add eleven or twelve gallons of water. In practice it has been found that there is no more danger of scorching with the mixture made with lime water than with one made with milk of lime in the usual way.

EMULSIONS.

The report on emulsions is not less valuable, both from the scientific and practical points of view, than is that on the Bordeaux mixture. Some years since the authors, as the result of considerable investigation, prepared an emulsion-soda wash for use at the Woburn Experimental Fruit Farm, which was christened the "Woburn Wash," and used with much success. The proportion of the various ingredients was "caustic soda, 2 per cent.; soft soap, ½ per cent.; paraffin (by volume), 6 per cent." The amount of paraffin could be varied between wide limits, but no great variation was found possible with that of the caustic soda if the wash was to have a proper detergent effect in removing moss and lichen, whilst the proportion of the soap could not be increased without giving rise to difficulty in using the wash in the machine. As stated by the authors, the caustic soda and the paraffin in the wash do not combine chemically, but are still present as such, forming merely a mechanical mixture. "There was one disadvantage attaching to the Woburn Wash; the soap used to emulsify the paraffin and water is potash, or soft soap, and so, on adding the caustic soda, this is converted into hard soap, which is only sparingly soluble, and is consequently thrown out of solution as a flocculent solid. The paraffin, as a consequence, is no longer kept properly emulsified, and mixed with the soda-soap it generally rises to the surface in the form of a bulky scum. . . . This necessitates constant agitation of the mixture during use, and even under the best conditions the distribution of the paraffin on the trees is far from uniform."

The discovery, therefore, of some emulsifying agent other than soft soap, which would not be affected by caustic soda, became highly desirable. To attain this end Mr. Pickering set himself the task of obtaining further insight into the nature of emulsions, and of ascertaining the conditions under which emulsification occurs. A full account of his investigations is given in the paper contributed to the Chemical Society, which has a place in the appendix. There is also a brief sketch of the conclusions arrived at in the body of the book, and as this is of much practical importance, we regret that the length to which this notice has extended prevents our referring to it otherwise than in the briefest manner. In the course of the investigations it was noticed that when a little copper sulphate was mixed with the lime before churning with oil, an emulsion was formed quite different to that obtained by the mixture of lime and paraffin. Following up this indication it was ascertained that basic sulphate of copper—which is the substance formed when sulphate of copper and lime are mixed together—has the property of forming a true emulsion of the oil, due, it was subsequently found, to the minute particles of which it was composed. The emulsion produced is, we are told, very fine and creamy, and rises to the surface only very slowly, the slightest agitation being sufficient to keep it disseminated evenly throughout the whole bulk of the liquid. The presence of sulphate of copper in the emulsion indicates its value as a fungicide; but when no fungicidal action is required sulphate of iron, which is much cheaper, may be substituted.;

We should have much liked to refer somewhat in detail to the chapters devoted to the mussel scale and the apple sucker, but we have said sufficient to indicate the great value of the work to fruit growers, and, indeed, to all who are interested in the various pests with which horticulturists have to contend.

LAWNS.

By Sutton and Sons. (Simpkin, Marshall, Hamilton, Kent, and Co., Lim., London, E.C.) Price 1s.

We need hardly say that we are in full agreement with the authors of this elegant and extremely useful brochure in their estimate of the charm of a smooth verdant lawn, of its usefulness as a meeting place for social gatherings, and of its value for the opportunity it affords for healthy recreation in the various popular garden games. We might even go further, and say that the importance of the lawn as a setting for both the stately mansion and modest villa in this country cannot be over-estimated. Holding very decided views as to the charms of lawns in a high state of keeping, we consider it most desirable that correct views should obtain with regard to their formation and after management.

Hence the appearance of a new edition of "Lawns" is especially welcome, as an indication that increased attention is being paid to lawns, putting greens, cricket grounds, and other open spaces in which a smooth velvety turf is a necessity, and the endeavour of Messrs. Sutton and Sons to provide trustworthy information relating thereto is [illegible] fully appreciated. The book is so clear and comprehensive that we are not surprised at its remarkable popularity, and, recognising its value, we strongly recommend it to the notice of our readers.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Linnean Society.

FEBRUARY 20.

At the general meeting of the Linnean Society, held on the 20th, a paper on "Wild Types and Species of Tuber-bearing Solanums" was read by Mr. Arthur W. Sutton, V.M.H., F.L.S., of which we give an abstract herewith.

At the outset of his paper, Mr. Sutton stated that this study of the wild types and species of tuber-bearing solanums dates from the year 1883, when the late Lord Cathcart, a member of the Council of the Royal Agricultural Society, suggested crossing the wild types with the cultivated potato, to obtain a race of commercial potatoes which would resist the ravages of the potato disease, Phytophthora infestans. Upon this Mr. J. G. Baker, V.M.H., made his inquiry into the various species and types of tuber-bearing solanums, laid before the Linnean Society on January 17, 1884. Lord Cathcart hoped that hybrids between the Solanum Maglia of Schlechtendahl (Darwin's potato), a native of the low-lying swampy grounds of the Chonos Archipelago, and a cultivated potato, might give rise to the desired race of disease-resisting potatoes.

Many hundreds of attempts were made to fertilise Solanum Maglia with the cultivated potato, but almost entirely without result, for the blooms of Solanum Maglia nearly all fall without setting seed. These crossings only gave one hybrid seedling, from a cross made in July, 1887, and though cultivated for the last twenty years, it has shown no superiority to ordinary potatoes.

Many wild types of tuber-bearing Solanums were experimented with during the last few years, including Solanum tuberosum, two forms from Mexico, S. polyadenium, Greenm.; S. verrucosum, Schlecht.; S. Maglia, Schlecht.; S. etuberosum, Lindl.; S. Commersoni, Dunal, received from Uruguay; S. Ohrondi, Carr.; S. tuberosum var. boreale (syn. S. Fendleri). Attention is especially called to the fact that all these wild types flower freely, and that in every case where a wild type produces fruit, it has, with the exception of Solanum etuberosum, reproduced itself absolutely pure from seed; in contrast to this, all varieties of the cultivated potato which produce seed give rise to the greatest possible variation in the seedlings, none of which correspond exactly to the parent.

There is also a striking difference in the form of the pollen-grains of the wild types of tuber-bearing solanums, compared with pollen-grains of cultivated potatoes, the former being elliptical, and the latter very irregular in form.

The paper dealt fully with Solanum etuberosum, the only wild type of which the seedlings have not reproduced the typical form, but have, on the other hand, given precisely the same variation in habit of foliage, form, size, and colour of tuber, etc., as is found in the seedlings from the cultivated potato. Although cultivated continuously for twenty years, Solanum etuberosum has never been known to produce a fruit until 1906, when one berry only was found, and from seed thus obtained twenty plants were grown in 1907, differing from each other as just stated. Reference was made to the specific name "etuberosum," given by Lindley, and to the fact that, though this name denotes an absence of tubers, small tubers are invariably formed under cultivation, and that the size of the tubers has greatly increased during the last twenty years, until they resemble those of the cultivated potato. The pollen-grains of the seedlings from Solanum etuberosum retain the elliptical form of the type, although the pollen-grains of a hybrid obtained by crossing a cultivated potato with S. Commersoni type vary greatly in form. As the S. etuberosum has given seedlings many of which more resemble the cultivated potato than the type, the conclusion is suggested that this may have been one of the parents of cultivated potatoes of to-day; and conversely, that as no other wild type experimented with has given seedlings which vary in any degree from the type, it is unlikely that either of these wild types gave rise to our cultivated potatoes. A fact of special interest and importance is stated, that during the twenty years of cultivation, no plant of Solanum etuberosum has ever been noticed as affected by the fungus Phytophthora infestans, although during the whole period it has been grown in close association with potatoes which have suffered more or less from it year after year.

The general belief that the cultivated potato owes its origin to a specific type of tuber-bearing solanum, to which Linnæus gave the name of Solanum tuberosum, is discussed, and attention called to the fact that the potatoes originally introduced into England or into Europe were certainly introduced as cultivated potatoes, and not as wild types, and also that it is at least doubtful whether in Chili, Peru, or elsewhere, any specific type of tuber-bearing solanum (apart from Solanum etuberosum) can be found which will, under cultivation, give plants at all like the potato of commerce. A brief summary of the history of the introduction of the potato into Europe is given, and a photographic copy shown of the earliest drawing of the potato, viz., by Philippe de Sivry, and sent by him to Clusius in 1589. Photographs are also shown of "Solanum tuberosum esculentum" from Bauhin's Prodromus, of Linnæus's original specimen in his Herbarium, and of a specimen recently collected in Chili.

To sum up: Although the evidence adduced is not sufficient to show that our cultivated potatoes certainly owe their origin to Solanum etuberosum, or that they have not been derived from some wild type which might correctly be considered the specific form of Solanum tuberosum, it is at least likely that S. etuberosum has given rise to our cultivated potatoes, and that a continuation of the experiments during the next few years will doubtless give interesting results, and possibly lead to definite conclusions.

Woolton Gardeners' Society.

A meeting was held at the Mechanics' Institute on February 20, Mr. J. J. Guttridge, superintendent of the Liverpool Parks and Gardens, presiding. The Chairman, in introducing Mr. F. Ker as the lecturer on "Hippeastrums," referred to the great success achieved by Messrs. R. P. Ker and Sons with these important and beautiful bulbous plants, not only in our own country, but also at the more important Continental exhibitions.

Mr. Ker gave a brief outline of the history of hippeastrums or amaryllis, and mentioned that amongst the earlier known varieties was one named Johnsoni, raised in the vicinity of Prescot. When cross-fertilising, it was advised to keep the colours together, that is, light with light, and dark with dark, for if colours are mixed the seedlings are largely pinks. A suitable temperature for raising the seedlings is from 55 to 65 degrees, with a damping overhead on all bright days. The plants should be potted as early as possible, affording larger pots as the plants advance; a light compost was recommended, of two parts loam, one leaf-mould, a little sand, and an addition of Clay's Fertiliser. The bulbs should be two-thirds above the soil, and the pots should be plunged in a bed having a temperature of 80 degrees, with a house temperature of from 50 to 60 degrees. Shade should be given during brilliant sunshine, except when the bulbs are drying off, when they cannot have too much. No water should be given until the pots are well filled with roots, although the plunge bed must be kept moist, and hard-baked pots should be avoided. When the flower-scape is three inches in length the pots should be lifted from the plunging material and stood on the stage. After flowering, the dead blooms should be removed, but not the stem; replace the plants in the bed, and give a good coating of rich soil; water, and syringe freely. Insects are not usually troublesome, but mealy bug and thrips are the worst enemies, and, with good treatment they will be kept at bay.

Mr. Ker exhibited some plants carrying flowers of good substance, colour, and form; a bulb that had been started a few weeks was cut in two, showing the spike in its very early stage.

A good discussion followed, in which many other interesting points were brought out. Among the speakers were: Messrs. R. Todd, J. Stoney, E. Bache, G. Haigh, W. D. Skinner, —. Little, and R. G. Waterman. A cordial vote of thanks was tendered to Mr. Guttridge for presiding, and to Mr. Ker for his excellent paper.

Croydon Gardeners' Society.

Much interest was taken in a lecture on "Insect Friends and Foes," delivered before the Croydon Society at the Sunflower Temperance Hotel, by Mr. H. Withers, of South Croydon.

Mr. Withers divided this family into seven groups, and illustrations by diagram and lantern slides helped to explain each class to the audience. How much better one is able to cope with the minute depredators or encourage those which are useful in the garden by studying the structure and history of their mode of living was clearly exemplified. Often, the lecturer explained, little friends in the insect world are destroyed through ignorance of their usefulness. Amongst those to be encouraged are the ladybird whose larva feeds upon aphides, the golden-eyed fly, ants, and many of the ichneumon flies. The lecturer remarked how interesting it was to watch the larva of the lacewing fly at work holding the aphis with its jaws, and sucking the juices from the body.

In some respects it was unfortunate to the gardener that Nature had ordained more enemies in the insect world than friends, and means had to be found to eradicate many of these pests with the aid of fumigants and insecticides. It was in this way that many friends were destroyed. Unlike animals, insects had no lungs, but breathed through long tubes called tracheæ, running through the body and limbs, and in many instances ways had to be found for stopping these tubes, whilst others were destroyed by poisonous juices placed in their haunts.

It must not be forgotten, the lecturer said, that insects played a great part in the fertilisation of flowers. The principal amongst this class are the bees. Many flowers had so developed themselves as to favour the classes of insects that could help their fertilisation, as, for instance, the pea and bean flowers, delphiniums, etc.

When a vote of thanks was conveyed to him by the meeting, the hope was expressed that Mr. Withers would supplement his remarks with another evening's discourse at no distant date.

Mr. P. F. Bunyard had a few interesting exhibits, including a nest of the yellow fink, an insectivorous bird from South Africa; Mr. Gregory had mounted specimens of insects for the microscope, and of plants; Mr. Mills staged a fine specimen basket of Lachenalia Nelsoni, and Mr. A. Edwards an exceedingly well-grown Pteris tremula.

Weybridge Horticultural Society.

At the last monthly meeting the president, Mr. J. Lyle, presided over about sixty members. Mr. Lingwood, of the Egham Society, read an excellent paper on "The Culture of the Azalea." Several members asked the lecturer questions, which were met with ready answers. A splendid lot of exhibits were staged by the members, notably amaryllis, primulas, cyclamens, kales, and parsnips. Votes of thanks to the lecturer and president closed an instructive meeting.

National Chrysanthemum Society.

About forty-six members and friends of the National Chrysanthemum Society met at the Popular Café, Piccadilly, W., on the evening of Monday, February 24, under the presidency of Mr. R. Ballantine. The occasion was the fourth Market Show dinner, a function to which many of the market chrysanthemum growers come. An excellent dinner was served, and the tables were decorated with Framfield Pink chrysanthemums and daffodils.

The speeches were few in number, and laudably brief. The Chairman proposed "The King and Queen and Royal Family," and, after this had been honoured, "His Grace the Duke of Bedford," was toasted, and heartily thanked for his kindness in allowing the use of the Foreign Flower Market for the Market Chrysanthemum Show. The loss of Mr. Assbee was deplored, and of his successor, Mr. Frost, many kind things were said.

The presentation of prizes then followed, Mr. Philip Ladds receiving a silver cup, a gold medal, two large silver medals, and two small silver medals; Mr. Tulley and Mr. Weir were also present to receive their awards, but several prizewinners were unavoidably absent. The next item was the toast of the "National Chrysanthemum Society," proposed by Mr. Ballantine, who said the Market Show of 1907 was the finest yet held, and added that the N.C.S. continued to prosper. The response was in the hands of Mr. Thos. Bevan, chairman of the N.C.S. Committee. The other toasts were "The Chairman," proposed by Mr. Hawes; and Mr. D. Ingamells, the moving spirit of the Market Show, whose health was proposed by the Chairman; and "The Gardening Charities," proposed by Mr. Mackerchar, and responded to by Mr. G. J. Ingram.

A lengthy programme of music was provided, this extending to fifteen items, the artistes being Miss N. Beare, Miss Such, Mr. H. D. Porter, Mr. W. Bamforth, Mr. Laurence Harewood, Mr. Wilfred Stracey, Mr. Walter Fullerton, and Mr. Harry Briden, and all rendered their parts well.

Among those who were present we noted Mr. T. Bevan, Mr. E. Hawes, Mr. R. H. Witty, Mr. McKerchar, Mr. Caselton, Mr. W. Howe, Mr. Ingamells, Mr. G. J. Ingram, Mr. Eihle, Mr. J. W. Moorman, Mr. Prickett, Mr. Ladds, Mr. Curtis, Mr. Such, Mr. Tulley, etc.

Crawley Gardeners' Association.

According to the report presented to the annual meeting, which was held a few days since, the Crawley Gardeners' Association continues to make most satisfactory progress. The membership had increased from 175 to 193, the meetings had been well attended, and visits had been made to several noteworthy gardens. Among other gardens visited were those of Gatton Park, Kew, and Hampton Court. The financial statement showed a balance in hand of £12 13s. 2½d. Both report and financial statement were unanimously adopted, on the proposition of the chairman, Mr. T. H. Martin, who heartily congratulated the society on the successful results of the past year's work. The officers and members of committee were re-elected.

Reigate Gardeners' Association.

A meeting was held on February 18, Mr. W. P. Bound in the chair. Mr. H. G. Cox, secretary of the Reading Gardeners' Association, gave a most interesting and instructive lecture on "The History and Cultivation of Primula Sinensis." About sixty lantern slides were shown, many of which were coloured by hand, and a good number were done by colour photography, taken by the new autochrome process. Mr. Cox had a large number of fine primula flowers on view, and some plants in three-inch pots, each carrying a good head of bloom.

A first-class certificate was awarded to Mr. Herbert, gardener at Nutfield Priory, for a collection of apples, and to Mr. Barker, inside gardener of The Mount, Earlswood, for a specimen of Dendrobium Cooksoni; a second-class certificate was awarded Mr. Kemp for four primulas, and to Mr. Horsley for a dish of Tangerine oranges. Ten new members were elected.

Mr. Cox was accorded a very hearty vote of thanks.

A special meeting was held at Mutton's Hotel, Redhill, on February 22, Mr. W. P. Bound in the chair. Mr. N. E. Brown, of the Kew Herbarium, gave a most instructive lecture on "The Pronunciation of Plant Names." Mr. Brown handled his subject in a masterly manner, and his lecture was highly appreciated by the large audience. Many of the names were supplied by the members, and in this way many errors were corrected.

A very hearty vote of thanks was accorded Mr. Brown for his valuable lecture, which closed the meeting.

Beckenham Horticultural Society.

On Friday, February 15, Mr. J. R. Pocock, of College Nurseries, Bromley (the Rev. G. C. Griffiths presiding), gave a lecture on "Hardy and Rock Plants." After speaking at some length on the construction of rockwork, the way and time to plant, soils to use, etc., etc., the lecturer, having about a hundred specimens in pots in the body of the hall, took them individually, pointing out their types and varieties, their rarity or otherwise, ease of propagation, or vice versa, and their prices as governed by these things. He urged very firm planting indeed, and not to split up choice plants after midsummer, as to do so would probably end in loss during winter. The very best time to propagate, he said, was just as growth is commencing.

A hearty vote of thanks to Mr. Pocock and the rev. chairman closed the very instructive evening.

TRADE NOTE.

It is not often that tubers of the brilliant Flame Flower (Tropæolum speciosum) are offered to the public in quantity, so that the notice in the catalogue of Mr. H. N. Ellison, of West Bromwich, to the effect that he has a very large stock to offer at unusually low prices, is specially interesting. Now is the time to plant the tubers.

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ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

MELON CULTURE.—T. L. B., Otley: We cannot do better than refer you to our issue of February 15, where, on page 121, is an excellent article on melon culture by Mr. Jas. Mayne.

HARDY PERENNIALS.—M. S. G., Oxford: A very handy work dealing with the culture of hardy perennials, and giving the genera, species, varieties, and English names of the best to grow, is "Easily Grown Hardy Perennials," to be obtained post free for 5s. 6d. from The Gardeners' Magazine Office, 148 and 149, Aldersgate Street, E.C.

CELERIAC.—F. C. H., Malpas: Sow the seeds at the end of February or early in March in a box or pan, and place in a temperature of about 65 degrees—in fact, treat as for celery. Transfer the seedlings singly to sixty-sized pots when large enough. When established proceed to harden the plants, and subsequently plant them out about the last week in May. Choose a plot that was well manured and trenched during the winter, and set out the plants fifteen inches apart in rows eighteen inches apart. Plant firmly, and allow the plants to remain in the same relative position as regards the soil level as when they were in the pots. Abundant watering and liquid feeding are not necessary for celeriac, and in this respect the crops differ materially from celery. Firm soil and firm planting are essential to success.

MANURES FOR POTATOES.—A. B., Hambledon: In your case, and with such a soil to deal with, the best plan will be to apply superphosphate and sulphate of potash at planting time, using 3lb. of the former and 1½lb. of the latter per square rod. These should be mixed together and given at planting time, sprinkling them along the drills. Nitrate of soda, at the rate of 1lb. to the square rod, should be given when the potato shoots are a few inches above the ground, hoeing it in lightly, or applying it in showery weather. Basic slag should be given in the autumn, and it is of the greatest value on peaty or clayey soils in which there is a lack of lime. The other materials you mention we should not use for the purpose. The first named is better suited for plants in pots and for all cultures under glass, while the last named would not, we presume, be at all suitable for any but the purpose for which it is made.

SWEET PEAS.—A. S., Liskeard: The varieties that head the list in their respective colour classes in the National Sweet Pea Society's Classification of Sweet Peas for 1907, are as follows: White, Dorothy Eckford; crimson and scarlet, King Edward VII.; blush, Mrs. Hardcastle Sykes; cerise, Coccinea; rose and carmine, John Ingman; yellow and buff, Mrs. Collier; pink, Countess Spencer; orange shades, Helen Lewis; blue, Romolo Piazzani; violet and purple, Duke of Westminster; lavender, Lady Grizel Hamilton; mauve, Mrs. Walter Wright; magenta, George Gordon; red striped, America; purple-striped, Princess of Wales; maroon and bronze, Black Knight; picotee-edged, Dainty; fancies, Agnes Johnston; bicolors, Jeannie Gordon; and marbled, Helen Pierce.

GLOXINIAS.—D. G., Swanley: Place the tubers in small well-drained pots, in a mixture of equal parts loam, leaf-mould, and peat, with sufficient sand to render the whole porous. When potted the surface of the tuber should be on a level with the soil. A temperature of 60 deg. by night, rising to 65 or even 75 deg. by day with sun heat will be the most suitable. If the soil is comfortably moist at potting time then no water will be needed until growth has well commenced, but a humid atmosphere should be maintained by damping down the floors and by syringing between and around the pots. Overhead syringing is too risky for amateurs to practice, because unless it is done very lightly and carefully damping will result; after they have started into growth gloxinias should not be syringed overhead, as syringing induces flabby leafage. Gloxinias love plenty of light, and therefore they need only be shaded from bright sunshine. Heavy shading and excess of moisture produce weakly plants that cannot yield sturdy-stemmed, fine flowers. If leaves and flowers lack substance then the plants are of little value for conservatory or room decoration. When the young plants have made some progress they should be placed in larger pots in similar compost to that already advised.

SINGLE CHRYSANTHEMUMS.—N. N. A., Chesterfield: Cuttings can be rooted at any time from the beginning of January till March is well advanced, but amateurs should, as a rule, raise their stock from cuttings struck in February. This will give the plants plenty of time to grow to a full size, and they will have the advantage of an abundance of sunlight and a freer circulation of air from the time they are transferred from the cutting pots. The cuttings should be inserted several together in five-inch pots, and be placed in a frame in the corner of the greenhouse or other structure, where they can be kept close and shaded for a few days. When the cuttings are rooted they should be potted off singly, and put into three-inch pots. When these are well filled with roots, they should be transferred to six-inch pots, and, if rather large specimens are required, they should receive a further shift, this being into pots eight inches in diameter. As in the previous repotting, the shift should be given when the pots are well filled with roots, and before they have become pot-bound. In the preparation of the cutting pots a light sandy soil should be used, and this should be surfaced with silver sand. For the several repottings a compost, consisting of good turfy loam five parts, and well-rotted manure, two parts, will be the most suitable. From the time they are put into the three-inch pots until they are placed out of doors in May, they should have a position near the glass and a free circulation of air about them. When taken out of doors they should be given an open position, the pots be stood upon a bed of coal ashes and some ashes or other loose material be packed about them to check the evaporation of moisture. The growths should be stopped two or three times, the last stopping to be done by the middle of July. They will require rather liberal supplies of soot water and liquid manure when well rooted in their final pots.

SPOTTED DENDROBIUM LEAVES.—W. H. S., Chipping Sodbury: Mr. H. J. Chapman, to whom we submitted the specimens, writes: There can be no doubt that the pseudo-bulbs and leaves sent are badly affected by the dreaded "Black Spot." Orchids, principally those of the Eastern group, such as dendrobiums, calanthes, phaius, phalænopsis, and some of the vandas, are particularly subject to these undesirable disfigurements. I have also seen Cœlogyne cristata badly affected on two or three occasions. At one time we suffered a great deal from spot, and I submitted specimens to various people for scientific investigation, but none were able to identify any fungoid growth to account for the spotting or bacteria which might be likely to cause the trouble. I came to the conclusion that our methods of culture might be the cause, and am now satisfied that this was to a great extent correct. Where one has a mixed collection of plants growing together under practically the same conditions, success may attend our efforts at first, especially so if we are dealing with imported orchids, for I have seen freshly imported orchids growing satisfactorily under the most adverse conditions for a season. W. H. S.'s complaint is precisely the same as that of others; the difficulty rarely commences until the pseudo-bulbs and growths are matured or nearly so. Some two or three years ago I gave my experience of a housefull of calanthes in the columns of The Gardeners' Magazine, and later, in the Weekly Calendar Notes, I stated the successful methods that had been practised, and I am perfectly satisfied with the success that has since followed the treatment I then advised. The surroundings under which the plants grow naturally are very definite, wet or dry seasons. Such conditions are very difficult to provide artificially. Where we make mistakes is generally at the completion of growth. I saw an instance last autumn where a stove containing orchids principally was damped down, closed, and the blinds drawn up to permit the sun to reach the plants. The temperature at the time I entered was 95 degrees, with the sun full on the glass; this practice, with stove plants, is quite familiar to gardeners. I do not think this would have caused any harm had the practice been applied in the months of June or July, when the plants were in full growth, but as it was in the middle of September, when the plants had practically matured their growths, I came to the conclusion that if there was no trouble it would be rather strange. I am not sure that this was actually the cause, but I was asked to come and see the plants a few weeks later, when many of them were showing small white spots on the foliage and indentations on the pseudo-bulbs, which all ultimately developed into black spot of the most serious description I have ever seen. These are conditions to avoid. When the pseudo-bulbs of a calanthe or dendrobium have reached maturity, atmospheric moisture should be reduced, and while the temperature may not be materially lowered for a few weeks, the top ventilators should be brought into use to prevent a stag-

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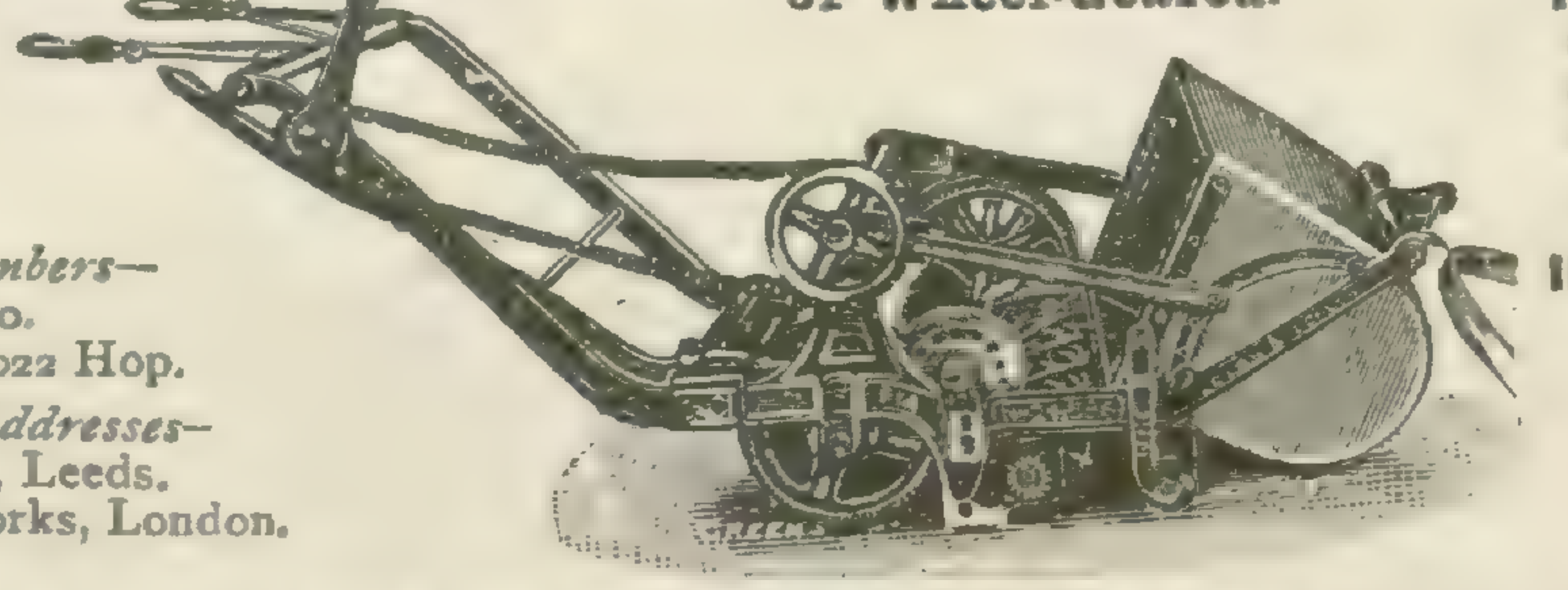

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nant atmosphere. If we can provide conditions practically similar to that usually given to a house of melons when ripening. I am quite certain this would be the correct treatment for all the warm-house orchids that are liable to this dreaded disfigurement. The resting of such species as Dendrobium Findlayanum (which have pseudo-bulbs and growths of a sappy nature) in a temperature of 50 degrees, would not do, as this would be 5 to 10 degrees too low. With such a low temperature, and the atmosphere charged with moisture, the development of spotting would be considerably assisted. The whole of the hybrids from D. Findlayanum should also be rested in a temperature of about 60 degrees.

NAMES OF PLANTS.

E. P., Reading.—1, Acacia dealbata; 2, Iris sindjarensis; 3, Jasminum nudiflorum.

F. E., Mitcham.—1, Woodwardia radicans; 2, Virburnum Tinus; 3, Hibbertea dentata; 4, a good form of Clivia miniata.

M. H. B., St. Neots.—1, Shortia galacifolia; 2, Libocedrus decurrens; 3, Abies Pinsapo; 4, Cupressus macrocarpa lutea.

R. N. J., Huddersfield.—1, Cattleya Trianæ, a fairly good variety; 2, probably Rhynchospermum jasminoides; 3, Calceolaria Burbidgei; 4, Eucharis candida; 5, Aralia Chabrieri.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. February 16 to February 22.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Feb. 16—Sunday	4 40	37	35	49	34
,, 17—Monday	0 20	49	48	54	37
,, 18—Tuesday....	1 50	44	43	51	43
,, 19—Wednesday..	1 40	43	41	53	41
,, 20—Thursday ...	—	46	45	52	43
,, 21—Friday	0 10	47	46	51	44
,, 22—Saturday ...	—	45	42	51	42
Means	1 15	44	43	52	41

Date. 1908. February 16 to February 22.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg
Feb. 16—Sunday	0.21	40	41	42	29
,, 17—Monday	0.13	40	41	42	32
,, 18—Tuesday.....	0.04	42	42	42	39
,, 19—Wednesday..	—	41	43	42	34
,, 20 Thursday ...	0.02	42	42	43	38
,, 21—Friday	—	43	43	43	38
,, 22—Saturday ...	0.07	43	43	43	37
Means ...	(total) 0.47	42	42	42	35

CATALOGUES RECEIVED.

W. W. JOHNSON AND SON, LIM., BOSTON, LINCS.—Seeds.

JOHN FORBES, HAWICK, SCOTLAND.—Plant catalogue.

DOBIE and MASON, 22, OAK STREET, MANCHESTER.—Seeds.

W. ATLEE BURPEE and CO., PHILADELPHIA, U.S.A.—Seeds.

Guides to Garden Work.—The publishers of the Gardeners' Magazine will be pleased to forward a catalogue of their gardening books, setting out full particulars of the contents of each work. The books, which are thoroughly practical, up-to-date, and well bound, will be of particular service to those interested in flowers, the greenhouse, or the garden. A copy of the catalogue will be sent post free to any reader who addresses a postcard to the Publishers, The Gardeners' Magazine, 148 and 149, Aldersgate Street, London.

MARKETS.

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Acacia	per doz. bun.	6 0	to	9 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 6		5 0
Arums	per doz.	2 6		5 0
Asparagus	per doz. bun.	1 6		6 0
Azalea	per doz. bun.	3 0		5 0
Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	5 0		8 0
Camellias	per doz.	1 6		2 0
Carnations	per doz. blms.	1 6		3 6
,,	per doz. bun.	7 6		12 6
Cattleyas	per doz.	10 0		12 6
Chrysanthemums	per doz. bun.	10 0		18 0
Cœlogynes	per doz. blms.	1 0		1 6
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	5 0		8 0
Cypripediums	per doz. blms.	2 0		3 0
Daffodils	per doz. bun.	3 0		6 0
Eucharis	per doz.	2 6		4 0
French fern	per doz. bun.	1 0		3 0
Freesias	per doz. bun.	2 0		3 0
Gardenias	per doz.	3 0		6 0
Hellebores	per doz.	0 6		1 3
Hyacinths, Roman	per doz. bun.	4 0		6 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 0		5 0
Lilium auratum	per bun.	2 0		3 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		6 0
,, yellow	per doz. bun.	2 0		4 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	1 6		5 0
Odontoglossums	per doz. blooms	2 0		3 0
Pelargoniums	per doz. bun.	5 0		9 0
Pernettya	per bun.	0 6		1 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0
Snowdrops	per doz. bun.	1 0		2 0

Fruits.

There is a keen demand and prices are very firm.

		s. d.	s. d.
Apples, Canadian	per barrel	14 0	23 0
,, Californian	per box	9 0	12 0
,, American	per barrel	13 0	20 0
Apricots, Cape	per box	6 0	10 0
Bananas	per bun.	3 0	12 0
Cranberries	per case	7 0	9 0
Cob Nuts	per doz. lb.	4 0	5 0
Filberts	per doz. lb.	3 6	4 0
Grapes, Alicante	per lb.	1 3	2 6
,, Belgian	per lb.	0 10	1 6
,, Muscats	per lb.	3 6	7 6
,, Gros Colmar	per lb.	1 0	2 0
,, Channel Islands	per lb.	0 9	1 0
,, Almeria	per barrel	10 0	16 0
Lemons	per case	8 0	22 0
Oranges	per case	7 0	30 0
Peaches, Cape	per box	3 0	10 0
Pears, French	per crate	8 0	10 0
,, English	per bush.	4 0	8 6
Pineapples	each	2 0	5 0
Plums, Cape	per box	4 0	7 0
Strawberries	per lb.	6 0	10 0
Walnuts	per bag	7 0	8 6

LONDON POTATO MARKETS.

The demand has been scarcely so good during the last few days, but prices are little affected.

		s. d.		s. d.
British Queen	per ton	90 0	to	105 0
Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		130 0
Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	95 0		105 0
Langworthy	per ton	90 0		110 0
Lincoln Maincrop	per ton	95 0		115 0
Lincoln Up-to-Date	per ton	90 0		115 0
Royal Kidneys	per ton	80 0		95 0
Reading Giant	per ton	80 0		95 0
Sir J. Llewelyn	per ton	85 0		105 0
New, French	per lb.	0 2		0 2½

FORTHCOMING ENGAGEMENTS.

TUESDAY, March 3.—Royal Horticultural Society, Meeting of Floral, Fruit, and Orchid Committees, 12 noon; General Meeting, 3 p.m., lecture on "Bulbous Plants of New Zealand"; Scientific Committee, 4 p.m.

Horticultural Club, House Dinner, 6 p.m. Lecture by Mr. C. E. Pearson on "Birds Eggs and Evolution of Protective Colour."

Croydon Gardeners' Society, Meeting, lecture on "Flowering Shrubs," 8 p.m.

National Rose Society, Meeting of General Committee, 3 p.m.

WEDNESDAY, March 4.—Royal Society of Arts Meeting, 8 p.m.

Royal Botanic Society, Meeting, lecture on "Various Marriage Customs of Plants," 4 p.m.

THURSDAY, March 5 (two days), Royal Horticultural Society, Show of Colonial-grown Fruit and Vegetables.

Linnean Society Meeting, 8 p.m.

FRIDAY, March 6. Beckenham Horticultural Society, Meeting for Discussion, 8.30 p.m.

SATURDAY, March 7.—Liverpool Horticultural Association, Meeting.

British Gardeners' Association, Meeting at Carr's Restaurant, Strand, W.C.; address by Mr. J. Weathers, 7 p.m.

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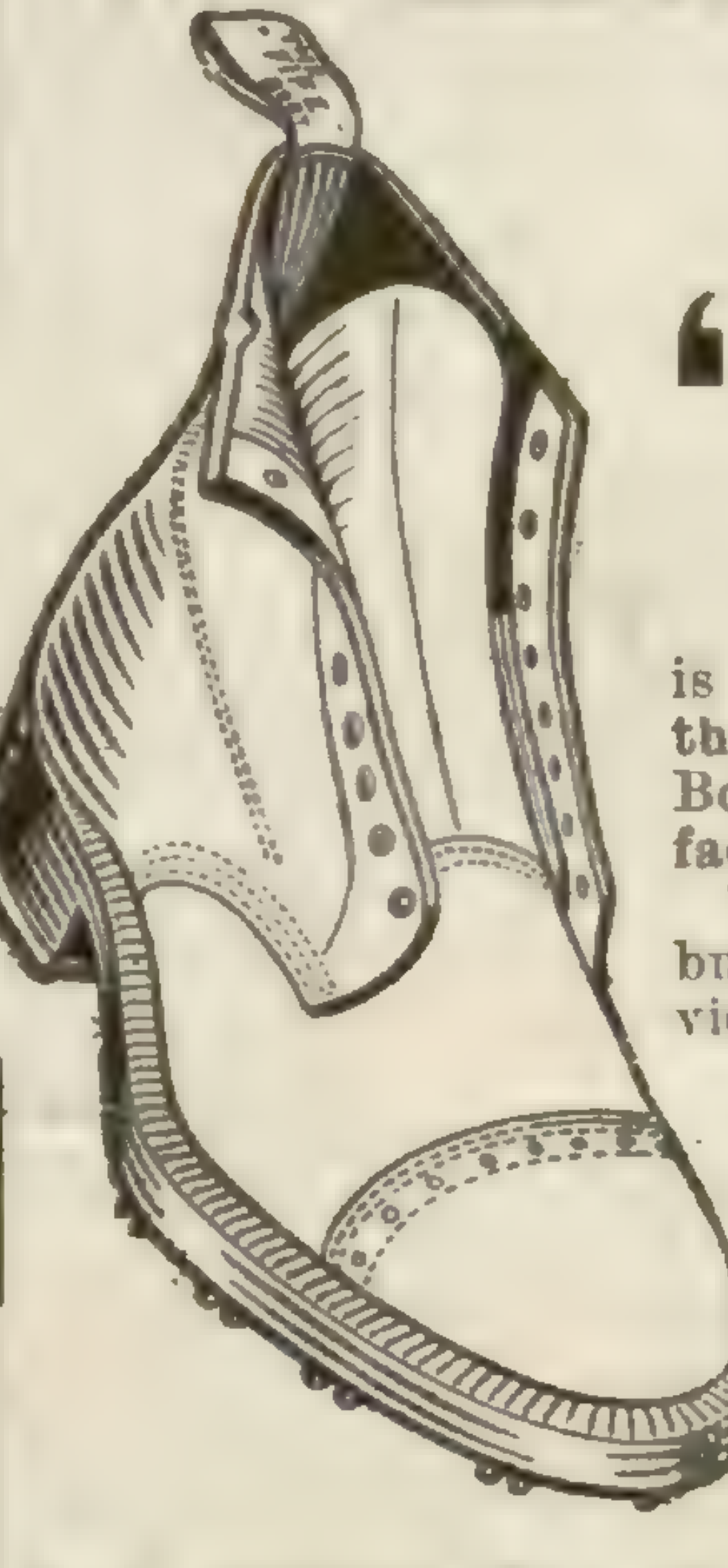

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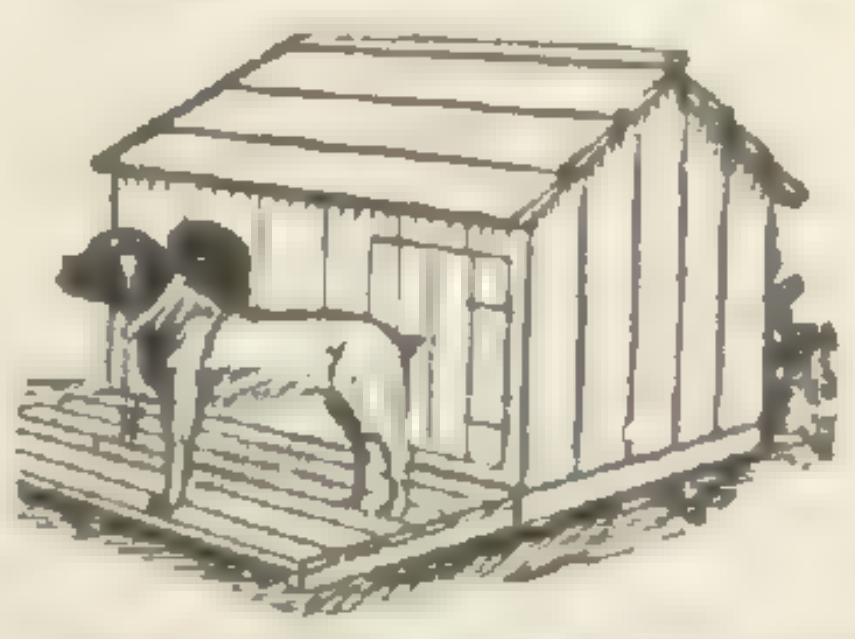

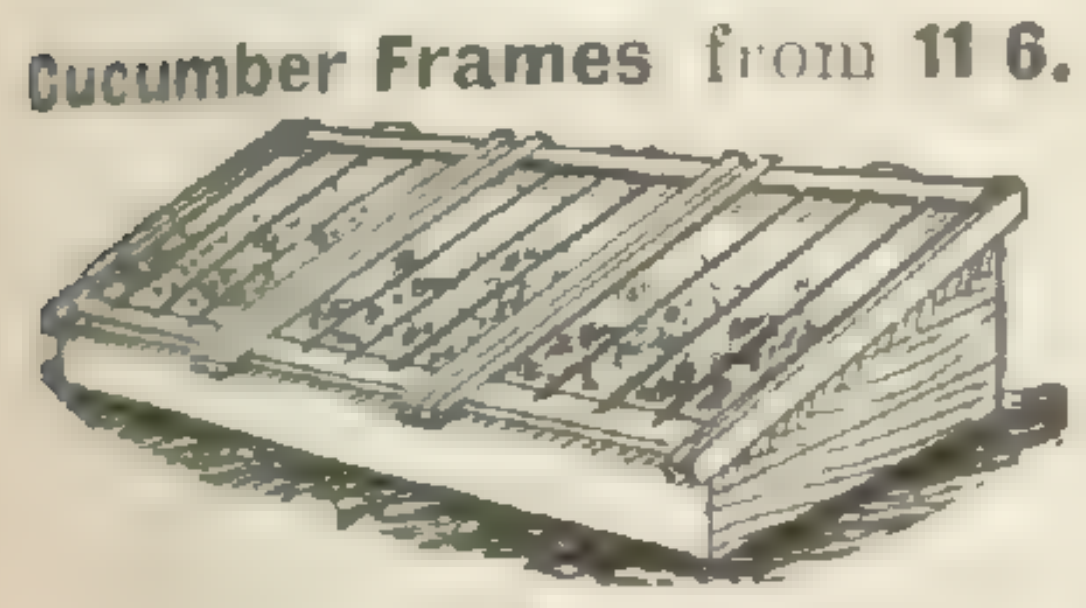

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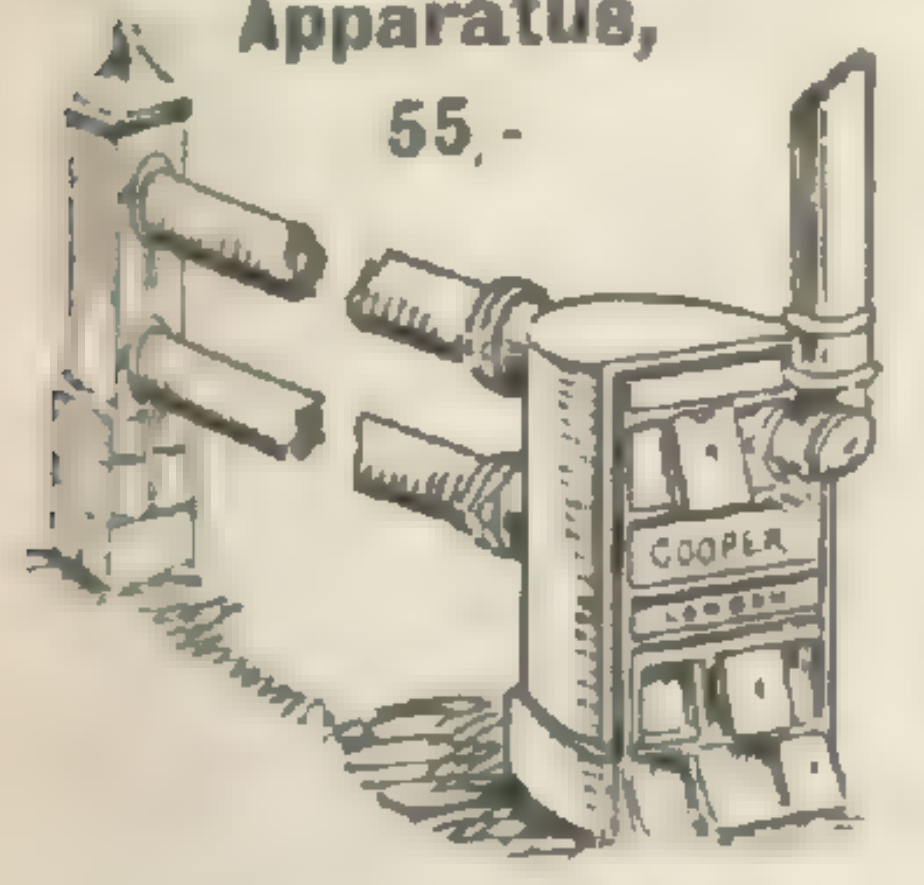

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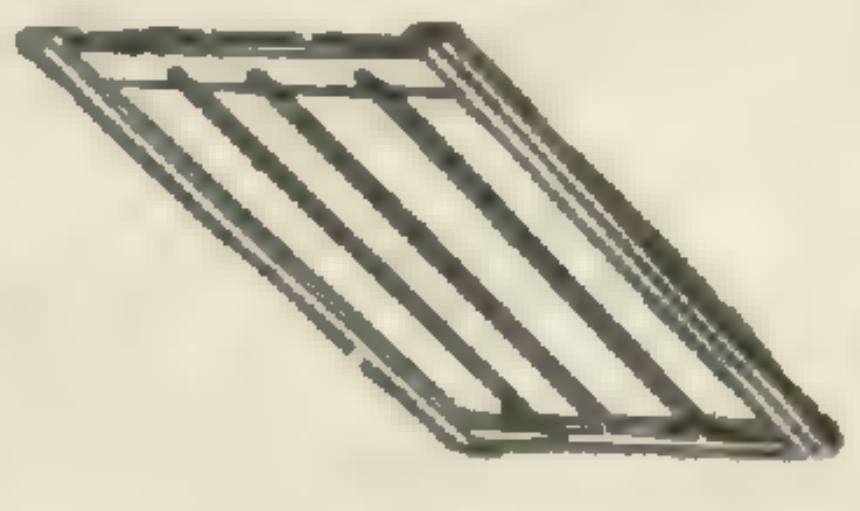

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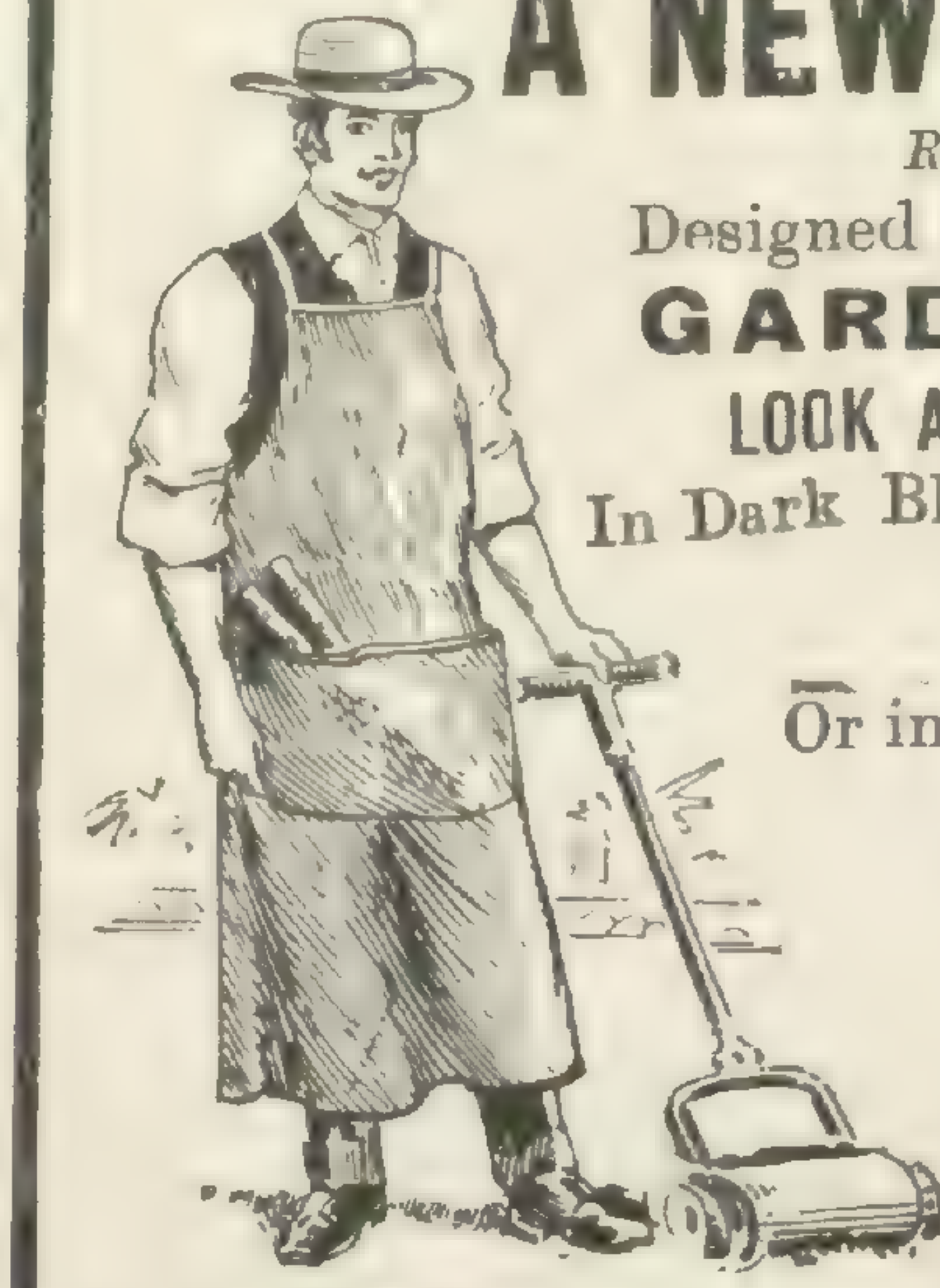

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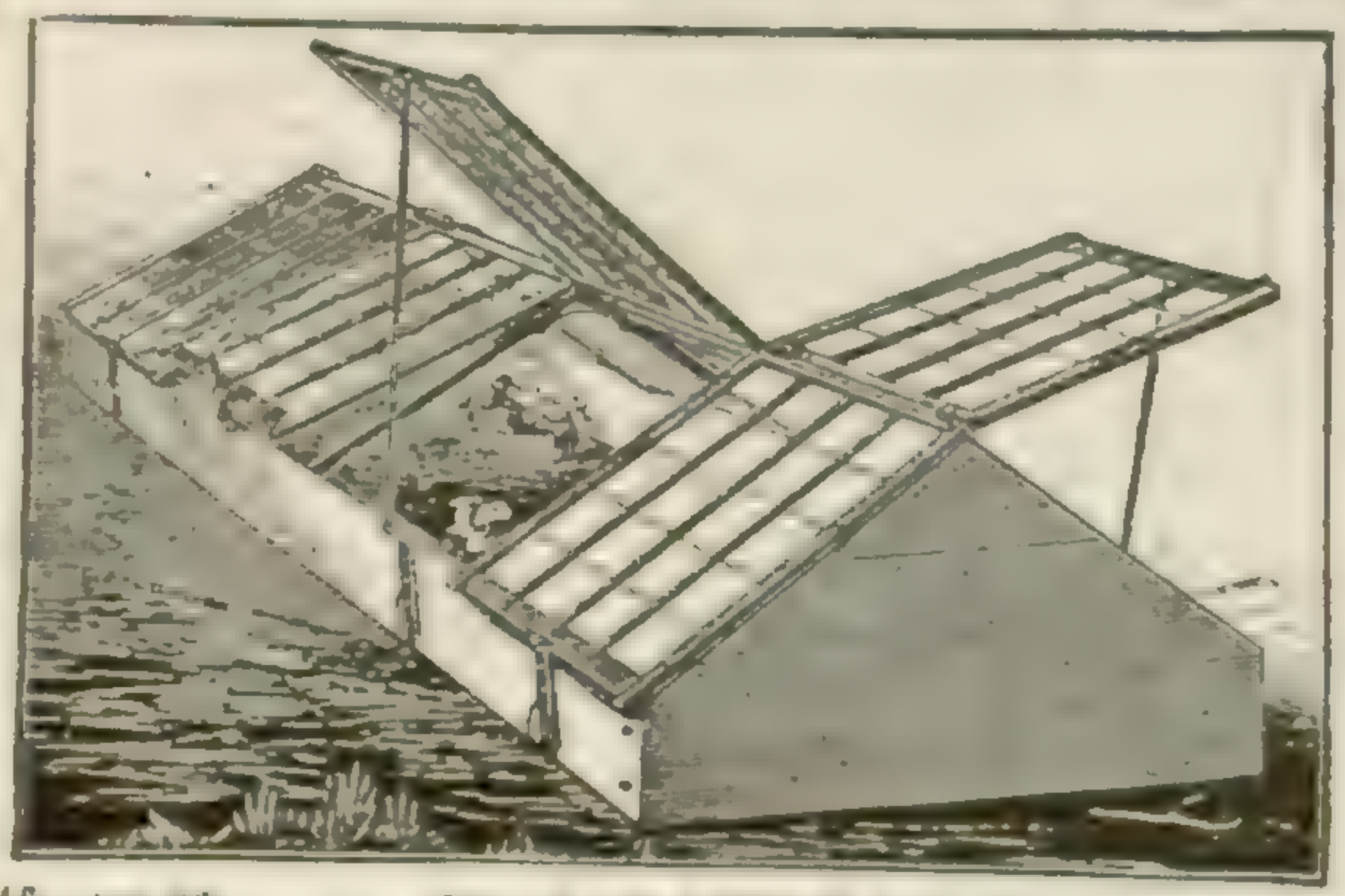

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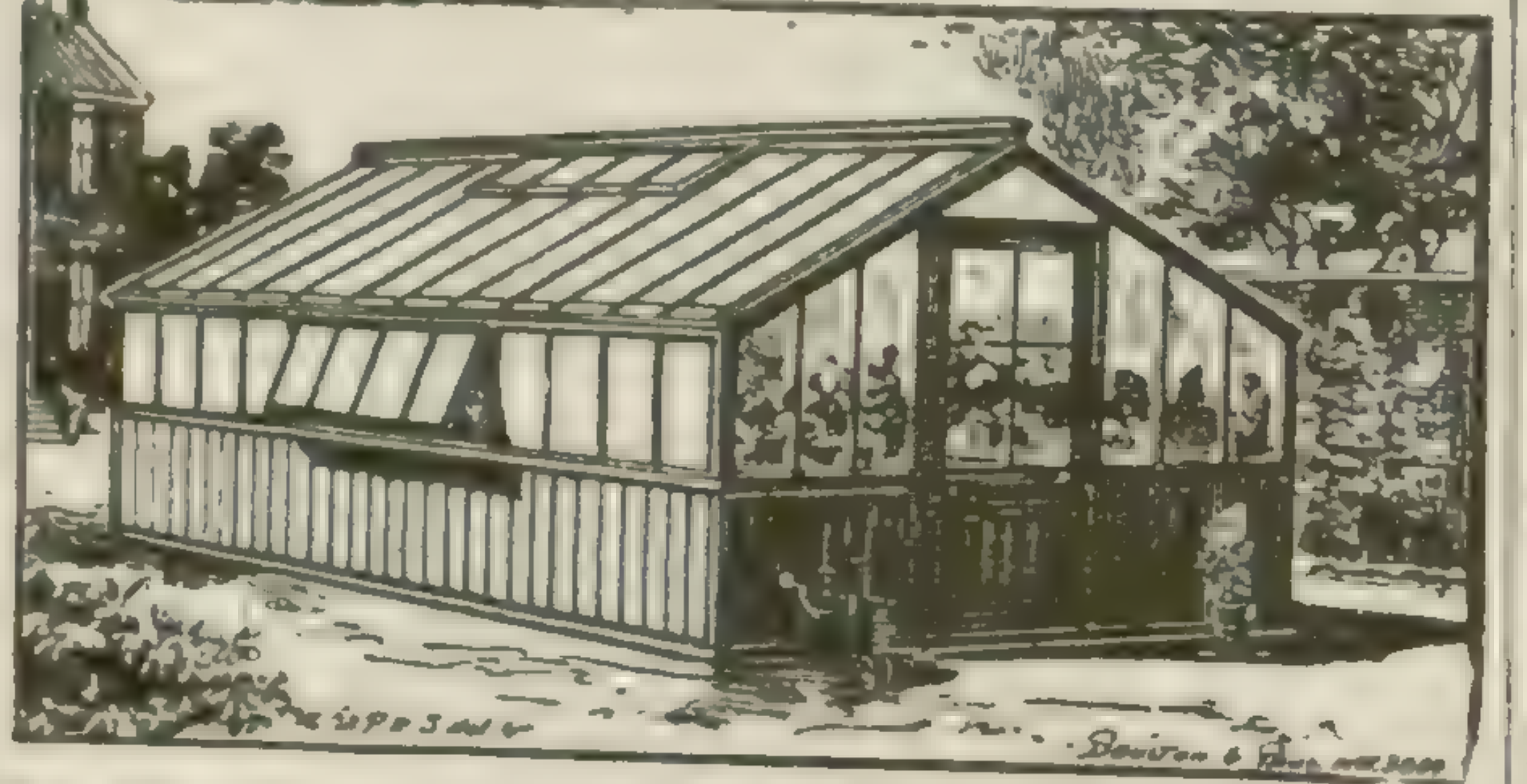

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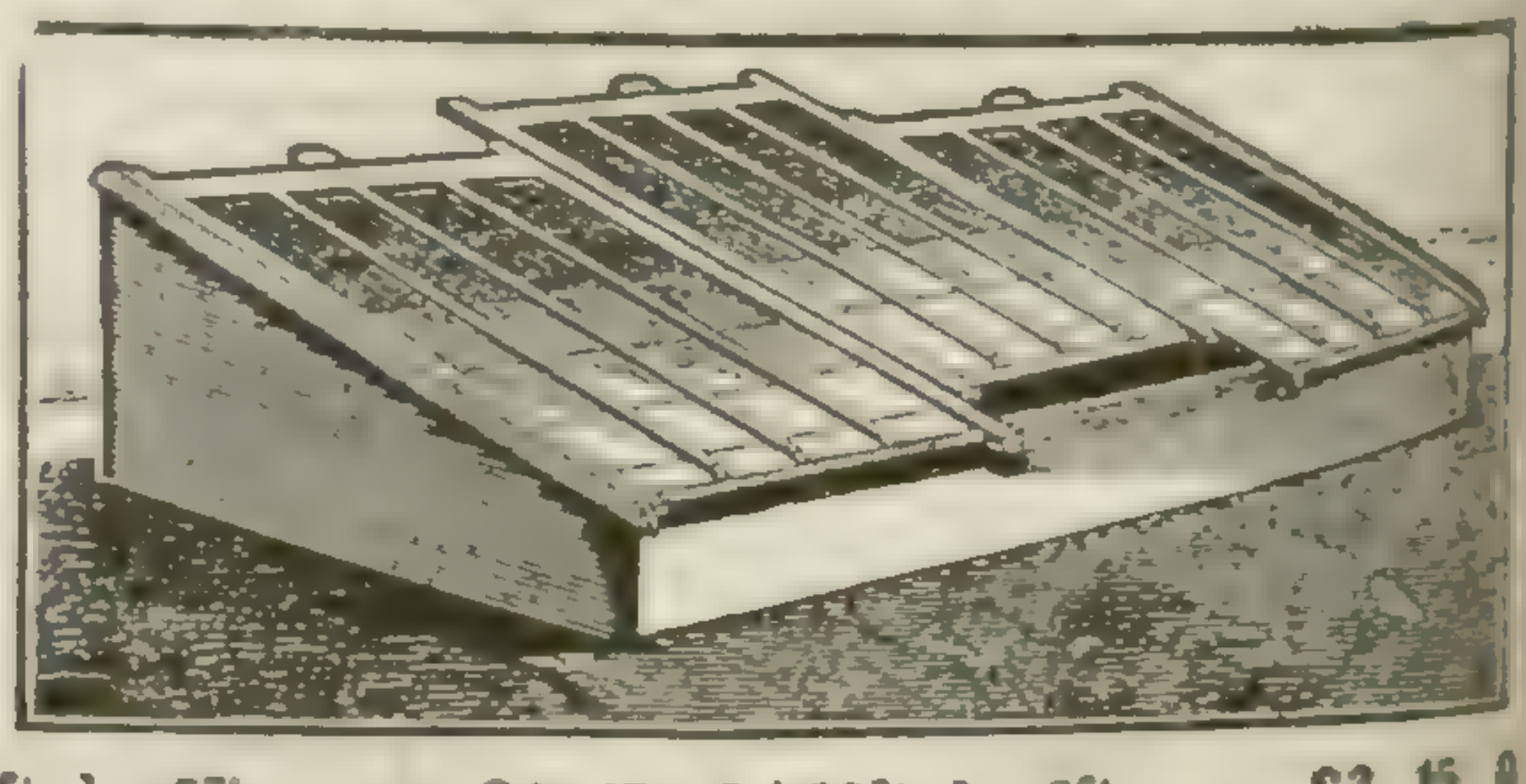

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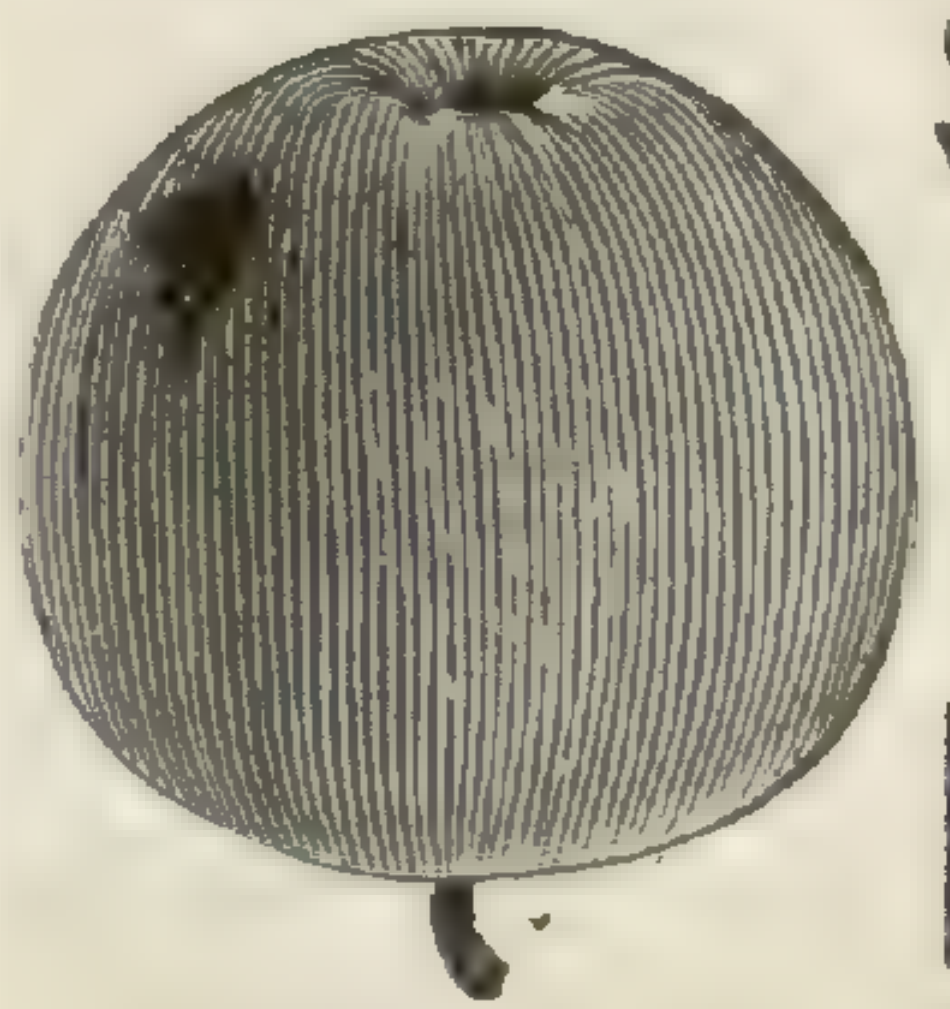

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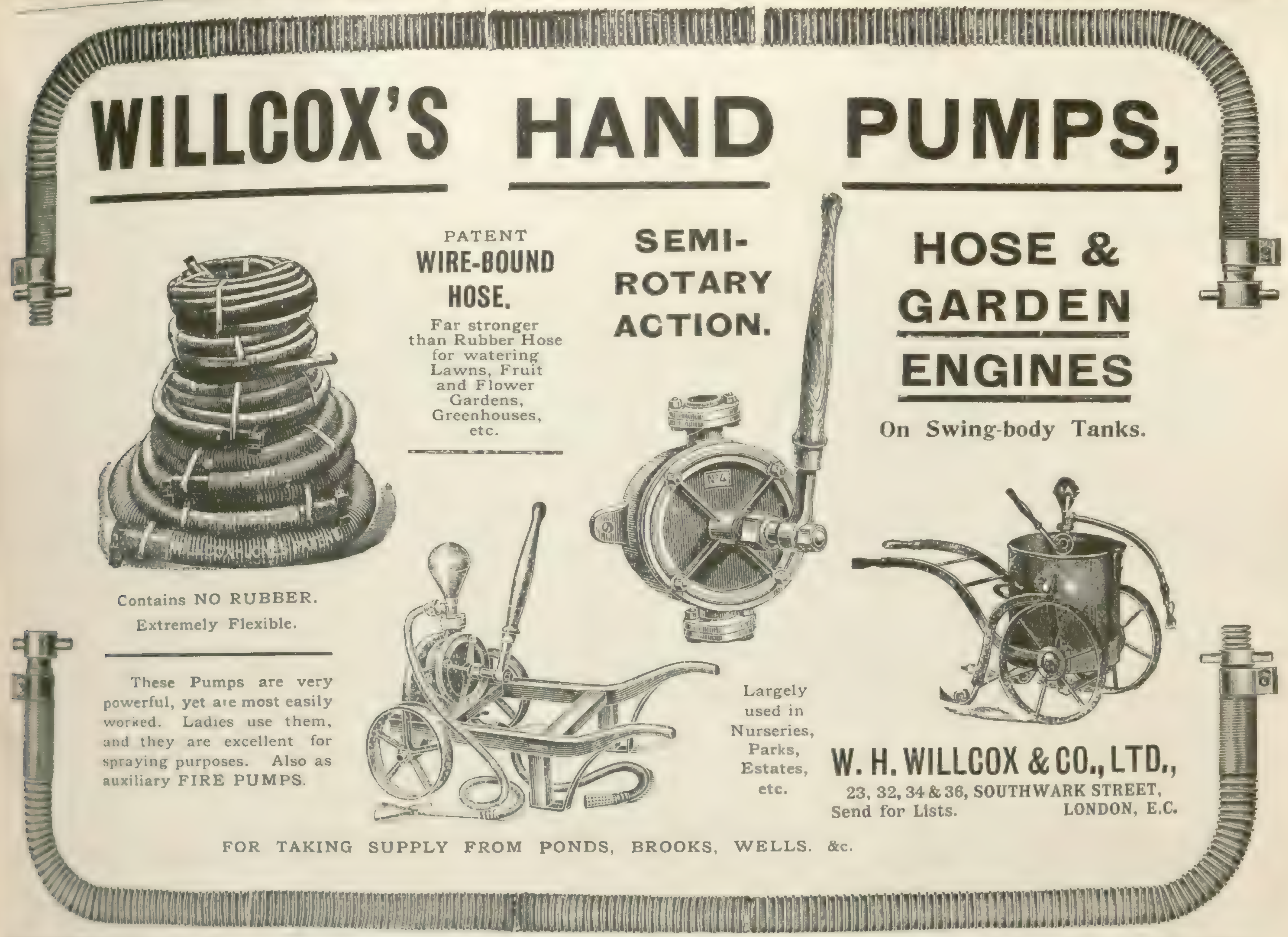

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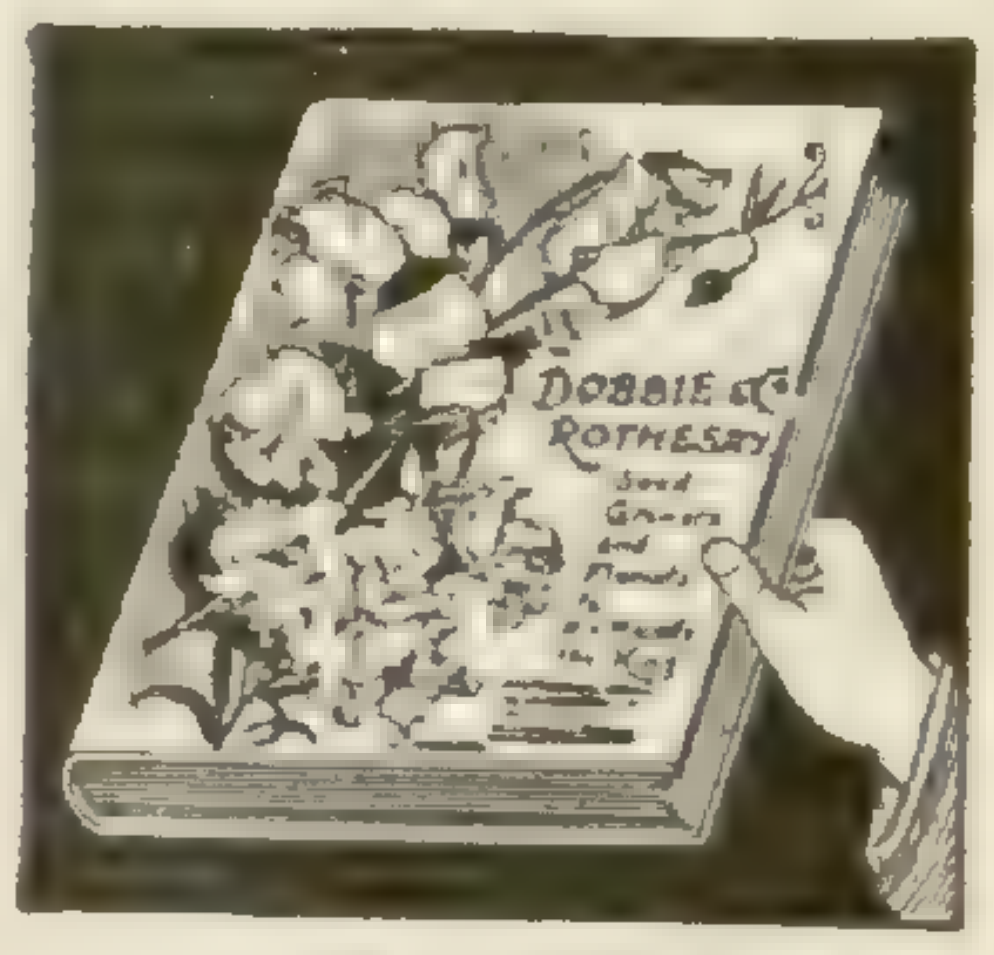

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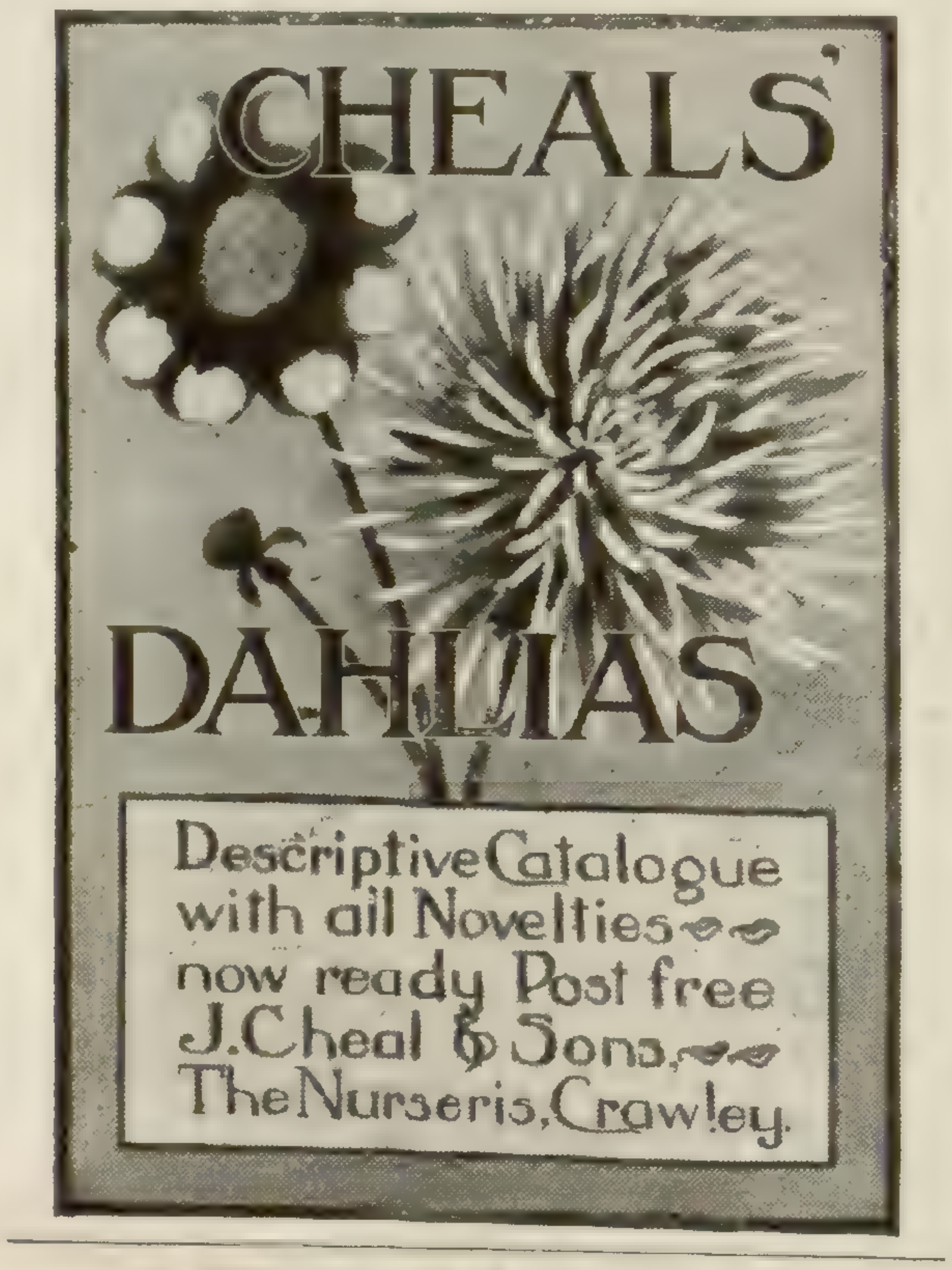

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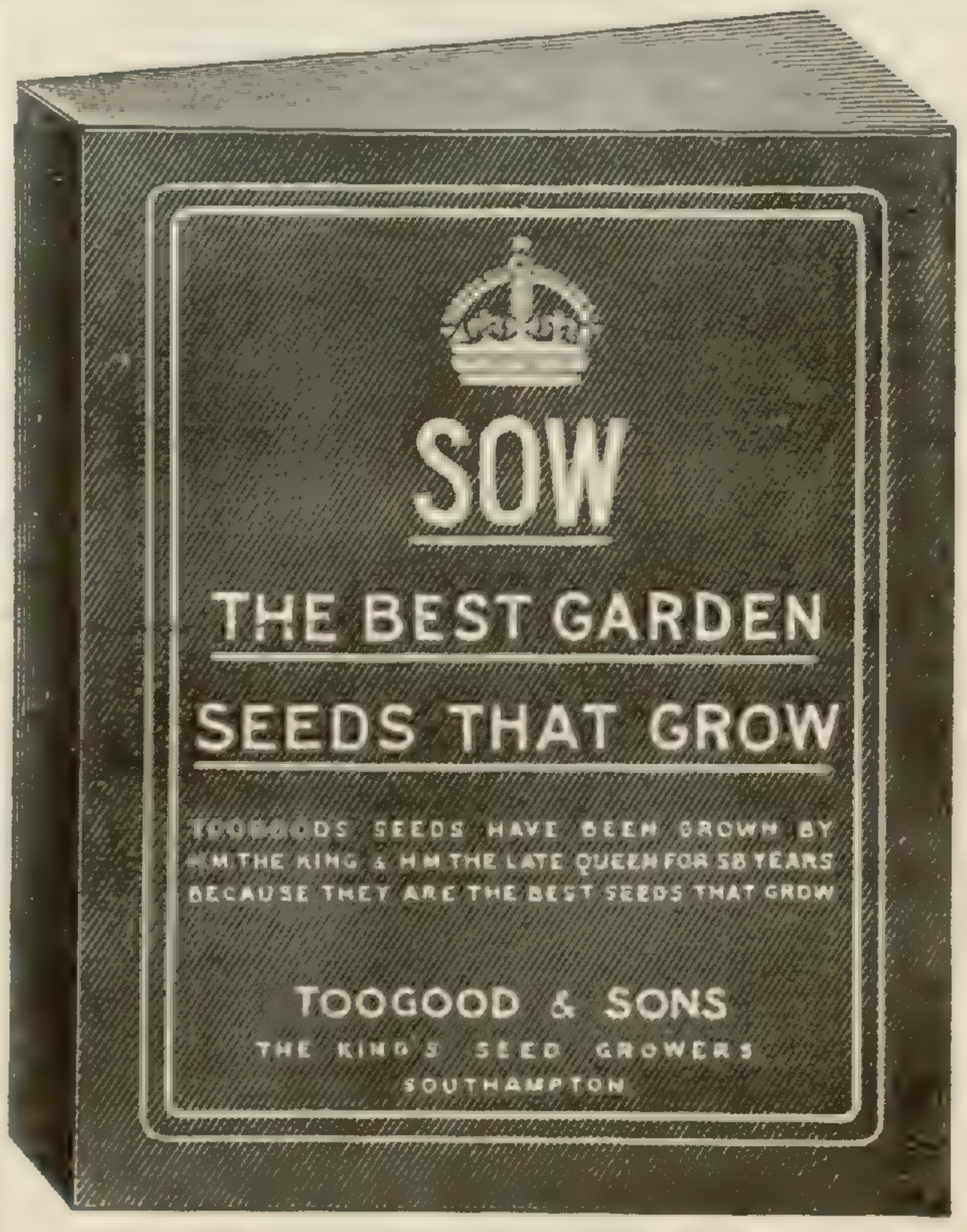
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MRS. PYM, F.R.H.S.,
9, Delph House, PETERBOROUGH.

Supplement to the Gardeners' Magazine, March 7, 1908.

SINGLE TULIPS.

Isabella—Primrose-Yellow, suffused with Pink:

Marguerite—Rose-Carmine, flushed with Red.

[illegible] the Gardeners' Magazine.

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VOL. LI.—No. 2,836. SATURDAY, MARCH 7, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Garden Annuals.

For a long period there was full justification for the complaints that were so frequently made to the effect that annuals were not used in the embellishment of the flower garden in proportion to their merits, or grown in such manner as to ensure the development of their distinctive characteristics to the fullest possible extent. These causes for complaint have not as yet been wholly removed, but there has of late years been so marked an improvement both in the appreciation in which they are held by the flower loving community, and in their cultivation, that it is now possible to regard the progress that has been made with considerable satisfaction. The finer kinds are now grown somewhat largely, and with the clearer views that obtain with regard to their cultural requirements they contribute in no small degree to the summer attractions of many of the most beautiful gardens in the United Kingdom. This change in the estimation in which these subjects are held is in part due to the immense improvements that have been effected in them, as the result of unremitting endeavour on the part of the seedsmen and the facility with which they can now be included in the summer arrangements. When, as was the case for a long series of years, the plants were massed in beds or borders, or arranged to form divers patterns, it was practically impossible to employ annual flowers otherwise than in comparatively small numbers. But few of them could be made to fit in an elaborate colour scheme, and of these a very small proportion could be depended upon even under the most favourable conditions to continue to bloom until the close of the season. With the mixed style of planting that now enjoys so high a degree of popularity the difficulty of using them extensively has disappeared, and they can now be so associated with both hardy perennials and tender bedders as to produce the most delightful effects. Moreover, in mixed beds and borders the general effect is not materially impaired if a few of the clumps become exhausted before the end of the season. On the other hand, when in accordance with the old practice the plants used in the production of the summer displays were arranged in large masses, many of the beds containing but one kind, the collapse of any particular subject was a very serious matter. The improvements that have been made by judicious cross fertilisation and careful selection have greatly enhanced the value of annuals for garden decoration, inasmuch as they include a more vigorous habit as well as flowers of a higher quality and a wider range of colours. So materially have they been improved that it would be difficult to overestimate the splendid work that has been accomplished by the various firms engaged in the production and distribution of flower seeds. Especially is the value of this work evident in the newer types of asters, candytufts, centaureas, chrysanthemums, eschscholtzias, godetias, nemesias, Drummond's phlox, poppies, salpiglossis, scabious, stocks, sweet peas, and zinnias. It is hardly necessary we should refer otherwise than briefly to these important classes, but it may with advantage be pointed out that they include some of the finest of the flowers of annual duration, and should be given prominent positions in the flower garden. With regard to these, as to other classes, the self-evident fact may be stated that the same time and attention are required in the cultivation of inferior types as in those of the highest quality, while the effect produced is much less satisfactory; therefore, as the difference in the cost of seed of the two types is relatively small, that of the best only should be purchased and sown. If there be occasion for the exercise of the greatest economy in seed buying, the reduction in the cost should be effected by the purchase of a smaller quantity rather than by obtaining seed of a second rate type, and care be taken to fully utilise the whole of the seeds contained in each packet. In not a few instances a reduction in the quantity of seed available will be a distinct advantage, as the smaller number of seeds may have the effect of inducing cultivators to sow and plant more thinly than has hitherto been considered desirable. In the sowing of seeds of annuals, and in planting out those raised under glass, there is still much room for improvement, for seldom is sufficient space allowed for them to attain their full development and give their full complement of flowers. There has been a considerable improvement upon the old practice of sowing the seeds as thickly as those of "mustard and cress," and then thinning the seedlings to a distance of two or three inches apart, but as a rule room enough is not given for the plants to branch freely and thereby produce a succession of flowers extending over the whole season. Not only is enough space for the free development of lateral growth necessary, but it is essential to success that the soil be deeply dug and liberally enriched, and the plants thereby placed under the conditions favourable to their making a sustained growth.

MR. R. IRWIN LYNCH, M.A., V.M.H.,
Curator of the Cambridge Botanic Gardens.

Mr. R. Irwin Lynch, V.M.H., whose portrait graces the first page of this issue, has occupied the position of curator of the Cambridge Botanic Gardens for nearly thirty years, and during this period he has won the golden opinions of all who are acquainted with him and his work. Early in life, Mr. Lynch, like many other successful botanists and horticulturists, had the opportunity of spending several years in the Royal Gardens, Kew, and that he was careful to take full advantage of this has been made abundantly evident in the course of his career. While at Kew Mr. Lynch attained to a position of considerable responsibility, and in the fulfilment of the duties belonging thereto he achieved so high a degree of success that when the curatorship of the Cambridge Botanic Gardens became vacant he was appointed thereto. Going to Cambridge with a thorough knowledge of systematic and physiological botany and practical horticulture, those who were acquainted with his great natural abilities and aptitude for sustained effort were most sanguine in their anticipations with regard to the position to which he would attain. These anticipations have been more than realised, for the gardens of which he is curator have become one of the most important botanical establishments in the provinces, and he has become one of the principal authorities on several classes of plants of much importance. Mr. Lynch has been especially successful with the iris, to which he has devoted much attention, and his "Book of the Iris" is a model of its kind, and indespensable to those who take an active interest in these beautiful plants. The gardens under Mr. Lynch's care have acquired considerable fame for the comprehensive collection of hardy opuntias that he has succeeded in forming and cultivating so successfully. Mr. Lynch has also devoted considerable attention to the gerberas, and as the result of his labours a fine race of these distinct and beautiful plants has been created. The splendid work that has been accomplished by Mr. Lynch is fully recognised at Cambridge, as proved by the fact that two years since the University conferred upon him the degree of Master of Arts. Elsewhere his efforts in the cause of botanical science are highly appreciated, and as a mark of their appreciation the Council of the Royal Horticultural Society conferred upon him in 1906 the Victoria Medal of Honour in Horticulture.

The "Gardeners' Magazine" in 1908.—During the current year beautiful and interesting gardens will receive prominent attention, and will be freely described and illustrated. We shall make a special feature of illustrated descriptions of the great gardening districts in the United Kingdom. These will appear at regular intervals throughout the year. We commenced the series with an account of the horticultural features of the Isles of Scilly in the issues for January 4 and 11, followed in February (8 and 15) by descriptions of the more noteworthy gardens in the district of which the Sussex town of Horsham is the centre, and in this issue we give the first of the two articles descriptive of some of the more famous Cornish gardens. Special attention will also be given to garden architecture: rock, mural, and water gardening; hardy border flowers; roses and carnations; chrysanthemums; and sweet peas; orchids and their cultivation; birds and insects; plants and flowers from seeds; fruit culture in the open and under glass; the kitchen garden; and scientific horticulture and novelties. We shall continue to make a special feature of illustrating successful examples of cultural skill, artistic arrangements, and new plants, flowers, fruits, and vegetables. We would add that the rate of subscription is: One year, 10s. 6d., post free; six months, 5s. 6d., post free; to foreign countries, 15s. per annum, post free.

Absorptive Power of Peas.—In experiments recently conducted by Mr. A. D. Darbishire it was proved that a wrinkled pea takes up a larger amount of moisture during germination than a round pea, and that cross-bred peas, between round and wrinkled varieties, were intermediate in this absorptive power, between the parents.

British Gardeners' Association.—A public meeting of the association will be held at Carr's Restaurant, 264, Strand, W.C., on Saturday, March 7, at seven o'clock, when Mr. George Gordon, V.M.H., will preside, and an address on the work of the association will be delivered by Mr. J. Weathers, secretary of the association. This meeting is being held especially for the employees in the London parks and Metropolitan gardens, and a very large attendance is expected.

Paris Rose Show.—M. J. Gravereaux, the well-known rosarian of Hay, has called our attention to the exhibition of roses that he is engaged in organising. The exhibition will be held in that part of the Bois de Boulogne, Paris, known as Bagatelle, and will be devoted to varieties introduced in 1907 and 1908. Their merits will be determined by a competent jury appointed by the Municipal Council of Paris and the Prefect of the Seine, and this jury will meet in the first fortnight of June. Rosarians in this as in other countries are invited to contribute to the exhibition the varieties that they are distributing this year. Those who purpose taking part in the exhibition are requested to send a list of their varieties, with particulars as to the types to which they belong, the names of the varieties from which they have been obtained, and the names of the raisers and the places of origin, for the purpose of entering the roses in the catalogue and inscribing their names, etc., on the tallies to be affixed to them. The roses must be despatched to 4, Avenue de Villars, to reach there not later than the 14th inst.

Cigars from London-Grown Tobacco.—Cigars made from tobacco actually grown in London may appear an impossibility, but that is by no means the case. A portion of the 1906-7 tobacco crop grown experimentally in the gardens of the Royal Botanic Society, Regent's Park, has been properly cured and manufactured. The plants, as mentioned in these pages, were shown at the last International Tobacco Exhibition, and at the next exhibition, which will be held at the Horticultural Hall in the course of this month, the cigars made from their leaves will be shown. These cigars, it may be added, are smokable, though it is probable that a certain measure of patriotism and London pride is required to rise to the level of their aroma and taste. The growers of the London leaf and the makers of Flor de London do not claim to rival Havana. What they claim is to have established a record that of having produced and worked up into cigars a crop of tobacco grown in London, and this claim is fully justified.

Eaglesfield Park, Woolwich, a new open space of about nine acres, was opened to the public on Saturday, February 29. The park was purchased for £4,541, and as it is on the summit of Shooter's Hill, 420ft. above sea level, it commands extensive views over Kent and Essex. Mr. Ambrose Pomeroy, vice-chairman of the Parks Committee of the London County Council, presided at the opening ceremony.

Visitors to Kew.—We have already stated that the visitors to the Royal Gardens, Kew, during 1907 numbered 2,962,714. It is interesting to notice that this shows an increase of 623,222 upon the visitors during 1906. The average number of visitors for the ten years 1893—1902 was 1,352,425, so that the record for 1907 was more than double that average. The average attendance for 1903—7 was 2,011,748, the figures for the several years being respectively 1,352,548, 1,579,666, 1,824,319, 2,339,492, and 2,962,714. The total Sunday attendance for the same years amounted to 568,726 in 1903; 675 225 in 1904; 853,631 in 1905; 867,148 in 1906; and 1,268,501 in 1907. These figures prove how increasingly popular these National Gardens have become.

Spangle-galls of the Oak Eaten by Birds.—We learn from the "Kew Bulletin" that in October, 1907, a small packet of "seeds" was received at Kew from Mr. F. Monteith Ogilvy, Ledaig, Argyllshire, N.B., together with a letter in which it was stated that the contents of the packet had been taken from the crop of a Grey-hen (the female black grouse), shot on October 17. The crop of the bird was found to be full of these "seeds" and an immense number of small black beetles; a few days later the crop of a Black-cock was found with similar contents. The supposed seeds, which were yellowish-green and smooth, proved to be the common spangle-gall of the oak leaf (Neuroterus lenticularis), the characteristic hairs having been rubbed off. Again in December the contents of the crop of a pigeon (a bird of the year), shot close to Pembroke, were received at Kew through the Board of Agriculture and Fisheries, and in this case also the crop contained a large quantity of the common spangle-gall.

A Rubber Exhibition is to be held at the Royal Horticultural Hall, Westminster, in September next, and, remembering how great is the interest taken and how large the amount of money invested in the rubber industry, the exhibition should prove successful and educational.

Colpomenia sinuosa, a brown Alga found in the Mediterranean and other warm waters, has been discovered at Torquay and Swanage, and it seems to have established itself at both places. This seaweed has not hitherto been known to live nearer England than the coasts of Southern Spain and France, and, though the discovery is an interesting one, it has its drawbacks, because Colpomenia sinuosa has the capacity of doing much damage to oyster beds.

Sir George A. Cooper, Bart., of Hursley Park, Winchester, who was president of the National Sweet Pea Society during 1907, has been appointed by his Majesty to serve as Sheriff of the County of Southampton during the ensuing year.

Presentation to Mr. G. P. Miln.—On Saturday evening last Mr. A. W. Armstrong, the president of the Chester Paxton Society, entertained the officers and members of committee with a few friends at dinner at the Blossoms Hotel, and advantage was taken of the event for making a presentation to Mr. G. P. Miln, the hon. secretary and treasurer. Mr. Miln has occupied the dual position for upwards of sixteen years, and so admirably has he discharged the duties associated therewith that the society has greatly increased in strength and influence. When in 1891 Mr. Miln added the duties of honorary secretary to that of treasurer, there were 80 members, and now there are 341, the classes at the exhibitions had been increased by 44, and the prize-money by £62. Appreciating the value of the service that had been rendered by Mr. Miln, the committee decided to ask his acceptance of the society's gold medal suitably engraved. The presentation was, in the unavoidable absence of Mr. N. F. Barnes, made by J. D. Siddall, who paid a warm tribute to Mr. Miln's abilities.

Our Coloured Plate.—With this issue is presented a plate in colours of early flowering tulips, which form the subject of an interesting article in the current issue from the pen of the Rev. J. Jacob.

WEEPING STANDARD ROSES.

In a recent issue of the Gardeners' Magazine (February 1) I dealt somewhat fully with standard roses of the ordinary type, with a view to bring into greater prominence their usefulness in the flower garden, and the conditions under which they can be grown to the highest degree of perfection. It will be remembered by many of my readers that I strongly advised a more liberal use of standards of hybrid perpetuals, hybrid teas, and tea-scented varieties because of their value in relieving the flatness so common when dwarfs are grown alone, and of the charming appearance presented by the huge bouquets of bloom they produce when in a robust state of health. Attention was also directed to the importance of selecting varieties that are by reason of their vigorous habit of growth especially adapted for cultivation as standards, and the desirability of having plants that have been worked on comparatively young stocks. The necessity for good cultivation was insisted upon because of the impracticability of having specimens with large heads when the soil is indifferently prepared and allowed to become more or less exhausted of plant food.

Much that was written with regard to standard specimens of the varieties of the three sections mentioned will apply with equal force to standards of rambling, and other roses of a weeping habit. It is not necessary, or even desirable, to plant them otherwise than sparingly in the rose garden; but they produce an effect so distinct and pleasing when planted in suitable positions and placed under the conditions favourable to the full development of their growth, that a few specimens should be regarded as essential to the proper furnishing of that part of the garden devoted to roses. There is hardly any part of the garden in which they are not highly effective; but they appear to the greatest advantage when assigned positions in the rose garden where each specimen can have a small circular bed wholly to itself. They ought also to be distributed with some degree of regularity over the area. They might be arranged alternately with beds of dwarfs or ordinary standards alongside the principal walks in the rose garden, as the combination is an exceedingly good one. It is an excellent plan, and specially where the roses are not grouped together in an area somewhat shut off from the pleasure grounds, to have oblong or oval beds filled with dwarfs and standards alongside one of the main walks, and to plant a weeping standard between every two beds. The size of the mixed beds and the distance apart must be governed by the size of the garden, the width of the walk, and the taste of the owner. If the beds are of comparatively small size the preferable course will be to have two between the standards. There are two good reasons for taking this course; one the loss of dignity when the standards are a short distance apart and the other their comparative expensiveness. With reference to the latter point it may be well to state for the purpose of avoiding misapprehension that weeping standards are not unduly costly, but they are necessarily more expensive than ordinary standards, and the planting of a considerable number involves a considerable outlay.

Later in the season I may say something about the preparation of weeping standards, but for the present I shall confine myself to the points that should have the attention of those who are desirous of obtaining at once standards by purchase at the nurseries. Seven or eight feet is a suitable height for standards of weeping varieties, and the stocks should be stout, quite straight, and with a healthy brownish green bark. Previous to the rose being planted a stout iron stake should be driven firmly into the centre of the station, and this should be of a length that will allow of it being, when firmly fixed in the ground, the same height above the level of the soil as the rose. It follows as a matter of course that the rose be carefully planted, and the soil trodden firmly about it, that the stem be securely fastened to the iron stake, and that two or three liberal waterings be given during April. It is advisable to prevent the bark of the stem coming into contact with the iron, and this can be readily done by binding a small hay or straw band, or a piece of cloth round the stake at the points where the stem of the rose will be secured to it. In all cases it is advisable to put a strip of cloth round the stem to prevent the string injuring the bark. Generally speaking the pruning will consist chiefly in cutting out the old and exhausted wood and leaving the growths of previous season to take its place, after a few inches have been removed; but the first season all the shoots should be pruned rather hard back to ensure strong growths from their base. When the roses are well established and growing vigorously, an iron hoop about three feet in diameter may be fixed four feet or so above the ground level for the purpose of so regulating the growth as to produce well balanced specimens. These hoops can be supported by two or three iron rods.

A large number of varieties is not necessary, and the following selection may be suggested as comprising the finest of the varieties suitable for culture as weeping standards: Alberic Barbier, Blush Rambler, Dorothy Perkins, Flora, Dundee Rambler, Hélène, Felicité et Perpetué, Hiawatha, Jersey Beauty, Lady Gay, and Tea Rambler. Viator.

A BEAUTIFUL WEEPING STANDARD ROSE.
In the gardens of Town Close House, Norwich, the residence of E. T. Boardman, Esq.

Large Chrysanthemum Blooms.—On page 102 Mr. Molyneux invites me to show him blooms of F. S. Vallis sixteen inches in diameter. Permit me to say I do not believe such blooms ever existed in fact. The figures I took from Mr. Molyneux's own article on p. 333, December 8, 1907, and from a paragraph over the signature of "Sadoc" on p. 40 of the Gardeners' Magazine of January 11.—R. Barnes, Malvern.

GARDEN SEATS—I.

Leigh Hunt has written, "Oh for a seat in some poetic nook"—and how often in passing through a garden has one's own heart echoed that desire. Poetic nooks there are in plenty, and of garden seats there is no lack, but putting the two together has, apparently, in many cases, never occurred to the proprietor of the domain, and we have to take our choice of either resting on a seat commanding no particular view of charm, or feeling of peace, or, having found such a spot, must needs enjoy it standing, or court present discomfort, or possibly future pains, by reposing on the ground.

The disposal of seats in the garden is a matter that should claim the utmost thought and attention, both as regards their position in the landscape, the sense of their own picturesque value, and also the pleasing and restful effect of their surroundings on those who make use of them. For a seat to be merely an object to sit upon is to give it but a tithe of its opportunities. It should invite. It should give us just what we feel expressly in need of at the particular moment in the way of sun or shade. How many gardens are there whose seats have either permanently retired, like evil spirits, to the gloomy shadow of evergreen trees, or else stand, summer and winter, on a terrace or lawn, to which ladies are forced to carry their own shade with them in the shape of hats or parasols, poor substitutes for the cold fragrance of green branches?

Your seat should, above all things, offer rest and refreshment to the mind, the shadowy beauty of woodland in the summer, with, if possible, the audible sound of cool, running water, or harmonious voice of fountain or waterfall; and in the springtide of the year, a glimpse, in the near distance, of a primrose or bluebell-decked copse, with its orchestra of birds and little comedies of wild life for entertainment; a distant view of gently-sloping green cornfields, scarlet with poppies, or the crimson and golden glory of autumn. Very acceptable is a terrace with as cheery a scene as possible for the rare days of winter sunshine—a terrace to which one's feathered players of the April days shall transfer their stage, and titmice, robins, squirrels, and other little people of the woods, augmented, possibly, by visitors from foreign climes, shall give their performances by way of thanks for hospitality received. Let the garden offer of its best to those who rest awhile therein, particularly let it bring its perfumes for their refreshment, and let no old stone seat or quaintly-fashioned bench be set up without planting by it some fragrant flowers, to give a charm to present thoughts, and suggest, with that subtle power that all scents possess, the happy memories and fancies of the past.

If one has the advantage of beautiful views in the garden, a glory of colour, or a still pool, what is more to be approved of than the provision of some seat on which to rest and admire the charming sight, and to let the full beauty of the scene impress itself upon the retina of the mind? Yet how often are such opportunities neglected in the garden? And the chance of admiring to the full some lovely view in peace and quietness, or of resting after an arduous climb or lengthy walk is, unhappily, too frequently conspicuous by its absence in our gardening schemes.

S. W. Fitzherbert.

THE BEST SIX LONG KEEPING APPLES.

My remarks upon this subject will refer to culinary varieties of apples only, and the opinions given will be entirely confined to varieties that are capable of being kept in good condition until well on in March. These varieties we have cultivated here for a period of not less than fifteen years, so that it cannot be considered my judgment has been formed without fair experience. Further, we have a very good and representative collection of the leading varieties of apples, and the number of trees grown of each ranges from seven to thirteen.

Annie Elizabeth.

This variety is of compact, upright, clean growth, but does not bear well for several years after being planted; in fact, we at one time thought of regrafting our trees with another variety, but after they became well established they cropped well, and in some seasons they yield heavily. The fruits are large, solid, and handsome, and of first-rate quality; it is a variety well worth waiting for.

Bramley's Seedling.

As with the foregoing variety, trees of this do not crop satisfactorily while in a young state, at which stage, if grown as bushes, they may be improved in this respect by being root pruned. It is a robust grower, and is best when grown as a standard, under which condition a farmer friend, who grows a goodly number of varieties, considers it the best of the late keepers. Its fruit is very large, flattish, heavy, and briskly flavoured.

Hormead Pearmain.

This is one of the most regular and good croppers, and a long keeper, but it does not appear to be so generally planted as it deserves. The tree makes clean, free growth, and its fruits are moderately large, of conical shape, and though greenish-yellow in colour, it is handsome. It cooks well, and is also valuable for dessert in spring where apples are scarce.

Lane's Prince Albert.

Amongst choice apples this must be classed as one of the most fruitful; it is generally so fruitful, in fact, as to necessitate severe thinning. It is large, and, especially when exposed to the sun, particularly handsome. Its flavour is of the best, but some cooks object to the colour of the flesh after cooking. Its habit of growth is not wholly satisfactory, though it makes a better bush, or pyramid, than a standard. In the case of dwarf trees even it is often difficult, owing to extreme fertility when in a young state, to procure suitable wood to form good, shapely, full-sized trees.

Newton Wonder.

Taking every quality into account, I consider this the most valuable apple of my selection. It is of excellent constitution, and makes a splendid free-growing and free-bearing tree, either as a bush or standard. Its fruits are beautiful in shape and colour, large and heavy, and among the latest of keepers. This variety is being commonly planted in orchards in this district.

Dumelow's Seedling.

This is a well-known sharply flavoured and splendid cooking apple of medium size. It makes a prolific, well-shaped bush, but is in some places subject to canker, though here, planted upon a heavy, well-drained soil, it is almost exempt from this plague. The variety is best known as Wellington.

T. Coomber.

The Hendre Gardens.

LILACS.

Now that flowering shrubs are obtaining their proper position, choice varieties of lilacs will add interest to the garden during May and June.

Thanks to the energy of our French neighbours we have now quite a long list of varieties to choose from. Having a strong love for the better lilacs I venture to give a selection of desirable varieties.

Double Flowered Varieties.

Among white flowered varieties we have now several to choose from. Mdme. Abel Chatenay is quite one of the best; it has immense spikes of pure white blossoms. Mdme. Lemoine is an extra good variety, giving huge panicles of pure white flowers; this is a good variety for growing in pots. Mdme. Casimir Perrier is newer than the preceding, and is in every way a charming variety.

Of varieties of more recent introduction Miss Ellen Willmott is one of the finest, giving large trusses of snowy whiteness. Jeanne d'Arc is another of quite recent introduction. Taglioni, porcelain white; Banquise, and Mdme. de Miller are also quite new, the latter is a dwarf-growing variety.

Of coloured sorts the following are desirable; Alphonse Lavallee, very large panicles, blue, shaded violet. Charles Joly, dark purple, the finest of dark colours. Countess Horace de Choiseul, creamy white, shaded rose. Comte de Kerchove, rose, very free. Doyen Keteleer, pale rosy-lilac, large spike. Emile Lemoine, flowers large, panicles of fine globular form, colour lilac. La Tour d'Auvergne, flowers very double and large violet-purple. Mdme. Jules Finger, satiny-rose, very fragrant. Sauvenir de L. Thibaut light red, reverse of petals white. President Carnot, large panicles, pale lilac. Leon Simon, coral buds, changing to blue. Condorcet has large spikes of blue flowers. Mary Micheli, clear lilac-blue. Renoncule, pale mauve. Michael Buchner, pale lilac with pink margin. President Grevy, cobalt blue with rosy edging.

Among quite new varieties Dr. Troyanowsky has enormous flowers, blue, changing to azure. President Loubet, deep purple red, buds carmine, is one of the darkest. Maurice de Vilmorin has very large flowers, blue with a white eye. Waldeck Rousseau has extra large flowers, rose-lilac, white towards the centre, a charming colour.

Single Varieties.

Of single flowered varieties the following are good: Souvenir de Louis Spath, long panicles, individual flowers large, dark purple, quite one of the best lilacs in cultivation. Marie Legrave, an exceptionally free flowered white sort, valuable for forcing. Ville de Troyes, dark purple, distinct. Mdme. Briot, bright red. Gloire de Lorraine, red buds, changing to lilac. Philemone, dark red. Professeur Stockhart, blue-lilac. Triomphe d'Orleans, light blue, good habit. Gloire de la Rochelle, rose-lilac, changing to a pale blue. Beranger, blue-lilac, very free. Duchesse d'Orleans, pale blue, very free. Mdme. Kreutzer, large spikes of vinous red flowers. Toussaint Louveitre, dark crimson, changing to dark violet. L'Oncle Tom, deep violet-purple, large spikes. Pasteur, erect trusses, large flowers, colour wine-red, changing to mulberry-red.

E. Molyneux.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London

SENECIO TANGUTICUS.

The introduction of this comparatively new ragwort to small and narrow borders has proved disastrous to many plants growing in association with it, and many have been compelled to regard it as more than an ordinary nuisance where space is limited. Its vigorous aggressiveness is, however, an excellent feature in the informal garden, the wild garden, and in woodland planting, as it proves beyond doubt it can take good care of itself, and in such positions the plant possesses a measure of attractiveness that well accords with its surroundings.

Studied as a border plant it falls short of a given standard of excellence by many points, its root system beats perennial sunflowers hollow in sheer aggressiveness, its inflorescence when studied at close quarters lacks refinement, and as a robber of plant food it has few equals. There is a saving grace in its handsome leafage, for the three months of summer, however, but this is not enough in a good border plant.

Used in the wild garden there is a different tale to tell, and it is probably in this sphere that its greatest garden value will be realised. It has all the characters of a plant that appears at its best in broad groups destined to be viewed twenty yards distant, and one can recommend it for rough broken ground disposed at this distance from the approach. Grouped thus it is decidedly picturesque, the leafage loses none of its elegance, the stout stems, two yards high, are in clear outline, and the giant panicles of few-petalled yellow flowers become distinctly plumy in appearance. Nor is this all. The silky pappus that follows the flowers give a silver-grey cloud of surpassing beauty, a feature that should do much to render this plant popular for sites difficult of cultivation.

G. B. Mallett.

CYMBIDIUM WINNIANUM.

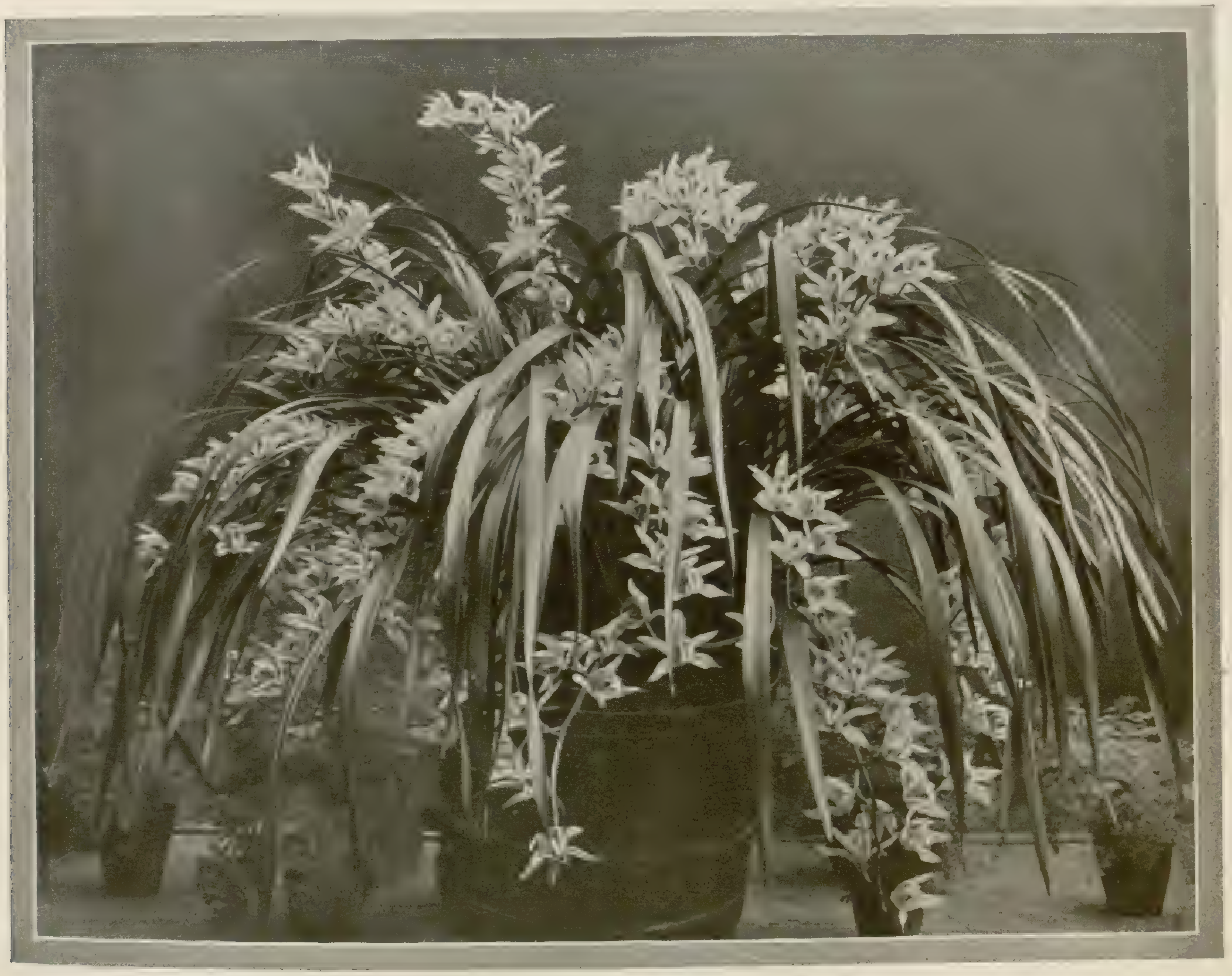
This distinct and handsome cymbidium was the second raised hybrid member of the genus. It was raised in the collection of Charles Winn, Esq., of Selly Hill, Birmingham, reputedly from C. giganteum and C. eburneum, and when a plant of it was shown by Messrs. Sander and Sons in 1891 it received a First Class Certificate from the Royal Horticultural Society. From the outset there was a suspicion that there was some mistake as to parentage, and since then it has been proved that C. Mastersi, and not C. eburneum, must have been the pollen parent. The accompanying illustration, which represents a noble specimen of this fine orchid, is reproduced from a photograph taken early in the year, of a plant as it flowered in the collection of Major G. L. Holford, Westonbirt, Tetbury. The plant bore twenty-one spikes, and an aggregate of two hundred and twenty flowers, the best spikes carrying fifteen flowers each.

Here the cultivation of specimen orchids is aimed at, and with a fair amount of success, and especially with terrestrial kinds. Eight years ago this particular plant was growing in a six-inch pot, now it is accommodated in a teak-wood tub eighteen inches in diameter, and no further disturbance is anticipated for some few years to come.

This hybrid has now many beautiful companions, thanks to the ardent hybridist. Nearly all are vigorous-growing plants, and therefore not adapted for small houses, but where head-room can be provided no more stately and beautiful orchids than the showy members of this genus can be desired. They are free blooming, healthy growing plants when properly attended to, and have few equals as regards the lasting qualities of flowers, either remaining on the plant or in a cut state. The plants soon grow into specimens, and it is only when thus seen, a picture of health and vigour, and well flowered, their full beauty can be realised. Full cultural details are not necessary here, as these are always dealt with so admirably in the proper season in the weekly orchid calendar. I may, however, add that in the cultivation of cymbidiums the mistake that used to be made was in treating them as if they were epiphytes. It should be borne in mind they are terrestrial orchids, and it is obvious that a substantial compost is necessary for them to root in. Another mistaken idea was that of growing them in too high a temperature. This has, however, proved to be erroneous, as the plants thrive best in a temperature slightly higher than that generally afforded odontoglossums, and with an abundance of fresh air.

H. G. Alexander.

Westonbirt Gardens.



CYMBIDIUM WINNIANUM.

A fine specimen in Major G. L. Holford's collection at Westonbirt.

PERPETUAL CARNATIONS FOR PRIVATE GARDENS.

It has, I think, long been recognised by practical men that what pays the market grower is also, in a great measuré, equally useful to the private gardener, excepting perhaps that some shades of colour may not be favourites with all owners of gardens.

The ever-increasing popularity of the perpetual-flowering carnations, their beauty, and usefulness as cut flowers, and for personal wear, and their comparatively easy culture places them in the front rank of winter-flowering plants, and, indeed, which may be flowered the year through if properly attended to.

PERPETUAL-FLOWERING CARNATION DUCHESS OF PORTLAND.
Award of Merit, R.H.S. Flowers, soft pink.

While it is not altogether necessary to build special houses for these plants, yet where a large display of bloom is required at one time a good house should be allotted to them, and this, with the addition of pits for bringing on the successional batches of plants, will give the cultivator all the accommodation necessary for the production of good blooms. There are, however, many gardens where existing glass structures that have been used for other purposes have to answer for carnations, and if they are light and airy, and the plants can be kept near the roof glass, such houses or pits answer well for the purpose. We grow and flower our plants chiefly in span houses or pits, the path running through the centre, and the stages on both sides. These pits have been used in former years for different purposes, among others for the culture of pineapples, and they make excellent places for the carnations, as the plants are near the glass, with abundance of light and ventilation. Much piping will not be required, but there should be sufficient to maintain a temperature of 50 degrees to 60 degrees without the pipes becoming unduly hot, for fire-heat will only be required in very cold and very wet weather, and the pipes should not be in close proximity to the plants.

In the selection of varieties one needs the best, but colour is a question of individual taste, and what may find favour in some gardens may in others be rejected. Mrs. Lawson is not liked here as it has not a good daylight colour, but it is very effective under artificial light. This shade is very prevalent in the American varieties, and it also shows itself in many of the seedlings from Mrs. Lawson. Of pink-shaded carnations Fair Maid is still one of the best for winter-flowering, or, in fact, any season of the year. I do not admire the form of the petals, but it has other good qualities which outweigh that objection. Of the merits of Mrs. Burnett, which created a furore last year, opinions will differ; it has done very well with us, and while it continues so we shall grow it in quantity. A recent remark of mine in the "G.M." concerning this variety brought me a note of congratulation from a noted grower who utterly condemned it, and complained of the flowers being affected by "sleep." Now it would be unfair to deny the fair lady a normal amount of rest. We have not experienced this fault in our blooms; "sleep" may be due to a cultural error. I have noticed it in other pink varieties, and at times in scarlets and whites. Enchantress will still hold its own as a light pink.

Mermaid is a pretty shade of pink, and gives a medium sized, neatly formed flower; it is an English variety, but a trifle weak in the stem. Fiancee is a rough, loosely formed flower, that does not appear to have much to recommend it, except stoutness of stem. Floriana is a useful shade of pink, and has other good qualities. Duchess of Portland, a beautiful large-flowered pink variety, introduced by Messrs. W. Cutbush and Son, is worthy of extended trial.

In cerise shades we have Mrs. T. W. Lawson, Nelson Fisher, and Elliott's Queen.

Whites will include White Perfection, a perfect shaped flower, but I fear not free enough to be grown largely, still, a few blooms of this variety are worth having. Lady Bountiful is supposed to be white, but we scarcely ever have a bloom without pink markings on the petals. Mrs. Norman is a fine white, but does not produce cuttings very freely. White Lawson possesses the good qualities of Mrs. T. W. Lawson.

Scarlets will include Britannia, but this is disappointing with me; it gives a nicely formed flower of good build, but is not free enough as yet. I am inclined to think this variety requires very little pinching. Robert Craig is a strong grower, and gives well-formed flowers. St. Louis has given us some beautiful blooms, that opened clear and good; it is a rich scarlet, always attracts attention, and gives the largest flowers we grow in this colour.

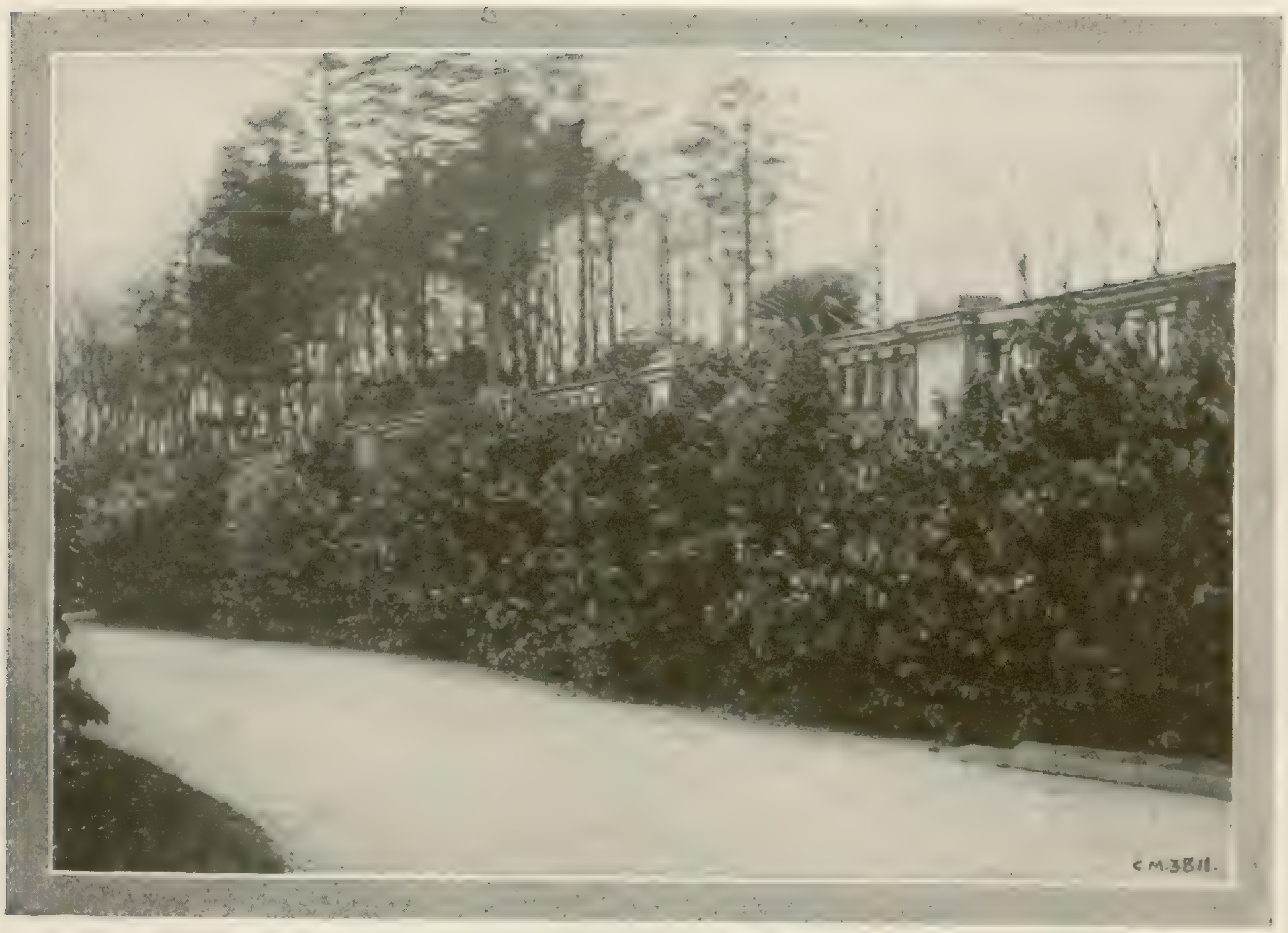
Crimsons are represented by Harlowarden; Daheim, good habit and colour; President, and Cardinal.

In fancies, white and yellow grounds, there are Dorothy Whitney, beautiful yellow fancy; Ceres, Prosperity, Mrs. M. A. Patten, and Jessica—the largest flowered in this section. Imperial, the new American bicolor, is now in bloom, but is far from pleasing in colour; Helen Gould is too variable as yet.

Among recent American novelties there appears much room for a freer branching habit of growth; a strong growth, with an occasional large bloom, is not sufficient return to make them profitable even in a private garden. As the best blooms are generally the first to open on the plants, to ensure a constant supply of high-class flowers many successional batches of plants must be grown to maintain the [illegible]. We appear to require for our winter-flowering period plants of free branching habit, so that as one bloom is cut others will speedily appear. The blooms should also be formed of large petals, without small ones in the centre, as such flowers would be more serviceable for our dull winter days.

T. H. Slade.

Poltimore Gardens.



CAMELLIA WALK AT TREMOUGH.

SOME CORNISH GARDENS.—I.

Because of its peninsular position the county or Duchy of Cornwall enjoys an unusually equable climate. Although it is the most southern portion of England, it cannot truthfully be called "the Sunny South." The west wind that brings so much warmth to Cornwall also brings much rain. The Falmouth district is a particularly favoured one, and the mean temperature for November is 47.5 degrees, for December 44.4 degrees, for January 43.2 degrees, for February 43.5 degrees, for March 43.9 degrees, and for April 47.4 degrees. These temperatures are the means taken over a period of twenty-nine years.

This equability of climate, especially during the winter season, is accounted for also by the action of the Gulf Stream. The sea round Cornwall is rarely below 46 degrees at the surface, even quite close to land, while some distance out the temperature is distinctly higher. Not only is the winter mean temperature very steady, but the range of temperature during that period is very small, i.e., about 4.3 degrees. These facts at once explain how it is that dracænas, palms, camellias, Himalayan rhododendrons, and even bananas flourish year after year out of doors unprotected.

Not so very long ago Lord Rosebery said, "Falmouth, preserve your beauty, for you will need it in the days to come, for the visitors who will throng to you." That advice is still needed, because in the matter of public gardens there is room for a great deal of improvement.

In natural beauty the Falmouth district is rich, especially round the harbour and for some distance up the River Fal. Many of the neighbouring private gardens adorn these beauty spots, and lend additional charm to a country where "the climate is that of the lotus-eaters."

Tremough.

Tremough, the first of the series of famous Cornish gardens to which attention is now drawn, is the property of D. H. Shilson, Esq., but the white mansion is now occupied by Colonel Brown. The entrance to the gardens is not far from Penryn Station, and as soon as one steps inside the gate the fact that rhododendrons are a leading feature is at once apparent. On either side of the broad drive that climbs slowly to the mansion are splendid examples of Rhododendron arboreum and other choice kinds, and one looks in vain for ponticum and other hardy sorts, such as grace the gardens in counties further north.

Tremough is a veritable home of the beautiful Himalayan rhododendrons. Not only do they thrive amazingly and flower profusely here, but they are made here—that is to say, Mr. Shilson and his late father, who was the pioneer of rhododendron culture in Cornwall, and Mr. R. Gill, who has so long had charge of the gardens, have ever been keenly interested in the hybridisation and cross-fertilisation of these beautiful plants, and have been particularly successful in raising new and beautiful ones.

Some distance up the drive the roadway is skirted with splendid masses of R. ciliatum, and in early spring these are smothered with their white flowers; they form compact specimens and make a capital foreground for the taller kinds. One of the larger specimens measures 18ft. through. Close to the house a long row of this beautiful rhododendron is used to form an edging to a huge bank of large Indian azaleas; in this case, the plants are smaller than those along the drive, but they are none the less beautiful.

After allowing ample room for carriages to reach the front door of the house, the drive continues through the gardens and estate. A little beyond the house the drive has been cut through the higher ground, and this has necessitated a retaining wall. This wall is surmounted by ornamental stonework, but it is all but hidden by the luxuriant growth of the fine camellias planted at its base. In early April these shrubs are gay with thousands of blooms.

Of formal gardening there is very little at Tremough. There are a few beds on the lawn, and these are kept bright with daffodils or begonias, according to the season. But the most interesting plants in this little flower garden are the big-branched examples of Dracæna indivisa in the several beds.

Coming again to the ever-present rhododendrons it is found that so numerous are the species, so remarkably varied their form and colouring, and so very fine the specimens, that there is considerable difficulty in knowing just where to begin or conclude any reference to them. As already stated, they skirt the long drive, they also fill huge beds and borders, and they clothe the margin of the thin woodlands that come down to the gardens on nearly every side.

The illustrations show something of the stateliness and wondrous beauty of the Tremough rhododendrons, and convey a little of the surprise they give to anyone familiar only with such plants in a big conservatory, winter garden, or the Temperate House at Kew. In one view Mr. Gill is standing by the side of a splendid R. arboreum about 20ft. high, and behind him is a densely flowered bush of R. ciliatum. Another picture shows a still larger tree, of R. arboreum roseum. This occupies a position close to the azalea bank, on the high ground above the camellia border, and part of it hangs gracefully over an old yew hedge. It must carry more than a thousand trusses of rosy blooms in its best seasons.

Not far from this spot the handsome R. Falconeri is found in a setting of R. arboreum varieties. This Sikkim species has enormous globular trusses of white flowers, admirably set off by the large, leathery, glossy-green leaves that are covered on the under surface with dense red-brown down. R. Thomsoni is perfectly lovely as I saw it, covered with neat trusses of blood-red flowers; it has smaller leaves, and is of lowlier growth than most others. Of R. campylocarpum, a yellow-flowered species, there is a fine example. R. barbatum is well represented, and R. arboreum varieties and seedlings are among the commonest plants in the garden. R. campanulatum and R. grande, two large-flowered species that are somewhat rare in more northern gardens, do well here.

A SPLENDID RHODODENDRON ARBOREUM ROSEUM AT TREMOUGH.

Among the hybrids there are some exquisitely beautiful things, and the chief of these are the glorious R. Shilsoni, the lovely rich pink Mrs. Henry Shilson, and the newer R. Duchess of Cornwall, and R. Gill's Triumph. R. Aucklandi, another species that is a success here, and gives the largest flowers of any member of the genus, has been used as a parent for many of Mr. Gill's seedlings, as is evidenced by the bold flowers and trusses so many of them possess.

The soil in which these rhododendrons thrive appears to consist of decomposed granite and leaf-mould, but soil and climate both suit them splendidly, and also agrees wonderfully well with the brilliant Embothrium coccineum, with the handsome Benthamia fragifera, with Andromeda formosa, with Clianthus puniceus—that flowers grandly against a wall, but is not otherwise protected, and with many other rare and choice plants.

At one end of the garden Mr. Gill has established a nursery, and here he has large breadths of many of these choice rhododendrons, lots of seedlings of Embothrium coccineum, and smaller plots of R. Falconeri, R. Shilsoni, R. Duchess of Cornwall, and R. arboreum varieties. Here, too, he has a home-raised stock of Dicksonia antarctica, seedling bamboos, a big batch of Lilium sulphureum, and scores of the fragrant Daphne indica. There are any number of other interesting plants at Tremough, including half a dozen strong seedlings resulting from the intercrossing of Rhododendron Falconeri and R. Nuttalli, all as yet unflowered, but these must suffice for the present.

Trelissick.

Trelissick, being translated, means The Dwelling on the Broad Creek. It is beautiful for situation, commanding delightful views over the River Fal, the broad Carrik Roads, and out to sea beyond Pendennis Point.

Trelissick has undergone a good deal of alteration and improvement of late, since G. J. Cookson, Esq., came to reside there. The estate is of considerable size, and the house is placed on the highest point of a ridge that slopes gently seawards, but very sharply on either side. This peculiar conformation of the ground has been taken advantage of, and one valley has been converted into a water garden. Here is a series of pools gradually descending from the head of the valley to the large lake down close to one of those broad creeks for which the estuary of the Fal is famous.

Around these upper pools are irises in great variety, and here and there where the land juts into the water bold clumps of gunneras luxuriate, their enormous leaves producing a wonderfully fine effect. Primula japonica is another subject that thrives around these upper pools. The slopes of this valley are well wooded, but near the pools rhododendrons are grouped, and various acacias give a wealth of fragrant blossoms in the spring time.

Probably, to anyone coming from less favoured counties, the chief interest of Trelissick would lie in the large lake at the bottom of the valley. A wide path runs along the top of the cliff that separates the lake from the creek, but from this path, during late spring and early summer, is seen one of the most wonderful sights to be found in English gardens. In the water, but near the bank, are masses of arum lilies, these extending right round the curved end of the lake. The plants are in perfect health, and in their season give thousands of beautiful white spathes. Of course, no protection is afforded at any time, in fact, beyond the occasional replanting of some part of the stock, this wonderful mass of arum lilies needs no attention.

In most places, the woodlands come down too closely and solidly to the margin of the lake, and so rather spoil the garden effect of this part of the valley.

Passing over the hill from this valley of the pools one reaches another and very distinct part of the garden. Here rhododendrons abound and bamboos flourish. Further round still, and not far from the famous King Harry Passage, across which one has to go to reach such places as Phileigh, Veryan, and St. Just, there is a good collection of coniferous trees. Here, too, is an extensive herbaceous border, very formally planted, with spreading lawns in front, and beds of T. and H.T. roses.

Trelissick is a garden of great possibilities. Nature, with some little help from art, has made it a garden of beautiful views. Mr. Day, the young head gardener, says there is only one drawback, and that is the poorness of the soil in many parts. The kitchen and fruit gardens need very close attention. Fortunately, the genial climate and moist atmosphere of this part of the delectable Duchy, are ever ready to lend powerful aid to any efforts put forth by the cultivator.

Rosehill.

In Falmouth itself, and set well up on one of the many high points the town possesses, stands the verandah-fronted residence of Howard Fox, Esq. From one point of view, nothing in the outward appearance of Rosehill would lead a person to believe there was anything of unusual interest within the garden boundary. But that is a way many of these Cornish gardens have. And yet, from among the many gardens I have visited I cannot call to mind one, in England, that is so altogether un-English as that at Rosehill.

Trim flower beds, gay parterres, spick-and-span pathways, and all the "smartness," so common in many new gardens—for these things Rosehill cares not at all. An almost tropical luxuriance prevails in this sheltered garden, and it would seem that the chief difficulty Mr. Jenkin (who has long had charge of the garden) experiences is that of keeping things within reasonable limits, rather than that of encouraging them to grow.

Rosehill has been badly misnamed. It should have been called Cordyline Hill, Banana Grove, or Musa House. There are plenty of roses at Rosehill, but surely no visitor ever looks twice at them. The fine old plants of Cordyline australis, the abundance of bananas, the vigorous and graceful bamboos, and the giant Arundo Donax, these are the things one admires, and of which Mr. Fox is pardonably proud.

The accompanying scene, taken from the lower part of the garden and looking upwards towards the house, indicates the character of the place. The broad stretch of lawn is bordered on either side with thick-stemmed, much branched Cordylines or "Club Palms," alternating with groups of Trachycarpus excelsus, tree ferns, and bamboos, the whole making up a picture of the character one associates in idle moments with a "Chateau d'Espagne."

But when one has grown accustomed to these cordylines Mr. Fox leads the way to his fern-bordered Banana Walk, and when you have pinched yourself to discover whether you are in England or whether there are "wisions about," he calmly remarks that in 1906 five specimens of Musa japonica fruited here, and that the tender Musa ensete often stands the winter at Rosehill.

I shall not attempt a detailed description of the various parts of the Rosehill gardens, but, instead, draw attention to a few of the choicer plants they contain. Acacia longifolia and A. verticillata, A. cordata, A. dealbata, A. ovata, A. armata grow freely, and bloom profusely. By the end of the summer a giant Datura sanguinea spreads its branches and bears its trumpet-shaped flowers over a space 75ft. in circumference! Bamboos are splendid, and during the summer of 1906 a stout young culm of B. fastuosa was measured carefully, and it was found to grow five inches in length each day for a period of three weeks.

On a wall facing south-west the citron flourishes, and is hardly ever without fruits. Olearia Gunni is a fine plant, and Piptanthus nepalense that needs a warm wall in the London district here becomes a bushy tree. Asparagus deflexus and Semele androgyna need no protection, and both fruit out of doors.

The bold Senecio petasites and S. grandifolia grow strongly and come into flower in January, and only in very bad seasons are their floral displays at all damaged. The ferns, too, are worthy of special note. Nowhere have I seen a larger mass of Lomaria procera than at Rosehill. Woodwardia radicans is in grand condition close by the doorway of the house. Plenty of fronds 10ft. long are to be found in this fine group. Mr. Fox says that several degrees of frost will do Woodwardia radicans no harm, but ten degrees will cut it down to the ground.

Senecio brachychætus ripanda is a splendid shrub 8ft. high. Diosma ericoides (syn. Coleonema alba) has been in flower for the past two years. Coronilla glauca, some genistas and fuchsias are also never without flowers, summer and winter.

Another plant, usually accounted tender, and with this I must conclude, is Rhodochiton volubile; it is a robust hardy climber here, and some further indication of the mildness of the climate at Rosehill may be gathered from the fact that it starts into vigorous growth at the end of March.

Penjerrick.

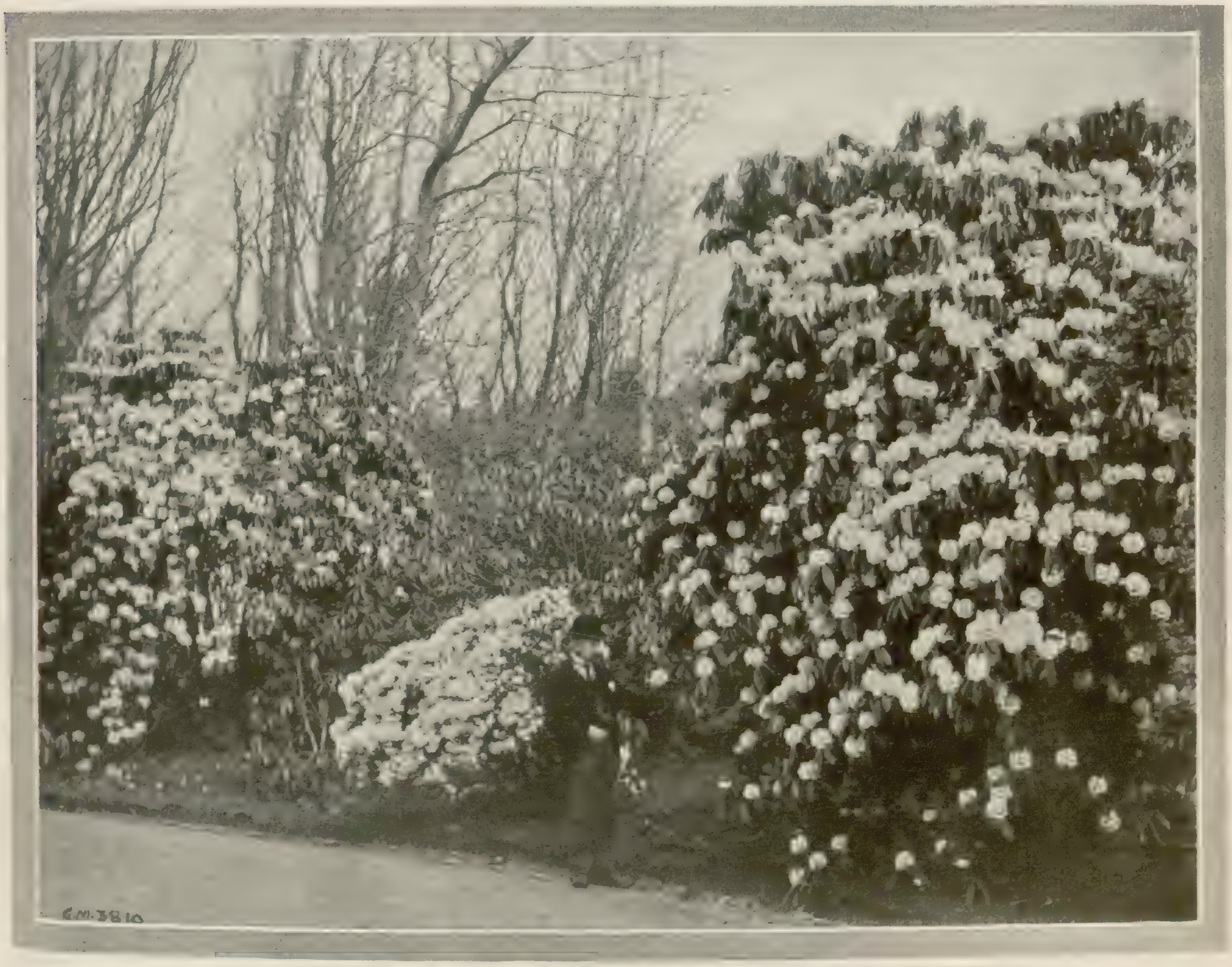
Camden has written:

> "By Tre, Ros, Pol, Lan, Caer, and Pen,
> You may know most Cornishmen."

The couplet would be equally as true if names of places rather than surnames were considered. These place names are of great interest because surnames were formerly taken from them; indeed, it is said that Cornish gentlemen of the eighteenth century, and earlier, not seldom changed their name when they changed their abode, using the name of the residence in each case.

Nearly all the names of the country residences have a meaning, and they are the remains of the Celtic language—Cymric, not Gaelic—once spoken over a considerable portion of the South of England. Penjerrick means "Head Rock."

Penjerrick, the residence of R. Fox, Esq., stands on a rocky eminence, at the head of a small valley that has been carved, wedge fashion, out of the hill side. The spot is a most picturesque one, and the wooded slopes give the garden ample protection, thereby increasing the favourable conditions of the locality. Here, as in most of the Cornish gardens visited, there is an utter absence of formality in design or planning. Fine rhododendrons abound, and stately conifers, big araucarias, and ancient dracænas raise their heads in all directions, showing by their colour and size how admirably the moist and mild climate suits them.



GROUP OF RARE HIMALAYAN RHODODENDRONS AT TREMOUGH.

Everyone familiar with the Crystal Palace will remember how, close to the great clock, there are some large examples of the giant asparagus, Semele androgyna. This robust climber covers a very large portion of the house front at Penjerrick, throwing up immense new growths every year, and fruiting and seeding freely on a south-eastern exposure; and yet this plant is a native of the Canary Islands. The Cydonia clambers over the porch, and in early spring is a blaze of brilliant scarlet flowers.

BANANA GROVE AT ROSEHILL.

The glass department is not extensive, but the whole of it is contiguous to the house. The most interesting part of it is a sunken, heavily-shaded fernery, where the ferns are prettily grouped in a very natural rock garden. Those exquisite gems of the fern world, the todeas and hymenophyllums, are perfectly at home in this moist indoor fernery, where, thanks to a kindly climate, they can dispense with artificial heat.

In the foreground of the charming scene that spreads out in front of Penjerrick, the several forms of the glorious Rhododendron arboreum at once attract attention early in the year, as they are clothed from head to foot in showy blossoms. Between these trees—for they are trees—one espies the noble frondage of that splendid Antipodean fern, Alsophila dealbata, and near by is the sweet Genista fragrans, a wealth of gold.

Along this upper portion of the garden are also some fine Yulans (Magnolia conspicua), and such grand rhododendrons as R. Pink Pearl, R. Falconeri, R. Nuttalli, and the magnificent R. Glory of Penjerrick. Indian azaleas are splendid at Penjerrick, great masses of them growing freely in this favoured spot and flowering profusely in early summer, while mollis azaleas are commonplace shrubs, but beautiful withal. All about here, among the trees, and also in other parts of the garden beneath trees, the handsome little Cyclamen hederæfolium seems to run riot, and its foliage alone makes it one of the most effective of lowly plants, and yet it refuses to grow in not a few gardens.

Among the interesting coniferous trees I was especially attracted by Fitzroya patagonica, a plant that is sometimes met with in large winter gardens, but here it is in fine condition out of doors. Here, too, is Sequoia sempervirens, 70ft. high, and with a trunk 16ft. round at about 5ft. from the ground; Cryptomeria japonica is 60ft. high, and Thuia gigantea rises to about 100ft., for some nine years ago, when carefully measured, it was 90ft. high. Cupressus Lawsonianus is very fine, and Pinus Montezumæ is unusually good. Some huge junipers are to be seen at the end of the terrace walk, and there is a handsome example of Podocarpus andina, as well as a particularly graceful specimen of Cedrus atlantica pendula glauca.

In the lower parts of the garden, by the water, the banks are clothed with rhododendrons, while by the water's margin Primula japonica is the commonest plant. Huge gunneras occupy prominent positions in this glen, but bamboos abound, and Phormium tenax is far finer here than in the Scillies. The water is not allowed to flow through and out of the glen in its own sweet way, but is held back in a series of pools, a method, by-the-way, that is not uncommon in these Cornish gardens.

But limits of space are inexorable, and so one can but mention a Laurus camphora 30ft. high, with yellow flowers, and fruits not unlike a marrow-fat pea; Boronia megastigma, that produces its deliciously fragrant blossoms out of doors; a great big unprotected Acacia dealbata, a tall Araucaria braziliana, the big groups of hydrangeas, Francoa ramosa, that flourishes in the herbaceous border; and ask how it came about that Mr. S. Smith, the gardener, had a sturdy plant of Primula Kewense come up among seedlings of P. japonica, two years ago?

And yet another word, and it is this: Mr. Fox opens this garden of Penjerrick to the public on Wednesday and Friday afternoons. Truly Cornwall has now, as a hundred years ago, "noble, free gentlemen," as well as men who are "sturdy, bold, honest, and sagacious," while even a wandering horticulturist quickly discovers it has "women lovely and modest, courteous, and unaffected."

Charles H. Curtis.

⁂ The second of the two articles on "Some Cornish Gardens" will appear in our next issue (March 14).

VIEW IN THE GARDENS AT ROSEHILL.

SWEET PEAS FOR EXHIBITION.

The subject of sweet pea cultivation is now exercising the minds of all those interested in these beautiful flowers, especially so in the case of exhibitors, so the following notes may not be without interest. My only excuse for writing is that I have been fairly successful in growing sweet peas.

One of the greatest factors towards successful cultivation of the sweet pea is the preparation of the ground, and this must be thought about long in advance of the time for sowing or planting out, which ever system has been decided upon, and at the outset I must say that I have quite come to the conclusion that for really high-class exhibition flowers autumn sowing in pots is far the best practice, though February-sown plants (also in pots) are very good.

Autumn and Spring Sowing.

Last year I found that plants from seed sown in pots early in October, 1906, wintered in a cold frame, and planted out early in April, gave me flowers of better size, substance, and colour, and continued blooming longer than those sown in February and treated similarly. The date of blooming of the autumn-sown plants was only a very few days in advance of the spring-sown ones. I should not like it to be inferred from this that I would rely entirely on the autumn-sown plants for exhibition purposes as late as July 24, the date of the National Sweet Pea Society's show this year, as I have generally found in this neighbourhood (twenty miles south of London), that plants sown as above are about at their best from July 1 to 10. Of course, three weeks after that, no matter what attention and care is given them, the flowers would have deteriorated somewhat, especially in the length of stem. I think the second week in March is quite late enough to sow for exhibition, and even then the plants do not prove so robust as the earlier sown ones. But the date of sowing must at all times be governed somewhat by the locality and the date at which the best exhibition flowers are required.

Preparing the Soil.

The times of sowing having been referred to, it is only here necessary to say that the seeds should be sown thinly in 48-sized or 32-sized pots, in a fairly light compost, afterwards placing the pots in a cool frame or on a shelf in a cool greenhouse, where they can have all the air possible on fine days; personally, I prefer a cold frame, as the lights may then be removed on all favourable occasions after the seedlings are up, and it is only in very frosty and wet weather that they need covering. But precautions must be taken against the attacks of birds, mice, and slugs.

Returning to the preparation of the ground: good deep trenching is absolutely necessary, though on some soils, owing to the nature of the subsoil, bastard trenching might do instead, but whenever possible it should be trenched three spits deep, and whether it is done in the autumn or early spring must be decided by the individual. I find in our cold, heavy soil that it is not advisable to trench too early, as a continuance of heavy rains consolidates the soil too much, so usually I leave the work until early spring. During the process of trenching plenty of strong farmyard manure should be worked in with the bottom and second spits, and if it can be obtained, blood and offal from the slaughter house can be thrown over it with advantage. Lime, soot, or bonemeal added to the soil will give very beneficial results. After trenching, if the soil is heavy, a good plan is to ridge it, as this allows the frost and air to have full play upon a good depth of soil, and the latter will be found to break down nicely and finely at the time of planting or sowing, and the young plants will grow away freely in it.

Planting and Staking.

The pots may remain in the frame until the time for planting out, and this operation should be done from the third week in March to the middle of April, according to the state of the ground, and as long as this is in a fairly dry condition, and the plants have not been coddled, the effects of frost need not be feared. Previous to planting the ground should be well forked over, and a sprinkling of superphosphate of lime be well worked in. Plant either in clumps or short rows, and leave the individual plants from nine to eighteen inches apart in double rows. I prefer planting in rows, as these are more convenient for shading in the event of hot weather, and the little shade one row gives the other is quite beneficial. After planting the rows should be carefully staked with some small twigs—old birch brooms I find very handy for the purpose. Soot must be used regularly to ward off the ravages of slugs, and it is quite advisable to cover the whole patch over with a garden net, which not only prevents attacks by greenfinches, etc., but helps to break the cold winds somewhat.

After planting and early staking there will not be much to do for some time, but as soon as the plants have made sufficient headway they will require to be permanently staked. Use good strong hazel stakes, making them very firm in the ground, and inclining them, if anything, a little outwards at the top, as this gives them a little more resistance to the wind, and the haulm is less likely to fall about. Also at about this time the plants will be making a good many shoots at the base, and these should be thinned out somewhat, and a tie given here and there where necessary, just to give them a hold until they throw out their clinging tendrils.

DRACÆNA WALK AT ROSEHILL.

Mulching, Shading, Etc.

After staking it is necessary to break up the soil between the rows or clumps, and to keep this well hoed at intervals up to the time the flowers commence opening, and at this time, if the weather is hot and dry, a good syringing overhead each evening will do good. A mulching of good fresh farmyard manure might also be given, especially if the soil is light, but if the ground is heavy and has been well manured, and the hoe kept going, this is not really essential; indeed, I think a good deal of the bud dropping that we hear about is caused by heavy mulching, and watering just previous to the flowers opening.

After the plants have got well into their flowering stage a little feeding is necessary, giving weak doses of farmyard liquid, and alternating these with an application of some good artificial manure, such as Clay's Fertiliser, nitrate of soda, or nitrate of potash, but always giving it directly after a good soaking with clear water. It is wise not to let sweet peas become really dry.

Shading will no doubt have to be provided to preserve or bring out the colour in some varieties, such as Henry Eckford, Helen Lewis, and a few others, but this only needs to be done three or four days before a show, and my practice is to cut all open flowers six or seven days previous to a show, and as the blooms get fairly well expanded shade them with very light tiffany, or, in most cases, with a double thickness of fish netting. This should be removed as soon as the flowers are gathered, because leaving it in position weakens the plants considerably.

Cutting and Staging.

When cutting for exhibition care must be taken to secure quite young and unmarked flowers, never cutting them when wet with dew or rain, though it may happen that one is obliged to do this sometimes; if so the best plan is to cut the flowers as carefully as possible, place each bunch separately in water, and leave them in a shed for a few hours where the air can get to them. They most certainly must not be packed until quite dry.

When arranging the blooms in vases aim at obtaining a light effect by giving each individual flower plenty of room, and make as much as you can of long stems, as at the present time in sweet pea exhibiting even good growers cannot afford to give away points, for the competition grows keener each season. When arranging the vases on the table place those colours near together that produce the best and most pleasing contrasts, never letting any one colour predominate at any one point in the exhibit. Label correctly and legibly.

Varieties are unlimited, and everyone has favourites, but from the following I am sure a good dozen could be selected: **King Edward, Queen Alexandra, Nora Unwin, Paradise, Mrs. Hardcastle Sykes, Lord Nelson, Lady Cooper, John Ingman, Black Knight, Henry Eckford, James Grieve, The Marquis, Evelyn Hemus, Rosie Adams, Helen Lewis, Helen Pierce, Jeannie Gordon, and Sutton's Queen.**

F. Stevenson.

Woburn Place Gardens.

CALANTHES.

There is undoubtedly much to learn yet in the art and craft of gardening, for, as Shakespeare said, "This is an art which does mend Nature, change it rather, but the art itself is Nature."

When describing the cultivation of a certain class of plants one is apt to forget the important part that Nature teaches us. The observant eye is not slow to detect the difference between the growth of plants in the well-watered fertile plains, and those on the poor upland moors, or between the crops that are produced on a well-cultivated farm, and those that are grown on poverty-stricken, ill-tilled land. It is the same with plants grown under glass. Where ample food of a suitable kind is provided, a genial temperature, regular supplies of moisture, and other things needful to their well being, there is but little doubt that what are considered difficult subjects will readily respond to the treatment.

Deciduous calanthes are, for the most part, hybrids, therefore they have no natural history to guide us in their cultivation. In the first place, we have to find out the soil most suitable for them to root in, the temperature most congenial to their well being, and a structure where this can be maintained. Soil is the first consideration, but the best material procurable may be spoiled in preparation, therefore a little explanation as to the mode to follow may be of service to those who contemplate making a start in the cultivation of these most useful winter-flowering subjects.

We are apt to advise people to take good turfy or fibrous loam, or this and the other material, but I may say at the outset that our loam is decidedly poor, but we make the best we can of it, and this is the way we manage. The sods, which are cut in the autumn, are stacked in a heap until the spring; they are then pulled to pieces, preserving what little fibre there is in them; most of the fine soil gets knocked out in the operation, and the fibrous portion only is used, and this is mixed with dried cow manure in equal proportions. Sufficient broken potsherds are added to keep the whole porous. This mixture is put into a heap in a warm place for a few days previous to use. By many this may be considered a light compost, but I may say that our soil is bordering on clay, so I will leave the reader to judge for himself of its nature. This then is the material we use for Calanthe Veitchi, C. bella, C. superba, C. rosea, C. Turneri, and that most beautiful of all calanthes, C. Harrisi.

As soon as the flower spikes are cut the bulbs are taken from the soil, and every particle of the old root is removed close up to the base. The bulbs are then stood in shallow boxes until the young growths appear. At no time are they subjected to a lower temperature than 55 degrees, as a low temperature, even when the bulbs are in a dormant state, is one of the chief causes of spot in the subsequent foliage. While in the boxes the bulbs should be examined frequently to make sure that none of the young growths are injured, and they should be turned round occasionally, so that they may have all the light and air possible.

In the matter of potting I believe our method differs from that of most people, and herein lies the secret of our success. We do not use pots for the large bulbs; these are either planted in baskets eighteen inches in diameter, or in pans specially made for the purpose. These latter are from twelve to fifteen inches in diameter, and about nine or ten inches deep. When the former are used a layer of moss is placed round the inside to prevent the soil from running through the meshes; the baskets are then filled with soil as loosely as possible, not pressed together in the least. If pans are used then these are moderately drained and filled with compost in like manner, but heaped up so as to form a cone. Bulbs of even size are then selected, having the young growths as evenly developed as possible. Five of the largest are chosen for a pan, and having placed one on the top of the cone this is secured in position by having two sticks thrust into the soil, one on either side of it, and a piece of raffia is then tied round to make the whole firm; by this means the bulbs are held in position through the summer. Four other bulbs are then placed at equal distances apart round this, about halfway between the centre and the rim of the pan, and these are secured in like manner. The pans are then stood in a melon house, where they remain until growth is completed. Very little water is needed at first, that from the syringe, which is used twice daily over the melons, being all that is required. We have no special time for potting the plants, but simply place them in the pans when the young growths are about an inch long, and before new roots have very much advanced.

H. C. Prinsep.

Buxted Park Gardens.

(To be continued.)

CUCUMBERS IN ABUNDANCE.

Owing principally to the cheap methods of erecting glass structures, combined with a great improvement in the varieties and a better knowledge of their requirements, the cultivation of cucumbers during the spring, summer, and autumn is now practised in nearly every garden of any dimensions. They also form one of our greatest market gardening industries. People talk of tons of cucumbers nowadays as we used to speak of dozens a few years ago. This is, of course, a great boon to those who live in populous centres, for without the aid of the market grower they would be unable to obtain supplies.

Cultivation in Houses.

It is not at all necessary to have specially-built structures for the growth of cucumbers during the summer and the early part of the autumn. Almost any house provided with a hot-water apparatus for maintaining a reasonable amount of artificial heat, and commanding a full amount of sunheat will suffice. Except during the hottest part of the summer it is absolutely necessary to raise the plants in heat. The seed should be sown singly in small sixty pots, water the seeds in, but keep them moderately dry till after germination has taken place. Immediately the third leaf is made shift them into 32-sized pots, grow them on with the same temperature, and near the glass. Use every precaution to build up a stout, short-jointed growth, as weakly plants seldom give really satisfactory results.

While the plants are being nursed along the house in which they are to be fruited should be prepared for them. Make everything perfectly clean, and the walls, if there are any, should be limewhited. It is always well to arrange for a certain amount of fermenting material, and a bed from two to three feet thick will be ample, and there is nothing better than good oak leaves. A small quantity only of soil is required, and this should consist of good fibrous loam, a little sandy material from the roadside, and leaf-soil. Allow the soil to become nicely warmed before turning out the plants. Neatly stake and arrange for the growths to be trained to a wire trellis fixed about one foot from the glass. Allow a distance between the plants of about two feet. Endeavour to maintain a temperature of from 60 to 80 degrees, and during very hot weather no harm will be done if the thermometer rises over 100 degrees. The paths and stages should be continually damped down, and a moist atmosphere maintained, when the growth will be rapid, and in four or five weeks good fruits may be looked for.

Constant attention will be necessary in the matter of stopping and training. Carefully avoid overcropping, especially in the early stages, allowing a moderate crop only of the most shapely fruits. Do not allow any fruits to remain after they have become fit for use, as it is when the fruits begin to mature that they naturally impose a heavy strain on the plants. Add slight top-dressings from time to time as the roots push through, and give assistance by applying liquid manure when the plants are in full bearing. Do not syringe the growths after fruiting commences, but damp down the paths with farmyard liquid manure during the early part of the evening. On no account must the roots suffer from dryness of the soil, or the fruits are certain to be bitter. At all times apply this in a tepid condition.

Edwin Beckett, V.M.H.

Aldenham Gardens, Elstree.

A GARDEN OF ANNUALS.

Such a wealth of material for the adornment of our gardens as is provided for us to-day by the great and ever-increasing class of annuals was never dreamed of by our forefathers, though, before the introduction of the bedding pelargonium, and the subsequent bedding-out craze, they gave a good deal more attention to annuals than we do now. Adaptable to such diverse purposes are the members of this great class of garden plants that it is quite possible for a man going to live in a new house in the autumn, with only a piece of field for a garden, to have as gorgeous and varied a display the following summer as if he had been there for years.

Among annuals there are plants of every colour and of every conceivable habit of growth, from giant sunflowers to trailing plants, and when making out one's seed order one can arrange to have a garden at its brightest at that time of the summer when one is going to see most of it, except that in June, unless we have been able to follow Nature, and let our hardy annuals be autumn-sown, there are not many annuals from which we can expect much display before the latter part of the month. The same applies, however, in some degree, to many of what are generally known as bedding-out plants. The types, or classes, of annuals being of so varied a character, and the purposes to which they may be put so diverse, it will be as well to simplify the subject by grouping them together according as they more especially lend themselves to different parts of the garden scheme, premising that for the purposes of this article we will regard as annuals any plants which can be flowered the same year as they are sown, even though they may last more than one year if desired, or the necessary trouble taken to preserve them.

Let us deal first of all with those which are more especially adapted for use as

Bedding Plants,

such as stocks, asters, French and African marigolds, zinnias, petunias, pentstemons, verbenas, balsams, lobelias, Salvia patens, ageratum, Phlox Drummondi, salpiglossis, nicotiana, Dianthus Heddewigi, and others more or less suitable for this purpose. Nearly all annuals that are worth growing need good cultivation, none of those just mentioned being an exception, and fortunately plants in beds generally get it as far as soil goes, owing to the digging and manuring which such beds usually receive every year.

The next point, if they are to occupy the most important places in the garden, is that we should get them in flower as early in the summer as possible, say, by midsummer. Nearly all of those mentioned are only half-hardy, and consequently need to be sown in gentle heat not later than February, the middle of the month being better than the end, and brought on in the usual way, so that they are sturdy plants, ready to plant out with a good ball of earth attached, or even as single pot plants, by the end of May.

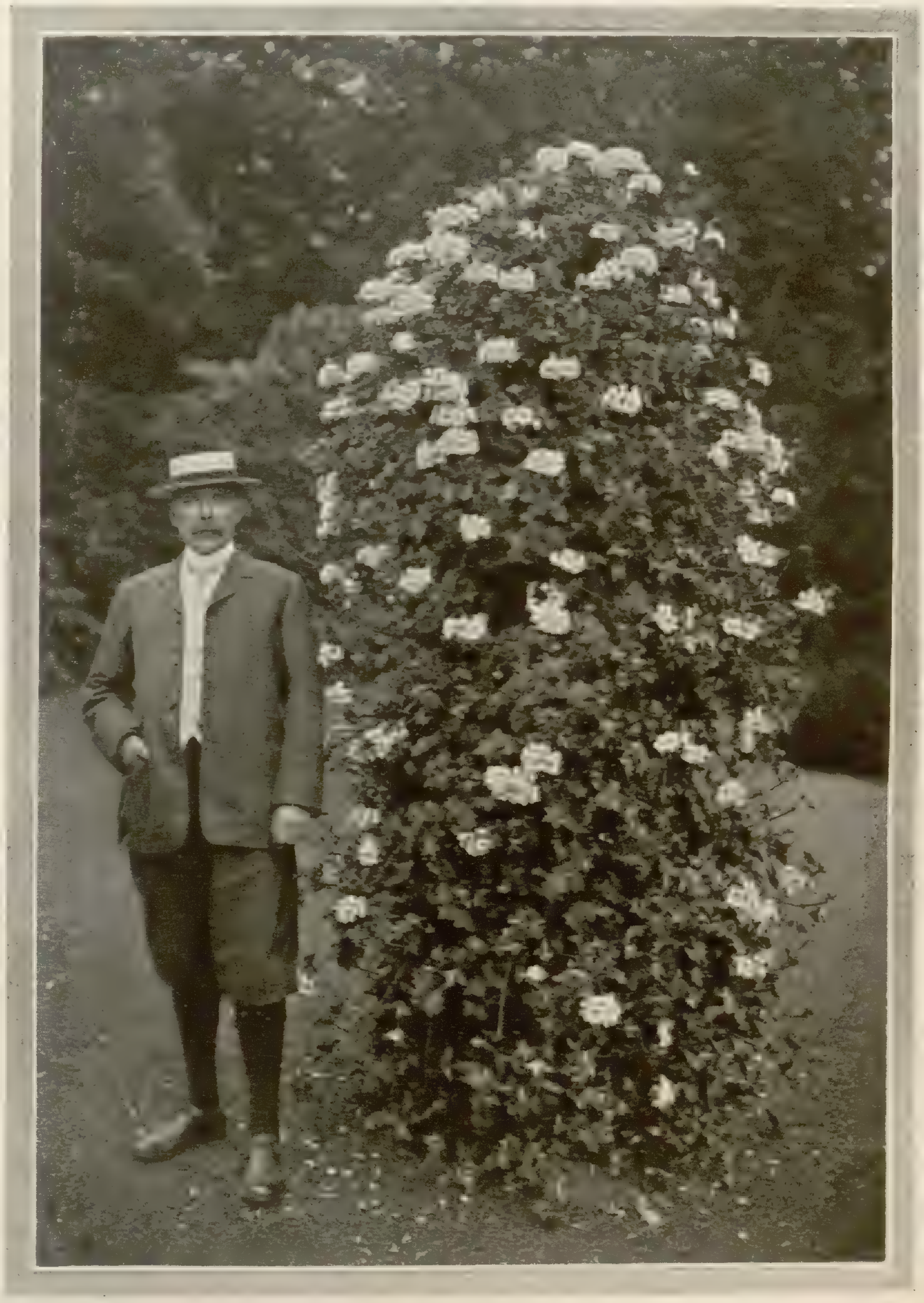
The complaint that annuals are of short duration applies to scarcely any of these, for most of them begin to flower by the second or third week in June, and continue to make a good show in a favourable season till late in September. Few things make a more beautiful bed than petunias [illegible] pegged down evenly all over it. The same applies to Phlox Drummondi, though these are more difficult to succeed with.

A. PETTS.

(To be continued.)

IVY-LEAVED PELARGONIUMS AT POOLE HALL, CHESHIRE.

Among the many things that are well grown by Mr. Forrest, head gardener to Sir William and Lady Holland, at Poole Hall, Nantwich, Cheshire, are ivy-leaved pelargoniums, and such exceptionally fine specimens has he produced of these that a note in the GARDENERS' MAGAZINE as to their size and effect may interest and stimulate some readers. It may be remarked that Mr. Forrest is an exceedingly keen and clever gardener, and if once he takes a subject in hand, neither interest or energy are lacking until he has attained results considerably beyond mediocrity.



A FINE IVY-LEAVED PELARGONIUM MADAME CROUSSE AT POOLE HALL.

In the case of ivy-leaved pelargoniums he had occasion to grow a few for corners of walks, and to break up the flatness of flower beds, etc., and these, during the summer of last year were very much commented upon by those who saw them. The finest specimen was 9ft. in height, and from 4ft. to 5ft. in diameter, and a picture of health and beauty from top to bottom. This was produced within eighteen months from the cutting, and the single specimen shown in the illustration, with Mr. Forrest standing by its side, will convey a fair idea of its proportions. On the east side of Poole Hall these ivy-leaved pelargoniums were employed to add colour to a portion of the lawn, and, at the same time, break up the stiffness of the surroundings.

These were propagated in the spring of 1906, grown on in pots, with liberal treatment as to food, until their roots demanded a wider sphere, when they were transferred to tubs. Strong bamboo stakes and wire were used to secure height and width, and the growths were trained to cover the tubs, so that when seen on the lawn they had the appearance of having been planted out. Only two varieties were used by Mr. Forrest, viz., Madame Crousse, a rather pale pink, and Souvenir de Charles Turner, a rich red-coloured variety, both of which are vigorous growers and free bloomers.

Although I have often advised others to employ ivy-leaved pelargoniums, and used them myself for such purposes as those at Poole Hall, yet my attainments, or those of my friends, have not in anyway approached the exceptional achievement of the chief of the Poole Hall Gardens. It is therefore a pleasure to record such results, as something to aim at for myself and others, and to draw attention to the fact that under thoroughly good management ivy-leaved pelargoniums may not only be used to break up the flatness of flower beds, but are also adaptable for covering pillars, fences, and even forming arches, as demonstrated by the rapid growth and well furnished plants at Poole Hall.

PEDESTRIAN

WINTER SPRAYING FRUIT TREES.

To many gardeners and fruit growers the operation of spraying the fruit trees is fully recognised as one of the most important items of fruit cultivation. Indeed, without spraying, it is almost an impossibility in many districts to produce some of the hardy fruits in the best condition and fit for the dessert table. Trees in a fruitful state will invariably produce a quantity of fruit, which may, and in most instances is, practically spoiled for either home use or for sale by one or other of the numerous enemies which are generally prevalent in gardens where fruit is much grown. Yet had a little labour been expended in spraying the trees, quite a different and much more satisfactory result would have been attained.

Another point, and this a most particular one, which should be well considered where apples and pears are required for use over as long a period of time as possible, is that clean and healthy fruits keep much better and give much more satisfaction than do those which have been attacked by insects or fungoid growth.

Summer versus Winter Spraying.

Insects and fungoid pests are much more in evidence during the summer months than at other times of the year; consequently spraying the trees with a weak emulsion is often practised, with the result, generally, that the foliage suffers more than the insects. Therefore we have to consider the best season to apply remedies for the destruction of the enemies, with the least possible danger to the trees.

My experience leads me to suggest that the season from October to April is the most suitable for this work, as during these months much more drastic measures may be adopted than would be possible at any other period of the year. The trees are without leaves the greater portion of that time, and there is nothing to prevent the emulsion from reaching to all parts of the branches and stems, and coming into direct contact with the pests. Many insects conceal themselves in the cracks and crevices of the bark, and in the axils of the buds, in which positions, if left alone, they pass through the winter months safely, notwithstanding the cold weather that may be experienced. The eggs of other pests are deposited on the branches of the trees, and generally in such positions as to be almost invisible, and, like the former, these seem impervious to the weather. As soon as the warm spring arrives, they hatch out, scatter themselves over the trees, and forthwith commence their work of destruction, and the large amount of mischief these minute objects can accomplish is almost inconceivable.

When to Spray.

The other points to consider are the best time to spray, and the most effective emulsion to use. The eggs of aphis are usually laid during the months of October and November, and it seems almost impossible to destroy them with an insecticide without damaging the trees. Efforts should therefore be directed towards combating this by destroying the egg-laying insects. This may be accomplished by a forcible spraying when the leaves commence to change colour and before they fall, using a rather strong solution of paraffin emulsion, and repeating the dose in the spring just before the buds begin to swell up, so as to kill any perfect insects which may have escaped the first application. This process will very greatly assist in keeping the pest in check. As most of the species of aphis protect themselves by curling up the foliage during the summer, it is then impossible to reach them with an insecticide, to that every opportunity should be taken for their destruction during the winter months.

Several caterpillars feed on the foliage of fruit trees, while others feed on the fruit. The last few seasons we have discarded grease banding for the winter moth, and depend entirely on spraying the trees just before the buds open, and again immediately after the fruit is set and the petals are falling, with an acetate of lead emulsion. This not only destroys the caterpillar of the winter moth, but also any other species that may be found on the trees. This emulsion is perfectly satisfactory, and we find it quite as effective, and much safer to use, than Paris green, as it is not so liable to scorch the young foliage as the latter.

Fungi, Moss, and Lichen.

Moss and lichen may also be classed among the injurious pests of the fruit garden, as they clothe the branches and stems in such a manner as to prevent air from reaching them, thereby hastening decay; they also provide ample security for many insect pests. Among the many remedies advised for the removal of moss and lichen we have found none so effective and so easily applied as the alkali wash, which quickly cleanses the trees, leaving the branches bright and clean; there is also no doubt that this is very destructive to numerous insects and their eggs.

Fungoid diseases, where prevalent, are very destructive, and should be kept in check by every means at one's disposal. We have a few apples and pear trees here which were at one time badly infected, but we have practically got rid of the disease by spraying the trees when dormant with a strong solution of Bordeaux mixture.

Summary.

To sum up these remarks, I would suggest that a spraying with paraffin emulsion be given to all fruit trees just previous to the fall of the leaf, and again before the buds start in the spring. The alkali wash may also be applied to all, but in a slightly weaker form on peaches and nectarines. For trees which have been infected with fungoid diseases the Bordeaux mixture may be applied at any time during the winter. For caterpillars give the acetate of lead wash as the buds begin to push forth in the spring, and again as soon as the fruit is set.

When spraying thoroughly wet the whole of the tree, using as fine a sprayer as possible, but do not spray when the branches are frozen.

The insecticides and fungicides I have mentioned can be obtained ready for use, but in case any would like to prepare their own I have added below the quantities. The mode of preparation has been so often described in these pages that it will be unnecessary for me to do so now.

Paraffin Emulsion.—Soft soap, two pounds; paraffin, one pint; rain water, ten gallons.

Alkali Wash.—Caustic soda, one pound; carbonate of potash, three-quarters of a pound; soft soap, one pound; rain water, ten gallons.

Bordeaux Mixture.—Two pounds of copper sulphate, two pounds of lime, and two pounds of treacle, to ten gallons of soft water.

Acetate of Lead Wash.—Three ounces of acetate of lead, one ounce of arsenate of soda, and two pounds of treacle, to ten gallons of water. Geo. Woodgate.

Rolleston Hall Gardens.

CARE OF GARDEN TOOLS.

One often wonders whether the numerous readers of the Gardeners' Magazine take into consideration the importance of keeping in order the various tools required in gardening operations. That these are both numerous and varied most people who have anything to do with such work must be aware, but of their number and kind very few who have not given the subject their consideration would have any idea. They range from the common dibber used in pricking out the smallest and most delicate seedlings, up to the latest motor lawn mower and the most approved and scientific instruments required for levelling and marking out ground.

All well-appointed gardens should have a tool house, fitted up with pegs and shelves on which tools may be hung or put away. There should be a place for everything, and everything should be kept in its place. Every man should have a separate set of such tools as spade, fork, rake, and hoe, and should be allotted a peg and place on which to hang or put his tools when not in use. He should be instructed to take them to their place each night, no matter in what part of the grounds he may be working. All bright tools should be cleaned and rubbed dry with a piece of cloth or canvas before being put away, and those not likely to be required again for some time should be oiled to prevent them from rusting.

Here the rule is to allow the men ten minutes or a quarter of an hour each evening to clean and put away their tools. Each man has his own set, and his allotted place, and he knows that if the tools are not in their place he will be called to account. By adopting this plan tools are brought to the shed and put away tidily.

Tools form a considerable item in the garden accounts, as some of them are costly, therefore, if they are not taken care of the expense is considerably increased. Nothing is more annoying than to find, when a certain tool is required for use, that it is either lost, broken, or is in such a state that it cannot be immediately used. It is far easier for men to work with clean bright tools than with those that are rusty.

Tools may be divided into three classes, such as blunt, sharp-edged, and machinery. If we take the former these include such articles as garden hose, brushes, sieves, baskets, wheelbarrows, and the like. Now if these are put away in the dry each time they are used, they will last longer than when allowed to remain out exposed to the weather. Sharp-edged tools include spades, billhooks, shears of various kinds, picks, knives, turfing irons, etc. All these should be cleaned and rubbed dry before being put away.

Of machinery the chief items are lawn mowers, sprayers, garden engines, rollers, and the like. Oh! that is only an iron roller, and will come to no harm if left out! But it should be remembered that the weather has considerable influence on iron, causing it to rust, and flake, therefore all parts that have any wear should be oiled before the roller is put away in the dry. It is no uncommon thing to see rollers left for months together close to where they were last used, but this is not taking care of one's employer's property. Lawn mowers are costly machines, even the smallest are expensive if not taken care of. They will soon become unusable. They ought to be cleaned each time they are used before being put away. And when the season for mowing is over, all the parts that are not painted should be thoroughly cleaned and oiled before being stored away.

H. C. P.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

EAST INDIAN ORCHIDS.—With the exception of one or two species, these fine orchids have practically dropped out of general cultivation. It is only in the older collections and botanical gardens that we meet with anything like a representation of these most beautiful subjects. I think this is to be regretted, for there are certainly included among them some of the most deserving, as well as the most beautiful plants in the orchid family.

VANDAS. — The large growing section, which includes the remarkable variations found in V. tricolor and the allied V. suavis, were for many years included in groups at the summer shows throughout the country, and most attractive subjects they proved. Even when not in flower, there are no orchids that give a more graceful effect. These plants will now be commencing to make new roots, and any repotting necessary should now be attended to. Where the plants have become leggy from loss of the lower leaves, and have ample aerial roots between the lower remaining leaves and the surface of the potting compost, such plants may be cut down. First carefully turn them out of their pots, the operator is then better enabled to see what length of the stem can be dispensed with; after the stem has been shortened to the desired length, a stick sufficiently strong should be secured to the stem, and, after carefully working the roots in the pot so that the stem may be in a desirable position, the pot should be filled to one-half its depth with drainage, carefully avoiding damage to the roots; the remaining space may then be filled in with chopped sphagnum moss, intermixed with broken crocks or peat. Plants that are in good condition should not be disturbed. The sphagnum moss and decayed material on or near the surface may be carefully removed, and fresh material given. The shorter-growing sections, such as V. Parishi, V. concolor, V. cristata, V. Roxburghi, V. Amesiana, and V. Kimballiana, are best grown in pans or baskets suspended near the roof-glass. These should also be attended to at the present season.

AERIDES are scarcely known to our younger orchid growers; these should also have received attention, being treated in the same manner as vandas. The dwarf-growing kinds, such as A. Fieldingi, A. maculosum, A. Lobbi, A. affine, etc., may be grown in baskets, and suspended near the roof-glass. The tall section should be grown in pots. The whole of the foregoing plants may be successfully cultivated in the ordinary plant stove, if a house cannot be set apart for them. All plants that have been repotted should be carefully shaded from the direct rays of the sun. A humid atmosphere should be maintained, and every encouragement be afforded. Syringing overhead, when the outside conditions permit, will prevent undue shriveiling of the leaves, and will aid root action.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

FUCHSIAS.—Plants that have been wintered in cold houses will now be breaking into growth, and it is a good plan to take from them a few stout shoots as cuttings, ere cutting back the old branches. When pruning is done in the early winter, and breaks are not so good in the spring, usually all the best shoots are then needed to furnish the plants. If any tops be taken off to make cuttings the shoots should have become at least six inches long, so that they have enough of base left to break afresh. Plants wintered in an unpruned state usually break freely from every leaf joint, so that there is abundance of shoots to select for cuttings, and then when the young branches are cut back the growth of the new shoots is stout and [illegible]. Fuchsias bear hard pruning remarkably well, but the roots like ample pot room and feeding, and as the fuchsias have again become popular for summer bedding, it is well to propagate liberally in the early spring, growing them somewhat freely. Pinching is needed to prevent flowering; indeed, keep the plants growing all the season so that fine ones, three to four feet high, are produced for the following summer.

NERTERA DEPRESSA. — When this interesting little plant is thickly set with its bright orange scarlet berries it is sure to attract attention. As the plant flowers early in the year, it is best increased by division at once, so as to encourage an early growth and a greater number of blossoms. These latter are of a greenish hue, and appear in the axils of the leaves. The plant grows freely in light sandy loam, mixed with fine brick rubble. When potting keep the plants on a level with the top of the pot, so that a mound-like form may result when growth ensues; give plenty of moisture overhead during the growing season. The nertera may be well grown in a cold frame, and in such I have wintered large numbers satisfactorily.

DOUBLE PETUNIAS. — These are extremely useful for a summer display in the greenhouse and conservatory, young vigorous plants keeping up a show over a very long season. It is quite a mistake to keep old plants, as is often done, as they are lanky and untidy in appearance if not cut back, while if so treated the flowers are never so fine as from young plants. Seeds may be sown now, but it is much the better plan to obtain a good variety and propagate by cuttings yearly, throwing the old plants away in autumn, after reserving a few for stock. These will be cut back and kept in the greenhouse during the winter. They will now be covered with short stubby shoots two inches or so in length, and it is now quite time to strike these. They strike with the utmost ease in light sandy compost, about five or six being placed in a 4-inch pot. The soil must be well watered at once, and kept moist; and the cuttings will be rooted in about a fortnight. Pinch the tips out of each one a few days in advance of putting them singly in small pots; after this repot by gradual stages, never allowing the plants to get pot-bound before shifting them, as this will cause flowers to be produced before growth has sufficiently advanced. Growth is rapid in a greenhouse or frame temperature. By the time the final pots are filled with roots they will be dense bushes about a foot high, and as much through, and for three or four months these plants will produce an almost unlimited supply of flowers for cutting or, if needed for this purpose, will be useful for the conservatory.—T. B. Field, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

LAWNS.—Continue to sweep and roll lawns, and trim verges so as to insure good order and appearance. If possible, remove all strong plantains, dandelions, etc., rake over any mossy parts of lawns, and apply a good top-dressing of wood ashes, fine soil, and well-rotted manure, lightly rake in, and give a good rolling. Endeavour to bring all lawns into good condition, as patchy turf detracts from the appearance of the place.

SUBTROPICAL GARDENING. — Where this is practised, or tubs and plants are plunged in mounds on grass, positions may now be prepared in readiness for the summer. Dummy tubs may be placed in mounds, and turfed over until the summer occupants are brought out.

ROSES.—Protecting material should be very carefully removed, but where newly-planted and tender roses have been protected with leaves and mulching on the ground this may remain a week or two longer. A few of the most sheltered plants may now be pruned; the very weakest of the wood should be cut quite out, the moderate growths cut well back, and the strongest growths left somewhat longer. H.P.'s should be cut closer than teas and H.T.'s; China or monthly roses need but very little pruning; the bulk of rose pruning is, however, best left until nearer the end of the month, or late frosts may damage young growths.

PERMANENT EDGINGS of box, armeria, aubrietia, arabis, daisies, etc., used around flower beds, should be attended to, and any vacancies that may have occurred be at once filled in.

ECHEVERIAS, sempervivums, kleinias, etc., should be examined and have any dead leaves or decaying parts removed. If they have been wintered in unfavourable quarters have them removed as soon as possible into more favourable positions to prepare for planting when the time arrives.

TUBEROUS BEGONIAS may now be brought from their winter quarters, examined, and placed moderately close together in leaf-mould and sand, in shallow boxes, and placed in a light position in a temperature of from 50 to 55 degrees. As growth ensues, they may be potted up singly, or planted in frames, from which they can afterwards be planted out.

DAHLIAS.—If further increase is necessary, roots may still be placed in heat, and cuttings taken from them; dividing old roots is best left somewhat later. Lobelia cardinalis varieties, if not already divided and potted or boxed up, should be attended to.

ANNUALS.—A further sowing of annuals should now be made inside. Continue to prick off and grow on all plants from previous sowings. An early sowing of annuals in sheltered places outside may also now be made of poppies in variety, mignonette, cornflowers, godetias, French marigolds, calliopsis, and others. Do not bury the seed, but only lightly rake it in on a well-prepared fine surface. In cold, late districts it will be best to postpone sowing for a week or two.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

TOP DRESSING.—I am greatly in favour of top-dressing most fruit trees early in the autumn, before the leaves fall, especially on light soils and if the trees have borne a heavy crop of fruit. In fact, as soon as the apples have been gathered from our bush and wall trees we give the roots a thorough soaking of liquid manure, and shortly afterwards a good top-dressing of loam, basic slag, and manure is applied to the roots of each tree. But where this work has not yet been attended to, it may be done at once with advantage; first remove some of the old soil, taking care not to injure any more roots than possible, and then give a good dressing, and, should the soil be light, add a good mulching of decomposed farmyard manure.

PEACH AND NECTARINE trees in good bearing will be all the better by having a thorough top-dressing annually, so as to keep the roots near to the surface. The condition of the roots is of more importance than that of the branches, for if the former are unhealthy, or get down into the cold, clayey subsoil, all the attention possible to the latter will be of no use. A firm medium growth is most essential.

RASPBERRY CANES. — These may be shortened back to the required height. If on wires, do not train the canes too thickly, and should the soil be light and porous mulch well with manure. Raspberry canes will be greatly improved by a good top-dressing of loam, or potting soil of a loamy texture.

BLACKBERRIES.—Some blackberries are well worth a little extra care and attention, as the fruits give variety to the year's supply. The old wood, which has borne fruit should be cut out to allow room for that which is to fruit in the coming season. Blackberries may be grown on trellises or on poles.

LOGAN BERRY.—This should find a place in all gardens, as the fruits make excellent tarts and preserves, and are so abundantly produced that many pounds in weight can be gathered from a comparatively small amount of space. Train them similarly to blackberries, and feed well if the soil is porous and light.

GRAFTING.—Head back trees ready for grafting as early as possible. Trees of unsuitable varieties, if healthy, will quickly come into bearing if regrafted.—H. Markham, Wrotham Park Gardens.

THE WEM SWEET PEAS.

The accompanying illustration of the field of the Eckfordian sweet pea, Queen of Spain, is a timely reminder of the immense influence for good the Wem firm has exercised in the past, and continues to exercise upon the development of the fascinating Lathyrus. Every mention of the founder of this house, who a few years since passed away at a ripe age —Henry Eckford—revives pleasant memories either of personal association or of the introduction of some new variety that gave pleasure alike to the raiser and to the cultivator of sweet peas. In these pages the story of Henry Eckford's career has been told at length before to-day. It is therefore enough to mention that this able Scottish gardener, after matriculating at Bewley, Lord Lovat's seat at Inverness, came south, and at Salisbury, and subsequently at Coleshill, the fine Berkshire seat of the Earl of Radnor, devoted much attention to hybridisation and cross-fertilisation, especially amongst dahlias, of which he raised many varieties of exceptional excellence; and this he did without sacrifice of energy and care for the plants under glass, or the occupants of the kitchen garden or fruit plantations.

SWEET PEA QUEEN OF SPAIN, AS GROWING AT WEM, SALOP.
Flowers large, delicate soft pink.

Then, at threescore years of age, when men usually seek repose rather than new worlds to conquer, Henry Eckford became associated with the sweet pea, and in its development and improvement he laboured with unbounded enthusiasm and energy until his death. How successful was his work is well known to all who take an interest in this fragrant flower. It may, however, be mentioned, for the information of those who have within a quite recent period turned their attention to sweet peas, that, although he had only half a dozen or so of varieties at his command when he commenced his memorable work, the varieties he had succeeded in raising by 1890, when the Sweet Pea Conference was held, ran well into three figures. At this great gathering, which will ever occupy a prominent position in the history of the sweet pea, growers from the Continent of Europe and the United States of America, as well as authorities at home, testified in no uncertain manner to the splendid work Mr. Eckford had accomplished.

The reputation of the Wem business as the headquarters of sweet peas has been well sustained. Mr. J. S. Eckford, the son of the founder, as every lover and cultivator so well knows, is as loyally devoted to the cult of these flowers as his father was; and has done, and is doing, much useful work in their development. The Queen of Spain that we have pleasure in illustrating is one of the fine varieties introduced to cultivation by Mr. Eckford last year, and now, with others sent out at the same time, is rapidly passing into general cultivation. The list of novelties for the current season comprises varieties distinguished by the splendid development of their blossoms and the wide range of colours they afford, and thus promise to fully maintain the high reputation the Eckfordian sweet peas have so long enjoyed. The 1908 novelties include James Grieve, a considerable advance among yellow sweet peas; Mima Johnston, a charming variety, exquisitely coloured rose-carmine; H. J. R. Digges, a rich claret-coloured flower that will find much favour with those who appreciate dark sweet peas; Purple King, a richly-coloured flower of much merit; and May Perrett, an extremely beautiful variety with large flowers, ivory white suffused with buff. There are other novelties not less noteworthy than those mentioned, but we would suggest that a copy of the seed catalogue issued by Mr. Eckford be obtained and the lists of sweet peas carefully studied. It is a matter of much interest that the seed of the new sweet peas is so inexpensive as to enable the amateur with very limited resources to participate in the pleasure of growing the new introductions the first year they are placed in commerce.

In addition to the trial grounds at Wem, and the seed farms at the headquarters and elsewhere, a new estate—Althorne Lodge—has been acquired by Mr. Eckford, and this affords a largely increased area for sweet pea culture for seed purposes, which, by the way, has been rendered necessary by the extension of business during recent years. Situate within an easy distance of Burnham-on-Crouch, in Essex, and possessing a soil admirably adapted to the growth of the plants, and a climate favourable to the perfect ripening of the seeds the new farm should prove a most valuable adjunct to the business.

Tubs of Plants, for terraces, verandahs, garden walls, and walks, may now be prepared, these being very attractive when well grown and suitably placed. Old petroleum or other casks sawn in two are very suitable for the purpose, if charred inside and painted outside, and with two handles fixed on and holes bored in the bottom. Numerous plants may be used to fill them, some of the most suitable being zonal and ivy-leaf pelargoniums, fuchsias, marguerites, petunias, hydrangeas, lemon-scented verbenas, and agapanthus. Tubs should be well-drained, and moderately rich soil must be used, that in which melons, cucumbers, and tomatoes were grown in the previous year being suitable.—E. F. HAZELTON, Knowsley Gardens.

TULIP COLOUR EFFECTS.

In the early days, when tulips were almost unknown in Western Europe, an Antwerp merchant one day received a package of bulbs from the East. Part he had cooked as onions, and the rest he planted among the cabbages in his kitchen garden. Here most of them seem to have perished, but the few that lived were taken care of by George Rye, of Mechlin, with whom they produced a variety of beautiful flowers.

It is a long time from then to now, and our gardens and our gardening ideals are vastly different. Perhaps I am not far wrong in thinking that the taste of to-day lies in the direction of being able to maintain a succession of flowers for as long a period as possible. With this end in view many an old favourite has been restored, and new species and varieties introduced. We are familiar with the beautiful effects which can be obtained from suitable and tasteful schemes of colour when early-flowering tulips are used for spring bedding. For example, Artis and White Pottebakker, Prince of Austria and Ophir d'Or, Thomas Moore and Yellow Pottebakker give delightful results when used together in proper proportions.

When, however, we come to the late or May-flowering varieties, we find their value by no means so fully appreciated. In many gardens they are only conspicuous by their absence, and we need some modern George Ryes to rescue them from their neglect, and take them under their care.

In arranging the position of tulip beds or clumps it is well to remember how much depends on environment. Nothing helps tulips more than plenty of greenery. I have in my garden a narrow border, betweent some variegated cupressuses and a walk, and another with Pinus cembra as a background. In both I generally plant tulips. Last spring I had alternate clumps of Coleur Cardinal and White Swan in one and some of the best Darwins in the other. Mr. Farncombe Sanders, White Queen, Night, Europe, Donders, Edmee, Rev. H. Ewbank, and Pride or Haarlem were planted in groups of twelve to eighteen, and made a fine show. Any stiffness was relieved by their difference in height and the daffodil leaves which came between each.

Coleur Cardinal and White Swan belong to what might be appropriately called (to revive an old name) medios or middle flowerers. They are the latest of the earliest and the earliest of the late; Coleur Cardinal is a truly magnificent shade of crimson-scarlet, with a bluish shade or reflection on the exterior of the petals. The stems are stout and solid, and every flow stands stiff and erect. White Swan is the well-known large egg-shaped white, and is famous for the length of time it remains in bloom.

A combination that I had last year, a which I liked immensely, was Bouton d'O and Mrs. Wolseley. The former is a r deep yellow Darwin-shaped flower, with black anthers, and the latter is a very fine form of the old red Maculata. Margarita, rosy-carmine, is a telling variety, a might be substituted for Mrs. Wolseley. A handsome and uncommon effect wh I hope to try another year might be by using Inglescombe Pink and some dark Darwin, such as Zulu or Zanzibar. Another combination that I think would look very nice would be Vitellina (primrose) and Cassandra, cherry-rose.

In the mixed herbaceous border any kind may be introduced if due care is taken to plant so that the colours har-

harmonise with each other and with any other flowers that happen to be near. Naturally, the dwarfer varieties would have places in the front. Among those that are suitable for this position mention might be made of La Rève, a large lasting flower of an indescribable blend of yellow, rose and lavender; Monmouth, a magnificent large scarlet; Isabella, a distinct and very attractive flower of carmine-rose and primrose-yellow; Gloria Mundi, a small bright red flower, with stripes of yellow (I often call it the lamp tulip, for it suggests lighted gas lamps in the street); Glare of the Garden, a long-shaped bright crimson-red; and Strangulata primulina, a beautiful shade of primrose-yellow.

Where it can be managed these late tulips look very well in large beds of one variety. Mr. Farncombe Sanders, bright rosy-red; Scarlet Emperor, scarlet; Inglescombe Yellow, a lovely pale yellow; Bouton d'Or, deep yellow; Sunset, a beautiful Billietiana yellow, with the ends and margins of its leaves a bright red; Gesneriana spatulata, intense crimson-scarlet, with a deep blue base; and La Merveille, orange-red, are some nice varieties for this purpose. They have, however, this drawback. Their bulbs are not properly ripened when it is time to lift them to make room for other plants, hence doubtless the greater popularity of the early section for bedding. Three of the very best varieties for massing in beds of one colour are Artis, bright red; Prince of Austria, orange-red; and Coleur Cardinal, crimson-scarlet. These rival any of the later section.

Space does not permit me to mention the "parrots," and the specific varieties that might be used for brightening the spring and early summer border. Fosteriana, one of the recent introductions from Central Asia, is perhaps the most gorgeous tulip in the world, and a bed of Kaufmanniana (the water lily tulip) resembles nothing so much as a pool of water covered with lovely primrose lilies.

Joseph Jacob.

Libonia floribunda.—At this season of the year libonias, with healthy dark-green foliage, and covered with tubular blooms of vermilion and yellow, are among the most striking occupants of the conservatory. They are at present, unhappily, almost out of fashion, and it is rarely they are seen well grown nowadays, but there are few subjects that fill the gap during the first months of the year so satisfactorily and enduringly, [illegible] adequate attention is accorded. Cuttings should now be struck in heat, potted as soon as rooted, and shifted on during the spring and early summer, taking care that the shoots are well stopped to lay the foundation of a bushy and symmetrical plant, after which they may be stood in a frame until October, when they should again be housed.—T. B. Field, Ashwellthorpe Gardens.

The Banksian Rose, under Glass.—What a charming rose the yellow Banksian is for conservatory planting. It should be given a conspicuous position, such as a wall, pillar or roof. So rapid a grower needs much space to allow of its full beauty being seen, and especially should it be allowed to grow its own way. The White Banksian, too, is even more precious, owing to its powerful violet-like fragrance. There never need be any fear as to these two beautiful roses failing to flower when grown indoors, if attention be afforded them immediately after flowering. This would consist in cutting out the extra vigorous sappy growths, and removing a few others where overcrowded. These Banksian roses flower upon the [illegible] growths imaginable, so that it is necessary not to overcrowd the growths.—T. B. Field, Ashwellthorpe Gardens.

BRITISH GARDENERS' ASSOCIATION. A PUBLIC MEETING will be held at CARR'S RESTAURANT, 264, Strand, W.C. (Close to Temple, Strand, and Holborn Stations), This Evening, SATURDAY, March 7th, 1908, at 7 p.m.

The Chair will be taken by Mr. GEORGE GORDON, V.M.H., etc., Editor of the "Gardeners' Magazine," supported by Members of the Executive Committee.

An ADDRESS on the B.G.A. will be given by Mr. J. WEATHERS, Sec. of the Association.

All Professional Gardeners working in the London Parks and Metropolitan Gardens are invited to attend. Full particulars and Forms for joining the B.G.A. can be obtained by Gardeners from the General Secretary, Talbot Villa, Isleworth.

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ENTRIES CLOSE JUNE 10th.

Schedule and full particulars from J. WILFRID PACE, Secretary, Emerson Chambers, Newcastle-on-Tyne.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

Royal Horticultural Society.

MARCH 3.

A wonderfully fine display of plants and flowers delighted the large numbers of visitors to the Royal Horticultural Hall on March 3. The spacious hall was filled with splendid exhibits of forced flowering trees and shrubs, gorgeous orchids, carnations, and early hardy flowers, and during the afternoon the visitors were so numerous that it was difficult to get near some of the displays.

FLORAL COMMITTEE.

A glorious exhibit of forced trees and shrubs was splendidly arranged opposite the entrance by Messrs. R. and G. Cuthbert, Southgate. The firm has set up many beautiful displays, but not one finer than this. Magnolias formed the centre of the group, with lilacs and standard mollis azaleas rising over and around them. On either side were groups of lilacs and large Azalea mollis and Ledum latifolium, with the groundwork filled in with dwarf azaleas. All the plants were finely grown and abundantly flowered. Mr. L. R. Russell, Richmond, Surrey, contributed a beautiful lot of standard lilacs, dwarf mollis, and Indian azaleas, and the fragrant Buddleia asiatica, arranged with palms and euonymuses. Mr. J. Wilkinson, Highlands Gardens, Minchin, Hampton Bourn, contributed a group of well-grown cyclamens.

Carnations and liliums were delightfully shown and arranged by Mr. W. H. Page, Tangley Nurseries, Hampton. The carnations were chiefly Enchantress, Lady Bountiful, Governor Roosevelt, Beacon, Mrs. T. W. Lawson, White Perfection, and Harlowarden. The beautiful Iris reticulata was well represented by Messrs. G. Jackman and Son, Woking, in a group of Primula denticulata alba, Cyclamen Coum, White Squills, and Daphne Mezereum.

In the rockwork arrangement set up by Messrs. J. Cheal and Sons, Crawley, there were coloured primroses, cyclamens, saxifragas, and a few alpine shrubs.

Some splendid blooms of perpetual carnations were set up by Mr. H. Burnett, Guernsey; there were wonderful flowers of Marmion, Mikado, White Perfection, Enchantress, Mrs. H. Burnett, and Jessica. Mr. A. R. Allan, gardener to Lord Hillingdon, Uxbridge, showed a big batch of the useful and effective Lachenalia Nelsoni, thoroughly well grown. The Misses E. and M. Kipping, Hutton, Essex, showed a few rock plants, such as saxifrages, Primula cortusoides, and coloured

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primroses. Messrs. T. S. Ware, Lim., Feltham, contributed an exhibit of alpines, staging saxifragas in great variety, primulas, alyssums, drabas, cyclamens, anemones, adonis, hellebores, crocuses, and fritillarias.

Messrs. Barr and Son, Covent Garden, showed a large variety of hellebores, crocuses, and early daffodils. Their varieties of Helleborus orientalis were very interesting, and the new deep marone-purple variety named Peter Barr (A.M.) was one that attracted a great deal of attention, as it had shapely rich-hued blooms freely borne. A very pretty and interesting group of freesias and irises was contributed by Mr. Chapman, of Rye. The Freesia Chapmani, the yellow form, was well staged, and the many seedlings from it show that in the future we may expect numerous distinct varieties to add to our old F. refracta alba.

Carnations were extensively displayed by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, their exhibit including Britannia, Winsor, Mrs. Burnett, Enchantress, Oriflamme—a very free bloomer, pots carrying 50 flowers and buds being shown; White Perfection, Beacon, etc. This firm had also a number of acacias, daphnes, and cyclamens, making up a couple of groups of these flowers. A group of choice lilacs was set up by Messrs. Paul and Son, Cheshunt, and this contained Belle de Nancy, Alba grandiflora, Marie Legray, Marechal de Bassompierre, Mdme. Lemoine, etc., all deliciously fragrant.

Messrs. Jas. Veitch and Sons, Chelsea, contributed growing plants of all the popular carnations, showing their habit as well as their flowers. They also had batches of splendidly flowered Indian azaleas, of Primula Kewensis—beautiful plants, carrying abundance of golden flowers; of Kalanchoe Dyeri, of the sweet Boronia megastigma, of the blue Coleus thyrsoideus, the golden Coreopsis Granti, and the curious pink-flowered Lopezia miniata. A big bank of camellias, the plants smothered with flowers, and associated with pretty plants of Clematis indivisa lobata was arranged by Messrs. W. Paul and Son, of Waltham Cross, and attracted much attention. This firm also exhibited numerous baskets of camellia blooms in a high state of development. Zonal pelargoniums were grandly shown by Messrs. H. Cannell and Sons, Swanley, who also had a fine assortment of free-growing and free-flowering forms of Chinese primulas.

Messrs. W. Cutbush and Son, Highgate, showed a bank of forced azaleas, lilacs, laburnums, and magnolias, and a miniature rock garden filled with Primula denticulata, lovely hepaticas, early tulips, daffodils, adonis, etc. In another group the Highgate firm arranged a collection of perpetual carnations, showing Nelson Fisher, Britannia, Winsor, Mikado, and Mrs. Burnett in fine style. Ferns were largely shown by Messrs. H. B. May and Sons, who had some beautiful nephrolepises, platyceriums, etc., as well as plants of the pelargonium Clorinda, a fine strain of Primula japonica, elegant plants of Clematis indivisa lobata, and a good batch of Primula Kewensis.

Himalayan rhododendrons were well shown by Mr. R. Gill, Tremough Gardens, Penryn, Cornwall, who had a big display of R. arboreum, R. Henry Shilson, R. Mrs. H. Shilson, R. arboreum roseum, and many other delightful forms, rich in colour and fine in truss.

Messrs. J. Hill and Son, Barrowfield Nursery, Edmonton, submitted a group of very fine ferns, showing splendid examples of Gymnogramma elegantissima, Gleichenia semi-vestita, Polypodium conjugatum, Adiantum Bausei, Platycerium grande, Davallia canariensis elegans, Lastrea patens, etc.

Mr. Howe, gardener to Lady Tate, Park Hill, Streatham, made up a splendid group of forced tulips, daffodils, Roman hyacinths, azaleas, liliums, arums, and Solomon's seal, arranging quantities of these useful and well-grown subjects with ferns and palms, and making up a most effective exhibit. From the Guildford Hardy Plant Company, Guildford, came a small group of heathers and alpines. Messrs. R. Wallace and Co., Colchester, sent Iris reticulata, Saxifraga Burseriana major, crocuses, adonises, and hardy cyclamens. Messrs. J. Peed and Son, West Norwood, were represented by a batch of the useful Lachenalia aurea, L. Cammi, and L. Nelsoni, and hepaticas, saxifragas, daffodils, and cacti. Mr. F. Spillard, gardener to Lord Zouche, Parham Park, Pulborough, Sussex, sent a batch of large, freely-flowered cyclamens, all well grown.

Mr. G. Mount, Canterbury, showed some lovely rose blooms, the varieties shown being chiefly Joseph Lowe, a lovely pink H.T., and Richmond; all were grandly exhibited. Mr. G. Reuthe, Keston, Kent, showed Rhododendron grande, R. arboreum, camellias, hellebores, hardy heaths, irises, snowflakes, snowdrops, hardy cyclamens, etc. Forced flowering trees and shrubs were prettily shown by Messrs. Jas. Veitch and Sons, Chelsea, whose display was a large one, consisting chiefly of the white Rhododendron Coombe Wood Seedling, Amygdalus Clara Meyer, Cerasus J. H. Veitch, lilacs, Buddleia asiatica, deutzias, spiræas, forsythias, and wistarias, all very beautiful.

ORCHID COMMITTEE.

A glorious display of choice orchids was charmingly arranged by Mr. H. Alexander, orchid grower to Major G. L. Holford, Westonbirt, Gloucester. It contained magnificently grown dendrobiums, such as D. splendidissimum, D. rubens grandiflorum, D. Wiganianum, D. Psyche, and D. nobile nobilius; these were set up at the back with palms, ferns, odontoglossums, and phalænopsis. In the centre of the group was a bold exhibit of such fine-flowered plants as Cattleya Trianæ, C. T. Westonbirt var., C. T. Aurora, C. T. ampliata, C. T. Perfecta, C. T. Hydra, and a wonderful Lælia Jongheana. At either end were groups of Lælio-cattleya Ariel, a glorious golden-orange hybrid between L. Cowani and C. aurea, but one group had deep orange flowers and the other golden-orange flowers, though all were from the same seed pod. Cœlogynes, Lælio-cattleya Pizarro (A.M.), many superb cypripediums, Lycaste Ballæ, May Gretrix, and the new Lælia Goldfinch were a few other glorious orchids in this superb display.

Messrs. J. Cypher and Sons, St. Albans, showed a batch of Sophronitis grandiflora, set amid dendrobiums in variety, cymbidiums, Lælia Jongheana, Lycaste Skinneri, Odontoglossum Wiganianum, etc. Messrs. Sander and Sons, St. Albans, contributed a small group of orchids, and the leading plants in it were Cymbidium insigne superbum (F.C.C.), C. i. splendens (F.C.C.), Phaius maculatus, the pretty and graceful Odontoglossum Lairessiæ, Cypripedium Curtisi Sander's var., very fine; and a few cattleyas.

Another fine group of orchids was an extensive one set up by Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate. Dendrobiums were the great feature of the exhibit, but they were rather too crowded. A few very fine things were D. Cybele Gatton Park var. (F.C.C.), D. Ainsworthi Hazelbourne var., D. Othello, D. Wiganæ, D. Cybele giganteum, D. stratius, D. Chessingtonense (A.M.), D. nobile Dormanianum—a fine plant, and D. Wardianum album. In the centre of the display fine forms of Cattleya Trianæ were grouped into a tall pyramid, with cypripediums at the base. At the ends of the group were Cymbidium grandiflorum, fine examples of Dendrochilum glumaceum and calanthes, the whole making up an elegant exhibit.

From Messrs. Hugh Low and Co., Bush Hill Park, Enfield, came a small group of orchids, consisting of dendrobiums, a few cypripediums, the curious Pleurothallis Roezli, and the handsome new Odontoglossum crispum Carmania, with a pair of heavily marked shapely flowers, the reddish shading being very intense and rich. Messrs. Heath and Son, Cheltenham, brought up finely flowered plants of Primula Kewense, P. grandiflora, Chinese primulas, nephrolepis, and a few orchids.

Several new and beautiful orchids were shown by Messrs. Charlesworth and Co., Heaton, Bradford; these were Odontoglossum Clytie (A.M.), a graceful light purple flowered hybrid between O. Edwardi and O. Pescatorei; and Odontioda Lutetia—O. luteo-purpureum and Cochiioda Noetzleana; other fine things were O. Phœbe, Cymbidium Woodhamsianum, Eulophiella Elizabethæ, the glowing Lælio-cattleya Hypatia, Sophrolælia Felicia (A.M.), Odontoglossum ardentissimum O. Ossulstoni, and the curious O. mulus tenebrosa. Mr. G. Day, gardener to H. S. Goodson, Esq., Fairlawn, West Hill, Putney, showed Miltonia Bleuana with two spikes of fine flowers; several odontoglossums, dendrobiums, and cypripediums were included, and a very pretty form of Cattleya Schroderæ.

Mr. Duncan, gardener to C. J. Lucas, Esq., Warnham Court, Horsham, showed Ansellia africana, many forms of Odontoglossum crispum, O. Wilckeanum, O. triumphans, and several lælio-cattleyas. A very fine plant of Lycaste luteo-alba (A.M.) came from W. Cobb, Esq., Normanhurst, Rusper (Mr. C. J. Salter, gardener, this merited a cultural commendation. Mr. Walters, gardener to H. J. Elwes, Esq., Colesbourne, Gloucester, sent up Pleione yunnanense, and several cypripediums. From Sir Trevor Lawrence's collection came a fine plant of Zygopetalum Balli. The beautifully veined Cattleya Luddemanniana alba var. Empress was shown by J. Bradshaw, Esq., Southgate. Messrs. Armstrong and Brown, Tunbridge Wells, contributed Lælio-cattleya Daffodil (A.M.), several good cypripediums, sephronitis, and odontoglossums. M. Mertens, Mont St. Amand, Ghent, staged several choice odontoglossums, chiefly O. Harryanum hybrids. M. Jules Hye, Ghent, showed beautiful flowers of Cattleya Suzanne Hye de Crom, a glorious white-flowered hybrid between C. Wagneri and C. Gaskeliana alba. Mr. Brooman White, of Ardarroch, sent a small lot of good odontoglossum spikes. From Messrs. Stanley and Co., Southgate, came a group of odontoglossums, dendrobiums, and cattleyas. M. Maron, Brunoy, France, submitted the large-flowered and beautiful Lælio-cattleya Helen Maron (A.M.), soft purplish-lilac, with big frilled lip.

Mr. H. J. Chapman, gardener to Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne, showed some beautiful odontoglossums, but among the many good things the seedling O. crispum Chapmanse, raised from O. Cooksonianum and O. Cooksoniæ, was the most interesting; O. c. Memoria Battle of Waterloo was especially good.

FRUIT AND VEGETABLE COMMITTEE.

Mr. Spillard, gardener to Lord Zouche, Parham Park, Pulborough, showed a few dishes of finely-kept clean apples, such as Annie Elizabeth, Hoary Morning, Gloria Mundi, and Blenheim Pippin.

CERTIFICATES AND AWARDS.

First-class Certificate.—Dendrobium Cybele, Gatton Park var., from Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate; Cymbidium insigne superbum and C. insigne splendens, from Messrs. Sander and Sons, St. Albans.

Award of Merit.—Dendrobium Cheningtonense, from Sir J. Colman, Bart.; Maxillaria luteo-alba, from W. Cobb, Esq., Rusper. Lælio-cattleya Helen Maron, from M. Chas. Maron, Brunoy, France; L.-c. Pizarro, from Major Holford, Westonbirt, Gloucester; L.-c. Daffodil, from Messrs. Armstrong and Brown, Tunbridge Wells; Sophro-cattleya Felicia and Odontoglossum Clytie, from Messrs. Charlesworth and Co., Bradford; Helleborus orientalis Peter Barr, from Messrs. Barr and Sons, Covent Garden.

MEDALS.

Gold.—Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester; Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate; Messrs. R. and G. Cuthbert, Southgate, Middlesex.

Silver-gilt Lindley.—Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham.

Silver-gilt Flora.—Messrs. J. Veitch and Sons, Chelsea; Messrs. W. Cutbush and Son, Highgate; Messrs. Hill and Sons, Edmonton; Mr. H. J. Chapman, gardener to Norman C. Cookson, Esq., Wylam-on-Tyne.

Silver Flora.—Messrs. Charlesworth and Co., Bradford; Messrs. J. Cypher and Sons, Cheltenham; C. J. Lucas, Esq., Warnham

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EXETER.

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GLADIOLI.—I can offer a few superb seedlings for exhibition, etc., 5s. 6d. and 10s. per doz. splendid mixture of all colours, 16s. 100. All [illegible]. List of named vars. free. W. C. BULL, [illegible] Road, Ramsgate.

FERNS, FERNS, FERNS, Etc.—Foliage and Blooming Plants for stove, greenhouse, and garden. Wholesale list or amateur catalogue No. 100, free. 5,000 cases sent off yearly. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

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ROSE STAKES IN BEST REDWOOD.—[illegible] square, 4 ft. long, 8d.; 5 ft., 10d. 1¼ in. [illegible] 4 ft., 1s. 3d.; 5 ft., 1s. 6d.; 6 ft., 2s. per [illegible] Price lists free.—PATRICKS, Otley, Yorks.

ROSES.—Dorothy Perkins, 4 to 5 feet, 4s. per doz., 25s. per 100; Lady Gay, 5s. per doz., [illegible] per 100 (4 ft.); carriage paid; sample and catalogue, 6d.—E. BATSON, The Rose Gardens, Ditching[illegible].

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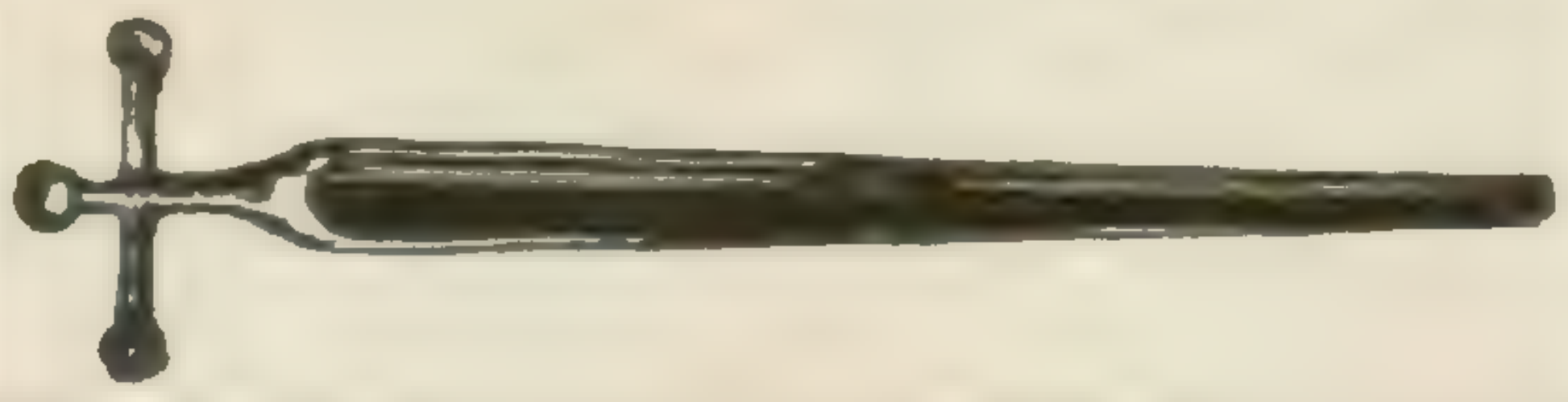

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Court, Horsham; Messrs. Hugh Low and Co., Bush Hill Park, Enfield; Messrs. H. B. May and Sons, Edmonton; Mr. G. Mount, Canterbury; Messrs Wm. Paul and Son, Waltham Cross; Mr. L. R. Russell, Richmond.

Silver Banksian.—Messrs. Sander and Sons, St. Albans; Messrs. Hugh Low and Co., Enfield (orchids); Messrs. Armstrong and Brown, Tunbridge Wells; Mr. Day, gardener to H. Goodson, Esq., Putney; M. Mertens, Ghent, Belgium; Mr. A. R. Allan, gardener to Lord Hillingdon, Uxbridge.

Bronze Flora.—Messrs. H. Cannell and Sons, Swanley; Mr. W. H. Page, Hampton; Messrs. Paul and Son, Cheshunt; and Mr. G. Reuthe, Keston.

Shrewsbury Floral Fete.

ANNUAL MEETING.

At the annual meeting of the Shropshire Horticultural Society, held at the Music Hall, Shrewsbury, with the Mayor in the chair, a most gratifying record of the year's work was presented by the committee. After the usual preliminary matters had been disposed of,

Mr. W. W. Naunton read the annual report, in which the committee said they had again to congratulate the members of the society upon a successful year's work. The summer show had been remarkably good, and the weather propitious, which, having regard to the past summer, was most fortunate, and the attendance in excess of any previous year. The total receipts from all sources amounted to £5,922 12s. 8d., being £283 17s. 5d. in excess of the previous year, which year was higher by £400 8s. 4d. than any other year. It was gratifying to see that the number of annual subscribers steadily increased, the subscriptions last year amounting to £536 11s. The takings at the gates on the two days were also greater, amounting to the sum of £3,485 4s. 3d., as against £3,317 10s. 11d. The accounts showed that the balance of assets in 1907 amounted to £786 11s. The expenses of carrying on so great a show were necessarily large, but the committee were keeping a watchful eye on the expenditure side of the account, and would see it did not unduly increase. It was almost unnecessary to refer to the main features of the show, as the magnificent results obtained were so well and widely known. The committee reported that, in consequence of a rearrangement of the refreshment tents, considerably more space was available for the public in the Quarry, and, although the numbers present were greater, the pressure seemed less. Some changes were also made in the musical arrangements last year, which the committee trusted were found to be beneficial. The committee regretted to report that, in consequence of certain technical and legal difficulties raised by the Board of Trade, it had not been found possible to carry through to a successful end the proposal to register under the Companies Act 1867, mentioned in the last report, and the matter had therefore been dropped for the present.

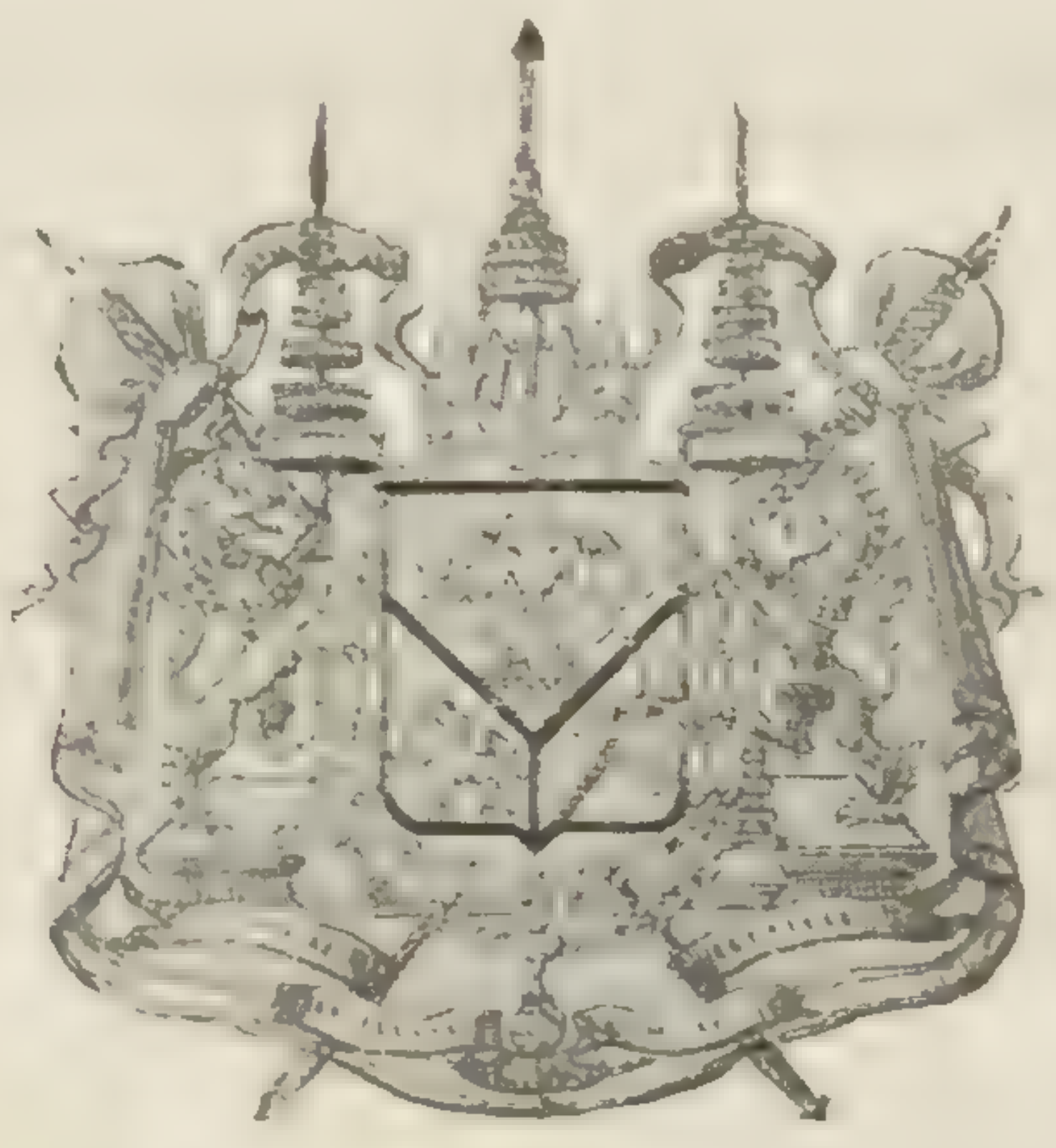
Mr. James Vine next submitted the financial statement, which showed that on the receipt side the items included £735 1s. from refreshment contracts, £506 18s. 1d. tickets sold before show, £100 5s. 9d. profit on sale of programmes, £1,203 3s. taken at gates first day, £2,282 1s. 3d. taken at the gates second day. The disbursements included £142 8s. 4d. spring show expenses. With regard to the summer show, the prize money expended amounted to £1,238 12s. 3d., and among other items were £544 7s. special attractions, fireworks, etc., £500 bands, £102 11s. horse-leaping, £195 0s. 11d. printing, £608 5s. 7d. hire of tents, staging, and fittings, £219 5s. 7d. advertising, £169 11s. 8d. ground expenses, and £188 2s. 9d. bill posters. The society's total receipts for 1907 amounted to £5,922 12s. 8d., and the payments to £5,136 1s. 8d., leaving a balance of £786 11s. The receipts from the summer show amounted to £5,683 9s. 4d., and the payments to £4,449 3s. 11d., leaving a profit on the summer show of £1,234 5s. 5d.

The report and balance-sheet were, on the motion of Mr. Peele, seconded by Mr. Deakin, unanimously adopted.

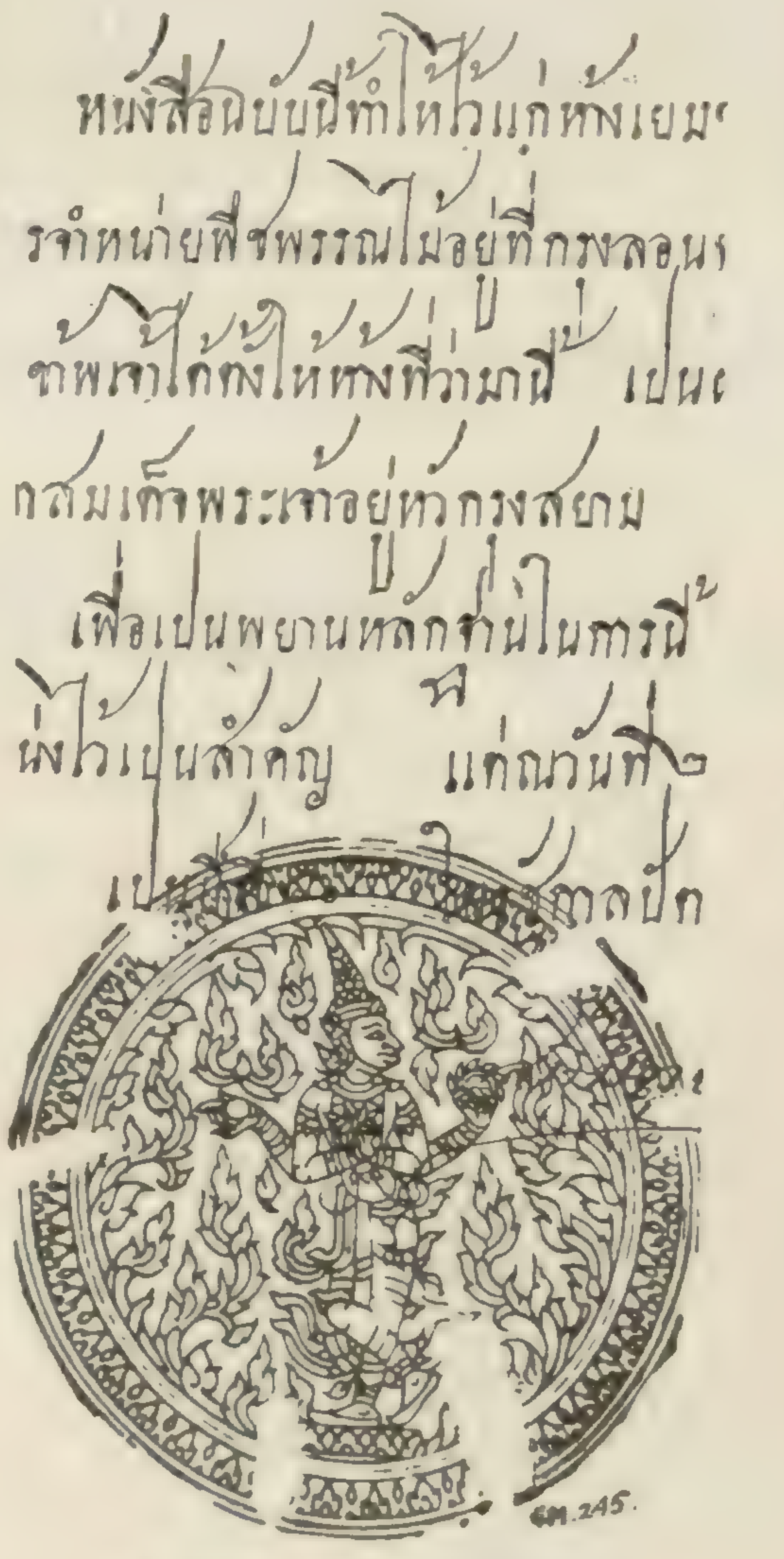
Mr. Beville Stanier was unanimously elected president for the year. Votes of thanks were accorded as follows: Colonel Hope Edwards, for his services as president during the past year; to the Mayor and Corporation for the use of the Quarry for the purposes of the summer show; to the managing committee, to Messrs. Phillips and Vine, the treasurers; and to Messrs. Adnitt and Naunton, the hon. secretaries. In submitting the votes of thanks to the several officers and members, the speakers referred in eulogistic terms to the splendid services they had rendered the society by the judgment and energy they had brought to bear upon the management of the society's affairs.

SIAMESE ROYAL WARRANT.

In a recent issue we had the pleasure of announcing that Messrs. James Carter and Co., the well-known seedsmen of High Holborn, had been appointed seedsmen by Royal Warrant to His Majesty the King of Siam; and now, through the courtesy of the firm, we are able to give a facsimile of the warrant, and an illustration of the Royal Arms of Siam. As the Siamese characters and the Royal Arms are by no means familiar to residents in this country, the illustrations of them can hardy fail to prove of much interest to our many readers.



SIAMESE ROYAL ARMS.



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SIAMESE ROYAL WARRANT.

OBITUARY.

THE MARQUIS OF LINLITHGOW.

The Marquis of Linlithgow, whose regretted death took place at Pau on February 29, was a liberal patron of horticulture and arboriculture, and his magnificent estate at Hopetoun House, Linlithgowshire, was kept in the finest of condition. Within recent years the gardens, which have been described in our columns, have been improved through the active personal interest of the Marchioness, who is a devoted gardener, and the late nobleman was justly proud of his beautiful gardens and the policies, in the former of which Mr. Thomas Hay, the gardener, has done some splendid work in the way of development and improvement. The late Marquis was a model employer, and the relations between master and servants were excellent. Lord Linlithgow was a generous supporter of horticultural societies, and took a special interest in those connected with his extensive estates.

MR. WM. COLEMAN.

For a long number of years one of the most famous of horticulturists in this country was "Coleman of Eastnor," but during recent years, during the quiet evening of his life, the name of Mr. William Coleman has been less prominently before the public. Mr. Coleman died on Thursday, February 20, and was buried at Eastnor on Monday, February 24. He was born at Rolleston in 1827, and his gardening career led him to Cole Orton, Grimston Park, Pontypool Park, Crewe Hall, Veitch's Chelsea Nursery, and finally to Eastnor Park, Ledbury, where he was appointed head gardener in 1860. He continued to act as head gardener for thirty years, and was then promoted to the position of agent to the Eastnor Estates for Lady Henry Somerset. Altogether, he was forty-two years at Eastnor, and during that time made the place and himself famous. Mr. Coleman was a fine character and a splendid gardener, a man in whose footsteps not a few of our younger men are striving to tread—what better fame can a man have.

TRADE NOTE.

Sun-dials now form a part of the ornamentation of most gardens, and those who have not studied the forms and styles of these timepieces will be surprised how varied they are. We have before us a most interesting and entertaining catalogue, issued by Messrs. F. Barker and Son, 12, Clerkenwell Road, London, a firm who specialise in sun-dials, wind vanes, barometers, etc. We learn that the sun-dial was in use 2,600 years ago, and we are asked: "What could be nicer in making a garden interesting and attractive than a sun-dial mounted on a suitable pedestal, and placed 'Amyddst ye fflowres to mark ye passing of ye houres,' and a rustic seat close by, where one can sit and meditate in quietude, lifted, as it were, out of the dulness of ordinary life into a region of romance and imagination? A garden, however beautiful, seems, to some extent, destitute of dignity and interest without a sun-dial, however simple of construction. There is a feeling of curious interest and '[illegible] into' in this silent monitor of time; there is no irritating ticking, or striking of [illegible], but silently as surely the sun-dial does its work year in and year out."

The method of setting the various sun-dials is given, and there are an equation table, numerous illustrations of dials and pedestals, a disquisition on the magnetic compass, an interesting set of fifty different mottoes for sun-dials. This catalogue is a useful one to keep at hand.

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JARMAN and CO., CHARD, SOMERSET.—Seeds.
F. BARKER and SON, 12, CLERKENWELL Road, LONDON.—Sun-dials, Weather Vanes, etc.

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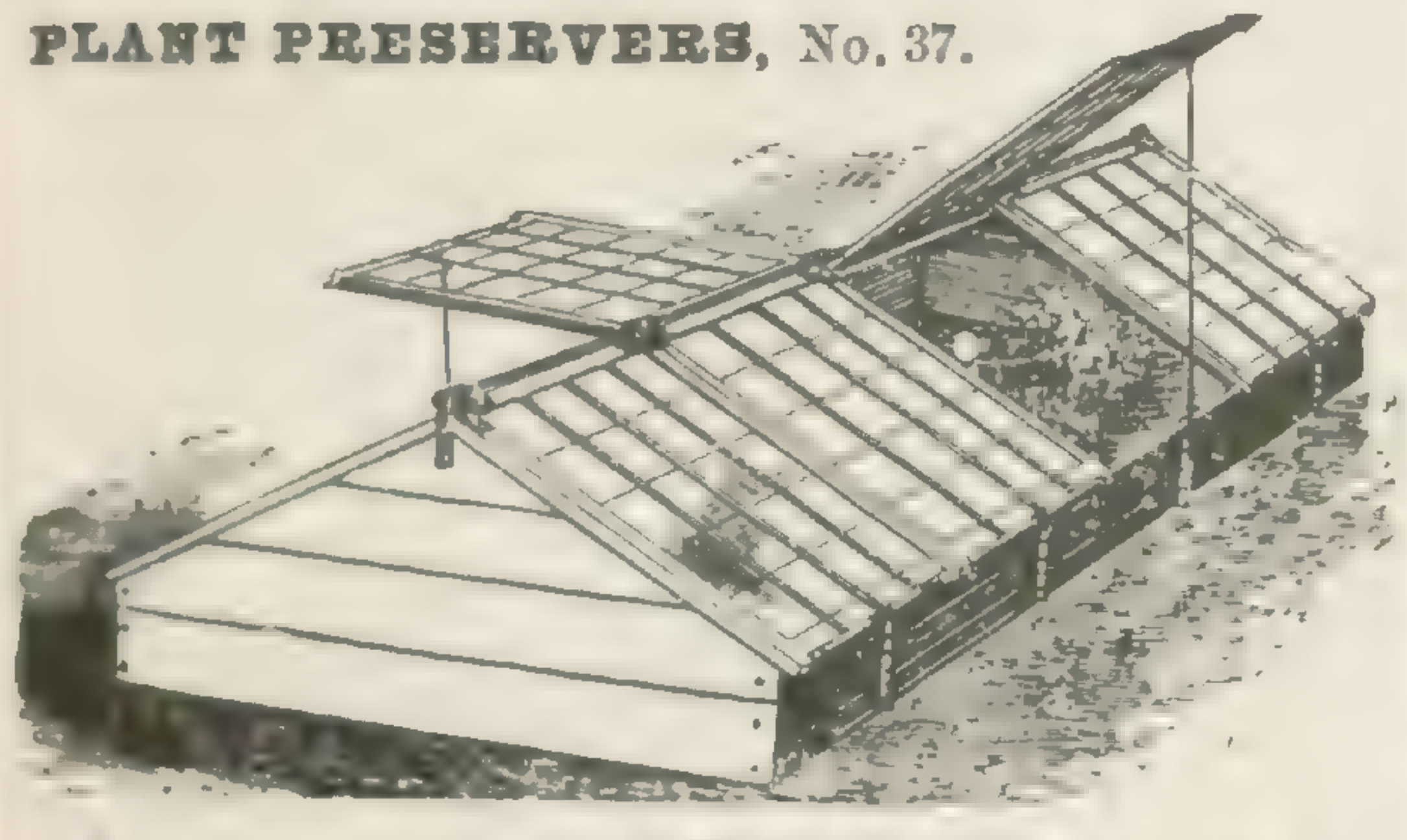

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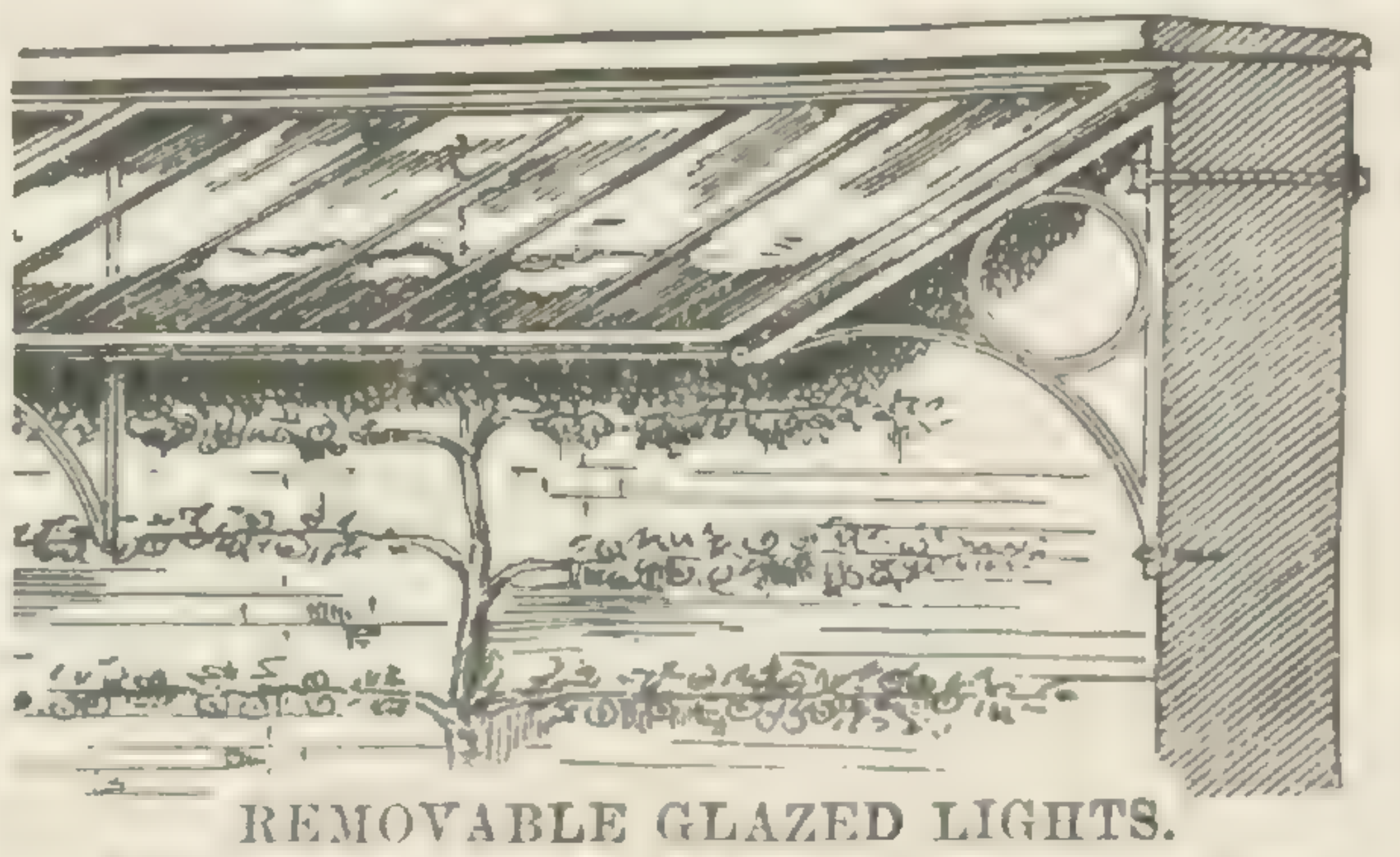

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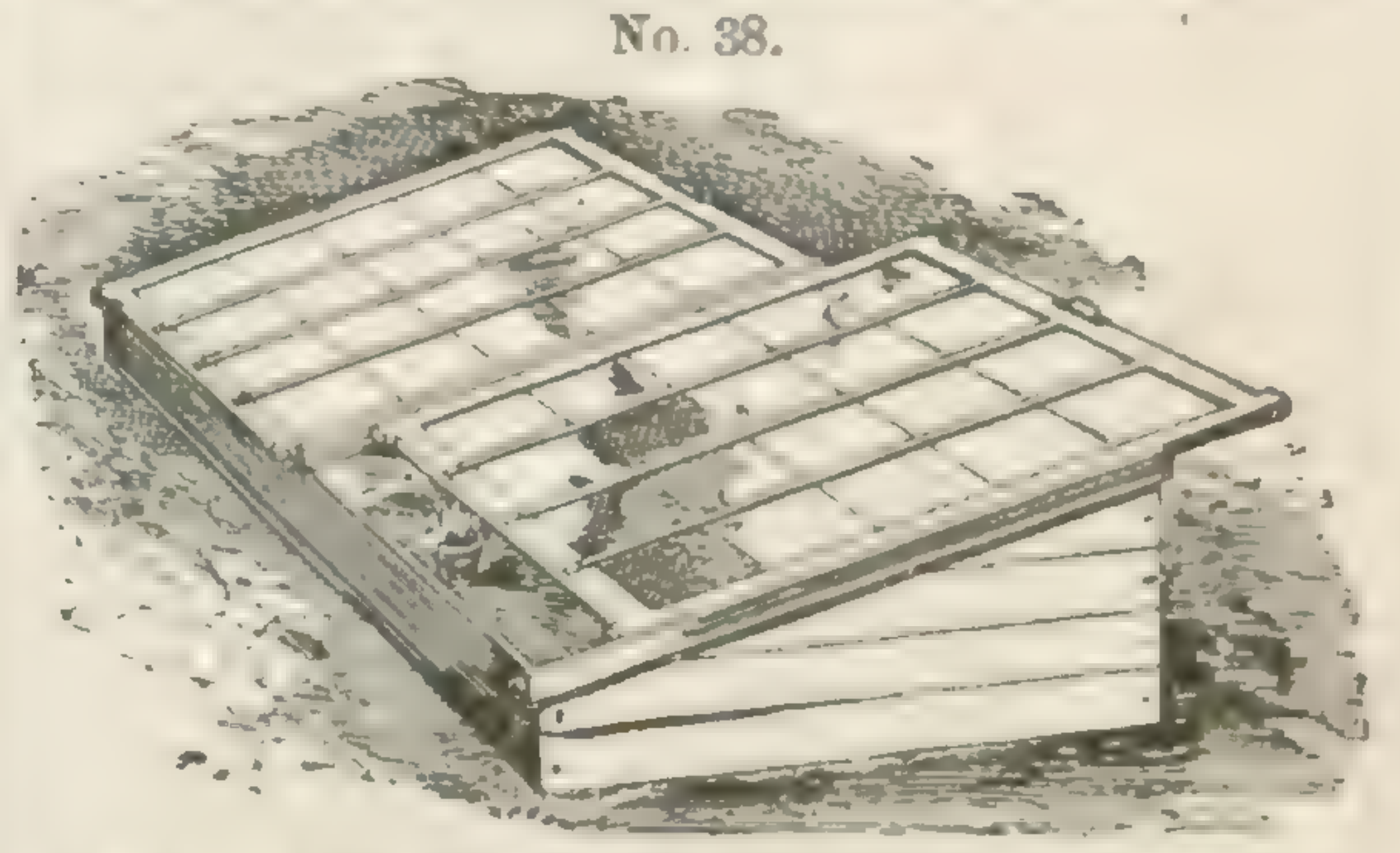

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ANSWERS TO CORRESPONDENTS.

ADDRESS.—S. J., Cambridge: The address is Mr. James Douglas, V.M.H., Edenside, Great Bookham, Surrey.

ANNUALS FOR CUTTING.—M. A., Brighton: A good selection of kinds for your purpose includes asters, coreopsis, sweet sultans, double godetia, chrysanthemums, mignonette, dwarf sunflowers, Gypsophila elegans, Lavatera trimestris, stocks, scabious, poppies, and sweet peas.

SINGLE PYRETHRUMS.—R. J. H., Lancaster: There is no need to wait until autumn before planting single pyrethrums. If your ground has been well prepared then order the plants at once, and plant them directly they arrive. Plant firmly, give water if necessary, and mulch with half-decayed manure to prevent March winds from drying up the soil.

RENEWAL OF BOX EDGING.—A. R., Taunton: The work of replanting a box edging should be done at once. The chief points to consider are the maintenance of a perfectly straight and level line of plants, and to be careful that the plants lifted are not unduly exposed. Place a damp mat over them, and draw out sufficient for immediate use as the work proceeds.

NEW CHRYSANTHEMUMS.—P. C., Scarborough: We understand that the leading class at the National Chrysanthemum Society's exhibition, to be held in November next, will be a new and distinct one. Only those varieties distributed in quite recent years will be eligible. We have not the full particulars before us as the schedule has not yet been issued, but we may say that Messrs. Davis, Godfrey, Jones, and Wells are contributing the substantial prizes.

EMPLOYMENT AT EDGBASTON.—R., Burton-on-Trent: If we are to judge from your letter—and that is all we have to help us—there is considerable need for you to improve your general education. Your caligraphy is good, but there is room for improvement in grammar and composition. We believe there are no special regulations at the Botanical Gardens, Edgbaston, as there are at Kew, but you will receive full information if you send a request for employment to Mr. Thomas Humphreys, curator, Botanical Gardens, Edgbaston, Birmingham.

FUCHSIAS.—F. S. H., West Leigh: The fuchsias have been very hardly treated. Place them in the smallest pots that will accommodate them, and stand them in a warm house; take a few cuttings from the young shoots that will soon push from the tips of the old wood, and as soon as this has been done prune the old plants back rather severely. This will induce root action, and new growths will start from the basal buds, and these may be pinched once, and then allowed to grow freely. It would be a mistake to cut the plants right down; the cuttings will give you sufficient dwarf plants if they are properly cared for. In the case of the roses, plant these at once, and as soon as they show signs of growth prune them hard. We cannot promise you much success, and everything depends on the present condition of the several plants.

LYCOPODIUM FOR SURFACING.—W. B., Bridgwater: It is, no doubt, to Selaginalla Kraussiana you refer, as this plant is used for surfacing, and is not infrequently known in gardens as lycopodium. For table plants the selaginella may be dibbled in thickly over the soil surface soon after potting, and nothing more will be needed, because every bit will root readily in a warm house. When so treated there is a danger of the surfacing becoming bare or straggling in due course, hence another plan is frequently adopted, and that is of propagating the selaginella freely and frequently in shallow pans or boxes, and lifting and placing the amount required on the surface of the pot, in the case of plants that are to do duty in the house. S. Kraussiana strikes freely in heat, but it should not be kept in strong heat very long, or it will become drawn.

GRUBS IN CYCLAMEN AND FERN ROOTS.—N. D. P., Littlehampton: The grubs sent are those of Otiorhynchus sulcatus, the vine weevil, a pest closely allied to and very much like O. picipes, the clay-coloured weevil, so well figured and described on p. 166 of the GARDENERS' MAGAZINE of February 29. It sometimes happens that the soil used for potting contains grubs, and if there is a possibility of this then such soil should be sterilised before use by submitting it to heat sufficient to kill all animal life. The weevils are often very destructive in vineries, and should be hunted for at night after the manner described on p. 166. Where ferns and other plants are infested, it is possible to kill the grubs by immersing the plants in water for from twelve to twenty-four hours. The condition of the plants must be considered, of course, otherwise the cure may be as bad as the disease.

ALOCASIA METALLICA.—W. B., Bridgwater; The probability is that your plant has been wintered in a rather too low temperature, and kept too dry. A good winter temperature is 65 degrees. The present is a good time to deal with alocasias, and an annual potting is usually desirable. Turn the plant out, remove all old soil and decayed roots, and put the plant in a clean pan or pot. The latter should be amply drained, a third of its depth being filled with crocks. Over these place some rough material from the potting compost. A suitable mixture consists of two parts peat fibre, one part loam fibre, and two parts clean sphagnum moss, with a plentiful addition of small crocks and coarse sand. So arrange the plant that its crown is well above the compost, the latter sloping from it to the rim of the pot or pan. Thus you will see that the method of potting is very much the same as followed for many orchids. Abundance of heat and moisture are necessary to secure the best results from alocasias. A. metallica may be grown to a very large size.

TAR PAVING FOR TERRACE.—A. W. G., Cardiff: We are not sure that we fully understand your question. If the present answer does not meet the case please write us again. Over a well-drained and solid foundation place about three inches of material made by mixing moderately fine gravel with hot tar and pitch until a stiff, mortar-like consistency is obtained. Rake this into shape, sprinkle with fine binding gravel and roll well, adding more gravel as the rolling proceeds. Sufficient gravel may, of course, be added to produce a gravel surface, but as a walk depends, for its firmness, on its solidity, it will be obvious that if much gravel is added, and not rolled into the tarred material, it will form a surfacing that is likely to move with use. If you want a gravel path only, then there is no need whatever to use tar beneath, provided a good foundation is made, with the coarse gravel over this, and then three to six inches of good binding gravel of a finer description. If the work is well done and the gravel good such a path will be firm enough for all ordinary garden purposes.

NAMES OF PLANTS.

S. P. R., Crawley.—Anœctochilus Dawsonianus.

E. S., Carlisle.—1, Iris japonica; 2, Saxifraga Burseriana.

W. B., Bridgwater.—Eranthis hyemalis, the Winter Aconite.

A. B. J., Bridgwater.—1, Corylopsis spicata; 2, Hamamelis arborea.

R. N. H., Ipswich.—1, Dendrobium Ainsworthi; 2, Lælia anceps, a good form.

D. D. G., Hampton.—1, Clematis cirrhosa; 2, Asplenium Fabianum; 3, Didymochlæna lunulata.

C. T. F., York.—1, Leonotus Leonurus; 2, Saintpaulia ionantha; 3, Cupressus nutkænsis; 4, Dendrobium cretaceum; 5, Cypripedium villosum; 6, Nephrolepis Duffi.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. FEBRUARY 23 TO FEBRUARY 29.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Feb. 23 Sunday	1 35	44	41	49	42
,, 24—Monday	1 5	38	35	44	36
,, 25 Tuesday...	1 55	42	39	47	37
,, 26—Wednesday..	2 10	38	3[illegible]	43	36
,, 27—Thursday ...	1 50	44	41	46	37
,, 28—Friday	4 30	38	37	43	35
,, 29—Saturday ...	5 30	32	31	42	30
Means	2 40	39	37	46	36

DATE. 1908. FEBRUARY 23 TO FEBRUARY 29.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg
Feb. 23 Sunday	0.01	42	43	43	36
,, 24—Monday	0.06	41	43	43	31
,, 25—Tuesday	0.01	40	42	43	32
,, 26 Wednesday..	0.05	40	42	43	30
,, 27 Thursday ...	0.09	41	42	43	32
,, 28 Friday	0.03	40	42	43	30
,, 29—Saturday ...	—	38	41	43	23
Means ...	(total)	40	42	43	31

FORTHCOMING ENGAGEMENTS.

MONDAY, March 9.—United Horticultural Provident and Benefit Society, Annual Meeting at Horticultural Hall, Vincent Square, S.W., 8 p.m.

WEDNESDAY, March 11.—Royal Society of Arts Meeting, 8 p.m.

FRIDAY, March 13.—Beckenham Horticultural Society Meeting, lecture on "Annuals," 7.30 p.m.

Guides to Garden Work.—The publishers of the GARDENERS' MAGAZINE will be pleased to forward a catalogue of their gardening books, setting out full particulars of the contents of each work. The books, which are thoroughly practical, up-to-date and well bound, will be of particular service to those interested in flowers, the greenhouse, or the garden. A copy of the catalogue will be sent post free to any reader who addresses a postcard to the Publishers, THE GARDENERS' MAGAZINE, 148 and 14 Aldersgate Street, London.

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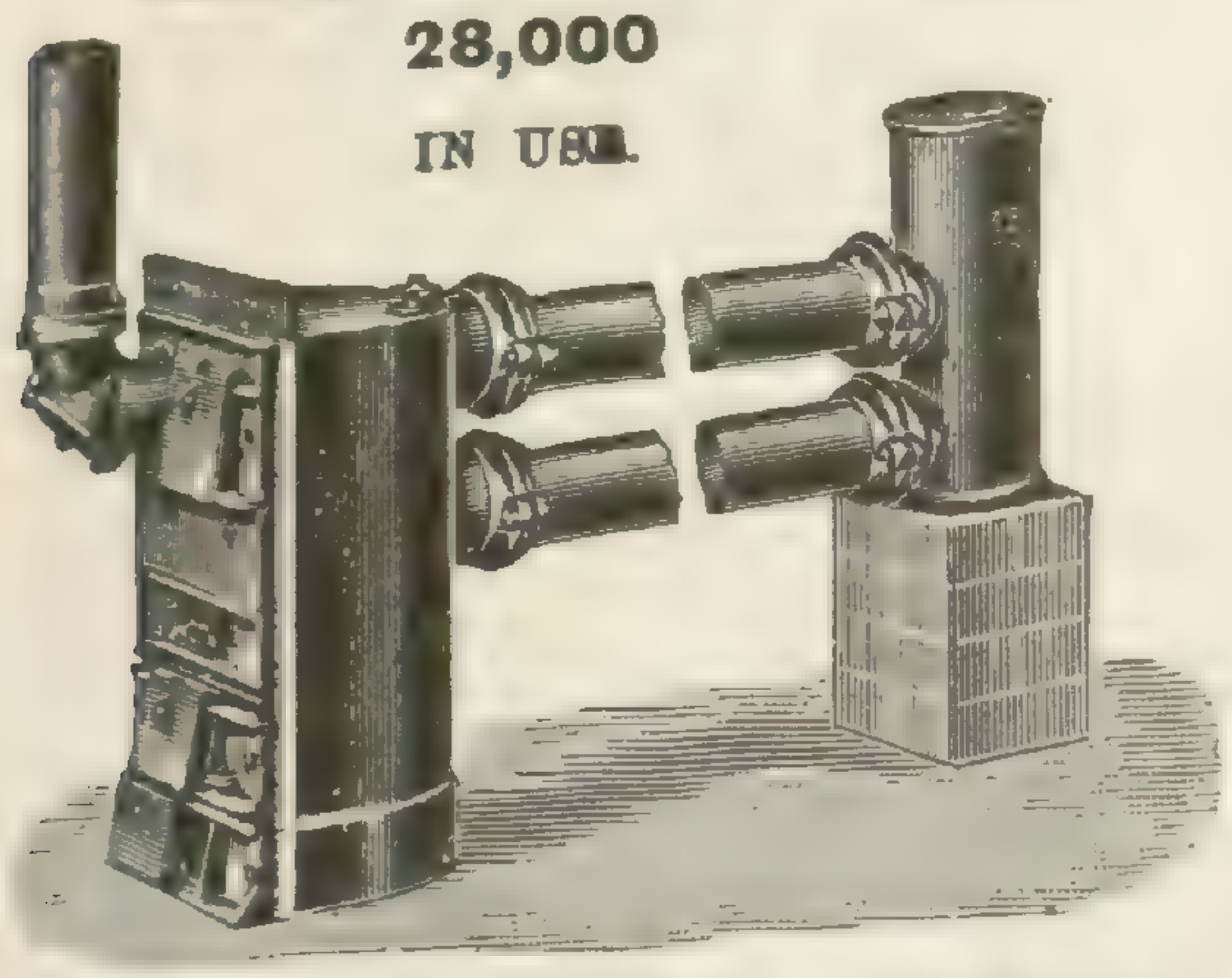

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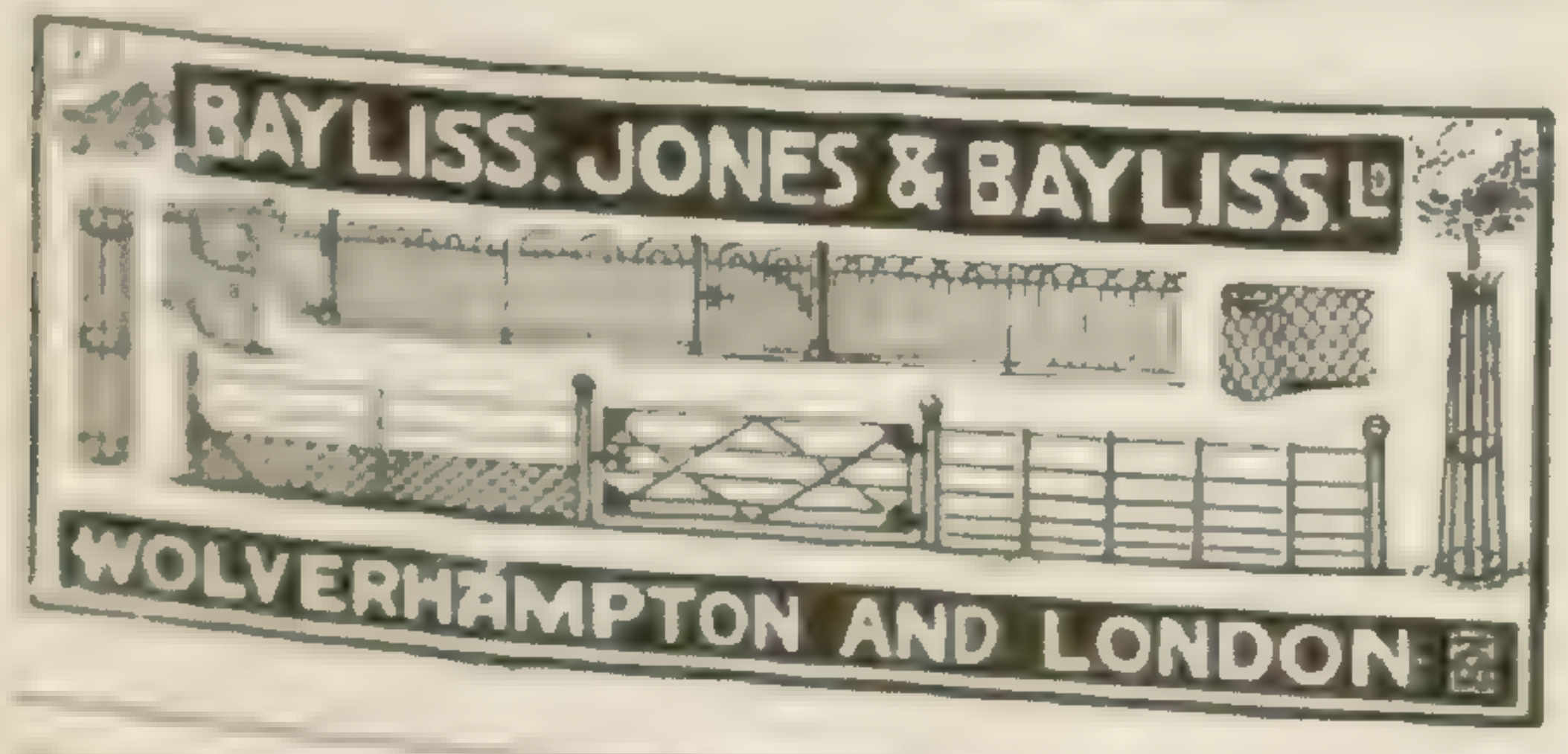

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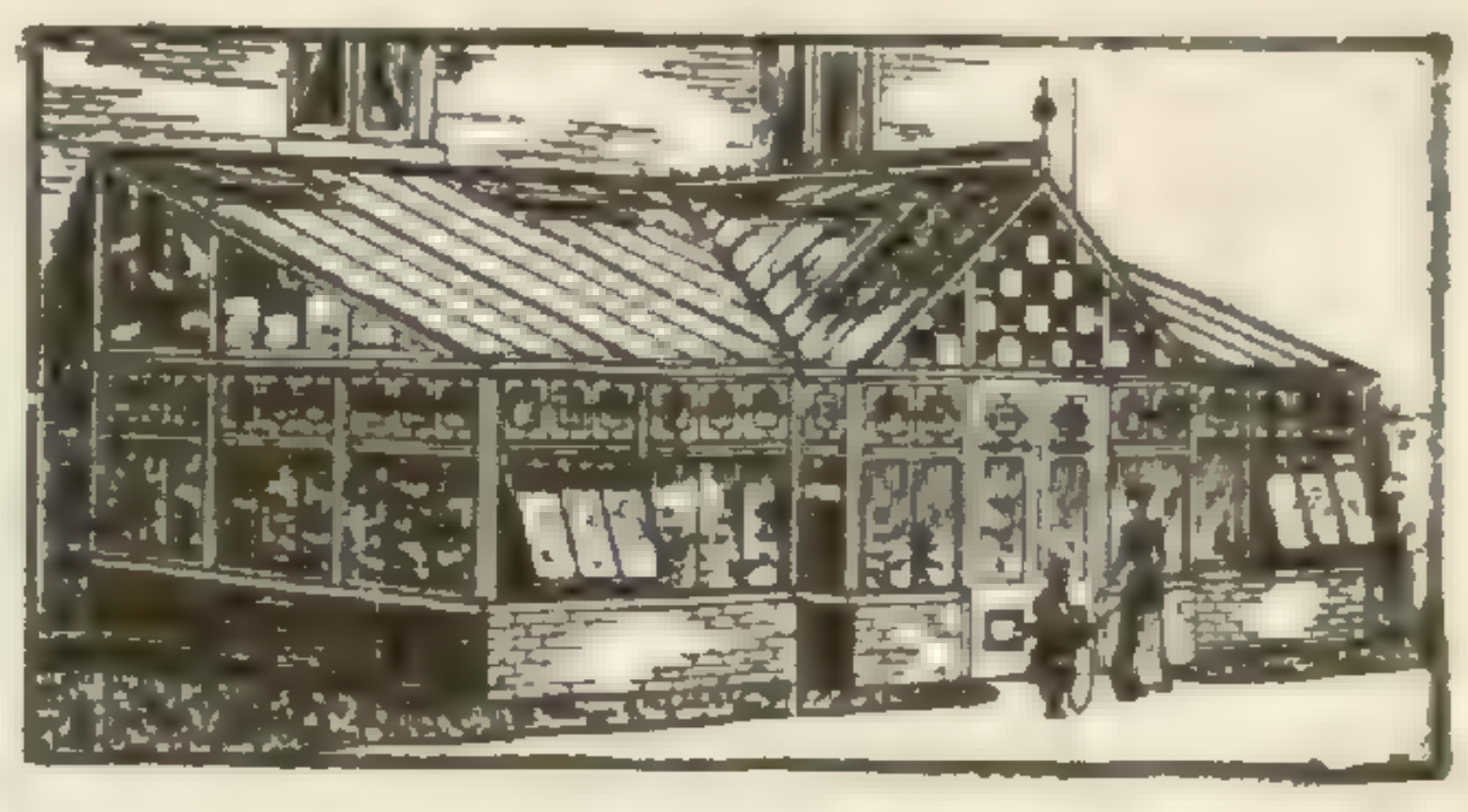

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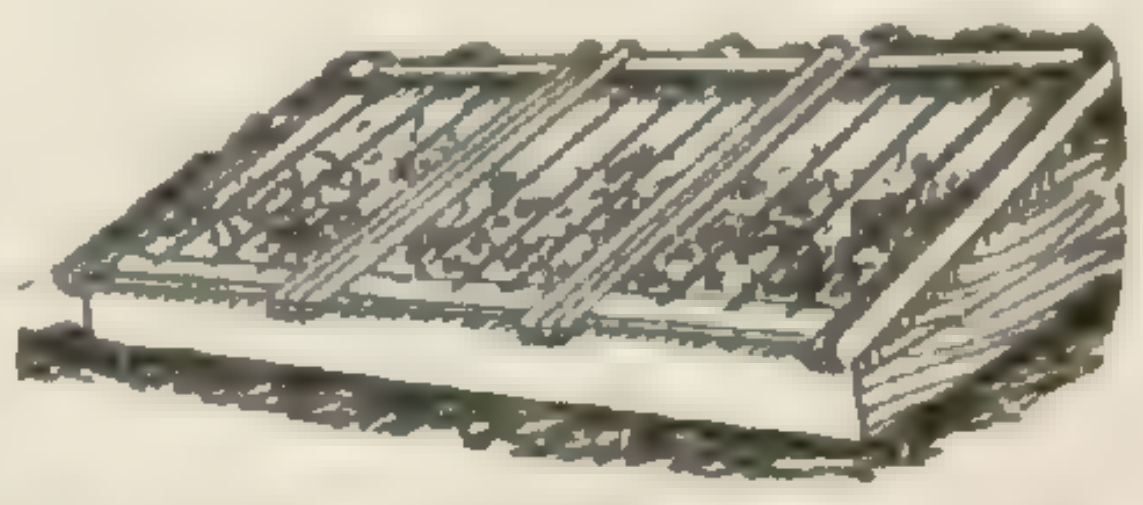

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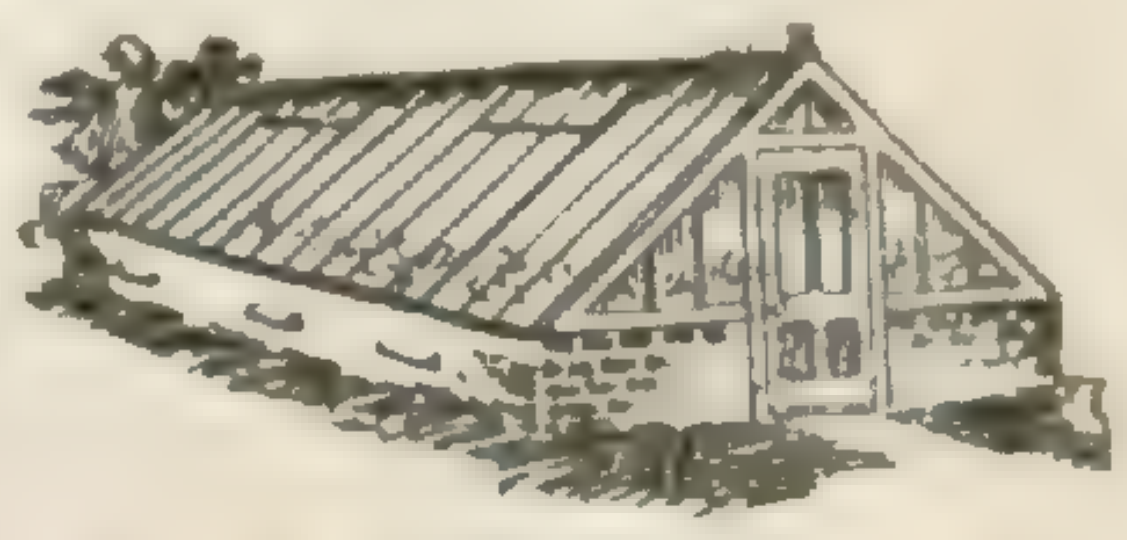

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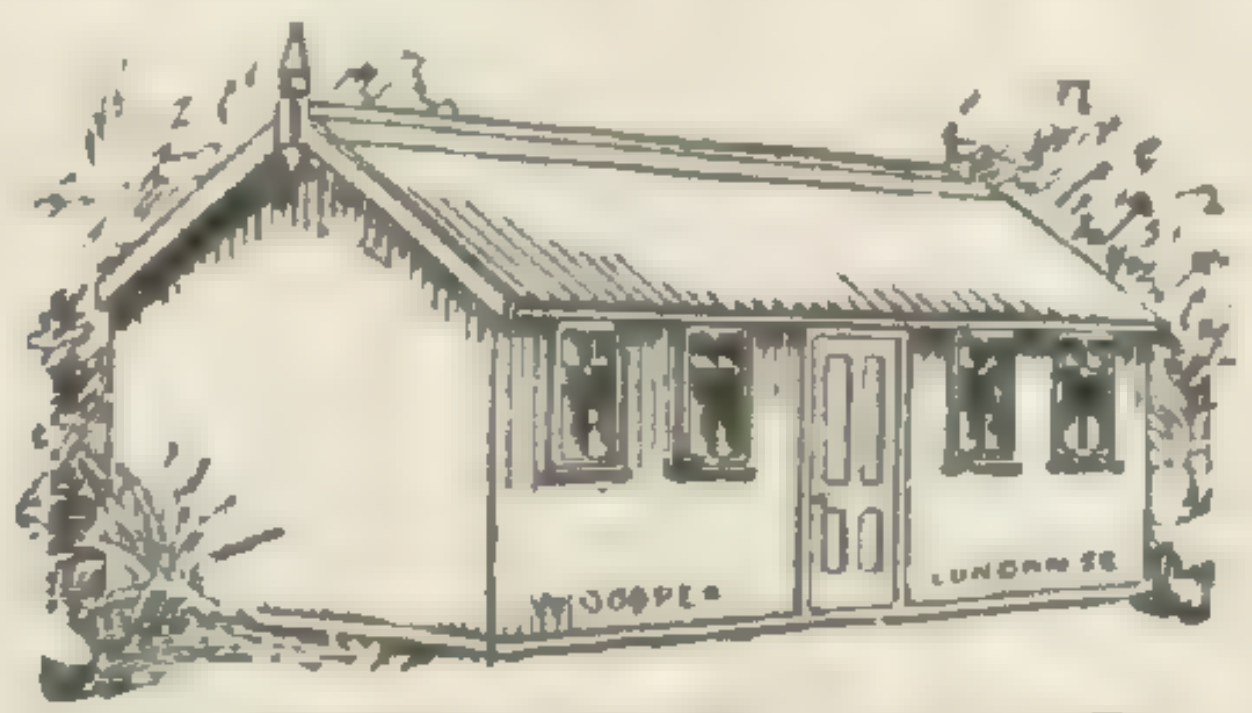

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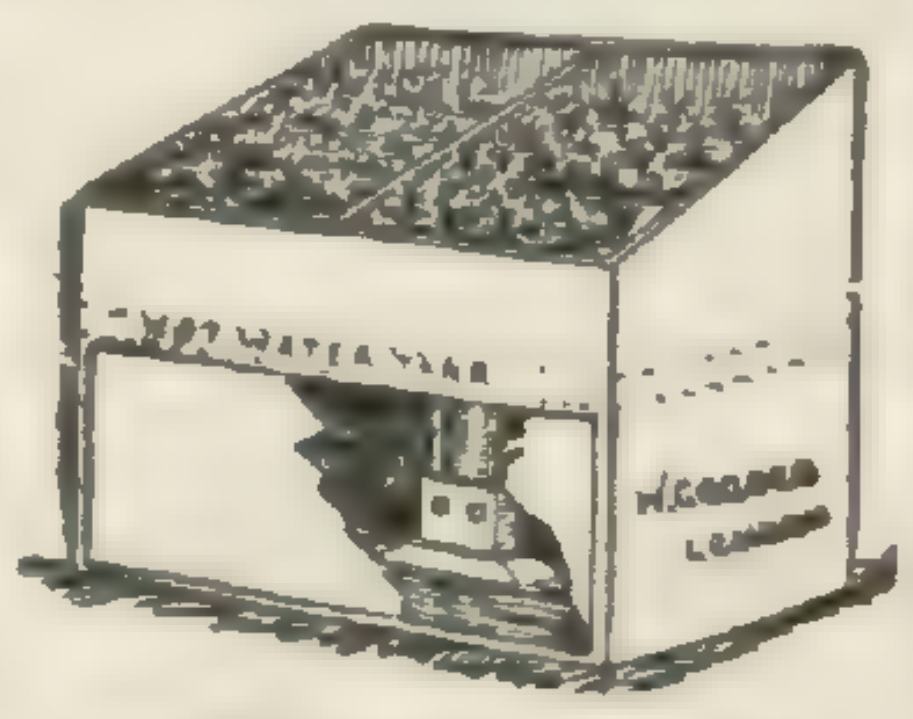

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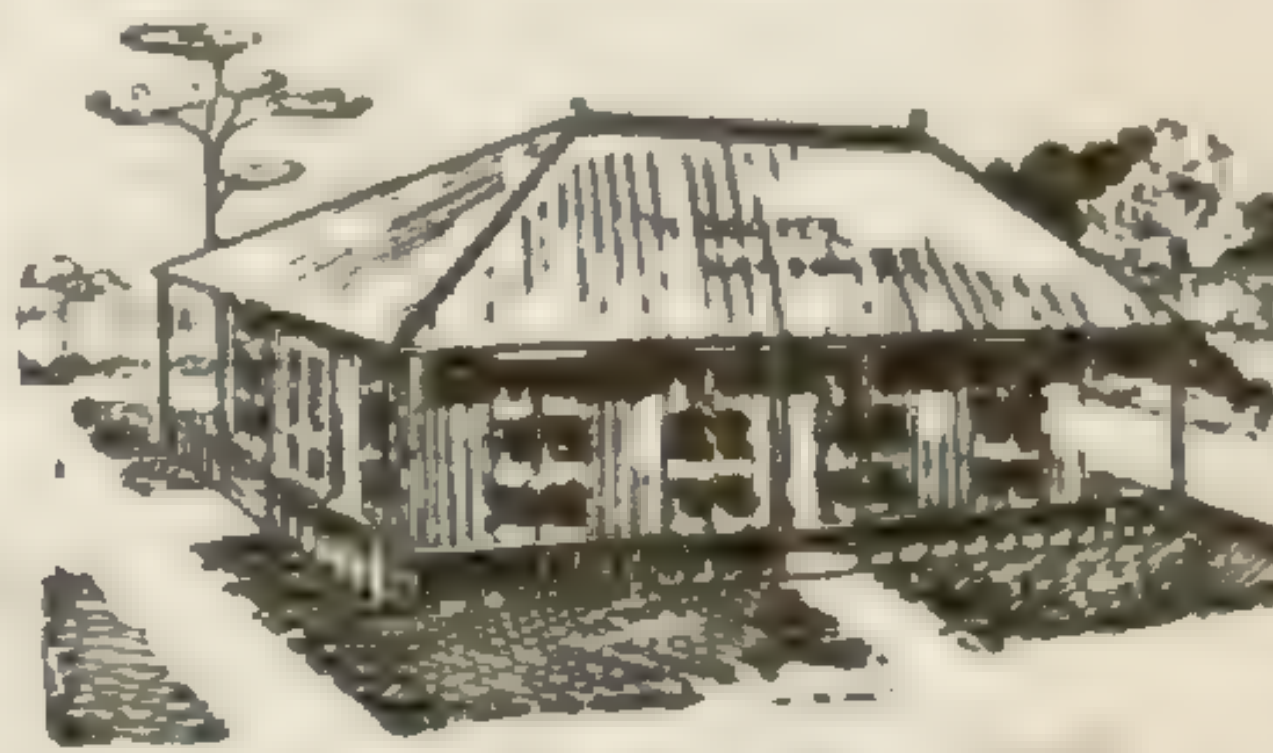
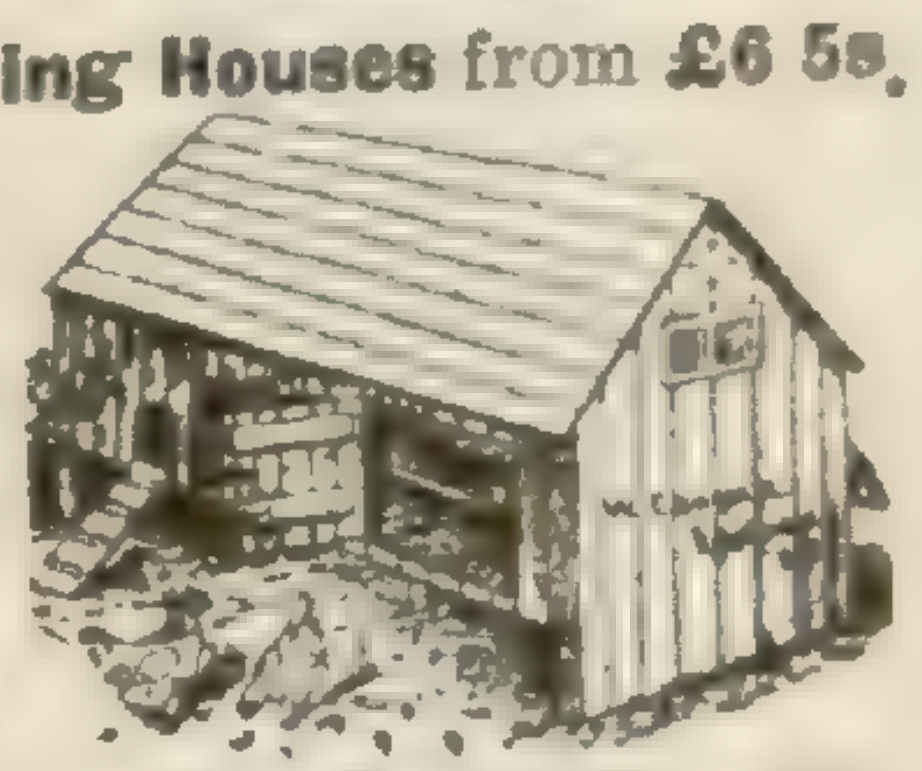


Iron Bungalow £98



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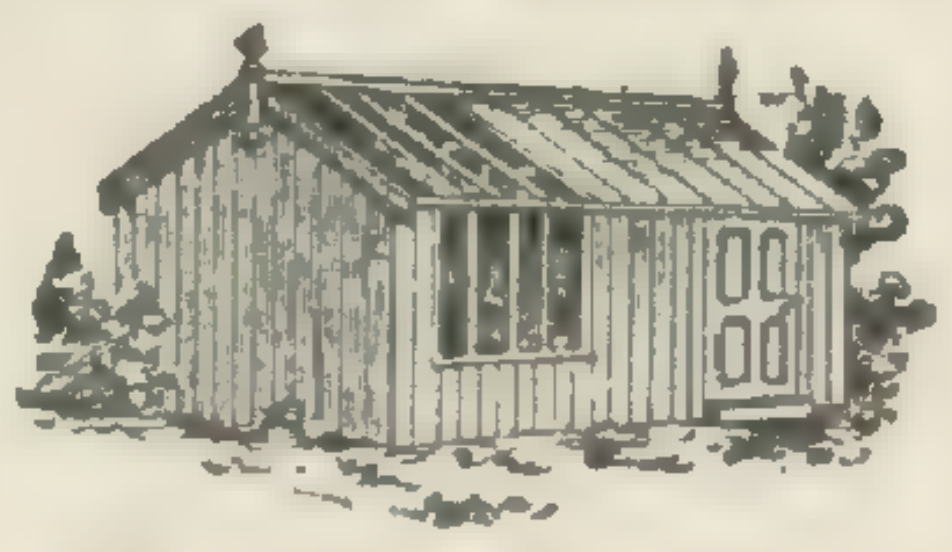

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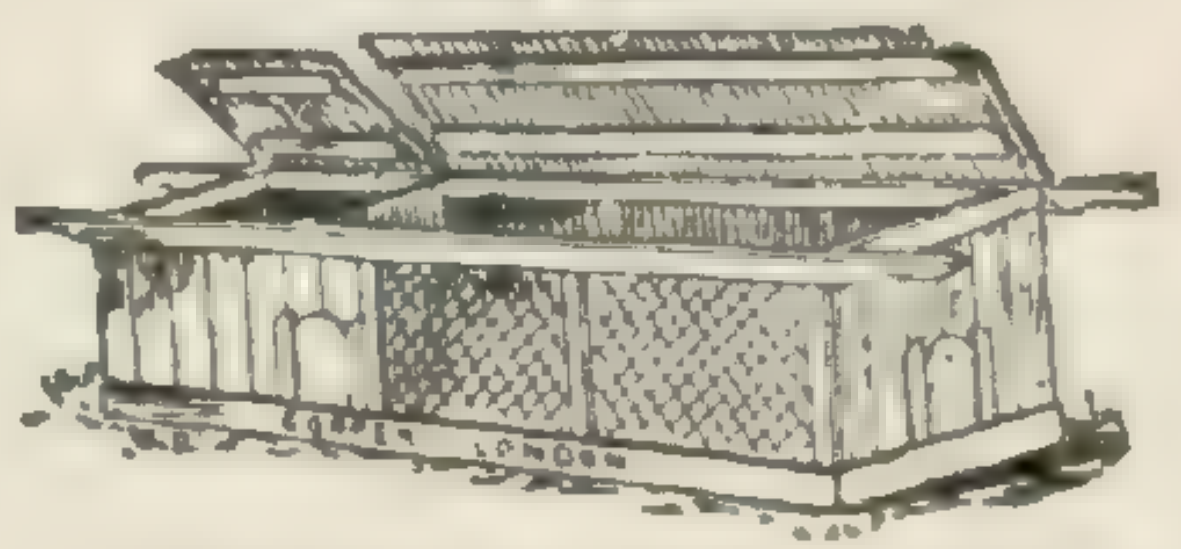
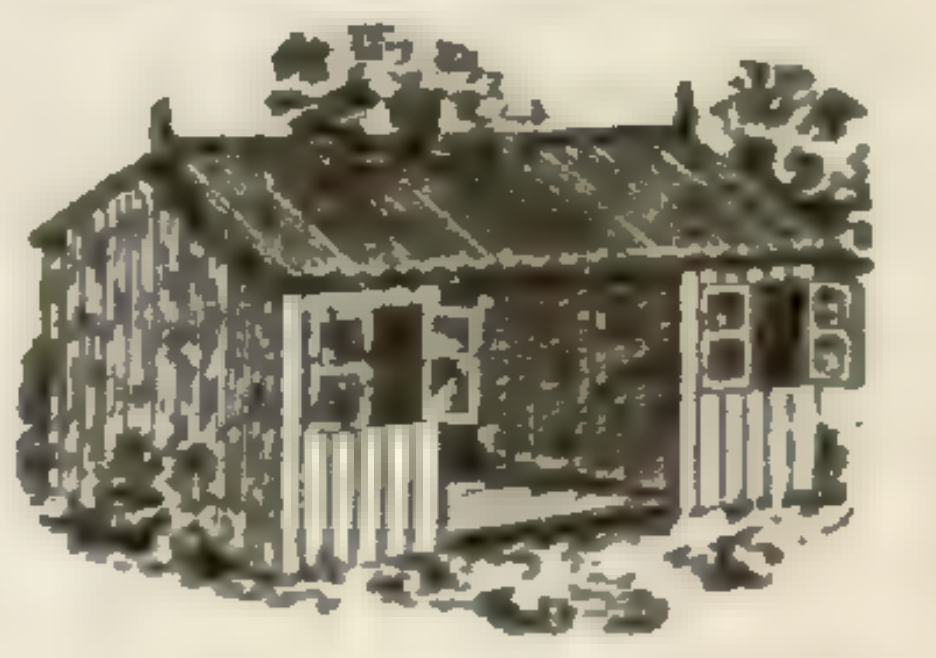
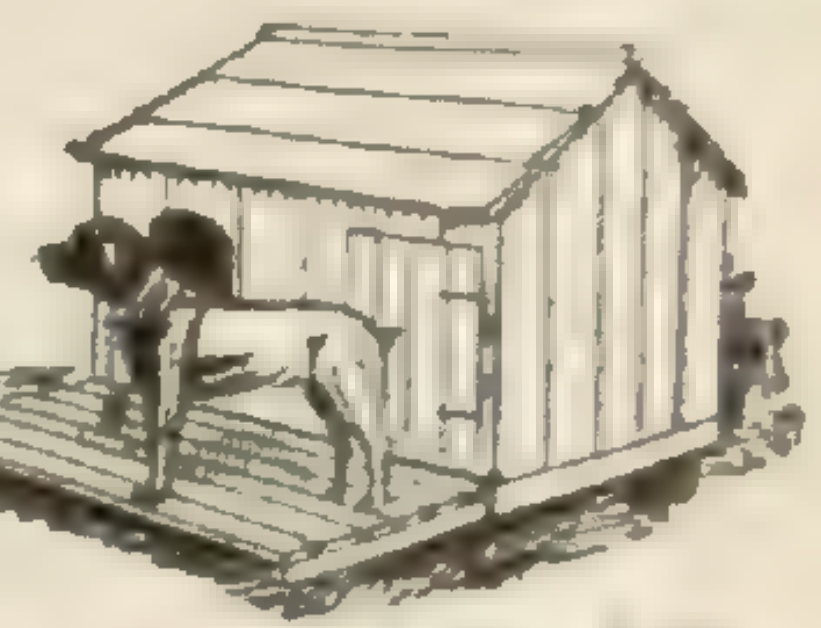


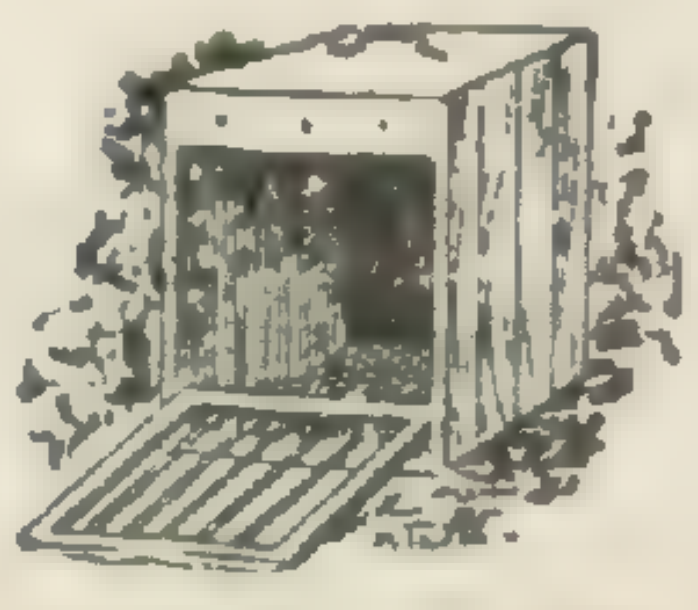
Foster Mothers from 22/6



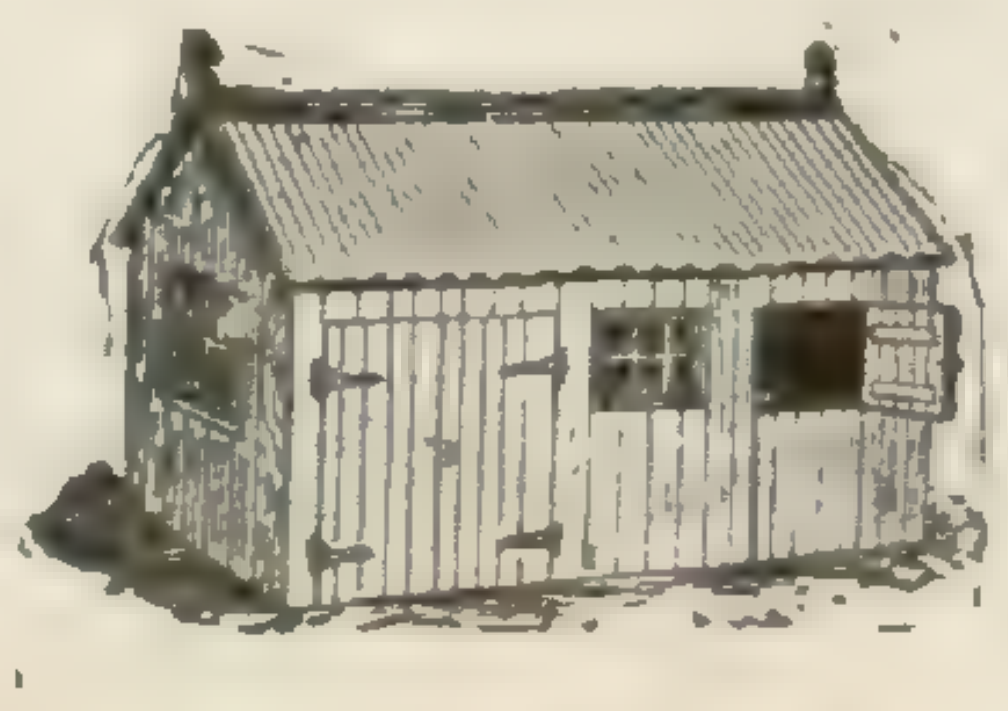
Sports' Pavilion, £11 10s.



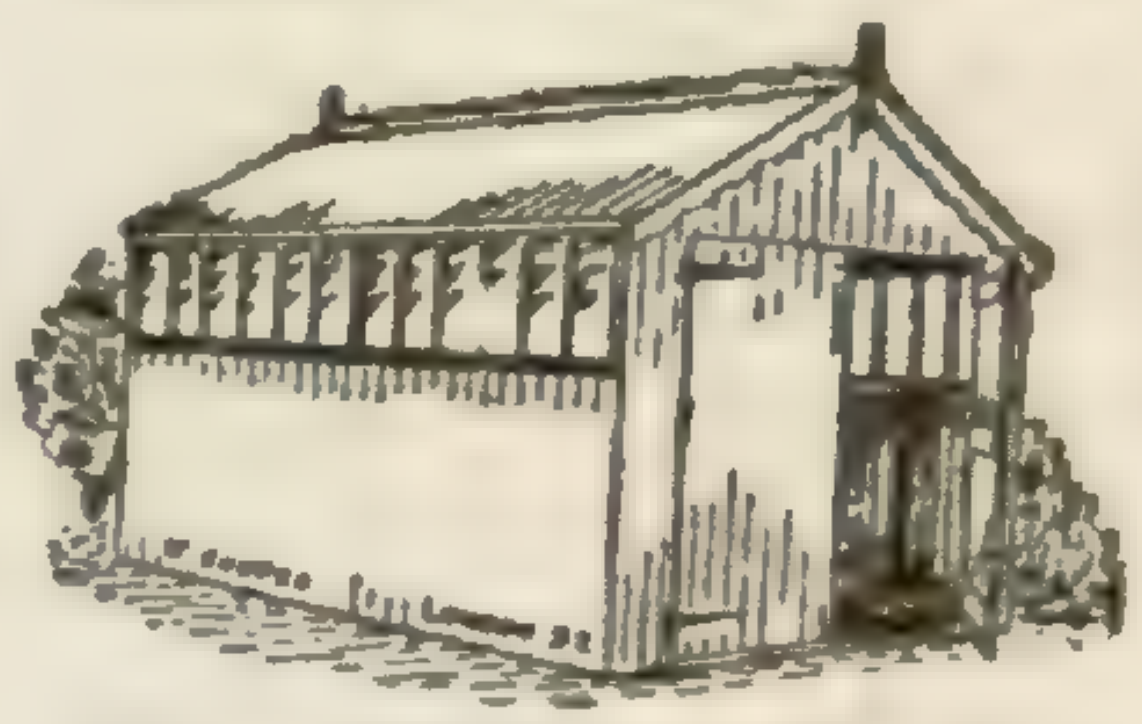
Dog Kennel from 7/6



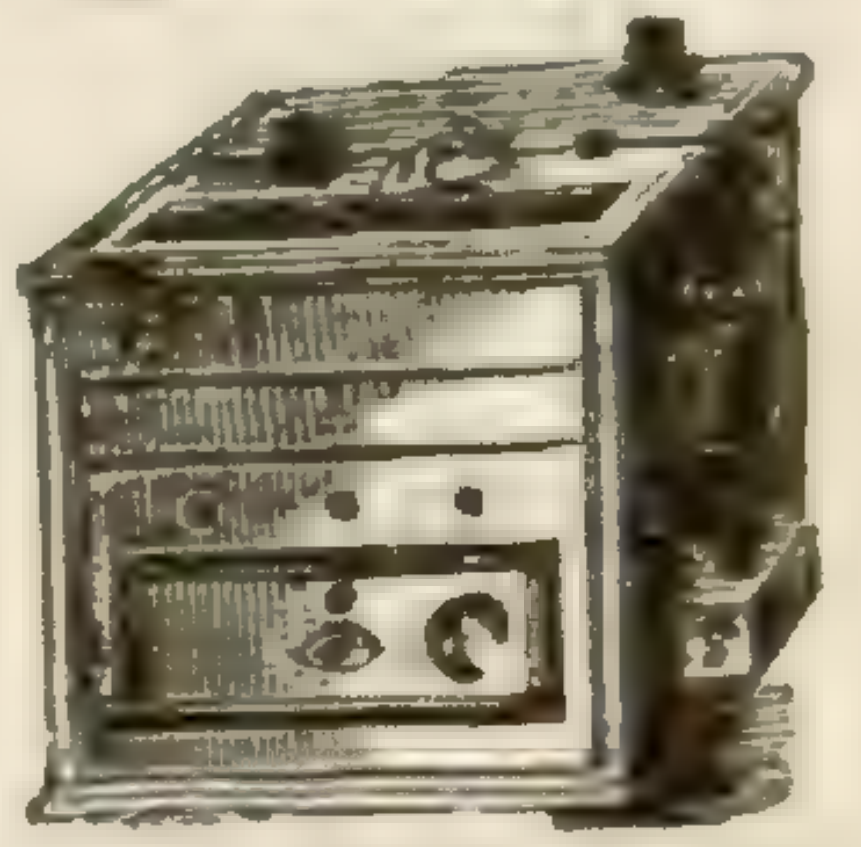
Nest Boxes, 2/3



Stable and Coach House, £8 5s.



Motor House from £6 5s.



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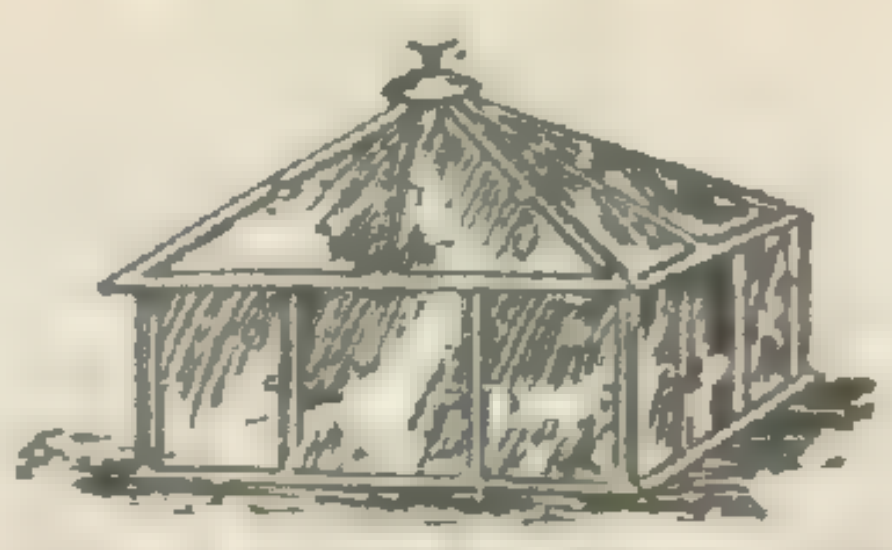
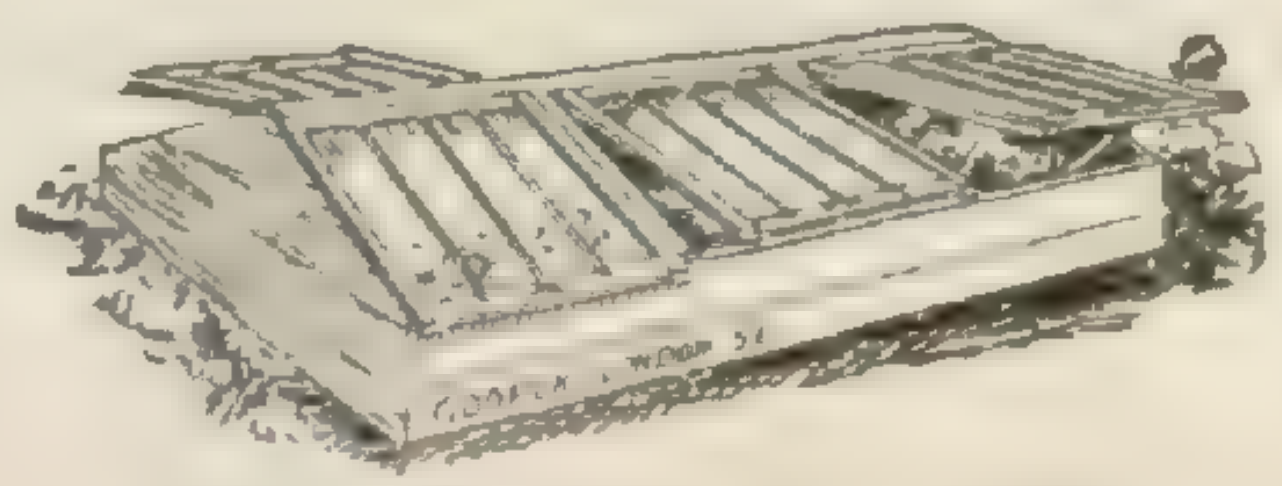


Hand Lights from 4/3



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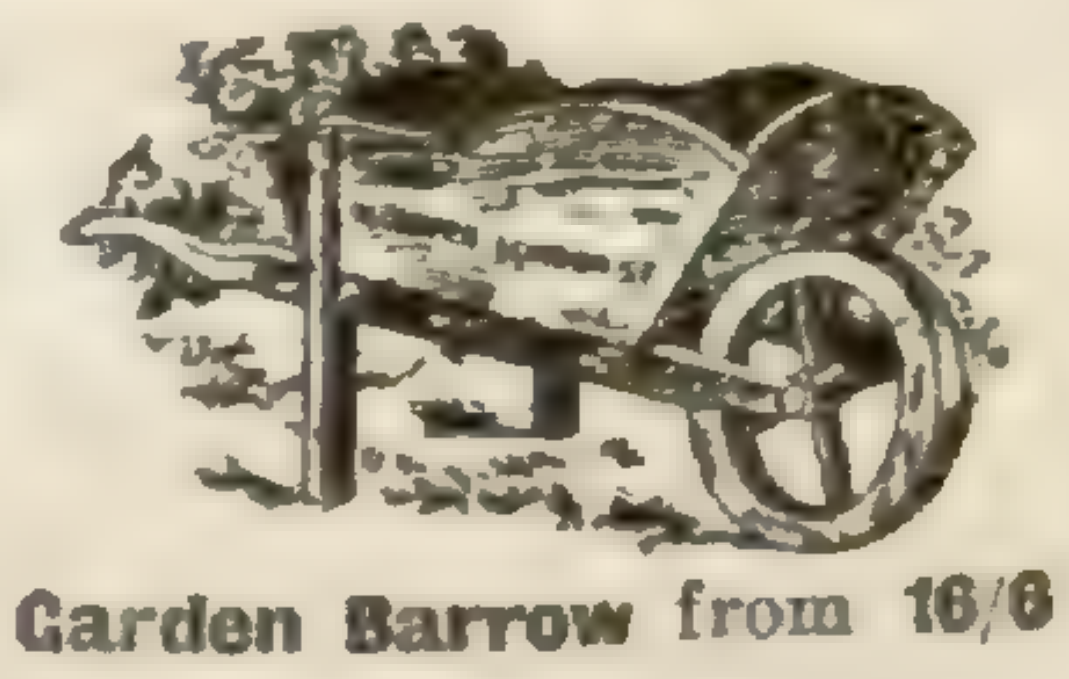
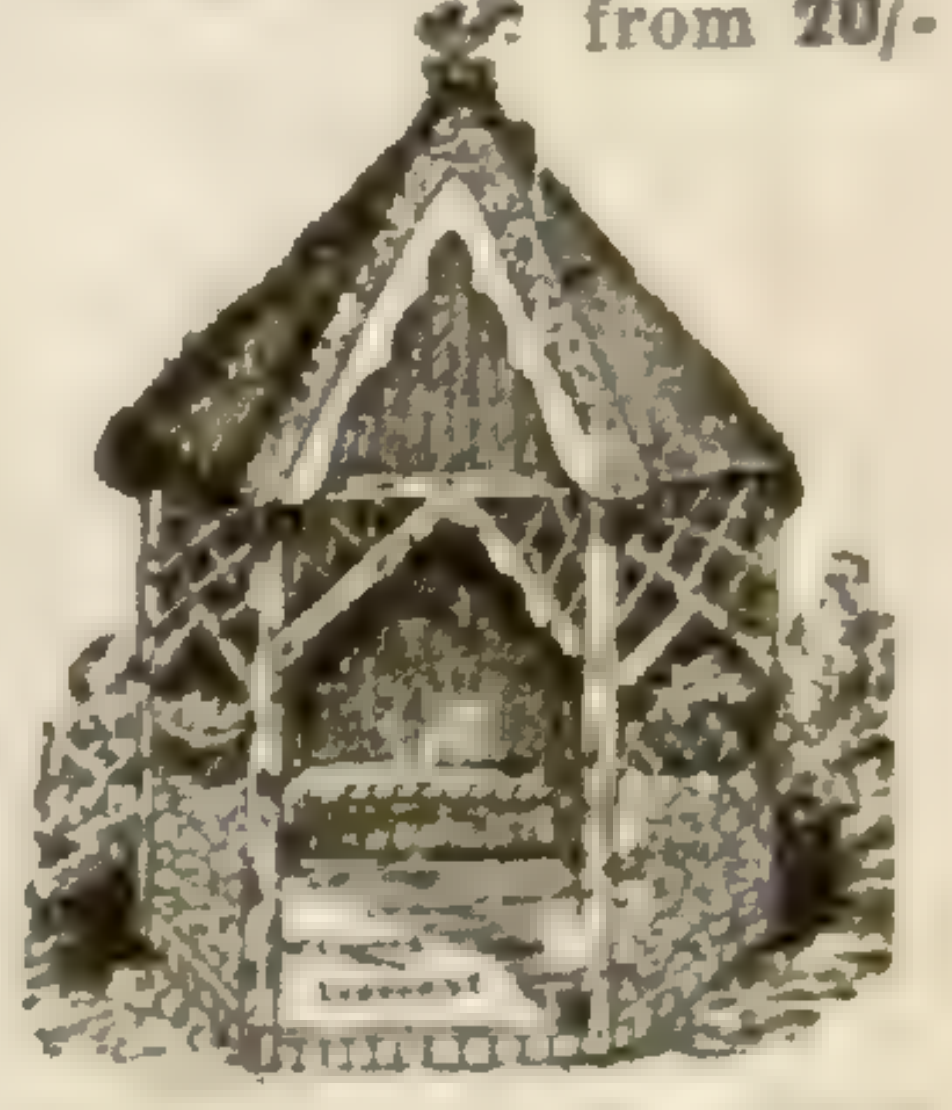
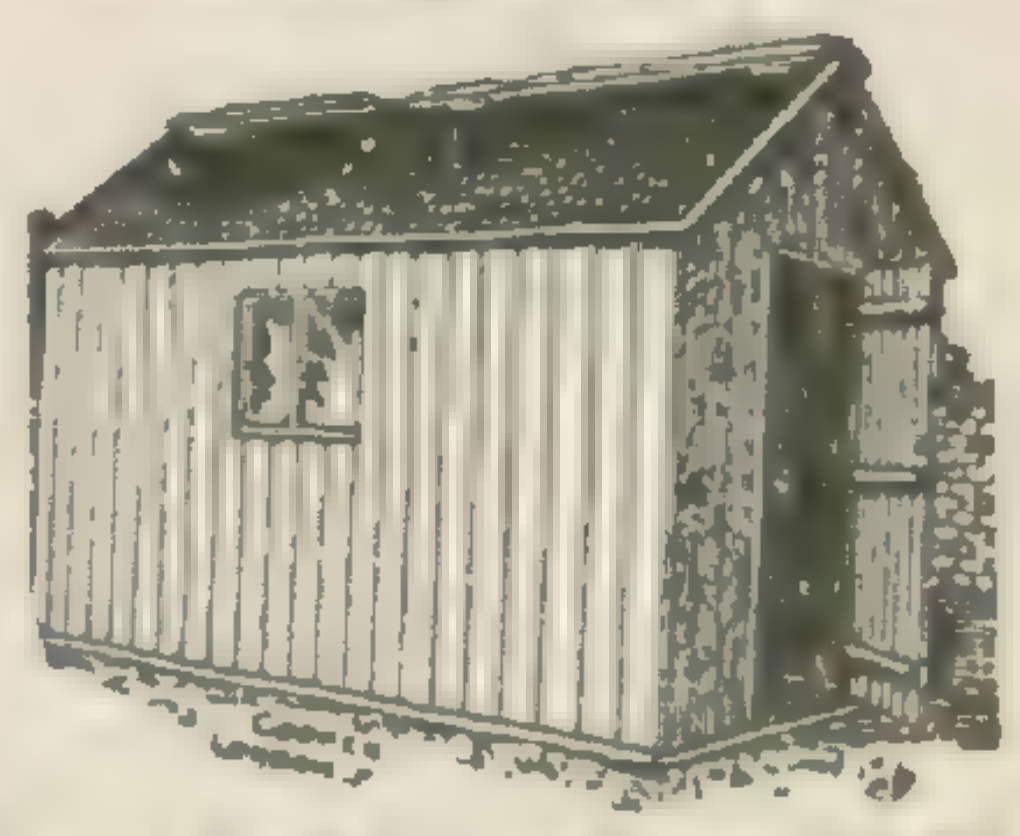


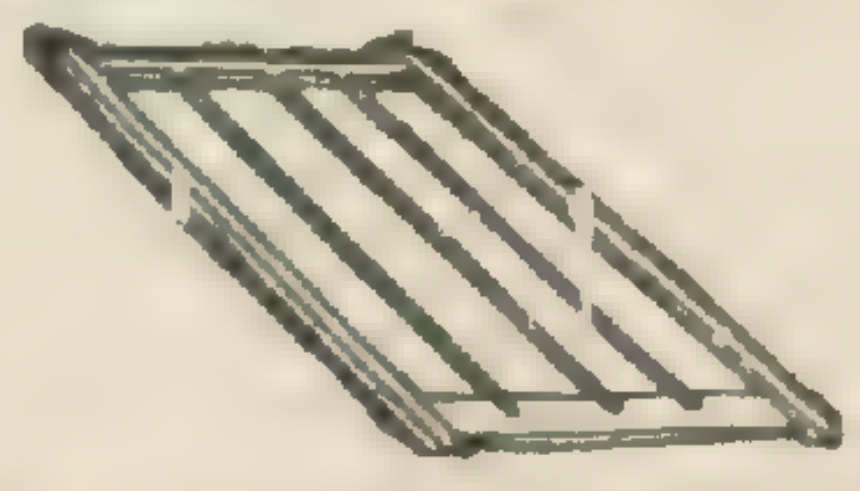
Garden Barrow from 16/6



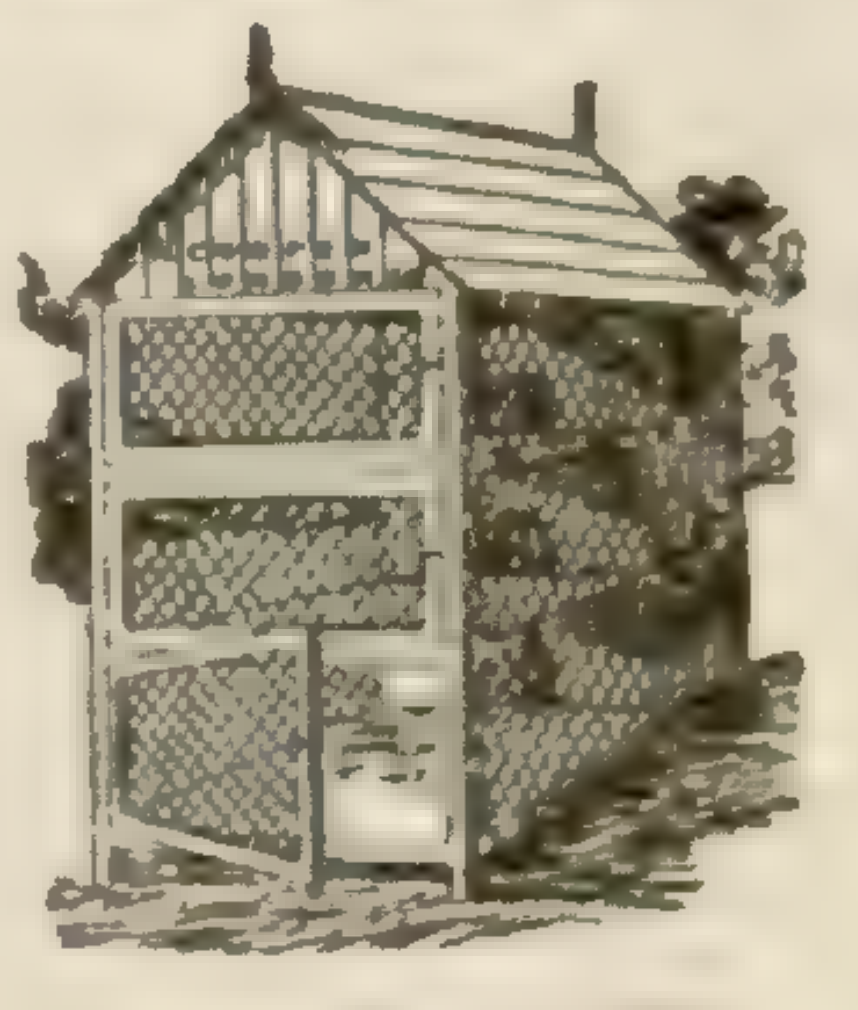
Rustic Houses from 27/6



Wood Buildings from £2 17/6



Garden Lights from 1/6



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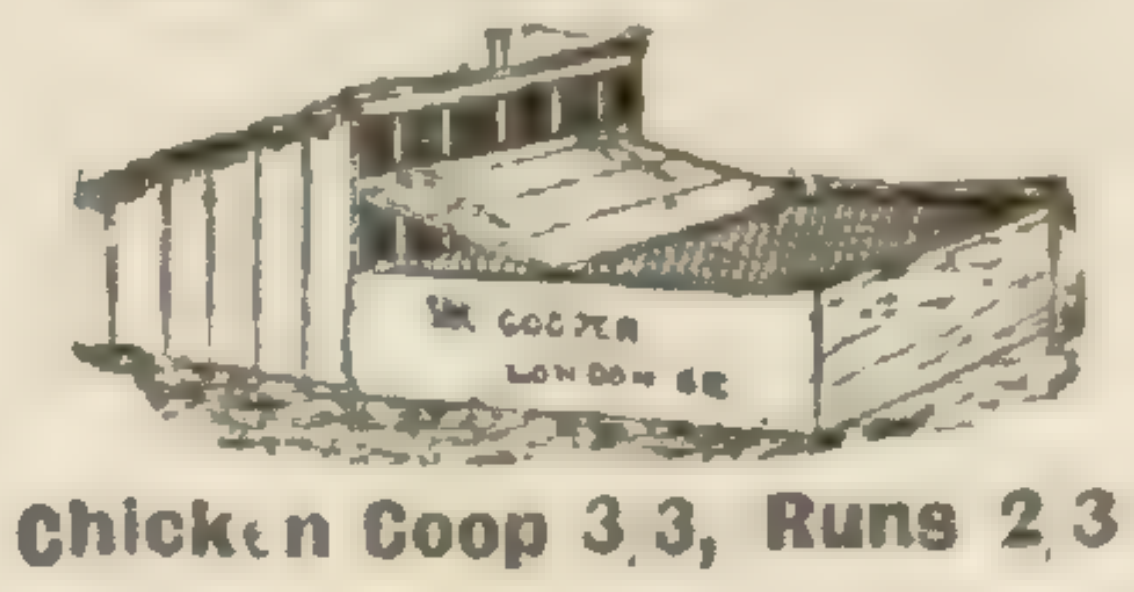
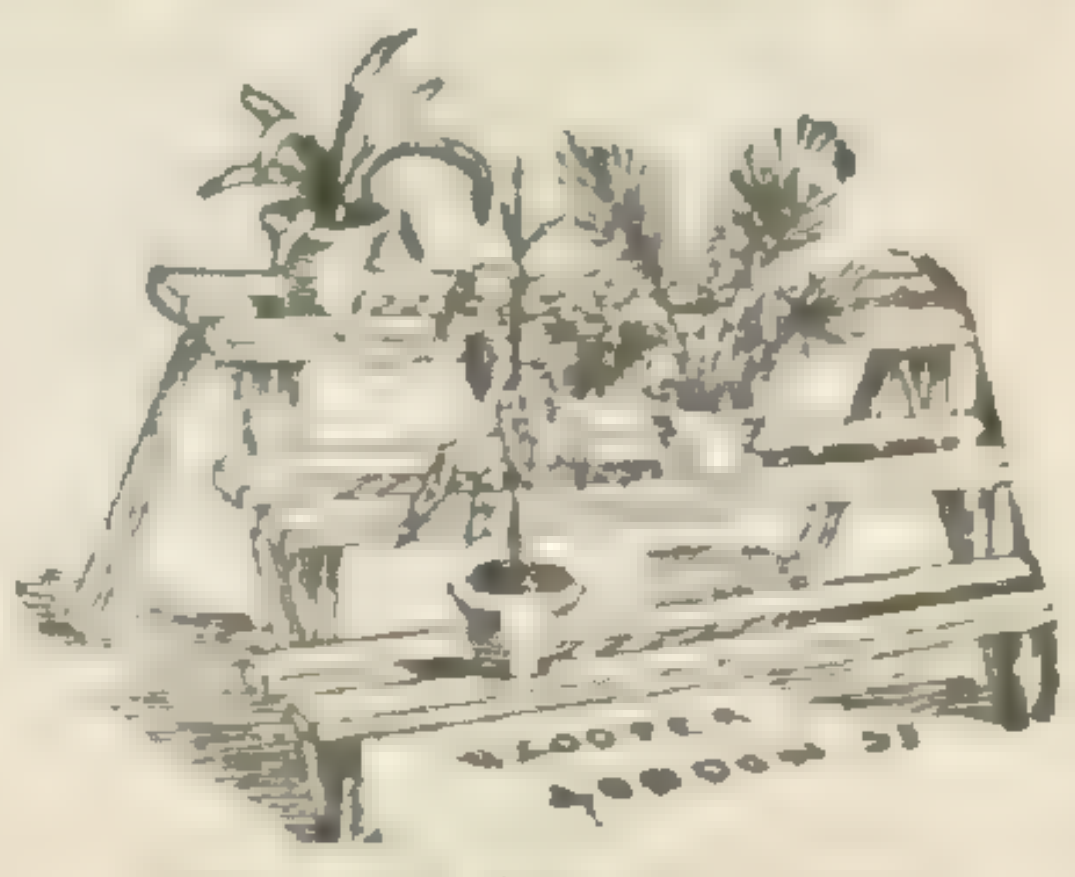
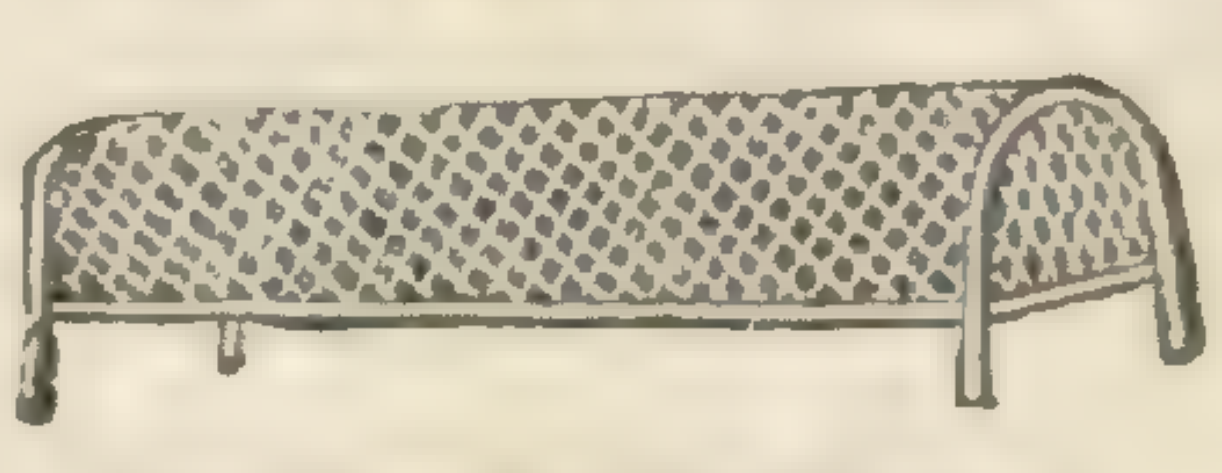


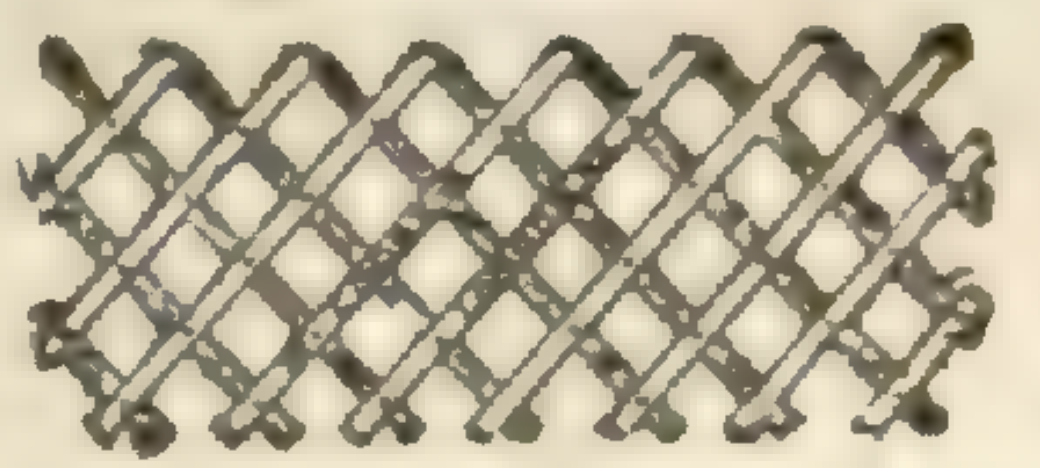
Chicken Coop 3/3, Runs 2/3



Flower Stand, 3/3



Pea Guards, 2/6 dozen.



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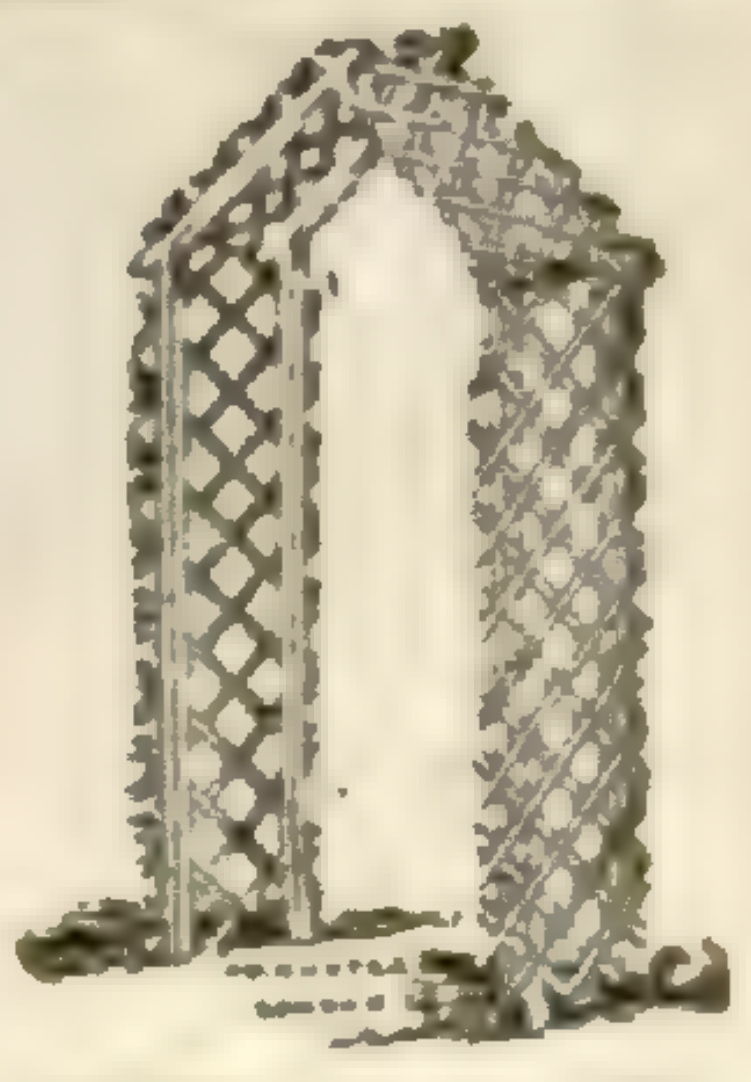

Trellis Arch, 4/6

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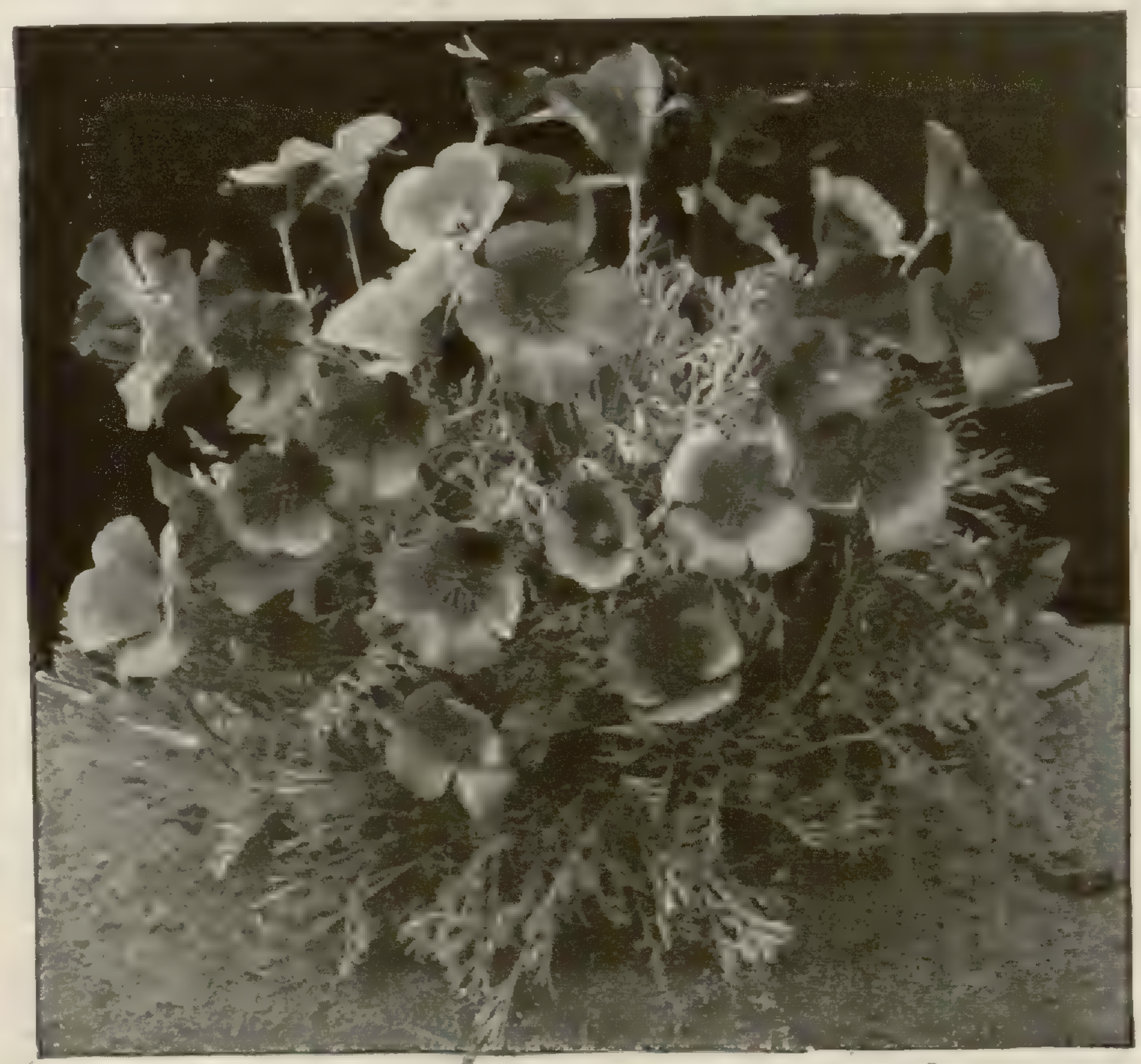
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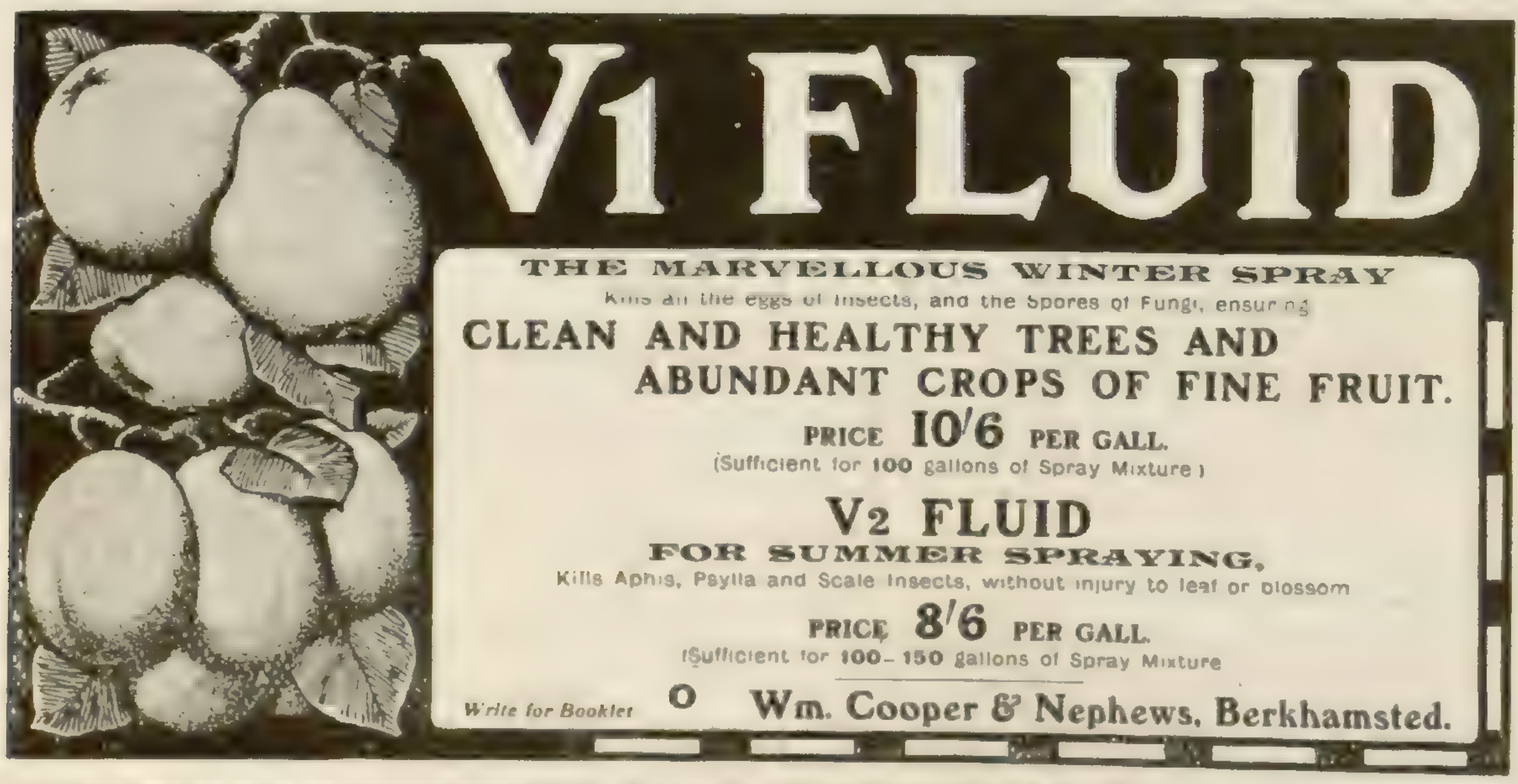

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Situations Wanted.

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GARDENER (Head Working), where several are kept; life experience in all branches; 10 years as Head in last situation; excellent references; age 38; married, one boy, age 7. O. BEAL, 39, Mayfield Road, Hampton Park, Southampton.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

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GARDENER (Head, or good Single-handed); thorough experience in all branches inside and out; age 37; two boys, age 6 and 11 years; 9 years' good reference from present employer. F. BALCOMBE, Hollings Hill, Mathon, Malvern.

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GARDENER (Under), age 19, seeks SITUATION; good character; country preferred. F. HELYAR, 46, Coombe Road, Upper Sydenham, Kent.

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FOREMAN (Inside), age 26; well up in all branches, including Fruit, Carnations, Orchids, House and Table Decorations. J. WILLGOSS, Crockerend, Nettlebed, Henley-on-Thames, Oxon.

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JOURNEYMAN (Inside); age 21; 6½ years' experience in present place; good reference; Bothy. H. JONES, Warens Gardens, Lyndhurst, Hants.

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VOL. LI.—No. 2,837. SATURDAY, MARCH 14, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Bark.

Bark, in its numerous forms is one of the most curious means of plant protection, consisting as it does of a sort of crust of dead inert matter secreted and accumulated outside the living, active cellular growth which builds up the annual ring of the tree or shrub concerned. A fair parallel to it may indeed be found in the animal kingdom in the shape of crustaceous and other shells, which in like fashion serve as protection to the tender, living tissues beneath them. Bark, however, varies in its nature far more than do shells, which are merely lime or carbonate of lime, or, it may be, flint, for combined with the dead ligneous matter, there are various alkaloids and other chemical agents which are of great use to mankind, but which were primarily evolved, no doubt, to prevent insect attack by their bitterness, or even poisonous qualities. Thus in the oak we have the intensely acrid principle of tannin, so valuable in our leather industries: in the cinchona we have the invaluable alkaloid quinine, the finest febrifuge and tonic known: and in the willow we have the less potent, but still valuable salicine as a milder remedy on similar lines. These are but types of many such repellent salts which must be of great service by preventing the boring into and destruction of the protective bark by grubs, etc., which often lead to the death of more assailable trees. Barks also vary markedly in structure and thickness. Thus, in the birch the bark consists of thin skins, smooth of surface and silvery in colour; in the plane it appears as a series of plates, the outer ones of which are shed annually as fresh ones form below: in the oak it forms ragged masses, and in the cork tree we have it in very thick sheets, corrugated outside, and formed throughout of the dense elastic brown material with which we are so familiar. A curious feature is the variable modes in which barks that are not shed adapt themselves to the annually increasing girth of the tree they envelop. The corrugated rough and rugged barks become so by a process of cracking, as the new wood beneath demands more room, fresh bark being deposited to heal the fissures thus caused; and as these fissures continue to be the weakest points in the armour, the natural result is that they get deeper and deeper, and the ruggedness of the exterior consequently becomes more and more emphasised. Other barks, such as that of the beech, are more elastic, and adapt themselves to increased girth by a fairly uniform expansion, fresh bark being, as it were, infiltrated from beneath in the process, so that few actual fissures become evident. Bark proper is confined to such plants as produce annual rings of wood outside those previously formed, the so-called exogenous trees. A tree trunk really consists of three parts, a central cylindrical mass of wood which contributes nothing to the vitality of the tree, but only to its structural support; outside this is the active, living formative cells, which, during the growing season perform two offices, that of conveyance of the sap collected by the root system to the foliage above, and of recieving in return from that foliage some of the material elaborated by the leaves under the influence of the sunlight, and converting this into wood, and, finally, there is the bark which covers and protects the whole. The life of the tree, therefore, so far as the trunk is concerned, is confined to a thin ring of active cells, of which the bark is the only protector, so that it is quite easy for us to understand that stripping the bark on a large scale may easily prove to be a mortal wound. Furthermore, when we consider that it is precisely this thin underskin of vitality which constitutes the feeding ground of any vermin, but actual wood eaters, we can see how essential it is that bark protection should be thorough. Hitherto we have spoken only of the trunk, but bark pervades the entire tree; trunk, branch, and minutest twig have their armour-plating on lines relative to their age and size, and also contain the register of their age in the number of wood-rings beneath.

MR. ALFRED TATE.
Vice-President of the National Rose Society.

Mr. Alfred Tate, whose portrait we have the pleasure of giving in this issue, is well-known as an enthusiastic and highly successful rosarian; he is happy in the possession of a genial temperament, and generous in permitting others interested in roses to freely participate in the enjoyment of his wondrously beautiful garden, and is held in the highest estimation. Mr. Tate is best known as an exhibitor of garden roses, and the magnificent collections from his gardens that have been staged at the leading exhibitions have done much to popularise good free blooming varieties. Having regard to his remarkable success as an exhibitor of garden roses at the shows of the National Rose Society and some other of the leading societies, it is a matter of some interest to mention that Mr. Tate does not attach undue importance to bunches of large size. He would appear from the evidence derived from his collections to regard high quality and taste in arrangement as of primary importance. The collections are indeed models in their way, for the flowers are invariably in the highest state of development, and they are presented in a manner that at once arrests attention and gives pleasure to those fortunate in the possession of artistic perceptions. With exhibition varieties Mr. Tate has also been successful, and notwithstanding the disadvantages of soil he has on more than one occasion attained to a high position in the contest for the amateur championship; and in other classes he has been successful in winning first prizes well-nigh innumerable. The rose garden which Mr. Tate has formed at Downside, his charming residence at Leatherhead, is unique, and may well be described as a veritable triumph of art over nature. It is unquestionably the finest garden of its kind in the United Kingdom, and we shall be surprised to learn that it has an equal in any part of the world. Had the soil at Downside been more or less suitable for roses the garden would have been deserving of the highest praise for the taste with which it had been designed, the skill with which it was planted and the luxuriant condition of the thousands of roses located within its boundaries. So far from the soil being a deep holding loam such as that in which roses delight, it is thin, and rests upon a bed of chalk of enormous thickness. Therefore all the beds and borders had to be excavated to a depth of several feet, and the chalk with its thin covering of soil replaced with good loam brought from a distance. When any considerable proportion of the soil of a garden of quite moderate dimensions has to be replaced with new it is usually regarded as a serious business; and when it is stated that the rose garden at Downside has an area of between three and four acres there will be no difficulty in appreciating the task Mr. Tate has accomplished. Mr. Tate, it may be added, is hardly less appreciative of hardy herbaceous plants, carnations, water lilies, and beautiful trees and shrubs, and as a consequence thereof these subjects form great and attractive features in the delightful gardens of Downside.

Royal Horticultural Society.—The next Fruit and Flower Show of the Royal Horticultural Society will be held on Tuesday, the 17th inst., in the society's hall. A lecture on "Beautiful Flowering Trees and Shrubs," illustrated by lantern slides, will be given by Mr. George Gordon, V.M.H., at three o'clock. At the general meeting of the society held on March 3, 113 new Fellows were elected, making a total of 305 elected since the beginning of the present year.

Compounds (Poisonous) for Horticultural and Agricultural Purposes.—The Poisons and Pharmacy Bill has successfully passed its second reading in the House of Lords, and has been referred to a Joint Committee of both Houses of Parliament. The horticultural trade is materially interested in this Bill, as by Clause 2, power is given for persons, other than chemists, such as nurserymen, seedsmen, and agricultural agents, to stock and sell (under provisions to be made by the Privy Council) weed killers, insecticides, sheep dips, etc. It will be remembered that the Traders in Poisonous Compounds for Trade Purposes Protection Society has, for years past, been working to this end, and it is due to the efforts of the society that this clause has been inserted in the Bill. All those interested in the sale of these compounds should assist the society in its efforts to induce members of Parliament to support Clause 2 of the Bill, so that the same may become law this session.

Foreign Fruits were rather more plentiful in British markets during February than in the corresponding month of last year, the largest increases being in the imports of bananas, lemons, and oranges, with which fruit growers in this country are not immediately concerned. The largest decrease was in the imports of apples, the total having been 267,448 cwt. of the value of £603,840, against 329,579 cwt. of the value of £653,337. Peaches and apricots were also imported in smaller quantities, the total having been 209 cwt. of the value of £1,128, or a decrease in quantity of 155 cwt. and in value of £1,222, Of bananas the imports were 420,077 bunches of the value of £112,092, an increase in number of 96,932 bunches, and in value of £37,431. There was also a material increase in the imports of grapes, the total being 1,506 cwt. of the value of £6,979, an increase in quantity of 898 cwt. and in value of £4,333. Lemons, almonds, and oranges were imported in considerably increased quantities, and the totals were very large. The imports of pears were larger than they have been in the corresponding month of several years past, and as they reached this country in rather better condition than for some years they commanded a good price. The total of the imports was 3,405 cwt., and the value was £7,061. There was a big drop in the imports of plums, the aggregate having been only 440 cwt. of the value of £977, against 775 cwt. of the value of £2,196 in the corresponding month of last year. Still larger was the relative decrease in the imports of unenumerated fruits, the total having been 2,786 cwt. of the value of £4,855,.or about one-half the quantities received in February, 1907. The total value of the fruits imported during the month was £726,827, or an increase of £51,460.

Gardeners' Royal Benevolent Institution.—The Liverpool Auxiliary has arranged their annual smoking concert in aid of the funds for Saturday next at the Bear's Paw, Liverpool. Allan H. Bright, Esq., J.P., has promised to preside, and the committee has obtained the services of a band of capable artistes, through whom they hope to provide a most enjoyable entertainment. Mr. R. G. Waterman, of Woolton, is the hon. secretary.

Insects and Flowers.—Professor Bottomley gave a most interesting lecture before the Royal Botanic Society, at Regent's Park, on Friday last. He pointed out how insects were attracted by the colour, odour, and nectar of flowers, and thus induced to perform the work of fertilisation. He described the floral world as a place of unlimited public-houses, with free drinks, and, citing the Cuckoo pint or wake robin, he showed how midges became intoxicated by its nectar, but as soon as they recovered they at once flew to the next sign—the purple shaft or spadix of the flower.

Mr. James Whytock, the new president of the Scottish Horticultural Association, in his inaugural address at Goold Hall, Edinburgh, expressed the opinion that the art of gardening would flourish more than it yet had done, and that there was a great future for commercial horticulture, and for horticultural specialists. Mr. Whytock roughly grouped professional gardeners into four sections—nurserymen and seedsmen, market gardeners, city and town gardeners, and private gardeners.

R.H.S. "Journal."—The first part of the thirty-third volume of the Royal Horticultural Society's "Journal" has been issued, and is remarkable both for its interest and usefulness. The most important of the contributions to its pages are "The True Darwinism," by the Rev. George Henslow, V.M.H.; "British Guiana," by J. A. Barbour James; "The Relation of Meteorology to Horticulture," by Mr. R. H. Curtis; "The Amateur and Horticultural Law," by Mr. H. Morgan Veitch; "Japanese Dwarf Trees," by M. A. Maumerné; "Mistletoe," by Mr. W. Smythe; and "Gesneraceæ: Annotated List of Genera and Species." The reports on the trials of perennial asters, cannas, dahlias, tulips, melons, strawberries, French beans, kales, and outdoor tomatoes, conducted at Wisley, form an important part of the "Journal," and are especially deserving the attention of cultivators.

Preparation of Potato Sets.—Recognising the fact that home-grown seed potatoes are often in a bad condition at planting time, the authorities at the Harper Adams Agricultural College arranged an experiment with a view to ascertain the effect on the vigour of the plant and on the crop of removing the first sprout in early and mid-season varieties. The varieties selected for the experiment were Ninetyfold and British Queen, and the first sprout was retained in one lot of each variety, and the sprouts rubbed off the tubers of the other lots previous to planting. The haulm of the sprouted seed was first in making its appearance above the surface, and made the most vigorous growth throughout the season. When the crop was lifted the results obtained were per acre: Ninetyfold, sprouts retained, 9 tons, 3½ cwts., sprouts removed 6 tons 14 cwt. British Queen, sprouts retained 11 tons 1¼ cwt., sprouts removed 9 tons 8¼ cwt. The results obtained in this experiment clearly indicate the need for careful treatment of seed potatoes and of the value of sprouting, more especially in the case of early varieties.

Vegetable Imports.—These were considerably larger in February than in the corresponding month of last year, all the kinds showing increases. The imports of potatoes aggregated 509,195 cwt. of the value of £102,037, as compared with 73,353 cwt. in February, 1907. Of the quantity France sent 289,369 cwt., Germany 54,705 cwt., Channel Islands 3,659 cwt., and other countries 161,462 cwt. Of onions the imports were 743,910 bushels of the value of £80,071, an increase in quantity of 171,655 bushels, and in value of £10,412. The imports of tomatoes were 69,350 cwt., of the value of £57,3[illegible], against 58,289 cwt., of the value of £50,765, in February, 1907. The imports of unenumerated vegetables were of the value of £37,525, or an increase of £6,603.

Ghent Quinquennial.—The King of the Belgians has consented to open the great exhibition of the Royal Agricultural and Botanical Society of Ghent, which will be held next month.

Brussels International Exhibition.—At a recent meeting of [illegible] Council of the Société Royale de Flore was decided to offer to the Committee [illegible] the International Exhibition to be held [illegible] Brussels in 1910 the assistance of the [illegible] ciety in organising the flower shows. [illegible] offer is made in conjunction with the [illegible] Royale Linnéenne. It has further [illegible] decided to form floricultural, orchid, [illegible] chrysanthemum, scientific, rose, and [illegible] den architecture sub-committees.

Floral Decorations at Bishop's Waltham.—In the schedule of the Bishop's Waltham Horticultural Society, just received, we find that floral decorations receive special encouragement. At the show to be held on July 29 there will be an open class for a table decoration, orchids excluded, and the prizes are £5, £3, and £2, respectively. We are glad to find a class for a table decoration of wild flowers, grasses, or berries, and several classes for flower arrangement open only to ladies. Vegetables and sweet peas receive much attention, and cottagers are well catered for. An interesting side issue of this society is its children's show, to be held on July 10. There are fourteen classes open to the youngsters, who are grouped according to age; the classes are chiefly for wild flowers, grasses, and tree twigs, and all the vases or other designs have to be made up in the schoolroom under the eye of the committee. Our friend, Mr. E. Molyneux, V.M.H., is hon. secretary of the Bishop's Waltham Society.

CYMBIDIUM INSIGNE SANDERI SPLENDENS.
Flowers pink and purple. F.C.C., R.H.S., March 3; Messrs. Sander and Sons, St. Albans.

Forestry Education at Oxford.—We learn from "Nature" that the average number of forestry students at Oxford during 1907 was fifty-seven. The forest garden and experimental plantations in Bagley Wood have been much increased during the year, and the lack of accommodation is about to be met by the generosity of St. John's College. A block of buildings for the accommodation of the professor of rural economy was erected in Parks Road during the years 1906-7. It is now proposed to add further accommodation for the forest branch, consisting of a lecture theatre, a class-room, a museum, a library, and a professor's room. The new buildings will be ready by the end of 1908.

A Hopeful Outlook.—American nurserymen foregather more frequently than do their British confreres, and they have grouped themselves into several associations. The Western Nurserymen's Association recently met, and the members deplored the ill effects of the weather last autumn on their stock. Mr. A. Willis, the president, referred to this matter, to the money panic in America, and to the consequent disorganisation of railway carriage, but added that the losses had not been sufficient to cripple their work. His closing remarks were: Let us contemplate the scene before us; there are lands to plant as fertile as the Valley of the Nile, there are seeds and plants within reach, there are labourers with willing hands waiting our bidding, the bright sun shines, the gentle rain waters the thirsty earth, and a gracious heavenly Father has commanded that the seed sowed shall bring forth plants and trees after their kind, and a multitude all over this broad land are stretching forth their hands to us and asking for the products of our craft that they may plant and grow fruit for food and trees and plants for shelter and beauty. Let us arise and plant, being sure we shall reap in due time if we faint not.

Solanum Commersoni Violet, about which a good deal has been heard and written, has not realised the expectations of its friends. Some French growers claimed for it considerable disease-resisting and frost-resisting powers, and M. Labergerie had great faith in its usefulness under varying conditions. In Ireland, however, a series of experiments conducted by the Department of Agriculture, go to show that this potato has not established any claim for special consideration, and that there are many superior varieties.

PLECTRANTHUS CRASSUS.

From Central Africa we have, within the last decade or so, received several pretty flowering members of the Labiate family. One of them, Coleus thyrsoideus, has for a long time been an established favourite owing to the flowers being of such a charming rich shade of blue. A second species, C. shirensis, of more recent introduction, is decidedly pretty, but scarcely likely to attain the popularity of the older kind. The blue of the flowers is not so striking, though the habit of the plant is good. To these two African labiates may be added Plectranthus crassus, which well merits extended cultivation. It is a stout-growing plant, reaching a height of eighteen inches to two feet or more, the stems being clothed with ovate leaves about four inches long and half as much in width. In colour they are of a pale green. The flowers, which are borne in narrow terminal spikes, are arranged in whorls, which develop for a considerable time, and thus maintain a succession of bloom. In colour they are of a lavender-blue tint, certainly less showy than Coleus thyrsoideus, but decidedly useful in the depth of winter. The shoots, even if the tops are pinched out, do not branch very freely, hence this plectranthus is seen to better advantage when three plants are disposed triangularwise in one pot rather than grown singly. When one remembers how readily the different coleus intercross with each other, and how quickly a great number of foliage varieties made their appearance after the introduction of two or three kinds with handsome leafage, it is almost a matter for surprise that Coleus thyrsoideus and its near relatives have not been taken in hand by the hybridist.

W. T.

NEW PLANTS, ETC.

◆

CYMBIDIUM INSIGNE SANDERI SPLENDENS.

This beautiful orchid has flowers from three to four inches across; white, rose, or blush-tinted sepals and petals, with a line of colour down the centre of each. The lip is especially handsome, deep rosy mauve, freely marked and spotted with rosy crimson. F.C.C., R.H.S., March 3; Messrs. Sander and Sons, St. Albans.

CYMBIDIUM INSIGNE SANDERI SUPERBUM.

In this variety the flowers are of a charming pink shade, and the lip is of similar colour, with spots and markings of deep rosy purple. F.C.C., R.H.S., March 3; Messrs. Sander and Sons, St. Albans.

DENDROBIUM CYBELE GATTON PARK VAR.

A very large-flowered and handsome dendrobium, derived from D. nobile nobilius crossed with D. Findlayanum. The broad sepals and petals are white tipped with purple, while the big, rounded lip is deep and bright purple with a large central orange blotch. A very fine orchid. F.C.C., R.H.S., March 3; Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate.

DENDROBIUM CHESSINGTONENSE.

A shapely dendrobium, obtained by crossing D. aureum with D. Wiganiæ. It has very soft light yellowish sepals and petals and a rather brighter lip, on which are deep brownish markings, suggestive of D. aureum. A.M., R.H.S., March 3; Sir Jeremiah Colman, Bart.

LÆLIO-CATTLEYA DAFFODIL.

A rather small-flowered, but shapely and beautiful hybrid from L.c. Mercia and L. Jongheana alba. The flowers are of excellent substance, white, shading to yellow at the tips of the sepals and petals, with a rich yellow lip. The latter is very pretty, and has a frilled margin. A.M., R.H.S., March 3, Messrs. Armstrong and Brown, Tunbridge Wells.

ODONTOGLOSSUM CLYTIE.

An unusually pretty and graceful odontoglossum obtained by crossing the deep purple, small-flowered O. Edwardi with O. Pescatorei. The branching spike is tall and arching, and carries a large number of neat light purple flowers, freely marked with dark vinous purple. For grouping this should eventually become a very popular hybrid. A.M., R.H.S., March 3; Messrs. Charlesworth and Co., Heaton, Bradford.

BRASSO-CATTLEYA HELEN MARON.

A very fine form, suggestive of B.-c. Digbyano-Mendeli; parentage unrecorded. The plant exhibited carried a pair of splendid flowers, of a soft lilac shade, with a big fringed lip that is lilac, lightly marked with purple and shading to green in the throat. A.M., R.H.S., March 3; M. Chas. Maron, Brunoy, France.

MAXILLARIA LUTEO-ALBA.

A very old species, with flowers that are coloured yellow, green and white. They are of fair size and freely produced in a semi-pendant fashion. The plant exhibited carried about seventy flowers, and was a very fine example of good culture. A cultural commendation was awarded. A.M., R.H.S., March 3; Mr. C. J. Salter, gardener to Walter Cobb, Esq., Normanhurst, Rusper.

LÆLIO-CATTLEYA PIZZARO.

A handsome and large-flowered hybrid derived from Lælia Jongheana and Cattleya Dowiana aurea. The flower shown was large, well-expanded, and substantial. The ample sepals and petals are of a deep rose-purple colour, while the large lip is dark orange, veined and shaded with deep purple. A.M., R.H.S., March 3; Mr. H. Alexander, orchid grower to Major G. L. Holford, Westonbirt, Gloucester.

SOPHRO-LÆLIA FELICIA.

This is one of the largest-flowered of the sophronitis hybrids, and its parents are Sophro-lælia Heatonense and Lælia præstans, therefore, it is a secondary hybrid. The shape of the flower at once suggests the sophronitis, but the flower is three inches or more across, flat, and deep rich magenta-purple, with deep crimson-purple lip. A.M., R.H.S., March 3; Messrs. Charlesworth and Co., Heaton, Bradford.

HELLEBORUS PETER BARR.

An effective oriental hellebore, and a very free-flowering one, carrying numerous shapely flowers of a bright marone-purple colour. A.M., R.H.S., March 3; Messrs. Barr and Sons, Covent Garden.

CHIMONANTHUS FRAGRANS

This deliciously scented winter-flowering shrub is worthy of wider culture than it receives, as it comes into flower during the dull months of the year. It is evidently at home in a fairly light and well-drained soil. We have it growing near a north-east wall, in which position it does well. It is mostly seen with short twiggy shoots on which the flowers are produced, but its usefulness and beauty are greater when the plant produces strong shoots, as these enhance its usefulness.

We have been cutting branches several feet in length, and these, placed in trumpet glasses, with a spray or two of evergreen, give a delightful perfume in a room. There is no comparison between such flowering shoots and those small shoots of several inches in length, which are only suitable for shallow bowls.

We find that after flowering fairly close cutting back is the best way of inducing the plant to make these strong shoots. Even if deciduous, all sweet smelling shrubs are acceptable during winter, and doubly valuable if the flowering shoots can be cut of good length. T. H. Slade.

Poltimore Gardens.

LEUCOJUM VERNUM.

It is a pity the Spring Snowflake is not utilised more than it is as a companion to the earliest spring flowers of our gardens. Many years ago, staying in Poland through the winter, I saw in February a beautiful colony of L. vernum on the slope of one of the outliers of the Carpathian mountains. For a large space the grass was intermingled with the shining green foliage of this plant, surmounted by innumerable clusters of snow-white hemispherical bells as large as a shilling and with the tips of the petals delicately tipped with green à la snowdrop. Each stalk, about six or eight inches high, bore two or three of these bells, reminding one rather of huge lilies-of-the-valley. Although naturally bulbs were unavailable at the flowering period, friends on the spot collected some for me later, and sent me a bag full. That is some 15 years ago, but ever since, early in February, I am gladdened by the appearance of three clumps of these, with their characteristic flowers, though, owing to a purely suburban environment, I rarely get more than one flower on a stalk, despite which there is a sufficient number to form a very pretty and desirable group. The whole time they have taken care of themselves, having only been shifted once when removal took place to another house and garden. Leucojum æstivum, the Summer Snowflake, is far less attractive, being taller and more straggly, and with much smaller flowers. The two must not be confounded. C. T. D.

CORONILLA GLAUCA.

Coronilla glauca is one of the most useful plants we have for brightening up the cool greenhouse at this period of the year. Its beautiful yellow and fragrant flowers make it a most desirable plant. The treatment necessary is precisely the same as the genista or Cytisus racemosus needs, but the coronilla is a trifle the hardier, and will bear rough usage patiently, and it may be fairly said that whoever fails to keep it for some years, and to have at least one display of its flowers annually, either has very much to learn in the way of plant growing or is wanting in genuine love for plants.

The glaucous coronilla, like the golden greenhouse broom, is a free-growing shrub that attains to considerable dimensions if encouraged to grow, and kept from harm in the winter. Severe frost will certainly kill it, but a light one will do it no harm, and it may be exposed to the weather with advantage during six months of the year. To obtain young plants, cuttings may be struck at any time during the summer; young shoots should be selected, as the hard wood does not serve the purpose. If dibbled into sandy soil, pressed firmly, and covered with a bell-glass, they soon form roots, and may then be put into small pots in any light loamy soil. When the small pots are filled with roots the plants should be shifted into pots one size larger, and in these they should remain for the winter, and the proper place for them is a light airy greenhouse. They are very accommodating; they will thrive in peat or loam, but the soil should be substantial, and there should be about a sixth part of sand added, and there may be added also about a fourth or fifth part of decomposed hotbed manure.

To secure handsome specimens the plants should be carefully pruned as soon as flowering is over. This is intended to keep them in shape, and to prevent them becoming unreasonably large. But they will do as well without pruning as with it, and if the shape and size are satisfactory, and some increase of size may be allowed, it is simply waste of time and waste of growth to prune them. Having pruned them, turn them out of the pots, remove some of the old soil, and repot in clean pots of the same size, and do not disturb them again until they are growing freely, then shift them into pots one size larger. Thus, before the growing season is over, you will have promoted a free growth, and if this is well ripened by sunshine and fresh air, and a slight diminution of the water supply, a grand display of flowers will be seen in due time.

I had for many years some fine plants of coronillas and cytisuses; they had the most simple treatment, were always in perfect health, and flowered superbly. When they grew somewhat too freely I kept them two years in the same pots without any fresh soil. But the routine treatment consisted in turning them out of their pots in the month of April and removing some of the old soil, and putting them back into the same pots, or into pots one size larger, and filling in with a mixture of equal parts of loam, leaf-mould and rotten manure. They were kept in the open air, on beds of coal ashes all the summer, and they usually flowered in spring and in autumn, the spring bloom being the most abundant. T. B. Field.

Ashwellthorpe Gardens.

SOME CORNISH GARDENS.—II.

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During a tour of Cornish gardens it is borne in upon one that here in this favoured country is the home of the water garden and the wild garden. The moist atmosphere, the abundance of running water, and the genial temperature, all encourage this free style of gardening, while the lay of the land in so many of the larger gardens is a further inducement to practice this method. In but few gardens can one find a formal flower garden or any extensive plan of spring or summer bedding. There is, if anything, rather too much of the same kind of gardening, and in most places a little formality and some bold flower beds would serve as an excellent contrast to the freer methods, and give colour at a season when the spring-flowering and early summer-flowering subjects have yielded their wealth of bloom for the season. Cornish gardens are beautiful in a way of their own, and for those who live in less favoured districts they possess a long drawn out interest; but an attempt to follow their general style would, in many counties, end in hideous failure, even if hardier plants were used, simply because the atmospheric conditions would not be so suitable as they are in the Duchy, where "all our trees are shrubs, and all our shrubs are trees."

Carclew.

About half-way between Truro and Falmouth, and on the southern bank of the deep and broad Restronguet Creek—the valley with the deep promontory—lies the Carclew estate, with its extensive and finely wooded park. The nearest station is Perranwell, and not very far distant are the Gwennap Mines. Carclew has for some time been the residence of the Tremayne family, and the present proprietor is Captain Tremayne.

The garden proper occupies a valley, with the mansion on the higher side, set amid fine trees, and with the gardener's (Mr. Simmons) house nestling behind rhododendrons on the other side. The kitchen garden and the glass department are close to Mr. Simmons' house, and the glass houses are more important at Carclew than in many Cornish gardens. Allamandas are splendidly grown in the stove, and Cæsalpinia (or Poinciana) pulcherrimma is a feature of this house. This is cut hard back each year, and then grows vigorously, and produces its handsome red and yellow flowers freely. This species is by no means common in gardens; it has roundish seeds, and these only take two days to germinate. Carica Papaya does well here, and Stephanotis is particularly fine. Plants and indoor fruits are well managed, and the conservatory is always well filled, so that, in addition to the hardy plants, there is much of interest at Carclew.

A part of one side of the valley is terraced, and the levelled spaces are so many different gardens. The glass houses already referred to occupy the highest point. Sheltered by one of the walls there are large plants of Clianthus puniceus, Coronilla glauca, Mitraria coccinea, Carpenteria californica, Cantua dependens, and a very large Rhyncospermum jasminoides. Swainsonias stood out of doors unprotected for four years, but they were cut right down in the winter of 1906-7. The pretty blue-flowered Australian liliaceous plant, Dianella lævis, has been a success at Carclew, though unprotected during two winters. Lapagerias are common wall climbers in the shadier places. Pleroma macrantha has stood out against a wall, but has not yet flowered in the open.

CEDARS, RHODODENDRONS, AND WATER GARDEN AT CARCLEW.

A little lower down the valley slope the rose garden is planted, and from it a charming view of the water below and the splendid rhododendrons and camellias beyond is obtained. Further along this terrace are to be found Paulownia imperialis, a large Myrtus (Eugenia) Luma apiculatus, Abies Albertiana, 90 feet high; Sequoia sempervirens, 85 feet high; and Cletha arborea in fine form. In a little border the interesting Tricuspidaria dependens, a Peruvian plant, has flowered, and it is regarded with special pride.

The lower garden at Carclew is very fine. On either side are glorious rhododendrons and camellias, with winding walks in among them. There are big trees here and there, and many large ones on the higher ground above. Right in the bottom of the valley is an open space that holds a formal pond, with its ornamental boat and tea house at one end. Herewith are two views of this water scene, one showing the famous Lucombe oak, that was planted at Carclew years ago; it also shows the rhododendrons overhanging the water. The second view shows the water lilies and pampas grass, and the noble cedars and rhododendrons beyond.

Seedling varieties of Rhododendron arboreum abound, and they are fine plants, indeed in most cases care has been taken to keep all these fine Himalayan rhododendrons shapely, by occasional pruning, and by allowing each plant room to develop. Overcrowding is a sin as common in Cornwall as elsewhere, but it has been avoided at Carclew. The principal species and varieties of rhodendrons so successfully grown here are R. arboreum, R. Shilsoni, R. Hodgsoni, R. Sir Charles Lemon—a lovely white variety; R. Thomsoni, R. Falconeri, a splendid specimen; R. Aucklandi, raised from seed; the yellow-flowered R. campylocarpum, figured herewith; R. Manglesi, a hybrid between R. Aucklandi and

R. album elegans; the glorious R. Beauty of Tremough; R. Lucombei, a hybrid between R. Fortunei and R. Thomsoni, and probably raised here; R. eximium, a huge-leaved variety of R. Falconeri; R. campanulatum, a grand plant, with very handsome foliage; the rose-coloured R. Fortunei; the splendid R. grande, bearing great trusses of whitish blooms; the curious red and yellow-flowered R. Keysi, from Bhotan; the interesting R. Roylei; a scarlet-flowered form of R. Aucklandi; and the Chinese R. Fordi. This does not exhaust the list, but it gives the principal and most distinct species and hybrids. Certainly Carclew possesses one of the finest collections of these rhododendrons to be found in the country, and the collection is well cared for, and a credit to Mr. Simmons, who has so long had charge of them. There is one huge R. arboreum, with an immense trunk, and its spreading branches have long since extended right across the pathway at one point, so that you pass under the tree, and can only see its fine proportions when you look back from close to the pond.

All around this lower garden are sheltered nooks, and in every one of these there is something of special interest. There is a little fern dell, where Dicksonia antarctica and Cyathea dealbata thrive, but the nook is so enclosed, and the plants so large, that it was a practical impossibility to photograph the group. One other little nook is filled with polyanthuses, and another with lily of the valley. Close by is Azara microphylla 20 feet high, an Embothrium coccineum nearly 40 feet high, and a huge Choisya ternata that was a small plant in a pot twenty years ago, but it now a magnificent specimen 21 feet in diameter.

THE LUCOMBE OAK, AND RHODODENDRONS AT CARCLEW.

The tree pæonies are also a feature of Carclew, and they are planted on the slopes of the lower garden, and they must look fine in summer time, when they produce their big glowing flowers. Ginkgo biloba, the Maidenhair Tree, and the deciduous cypress, Taxodium distichum, are also fine in the lower garden.

Passing out of this little wonderland, and joining the drive where it comes through the park and ascends to the house, another good bit of free planting comes into view. Here is an old water wheel, formerly used to raise water, but now only a picturesque reminiscence of the past. There is a fairly deep gorge, with a stream broadened out into a lake at its foot, and all along the slopes are great breadths of mollis and Indian azaleas, and of the best of those Rhododendron arboreum seedlings that spring up so abundantly in the garden behind. Bamboos have been also freely planted, and there are some fine gunneras and big colonies of Arum lilies at the water's edge.

At Carclew one gains the impression that Captain Tremayne and Mr. Simmons are steadily extending the garden into the park and woodlands around, and not the impression that comes all too frequently after inspecting many gardens, that the park and woodlands are being allowed to extend into and encroach upon the garden proper. I hope to visit Carclew again some day.

Trebah.

Several miles south of Falmouth the Helford River discharges itself into the sea. Like the other Cornish rivers, it is wide-mouthed, and the waterway branches out into innumerable creeks and backwaters, the whole of the valley making up a very charming and peaceful scene in spring and summer, but, towards Mawnan, during the winter the scene may be a terrible one.

Many estates overlook this pleasant river, and one of these is Trebah. Another is Bosahan, on the south side of the river, and concerning which I shall have something to say on a future occasion. Trebah, the home of C. H. Hext, Esq., is charmingly situated in one of those gigantic hillside depressions that slope sharply to sea or river, and that are a so common and beautiful feature of Cornish scenery.

The house was undergoing repair at the time of my visit, but the builders could not hide the glory of Passiflora kermesina, Tacsonia Van Volxemi, and Cassia corymbosa, with which it was mostly covered. The house commands fine views over its gardens and fields, and over the river. The sides of this valley garden are finely wooded, and splendidly sheltered from the north, east, and west; broad pathways are cut along its slopes, and all along under the trees daffodils, snowdrops, bluebells, and primroses carpet the ground, and in their several seasons give delightful displays. By the streamlet in the bottom of the valley are any number of arums, colonies of Primula japonica, and some big gunneras.

Near the house, on the lawn, are three large specimens of Dicksonia antarctica, a very fine Exochorda grandiflora, a big juniper, a number of graceful bamboos, and, farther down, several stately cordylines or dracænas. Formal gardening does not find a place at Trebah, and it is not missed; indeed, the informality of these Cornish gardens, and their fine collections of rare trees and shrubs are their chief and interesting features.

The right-hand side of the valley, passing riverwards, is the garden side, and here, in sheltered recesses, are little gardens that form picturesque and interesting surprises. In one of these there are splendid masses of Lomaria procera, and a mass of Woodwardia radicans, 25 feet across, many of the huge drooping fronds measuring 10 feet long. This occupies a position on a bank, which it clothes in a graceful manner. Musa japonica does well here unprotected, and there are three plants of the more tender Musa ensete. Streptosolen Jamesoni lives here unprotected, and arums thrive beneath the taller bananas.

Another of these little side gardens contains several fair-sized examples of Dicksonia antarctica, a good Cyathea dealbata, and also a sturdy plant of Cycas revoluta. Around this recess Benthamia fragifera flourishes, so that within a small space there are grouped plants from Australia, New Zealand, China, and Nepaul.

On the lower slopes rhododendrons do well, and I understand from Mr. Thomas, the head gardener, there are several arboreums from 12ft. to 18ft. high now out with hundreds of blooms on them (March 9, 1908). On the other side of the valley, coming down quite close to the water, splendid masses of the common laurel were just coming into flower at the time of my visit, and the difference between these huge specimens, clothed with large deep green leaves, and bristling with flower spikes, and the smoke-begrimed and closely-cropped plants one sees so frequently in the neighbourhood of large towns, was very remarkable.

Trebah has its magnolia garden, and this must provide a pretty picture in the early summer. Here, too, are Daphne indica and Banksia quercifolia, and behind, on the higher ground, is a fine plant of Acacia longifolia, and a beautiful tree of Acacia dealbata over 30 feet high, that is a glorious mass of graceful golden florescence in the early springtime. Cyclamen hederæfolium covers the grounds in many parts of Trebah, flourishing beneath evergreen oaks.

A fine pair of trees of Thuia Lobbi, and a handsome Cupressus macrocarpa lutea 20 feet high, attract attention ere this valley garden ends in an extensive orchard of apples and pears. Passing through this, and over some meadows, one reaches the high cliffs that keep the Helford River within bounds.

Enys.

Enys, beautiful Enys, lies within easy reach of Penryn; indeed, it is about halfway between Penryn and the Carclew estate. Penryn, famous for its granite quarries, is almost as good a centre as Falmouth for anyone who wishes to see a number of good Cornish gardens, but it has not the attractions or the romantic associations of Falmouth. Londoners may remember, however, that Waterloo Bridge is built of Penryn granite.

The owner of Enys is J. D. Enys, Esq., who takes much interest in his fine estate, and his home steward and gardener, Mr. Hogbin, is a keen horticulturist, while the foreman gardener, Mr. Frost, is a skilful cultivator. Small wonder then that Enys is not merely a big estate, with fine woodlands and pastures, and a garden, but is a garden of many gardens. I was fortunate in finding Mr. Hogbin at home, and under his guidance a very pleasant afternoon was spent in exploring the extensive grounds, the extensive water garden—the Enys Ponds, the admirable farm and stables, and part of the splendid beech and oak woods. Timber is well managed at Enys.

From whatever side Enys is approached the visitor must pass up very long drives, and cannot, as a consequence, fail to notice how unusually well-wooded this estate is, as compared with many others in the district. I was told that one small wood, fortunately quite isolated, is the home of innumerable starlings. Time and again efforts have been made to materially reduce their numbers, but with very little success, and it would appear that nothing short of levelling the wood will disperse them.

Along the nearer approaches to the house rhododendrons have been planted extensively, and in spring the view from the front door is especially fine, by reason of the splendid trees and great banks of arboreum varieties that are literally smothered with big trusses of effective blooms. The garden front of Enys House is treated with some measure of formality. The lawns are on a higher level than the park, and separated from it by a low wire fence, and retaining walls. There are groups of mollis and Indian azaleas, and a small set of flower beds in the centre, surrounding a small temple of Crimson Rambler roses. Spring flowers, notably daffodils, tulips, wallflowers, and polyanthuses are made a feature of here, and over these fragrant and beautiful flowers Mr. Enys can, from his favourite window, obtain a fine view across the park beyond.

In what part of the estate, relative to the house, the various gardens lie, I do not know, because, in spite of a fairly well-developed bump of location, I confess to have lost my bearings at Enys. But this matters little, as a request for admission is rarely denied to a horticulturist, and a visitor will prefer to see the gardens rather than study a plan of it. It may be at once stated that Enys possesses a very fine walled-in kitchen garden that bears ample evidence of good cultivation. The glass department is a fairly extensive one, and its upkeep bears testimony to the good relations existing between employer and gardener. It is at some distance from the house, and in the conservatory the largest batch of Rehmannia angulata I have seen was flowering. Brugmansias or daturas were also a noteworthy feature. The vineries were interesting because in several of them the vines are grown under express culture. They are grown on freely and well ripened one year, fruited heavily the second year, and then pulled out. In the peach houses the unusual method of growing standard trees in the border, instead of up the roof, is practised with great success.

Under the conservatory wall the Belladonna Lily flourishes, and in a garden close by there is a collection of rarities that would delight the heart of most plant lovers. Some rare old branched examples of Cordyline australis occupy a central position, and here and there are some big specimens of Agave americana. At the end is a splendid Phœnix canariensis, 12 feet high, and with frond-like leaves 12 feet to 15 feet long, the picture of health, and yet it is never protected.

In the beds are numbers of those plants that one goes to the Temperate House at Kew to inspect. Daphne indica and D. i. rubra dispense their fragrance all around. On the wall is a beautiful specimen of Berberidopsis corallina, with the Chilian Rhaphithamnus cyanocarpus as a near neighbour. Grevillea alpina is 2½ feet high, and G. rosmarinifolia rises 8 feet high. Eucalyptus cordata and Corokia buddleoides, a yellow-flowered New Zealand shrub, are near neighbours.

Further along in this garden one finds Celmisia Munroi, the elegant Lagerstrœmia indica, Clianthus puniceus flowering finely against the wall, the elegant Grevillea Thelemanniana, Correa speciosa, Tricuspidaria splendens (Crinodendron Hookerianum) 5 feet high, coming into flower, and the rare, small yellow-flowered Rhododendron anthopogon. Leptospermum myrtifolium, a white-flowered myrtaceous plant, from Australia, rises to a height of 8 feet, while skimmias and Desfontainia spinosa are common plants here and in other parts of Enys, the latter making big bushes and producing its scarlet and yellow flowers freely during summer time. Of Trachycarpus excelsa, large or small, one takes little heed, or even of the colony of Crinum Moorei in a narrow border. But Citrus trifoliata is a big bush, and the climbing hydrangea—Schizophragma hydrangeoides, clambering up a mespilus, are rather out of the common, while Photinia serrulata, a close relative of the Japan medlar or loquat, fills up a big corner, and is about 34 feet across.

RHODODENDRON FALCONERI AT CARCLEW.

There is a very interesting border of plants outside the kitchen garden wall, and near to the rock garden, where hardy ferns flourish in the moist atmosphere and the genial shade of tall trees. In this border a few of the prominent plants are Magnolia Lennei, 20 feet high, Rhododendron calophyllum, R. Roylei, a fine R. Falconeri, R. grande finely in flower, some of the choicer forms of R. arboreum, fine plants of Erica codonodes, and among them all the stately Lilium giganteum is a great success.

The giant Chatham Island Forget-me-not. Myosotidium nobile, is one of the many things well managed at Enys. It is planted under a north wall, and the three dozen clumps of this herbaceous perennial are worth going a long way to see. It is liberally treated, and responds nobly to that treatment. Shortia galacifolia and Soldanella alpina are lowlier plants of great beauty that are perfectly at home at Enys.

DICKSONIA ANTARCTICA AT CARCLEW.

Leaving these and many another very interesting and beautiful subject, one passes on to the ponds, noting by the way a fine Pittosporum undulatum 40 feet high, and, sheltered by a cupressus, a fine example of the deliciously fragrant Drimys aromatica.

Nature and art have combined in pleasing fashion to open up the Enys Ponds and make them beautiful. They are really a series of small lakes, the one opening out from the other. All are set in a dense woodland, and the whole forms a very beautiful water garden, views of which have already appeared in these columns. Masses of rhododendrons are grouped irregularly all along the water margin, and here and there they dip into the water. Gunneras thrive here as they do in few places, and one leaf has measured 10 feet 4 inches across. The giant osmundas, with their feet in the water, make splendid growth, and bamboos are ever green and graceful. The little bays have their colonies of water lilies, these sometimes extending far out into the lake. Arum lilies and irises abound, and reeds and pampas grass have their allotted positions.

The slightly formal pond at the head of the series has also its special interest. Along one side of it a path runs beneath the overhanging branches of trees up to a rustic summerhouse. Between the path and the edge of the water is a colony of Primula japonica, and this colony is from 3 feet to 4 feet wide, and 150 yards long! From the summerhouse these primulas present a very fine and unique picture when they are in flower. They seed with the utmost freedom, and thousands of seedlings have to be hoed up each year on the path.

Another feature, the concluding one for the present, is the fine pair of plants of what is known as Cordyline indivisa vera. These are at some distance from the ponds, and they stand, backed by C. australis, in a groundwork of hardy ferns. They are about 12 feet high, and, as the illustration shows, are finely furnished with broad handsome leaves.

Penmorvah.

Only a few yards from the entrance to Penjerrick stands the entrance to the Rev. Ed. Hensley's very interesting little garden. The place is named Penmorvah. It was quite by accident I called on the reverend gentleman, but, when driving past with my friend, Mr. Gill, the latter suddenly pulled up with the exclamation, "Have you seen ferns growing in soda water bottles?" I replied that I had seen many a one, but he again asked, "Have you seen them by the hundred together?" To this I had to give a negative answer.

The owner, and his very enthusiastic gardener, Mr. Ould, were as delighted to show off their treasures as I to inspect them, and let me say that Penmorvah, with its six acres of garden and orchard, is one of the best kept places I saw in the Falmouth district. Larger gardens contained rarer trees and shrubs, and finer scenery, but for smart up-keep Penmorvah is more after the style of the better gardens in the home counties and northwards.

Mr. Ould is quite a character. He is a born gardener. He has not been to Kew, or Chiswick, or Swanley, or Wisley, or other seats of horticultural learning, nay, he has scarcely heard of them, but he knows how to garden all the same. With the partial help of one other man he not only keeps Penmorvah's six acres trim and neat, but he grows excellent vegetables in plenty; his fruit trees are the picture of health and fruitfulness; his little plant houses are well stocked; his frames of violets are a treat to inspect; and his three little vineries yield well over a thousand bunches of grapes per annum. I fail to understand how Mr. Ould gets through the work, but the garden is evidence of his ability and thoroughness. He also has some hobbies, and bottled ferns and tame fish are among them.

It was by accident that Mr. Ould found ferns would grow inside an upturned soda water bottle, and so he set to work, and selecting tiny seedling hardy ferns, chiefly scolopendriums, he planted one in the neck of each bottle he could secure, turned the bottle upside down, and buried a third of it in the soil, and in this fashion he has edged a part of the kitchen garden with bottled ferns. There is a small, round pond, with an edging of ferns, and a few water lilies, and it is inhabited by gold and silver fish. Mr. Ould has only to whistle softly and the fishes crowd to the side of the pond next to him, to be rewarded by a few crumbs.

Most of the trees at Penmorvah are of Mr. Ould's planting, and he is as proud as his employer of a group of Picea pungens glauca, of a fine Araucaria excelsa, Pinus insignis, and Cupressus macrocarpa. There is a very big fig tree near the glass houses, and the wall fruit trees would do anyone great credit.

In the pleasure garden there is a very fine Desfontainia spinosa, while roses are

PART OF THE FLOWER GARDEN AT ENYS.

a great success. In different parts of this garden are two rose temples, one almost wholly covered with Crimson Rambler, and the other with a variety of strong-growing climbing varieties.

The whole garden is prettily laid out, lawns, evergreen and deciduous trees, roses, herbaceous plants, fruits, and vegetables all occupying their rightful positions, and the house itself is well clothed with various creepers. Penmorvah is, to use a feminine expression, a little love of a garden, and Mr. Hensley and Mr. Ould are to be congratulated upon its admirable upkeep.

Charles H. Curtis.

HARDY SHRUBS UNDER GLASS AT KEW.

Although some of our hardy shrubs have for many years been forced prematurely into bloom for the embellishment of the greenhouse or conservatory, their popularity has increased of late, and we now find a greater variety of subjects so treated than was at one time the case. At the end of February and early in March forced shrubs of different kinds contributed largely to the display in the large greenhouse (No. 4), and in the Temperate House, quite large bushes of some of them serving to lighten up the latter structure in a remarkable manner.

A BEAUTIFUL WATER-GARDEN SCENE AT ENYS.

Rosaceous plants are, as usual, strongly represented, particularly noticeable among them being Spiræa arguta, which is one of the very best shrubby spiræas for the open air as well as for forcing. A second species, Spiræa prunifolia flore plena, has the leafless branches wreathed for some distance with clusters of pure white double blossoms, whose clearness of tint is intensified by contrast with the dark-coloured bark, which, in some instances, is almost of a blackish hue.

That delightful member of the cherry family. Prunus pseudo-cerasus roseo plena has very large double flowers of a delicate pinkish tint, while the dwarf-growing Prunus japonica, known also by the specific name of sinensis, has two charming double-flowered varieties, one pure white, and the other tinged with pink. In any selection, however limited, of plants for forcing, Prunus japonica, as represented by one or other of its double forms, is certainly entitled to a place. Prunus triloba, with double pink flowers, varying in depth of colouring according to the amount of exposure they have received, is fully recognised as most desirable for forcing, and large numbers of it are grown every year for the purpose. The double peach, represented by a rich rose-coloured form, is very conspicuous in the Temperate House. Pyrus floribunda, which, when out of doors, has such bright coral-red buds, is under glass almost white, but is even then very pretty, and exceedingly floriferous. The last of the rosaceous plants to mention is an old and well-known inhabitant of our gardens, yet it is not often employed for forcing, though it has been treated in this way at Kew for years. I allude to the ordinary double-flowered Kerria japonica, whose blossoms, like little yellow roses, are borne in great profusion. The bright green of the bark is, indoors or out, a notable feature of this kerria.

Next in quantity to the rosaceæ comes the different members of the rhododendron family, with which the azaleas are now included. Rhododendron Cunningham's White, or caucasicum album, is in some nurseries grown in large numbers for forcing. A group of it in No. 4 greenhouse shows its suitability for this mode of treatment. The deciduous Rhododendron (Azalea) sinensis, which, by the way, is better known as Azalea mollis, is represented by several kinds, varying in the tint of the flowers and in other respects. The rich orange-coloured Anthony Koster is one of the best of all. In addition to these the small-flowered forms of Rhododendron (Azalea) indicum may, in many districts, be regarded as hardy shrubs. Especial mention may be made of R. obtusum, with salmon-red flowers, and its variety album, as well as one of the amœna hybrids, viz., Illuminator, with deep purplish-magenta coloured blossoms.

Beside the above there were Viburnum opulus sterile, the guelder rose or snowball tree, so striking and distinct from anything else; Jasminum primulinum, which in many places at least is more of a success under glass than it is in the open ground; lilacs, including that pure white and extremely floriferous Marie Legraye; Staphylea colchica, whose blossoms are agreeably scented; Cytisus præcox, and Cytisus scoparius Andreanus, two charming brooms either in or out of doors.

Wistaria sinensis is, according to our nurserymen, becoming year by year more of a favourite for forcing, and this need not surprise anyone, as it supplies a welcome change in colour, and when grown as standards in the contour of the plant also. Lastly, must be noted the forsythias, so soon to make an outdoor display. For medium-sized plants Forsythia intermedia can be recommended, while quite large bushes of Forsythia suspensa in the Temperate House form masses of yellow flowers, and associated with dark-coloured evergreens they stand out conspicuously.

K.

Saccolabiums, and the allied genera Rhyncostylis, are also best grown in baskets. There are many beautiful and interesting plants among these that are worthy of every consideration. The potting requirements are the same as for vandas, but the fleshy-rooted kinds should not have too much compost about them.—H. J. Chapman, Oakwood Gardens.

ADVANTAGES OF THE ORCHARD HOUSE.

Those who have seen the choice collections of forced fruits displayed at the best of our summer and early autumn shows have had direct evidence of the great value and purpose of the orchard house, for there is no doubt that much out-of-season fruit exhibited is produced in such structures. The very fine apples, pears, plums, cherries, peaches, nectarines, apricots, and figs exhibited bearing the stamp of superior culture which only the protection of glass affords. Not only is there fine external appearance, handsome proportions, and bright clear skins, but there is an accompaniment of high quality in these fruits.

The title "orchard house" is often given to structures allotted to peaches and nectarines only, but a broader view is that under which the title is now adopted. Such houses are often found without the means of heating, or the hot water apparatus is not pressed into very active service. The simplest form of house is accounted sufficient, although there are many costly erections doing service.

Beyond all doubt the span-roofed structure is that which affords the best conditions. Such a house affords light and air in a manner that can be provided by no other designs. Side openings are as important as those in the roof, and should be as near the ground line as possible, in order that the circulation of fresh pure air may reach the whole internal space. Peaches and nectarines are not so fastidious as are some of our more hardy fruits, hence the form of structure need not be so exacting in its detail for these. The best aspect is found to be north and south, as then the sun, in its day's course, benefits the occupants from sunrise to sunset. Such a house may be from sixteen feet to thirty feet in width, and fifty feet to sixty feet in length, with a ridge height of eleven feet, or slightly more. In a scheme calculated on covering a long season there would be an extension of length and a dividing up of the orchard house into sections, so that there are means for retarding in the one case, and hastening in the other, and all brought about by the daily adjustment of the ventilators.

In private gardens the boundary walls are often utilised for the erection of glass structures for all purposes, sometimes, indeed often, on the principle of economy. There are advantages and disadvantages to this rule; the advantages, however, on the year's working, would probably be found not so great in the lean-to as in the span. There may be more uniformity of warmth and economy of stored heat where this is applied artificially in the lean-to, but in the span running north and south there are solar influences which are of incalculable advantage.

PRIMULA JAPONICA BY THE LAKE SIDE AT ENYS.

The most critical period parhaps with orchard house crops is when the trees are passing through their flowering stage; if the house is neglected then in the matter of ventilation trouble is invited, because flowers set indifferently when the atmosphere is unduly humid. The general object of an orchard house is to provide fruits prior to their natural season, and especially are they valuable in cold or unfavourable districts. Then there is that superb finish and quality in the fruit which are denied to those who must need depend on more primitive methods.

The provision of heating apparatus is regarded by practical men as strictly economical and essential, since by its use in adverse weather critical periods may be traversed without anxiety, and without loss of time or material. If trees are exposed to frost during their period of blossom there is the danger of sterility. The means for heating, even if not required for general purposes, should be provided for. There are sure to be seasons when the heat will be advantageous, notably in dull and wet periods.

Though much may be said in favour of simple architectural designs in the orchard house, one envies the more elaborate design, where the roof is divided into short sections that may be raised at will by lever adjustments in such a manner that the trees can enjoy exposure to the elements almost to the full. In the autumn certainly such conditions are ideal, and conduce much to the full maturity of wood and bud. True, these same conditions can be provided by a plain roof having sliding lights removable at will, and it may be argued that quite as good fruit is produced under these conditions as when the more elaborate house is used. In a large garden, or even in a small one, the orchard house is a treasure, so long as it does not impose heavily on the limits of labour. With timely and rational attention at all seasons, both pleasure and profit are secured. The orchard house is no new thing. The Messrs. Rivers, of Sawbridgeworth, have become almost world-famous for their triumphs of orchard house fruits of every kind, and though they may almost claim to be pioneers, their practice is now followed by trade and private enthusiasts, and all have profited; indeed the wonder is that opportunities for the erection of orchard houses are allowed still to lie undeveloped, simply because of a mistaken regard for economy.

W. Strugnell.

Rood Ashton Gardens.

Everyone interested in a garden should obtain a copy of the Alphabet of Gardening, by T. W. ders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price 1s. 6d. net, by post 1s. 9d.; cloth, 2s., by post 2s. 3d., from W. H and L. Collingridge, 148 and 149, Aldersgate Street, London.

A GARDEN OF ANNUALS.

(Concluded from page 187.)

Mixed Borders.

It is not necessary to have massed beds of one thing; balsams, nicotiana, and salpiglossis (where it succeeds), for instance, being effectively treated as standards in beds carpeted with low-growing plants, such as lobelias, Sanvitalia procumbens, Dianthus Heddewigi, blue nemophila, and the various dwarf forms of French marigolds, antirrhinums, etc., and all these plants last as long in bloom as most bedding plants.

All mentioned in this section need fairly sunny positions, most of them doing best in full sunshine. Capital pot plants for indoors can be made of some of them, notably balsams, petunias, and verbenas, if grown in a cool house or frame.

We generally see annuals grown mostly in mixed borders unsatisfactorily, both starved and crowded, the result being thin spindly plants, which make a patch of colour, though with flowers of poor quality, for a fortnight or so, after which, the plants having few or no laterals to keep up a succession, their beauty is over.

Annuals cannot be grown well where they have to share the soil with the greedy roots of strong perennials, as the competition is an unfair one, the former getting an insufficiency of light and air, and, through the necessarily inadequate digging, and consequently restricted root run, being starved both in respect of food and water. But as we are speaking of a garden of annuals, we will assume for the moment that the borders are not occupied by perennials, and that annuals can be given good conditions.

The object should be to keep up a display for as long a season as possible, and for this reason some of our favourites, which are of rather short duration even with the best cultivation, must be reserved for another place. Many may be sown where they are to flower, but some are not quite hardy, some fall victims to slugs and other vermin, while others, though hardy, pay for a little nursing in their early stages. Among effective annuals which may be sown where they are to bloom are Chrysanthemum coronarium, C. carinatum—the wild C. segetum being worth a place—Coreopsis bicolor, scabious, stocks, godetias, clarkias, Eschscholtzia californica, larkspur, sweet peas (best in groups of two or three plants of the same colour), lupins, sweet sultan, and calendula. Other very desirable plants for the borders best raised in heat or in a frame early in the year are gaillardias, pentstemons, Iceland poppies, and antirrhinums, the first two giving a very fine and prolonged display through the later summer and autumn.

Climbers.

We must have climbing annuals for arches, pergolas, fences, buildings, tree stumps, etc. There are several desirable ones among the annuals, the one thing necessary being early raising, so as to have them well up before the summer is too far advanced. Even the common climbing nasturtium and the canary creeper are best raised in a frame in pots, and planted out without disturbing the roots, towards the end of May. There are few climbers more beautiful than the Chilian glory flower (Eccremocarpus scaber), which, sown in February, will run ten feet high by the end of July, producing clusters of coral flowers. Maurandya Barclayana is more tender, but it produces a good mass of growth, with numerous delicate mauve flowers, by August. Cobæa scandens is another similar to the last. Of quite a different character are the gourds, which, when well grown, produce a striking effect. All the above are tender. For damp and shady places the canary creeper is about the best annual climber than can be grown, but the tall tropæolums and Convolvulus major also do well, the latter being especially beautiful in the shade in the early morning.

DRACÆNA INDIVISA VERA AT ENYS.

Cut Flowers.

Any garden is sadly incomplete without a part specially devoted to the growth of flowers for cutting, and this is especially true in small gardens, where a slight raid leaves its mark on beds and borders. Annuals can provide us with almost everything we desire in this respect. Given a border in the vegetable garden, or one or two beds three or four feet wide across the vegetable quarters, and gorgeous effects can be obtained, with an unlimited supply of material for cutting. Apart from sweet peas—of which, by the way, we do not want too many, as it is such a labour picking off the seed pods, and without this they soon flag—we might grow in this reserve garden Shirley Poppies, cornflowers (untidy plants in the flower garden proper), scabious, Eschscholtzia californica, love-in-a-mist, larkspurs, miniature-flowered sunflowers, sweet sultan, Coreopsis bicolor, annual chrysanthemums, gaillardias, Iceland poppies, Cosmos bipinnata, African marigolds, and others too numerous to mention.

Some of these are of long duration, but those that are of shorter life should be grown near each other, so that they can all be cleared off together as soon as they get untidy, and the ground used for something else.

Shady Places.

There is one respect perhaps in which annuals are deficient, and that is, very few are adapted for growing in shady places. Stocks, however, will do fairly well, and also asters, lupins, and pentstemons, if accompanied by a fair amount of moisture and good cultivation. Antirrhinums, on the other hand, will succeed in the shade if not too wet. There are two things which should be grown in various odd places in every garden, and these are mignonette and night-scented stocks, the latter, though an ugly little plant by day, scents the garden for yards all round it in the evening. Both do fairly well in the shade.

It has been assumed that all the plants mentioned above will be treated as annuals, that is, sown in the spring, but many of the hardy ones, even those which are true annuals, will make finer plants, produce a better display, and come into flower earlier in the summer, if sown in the previous August or September.

Sowing.

With spring-sown hardy annuals many get poor results through not sowing the seed soon enough, early March being a good time if the ground is in good working order and slugs are not troublesome.

Another reason why poor results are often obtained is the fear of having the plants too thin. It often looks like the ruin of a bed of Shirley poppies when the little plants are thinned out to eight or nine inches apart, but it is not at all too much room to allow them if the soil is good. Failure to afford support before the plants begin to fall down spoils the appearance of many a bed of annuals. Watering is yet another reason why results are sometimes so disappointing. Frequent sprinkling of the plants in their early stages induces surface rooting, and causes them to succumb very quickly to the heat of July. It is much better to keep the surface loose, and, as summer approaches and the plants begin to cover the ground, to put a mulch of short manure over the soil between and around the plants, and then, if very dry weather comes, to give them one thoroughly good soaking, and leave them, such a watering lasting a fortnight in the hottest weather if the plants have a deep root run. Alger Petts.

CLERODENDRON TRICHOTOMUM.

This very beautiful shrub or low-spreading tree has won for itself the reputation of being somewhat tender, but one can recommend a more extensive trial before thus condemning it, for one meets with many flowering examples in the east of England that, provided with fitting shelter, prove as hardy as the rank and file of trees and shrubs, and more attractive than most. It has soft, pithy wood, broad pale green leaves that recall polygonums, and the flowers in early autumn scent the air for yards around. They are produced in rounded hoya-like clusters, each cluster six inches or more across, and the flowers individually are white, with conspicuous purple calyces that help immeasurably to render the trees attractive at a distance. An attempt to grow it in a wind-swept garden or in exposed areas would undoubtedly fail, but if grouped in the middle of a laurel clump, or used to fill up a gap caused by the decease of a low tree, providing shelter all round, it would thrive.

Mr. G. Davison has a splendid example at Westwick, which I take to be ten feet to fifteen feet through, and when in flower it is one of the best features of that celebrated garden. Culturally, it is akin to ailanthus; it does not mind fighting for its living in competition with other shrubs, provided these shelter it. It has the soft wood of ailanthus, a similar stoloniferous outcrop at the base, and it can be grown and used in quite similar ways, the growth of both trees being singularly identical. One can rear a large stock of trees by cutting out the stolons with roots attached, or by forming "vine cuttings" of the ripened wood, rooting these in autumn under glass, and giving them the treatment of vines till strong enough to be planted under shelter in the shrubberies.

G. B. Mallett.

Glass Over Seed Pans.—At this time of year the gardener who is not overworked is somewhat of a white elephant, therefore I am sure that scores will thank me for reminding them what a saving of labour may be effected by covering each pot or pan of seeds with a close fitting pane of glass. Evaporation of moisture is thereby reduced to a minimum, so that water is seldom needed till after the seedlings are well through the soil. A handful of damp moss on the glass is a further aid, and it also assists germination by keeping the pan dark.—E. J. K.

A QUESTION FOR FRUIT GROWERS.

A question which aroused the interest and the close attention of the members of the French (Paris) Academy of Medicine at a recent meeting certainly merits the careful consideration of all fruit growers, and, indeed, all thinking men and women.

The subject was broached by a well-known Lyons professor, Dr. Cazeneuve, who has doubtless made a close study of it. The professor called attention to the fact that the vignerons of Southern France had, in the majority of cases, adopted the habit of using arseniate of lead for the purpose of destroying mildew and insects on the vines. The mixture was most efficacious for the purpose for which it was used, but Dr. Cazeneuve emphatically stated that traces of arsenic and lead were found in the wines made from the produce of these vineyards.

Of course, the percentage of the poison to the quantity of wine tested was very small, but, in the doctor's opinion, enough to constitute a menace and a danger to the wine-consuming community. Six months or less would, he considered, be sufficient (of moderate drinking) to poison the stomach so as to seriously endanger the system, therefore the continued use of the poison by the vine growers provided a danger of wholesale poisoning. It seems that the cheap wines are the ones which are most exposed to the danger, and that large quantities of these are consumed by the labourers of the wine-growing districts, and these labourers, according to the doctor, have a large percentage of their numbers suffering from arsenic and lead poisoning. The question debated seems to have taken a deep hold on the medicos, and the whole matter will be thoroughly investigated, and doubtless heard of again.

After this statement our own use of poisonous sprays and washes for fruits and vegetables needs consideration. Possibly during the time that fruit trees are dormant no danger is incurred, but to use highly poisonous washes on trees where fruit is set (even if it be but in its earliest stages) is surely a matter of risk. The readiness with which such washes adhere to leaves, stems, and fruits raises the question whether the matter is not retained on or in the fruit, even up to the ripening period. Of course, the danger is greater with indoor fruit, but the report from France shows that the danger is present, even with outdoor fruit.

The ever-growing output of chemical mixtures for the horticulturist's use have undoubtedly proved a blessing and boon to many, but for the safeguarding of the public health all the patent mixtures which contain poisonous ingredients should be labelled accordingly. On the other hand, growers who use poisonous washes, such as Bordeaux mixture and similar compounds, should be extremely careful regarding the use of these on growing crops. It would be wise, in view of the systematic spraying of tomatoes, potatoes, etc., if some means could be afforded of showing the amount of poison which remains on the fruit or foliage after the moisture has evaporated, and also the duration of time the same would remain without losing its poisonous qualities; also whether the poison is drawn into the flesh of the fruit or the tissues of the leaves by the action of the plants or trees under notice.

Look at it as one will, the subject is full of interest, and the grower who uses compound washes or poisonous mixtures should be fully aware of the nature and strength of what he is using. It will pay him to know as much as possible about the effect of the sprays, etc., upon his plants and fruit, and the more knowledge one can bring to his work the better will the consumers be safeguarded, and the more satisfactorily will the work be done.

P. S. Hayward.

HERBS.

It is rarely that large quantities of herbs are asked for at any one particular time, but a little of some one or other of them is required daily, so that, to keep up a constant demand, new beds should be made at intervals. I endeavour, so far as is possible, to keep all the herbs together, as this, it is needless to say, means a great saving of time for the one that collects them.

The ground for herbs requires dressing with good manure, more or less according to the nature and condition of the soil. If it has not been deeply worked then it had better be trenched at once. Most herbs require dividing, or to be sown, by the middle of April, and earlier if the weather is suitable.

Sage may be increased by seed sowing or by large slips put deeply in the ground and made firm; this latter method is mostly practised with good results.

Thyme may be similarly treated to sage. Small tufts, planted one foot apart, and made firm, soon grow to a good size, and both the common and lemon thyme may be increased in this way, or seed may be sown either in boxes or in the open in well-prepared beds.

Mint needs only to be lifted, pulled to pieces, and replanted, spreading out the pieces and covering them up with three inches of soil. Or young shoots, when about six inches high, may be pulled up and planted at one foot apart. If watered once or twice in dry weather these will quickly grow into very fine plants, and produce a large amount of serviceable mint.

Tarragon is very much asked for, and should be grown in larger quantity than many other herbs. It may be used in a dry state in winter, but it readily forces. I have more than once met with a variety under the name of tarragon, and although this greatly resembles it in leaf growth and appearance, it is practically void of flavour. Where such is to be met with it should be destroyed, and the right kind procured from a reliable nursery or some garden where it is true. I make up a fresh bed annually, and from this secure plenty of tarragon both for summer and winter use. It seeds but rarely. The plants divide readily, and the only protection needed in severe weather is a good top-dressing of short manure or leaf-mould.

Savory is another very useful herb, and should be grown in all gardens; only a small bed need be planted, as from a few plants a quantity of leaves and young shoots are produced. It is usually increased by seed or divisions.

Chervil ought to be sown at intervals during the summer months, so that the young leaves are plentiful. A few rows only need be sown at any one time. Chervil is mostly in demand early and late in the season.

Basil needs more warmth than most herbs, and should be raised in heat and planted on a warm sunny border.

There are many other herbs rarely asked for now, and these need hardly be grown. I have grown some kinds for years, and never been even asked for them; these I have ceased to cultivate, and immediately—such is the awkwardness of things—a new cook arrives, and they are wanted.

Wrotham Park. H. Markham.

MOON DAISIES.

For the border or for cutting the hardy chrysanthemums, commonly known as moon daisies, have become quite an extensive family.

Some persons now employ the term of Shasta daisies for the group, but why, it is a little difficult to understand, because, as far as I can learn, there is but one variety bearing this name, I think, raised by Burbank from C. nipponica, which is a Japanese plant, and a form of C. maximum. Therefore, I fail to see why the whole family should take the generic name of Shasta daisies.

Moon daisies can be divided into three types: C. maximum, from the Pyrenees; C. lacustre, from South-western Europe—this also bears the name of latifolium; and C. leucanthemum, also European. C. maximum is the parent of the early-flowering varieties, while the varieties of C. lacustre give late flowers that are equally as useful as the early-flowering type, although they are generally coarser in both flower and growth.

No hardy plants that I know are so accommodating either in propagation or in growth. If given a deeply dug and well-manured stiff soil freedom of growth is assured, and certainly a large number of flowers. Drought does not affect them in the same way as it does many hardy plants, hence their value for the border.

Propagation is easily effected by division of the roots in autumn or spring, according to the character of the soil. When this is of a sandy nature autumn planting is the best, but where heavy, cold, and retentive of moisture spring planting is advisable. Some few varieties, notably Li Hung Chang, are not so hardy as others, and are liable to be crippled by a severe winter. In such a case autumn propagation is desirable. Dig up the roots in October, pull them in pieces, and plant in sandy soil in a cold frame or in boxes, where, by the middle of March, they will be well-established plants, easily transferred to their flowering quarters. It is never wise to put out large plants; far better arrange several small ones in clumps, as they grow away more quickly, and are more easily supported in their growth during the summer.

In making a selection of varieties much discrimination is required to avoid duplicates, especially in the lacustre or latifolium section. As so many are almost, if not quite, alike, and many are now annually raised from seed.

C. leucanthemum is the ox-eye daisy, and C. Daviesi is the earliest of all to flower, opening its blossoms early in July.

C. maximum flowers abundantly during July and the early part of August. With liberal cultivation the type will grow from two feet to three feet high. C. m. filiforme, with its deeply serrated petals, which are long, and droop gracefully, is quite one of the best for border or vase decoration; it is two feet six inches high. C. m. Li Hung Chang (House) is far and away the best variety in this section. The growth is erect, stiff, compact, two feet high; the blooms are fully six inches in diameter. The florets droop gracefully at the tips, and are not set so closely together as in some varieties. I look upon this variety as quite the best of any section for the border or in a cut state. This variety may be a cross between the two species, maximum and lacustre. C. m. laciniata Robinsoniana has smaller flowers, with narrow petals, each one being elegantly fringed; this is a worthy variety, with stiff flower stalks. Its height is two feet six inches. C. m. Mrs. Charles Lowthian Bell is quite new, growing but twenty inches high, and flowering freely for a long time. C. m. grandiflorum (House) has narrow petals, with an extra deep golden disc. C. m. Distinction (House), with its narrow florets, is useful for cutting. C. m. Queen Alexandra (Barr) grows fully four feet high, and has extra large blossoms; the pointed petals droop gracefully at the tips. C. m. Monarch (Ladhams) is a gem, and should be in every collection; the florets are semi-drooping at the tips, the flower carrying a deep yellow disc. C. m. Goliath (House) is not so large as many of the moon daisies, but the blooms are of perfect shape, being quite circular; the florets reflex slightly at the tips, and the flowers are borne on long stiff stems.

C. lacustre is the marsh ox-eye daisy. C. l. Top Sawyer (T. Smith) grows five feet high, bears large blooms on stout stems, and the florets droop slightly at the tips. C. l. grandiflorum (Dickson) very much resembles the former variety. C. l. King Edward VII. is quite the largest moon daisy yet raised, growing nearly six feet high, and flowering profusely, but the blossoms are regarded by many persons as coarse. C. l. Moonlight has erect petals, forming cup-shaped blooms. C. l. Countess Cadogan is large, and spotlessly white.

The form of C. nipponicum, known as the Shasta daisy, commences to flower early; it is pure white, and has a deep yellow disc. The flower stems are slender, fitting it well for arranging with other flowers in vases. This variety has an advantage over others in that it sends up relays of new flower stems from time to time, and is, therefore, almost a perpetual in flowering.

E. Molyneux.

Swanmore Park.

RAMONDIAS.

Ramondia pyrenaica and its varieties are most beautiful and showy plants when well grown. They are perennials, perfectly hardy, and found growing in the crevices of the rocks on the Pyrenees. In our rock gardens they lighten up a wall of rocks in a most charming manner. They love plenty of light, but not direct sunshine, and they should be planted in crevices which are facing north and north-west; further, they should be put in or planted in the rock face vertically, so that the rain will not lodge in the little rosettes of leaves. Ramondias should have a good depth of soil, such as peat, good loam, cow manure, and grit. The cow manure will enable the plants to withstand drought, as it keeps the soil cool, and does not allow it to crumble in dry weather. R. pyrenaica bears violet-purple flowers with a yellow centre. R. serbica is a little lighter in colour, and is very free flowering on a north aspect. All these can be propagated from seed or increased by division. Their time of flowering is from May till July. They should not be allowed to become really dry at the roots, or it is very probably they may die. The generic title commemorates M. L. Ramond, a French botanist, who discovered the species in 1800.

W. A. Cook.

Leonardslee Gardens.

Lilium Bulbs that have recently arrived should be at once potted up in readiness for future transplanting, or where the position is ready they may be planted directly into it, placing a little sandy leaf-soil around each bulb. The ground should have been dressed with well-rotted manure and leaf-soil, and deeply dug. If potted up the liliums may be started under ashes. If bulbs of the longiflorum section are left near the surface pheasants find them. — E. F. Hazelton.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

COOL ORCHIDS.—The principal attraction in this division at the present season are the odontoglossums. I have often asked myself when entering a house full of plants in bloom at this season of the year, what can be the reason why these plants are not more generally grown in private places? If we consider them from a cut-flower point alone few flowers are more serviceable than spikes of O. crispum, and for whatever purposes they may be used the flowers are rarely out of place. One could understand the reason when imported plants of O. crispum were expensive, but during the past five or six years the supply has been undoubtedly larger than the demand, the result being that the cost has been reduced to a minimum, that is, less than is paid for many florists' flowers. The culture is also so easily managed, that where reductions in labour have been necessary and a full supply of garden products still demanded, I think it is a pity more attention is not devoted to their culture.

ODONTOGLOSSUMS. — While this may generally be considered to be the flowering season, or the season when the majority of the plants will be in spike or flower, the fact cannot be overlooked that there are plants producing flowers at practically all seasons of the year. It will naturally follow that they cannot all be treated at once; they must have individual attention, and be dealt with according to their condition of growth. Although no hard and fast lines may be laid down for the treatment of the plants in respect to potting requirements at any particular season of the year, I think we can safely observe the rule, that the period of producing new roots is the season when potting is necessary. Where a quantity of odontoglossums are grown there are a number of plants which have now just reached the stage in their growth when the pseudo-bulb is commencing to form, and this is generally the time when new roots are making their appearance. It is not always the case, for there are some of our most valuable O. crispums that do not commence rooting until the pseudo-bulbs are matured. I find the season does not matter so much as we at one time anticipated, and I would not hesitate to repot a plant at any season of the year, providing that it was in a condition to be treated.

POTTING COMPOST.—We use about equal portions of fibrous peat, chopped sphagnum, and broken beech or oak leaves. The drainage, to about half the depth of the pot, is of chopped bracken roots. We make the compost firm, but by no means hard. I consider hard potting detrimental, and when potting we avoid all lumpy portions of broken peat, for seldom are the roots found to penetrate them.

TOP-DRESSING, where the surface moss has become decayed or covered with algæ growth, may also be done at the present season. Plants that have had their roots disturbed in any way must be protected from strong light by shading, or the leaves will turn yellow; place any recently disturbed plants together, if possible, and spray them overhead two or three times a day in bright weather and keep the floors and stages damp about them, and the atmosphere of the house in a humid state at all times when the outside conditions are favourable. The night temperature at this season should be about 53 deg.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

CLERODENDRONS.—There are two useful clerodendrons which well merit a position in any collection of stove plants. Clerodendron Thomsonæ (or Balfouriana) is a deciduous creeper, a vigorous grower and of easy culture. Where cut flowers are in demand during autumn it proves most useful, being very free flowering. When grown as pot plants they are more easily managed as regards watering, and ripening of the wood. If required as large specimens they are best trained on strings under the roof, and as soon as the flower buds appear they may be removed and tied into the desired shapes. Plants are readily raised in the usual way from young growths taken off in spring, and kept close in the propagating case for a few weeks. As soon as rooted they should be potted off singly using small 60-sized pots. As the plants become root-bound shift them into larger sizes during the growing season. If smaller decorative plants are desired they can be obtained by restricting the roots of the young plants raised in spring.

CLERODENDRON FALLAX.—This is of exceptional value as a winter flowering subject, its intense scarlet flowers, with the handsome setting of green foliage, securing the appreciation of everyone, and at a season of the year when flowers are welcome. Plants are best raised annually, either from seed, which may be sown now, or from cuttings of the young growths taken off with a heel of the old wood and rooted singly in thumb pots. These should be placed in a close propagating case and occasionally sprayed with the syringe to prevent the leaves flagging. If a brisk bottom heat of 75 to 80 deg. is obtainable the cuttings will root in from four to six weeks. As soon as the plants show signs of growth, air should be admitted gradually until they can be placed near the glass. Place the plants in larger pots as they become rooted, but pots 6 in. in diameter are generally large enough for the final potting. Clerodendrons succeed well in a compost of good fibrous peat and loam in equal parts, with charcoal and coarse sand added. Shade the plants lightly from the hot sun, and particularly after potting.

GARDENIAS.—Cuttings will root very readily during the months of March and April. Plants rooted early in spring form very serviceable stock for autumn use, and will continue to produce flowers during the winter months. They are remarkably easy to cultivate, but there is one point which I think should be emphasised in their management, and this is that if it is desired to produce plants which will fully demonstrate the flowering capabilities of gardenias they must at all times be kept free from attacks of pests such as mealy bug. Gardenias require most liberal treatment and regular applications of weak liquid manure, with an occasional change, such as an approved artificial given according to directions.

GENERAL REMARKS.—Crotons and dracænas which were notched as advised in a previous calendar will require further attention. Either separate the tops from the parent plant, or place some additional rooting material up to the larger specimens and prepare for the final separation later on. After the tops have been removed and potted up care should be exercised to prevent the flagging of the foliage; if convenient they may be plunged inside the propagating frame and the larger plants may be placed for a time in the cucumber or melon house, where very little air is admitted, and kept shaded. Old dracæna stems may be cut up into lengths and placed in shallow pans or pots, these will soon push up growth, and, if grown on in a brisk temperature, will make useful plants for table or house decoration. Old crotons will be serviceable as stock plants from which good batches of cuttings may soon be obtained.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

PINEAPPLES.—Some of the strongest of the pines will be throwing up fruit, therefore keep up a steady bottom heat of 80 deg. to 85 deg. after their flowering stage. If necessary, give a top-dressing of good turfy loam and bone-meal: a night temperature of 70 deg., and 75 deg. by day should be maintained. Plants swelling fruit should have their pots and stages syringed with some liquid sheep manure, and be closed up early, damping all dry corners. Any ready for shifting into their fruiting pots should now be taken in hand; have the compost thoroughly warmed and made up of turfy loam, plaster rubble, a little bone-meal, and a good dash of soot; pot them in the house where they are to remain, and when potted, keep them damped overhead. If the soil was in good condition the plants will not require any water for a few days. Always use water that has stood in the house some time. Offsets put in pots last autumn should be examined and potted or top-dressed and placed back in a bottom heat of 70 deg.

PEACHES AND NECTARINES. — With the dull weather recently experienced forcing will be very slow. Fire heat must be given very carefully, as even at this stage (their first swelling) the fruits are liable to fall off, especially if the roots have gone far afield. Water only as really necessary. A few of the fruits may be taken off if they are too thickly placed, but until they are past the stoning stage it is not safe to predict a crop; 60 deg. at night is ample, and a few degrees lower is better than a few degrees higher. Syringing should be done carefully or mildew will appear; give air on favourable occasions or as the temperature of the house rises.

STRAWBERRIES. — To finish these off they should be placed in a slightly cooler house or the flavour in the fruit will be poor. Cease syringing. As there is little sun the fruits will not ripen fast. Take care to keep up a succession. The dull, sunless summer of last season and the late runners have not aided strawberry forcing, and a number of blind plants is the result. Those in 48-sized pots full of roots are giving the best results. As we were unable to obtain sufficient runners last season a few year-old plants were potted up, and although these rooted well, and the crowns are in good condition, they have failed to give a decent crop.

POT VINES.—At this stage these will require plenty of water at their roots, also some farmyard liquid in a diluted state; keep the plunging material made up as required. Thinning should be done judiciously. As fire heat will have been the only source of heat red spider is likely to appear, therefore spray the foliage with tepid soft water on a fine day.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

SEAKALE.—In most establishments this vegetable is required in quantity, so to form a succession to the forced roots the crowns remaining outside in permanent quarters should now be covered with seakale pots, placing about 15 inches of leaf-soil over the crowns. If some long litter can be put round the pots it will provide a gentle warmth, and the crop will be hastened. When sufficient pots are not available, the crowns may be earthed up with fine garden soil or leaf-soil, about the same depth. The produce is always excellent and tender from these outside beds.

RHUBARB.—Crowns may now be divided, and planted on deeply-trenched and well-manured ground. In fact, a fresh plantation should be made annually, so as to secure the best crowns for forcing. Put in small crowns, 3ft. apart each way, choosing good coloured varieties, such as Hawke's Champagne or Sutton's Early Scarlet. Where the ground has not been previously prepared through over-pressure of work, if good pits are dug out and manured as the work proceeds, this will answer fairly well. Roots that have been forced should be hardened off a little before replanting them outside.

WINTER ONIONS.—Seeds that were sown last autumn have produced strong plants, and these should now be transplanted on deeply trenched ground which has been well manured. If a dressing of wood ashes and soot can be put on the surface, it will have a beneficial effect on the crop. Plant the onions about a foot apart each way, and make each plant firm with the dibber as the work proceeds. Give them a good watering if the soil is at all dry: Ailsa Craig and Giant Lemon Rocca are two useful varieties to grow.

TURNIPS.—If a half-spent hotbed is at hand, it will prove most useful for raising a batch of early turnips, choosing a quick bulbing sort, such as White Milan. Sow the seeds thinly and thin out as required, dusting them over with fine wood ashes at intervals when they have made a few leaves.

SPRING CABBAGES. — The quarters should now be hoed, choosing a dry day for the work; it will assist the plants very much and make them heart quicker. Should some of the smaller plants be not looking well, they should be pulled out, and other stronger plants put in. I always grow two batches, and the first lot will now benefit from a sprinkling of nitrate of soda. Young plants from seeds sown at the beginning of the year will now require pricking off into other boxes or frames. These, if well attended to, will form a succession to the above.

EARLY PEAS. — Those that have been raised in pots or on turves should be well hardened off before planting them out permanently, or failure will be the result. Any rough frame will answer the purpose very well, where the lights can be removed in the day and put on at night until the weather is warmer.

POTATOES. — A few pecks may now be planted at the foot of south, east, and west walls, choosing early varieties such as Ashleaf or Sharpe's Victor. Plant them a foot apart in the trench, with a sprinkling of basic slag and decayed horse manure. In this position they form a succession to frame grown ones, and can soon be protected if the weather is cold.

CELERY TRENCHES.—These should be prepared without delay; the soil coming from them forms ridges, which can be utilised for growing dwarf peas, French beans, lettuce, and early cauliflowers. The trenches should not be made too deep, especially on cold clayey soils. For the earliest supplies the double row system answers well, but for late use I find that single rows keep much better during the winter months on heavy land. A trench 2ft. wide is ample for a double line, and 14in. for the single row, and a foot deep, placing four or five inches of good manure in the bottoms, and adding a similar depth of fine soil.

SOWING THE SEEDS.—The main crop of celery should now be sown in boxes, and placed in heat; keep the plants growing steadily, and guard against any check. A pinch of celeriac seed may be sown and treated the same way in the first stages of growth.—T. W. Birkinshaw, Hatley Park Gardens.

Wild Gardens.—These will now rapidly become more and more beautiful as early flowers continue opening. Note where and further improvements of planting may be done, but guard against any approach to formality. If there are any old tree stumps which it is not desirable to dig up, they may be covered with some of the rambling roses, periwinkle, hypericum, ivy, muhlenbeckia, or other climbing and trailing plants. Informal clumps and masses of spiræas, heaths, brooms, pernettyas, gorse, leycesteria, akebia, arundos, polygonums, hellebores, daphne, Solomon's Seal, anchusa, iris, and mimulus should be planted. In all places where they will grow plant quantities of violets, though April is soon enough to plant. The old sweet briar, with its rich fragrance, should be planted in suitable parts, as it is always welcome. Philadelphuses, weigelas, Olearia Haasti, Veronica Traversi, and others should also be remembered. The early-flowering Cornus mas, is now a very pleasing glow of yellow, where it has made good-sized bushes, and it is well suited for the more open parts of the wild garden. Now is also a good time to divide and replant Christmas roses, both in the wild garden and in beds or borders; very carefully divide them without unduly severing the roots, the outside crowns being the ones to plant; plant in well-prepared, but not newly-prepared ground; partial shade suits them best.—E. F. Hazelton, Knowsley Gardens.

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EXHIBITIONS AND MEETINGS.

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Colonial Fruit Show.

An exhibition of Colonial fruit was held under the auspices of the Royal Horticultural Society, at the Royal Horticultural Hall, on March 5. The Cape fruits, notably the pears, peaches, nectarines, and Kelsey plums, were especially fine, but, taken as a whole, the exhibition was a poor one, and did not half fill the hall. We understand, however, that some consignments of fruit were delayed in transit.

Sir Trevor Lawrence, Bart., presided at the opening ceremony, and introduced Sir Somerset French, at the same time presenting him with the society's medal for his service in helping to bring the exhibits together.

Sir Somerset French, in the course of his remarks previous to declaring the exhibition open, said that as a fruit-growing country South Africa possesses exceptional advantages. Being situated south of the line its fruits come to maturity at a season of scarcity in the northern hemisphere, whilst the magnificent climate, and the temperature varying in different parts from tropical to temperate, put it in a position to supply the European markets with an immense variety of fruits in almost unlimited quantities—provided, of course, that the means of transport and the distribution have been fully organised. That is, of course, one of the great essentials. Like many other industries, success in fruit growing and marketing is only to be achieved by constant care and study, and it says a great deal for the perseverance and the energy of those concerned that such excellent displays as that made in the hall can be placed on the market after a journey, in many cases, of upwards of 6,000 miles.

In the earlier days of the industry experience was, he was afraid, somewhat dearly bought, but of late years, under the fostering care of the Government, the general conditions have become much more favourable. In Cape Colony expert advice is freely given to farmers, and lectures on the subject of the best and most suitable varieties to cultivate, and how to deal with the various pests which the fruit grower has to contend with are distributed broadcast. It may be said that pests flourish in South Africa; the climate seems to suit them, and they present a very serious difficulty. Government experts have been appointed to give practical demonstrations of the best methods of tackling them.

On the railways cars specially designed for fruit transport have been provided, and farmers who desire to do so can purchase boxes and packing materials at a moderate price from the nearest railway station master, and can even consign, through the Colonial Trades Commissioner in London, any fruit they may have. At the docks in Cape Town cool chambers have been arranged for, where fruit is stored at a proper temperature pending shipment, and Government inspectors have been appointed whose duty it is to inspect, grade, and mark with Government brands the consignments of any growers or shippers who desire to avail themselves of their services. The question of the most suitable temperature to be maintained during the voyage to England has also been satisfactorily solved, which is a somewhat important matter, and on the arrival of the consignments at Southampton they are personally examined by the able and indefatigable Trades Commissioner, who reports without delay to the Government should any circumstance leave room for improvement, or the quality or variety of the fruit be unsuited for the English market.

This year the supply of stone fruit has not been quite up to the average. That is largely due to the season in South Africa not having been a favourable one, a drawback to which, of course, every country is liable. Some consignments have also fallen short of the usual standards of excellence, and the prices realised have, in consequence, been below the average. This, although doubtless very disappointing to the grower, widens the area of consumers. It is rather a desirable thing sometimes to get fruit on to costermongers' barrows, because it is a very good advertisement. Speaking generally, the quality, as well as the quantity, of African fruit imported into this country is year by year increasing in a most satisfactory manner, and there is every prospect of a large trade being built up in the near future.

This year melons of various kinds will be brought over from the Cape Colony in large quantities. The season for apricots, peaches, and nectarines is drawing to a close, but that for pineapples will shortly commence, and a number of shipments of varieties of table grapes, for which the Cape Colony, if he might say so, is famous, are now on the water. All that is necessary to make the industry a success is the opening up of new markets, and the extension of those which already exist. Our Trades Commissioner is doing his best to secure this end, and he had no doubt that one of the results of this exhibition will be a more extended knowledge of the capabilities of the Colony as a source of supply at this season of the year.

It should be added that the fine views of South African scenery hung round the hall were displayed by Sir Somerset French.

Mr. S. L. Simmons, of Church Street, Croydon, and Durban, Natal, showed some exquisitely-flavoured green musk melons, quite sound and fresh; a fine lot of pears, peaches, nectarines, apples, Hannepoot grapes, all very good. Some excellent Kelsey plums, Williams' pears, Louise Bonne pears, and peaches, came from the Rhodes Fruit Farms, Groot Drakenstein, and from Mr. Barry at Rustenberg, S.A. Some magnificent Williams' pears were shown by Messrs. Gie Bros., and Mr. A. C. Buller, from the Hex River district. Mr. E. W. Pearse, Niewe Hoop, S.A., sent some splendid Kelsey plums.

One of the best exhibits was from Mr. T. J. Poupart, Central Avenue, Covent Garden Market, who had boxes of grand fruits of Williams', Louise Bonne, Duchess d'Angoulême, Beurre Bosc, Beurre Superfin, and Beurre Hardy pears, Mary's Choice and Gladstone peaches, and some fine black grapes, Hermitage variety. From the Hon. J. W. Sauer (Cape Colony), huge Cape melons, granadillas, white Hannepoot and Muscat grapes, Golden Russett and King of Tompkin's apples. Besides the South African fruit Mr. Poupart showed barrels of Baldwin and Greening apples from Ontario. Mr. Poupart was awarded a gold medal.

Messrs. Brown and Maxim, Covent Garden, set up a consignment of Cape fruit, the Kelsey plums, Williams', Duchess d'Angoulême, Beurre Bosc, Beurre Spence, and Beurre Hardy pears, Hannepoot and Hermitage grapes, and Musk melons being all excellent; silver-gilt Knightian medal.

The Army and Navy Auxiliary Co-operative Supply, Lim., Francis Street, Westminster, contributed a very fine display of Colonial fruit, worthily winning a gold medal therewith. Their melons were splendid, and their Kelsey plums grand. The Jamaica oranges, Dominican limes, Jamaica mangoes, grape fruits, splendid Williams' pears, Hermitage grapes from the Cape, apples from Nova Scotia and the Cape, yams and bananas from the West Indies, peaches and nectarines from Cape Colony, and Cleopatra and Cox's Orange Pippin apples from South Australia, were all in excellent condition, and were admirably staged, in dishes, and also as packed.

Mr. C. Du P. Chiappini, Cape Colony, was awarded a gold medal for Cape-grown grapes, melons, granadillas, pears, and Kelsey plums—very fine fruit, finely arranged on a separate table. Mr. A. Chiappini also had a good display of Cape pears, peaches, grapes, apples, and plums.

The Nova Scotia Government, through the Agent-General, showed a collection of very fine apples, and it was difficult to realise that the fruits were all picked six months previously. The varieties shown, all fresh plump, and bright, were Baldwin, Nonpareil, Ontario, Fallawater, King of Tomkin's County (very fine), Blenheim Pippin, Golden Russett, and Stark. A gold medal was awarded.

Messrs. Westmacott and Co., 139, Leadenhall Street, showed grapes and apples, but chiefly Cape wines and liqueurs. Messrs. R. Jackson and Co., 172, Piccadilly, W., had an extensive exhibit of preserved peaches, fig jam, plum preserves, apricots, Cape gooseberry preserve, etc. Preserves of many kinds were finely shown by the Rhodes Fruit Farms, Groot Drakenstein, Cape Colony. A silver-gilt Knightian medal was awarded the Cape Orchard Company, Cape Colony, for apples, peaches and plums, all well shown.

Messrs. W. Cutbush and Son, Highgate, had a bright display of forced trees and shrubs, alpine flowers, and carnations.

The Horticultural Club.

The usual monthly dinner of this club took place on Tuesday, the 3rd inst., Mr. H. J. Veitch presiding, when Mr. Charles Pearson, who had promised to give a lecture on "Birds' Eggs," was unavoidably absent owing to an attack of the prevailing epidemic of influenza, and Mr. R. H. Read, an authority on the same subject, very kindly filled the gap at short notice with a description of an ornithological excursion to Southern Spain, illustrated by numerous lantern slides.

The lecturer prefaced his exhibition of views and nests in situ by a graphic account of his trip in the spring of 1906, the object of which was the study of the birds of that country. On the way thither he passed through Bordeaux, where he saw immense forests of pines, largely devoted to the production of turpentine, every tree being scored longitudinally, and provided with little collecting cups, the raw product being worked up by terebene factories on the spot.

Passing onwards the various phases of spring vegetation were touched upon, and also, of course, the numerous species of birds, many of which were obviously migrating in enormous numbers on their way hither and elsewhere, willow warblers, blackcaps, nightingales, etc., figuring among them. Arrived in the Jerez or sherry-producing district of Spain—the word sherry being really an approximation to the Spanish name, while the old word sack was a corruption of seco, or dry sherry sack, meaning dry sherry—the lecturer made his way to the curiously-constituted bird paradise known as the Marismas, a vast area of flat land covered during the winter and spring by about two feet of water, which dries up in the summer, leaving large expanses of sun-dried mud, varied by stretches of sand and shingle. Birds of innumerable kinds abounded here—herons, stilts, terns, and other waterfowl, and egrets, kites, and other birds of prey.

A curious arboreal feature in this district was that, owing to the scarcity of fuel, the pine trees were all denuded of their lower branches and were consequently reduced to somewhat mop-like forms. In some places drifting sand invaded both trees and smaller vegetation, and some of the slides showed curious effects in this direction. Among the most interesting slides were those showing various nests. Herons and eagles, etc., high up in lofty trees, while another series depicted ground nests, in many cases hardly worthy of the name, the eggs being laid in all but invisible groups among rough stones and shingle, and, by their mottled coloration, almost defying the eye to detect them. The nests and eggs of many aquatic birds were also shown, cosily planted amid the reeds and rushes, which in many cases necessitated standing knee-deep in water in order to obtain the photograph.

A discussion followed, in which Messrs. W. Pycroft, Percy F. Bunyard, W. Marshall, H. J. Veitch, and C. T. Druery took part, and a hearty vote of thanks concluded the entertainment.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, March 3.

Present: Sir John T. Dillwyn-Llewelyn, Bart. (in the chair); Prof. G. S. Boulger, Rev. W. Wilks, Messrs. A. W. Sutton, A. R. Rolfe, J. Douglas, J. T. Bennett-Poë, C. T. Druery, L. de B. Crawshay, G. Massee, G. S. Saunders, W. Cuthbertson, G. Gordon, W. Hales, A. Worsley, E. M. Holmes, S. U. Pickering, F. J. Chittenden (secretary), and numerous visitors.

INHERITANCE OF ALBINISM IN ORCHIDS.—The following communication was received from Mr. C. C. Hurst, F.L.S.: Two distinct and definite cases of albino orchids producing coloured forms when crossed were recently brought before this committee by Mr. H. J. Chapman. Such facts, expected by the Mendelians, are important, inasmuch as they go to show that albinism in orchids is inherited in a similar manner to albinism in sweet peas and ten-week stocks, and in accordance with Mendel's law. An albino orchid is distinguished from a coloured one by the absence of purple sap. For instance, the well-known Paphiopedilum (cypripedium) insigne Sanderæ is an albino form from which the purple ray of the type has disappeared. Recent experiments with sweet peas and stocks, carried out by Mr. W. Bateson, F.R.S., Mr. R. C. Punnett, and Miss E. R. Saunders at Cambridge, have fully demonstrated that the appearance of sap colour depends on the simultaneous presence of two colour factors. If both of the colour factors are present the sap is coloured, but if either (or both) of the colour factors is absent, the sap is colourless. With regard to the cases of Paphiopedilum (cypripedium) brought forward by Mr. Chapman, for the sake of simplicity we will call the two colour factors C and P. The typical coloured forms of P. insigne, P. bellatulum, P. callosum, and P. Lawrenceanum will therefore be carrying both of the colour factors C and P. Their albinos will, on the other hand, be carrying either the C factor alone, or the P factor alone (or neither). The known facts of the breeding of albinos of these four species seem to be in accordance with the conception that P. insigne Sanderæ and P. bellatulum album are carrying the factor C alone; while P. callosum Sanderæ and P. Lawrenceanum Hyeanum are carrying the factor P alone (or vice versa), as the following table, comprising all the results known to me, shows: Table A: 1, P. insigne Sanderæ (C) x P. insigne Sanderæ (C) gives albinos (C C); 2, P. callosum Sanderæ (P) x P. callosum Sanderæ (P) gives albinos (P P); 3, P. Lawrenceanum Hyeanum (P) x P. Lawrenceanum Hyeanum (P) gives albinos (P P); 4, P. Lawrenceanum Hyeanum (P) x P. callosum Sanderæ (P) gives albinos (P P); 5, P. callosum Sanderæ (P) x P. insigne Sanderæ (C) gives coloured hybrids (C P); 6, P. callosum Sanderæ (P) x P. bellatulum album (C) gives coloured hybrids (C P); 7, P. bellatulum album (C) x P. Lawrenceanum Hyeanum (P) gives coloured hybrids (C P). The next table gives the remaining possible matings between the albinos concerned, together with the expected results:— Table B: 1, P. bellatulum album (C) x P. bellatulum album (C) should give albinos (C C); 2, P. bellatulum album (C) x P. insigne Sanderæ (C) should give albinos (C C): 3, P. insigne Sanderæ (C) x P. Lawrenceanum Hyeanum (P) should give coloured hybrids (C P). Future results will show how far the above conception, based on Mendel's law, is correct. If Mr. Chapman thinks well to self-cross the coloured hybrids that he obtained from two albinos, he may expect to get, on the average, nine coloured forms to seven albinos.

BIGENERIC HYBRID ORCHID.—Mr. R. A. Rolfe, A.L.S., drew attention to the bi-generic orchid Epi-diacrum Colmani shown by Sir Jeremiah Colman, Bart., and raised between Diacrum bicornutum ♀ and Epidendrum ciliare ♂, and remarked that this new and interesting hybrid approached closely in habit, inflorescence, and form of flower to the pollen parent. He also commented upon the question of the nomenclature of bi- and poly-generic hybrids, saying that he considered it best to compound the name of the hybrid from the names of the parent species, and to avoid conventional names, unless they were so formed, as long as it is possible to do so.

GREEN-FLOWERED PRIMULA SINENSIS.—Mr. A. W. Sutton showed a plant of Chinese primula with green flowers, arising apparently from chlorosis of the corolla. The seed had been sown in 1904 and onwards, and had each year bred true until this plant had appeared among the seedlings raised last year. Only once before had Mr. Sutton seen a similar thing, and that was in 1902 when the same kind of sport occurred in another stock of double white P. sinensis, but in that case the flowers were not so well developed. The pollen of this plant appears perfect, and possibly seeds may be obtained from it.

COLOUR SPORTS IN BORONIA AND ERICA.—Mr. H. J. Veitch showed a plant of the albino form of Boronia megastigma, a portion of one branch of which bore flowers of the normal colour, purplish brown, thus reverting to the type from which the sport arose. From Mr. W. Earp, of Bayham Abbey Gardens, came a spike of an Erica (sp?) which last year had borne white flowers only, but every flower this year was of a pinkish colour. Some members of the committee thought that possibly the flowers in the previous year had been caused to open in the dark.

CROCUS WITH PARTS IN FIVES.—From Mr. H. J. Elwes, F.R.S., came a crocus flower having ten perianth segments in two whorls, five stamens alternate with the outer perianth pieces, and a five branched style.

"CANKER" CAUSED BY MONILIA.—Mr. Dunlop, of Armaghmore, sent a branch of apple Lord Derby with cracked bark, giving it the appearance of incipient canker. Inspection revealed the greyish sclerotia of Monilia fructigena in the cracks, and Mr. Massee said that this fungus, which is perennial in the tissues, forms sclerotia beneath the bark, causing the latter to be raised and to crack. Spores are formed on these sclerotia, and the disease spreads thence to the young leaves, shoots, flowers, and fruits.

TUBEROUS SOLANUMS.—Mr. A. W. Sutton read a paper on "Wild Types and Species of Tuber-bearing Solanums," illustrated by lantern slides. In the course of his interesting remarks, Mr. Sutton referred to the impetus given to the search for the wild type from which the potato has been derived by Lord Cathcart, and to Mr. J. G. Baker's work with the group, and related his experiences during the past twenty-five years in cultivating and hybridising the tuber-bearing species of Solanum, S. tuberosum, S. polyadenium, S. verrucosum, S. Maglia, S. etuberosum, S. Commersoni, S. Ohrondi, and S. tuberosum var. boreale (equals S. Fendleri). Whenever any of these have produced fertile seed the type has been reproduced, except in the case of S. etuberosum. The last named has apparently never produced fruit in this country until 1906, when a single berry was found. From the seeds it contained a number of plants approaching in appearance the cultivated forms of the potato have been obtained, and Mr. Sutton suggests that possibly it is from S. etuberosum that the cultivated potato has been wholly or in part derived. If so it is a hopeful sign for the future races of the potato that no plant of S. etuberosum has yet been known to be attacked by the fungus Phytophthora intestans. The meeting closed with a hearty vote of thanks to Mr. Sutton, who not only illustrated his lecture with slides, but with numerous specimens of tubers of the wild types and seedlings from S. etuberosum, etc.

United Horticultural Benefit and Provident Society.

The annual general meeting of this splendid friendly society was held at the Royal Horticultural Hall on Monday, March 9. Mr. Chas. H. Curtis presided over a moderate attendance—indeed, it might be said, that, as the management of the society is so excellent, members ought to attend better out of courtesy to the members of committee, who give their services so readily.

After the preliminary matters had been disposed of, the presentation of the report and balance-sheet was made.

REPORT OF THE COMMITTEE FOR 1907.

The committee has again great pleasure in presenting its annual report. During the year 1907 the society has made steady progress. Sixty-two new members joined, but thirty-six have fallen out of the ranks (several having gone abroad) and eight have died, thus leaving a net increase of eighteen, the smallest increase for several years. The membership now stands at 1,246.

The loss of an old and valued friend and trustee, the late Mr. George Wheeler, has to be recorded. Mr. G. Wheeler and his brother Mr. Joseph Wheeler, were trustees for thirty-one years. With the death of Mr. G. Wheeler and the issue of new rules, it became necessary to elect new trustees. Accordingly, at the annual general meeting on March 11, 1907, Mr. James Hudson, V.M.H., Mr. Riley Scott, and Mr. Charles H. Curtis were elected trustees, and Mr. William P. Thomson was elected treasurer, in the place of Mr. James Hudson, who retired from that office.

Sick pay was very heavy during the year, but it must be remembered that members who have been ill more than twelve months are now paid from the sick fund instead of from the benevolent fund; there are now five chronic sick members on the fund. The amount of sick pay for the year was £4[illegible] 7s. 6d. This amount is apportioned to members at 9s. 3d. and 6s. 2d., according to scale. Large amounts have been paid out at members' deaths to their nominees, the largest being over £133. Over £70 was also paid out to one lapsed member. Several members over sixty years of age have taken advantage of the new rules, and drawn the interest on their balance in the ledger. These payments will doubtless increase in the future, several other members having now nearly reached that age. There are now 54 members over sixty years of age; forty-eight over fifty-five and under sixty years of age; and seventy-three over fifty and under fifty-five years of age.

The benevolent fund has been greatly relieved by the transfer of chronic sick cases to the sick or benefit fund. Every member also now pays 3s. annually, which increases the receipts considerably. The amount paid from this fund to members over seventy years of age, and in special grants, was £10[illegible] against £132 5s. during 1906.

The convalescent fund has not been much used during the past year, only £4 having been paid to three members. The receipts from members have been small. Messrs. Hurst and Son kindly gave their usual £5 [illegible] to this fund.

The expenses of management are a little less this year, being £215 2s. 4d., against £248 0s. 2d. in 1906, the higher sum in the latter year being due to the expenses of new rules.

The annual dinner in November was presided over by Sir Albert Rollit, LL.D., D.C.L., who made an excellent chairman, and also become a honorary member. The dinner was not a financial success, the balance being on the wrong side by about £3. The continuing of this dinner as an annual function has been exercising the mind of the committee, and it is possible that some modification of this event may be necessary.

The great feature of the annual dinner was the presentation to Mr. James Hudson, V.M.H., of a very handsome solid silver tea and coffee service, with a large framed portrait of himself, as a token of esteem and in recognition of valuable services rendered to the society as treasurer during the twenty-five years. The members were invited to contribute to this presentation, and they responded nobly. After all expenses had been paid, it was found that there was sufficient money in hand to enable the committee to add a pair of solid silver candlesticks to the tea and coffee service. Needless to say, Mr. Hudson was greatly delighted with this substantial evidence of the high regard in which he is held by the members.

The committee is grateful to the honorary members for their continued support, and ventures to hope that other gentlemen will also become subscribers. The committee also would again urge the members to help to increase the membership, by pointing out to young gardeners the great advantages that the society offers, as it is a benefit society, insurance fund, and savings bank combined, and is worked on safe and economical lines.

Signed on behalf of the Committee,

CHARLES H. CURTIS (Chairman).
WM. COLLINS (Secretary).

From the financial statement, which involves several balance-sheets, we gather that subscriptions to the benefit fund amounted to £2,003 8s. 1d., and £479 9s. 6d. was paid out as sick fund. The benevolent fund expenditure amounted to £107 9s., and the income from members' subscriptions alone were £170 16s. In the case of the convalescent fund, only £4 was paid out, whereas the income from interest, subscriptions, and donations, amounted to £27 5s. 11d. The balance to the good on the benefit fund is £24,094 4s. 1d.; on the benevolent fund, £5,007 4s. 6d.; and on the convalescent fund, £590 17s. 7d. We append the management fund account and the statement of liabilities and assets, the latter showing the investments of the society.

MANAGEMENT FUND.

RECEIPTS.

1907. January 14.	£	s.	d.
To Balance brought forward	70	17	10
1908. January 13.			
To Subscriptions of Members	143	0	1
Arrears of Subscriptions	13	17	8
Rules and Revocation Fees	0	15	3
Adverts. in Annual Report	13	5	6
Sale of Emblems	0	10	9
Interest on £2,006 16s. 11d. standing to the credit of Lapsed Members, transferred from Benefit Fund	57	4	0
	£299	11	1

EXPENDITURE.

1908. January 13.	£	s.	d.
By Secretary's Salary	100	0	0
Rent for Meetings	5	0	0
Rent of Secretary's Room	5	0	0
Rent of National Safe	1	1	0
Postages	25	9	6
Printing and Stationery	39	14	2
Postal Orders to Sick Members and Carriage of Parcels	4	4	10
Trustees' and Treasurer's Expenses	5	15	1
Auditors' Fees	5	0	0
Cost of Transfer of Stock from the old to the new Trustees	16	16	6
Sundries, including expenses Attending Audit, Annual Meeting, Railway Fares, Postman, Secretary's and Treasurer's Guarantees, etc., Bank Charges, etc.	7	3	6
	215	4	7
Balance to date	84	6	6
	£299	11	1

STATEMENT OF LIABILITIES AND ASSETS.

LIABILITIES.

1907. January 14.	£	s.	d.
To Benefit Fund	£24,094	4	1
Benevolent Fund	5,007	4	6
Convalescent Fund	590	17	7
Management Fund	84	6	6
Balance of Surplus Fund, available for providing for depreciation in value of stock	1,437	7	7
	£31,214	0	3

ASSETS.

1908.				£	s.	d.
By Investments at par value—						
London County Consolidated Stock, 3 per cent				1,200	0	0
Liverpool Corporation Stock, 3 per cent.				3,100	0	0
Devonport Corporation Stock, 3 per cent.				600	0	0
West Bromwich Corporation Stock, 3 per cent.				3,300	0	0
Croydon Corporation Stock, 3 per cent.				1,400	0	0
Nottingham Corporation Perpetual Stock, 3 per cent.				6,150	0	0
Norwich Corporation Stock, 3 per cent.				700	0	0
Croydon Corporation Stock, 3½ per cent.				300	0	0
York Corporation Stock, 3 per cent.				1,850	0	0
Lancashire and Yorkshire Railway Debentures, 3 per cent.				1,000	0	0
Cardiff Corporation Stock, 3 per cent.				4,000	0	0
Bristol Corporation Stock, 3½ per cent.				1,500	0	0
Bristol Corporation Stock, 3 per cent.				400	0	0
Manchester Corporation Stock, 3 per cent.				1,600	0	0
Middlesex County Stock, 3 per cent.				1,500	0	0
Middlesex County Stock, 3½ per cent.				1,000	0	0
Hertfordshire County Stock, 3½ per cent.				1,000	0	0
North London Railway Preference (1875), 4½ per cent.				500	0	0
				31,100	0	0
By Balances in Hand—						
London and South Western Bank Deposit account	£50	0	0			
London and South Western Bank Current account	31	13	1			
In hands of Secretary	32	7	2			
				114	0	3
				£31,214	0	3

The motion for the adoption of the report and balance-sheet was moved by the Chairman, who referred to the chief features of the year's working, and emphasised the need for greater enthusiasm on the part of the members to secure new members among their gardening friends. He also pointed out the extremely sound financial condition of the society, the high opinion in which it was held by the Registrar General, and said that the senior auditor, Mr. Gunner, had given it as his opinion that there was not another friendly society that gave such a good return for the subscription paid. The motion was duly seconded, and carried without comment, everyone appearing to be well satisfied with the work done.

The four retiring members of the committee, Messrs. E. Burge, J. Bedford, W. Stanbridge, and C. Harding, were unanimously re-elected. Mr. Jas. Hudson moved the re-election of Mr. W. Collins as secretary; this was seconded by Mr. Joseph Wheeler, one of the first members of the society, and carried unanimously. Messrs. Gunner and Puzey were reappointed auditors on the motion of Mr. J. Harrison Dick and Mr. E. Burge, the former showing that these gentlemen not only did their work well, but took a kindly interest in the society's work, and had from time to time made useful suggestions to the committee. Mr. Thos. Winter proposed, and Mr. Hawes seconded, a vote of thanks to the three trustees, Messrs. Jas. Hudson, Riley Scott, and C. H. Curtis, for their services during the year, and it was pointed out that, though the amount of stock purchased during the year was £50 less than in 1906, the returns therefrom were about £10 more than the income from the 1906 investments. The trustees suitably responded. On the motion of the Chairman, Mr. W. P. Thomson received the thanks of the members for his services as treasurer during the year. Mr. Thomson has proved an admirable successor to Mr. Hudson.

A vote of thanks to the Horticultural Press for kindnesses received was moved by Mr. J. Bedford, and carried with great heartiness. The Chairman read the names of the original trustees, and committee of the society, from the original balance-sheet kindly presented to the committee by Mr. Wm. Marshall, V.M.H., one of the founders of the society, and who was present at the meeting. The original balance-sheet is interesting inasmuch as there is a sum of nearly £500 on the income side, and not a single item of expenditure opposite it.

The proceedings terminated with a vote of thanks to the chairman, moved in a very kindly and appreciative manner by Mr. Wm. Marshall, seconded by Mr. W. Woods.

At the subsequent committee meeting Mr. Chas. H. Curtis and Mr. Thos. Winter were again re-elected chairman and vice-chairman of committee respectively. These members have now held office for eight or nine consecutive years.

British Gardeners' Association.

Great enthusiasm was displayed at the public meeting recently held in Richmond, Surrey, but, unfortunately, the inclemency of the weather prevented a large attendance. Mr. E. F. Hawes, in addition to presiding, gave a very interesting and rousing address on the "B. G. A.," and especially emphasised the need for co-operation amongst professional gardeners. He was also ably supported by Mr. Dallimore, who dwelt on the necessity for drawing a line of distinction between the gardener and garden labourer, and by Mr. J. Weathers, who gave much useful information relating to the B.G.A., and said that the Executive Council was always ready to support any of its members in litigation, provided they could state a good case.

On the evening of Saturday, March 7, a meeting was held at "Carr's," Strand, for the purpose of bringing the objects of the association before the gardeners employed in the London parks and gardeners in private gardens within the metropolitan area. Mr. George Gordon, V.M.H., presided over a large attendance, and addresses were given by Mr. J. Weathers, Mr. E. F. Hawes, and Mr. Lewis. Following the addresses there was a brisk discussion, and at the close it was unanimously resolved to form a metropolitan branch of the association.

Bristol Gardeners' Association.

A most enthusiastic meeting was held on Thursday, February 27, at St. John's Rooms, presided over by Dr. Shingleton Smith. A large gathering of members attended to hear a lecture upon "Orchids," given by Mr. Hunking, gardener to Alderman Dix, Hampton Lodge. In his introductory remarks the lecturer said that as the orchid family was so comprehensive, there being so many species, it would be impossible for him to deal with them all. In no department of horticulture had such rapid strides been made as with orchids—methods had changed with the times. Formerly the supposition prevailed that orchids were very difficult to cultivate, chiefly owing to the belief that they required a very high temperature, but now that cultivators better understood their requirements, it was found they were no more difficult than other plants. The successful production of flowers depended upon the rest given after growth was completed. Liquid manure proved beneficial if used for damping when the plants are in full growth. A paved floor is to be avoided. The lecturer said the floors at Hampton Lodge are of coke, about two feet thick, well saturated with liquid manure. Remarks upon ventilation, shading, build of flower, insect pests, and diseases were included in this very interesting lecture. Dr. Shingleton Smith opened the discussion, which was well maintained by Messrs. Binfield, Curtis, Kitley, E. T. Parker, Scott, Jennings, Shaddick, Lee, and Woodward. Hearty votes of thanks were given both to the lecturer and chairman at the close. Certificates were awarded to Mr. E. T. Parker for Cypripedium Harrisianum, and to Mr. Hunking for Dendrobium Artemus. Only one exhibit of freesias was staged. First prize was awarded to Mr. Weare, gardener to Mrs. Hall, Redland.

Basingstoke Gardeners' Association.

The members of this association held a most successful social evening at the Basingstoke Town Hall last week. About fifty members sat down to tea, and they, as well as the friends who came later, were delighted with the beautiful floral decorations. The latter were chiefly due to the skill and kindness of Messrs. J. Mares, W. Stark, A. Wadmore, and G. Neal. Carnations, violets, cyclamens, snowdrops, daffodils, hyacinths, tulips, and orchids were the flowers most extensively used.

Mr. J. Mares, of Manor House, president of the society, presided, and was supported by Mr. T. A. Phillips, Mr. W. Cannon (Mayor of Basingstoke), Mr. W. Stark, Mr. C. Noakes, Mr. H. Noakes, and Mr. J. C. Newsham. The latter, who is head master at the County Council Farm School at Basing, is the genial and energetic hon. secretary of this new society. There were a few brief and congratulatory speeches after tea, a lot of excellent music, and a little straight talk as to the advantages and the responsibilities of membership.

Cardiff Gardeners' Association.

The fortnightly meeting was held at the Philharmonic Restaurant, on Tuesday, the 3rd inst., Mr. H. R. Farmer presiding over a very good attendance. The lecturer was Mr. J. Basham, jun., representative of the Bassaleg Gardeners' Association, who lectured upon "Mutual Improvement Societies, their Benefits, and how they may be made more Useful."

In his remarks the lecturer pointed out the value of gardeners' societies, and the work that they were endeavouring to do for the benefit of the horticultural world, and suggesting that all employers should encourage their gardeners in some small way, as a recognition of their efforts, and that all gardeners should become Fellows of the R.H.S., as the literature they would obtain would be of service. A series of new lectures ought to be taken up by societies, and these of a more scientific character, so that greater interest might be taken in botany, cross-fertilisation, bacteriology, manures, etc.

A good discussion followed, many members taking part in the debate, which was opened by Mr. J. Julian.

A vote of thanks was accorded Mr. Basham. A very fine display of daffodils and hyacinths was made, for which Messrs. Malpass and Freeman took equal honours.

Sandhurst Gardeners' Association.

The fortnightly meeting was held in the Church Schools, Sandhurst, on Tuesday, March 3. There was a goodly number of members present to hear Mr. M. Goddard, of The Gardens, Ambarrow, Sandhurst, who read a paper on "A Few Greenhouse Plants." The plants specially mentioned were Primula sinensis, Primula obconica, schizanthuses, and Trachelium cæruleum. Details were given as to seed sowing, soils, and the general treatment of the plants. A good discussion was created, in which the following took part: Messrs. Evans, Townsend, Chapman, Leversuch, Prior, Gear, A. Collins, Shepherd, Dupond, and Austin. On the proposition of the Chairman, a hearty vote of thanks was accorded Mr. Goddard for his paper. Mr. Townsend, Sandhurst Lodge Gardens, staged plants of Eupatorium ianthemum, and Mr. Dupond, Crowthorne Nurseries, showed dwarf plants of laurustinus.

Woolton Gardeners' Society. —A meeting of this society was held at the Mechanics' Institute, on the 5th inst., Mr. L. Godseff, superintendent of Calderstones Park, occupying the chair. The essayist, Mr. A. Calderbank, of Altrincham, selected for his subject "The Herbaceous Border." He recommended trenching three feet deep, with a liberal addition of rotten cow manure when the soil is light or of a sandy nature. Early autumn planting was desirable, but if not convenient it was better to defer planting until the spring. A list of the most desirable kinds was submitted in the order of flowering, with hints as to special culture. A list of suitable flowering shrubs to form a background, and a few annuals that were worthy of association with the perennials, were also noted. A discussion followed, in which Messrs. J. Stoney, W. W. Gamble, R. Todd, R. G. Waterman, W. D. Skinner, and the chairman took part. A cordial vote of thanks to the lecturer and chairman terminated the proceedings.

Beckenham Horticultural Society.

On Friday, March 6, Mr. G. A. Watson, B.Sc., of Beckenham, delighted a good audience with a lecture on "The Common Horsetail (Equisetum)." He used original diagrams to illustrate his remarks. Mr. Watson was very warmly thanked for his discourse, also for so kindly filling the vacancy at the last moment, Mr. Morrill, of Sutton, who was scheduled for the evening, being ill, and quite unable to fulfil the engagement.

Liverpool Horticultural Association.

The members of this society met at the Common Hall, Hackins Hey, on the 7th inst., Mr. T. Foster occupying the chair. The subject for consideration was in the able hands of Mr. Ben Ashton, of Lathom Gardens, who delivered an excellent paper on "The Cultivation of Tree and Malmaison Carnations." The essayist gave the details of his own system of cultivation, in which he recommended span-roofed houses from nine to sixteen feet in width, according to requirements, with side stages for the former and centre and side stages for the wider structure. Cuttings were advised for the tree varieties, and layers for the Malmaisons. A loam of medium texture, which had been stacked six months, with a little leaf mould and red sand, and a moderate addition of bonemeal was the compost recommended. Occasional waterings with weak guano water and top-dressings of bonemeal were advised. A moderate supply of water was needed, with a sprinkling overhead twice a day in fine weather, and with an extra midday syringing in hot, dry weather.

Insect pests and ventilation received close attention. After the paper, a discussion followed, with further questions, which were suitably answered. A cordial vote of thanks on the motion of Mr. R. G. Waterman, seconded by Mr. E. F. Hazelton, and supported by Mr. J. Stoney, was given to the lecturer for his essay. The thanks of the meeting was also given to Mr. T. Foster for presiding.

Croydon Gardeners' Society.

On Tuesday Mr. A. E. Thatcher, from Aldenham House Gardens, Elstree, lectured on "Hardy Flowering Trees and Shrubs." There was a capital attendance of members, many of whom had seen the fine collection when visiting these gardens last summer, and knowing that Mr. Thatcher has the care of the Aldenham House collection the information expected from him as an expert could be accepted and put to practical use. He made a strong appeal to the younger members of his audience to miss no chance of gaining knowledge on this subject. There is much to consider before commencing to make new pleasure grounds, or improve the garden which perhaps may exist, and the principal points to bear in mind are the position these flowering shrubs should occupy, the preparation of the soil for their reception, and the blending of colours to harmonise with each other, and also varieties which will be in flower practically all the year round. He advised deep trenching, and attention to the drainage, for almost without exception shrubs of this class will not thrive in waterlogged and sour soil. The roots should be well spread out to encourage the small fibrous rootlets, and it is a mistake to plant too deeply. Early spring or autumn are favourable for planting. The pruning is of considerable importance, and one must study each individual plant for this operation, as some require cutting hard back, whilst others require tenderer treatment to produce best results. There can be no hard and fast rule laid down for this. He strongly advised labelling each variety, for with this adoption the interest to visitors in inspecting these plants is greatly enlivened.

Lantern views of many of the subjects under his charge were thrown on the screen, and in each instance he described the treatment given to it. To give continuous bloom from spring to winter he enumerated some of the best kinds to plant, and lengthy as the list was it was most useful in completing what was generally considered one of the best lectures given before the society.

Mr. M. E. Mills proposed a very hearty vote of thanks to Mr. Thatcher, and this found ready support from the audience.

Some good exhibits came from the members, including a basket of lachenalias from Mr. Oxtoby, a Nephrolepis todeaoides from Mr. P. Chaff, a very fine specimen platycerium from Mr. Mills, and three pots each of primulas and cinerarias from Mr. A. Edwards, all of which received a vote of thanks.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

WATER GLASS.—P. T., Aylesbury: "Water glass" is liquid silicate of potash. It is used to preserve eggs.

SWEET PEA BICENTENARY.—J. G., York: The celebration of the bicentenary of the introduction of the sweet pea into Great Britain was held at the Crystal Palace on July 20 and 21, 1900.

DISEASED IVY-LEAVED PELARGONIUMS.—J. G., King's Lynn: We believe the damage is due to some error in cultivation rather than a fungus attack, but we are having the matter investigated.

SWEET PEA ROSIE ADAMS.—N. S. M., Monkseaton: This new sweet pea cannot be obtained now. It was raised by Mr. Thomas Stevenson, and distributed by Mr. H. J. Wright, but the demand far outran the supply many weeks ago.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.—G. S. B., Durham: You had better apply for full particulars to the secretary, Mr. G. J. Ingram, Victoria Street, Westminster, S.W., who will at once supply you with the needed information.

BLOTCHED CAMELLIA LEAVES.—F. L., Newark: The silvery blotches on the camellia leaves are caused by a fungus named Pestalozzia Guelpini, a pest that does much damage in the Indian tea plantations. The only safe method of dealing with the pest is to remove and burn all infected leaves.

GARDENERS' COMPANY.—G. J. O., Harrow: The Worshipful Company of Gardeners was formed in 1605, a few months previous to the Fruiterers' Company. The clerk is Mr. E. A. Ebblewhite, F.S.A., and his address is 1, Paper Buildings, Temple, London. He will let you have full particulars, fees, etc.

EXHIBITING SWEET PEAS.—R. A., Epsom: We recommend you to obtain "Sweet Peas and their Cultivation" (1s. 2d or 1s. 8d., post free, The Gardeners' Magazine Office, 148, 149, Aldersgate Street, E.C.). This work, by the hon. secretary of the National Sweet Pea Society, gives full instruction for the culture and exhibition of sweet peas, for packing, for vases, and stands, etc., etc., as well as ample information on general culture, history, varieties, etc.

FEEDING ROSES.—E. T., Walsall: Under the circumstances you should give the ground a dressing of bone-meal at the rate of two ounces per square yard; give this at once, and hoe in. When the flower buds begin to swell up, in June, you may give a light dressing of the proprietary manure named, using this at half the strength of the bone-meal, either applying it during a shower or watering it in.

GARDEN WORK.—B. B., Newtown (Mont.): You will find "The Year's Work in the Garden," given in the "Gardening Year Book for 1908," exactly the matter you require. Under each month, the current work in the flower garden, conservatory and greenhouse, fruit garden, fruit house, orchid house, and kitchen garden, is set out and explained, and there is also a list of daily reminders. The book is 1s. 2d. post free from the Gardeners' Magazine Office, 148 and 149, Aldersgate Street, E.C.

GRAFTING CONIFERS.—Early spring and about the middle of August are the best periods at which to graft conifers. The stocks should be about two or three years old, in small pots, and placed in a cool, close frame. Side grafting is the method found most suitable. The chief stocks used are as follows: For cupressus, Cupressus Lawsonianus; for abies, Abies pectinata; for yews, Taxus baccata; for thuias, either the Eastern or Western thuias (T. orientalis and T. occidentalis); for junipers, Juniperus communis; for the spruce group, Picea excelsa; and for the Hemlock Fir group, Tsuga canadensis. Grafting should always be done as low down on the stock as possible.

OSTERLEY PIPPIN APPLE.—R. C. O., Leicester: This apple was regarded by the late Dr. Hogg as "rich, juicy, and sweet, with a brisk and aromatic flavour, somewhat resembling, and little inferior to, the Ribston Pippin. A handsome and very excellent dessert apple; it is in use from October to February, and is not subject to be attacked with the grub as the Ribston Pippin is." We are told that the variety was raised in Earl Jersey's garden at Osterley Park, Isleworth, Middlesex, from a seed of Ribston Pippin. It should be remembered that a quite large number of apples have been raised in the Thames Valley district. For instance, Packhorse and Robinson's Pippin were raised in the garden of the Packhorse Inn at Turnham Green; Bigg's Nonesuch, at Twickenham; Braddick's Nonpareil, at Thames Ditton; Ord's Apple, at Fulham; Padley's Pippin, at Hampton Court; and several varieties at Frogmore.

AUTOGAMY.—S. J. W., Cirencester. Autogamy is another term for self-fertilisation or self-pollination. It is only in hermaphrodite flowers that autogamy is possible, but it by no means follows that self-pollination is the only means of fertilisation or reproduction open to such flowers. Indeed, taken as a whole, flowers appear to aim at cross-fertilisation, and, this end secured, there is no need for autogamy; but, failing cross-fertilisation, many flowers resort to autogamy, and a study of the means taken to bring this about is no less interesting than the study of methods whereby cross-fertilisation is aimed at. We strongly recommend you to read Kerner's "Natural History of Plants" (Blackie and Son, Old Bailey, E.C.). In the second volume, pp. 331-401, autogamy is discussed in a most able and interesting manner, and it is shown that self-fertilisation may be brought about by lengthening of stamens, bending of stamens, movements of stamens, shortening of pistil, elongation of pistil, bending of the pistil, coiling of stamens and pistil, contraction of style branches, bending back of style branches, the action of the corolla—chiefly by closing, movements of the flower stalk, and by a co-operation of movements.

SWEET PEA STREAK.—N. E. S., Cambridge: We have only once seen what is known as "streak" disease in sweet peas, and that was in the case of a diseased plant brought to the first exhibition of the National Sweet Pea Society held in the Royal Horticultural Hall. It was brought over from Ireland by Mr. H. J. R. Digges, an enthusiast whose ardour has been somewhat damped because he finds it almost impossible to grow sweet peas in his garden. Last season we inspected miles of sweet peas, and in almost all of the English counties, and not once did we see this new disease. We look in vain for any mention of it in "Sweet Peas and their Cultivation," and in the "Sweet Pea Annual," where there are about fifty answers from sweet pea experts, to sets of questions submitted by the N.S.P.S. Committee. The eighth question was: "Has fungus disease attacked your plants? If so, please state its character, effect, time of appearance, remedies employed, and the final results." The direct negative was given by thirty experts, several did not answer the question at all, a few said they had suffered from sweet pea mildew, and two experienced unhealthy conditions that may or may not have been disease. We do not contend, from this evidence, that there is no such thing as sweet pea streak, but we believe the disease, however caused, is of limited distribution. It would be ten thousand pities if a disease were to become epidemic and kill the sweet pea industry, as the hollyhock industry was killed many years ago, therefore the new pest will be investigated, and we understand that the N.S.P.S. and various scientific authorities are preparing to deal with the matter this season.

GARDENING FOR PROFIT.—F. M., Surrey: A capable and energetic man, with a modest capital, could make a comfortable living out of an acre and a-half of good land, with a glasshouse or two, but to pay a man a good wage, incur the responsibility, provide the capital, and expect a handsome return on the money and time expended, would be to expect too much. Under the conditions you suggest the undertaking would not be a very profitable one. To succeed with rhubarb and seakale the land must be good and well cultivated, better, in fact, than we believe yours to be, judging from the district. You should figure out the value of the land, and allow so much for rent; then the cost of houses and depreciation; the amount of rhubarb and seakale you could grow, and a reasonable sale for same; the number of tomatoes you could grow, and the return for a reasonable crop; the number of chrysanthemums you could accommodate, and what they are likely to bring in, etc., etc. The cost of firing, of stock to commence with, of soils, manures, seeds, stakes, etc., could all be fairly well estimated, and allowance would have to be made for the conveyance of the produce to the customers or market. Set down your prospective income at the lowest market rates for the several seasons, and your expenses at the highest local rates, and then see on which side the balance stands. It will be an interesting study, but, as already stated, you will not feel inclined to take up the business as an especially profitable venture when you have made the study. And, after all, so much depends upon the man in charge, remembering that a first-rate man who might run a concern successfully is just the sort of man to start out for himself rather than for the profit of someone else. Even given the right man, you need either more land for a wider range of hardy subjects, or more glass; and the latter means an increase of capital outlay and current expenditure, with greater risks to set against the larger prospective profits.

NAMES OF PLANTS.

T. H., Atherton.—Magnolia Soulangeana.

A. J., Steventon.—1, Cyclamen Coum; 2. Cornus Mas; 3, Pinus cembra.

N. W., Grimsby.—1, Cypripedium Haynaldianum; 2, Peristrophe speciosa; 3, Begonia nitida.

E. P. S., Horsham.—1, Impatiens Sultani; 2, Pellæa cordifolia; 3, Monochaetum Hartwegianum.

S. S., Ipswich.—1, Sciadopitys verticillata; 2, Cupressus Lawsonianus; 3, Abies cephalonica; 4, Thuia orientalis.

L. C. G.; Tadcaster.—1, Hoya carnosa; 2, Acacia longifolia; 3, Erica persoluta; 4, Begonia fuchsioïdes; 5, Cypripedium villosum.

OBITUARY.

MR. E. J. CASTLE.

It is with very great regret we learn of the death of Mr. E. J. Castle, who for several years has been one of our most regular and most valued contributors to these columns. Barely forty years of age, Mr. E. J. Castle passed away suddenly on Wednesday night, March 4. Mr. Castle was a keen gardener, and his loss to the horticultural world is by no means small. He gained his horticultural experience in Colonel Kidd's garden at Dartford; at Hillingdon House, Uxbridge; at Messrs. H. Cannell and Sons', Swanley, etc., etc., and his memory for the details of his business was especially good, as his writings proved. For several years Mr. Castle was sub-editor of "The Gardener," but failing health led him to resign his position. For some time he resided in the Channel Islands, but eventually returned to Kent, where, at Lyminge, near Hythe, he lived for some time previous to his death. His friends had hoped that, though robust health was not possible, there were many years of usefulness yet before him. His ability, sterling character, pleasant disposition, and fund of humour endeared him to all who knew him, and there are many who will mourn their loss, and join in sympathy with his widow. Mr. Castle was a great lover of sweet peas and of tulips, and these he cultivated extensively. His nom-de-plume in the GARDENERS' MAGAZINE has always been "E. J. Kingshome," or "E. J. K.," and we were reading proofs of an article by him on his favourite flower when we received the news of his untimely death.

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THE CURRANT AND HAZEL BUD MITES.

The Eriophyidæ are a family of mites, the members of which are feeders on plants. Some of them live on the surface of the attacked tissue, some live in buds, which may swell as a result of their presence, some cause a curling of the leaf, and some give rise to projecting galls or malformations on leaves and more rarely on twigs.

The black currant bud mite (Eriophyes ribis) and the hazel bud mite (Eriophyes avellanæ) live in each case in the buds of the respective plants, and as a result of their presence infested buds swell greatly.

Every now and again there is a recurrence of the statement of the belief that the hazel bud mite (E. avellanæ) can pass to, live in and cause to swell, the buds of the black currant, and that thus black currant bushes may become infected from neighbouring hazel or nut trees. This is an echo of an old controversy dating from early in last century, when workers on these mites joined issue with one another as to whether the same mite could make more than one kind of gall; or give rise to a gall on one plant and no gall on a different kind of plant; or whether the same species of mite could be found in the same kind of gall on plants with little relationship to one another. Thus the same mite was recorded as found in one kind of gall on the leaves of the lime trees and on the willow and in the swollen buds of the hazel.

The difficulties and disputes have been due partly to faulty observation; to insufficient magnification of the mites before the perfecting of the compound microscope; to the extreme minuteness of the mites—for only a few of them reach one-hundredth part of an inch in length, and to the difficulty of the characters, which are made the basis of distinction and separation of species—such characters as the number of bristles, the position of the bristles, the sculpturing and striations of the dorsal shield, and the shape of the ventral plate.

The great worker in recent years on the genus Eriophyes is Nalepa of Vienna, who has given detailed descriptions and figures of many species. From Nalepa's work the black currant bud mite and the hazel bud mite stand as valid and separate species. As far as I know, there are no records beyond dispute of the black currant mite having been found in swollen buds of the hazel, although Mr. W. E. Collinge has recorded finding on two occasions in black currant buds infested with the black currant bud mite a few examples of the hazel bud mite. Mr. Cecil Warburton, with hazel mite common in his garden, has never found any in his black currants. An occasional avellanæ found in black currant buds proves nothing. What requires to be proved is that "big bud" in currants has been due to E. avellanæ. It must be remembered that identification of the two mites needs a high power of the microscope.

Summarising our present knowledge of the genus Eriophyes we may say:

1. That the species of the genus Eriophyes to a great extent confine themselves each to one food plant.
2. That some species of the genus Eriophyes are found feeding each on several species of the same genus of plant.
3. There are recorded cases of a species of Eriophyes attacking plants of different genera of the same natural order.
4. That examples of the same species of Eriophyes infesting plants of a different but related natural order are so rare as to be exceptional.

It still remains to prove from microscopic examination and experimentally that the same species of mite will infest plants of two different and not related natural orders, giving rise on these plants to the same kind of gall or damage.—R. STEWART MACDOUGALL, D.Sc., in the "Journal of the Board of Agriculture."

MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand is brisk and prices are well maintained. Daffodils are now becoming abundant and selling at lower prices.

		s. d.		s. d.
Acacia	per doz. bun.	6 0	to	9 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 6		4 0
Arums	per doz.	1 6		4 0
Asparagus	per doz. bun.	1 6		6 0
Azalea	per doz. bun.	3 0		4 0
Berberis	per doz. bun.	2 0		2 6
Bouvardias	per doz. bun.	5 0		8 0
Camellias	per doz.	1 6		2 0
Carnations	per doz. blms.	1 6		3 6
,,	per doz. bun.	7 6		12 6
Cattleyas	per doz.	8 0		12 0
Chrysanthemums	per doz. bun.	10 0		18 0
Cœlogynes	per doz. blms.	1 0		1 6
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	5 0		8 0
Cypripediums	per doz. blms.	2 0		3 0
Daffodils	per doz. bun.	1 6		4 0
Eucharis	per doz.	2 6		3 6
Forget-me-not	per doz. bun.	3 0		4 0
French fern	per doz. bun.	1 0		3 0
Freesias	per doz. bun.	2 0		3 0
Gardenias	per doz.	3 0		6 0
Hellebores	per doz.	0 6		1 0
Hyacinths, Roman	per doz. bun.	4 6		5 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 0		4 0
Lilium auratum	per bun.	2 0		3 0
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 6		3 0
Lily of the Valley	per doz.	6 0		8 0
Marguerites, white	per doz. bun.	3 0		6 0
,, yellow	per doz. bun.	2 0		4 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	1 6		5 0
Odontoglossums	per doz. blooms	2 0		3 0
Pelargoniums	per doz. bun.	5 0		9 0
Pernettya	per bun.	0 6		1 0
Ranunculus	per doz. bun.	9 0		12 0
Roses	per doz.	2 0		6 0
Smilax	per doz. trails	2 0		3 0
Spiræa	per doz. bun.	5 0		8 0
Stocks	per doz. bun.	2 0		3 0
Tuberoses	per doz. blooms	0 4		0 6
Violets	per doz. bun.	2 0		6 0
Wallflowers	per doz. bun.	2 0		3 0

Fruits.

Supplies are fairly good and a brisk demand continues.

		s. d.		s. d.
Apples, Canadian	per barrel	12 0	to	21 0
,, Californian	per box	9 0		12 0
,, American	per barrel	13 0		16 0
Apricots, Cape	per box	6 0		10 0
Bananas	per bun.	3 0		10 0
Cranberries	per case	7 0		9 6
Cob Nuts	per doz. lb.	4 0		5 0
Filberts	per doz. lb.	3 6		4 0
Grapes, Alicante	per lb.	1 6		3 0
,, Belgian	per lb.	1 0		1 6
,, Muscats	per lb.	3 6		7 6
,, Gros Colmar	per lb.	1 6		3 0
,, Channel Islands	per lb.	0 9		1 0
,, Almeria	per barrel	10 0		16 0
Lemons	per case	8 0		14 0
Nectarines, Cape	per box	9 0		14 0
Oranges	per case	7 0		30 0
Peaches, Cape	per box	5 0		10 0
Pears, French	per crate	8 0		10 0
Pineapples	each	2 0		4 0
Plums, Cape	per box	4 0		6 0
Strawberries	per lb.	5 0		10 0
Walnuts	per bag	7 0		8 6

Vegetables.

Supplies are not over large, but they are sufficient to meet the steady demand.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	4 0
Asparagus, Paris green	per bun.	3 6		4 6
Asparagus, sprue	per bun.	0 7		1 6
Beans, French	per lb.	0 8		1 0
,, Madeira	per bskt.	2 0		3 6
Beet	per bush.	1 3		2 0
Brussels sprouts	per ½-bush.	1 3		1 6
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
,, French	per pad	2 3		3 0
,,	per bag	2 6		3 0
Cauliflowers	per tally	6 0		8 0
Celery	per per bundle	0 8		1 3
Celeriac	per doz.	1 6		2 0
Chicory	per lb.	0 3		0 4
Cucumbers	per doz.	5 0		9 0
Endive	per doz.	1 9		2 6
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	10 0		15 0
Leeks	per doz. bun.	1 0		1 9
Lettuce, cabbage	per doz.	1 0		2 0
,, Cos	per doz.	5 0		7 6
Mint	per doz. bun.	0 9		1 0
Mushrooms	per doz. lb.	8 0		12 0
Onions, English	per cwt.	3 0		4 0
,, Spanish	per case	5 0		6 0
Parsnips	per bag	2 0		2 6
Parsley	per doz.	1 6		2 0
Rhubarb	per doz. bun.	0 9		1 0
Savoys	per tally	3 0		4 6
Seakale	per doz. pun.	9 0		12 0
Tomatoes, Teneriffe	per package	10		16 0
Turnips	per doz. bun.	1 6		2 6
Watercress	per doz. bun.	0 4		0 6

LONDON POTATO MARKETS.

There are no material alterations of prices to record, but as the season is advancing and new potatoes are arriving, high figures cannot long be maintained.

		s. d.		s. d.
British Queen	per ton	90 0	to	100 0
Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		125 0
Dunbar Up-to-Date	per ton	115 0		115
Kent Up-to-Date	per ton	95 0		100
Langworthy	per ton	90 0		105
Lincoln Maincrop	per ton	95 0		110
Lincoln Up-to-Date	per ton	90 0		110
Royal Kidneys	per ton	80 0		90
Reading Giant	per ton	80 0		90
Sir J. Llewelyn	per ton	85 0		100
New, French	per lb.	0 2		0 2

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. MARCH 1 TO MARCH 7.	SUNSHINE.	TEMPERATURE OF THE AIR.			
		At 9 a.m.		Day	Night
		Dry Bulb	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 1—Sunday	2 0	35	33	40	33
,, 2—Monday	1 10	35	34	42	32
,, 3—Tuesday	—	35	34	42	33
,, 4—Wednesday	2 20	34	33	41	33
,, 5—Thursday	4 30	35	33	45	32
,, 6—Friday	3 50	45	41	49	35
,, 7—Saturday	0 10	40	36	49	38
Means	2 0	37	35	44	33

DATE. 1908. MARCH 1 TO MARCH 7.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Mar. 1—Sunday	0.25	38	41	43	29
,, 2—Monday	0.01	38	41	43	[illegible]
,, 3—Tuesday	0.22	38	41	42	[illegible]
,, 4—Wednesday	0.02	38	41	42	31
,, 5 Thursday	0.54	38	40	42	25
,, 6 Friday	0.06	39	41	42	[illegible]
,, 7—Saturday	0.03	40	42	42	33
Means	(total) 1.13	38	41	42	29

FORTHCOMING ENGAGEMENTS.

TUESDAY, March 17.—Royal Horticultural Society, Meeting of Fruit, Floral, Orchid, and Narcissus Committees, 12 noon. General Meeting, 3 p.m., Lecture on "Beautiful Flowering Trees and Shrubs." Scientific Committee, 4 p.m.

Croydon Gardeners' Society Meeting, lecture on "Grapes," 8 p.m.

WEDNESDAY, March 18.—Royal Society of Arts Meeting, 8 p.m.

THURSDAY, March 19.—Royal Botanic Society, Meeting, lecture on "Soil Fertility and Bacteria," 4 p.m.

Linnean Society Meeting, 8 p.m.

FRIDAY, March 20.—Beckenham Horticultural Society, Meeting for Discussion, 8.30 p.m.

CATALOGUES RECEIVED.

C. E. WEST, HIGHAM HILL, LONDON, N.E.—Sundries.

H. N. ELLISON, BULL STREET, WEST BROMWICH.—Seeds and Bulbs.

R. H. BATH, LIM., FLORAL FARMS, WISBECH.—Carnations, Dahlias, etc.

G. COOLING AND SONS, BATH.—Roses in Pots, Carnations, Dahlias, etc.

THOS. S. WARE, LIM., FELTHAM, MIDDLESEX.—Hardy Perennials and Water and Bog Plants.

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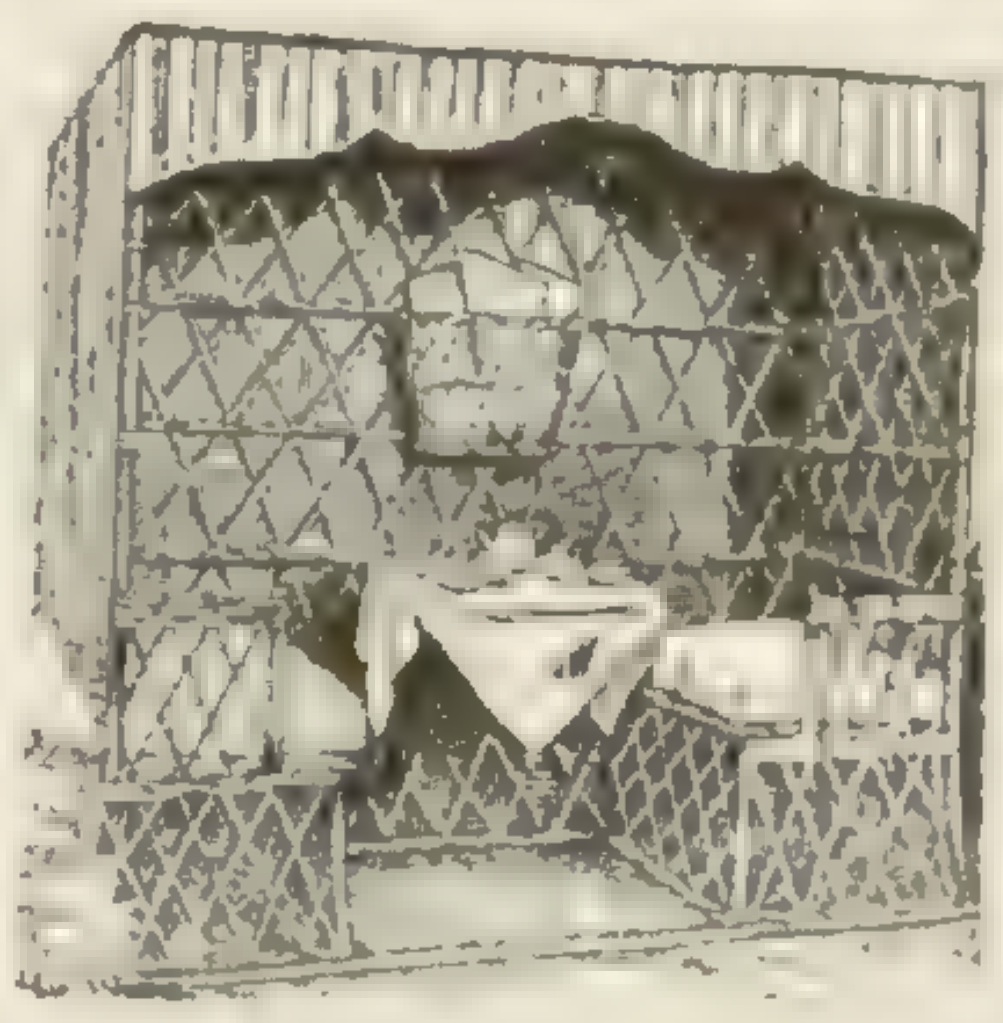

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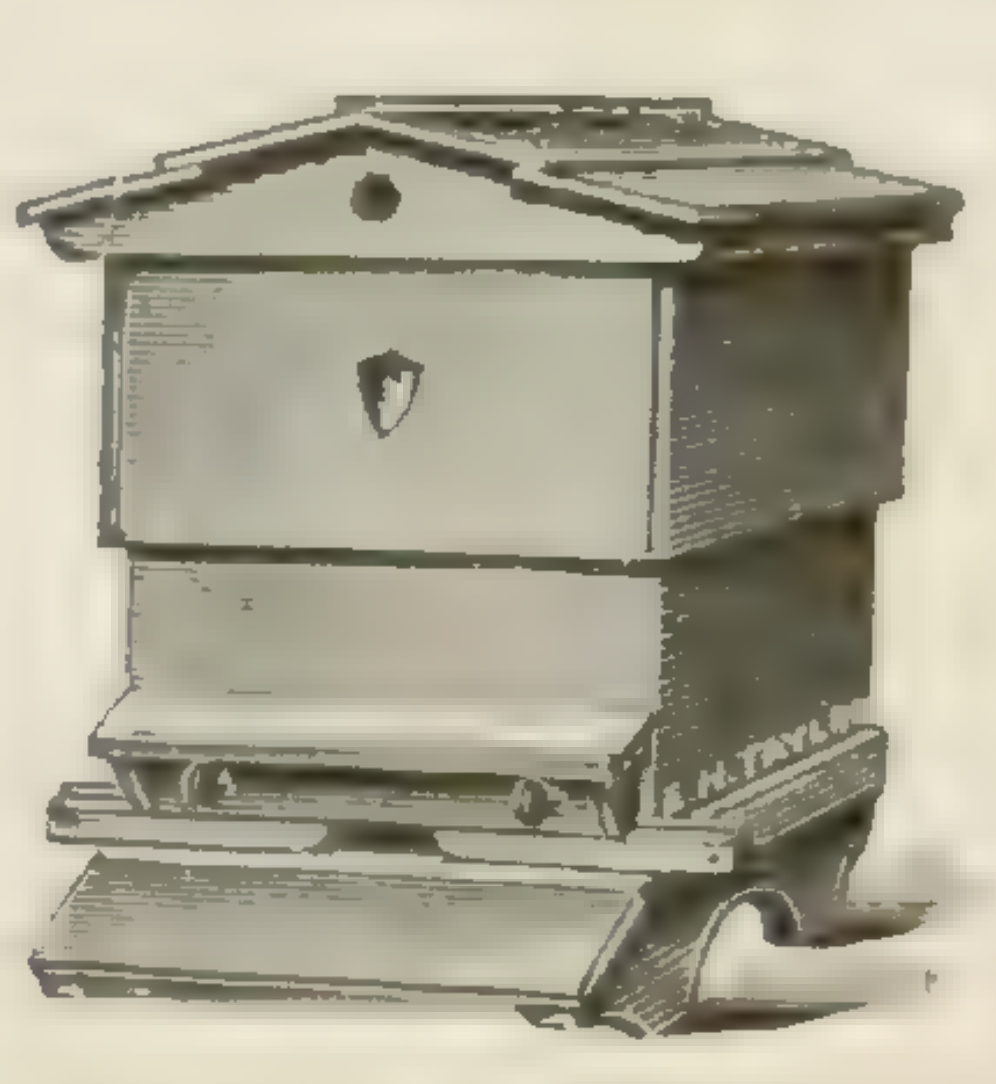

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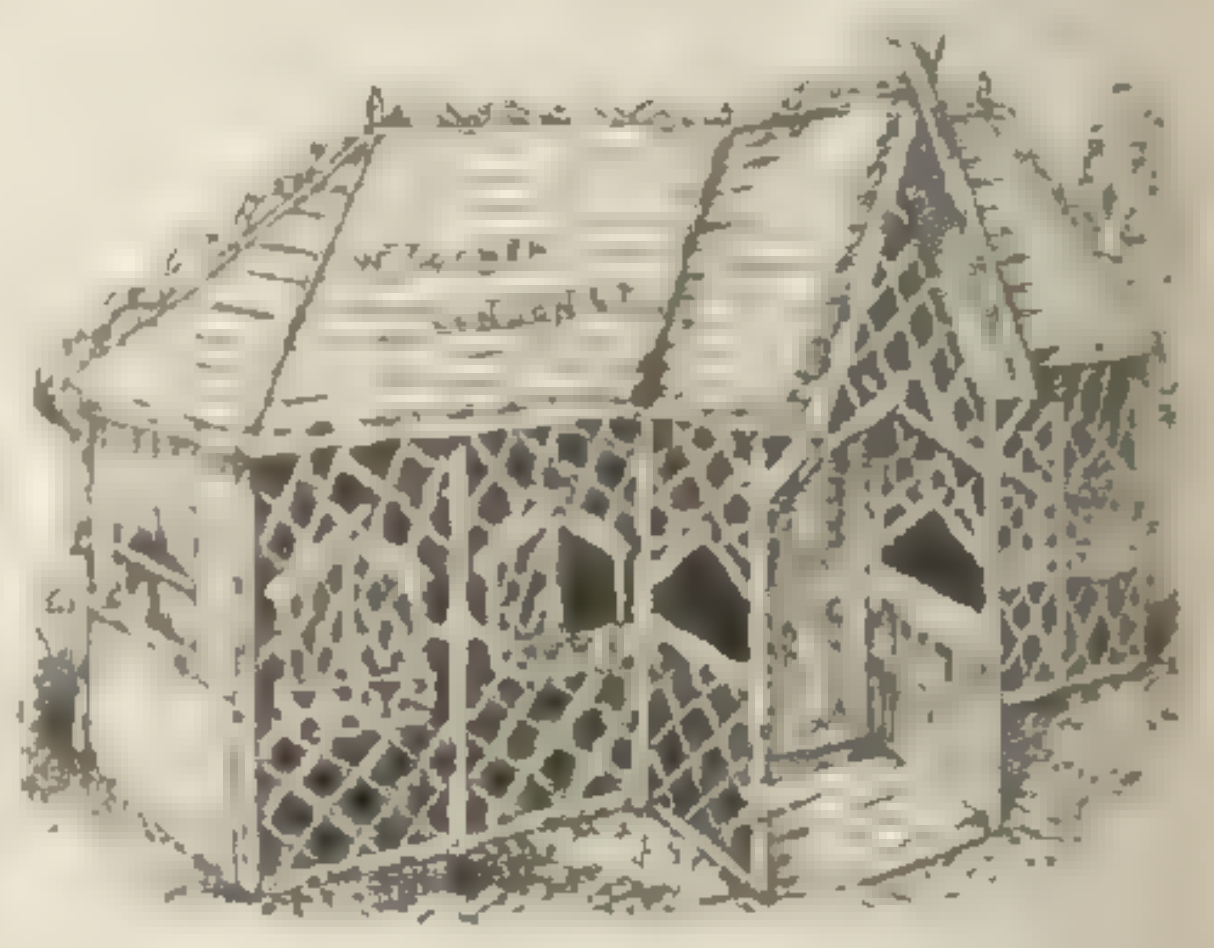

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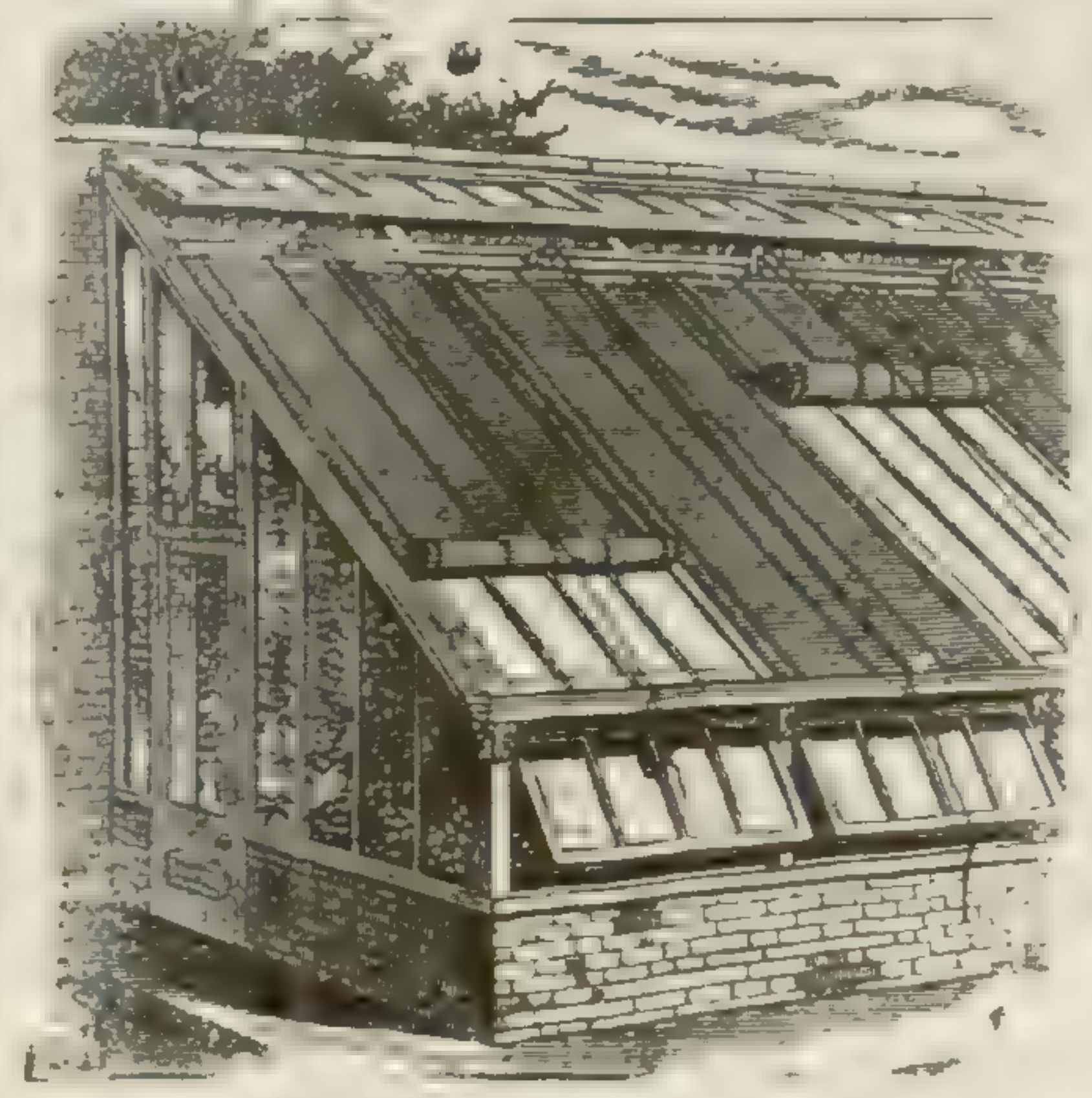

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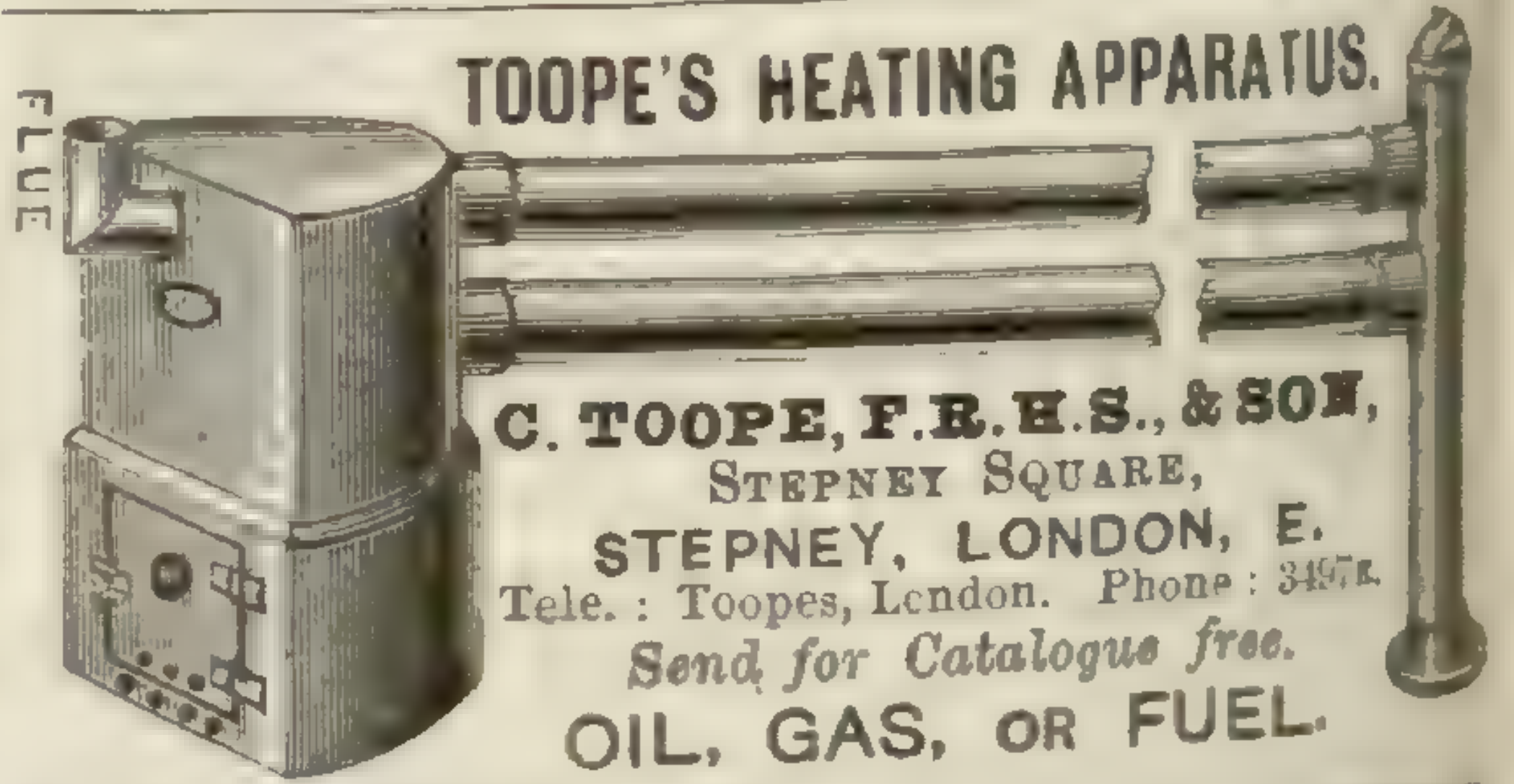

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The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

A LADY, reducing establishment, highly recommends her HEAD GARDENER, where two or three are kept, to anyone requiring a thoroughly trustworthy servant; life experience in all branches; 5½ years' excellent character, and excellent previous references; age 40; family grown up. Apply F. TOLEY, The Grange, Sutton Courtenay.

GARDENER (Head).—Mr. E. BECKETT, V.M.H., Aldenham House, Elstree, can with every confidence highly recommend a thoroughly competent and trustworthy Man for a medium to small-sized establishment; 32 years' practical experience; 20 years as Head; highest references; married; age 48; abstainer. S. BIGWOOD, Summer Grove, Elstree, Herts.

GARDENER (Head two, or good Single-handed); twenty years' experience Inside and Out; good references; age 35; married. Disengaged. W. HURST, The Lodge, Grove House, Dulwich Common, S.E.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working, where two or three are kept), 15 years' practical experience; 6 years present place; excellent references; age 30. F. TARRY, Manor House Gardens, Alton, Hants.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head Working); married; age 39; thorough knowledge of fruit, flowers, and vegetables; life experience; highly recommended; sixteen years' head; economical manager. PENFOLD, 15, Helvetia Street, Catford.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working), age 40; thorough practical life experience in all branches; could lay out new place, or remodel neglected garden; grass land, cows, poultry, bees. Wife excellent needlewoman. H. W., 12, Croftdown Road, Highgate, N.W.

GARDENER (Head or Single-handed); thorough experience Inside and Out; good knowledge Land and Stock; age 28; well recommended. GARDENER, 34, Third Avenue, Forest Town, Mansfield, Notts.

GARDENER (Head Working), seeks SITUATION, where two or more are kept; 6 and 10 years' references; married, no family; age 34. KIDD, The Lodge, Morden, Surrey.

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GARDENER (Head Working).—HENRY H. COCHRANE, Esq., can highly recommend WM. GIBSON as above; thorough practical experience, gained in first-class establishments; highest references as to character and abilities. Midlands preferred. Address WM. GIBSON, The Gardens, Eshwood Hall, Durham.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2¼ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head). — Mr. ROGERS, Langton Gardens, Blandford, highly recommends a thoroughly competent and trustworthy Man; highest references; life experience; 2 years as Head; age 31, married.

GARDENER (Head Working). — J. B. CAMPION COLES, Esq., highly recommends his late Gardener, a first-class, all-round practical Man, Inside and Out; highest references for 10, 6, and 7 years; married; age 35. F. CHILVERS, Cobden Place, Hailsham, Sussex.

GAIUS SMITH, Esq., can highly recommend his GARDENER as HEAD WORKING, where three or four kept; life experience all branches; 9 years present situation; 35; married, two children. Address PUGH, Gardener, Overmead, Ludlow.

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GARDENER (Head Working).—F. SMITH seeks SITUATION with any Lady or Gentleman requiring a thorough all-round Gardener; first-class references; life experience; age 45; married, no family. Address Rose Cottage, Mellis, Suffolk.

GARDENER (Head Working).—Mr. J. S. ARKWRIGHT, M.P., wishes strongly to recommend G. BARRELL; age 38; long experience; 7 years in present place. Reply 85, Vincent Square, Westminster.

MRS. BULL, The Limes, Finsbury Park, N., highly recommends W. SEARLE as HEAD WORKING GARDENER of two or more; has been here three years; leaving through death; life experience; excellent references, including Waddesdon Manor; abstainer; age 31; married, one child.—W. SEARLE, The Limes, 16, Woodberry Down, Finsbury Park, N.

THE DOWAGER LADY HILLINGDON highly recommends her Foreman, who has been here 3½ years, to any lady or gentleman in want of a HEAD WORKING GARDENER; experienced in first-class gardening; excellent references. Apply A. STEWART, Wildernesse Gardens, Sevenoaks, Kent.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (Single-handed or Under), age 26; 12 years' experience. G. OSBORNE, 86a, High Street, Bromley, Kent.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER (Single-handed or with help) seeks SITUATION; life experience; age 35; married, one child; disengaged when suited; good references. E. HASLOP, Summerhouse, Great Shelford, Cambs.

GARDENER (Single-handed), age 30, life experience; 10 years as second of four, where plants, fruit, and vegetables are grown for exhibition; highly recommended. G. PARSONS, Pampisford, Cambs.

GARDENER (Single-handed or otherwise); 26; experienced in Flowers and Kitchen Garden; 8 years last place; married when suited. W., 33, Heatherton Terrace, Squires Lane, Finchley, N.

GARDENER (Single-Handed), experience in flowers, fruit, and vegetables; age 38; married, two boys, 11 and 7; good character; two years last situation; 11 years previous; understand cows if required. T. READ, Chesterfield Road, Ashford, Middlesex.

GARDENER (Single-handed or with help); 14 years' experience Inside and Out; age 28; married, one child; excellent references; disengaged. HARTLEY, Chapel Street, Marlow, Bucks.

GARDENER (Single-handed, or where help is given); age 27; 11 years' general experience; three years present situation. F. FELLOWES, The Gardens, Ranelagh Club, Barnes, S.W.

GARDENER (Single-handed with help, or Second where 3 or 4 are kept); 6½ years' experience as Foreman in last place; death cause of leaving; single; age 32; excellent references. G. EUSTON, Shrubs Hill, Sunning Dale, Ascot, Berks.

GENTLEMAN highly recommends GARDENER; single-handed, or with help; 5½ years' good character; age 28; single. ASKEW, 4, Mountfield Road, Ealing.

GARDENER (Second), Inside or Inside and Out; life experience in Fruit and Plant Houses, etc.; good references; age 24. G. GRANT, Oakwood Lodge, Queen's Road, Maidstone.

GARDENER (Second), Inside or Inside and Out; age 26; 10 years' experience; well recommended; 3 years in present place. H. JENNINGS, Claremont Gardens, Esher.

GARDENER (Second), age 28, good general experience in Houses, Kitchen Garden, and Pleasure Grounds; disengaged; Bothy preferred; good references. G. GRICE, Burlton, near Shrewsbury.

GARDENER, Second (Inside and Out), seven years' experience in Fruit and Plant Houses; good references; age 21; disengaged. W. ROGERS, Aveton Gifford, Kingsbridge, Devon.

GARDENER (Second, Inside and Out), 10 years' experience; age 25; 4 years present place. I. PULLINGER, The Gardens, Rapkyns, Horsham, Sussex.

GARDENER, age 25, single, seeks SITUATION; life experience in all branches; five years present situation and four years previous; highly recommended; leaving through no fault. Apply to H. WALDER, The Gardens, Uplands, Uckfield, Sussex.

GARDENER seeks SITUATION as under Inside and Out; age 23; good references; bothy preferred. H. GODDARD, Carylls Cottage, Fay Gate, Horsham.

GARDENER, good all round, seeks SITUATION; experienced in all branches; well recommended. E. JEFFERY, Meadow Road, Catshill, Bromsgrove.

GARDENER (Inside and Out), age 25, ten years' experience; 4 years last place; with a good character; single. Disengaged. Mr. J. PULLINGER, Strood Lodge, B.B. Heath, Horsham, Sussex.

GARDENER (Under), 2½ years' experience, good character; age 19. F. REEVES, 81, Chester Road, Watford, Herts.

GARDENER (Under), age 19, seeks SITUATION; good character; no circulars. HELYAR, 46, Coombe Road, Upper Sydenham, Kent.

UNDER GARDENER seeks SITUATION, (Inside and Out); age 21; eight years' experience; excellent testimonials. E. ORME, Glenfield, near Leicester.

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FOREMAN, age 27, seeks SITUATION where two or three are employed in the Houses; three years last situation; can be highly recommended; disengaged. A. WHITE, Askerswell, Dorchester, Dorset.

FOREMAN (Inside). — Mr. HANSON, Cheveley Park, Newmarket, can highly recommend his Foreman as a reliable man; 11 years' experience, including chrysanthemums, carnations [illegible] and Malls.; house and table decoration; age 26. Address TURK, Ogdon, Chieveley, Newbury.

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JOURNEYMAN (Inside or Inside and Out). T. CORNISH, Mymn Wood Gardens, Hatfield, Herts, can highly recommend H. WALLACE, who has been with him for four years; age 21; seven years' experience. Bothy preferred.

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JOURNEYMAN (Inside); age 21; 6½ years' experience in present place; good reference; Bothy. H. JONES, Warens Gardens, Lyndhurst, Hants.

JOURNEYMAN, age 21, seeks SITUATION; 7 years' experience (Inside and Out); can be well recommended. H. BEES, The Gardens, Crown East Court, Worcester.

JOURNEYMAN, First (Inside), in good establishment.—Mr. BLOXHAM, The Gardens, Shirle Hill, Sheffield, will be pleased to recommend F. HERRIDGE as above; age 24; 10 years' good references.

JOURNEYMAN (Inside or Inside and Out); age 23; 8 years' good, all-round experience; excellent references; 3 years last situation. H. J. MARLOWES, Nursery, Hemel Hempstead.

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	Per 100.
Anemones, single, mixed	**1/2**
Anemone, The Bride...	**1/2**
Anemone, Japan, white	**4/6**
Anemone, Japan, rose	**4 6**
Anemone, Japan, red..	**10 0**
Herb Lily, in mixture ...	**6 0**
Tuberous Begonias, single, mixed, 1st size	**10/0**
Tuberous Begonias, double, mixed, 1st size	**15/0**
Dahlias, single, mixed..	**6 0**
Dahlias, double, mixed	**10/0**
Dahlias, Cactus mixed	**12 6**
Ferrarias (Tiger Flower), mixed... ...	**4/0**
Funkias, in fine mixture	**8 0**
Gladiolus Brenchleyensis, scarlet	**3 0**
Gladiolus, The Bride...	**3 0**
Gladiolus, Lemoine, mixed	**3/0**
Gladiolus Gandavensis, mixed	**3/0**
Gladiolus, Surprise ...	**2/0**
Hemerocallis (Day Lily), mixed	**8/0**

	Per 100.
Hyacinth. Candicans, white	**4 0**
Iris, Japan, mixed ...	**3 6**
Iris Germanica (Flag Iris), mixed	**3 0**
Iris Sibirica, mixed ...	**3/0**
Lilium Tigrinum (Tiger Lily)	**8/0**
Lilium lancifolium roseum	**18 0**
Lilium lancifolium rubrum	**18 0**
Ranunculus, French, mixed	**1/0**
Montbretias, mixed ...	**1/0**
Calla alba maculata, with white spotted leaves	**8/0**
Oxalis, mixed	**0/6**
Poppies orientalis, mixed	**10/0**
Phlox decussata, mixed	**8/0**
Phlox decussata, white	**10/0**
Potentilla, mixed ...	**10/0**
Trollius, mixed	**10/0**
Lilium auratum, large	**40 0**

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VOL. LI.—No. 2,838. SATURDAY, MARCH 21, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Syringing and Damping.

At this season of the year all plants under glass are growing freely, and it is essential to successful results that the growth receive such encouragement as will ensure its attaining to the highest state of development, of which it is capable. One of the chief encouragements to good growth is at the present time a moist atmosphere, and with but few exceptions, a liberal degree of atmospheric humidity in glass structures is necessary. This moisture may be provided by syringing and damping down, two operations that are well understood by those who have had any considerable experience in the cultivation of plants and fruits under glass. Syringing, when skilfully done, keeps the plants free from dust and vermin, refreshes them and assists materially in the maintenance of the requisite degree of moisture in the air. Damping down has its usefulness limited to its contribution to the atmospheric humidity of the structure. Yet its utility is great, for with its aid the moisture in the atmosphere can be maintained at such periods of the day and night when it would not be advisable to use the syringe, unless it be under quite exceptional circumstances. We need hardly say that it would not be advisable to keep the leaves of plants constantly wetted, and were they syringed when the sun is shining with full force upon the house, they would be seriously injured unless a heavy shade was applied beforehand. Damping down, which consists simply in pouring water over the floor and staging can be done at any hour of the day, whether the sun is shining brightly or not, and is therefore of much value in maintaining a moist atmosphere during the day when evaporation is proceeding at a rapid rate and the syringe cannot be used. The frequency of damping down must be determined by the class of plants grown in the structure and the state of the weather outside, and therefore no definite rule can be given. It may, however, be said that stove plants require more moisture in the atmosphere than do plants that belong to the greenhouse, and that damping down should be more frequent in bright, hot weather than when cool, dull atmospheric conditions obtain. Syringing is unquestionably the most important of the two operations, and some degree of skill is necessary in the manipulation of the syringe to ensure the whole of the plants being thoroughly moistened without water being used to excess, or the more delicate leaves being injured. Syringes, as so well known, are fitted with both jets and roses, but the skilful cultivator has a decided preference, and wisely so, for the jet. With this the operator can direct the water under or over the leaves, and regulate the force and fineness of the spray at will. The command over the syringe which the jet gives is a matter of considerable importance in the case of a mixed collection of stove plants, which vary so materially in the texture of their leaves. The use of the syringe must, of course be regulated by the classes of plants and by the weather outside; but, speaking in a general way, plants from tropical regions, and technically known as stove plants, and forcing houses should be syringed twice daily. The first syringing should be done early enough in the day for the foliage to become dry before the sun's rays have acquired sufficient power to injure the leaves, and it need hardly be said that the syringing must be done earlier in houses that have an east or south-east aspect, than in those facing south or south-west. In the afternoon the syringe must be used as early as the ventilators can be shut with safety for the purpose of enclosing as much sunheat as possible within the structure. No specified time can be given; but as a guide it may be stated that the house should have its ventilators closed early enough to conserve the sunheat, but not so early as to allow time for the condensation of the moisture on the glass to be dissipated before the sun has so far declined in power that there will be no risk from the exposure of the leaves to its rays. In practice this point is not difficult to determine, as all that is necessary is close observation extending over a few days. The syringing should immediately follow the closing of the ventilators, and at all times water of the same temperature as the house should be used. Not less important is it to use soft water, for when hard water is used there is invariably more or less disfigurement of the leaves.

[Photo: Arthur Weston, Poultry, E.C.

MR. T. A. MORRIS.

Mr. T. A. Morris.—A very interesting branch of horticultural activity is the one devoted to valuation and sales by auction, and one of the most highly respected of those who "wield the hammer" is Mr. T. A. Morris, whose portrait we have much pleasure in presenting now to our readers. Although Messrs. Protheroe and Morris, of 67, Cheapside, do not devote the whole of their attention to horticulture, it is by reason of their regular sales of orchids and bulbs, and the big annual sales of nursery stock that they are most widely known. Some of the finest private collections of orchids have changed hands under the persuasive eloquence of Mr. Morris, and the well-known rooms at Cheapside have witnessed some quite remarkable scenes when some unusually fine odontoglossums or exceptionally rare species of orchids have been offered. All sorts of records for prices of orchids have been made and remade at Cheapside, and Mr. T. A. Morris has had his share in the making and the breaking of records. Mr. Morris's geniality has won him many friends, and he himself has not forgotten the claims of others, as for many years he was a prominent member of the committee of the Royal Gardeners' Orphan Fund.

Gardens Round Norwich.—In the issues of the GARDENERS' MAGAZINE for April 11 and 18 we shall describe and illustrate some of the many beautiful gardens in the district of which Norwich is the centre.

Raising Lilies from Seed.—In the United States, as in this country, the beautiful pure white lily (Lilium longiflorum Harrisi) is of great importance to those engaged in the production of cut flowers for commercial purposes, and also to private growers. The bulbs are largely imported from Bermuda and Japan, but, according to Dr. B. T. Galloway, the bulbs imported into America are not satisfactory. The problem, he states, of producing these bulbs in America has been studied by members of the staff of the Bureau of Plant Industry, and a summary of the results obtained shows that healthy bulbs can be readily and profitably produced from seed in that country, and that disease resistant strains can easily be maintained. On the suggestion of Dr. B. T. Galloway, Mr. Oliver grew a large number of seedlings in the Department of Agriculture greenhouses, and from these several pounds of seed resulted. This was distributed on the Pacific coast and in Florida. The seedlings grown in California showed conclusively that with liberal treatment first-class bulbs can be grown by this method much more quickly than by asexual propagation. The plants were almost free from disease. A few plants showed it here and there in first generation seedlings, but in the second and third generations it was difficult to find an affected plant. These results have been so encouraging to practical men in the last-named state that several are now engaged in raising a stock of seedlings upon a large scale. The officers of the Bureau appear to have had some difficulty in persuading the farmers that bulbs can be grown to a flowering size in twelve months, and to plant the seedlings out in the fields early in the summer at the distances necessary to enable them to attain their full development. According to the official reports on the experiments that have been made by the officers of the Bureau, many of the bulbs harvested at the end of the first year were from seven to eight inches in circumference, while two-year-old bulbs had a circumference ranging from ten to twelve inches.

A Curious Mushroom.—Mr. H. Harris, of Denne Park Gardens, Horsham, sent a mushroom having a second complete but inverted mushroom attached to the pileus to the Scientific Committee of the Royal Horticultural Society. The two had evidently become grafted together through contact in the early stages of growth, and the one had carried the other up as its stalk lengthened, wrenching it away from the mycelium which gave it origin, the water, etc., necessary for growth of the inverted mushroom having been carried through the tissues of the one still attached to its mycelium.

Rosa Willmottiæ, a Chinese species introduced by Messrs. James Veitch and Sons, through their collector, Mr. E. H. Wilson, is a very pretty, much-branched rose, bearing an abundance of small leaves, and rose-purple flowers. This new species is figured in the current issue of the "Botanical Magazine," and other subjects illustrated in the issue are Sinningia Regina, a species with pendulous violet gloxinia-like flowers; Cypripedium debile, a slender-stemmed orchid with small green, white and purple flowers; Pyrus Aria majestica, a very fine form of the White Beam tree, having leaves and berries larger than in the type; and Berberis acuminata, another Chinese plant originally discovered by the Abbé Delavay, it has narrow spiny leaves, bright yellow flowers, and black berries.

Enlargement of Ruskin Park.—A strong effort is being made to secure the addition of twelve acres to Ruskin Park, Camberwell. We have for a long time hoped that such an effort would be made, and successfully made. The Bishop of Southwark is chairman of the committee that has been formed for the purpose of securing this enlargement of a useful and pretty park, and we are glad to learn that the Southwark Borough Council is to contribute £700 towards the sum needed, and that the committee has received an anonymous gift of £1,000 towards the same worthy object.

Arbor Day at Eynsford.—On Saturday, March 14, Eynsford, the pretty village near Swanley, was en fête. It was Arbor Day. Ever since Jubilee year Eynsford has made Arbor Day one of its regular feasts, and, under the guidance of Mr. E. D. Till, much excellent planting has been done, and the village improved thereby. Mr. Till is as enthusiastic as of yore, probably more so, because now the villagers can see for themselves how the planting done in previous years makes the place more and more attractive. On Saturday last a group of poplars was planted to hide an unsightly railway yard, and the young ladies from the Swanley Horticultural College were among Mr. Till's most enthusiastic helpers. On the outskirts of Eynsford, at Farningham, Mr. Till dedicated a piece of land to the future tenants of houses that will be built on part of his property. This land is thus to remain open, and the future tenants will have good cause to bless Mr. Till for thus keeping open to them a pretty view across the Darenth valley. The day's proceedings included a procession, headed by a band, and a service in the church.

Mr. A. Simmonds, who for four years has been foreman at Stagenhoe Park, Herts, was, on leaving to take up the charge of Ystrad House Gardens, presented with a handsome marble clock by the employees on the estate as a mark of the esteem and respect in which he was held.

The "Journal" of the Kew Guild, just received, reached us much later in the year than usual. This is the fifteenth annual issue, and a very considerable portion of it is occupied by interesting letters from Old Kewites resident abroad. One Old Kewite, in Egypt, has a whole bagful of grievances to ventilate; he urges the association of the Kew Guild with the British Gardeners' Association, he wants the Guild to champion the cause of Kewites in Colonial service; he wants gardeners' grievances at home redressed; he wants the "Journal" to give notices of public companies formed in Europe for the exploitation of rubber, fruit, etc., and he wants the "Journal" cut adrift from the Kew staff in short, he wants a horticultural millenium, but, apparently, wants other folks to get it for him. Last year we suggested that the "Journal" had practically nothing to say about Old Kewites at home, the pages were devoted chiefly to letters from the Colonies and foreign countries, and to work at Kew and the doings and grievances of present Kewites. Pretty much the same must be said of the present issue, though, judging from an editorial note, it would appear that Old Kewites at home are either too busy or too modest to tell of their own doings. The frontispiece of the "Journal" carries a portrait of Mr. R. Irwin Lynch, of the Cambridge Botanic Gardens, whose portrait we gave in our issue of March 7; there is an excellent illustration of Cambridge Cottage, formerly a Royal residence, and now remodelled inside to render it suitable for a public museum. The other illustrations have a melancholy interest, as they are portraits of Mr. W. B. French, Mr. Alex. Aikman, and Mr. Leo Farmer, all of whom have passed into the great beyond all too early in life, after having done with their might what their hands found to do; Mr. W. A. Duncan and Mr. L. Kropatch, older men of good report, have also passed away, and the "Journal" fittingly records their good work.

R.H.S. Examinations. — Gardeners and others wishing to sit for the society's general examination in horticulture to be held on Wednesday, April 8, are requested to send in their names on or before March 28 to the secretary, Royal Horticultural Society, Vincent Square, Westminster, also the name and address of the proposed supervisor, together with postal order for 5s. in payment of entrance fee. The society is willing to hold an examination wherever some responsible person accustomed to examinations will consent to supervise one on the society's behalf. If any candidate desires to sit in London for this examination the society will make arrangements for him to attend at their hall in Vincent Square, S.W. The society will hold an examination in cottage and allctment gardening on Wednesday, April 29. This examination is intended for, and will be confined to elementary and technical school teachers. Those desiring to sit for the examination should apply at once for a copy of the syllabus.

"The Practical Greenkeeper" is the title of a freely illustrated brochure dealing with golf greens, tennis and croquet lawns, cricket pitches, bowling greens, and lawns in general and particular. It is issued by Messrs. James Carter and Co., Holborn, who inform us that our readers may obtain a copy of the work free, on application to them. We hope to refer again to this useful and interesting work.

A Children's May Day Show.—The Hayward's Heath Gardeners' Association has instituted a May Day exhibition for the children of the district covered by the association. Prizes will be given for garlands, and the display will be in Victoria Park.

Manchester's Gardens.—It is recorded that a country cousin waxed cynical over the gardens and plants of Manchester. He said, "Two things do well in the city, good reliable gravel and a privet hedge. You have to renew the gravel at intervals, but the privet will stand anything."

Trial of Melons at Wisley.—The following melons received Awards of Merit from the Royal Horticultural Society after trial at Wisley: Charles Ross (Ross), a medium-sized fruit, with green flesh. Duchess of York (Hurst), medium-sized, with white flesh, and yellow, heavily netted skin. Eastnor Castle (Barr), large, with green flesh and skin. Empress (Sydenham), large, with white flesh, and pale, well-netted skin; and Perfection (Sutton), large, with green flesh and skin, the latter finely netted. A First Class Certificate was conferred upon Sutton's Scarlet (Sutton), medium size, with scarlet flesh and bright golden and well-netted skin.

The Gardeners' Company.—An interesting little booklet, privately printed, and issued by Mr. W. T. Crosweller, a Past Master of the company, gives a chronological history from 1605 to 1907. It was in the former year that James I. granted letters patent to the "Commonalty of the Company of Gardeners." Mr. Crosweller records the doings of leading members of the company, but for some of the years he has nothing to tell, and in others he records matters of gardening interest, but not connected with the company's work: for instance, in 1656. John Tradescant "issued the 'Museum Trandescantianum.'" In 1657 "Evelyn, the diarist, visits the Physic Garden of John Tradescant the younger, at South Lambeth, afterwards made famous by Parkinson and Johnson." In 1786 "Covent Garden consisted of stalls in the open square." In 1804 "Sir Joseph Banks, P.R.S., Thomas Andrew Knight, F.R.S., and others founded the (Royal) Horticultural Society of London." In 1839 "the Royal Botanic Society's gardens established," and in the same year a meeting was held in the Strand "to form a 'Benevolent Fund' for the relief of Destitute Gardeners,' was the beginning of 'The Gardeners' Royal Benevolent Institution.'" And in 1887 "The Royal Gardeners' Orphan Fund established." About 1890-91 the company began to arouse itself, and in the latter year the honour and privilege of the Livery of the City was granted. In 1892 Sir Trevor Lawrence, Bart., became Master, and horticultural scholarships were instituted in connection with the R.H.S. examination in horticulture; Baron Schroder contributed the money for the first scholarship. In 1893 the Rev. W. Wilks became Master, in 1896 and 1897 Mr. N. N. Sherwood, V.M.H., was Master, and in 1899-1900 the late Mr. Philip Crowley was Master of the Company. Mr. Crosweller was Master in 1907. Since its resuscitation the company has made numerous donations to the gardening and other charities.

American Gooseberry Mildew. The Government of Holland are following the example that has been set them in this country, and are taking active measures with a view to stamp out the American gooseberry mildew. For the assistance of Dutch cultivators in combating the disease a brochure, prepared by Dr. J. Ritzema Bos, has been published. This is comprehensive in scope, well written, and admirably illustrated, the illustrations including a plate in colours showing the effect of the disease on the growths and fruits.

Colorado Pines.—In an interesting contribution to the "University of Colorado Studies," Mr. F. Ramaley shows how the pines are found at certain altitudes. Grass lands rise to 6,000ft., followed by Pinus scopulorum and P. mucronata; then comes a zone of P. Murrayana, with P. flexilis, and above these is a zone of Engelman's spruce. Higher still the only woody plants are dwarf willows.

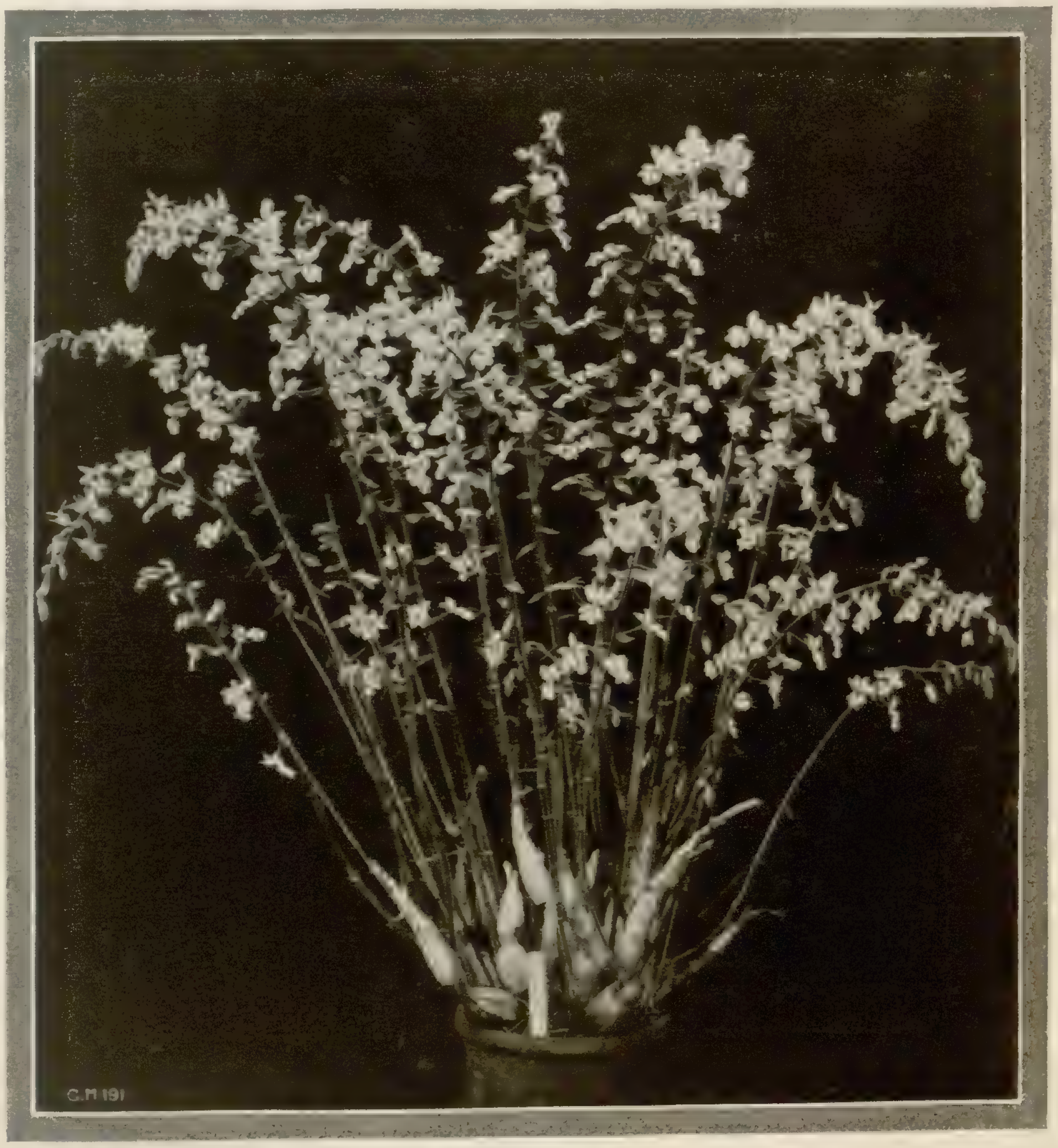
Begonia Rust, Etc.—Mr. R. H. Curtis sent leaves of Begonia Gloire de Lorraine with rusty spots and markings due to the attack of the begonia mite to the R.H.S. Scientific Committee. This pest is difficult to eradicate, but constant vigilance and fumigation whenever necessary will usually keep it under. A good wash for dipping plants attacked by mites is made by kneading a handful of soft soap with a quantity (indefinite) of flowers of sulphur and dissolving the whole in one and one-half gallons of water, but even this, probably the most deadly wash for mites, and at the same time harmless so far as the plants are concerned, is not always efficient in killing the eggs of the mite.

Nitrate of Soda on Wet Soils.—We are so apt to regard nitrate of soda as one of the finest manures for increasing the bulk of a crop that we are apt to forget it has an opposite effect under certain conditions. In Japan it has been found that the use of nitrate of soda in swampy soils reduces the yield of rice; this is due to denitrification, which process gives rise to poisonous nitrates, and thus the crop is harmed instead of being benefited.

CALANTHES.

(Concluded from page 186.)

As growth becomes more advanced, and root action active, more water will be required, but this ought not to be given in such quantities as to sour the soil. When the soil becomes permeated with roots weak liquid manure is given each time the plants require watering, and they are syringed daily to keep the foliage clean. We have no special house for growing calanthes in; our plants are grown on the north side of the melon houses, where the temperature during bright weather is often considerably over 100 degrees. They are, however, always kept shaded, as the dense foliage keeps off the sun, and they are syringed at the same time as the melons. The liquid manure we use is obtained from the farmyard, and this is diluted and given in quantities when the soil is filled with roots.



A SPLENDIDLY GROWN SPECIMEN OF CALANTHE VEITCHI.
Flowers bright pink.

Staking is an operation that is overlooked by most amateurs, and not a few professional orchid growers fail to see the necessity of staking the young growths of calanthes. Some may even laugh at the idea, and consider me a faddist to suggest it. But allow me to say that if the finest results are to be obtained the young growths must be kept in an upright position from the time they commence to grow until growth is completed, and this is impossible unless some support is afforded. The long, broad, plaited leaves are sure to pull the growths on one side, and when this happens the plants receive a check from which they do not recover. I am here alluding to well-grown bulbs, from fifteen to eighteen inches in length, carrying from six to eight leaves, each three or more feet in length. The larger the bulbs the greater the risk of their snapping off at the neck, near the base, by the weight of the leaves. It was a misfortune of this kind to some of my best bulbs that induced me to stake the growths very early, and since adopting this method I had not lost a bulb in the growing season.

With bulbs of the size suggested staking becomes absolutely necessary. Care, however, must be exercised, otherwise more harm than good will be done. The stakes should be so placed that they do not interfere with the swelling of the bulbs, and the ties must be loose and under the top ring of foliage. The plants should be frequently looked over to see that none of the ties are strangling the growths, as they swell very rapidly at this stage. Better err on the side of examining them too often than have any of the growths spoiled. If these details receive due attention the crop of flowers produced will well repay the cultivator for his pains.

Some growers recommend withholding water as soon as the flower spikes show themselves, but this I regard as a mistake. Here the plants are kept watered until the flowers are cut, and often the foliage is quite green when the blooms are expanding. The reason there is none on the specimen illustrated is because it was cut off at the time the photograph was taken so as to show the bulbs more plainly.

Well-grown calanthes will bloom from the middle of November until February, for though the individual flowers do not last very long, fresh ones keep opening, and on that account they are among the most useful of plants it is possible to grow. Our plants, though in full bloom in November, were in perfection in January, thus showing the length of time strong spikes will keep on flowering. When cut and put in warm rooms the flowers usually continue fresh for about three weeks, providing the water is changed occasionally, and the lower portion of the stems cut off to enable them to take up a supply of moisture. When kept in the plant house a warm, dry atmosphere is necessary, and in this they will continue blooming for a long time.

Those who have not grown C. bella and C. Harrisi would do well to give these a trial, as they are by far the finest calanthes. The former is a beautiful light pink variety, having a dark throat. It was raised some years ago by a friend of mine, who sent me two very small bulbs, not much larger than a snowdrop bulb, but the stock from these has so developed that at the present time some of the flower spikes are much thicker than the original bulbs were. C. Harrisi, I am told, was raised by the late Dr. Harris, and was named after him. The flowers of this are pure white, and about two inches in diameter. It is of robust habit, producing both bulbs and flower spikes of the superba type, and not with the "neck" which is so conspicuous in C. Veitchi and C. bella. The flower spikes are stout, growing from three to four feet in length, and having the flowers more closely together than in C. Veitchi.

Before closing I must say a word or two about C. vestita and its varieties. These form most lovely subjects for hanging baskets. When grown thus, about a dozen or eighteen bulbs should be planted in each basket, according to their size. Strong bulbs will produce spikes from a foot to eighteen inches in length, and these, hanging gracefully all round, make fine specimens for entrance halls or other places where they can be suspended.

Some growers are troubled with "spot" on the foliage, but with the exception of some "spot" on bulbs from another place that pest is unknown here. My opinion is that the chief cause of the disease is keeping the bulbs in a low temperature and damp atmosphere. With us the plants soon grow out of the disease should it be present when new plants are introduced.

H. C. PRINSEP.

Buxted Park Gardens.

PREPARATION OF SUMMER FLOWERS.

A gardener, whether amateur or professional, may have thousands of bedding plants ready for putting out in May, yet possess none that do him credit, and the ultimate appearance of the flower-beds may be poor. It is from the best grown plants that the finest flowers, both as to size and colour, are obtained. Perhaps a sense of haste, perpetual hurrying, is the cause of most failures in all branches of gardening. It may—nay, often does—exist with keen devotion to work, none the less is it among the worst of faults. A bed too sparingly filled with fine plants gives a better effect than a lavishly replete one of unhealthy subjects. Hurry in seed-sowing results in over-crowded seedlings, which are pricked out roughly, the weakliest and latest, so often the most valuable, being sacrificed, and further shiftings not performed with sufficient patience, cause the loss of many more. Inadequate hardening off, and neglect of pinching into shape, are other shirkings due often to haste.

The gardener who estimates fairly correctly how much seed he ought to sow to well furnish the pleasure-grounds, spares himself much unnecessary work, and saves the time, too, of his subordinates. He will gain more credit by trying a few novelties than by raising great numbers of ordinary varieties of bedding plants.

Polygonum orientale is a fine hardy annual that gives little trouble, may be raised in cold frames, and is not generally known. As its pendant carmine blossoms appear late in the summer and autumn the plant may well be accompanied by some that flower only in May and June, a succession of beauty being thus provided. The height is fairly uniform, about three feet, and there is a less effective white variety that can be recommended for contrast.

A remarkable ricinus is R. panormitanus, by reason of the blue stems that support its immense leaves; for sub-tropical effects it is admirable, in sunny, fairly sheltered spots, and grows symmetrically to a height of six feet.

The half-hardy annual rudbeckias are pleasing, and easy to raise in quantities from seed-sowing in heat in spring. Rudbeckia bicolor superba has regular brown spots on golden petals, and the double variety of this attracts much notice at shows or from visitors to the gardens. R. bicolor, a more usual representative of the class, has a dark zone in gold blooms, and flourishes in hottest positions. The height of all is under two feet.

Salpiglossis are seldom used to best advantage; they need to rise well above a thick undergrowth of contrasting coloured foliage or blossom, instead of being congregated by themselves in mixed tints. The branching growth of a fine salpiglossis plant set by itself produces an effect to remember. Why should the popular foliage zonal pelargoniums and fuchsias not be employed with self salpiglossis, the latter set at wide intervals? Of all the separate seed varieties coccinea is the most vivid, but charming also are rosea and aurea.

A small plant of infinite service for carpet bedding or edging is Silene pendula compacta Empress of India, as no green appears in it, the flowers being crimson and stalks and leaves deep maroon-purple. The dwarf white Silene p. c. Snow King is a perpetual bloomer, more effective than most other dwarf plants.

Instead of the usual African marigolds choice might be made for one season of the double quilled type, Tagetas erecta fistulosa; if well treated, by being carefully raised and allowed sufficient depth of rich soil and enough space when in the beds, this tagetes produces blossoms of immense size and excellent quality. By the by, no marigolds are so fine as those which are planted in maiden loam enriched with a mulch of almost fresh horse manure. Tagetes patula pygmæa I have found a most useful six-inch French marigold for carpeting beds of the tall Africans. Another vivid flower, orange in shade, is that of the nine-inch Venidium calendulaceum, a half-hardy annual. Among zinnias a feature might be made of the giant white Z. robusta, Queen Victoria, and the double orange variety of the dwarf Zinnia Haageana in combination. Gardeners have long been of opinion that Nemesia strumosa would only be an admirable bedder when obtainable in separate seed varieties. Now in Nemesia strumosa Orange Prince we have a level grower, of fine and constant blossom.

Schizanthus Grahami niveus will supply a double need, that of an elegant foliage plant and a free white bloomer. It should be used with a surrounding belt of Phacelia campanularia or Scarlet Begonias whose compact growth will add to its graceful effect, or with any three-foot centre plants that need to have their lower stems and leaves well veiled.

M. H.

Venidium calendulaceum.—Were I asked to name the best six annuals for giving a prolonged and bright flowering display, with the least trouble, Venidium calendulaceum would certainly be one of the six. In good soil every plant will cover from two feet to a yard square with its bold and handsome foliage, and on top of this, from one foot to eighteen inches high, it will rear hundreds of fine flowers, larger than a five shilling piece, and showier than a sunflower. One fault it certainly has, and that is it retires to rest each afternoon earlier than one would like. Otherwise, it blooms till November in fine seasons, and gives cut flowers galore for months. It can be sown out of doors at the end of March.—E. J. K.

Iris alata.—The scorpion iris, as this species is named, is the earliest of all the bulbous irises to flower, often expanding its blossoms before the close of the year. It was introduced from Algiers about 100 years ago. In the type the flowers, which are four inches across, are lilac-blue in colour, with falls one and a-half inches in breadth, marked with a central yellow crest that is reticulated with white on either side. As with many of the bulbous irises, the species is very variable, and there are many named varieties. The great drawback to this iris is that it often proves most difficult to flower, and in numbers of gardens refuses to bloom after the first year, though throwing up healthy foliage year after year. It is no uncommon thing to see a clump in apparently perfect condition that is said never to have flowered for six or eight years. An amateur who has suffered from the non-flowering of this iris, now imports bulbs every year, and throws them away after they have bloomed.—S. W. FITZHERBERT.

NOTES FROM CEYLON.

The Mangosteen.

The Mangosteen (Garcinia Mangostana) is the fruit par excellence of the Eastern Tropics. It is a native of the Malay Peninsula, and grows and fruits well in the moist low-country of Ceylon, Trinidad, and Jamaica. It does not thrive well in India, and has not as yet become quite established in the tropics of Africa and America, where, however, frequent attempts have been made to introduce it. The tree requires a moist, hot and equable climate, such as is found in certain equatorial regions only. The fruit is round, two to two and a-half inches in diameter, with a tough thick rind; it is first green, then gradually changes to pink, and finally to a rich deep purple when ripe; inside, the fruit is divided into edible segments, which are snowy white in colour, delicious in flavour, and of a delicate melting consistency. These segments are from five to seven in number (always indicated by the number of stigmatic scars on the rind) and contain a seed each. Usually only one or two of the seeds in a fruit are properly developed. The flavour of the fruit is said to suggest something between the grape and the peach. The Mangosteen tree is of a small branching habit, very slow in growth, and taking eight to twelve years or more to come into bearing. It is on this account not a very suitable tree to grow in costly conservatories in England. The tree has, however, been fruited in the conservatory at Sion House, an achievement which any horticulturist in Europe might be proud of.

Randia macrantha.

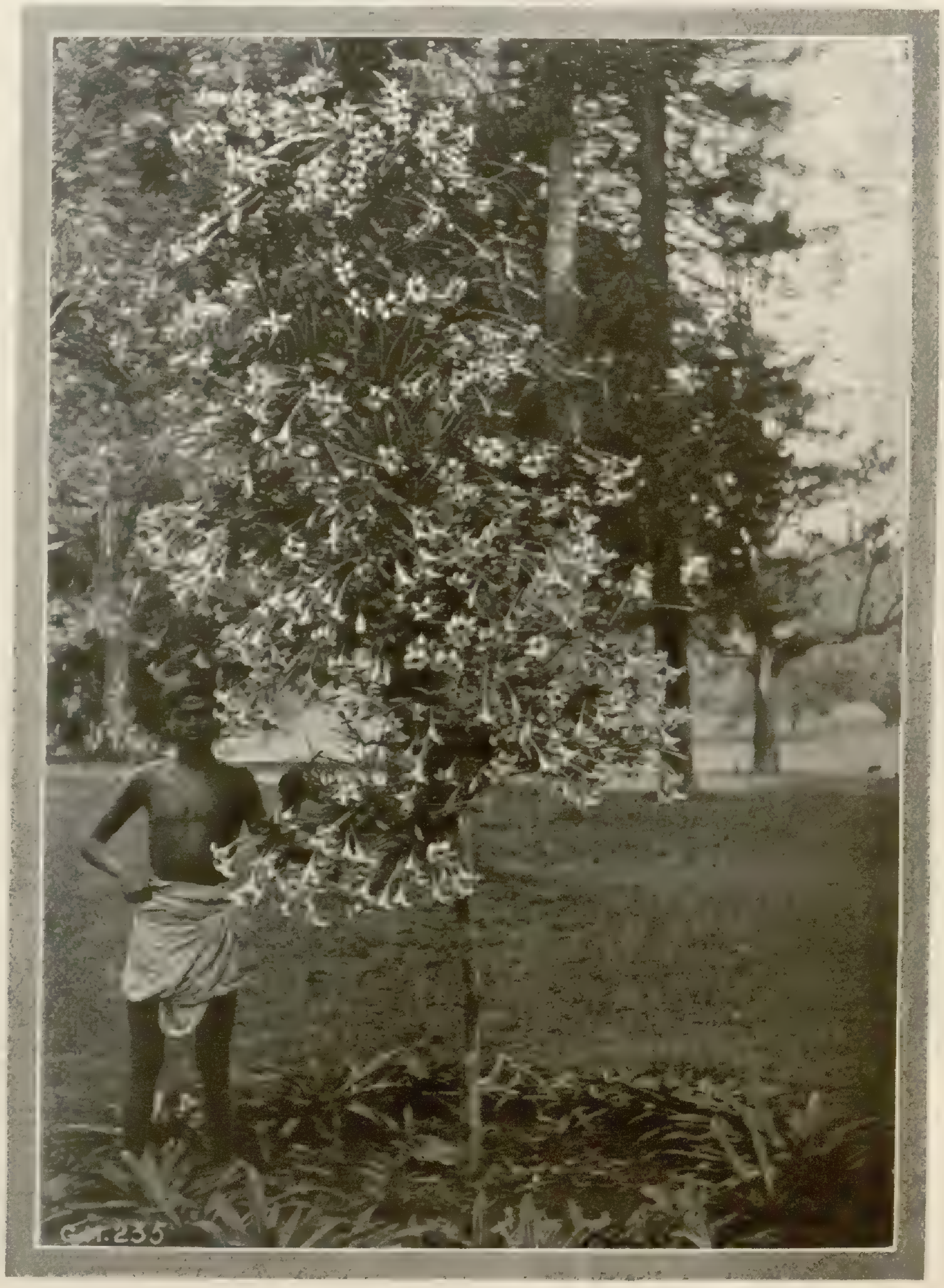
This is a particularly striking shrub (or rather small tree) when in flower. The peculiar long funnel-shaped flowers, bending down with their own weight, are borne in great profusion, literally smothering the foliage. These are at first creamy-white, afterwards becoming pale yellow, and are somewhat pleasantly scented. The tree is a native of West Tropical Africa, and like many other fine-flowering species of the tropics, belongs to the natural order Rubiaceæ. Through a misprint it is wrongly given for Randia maculata in the Kew Hand List of Tender Dicotyledons as being figured in the "Botanical Magazine," t., 4,185. Randia macrantha used to flower in the palm house at Kew, but it is seldom met with in private collections in Europe.

Flying-foxes.

This illustration, from a photograph taken by the writer, in the Royal Botanic Gardens, Peradeniya, Ceylon, will convey some idea of a pest which is found in certain tropical countries. The animals seen here on the wing are not birds, but mammals, furnished with large wings and a brownish-yellow hairy coat; they are popularly known as Flying-foxes, owing to the close resemblance of their head and body to those of a fox.

These huge bats (Pteropus Edwardsii) are of a gregarious habit, congregating in enormous numbers on specially favoured lofty trees, to the top branches of which they suspend themselves by the feet and rest during the day with their heads downwards, right in the blazing tropical sun. Being of a frugivorous nature, and of nocturnal habits, they roam at night in search of fleshy fruits, being particularly partial to ... fruits of almost all kinds. They quickly defoliate any tree of which they take possession, and seem to prefer a tree which has thus become completely devoid of foliage and shade. The flying-foxes have a very offensive odour, which is noticeable for a considerable distance, especially on the windward side. They are of interest to naturalists on account of the parasitic fleas which always infect their bodies. When stretched the flying-fox measures from three and a-half to four feet from tip to tip of the wings.

Hugh F. MacMillan.



[Photo: H. F. Macmillan.

RANDIA MACRANTHA IN THE PERADENIYA BOTANIC GARDENS, CEYLON.

THE MADEIRA ORCHIS.

Among the hardy orchids none of the orchises compare in beauty with Orchis foliosa, a native of Madeira, save, perhaps, the fine Kilmarnock and Glasnevin forms of O. maculata, while it is, moreover, even more easily cultivated than these noble plants. It is also more effective in its greater stature, while its handsome leaves, which give it the specific name of foliosa, or leafy, add greatly to the numerous good points it reveals to the student of beautiful flowers.

So easy is it to cultivate that one is always surprised that this fine plant remains so comparatively expensive. It may occasionally be purchased for half a crown or so, but the general charge for a good strong root is about three shillings and sixpence. Yet, although this is a rather high price for a plant which has so long been in cultivation, it cannot be said that it is beyond the plant's intrinsic value, as it is certainly better to pay a good price for a first-class subject than to have ten or a dozen inferior ones. Orchis foliosa is one of the really good flowers, which all who desire to own the élite of hardy plants should possess.

This fine plant grows from eighteen inches to three feet high, the latter height being reached in the good and rich soil which it enjoys, and I have seen it even taller in good gardens where its requirements were carefully studied. The leaves, as already indicated, are handsome, being long and broad, and of a pretty green; while the stout spikes of flowers are densely crowded with many rich purplish-red blooms.

The flowering time is generally from June to July, but it is later in some parts where early summers are not the rule. It is, however, hardy almost everywhere in the United Kingdom. I have seen it employed occasionally as an exhibition flower, but many shows are held too late for staging this handsome orchis. It likes a good, rich soil, preferring one of a heavy character with a fair amount of moisture in it, but a peaty one is preferable to one of a dry nature. I prefer planting this orchis in spring rather than autumn, and roots can still be secured and planted with advantage. A good clump will throw up several flower spikes, as it is not one of the plants which seem to flower more sparsely when crowded with growths. Divisions should be effected in spring.

S. Arnott.

SWEET PEAS IN CLUMPS.

The clump system of growing sweet peas has made amazing strides during recent years, and even exhibitors, with whom garden decoration is quite a minor consideration, now largely adopt the practice. For garden decoration pure and simple, the old style of growing in rows cannot for one minute compare with clumps; for one thing, it is altogether too set and formal for present-day tastes; for another, it is positively ugly in some situations.

As a hedge of irregular outline a row of sweet peas is a not to be despised feature of a flower garden, but even then the row should be a double one, with the component lines eighteen inches apart, and the sticks slanted outwards at the tops—not inwards to meet. Such a hedge will give a billowy mass of flowers a yard wide and two yards high. This is to be a hedge proper: an unbroken line from start to finish.

Where a background, as distinct from a hedge, is wanted, the clump will be found more pleasing than the unbroken row. By its aid distinct and fairly solid masses of colour can be arranged, each complete in itself, instead of half losing itself in association with its neighbours. More flowers will also be yielded from a given space, and cultural operations performed with less difficulty.

For filling blanks in shrubberies or in herbaceous borders the clump of sweet peas scores heavily, as it can be expanded or compressed to meet the exact exigences of the case. For these clumps good contrastive colours should always be chosen; something which will show up well amid the surrounding greenery in the shrubs, or stand out boldly by itself in the herbaceous border. Creams—yellows as they are fancifully called—whites, pinks, and orange, and light reds are the best colours in general, and in shrubberies it will be found that even such delicate varieties as Henry Eckford and Helen Lewis will not scorch and spot in the sun, but appear in almost their true colours.

The blues, magentas, and maroons are the most hopeless in shrubbery borders. Light blues—like Zoë and Flora Norton—are not so bad, but Horace Wright, Navy Blue, Nigger, and others of that ilk are great failures from the point of view of decorative effect. I saw these identical varieties so used last year, and the failure was most complete. The lavenders and mauves want shrubs or objects near them to foil and throw up their colours, and when this is done, such as Frank Dolby, Lady Grizel Hamilton, and Mrs. C. Foster are really lovely.

But, all things considered, whites, pinks, and reds in various shades are the best and showiest for any position where a telling effect is required. A good selection would include Dorothy Eckford and Nora Unwin, white; Countess Spencer, Mrs. Alfred Watkins, and Queen of Spain, pink; Miss Willmott and Helen Lewis, orange; George Herbert and E. J. Castle, rose and carmine; Mrs. Collier and Hon. Mrs. Kenyon, creamy-yellow; Triumph, rose and blush white; Queen Alexandra, scarlet; and Coccinea, a unique shade of red.

For these shrubbery clumps, and for other parts of the garden where bold effects are required, as many as twelve plants per clump may be allowed. This will give a mass of flowers quite six feet through, if the plants are kept—as they should be—one foot apart all round the circle, and the stakes are inclined outwards. Persons who have had no experience of this phase of sweet pea culture invariably sow seeds or set out plants in the centre of these clumps as well as round the circumference. This is quite a mistake, but one that is scarcely likely to be made twice, as the inner plants are smothered by the outside ones, and are simply wasted.

[Photo: H. F. Macmillan.

A PLAGUE OF FLYING FOXES IN THE PERADENIYA BOTANIC GARDENS, CEYLON.

For backgrounds or avenues of clumps, or where this system is followed for producing exhibition flowers, from four to six plants per clump are sufficient. Under a liberal exhibition régime a clump of four plants will make an astonishingly fine display, quite a yard through, and this will be found quite large enough for the careful tending that such plants require. With six plants a good clump is ensured in any well dug and tilled garden soil. Recently there has been some disposition to use two varieties of different colours in one clump, but a thorough knowledge of the varieties used is required, and a vivid recollection of their true colours, or the result is apt to be—well, unfortunate. I should certainly advise all beginners to stick to one variety per clump, and on no account to make up clump mixtures from catalogue descriptions alone.

As I have already digressed from my title with regard to rows and hedges, perhaps I may be allowed a little further digression to refer to sprays. These are admirable where there is not room for a clump, or where a strictly limited but flat-faced display is wanted.

The soil in such a position should be deeply dug and well manured, and in due time a seed should be sown or a plant set out where it is likely to grow best. After assisting the plant with a twig until it is two or three feet high, a stout hazel bough six feet high, somewhat fan-shaped, and as twiggy as possible, should be introduced. On this the plant is trained, giving it a tie or two to keep it in position at first. If much space is to be covered pinch the point out of the plant, and train the growths obliquely; a good plant will easily cover a space a yard wide.

Mention of training reminds me that this is a somewhat necessary accompaniment to clump culture. If left to themselves the growths have a marked penchant for getting inside the ring of stakes, and if not detected in the act they drop down inside eventually and are wasted. To guard against this, the cultivator at the time of fixing the final sticks carefully draws every plant to the outside of the circle, and ties it where he wants it with a piece of raffia. Generally this first tying will suffice, as the plants are, or should be, somewhere near a yard high at the final staking. Growths which subsequently try to force their way inwards should be gently withdrawn, and so conducted round adjacent twigs that they and their flowers are kept on the outside of the clump.

As a general rule, hazel boughs are the best supports for sweet peas in clumps; they are twiggier than any others, and are generally quite high enough and strong enough for garden sweet peas. Under special culture, however, the plants run up to a great height, and in these circumstances I have found chestnut boughs far the best. They can be obtained of almost any height, and with stems for inserting in the soil almost as thick as a man's wrist, by ordering them of the woodman. In wooded districts they should always be used when obtainable.

In towns wire netting has a great vogue for sweet pea clumps, and gives excellent results. It is secured to three or four stout poles driven in near the plants, and two widths of netting are used, one on top of the other, when height is desired. Whatever its other merits, wire netting is inferior to sprayey boughs from an artistic standpoint, and, in my opinion, should only be used where boughs are not forthcoming. Its aggressive shininess may be toned down with dark green paint, and then it is not such an eyesore.

E. J. Castle.

HARDY ANNUALS FOR CUT FLOWERS.

How inestimably valuable hardy annuals have become may be judged by their yearly increase in popularity. Their presence in garden decoration is very helpful, and as they are in constant request as cut flowers during summer and autumn, it is difficult to place limitations upon them.

The cultural details are readily mastered even by the novice, probably the chief stumbling-block to which even skilful cultivators not infrequently succumb is a too lenient hand in thinning the seedlings. To secure the brilliant flowers with long stems so much in request at present, a drastic system of thinning must be early practised. Sturdy grown plants yield a long season of flowers when each individual is given sufficient room for lateral development. Most of the annuals named can be sown in the open ground, a practice which answers admirably for successional plantings or late supplies, but to secure early flowering resource must be had to sowing in boxes or cold frames.

Any light soil, such as old potting soil, answers for seed sowing, and March and April are the accepted months for sowing during spring. The seedlings must be grown sturdily from the beginning, and when three or four inches in height they are planted into their flowering quarters in bed, border, or shrubbery as the case may be.

During the winter or early spring the ground is prepared by digging and manuring, though moderately rich soil yields the best flowering results, it being always easy to give extra stimulants as the plants require it by means of approved fertilisers supplied as a top-dressing. A dozen good annuals for supplying cut flowers, taken in alphabetical order, includes:

Asters of the Comet, Mignon, and Queen of the Market types. These give double flowers with comparatively long stems, and are useful for church decoration and invaluable where large supplies are required for despatching to sales held for charitable purposes. The improved forms of the single sinensis are probably most appreciated, as they lend themselves to lighter arrangements and their flowering season covers a longer period than others.

Calliopsis Drummondi and C. nigra speciosa are most useful for small glasses, and they stand fresh a long time when cut in the bud, the black maroon flowers of the latter are most effective by artificial light and contrast well at all times with the bright yellow blossoms of Drummondi.

Centaureas should be represented in gardens by the beautiful varieties introduced by Messrs. Jarman and Co. These embrace white, lemon, yellow, and heliotrope flowers, and are the finest type obtainable. The plants are characterised by great vigour and enormous stems, so that one can readily foresee a popularity for these annuals second only to the sweet pea.

Annual chrysanthemums are the brightest and most refined of all the Corn Marguerites, they last well when cut, and are also bright subjects when massed in bed or border. The single varieties are all good, though some of them are very old garden plants, two new varieties, named Morning Star and Evening Star, should be given a trial.

Eschscholtzia californica supplies the brightest and most refined orange-yellow colour among annuals; it is invaluable for light dry soils, and succeeds to perfection upon chalk soils, and the flowers, when cut, are valuable for small glasses.

Godetia Schamini fl.-pl., which appeared as a leading novelty a few years ago, has in a large measure supplanted the single forms. The flowers are a bright rosy-white, borne freely upon two-feet-long stems, and they last well in a cut state.

Gypsophila elegans grandiflora is the counterpart, among annuals, of Gypsophila paniculata, and is suitable for associating with all cut flowers when lightness and elegance are most desired.

Helianthus cucumerifolius is chiefly valuable for its cut flowers during autumn; these are in yellow and lemon shades, and the flowers have a conspicuous maroon disc in the centre giving to them a striking effect. The varieties Diadem, Orion, and Stella are most generally grown.

[Photo: H. F. Macmillan.

MANGOSTEEN FRUITS (GARCINIA MANGOSTANA).

Lavatera trimestris is a vigorous growing annual, often attaining a height of 5ft. The flowers are self coloured, either rose or white, and are invaluable for furnishing large vases. Early flowering plants come readily from seed sown in autumn.

Mignonette is generally esteemed for its fragrance, and the bold vigorous spikes produced by recent development in this popular annual are strikingly shown in the variety named Bismarck, which has the further virtue of remaining in flower well into the autumn.

Nigella, or, popularly, Love-in-the-Mist, has met with considerable improvement in the variety Miss Jekyll. The colour is a decided blue, and the flower is surrounded by threadlike leaves, which give it a quaint and pretty effect. Unfortunately the plants seed so freely that the constant removal of seed pods is imperative or the plants soon become exhausted.

Stocks are sweet-scented old-fashioned annuals which are almost indispensable. Since the introduction of Beauty of Nice and Princess Alice their cultivation has been greatly extended, as these varieties furnish flowers with long stems; of a beautiful rose or white colour respectively.

Schizanthuses have not inaptly been named the poor man's orchids. They may be had in flower in pots by Easter, if given the protection of an ordinary greenhouse, while their flowers may be enjoyed in the open garden throughout summer and autumn. Wisetonensis is a bright subject, and probably the most useful for cut flowers. Thomas Smith.

Walmsgate Gardens, Louth.

Planting Out Old Marguerite Carnations.—I believe most growers throw these away after flowering them in pots, and I have done the same, to the extent of many hundreds. However, an old garden labourer taught me a far better use for these oldsters, for he rescued a few plants from the rubbish heap, and in the summer had such a bedful of carnation blooms as one seldom sees. If a little care is taken of the old plants after they have flowered indoors, they will give baskets and baskets of bloom when planted out on a sunny peach or other border in the kitchen garden.—E. J. K.

CUCUMBER CULTURE IN PITS AND FRAMES.

When one is fortunate enough to possess brick pits provided with both top and bottom hot-water pipes capital crops are easily produced quite early in the season, and later in the year. During the hottest part of the summer, without pipes, and with only the aid of the glass, first-rate results may be obtained. The principal disadvantage, as compared with those grown in houses, is attending to the plants during inclement weather. Consequently advantage must be taken of favourable weather for giving them any attention they may require. As in the case of those grown in houses, it will be advisable to provide a fair depth of fermenting material, sufficient, in fact, to create a gentle warmth and give the plants a good start, and indeed to maintain them in a vigorous state of growth until they are well established.

Thinning, stopping, pegging down, arranging the growths, and top-dressing should receive constant attention. The plants should always be allowed sufficient room to develop without the foliage coming in contact with the glass.

Ventilation is perhaps one of the most important points in cucumber culture in pits and frames. Air should be admitted quite early in the morning, if ever so little, but the lights may be closed and the growths well syringed with tepid water quite early in the afternoon, retaining as much sunheat as possible. The leaves are seldom burnt during the latter part of the day. It is generally quite early in the morning that injury is done, when no air has been given. Thoroughly mat the lights during cold nights.

Black fly and red spider are generally the most troublesome insect pests. Frequent slight fumigations with some approved material will keep them free from aphis, and a moist atmosphere is of immense value in repressing red spider.

Portable Frames.

Upon the assistance of hotbeds only many have to rely entirely for their supplies. And by judicious care and management with the aid of this very excellent fruits may be cut every day through the summer and early autumn. These require treating much in the same way as when grown in pits, except that occasionally relining the frames to create additional warmth will be required.

Outside Culture.

Even where no glass at all is available many amateurs and cottagers may successfully grow their cucumbers quite in the open. Choose the warmest and most sheltered part of the garden. The Improved Ridge varieties are, in my opinion, quite equal in flavour to any grown under glass when good culture is given them. I have always found these best when grown in beds on ridges of leaves and manure, though many prefer to grow them on the flat. The seeds are best sown in pots, and planted out about the first week in June in any fairly good soil. The young growths will need pegging down occasionally, and in the early stages provide a little shelter at night when cold. Spruce boughs answer the purpose well. Black aphis sometimes proves troublesome, and immediately this is noticed take the precaution of syringing at once with a reliable insecticide. Keep the roots well supplied with water, and damp over the foliage every fine afternoon, and mulch between the growths during very hot seasons with half-decayed horse manure.

Varieties.

There are now many excellent kinds, and many cultivators make their own selections. I can strongly recommend Matchless and Ideal both for home use and exhibition, and when a medium sized fruit only is in request Lockie's Perfection is all one can desire. Improved Stockwell Ridge is one of the best for open air culture.

Edwin Beckett.

Aldenham House Gardens.

[Photo: W. J. Vasey.

A BED OF CALCEOLARIA BURBIDGEI AND VERBENA MISS WILLMOTT AT HAMPTON COURT.

SOME SUGGESTIONS FOR FILLING LARGE BEDS.

Those who have visited the famous old gardens attached to the Cardinal Wolsey's historic palace of Hampton Court cannot fail to have noticed during recent years how the summer bedding has differed from what was regarded previously as the correct thing. When carpet bedding was the height of fashion the flower beds at Hampton Court were large, intricate, gorgeous, and well kept, but these gave place to less formal and flat designs as the years advanced, and during the time Mr. J. A. Gardiner had charge a still freer style was adopted, and carried out in a most effective manner.

From time to time the summer displays at Hampton Court have been described in these columns, and many of the examples of good bedding out have been illustrated. Two further illustrations are now given, as they will serve as suggestions to those who have large beds to fill in a new park or garden. The first view shows a big bed of the free-flowering Madame Crousse ivy-leaved pelargonium, margined with a broad band of the dwarf white alyssum. The pelargoniums were about a yard high, and perfect pillars of graceful greenery and pink blossoms. In the other bed illustrated, the chief feature was Calceolaria Burbidgei, and as this plant grows luxuriantly, and produces an abundance of soft yellow flowers, the specimens were set well apart. The edging in this case was of light blue ageratum, and the groundwork consisted of the pink Verbena Miss Willmott.

Mr. Gardiner, who now has charge of Hyde Park, tells us that the best plants for producing the specimens for these big beds are those from cuttings put in the previous autumn, and grown on steadily through the winter and early spring. These have far more vigour, and produce finer flowers than old plants kept over from year to year.

C. B

IMPROVING AN ORCHARD.

From an experiment conducted by the Rhode Island Experimental Station since the year 1899, for the purpose of trying what could be done to restore a neglected orchard to fruitfulness, the following facts have been deduced. The orchard consisted of about one acre of land, containing many varieties of apples which had been planted about twenty-five years. When work began in 1899 the trees looked very unpromising, they had made little growth, and the trunks were covered with lichens or moss. No fruit of value had been produced for several years. The treatment given to the orchard was such as any fruit grower might afford.

The first thing done was to scrape off the rough loose bark from the trunks and branches, and prune the trees. This rough bark may do little harm, but it denotes lack of thrift, and affords a harbour for injurious insects. The pruning was simple in this case; only dead branches and crowding suckers were removed.

How much to prune in other cases will depend upon the condition of the trees. If they are old and decrepit, with dying branches and failing strength, pruning should be vigorous. An apple tree can be renewed like a grape vine. A wealth of runaway shoots is its signal that such renewal is needed. In extreme cases a tree may even be cut to the ground, and another built upon a young shoot which springs up. This is seldom demanded, but with old trees which have lost their vigour, whose branches are diseased, and which have made but little growth, quicker returns and better fruit may come from heroic treatment. Cut out the old branches ruthlessly. Leave vigorous young suckers to take their place. A new top will quickly form, and better fruit will result. If trees are not so far on the decline such pruning will not be needed. It may then be confined to thinning out useless branches. Sunshine and air should have free access.

Apple trees and their fruit contain plant food. The tree must be fed to produce good fruit. Some soils are rich enough to produce crops year after year without manure, but most soils are not so well provided in this respect.

To restore the fertility of a wornout orchard the following manurial dressing may be recommended, in quantities per acre: 125lb. nitrate of soda, 100lb. dried blood, 650lb. superphosphate, and 125lb. sulphate of potash.

This makes a total of about half a ton per acre. Much experimental work has been done with fertilisers in the growth of fruit, but there still must be much guesswork in the use of artificial manures for these crops. No one can tell the fruit grower just what his land needs; the soil must give the answer.

An orchard that has been much impoverished needs nitrogen. Its lack of thrift and small amount of growth proves this fact. In well-managed orchards, with soil of ordinary fertility, nitrogen can be supplied by sowing down to red clover or some other leguminous crop. Nitrogen can be supplied in the same way in a neglected orchard when once under way. In the beginning of the improvement farmyard manure, with a little nitrate of soda, will help to get the growth desired.

The second step is to plough the orchard and till the ground. Tillage acts as manure; it will help the nitrogen to bring about plant growth. If we wish to grow apples we cannot afford to have the trees battling with weeds or with grass. The trees need the moisture, and all the food they can get; weeds and grass will rob them of it. Thus a grass-covered orchard loses its moisture and its food, and so becomes impoverished of the very elements that tend to fruitfulness.

Tillage should continue frequently during early summer. By midsummer wood growth should cease; tillage should then stop. A clover crop sown at this period will protect the soil from washing by heavy rains, and will add humus to the land. The clover crop will gather nitrogen from the atmosphere for next year's growth.

All good rules have some exceptions. The best way may not be the best in all cases; sometimes it may not be advisable to plough the orchard, it may be on a hillside which is too steep, or something else may prevent.

Two alternatives are open which will yet permit abundant fruit. The orchard may be pastured with sheep or pigs. Pigs will plough it, sheep will not. In either case more animals should be kept than the grass in the orchard will support. Grain or some other concentrated food should be fed to supplement the grass; this brings fertility to the orchard soil, it also insures that the grass shall not grow tall. Grass will evaporate less water if kept short.

The other alternative is to let the grass grow, then mow it, and let it lie about the trees; this system seems to contradict the idea of growth upon which the system of tillage is founded, but it has a few advocates who show excellent results. It ensures a winter's mulch, and adds humus to the soil, but draws heavily upon the soil moisture during early summer. It is, therefore, not strange that its advocates thus far seem to be those who are dealing with a wet soil or a rainy climate.

Harpenden. J. J. Willis.

[Photo: W. J. Vasey.

BED OF MDME. CROUSSE IVY-LEAVED PELARGONIUMS AT HAMPTON COURT.

Protecting Tulips in Bloom.

The stems of bedding tulips are so easily broken that even a more than usually rough wind will snap them off. But this is nothing compared to the damage the domestic cat and dog will do in breaking the stems and injuring the plants in various ways. It will generally be found that these pets have a particular corner of a bed which they patronise, and I have been at times greatly troubled by their attentions. Of course, a stout boot is always handy and useful, but then, walls have windows, and the pets I refer to are those of the household. I have found that a simple way of keeping them at bay is to bend a piece or two of wire in the form of an arch, and insert this near the favoured spot.—E. J. K.

THE VIOLET.

The violet has a charm all its own. It appeals in greater or less degree to each one of us. We loved it when we were children, and the love has grown and strengthened with our later years from whatever standpoint we take it, and I purpose dealing with it in all its aspects. We shall, I think, find delight and refreshment in the study of it.

It has its poetic as well as its practical side. It is essentially a spring flower in its wild state, though when cultivated it is with us the greater part of the year, cheering our dull November days and smiling through March, April, and May.

Shall we take its culture first? and treat of its varieties, its native habitats, etc., and then turn to its poetic side, leaving that till last.

It is a great mistake to plant sweet violets in out of the way corners of the garden. Frequently they are seen under trees or in other shaded positions, when they produce splendid foliage but few flowers. There are various methods of growing them successfully which I shall briefly refer to. In every case good culture in an open situation is essential. In no other way can the crown be well ripened and a plentiful supply of flowers depended upon. Strong, short-jointed, healthy runners should be procured and planted out in April in lines in fine, rich, loamy soil about a foot apart. If runners are scarce, healthy clumps may be pulled in pieces and planted. Not much appearance of growth will be apparent for some time after planting, but root-action will be going on. Keep the beds clear of weeds, and move the surface occasionally with a Dutch hoe, recalling the proverb: "If you scratch with a harrow it smiles with a harvest." I would strongly advise summer treatment, the same as for pansies, a top-dressing of rich compost or old rotten manure and leaf soil in June, and a dusting of soot between the rows. The plants ought to be freely watered and dusted with sulphur if red-spider or mildew puts in an appearance.

In September—this is one of the methods—lift the plants carefully with large balls of soil and plant in a cold frame facing south, keeping the plants near the glass and so close to each other as to allow the tips of the leaves of one plant just to touch those of its neighbour. The frame ought to be made up with open sandy soil of some depth. Sometimes the soil is made to rest on a thick layer of leaves, but this is not necessary. When moving the plants into the frames, all withered and decaying foliage should be removed, and if the weather at the time be mild and dry the sashes ought not to be put on for some days. Even after it is deemed advisable to put on the sashes plenty of air must be given, night and day, except when freezing, then the sashes require to be closed and covered with mats if the weather be very severe. If the plants become dry they must be watered in the morning, giving plenty of water between the rows, and in fine weather, even in the depth of winter, a slight syringing occasionally overhead is beneficial. If this method of culture is carefully followed out sweet violets can be had in bloom continuously from October to March.

Sometimes the plants instead of being lifted in September are framed round where they stand, and the most excellent results can be had in this way. In the milder districts of the country it is possible to obtain a very continuous supply of flowers from plants grown entirely in the open ground, in which case it is not of course necessary to make a new plantation every year, but it is advisable to have young plants constantly coming on, and every year discard the older plants just in a similar way as is done with strawberries. Seed can be easily saved from the single-flowered varieties, and it ought to be sown in lines in a cold frame, or in the open-air, and the plants pricked off or transplanted when large enough to handle, and later placed where they are to bloom.

In March or April the plants in frames should be examined, and all unhealthy leaves removed and a quantity of fine soil mixed with sand and spread over the surface to the depth of an inch or more for the purpose of helping the runners to root.

Violets, like all other flowers, should be gathered in the morning and immediately placed in water. A sufficient supply of leaves should be taken at the same time. If the flowers are to travel by post or rail they should be allowed to stand in water for a few hours, and if gathered from outside in wet weather they must be allowed to dry before being packed. Pack with their own or other leaves and tissue paper slightly moistened. If moss or damp cotton wool is used it should not be allowed to touch the flowers. Always place a piece of soft paper between them. Use small boxes and pack tightly.

The following lists embrace most of the best varieties in cultivation:

Singles.

Admiral Avellon, reddish-purple, vigorous, deep green foliage; California, violet-purple; Devoniensis, deep blue; Odoratissima, blue-violet, highly fragrant; Princess Beatrice, bright blue, vigorous habit; Princess of Wales, rich violet-blue, large and fragrant, long stalk, and strong habit; Rawson's White tinged with pink, dwarf habit; Single Red, an old well-known sort; The Czar, dark purple, exquisite perfume; Victoria Regina, rich violet-blue, bold habit, early; Wellsiana, deep purple, large, long stems, deliciously perfumed; White Czar, snow white, strong growth, and free bloomer.

Doubles.

Belle de Chatenay, pure white, large, and fragrant; Comte de Brazza; Swanley White (Syn.), snow-white, fragrant and free; De Parma, pale lavender-purple, useful for frame culture; Double Red, an old-fashioned useful sort; King of Violets, dark indigo-blue, best out of doors; Lady Hume Campbell, rich blue, fine late variety; Marie Louise, lavender-blue and white, fine winter blooms; Mdlle. Bertha Barrow, beautiful indigo blue, strongly perfumed, very free; Neapolitan, lavender with white eye, a winter-flowering sort; New York, mauve, very fragrant and fine; Parmaensis, white rose striped, a pleasing sort; Queen of Violets, white, tinted violet-rose, large and fragrant; Swanley White (Syn), Comte de Brazza.

H. C. Philbrick.

(To be continued).

Annual Larkspurs.—If a good strain of annual larkspurs is obtained there is no spot in the garden too choice for it. The flowers are extremely light and elegant, the foliage is finely cut and delicate, and the colours of many varieties are charming. If not found a place elsewhere, a good patch should be sown in the kitchen garden for giving cut flowers. The long, dainty spikes are particularly suitable for vase filling, and if cut young, last quite a long time. For very large trumpet vases I have frequently used whole plants, cutting them off near to the soil and splitting the stems before placing them in water. Seed can be sown at any time now, on a sunny border of light and sandy soil. —E. J. K.

SPINACH.

In private establishments there generally is a demand for spinach, more o less, throughout the year. It is not very fastidious as to soil, but to avoid failur as fas as possible, it is best to take precaution when preparing to see that it is well sweetened by exposure to frost by digging early. At this time, in most cases, a light application of lime and soot will assist the crop and act as a deterrent to insect life.

For the earliest sowing a high and warm border is necessary; if it has been dug as recommended, and a dry day is chosen, the usual raking will provide a proper seed bed. The drills should be drawn out a from fifteen to eighteen inches apart, and two inches deep. Sow the seeds thinly and evenly, and return the soil to the drills, leaving a level surface for the youn plants to push their way through. I the weather is genial germination quickly takes place, and as soon as the plants have their rough leaves formed, promptly thin them to about ten inches apart, to allow full development of their leaves, except in a case of scarcity, when a few rows may be left thickly to cut off wholesale until the remaining rows are ready for gathering from. With favourable weather spinach is naturally a fast-growing plant. but much can be done to forward the plants by administering light applications of nitrate of soda or sulphate of ammonia at short intervals during moist dewy mornings, or damp days, and keeping the crust of the soil stirred with the hoe. I is generally considered that the prickly variety is the best for the early and la sowings, and possibly so, but I have sown and been rewarded with good returns from the round-seeded kinds for an early crop.

For the series of sowings through April and May an open part of the garden is the best. Where judicious mixed cropping can be carried out, to make the mos of space, it is much to be recommended but spinach, as it is sometimes seen, sown thickly amongst too closely placed rows of peas, should be avoided. A much more profitable crop can be secured from the t of celery trenches, or other sites wher undue shade does not exist. A sowin in alternate weeks through the above two months, in size according to likely demands, will be advisable. The variety Monstrous Viroflay, does well, and gives fleshy leaves at this time of year whe thorough cultivation is given.

As previously mentioned, spinach makes rapid growth during hot weather, and t guard against scarcity through the plants running to seed it is an excellent plan, through June and July, to devo a north border to this crop. The plants here lay cool, their growth is more steady and they are not so liable to bolt, consequently they carry on safely over a longer time, but even here it is not prudent to sow at too long intervals, but it is reasonable to expect the sowing made at the end of July will yield a supply well into the autumn months. If economy of space in the garden has to be closely considered every other row may be gathered, removed, and the site planted with tall kales, etc., which, with their erect growth, will afford protection to the remaining rows during late autumn and early win

The final sowings are important ones as they provide the winter pickings. The exact date to sow is difficult advise, as the part of the country and position of the garden each have th effect upon the plants, but two sowings at least should be made from the begi ning to the middle of August to enable the plants to become firmly established before cold nights and frosts arrive. A south border that has been occupied by early peas or potatoes will possibly be vacant, and will provide a good friable seed bed for these sowings; if dug over, with a coating of manure mixed in, and a dressing of soot to the surface, it will suffice. The prickly varieties are to be recommended for this season; allow fifteen inches between the rows, and, as with the earlier crops, attend to the timely thinning of the plants, and, if necessary, give applications of artificial manure as advised. Do not permit the gathering of the leaves of these plants until the other crops are over and it becomes necessary, but in every way possible foster their strength for the winter.

Perpetual spinach is sometimes called the gardener's friend, and often it allays anxiety when there is a shortage of true spinach. If a sowing is made now, and another in June, in any ordinary soil, the first will carry over the summer, and the second will yield through the winter. Although it cannot be reckoned as first class, it is an excellent substitute for spinach, and I have not received complaints when sending it in for use, while a sense of security is enjoyed by having it growing as a supplement to the other spinach.

Charles Flack.

THE RUMPENHEIM LILAC.

For very many years there grew in the gardens of Cambridge Cottage at Kew (the residence of the two last Dukes of Cambridge) a pair of lilacs of somewhat unusual character. They have each formed a clean single trunk, and have never produced sucker growths from the roots as lilacs mostly do. The trunk of the larger one is 4 feet 2 inches high, and 2 feet in girth, and the flaky bark has the spiral arrangement, frequently seen in lilacs very markedly shown. These plants are Syringa vulgaris, but the tree-like character is not common in this country. It may possibly be due to their having been raised from seed, and not from cuttings as is usually the case.

Besides their unusual appearance, these lilacs, says the "Kew Bulletin," have a certain historical interest. They had both been brought from Rumpenheim-on-the-Main, near Frankfort, a favourite palace of the Hesse family. This place is frequently mentioned in Sheppard's "Private Life of the Duke of Cambridge," from which work we learn that it was bequeathed by the Landgrave Frederick of Hesse to his children jointly. He also expressed the wish that they and their children should assemble there every second year. This desire was faithfully fulfilled. As long ago as 1837, when the late Duke was but 17 years of age, he wrote, "I am delighted to be once more at dear old Rumpenheim." He made his accustomed pilgrimage to Rumpenheim for the last time on August 25, 1903.

With the death of the Duke in 1904 Kew ceased to be a place of royal residence, a distinction it had possessed since 1730, when Frederick Prince of Wales and his consort, Augusta, came to live at Kew House. Cambridge Cottage has now been given over by His Majesty the King for public use. These two lilacs have always been objects of peculiar interest to the Royal Family, especially to the descendants of the Landgrave Frederick above mentioned. H.R.H. the Princess of Wales, who is his great granddaughter, expressed a desire that one of them should be transferred to the gardens at Windsor. This was accordingly done in [illegible]. The other and larger one, which was growing in an unfavourable position, was removed on December 23, 1907, to the lawn in front of Kew Palace, a building which has even longer associations with the Royal Family than Cambridge Cottage.

LATE-KEEPING APPLES.

It would, I think, be difficult to give the names of six better and more useful late-keeping apples than those mentioned by your able correspondent, Mr. Coomber (page 178). The varieties he mentions I have been acquainted with for some years, and all have proved excellent. Bramley's Seedling is one of the very best for cropping and keeping: I have this variety as standards on the crab stock in soil that is rather gravelly and porous, yet the fruits produced are heavy and solid, and keep excellently until the middle of March. Newton Wonder I have also growing on the crab, and although the trees are not so old as Bramley's, they fruit well, and the apples are of excellent cooking quality, and of a very pleasing appearance. I believe both these first-rate late apples are from Nottinghamshire.

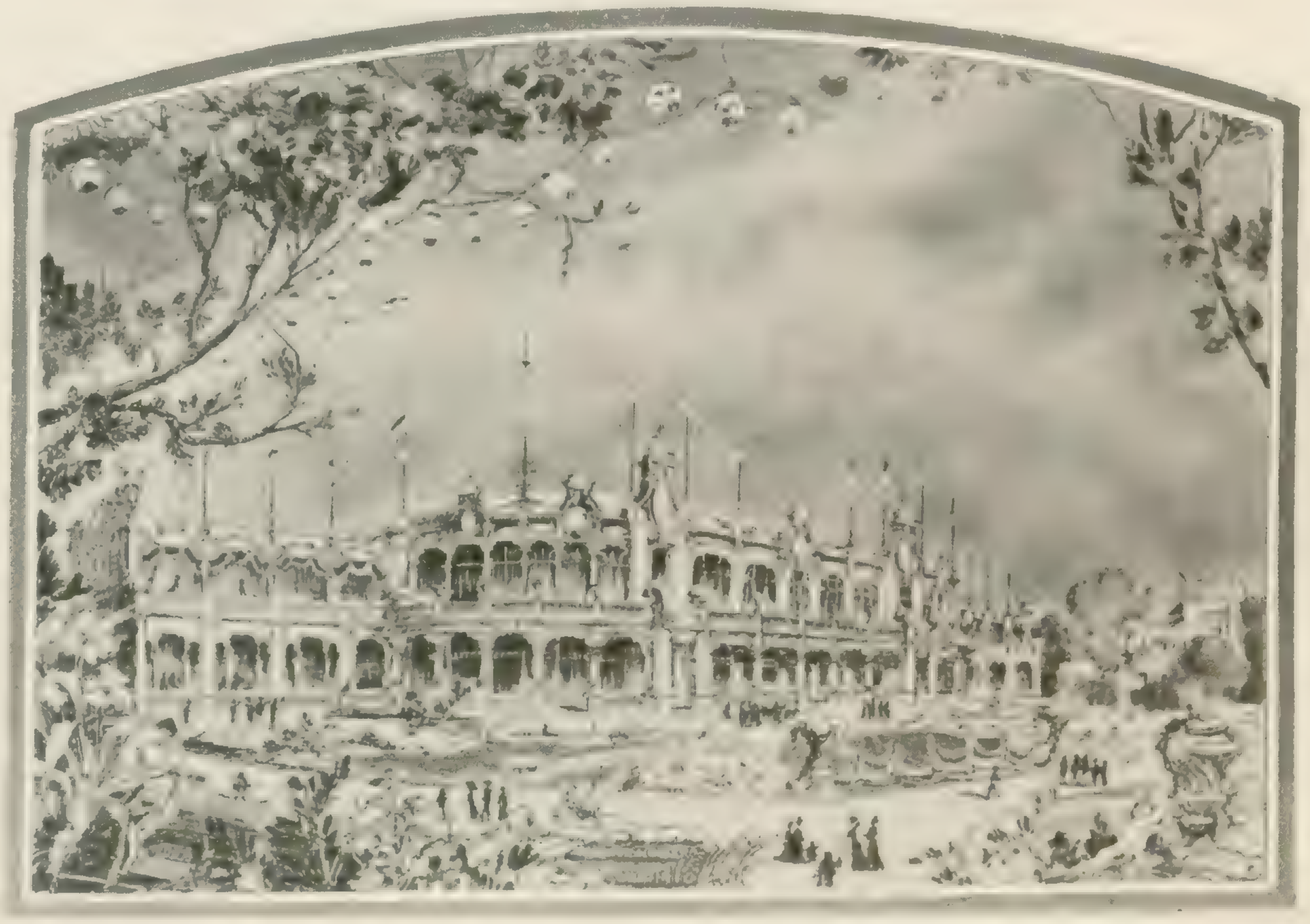
Lane's Prince Albert is both remarkable for cropping and keeping, and Wellington holds its own in many parts of the country. There are two other apples with which I have been acquainted for many years, and they might well be included among the best keeping varieties, namely, the Gooseberry Apple and Northern Greening (or French Crab), both these, if properly harvested and stored, will keep sound till the following crop is ready. They succeed well as standards, and might well be included amongst orchard varieties where lateness is considered.

My best dessert apples at the present time are Duke of Devonshire, Court Pendu Plat, Lord Burghley, and Scarlet Nonpareil. These I have growing as bushes in the kitchen garden, and I have never known them to fail in cropping. Lord Burghley, I may say, is not so free as the other three.

It would be very interesting if Mr. Coomber would give us the names of a few of the best dessert varieties for keeping in his immediate neighbourhood, the nature and conditions of the soil, also the stock employed for grafting or budding. I rather incline to the belief that the stock is not sufficiently considered for different varieties, and the nature and depth of the soil. Here the soil is light, and it would appear from the growth that the crab stock is the best and most suitable, while probably a variety which is of strong growth grafted on a deep-rooting stock, and planted on good loam of great depth, might fail to produce anything like a reasonable crop unless the roots were severely pruned. The same variety might prove just the reverse if worked on a dwarfing stock. The same may be said with regard to pears; those worked on the pear produce larger fruit than if on the quince and in light and porous soil, and just the reverse where the soil is deep and cold.

H. Markham.

Wrotham Park Gardens.



THE GARDEN CLUB AT THE FRANCO-BRITISH EXHIBITION, SHEPHERD'S BUSH.

GARDEN CLUB, FRANCO-BRITISH EXHIBITION.

In our issue of February 29 we gave a somewhat full account of the progress that is being made at the Franco-British Exhibition at Shepherd's Bush, and referred at some length to the more important of the arboricultural and horticultural features. We also mentioned that one of the most attractive and useful of the many handsome buildings that are rapidly approaching completion is that in which the Garden Club will be located. We have now the pleasure of giving an illustration of the structure, and from this it will be readily seen that it is handsome in design and noble in its proportions. We would add to what was said in the issue of the date mentioned, that the club has a frontage of 300 feet and a depth of nearly 150 feet, and, as might have been expected, is being equipped in accordance with the most advanced ideas regarding club life. Both ladies and gentlemen will be eligible for membership, and the club will be under the direction of a committee, of which the Earl of Jersey is the president.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe.—Full details on timing and stopping for Northern, Southern, and Midland growers, selections of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d., cloth, 1s. 6d., by post, 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

HARDY FERNS IN SPRING.

Most of the species of native hardy ferns are commencing in March to show signs of growth, the curled-up fronds of the crown-forming section swelling and loosening, while the growing tips of those with creeping rootstocks will have begun to extend and show vitality. At this stage, when the deciduous ferns are mere frondless stumps or clumps, and the fronds of the evergreens have evidently done their duty and will soon be replaced by new ones, it is clear that shifting, dividing, or handling generally can be effected with a minimum of damage. All, indeed, that is needed is to remember that the coming season's growth is neatly packed up in the crowns, and that therefore these must not be squeezed or damaged. All really dead fronds may be removed, but still green ones should be left, as their removal while still alive involves a certain check upon growth, and should be avoided.

In the open it is not advisable to clear away the old debris unless the crowns be subsequently sheltered from drying winds by a liberal mulching of leaves. New growth is always accompanied by the emission of new roots from the bases of the coming fronds, and in old plants these roots travel for several inches before they reach the soil. This, in their natural habitats, occurs beneath the mass of dead fronds which envelop the crown, and are usually saturated with moisture, and it is obvious that if in our desire for neatness we remove this protection and droughty March winds set in, these new roots are apt to be damaged.

Old ferns are apt to raise their crowns considerably above the ground, and when this occurs under ordinary garden conditions growth is apt to be checked, the new roots having to travel farther with greater risk of damage. This can be remedied by lifting the fern bodily and replanting it in a deeper hole, bringing the crown or crowns again to the level of the soil. Opportunity should be taken of operations of this kind to divide up such old ferns as have formed crowded masses of crowns. If growth be confined to a single crown of such ferns as Male and other Buckler Ferns, Lady Fern, and Shield Ferns, the fronds will be much more finely developed, and if the fern be one of those beautiful varieties which we advise should be grown in lieu of the common weed forms, the character will be greatly enhanced. These clumps are gradually formed by the growth of lateral buds or offsets, which compete with the central or parental one for root room below and air space above, to mutual detriment. As these develop each one forms its own bunch of roots, and becomes almost independent, only a small attachment to the main rootstock persisting. They can consequently, as a rule, be easily pulled away, and if care be taken to liberate the roots as well they will establish themselves right away when planted.

Where choice Shield Ferns (polystichums) are concerned, it often happens with many varieties of the divided forms that bulbils appear near the bases of the fronds, or even, in the "proliferum" section, all along the midribs. These are very handy for propagative purposes, as if layered with a short piece of the midrib attached they will soon root. In clearing away the old fronds of this species it is, therefore, well to keep an eye open for such bulbils, as they yield presentable plants more quickly than spores.

For the reasons given above March is a good month for overhauling pot plants, repotting and dividing, but our remarks as to division do not, of course, apply to specimen plants of the Polypodiums, Bladder Ferns, or Spleenworts, as none of these tend to depreciate in the same way as the crown formers, and are seen at their best when their creeping roots or bunches of crownlets have formed a pretty group. Under glass ferns in pots are very apt to suffer from neglect of watering, in which case the pot should be immersed in water for at least an hour to ensure a thorough soaking, otherwise the water simply runs away as fast as supplied, and no good is done at all. Ferns like a good open leafy soil, and the best compost is one part yellow or good loam, one part leaf-mould, and a liberal dusting of coarse sand. This is needed for pot culture, but out of doors good ordinary garden soil does, as a rule, very well.

Chas. T. Druery, V.M.H., F.L.S.

FUMIGATION WITH HYDROCYANIC ACID GAS.

During the past few years the method of destroying various insect pests by means of fumigating with hydrocyanic acid gas has been much advocated, and the recommendation has been made in a leaflet from the Board of Agriculture and Fisheries. For the destruction of mussel scale, woolly aphis, mealy bug, thrips, weevils, and red spider in greenhouses, etc., the method is very valuable, while it may also be employed for the fumigation of poultry houses in case of infestation by lice and mites.

Nursery stock fumigated with hydrocyanic acid gas before planting will be freed from insect enemies in all stages save that of the egg.

Materials to be Used.

The materials necessary for purposes of fumigation are:—(1) Potassium cyanide of 98 per cent. purity; (2) sulphuric acid of a specific gravity of not less than 1.83; (3) water; (4) jars and a glass measure.

The following quantities may be taken as a standard for use:—Potassium cyanide 1 part, sulphuric acid 1½ parts, and water 3¾ parts.

The proportions of cyanide, sulphuric acid, and water to be used, and the amount of space per unit of cyanide, vary slightly as recommended by different authorities, three different workers recommending one ounce of cyanide of 98 per cent. purity to every 200 or 300, or 500 cubit feet of space respectively.

The variation in the amount of cyanide depends to some extent on the character of the plants that are being treated, on their strength, whether they are dormant or active, evergreen, or deciduous, and also on the season. In the case of tender plants, one ounce of cyanide may serve for 500 cubic feet of space, while hardy plants may be treated with one ounce of cyanide to 200 cubic feet of space.

Treatment of Greenhouses, Conservatories, Nursery Stock, etc.

The glass-house or other place which is to be treated must be rendered as airtight as possible.

The sulphuric acid should be poured very carefully and slowly into the water, which may be put in an earthenware vessel, e.g. a large jam-jar. The cyanide of potassium, wrapped in thin blotting paper, should then be dropped into the now diluted sulphuric acid. The vessel into which the cyanide is dropped must be so near the door that it can be reached by the outstretched arm of the operator, who should immediately shut the door and close up its chinks by paper previously prepared. Another, and better method is for the operator to introduce the cyanide to the diluted sulphuric acid through a window, the cyanide being placed at the end of a long stick or rod, or be lowered into the acid by a string and pulley. The window must be closed immediately after the addition of the cyanide, so that the operator may escape the fumes. Strawson recommends the pouring of the diluted acid from a bottle fitted with a cork in which two slits are cut, one to let in air and the other to allow a small and even stream to flow upon the cyanide, the object being to provide a slow and even disengagement of gas. The bottle should be arranged so that it can be tilted up when all is ready.

It is of importance also that the hydrocyanic acid gas fumes be distributed over the house, and this may be done by an arrangement of fans which can be worked from the outside.

Fumigation should take place in the evening, or after nightfall, and not in strong sunlight. The temperature of the house should be from 50 degs. F. to 60 degs. F. The plants to be treated should be dry. The surface of the soil of the house should also be as dry as practicable. Experiment has shown that the eggs of the Woolly Aphis may remain unaffected, and therefore fumigation should be repeated in ten days. Eggs of the Apple Mussel Scale are also unaffected by gas of the strength mentioned.

The work should be done by a careful and skilled operator, for the cyanide and its fumes are very poisonous and dangerous to human and animal life.

The treated room or conservatory must be kept closed during fumigation from three-quarters of an hour to an hour, after which the room should be ventilated, the windows, etc., being opened from the outside, and no one should enter until an hour has elapsed. While opening the windows, etc., the operator should be careful not to inhale the escaping fumes.

It is safer not to fumigate when the plants are in bloom.

In the treatment of nursery stock the bushes or young trees should be placed in an airtight box or canvas tent of known capacity and subjected to the fumes of hydrocyanic acid gas for one hour. Large numbers can be treated at once at little expense.

When the time has expired the tent or box should be opened in such a way that the wind blows the fumes away from the operator, and should be left to ventilate for half an hour before the stock is removed.

Trees in the orchard may also be treated by the use of a canvas tent or cover.

Canvas Covers for Fumigating.

The practice of using canvas covers for fumigating is not so common in Great Britain as in some other countries, and the method followed in the colonies may here be given for the guidance of those who wish to undertake orchard fumigation with hydrocyanic acid gas. According to Claude Fuller, the Natal Government entomologist, the covers should be of a light, durable material, and comparatively gas-tight, the most suitable probably being canvas. Eight-ounce American duck canvas is recommended.

There are three types of covers: Sheets, tents, and box covers. The sheets are octagonal in form, and can be further enlarged by sewing on a "skirt" round the edge. These can be easily lifted over small trees up to six or seven feet in height, above which a hoisting apparatus must be used. Tent covers may be used for trees up to 13 feet in height. They take the form of dome-shaped tents, the mouth of which is kept open by a ring of gas piping passed through canvas loops, and they can be quickly lifted over and removed from 8 to 13 feet trees by a couple of men, where the hoisting of a sheet would take three or four. Box covers are made to any convenient size by covering a wooden framework with canvas or calico; the latter material should be painted or oiled to make it sufficiently gas-tight.

Caution.

As both the potassium cyanide and the hydrocyanic acid gas are deadly poisons, the former should be kept in a tightly stoppered bottle and labelled "Poison," whilst the gas as generated must on no account be breathed. Fumigation should not be carried out in a high wind, nor when the trees are wet, but otherwise it may be done at any season of the year.

GARDENING AND GARDENERS.

In his criticism of my "hot and cold effusion" Mr. J. Weathers says (page 137), "Your correspondent evidently thinks the gardener ought still to continue to allow himself to be injured by unscrupulous people." I think nothing of the kind. Nor did I say that "the gardener was selfish or foolish who endeavoured to protect himself and to obtain a fair remuneration, etc." What I maintain is that it is both selfish and foolish to be ever anxious to keep others from earning as good a living as they can, and improving their position as best they are able. When Mr. Weathers gives his definition of "labourers, interlopers, and outsiders," it is very evident that he and I are thinking of two totally different classes of men. I am not upholding men who have "never spent an hour in learning gardening," nor the "man who pretended to be a gardener when he knew he was not." I do not believe a thoroughly good gardener is at all afraid of that class of men, nor do I think they have the power to injure a really qualified man.

The men I seek to defend are those who, though illiterate, and consequently unfitted for technical examinations or tests arranged by a committee, commenced either as lads, or later in life to work in gardens as labourers, and who, by dint of perseverence and unceasing effort, have gained sufficient knowledge and practical experience of the ordinary routine of gardening to enable them to take perhaps a single-handed place, or a decent position in a nursery or large private establishment. I have had a good many such men working with me, and under me in my time, and although some of them, if put to the test of an examination, would surely fail, and therefore be classed as "unqualified," they have been well able to discharge the duties devolving upon them to the entire satisfaction of all concerned. I say, therefore, we have no right to endeavour to oust these men from the profession.

By all means let the man of higher qualifications take precedence. Let the best men make the best of their abilities, and let the "B.G.A." help them to do so. It is, however, worthy of note that it is not from the best men, or those who have climbed high, that these bewailings and complaints arise. It is those who are but little, if any, better qualified than those whom they denounce, that are ever advocating what I have called "barricading schemes."

Mr. Weathers tells us what we have often heard before with regard to the purpose for which the "B.G.A." was established. He further states that "the only chance for the professional is to join the 'B.G.A.'" May I ask him to give just a little more information? Will Mr. Weathers kindly tell the readers of the Gardeners' Magazine what the "B.G.A." has thus far accomplished? I do not mean how many members it has enrolled, but what has it done for its members?

I know full well that the society is as yet too young to have accomplished great things, but I feel sure a statement of what has been accomplished up to date towards raising the status of the gardener will enable readers to decide whether, as Mr. Weathers says, the only chance for the professional is to join the "B.G.A." A Gardener.

The views expressed by those who have written on this subject tend to show that much difference of opinion exists regarding the all-important question of gardeners and gardening. I hope that for some considerable time you will give as much space as possible to the discussion, because it is undoubtedly one of the most interesting topics that has been broached in the gardening Press for a long time past, and one which many who have hitherto disregarded should pay close attention to. Especially is this attention necessary at the present time, for I imagine there is a growing tendency to check the aspirations of the garden labourer who endeavours to raise himself above his present unsatisfactory station.

The question arises, How can we improve the existing state of affairs? I maintain that education will be a more effectual remedy than the useless feeling of discontent, and the peculiar ideas that many have the propensity to foster and disseminate. It is mainly by education that a man can be made a better workman or a workman a better man. The development of societies which make their main objects the betterment of the classes by union—whether trust or trade union—will not encourage the self-reliance which, combined with self-denial, appeals to me as being essential attributes in all good characters.

Whatever is done for some takes from them the stimulus to work for themselves, and it is the individual effort, blended with a sense of duty to others, that will gradually bring about an improvement. Anything that has a tendency to undermine unselfish individuality should, in my opinion, be avoided, and, unfortunately, this danger is not only apparent in such bodies as the British Gardeners' Association, but is real. Individuals may be appeased, but how can unions; there is always an aggressive faction which have no regard for tolerance.

Your correspondent who advocates supporting mutual improvement societies advances my opinion. I think they are excellent, and a means whereby we may understand each other better. Frank discussions and criticism should be invited, and the papers read should not be confined so much to gardening, but embrace such subjects as industry, character, recreation, etc., for all such topics have a marked effect on those who study and wish to cultivate good fellowship, and discussion on these will enlighten us on many points, and perhaps convince us that whatever position we are in, whether employer, gardener, or labourer, in authority or subordinate to it; and however necessary social distinctions may be, moral distinctions should be non-existent.

I hope others may consider the occasion demands more discussion on this subject. I am sure there are many like myself who wish to improve the state of affairs generally, and I hope I may have the pleasure of knowing that my views may be accepted by many readers of the Gardeners' Magazine. F. W.

Acokanthera spectabilis.—This is occasionally met with in gardens under the name of Toxicophlæa spectabilis, but it is not at all common. The delicious fragrance of its blossoms, and the season of the year at which they are produced, have obtained for it the popular name of the Winter Sweet, but that title is also used for the delightful Chinese shrub, Chimonanthus fragrans, whose sweet-smelling flowers form such a notable feature on a bright winter's day. To have it at its best the chimonanthus needs to be trained to a south wall, as not only does this ensure thorough ripening of the wood, but it also serves to protect the midwinter blossoms. On the other hand, the acokanthera requires the temperature of an intermediate house, while it will also do well in the stove. It forms a somewhat loose-growing shrub, and as a pot plant is not, as a rule, very shapely, but it also does well trained to the roof, and this is perhaps the best way to treat it. The leaves are oval in shape, from four inches to five inches long, bright green, and somewhat leathery in texture. The flowers, borne in dense clusters from the axils of the leaves, are individually small and white, but as each cluster contains a large number of blossoms, a plant when at its best makes a goodly show. Added to this, their delicious perfume soon makes their presence manifest even in a large structure. This acokanthera is a native of South Africa, from whence it was introduced in 1872.—W. T.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

MEXICAN LÆLIAS. — As the flowering season is now over the various species and natural hybrids of this section will be commencing to rest. I have on many previous occasions pointed out in this column, that the success or failure in the matter of flowering the following season depends largely upon the proper resting of the plants. Where a house is provided for the cultivation of this section of lælias there is very little difficulty in providing the conditions suitable; while the plants are in a dormant state the bright rays of the sun and ample ventilation are absolutely essential to enable the pseudo-bulbs to become properly ripened. Where ample ventilation is provided no shading will be necessary, and sufficient moisture to keep the pseudo-bulbs and foliage plump is all that is necessary.

L. ANCEPS.—Where this has to be grown in the same house with other plants, a portion of the house should be set apart for them, where less shading and drier conditions may be given. Every endeavour should be made to retard growth. It is the plants (even in the typical, coloured forms) that start into growth early, that fail to produce satisfactory flowers. A cool, airy greenhouse or intermediate house, where ample ventilation can be given when the outside conditions are favourable, meets their requirements during the dormant season. The various forms of L. anceps should be extensively grown where there is a demand for cut flowers during the months of December and January, as for decorative purposes there is nothing more serviceable to be had at that season, and as plants are plentiful a supply may be procured at a reasonable outlay. I might point out that it is practically useless to attempt to grow L. anceps in the neighbourhood of London and other large towns and smoky districts, where the fogs are bad in winter, as the least sign of fog generally carries off all buds and flowers.

REPOTTING.—I would not advocate disturbing large specimens of L. anceps more often than is absolutely necessary. The plants frequently are found to do well in an apparently starved and crowded out state in a pan or basket, but when disturbed for repotting they take a very long time to become properly established. I prefer to repot when the plants start into new growth, but at the present time I would advise an examination to ascertain the condition of the compost, and those plants which are to be repotted should have the rhizome severed between the second and third pseudo-bulbs, where possible. This will induce the back eyes to plump up, and, although such growths may be late in starting, they frequently produce flowers, in the white section, where the newly-potted leading growths fail. Where it is desired to repot at the present season, when the new roots are in an active state, the plants should be subjected to the conditions of the cattleya house, where every encouragement may be given to enable the plants to become re-established. I prefer growing the plants in teak baskets, allow ample space, so that the plants may have room for two or three years. Provide plenty of clean drainage, and use a compost of about equal portions of fibrous peat and chopped sphagnum moss.

COCKROACHES AND WOODLICE are very troublesome, as they eat the new roots of these lælias. Some hollowed-out potatoes form good traps, while Chase's beetle poison placed about the baskets and stages will help to keep the pests in check.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

THE CONSERVATORY should now be in its brightest possible condition; in fact, I have often noted that towards the end of March, in favourable seasons, there is a preponderance of flowering plants. What with bulbs in general, forced plants of various kinds, and plants flowering in a natural manner, it is comparatively easy just now to have a surplus of good things. When such is the case a special point should be made of retarding the latest of any given kind as much as possible, consistent with safety. A cold frame will now be quite safe for late bulbs, and if this can be given a north aspect it will be all the better. All spring bulbs come on with a rush after a few sunny days, whilst at the same time, if precautions in shading be not taken, those now in full bloom will fade all too soon. With a surplus of good things just now there may be a tendency towards overcrowding, and this is a decided mistake, for it is thus possible to detract from the individual merits of the plants. For a time, if possible, some plants should be transferred to a more suitable house to become re-established. Small ferns, grevilleas, aspidistras, Ficus elastica, and such-like plants come under this category, so do the cool house palms. Fire heat can now be dispensed with under the average of conditions, and so long as 40 deg. at night can be maintained it is better not to use it, whilst if a little air can be admitted during the night it will be beneficial.

GLOXINIAS.—These become more popular every year, and no wonder when we consider the extreme loveliness of the flowers of many of the choicer strains; the end of March is a good time to sow the seeds, which must be done with great care, similarly, in fact, to calceolaria seeds, merely covering them with silver sand, and placing them in a shady position in a stove or cucumber house. A square of glass placed over the pan or pot containing the seeds, this being covered with moss, will reduce the need for water until the seeds germinate. The young seedlings must not be exposed to hot sun, especially when the foliage is wet, or they will soon be ruined. Young gloxinias delight in plenty of heat and moisture. If moisture is lacking, they soon become infested with thrips—their chief enemy. Some growers are opposed to syringing the foliage of gloxinias, but I have never found any harm from the practice if it is discontinued as soon as the plants come into bloom. Both the erect and drooping strains have their special beauty, but the former are more in favour. The spotted varieties are also charming.

HYDRANGEA HORTENSIA VARIEGATA.—This is one of the most useful ornamental-foliaged plants for a greenhouse in early spring, especially where there is a little artificial warmth. The young growths take on a delightful variegation, and it is from these shoots cuttings should now be made. It taken off when three inches or four inches long they strike readily in a gentle bottom heat, and quickly grow into size. To have the variegation as perfect as possible, light and sun as well as warmth are necessary.

HARRISON'S GIANT MUSK.—This plant is a great favourite, especially in pots. In some instances I have seen it growing very luxuriantly. This cannot be raised from seed, at least, I have never known it to mature seed. Old plants that have been kept through the winter should now be placed in warmth, and they will soon start into growth, and cuttings will root freely in any position where they can be kept from sun and air. If the young plants are grown on in warmth they will make growth rapidly. I have known good plants established in about a month from the time the cuttings were potted off.—T. B. Field, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

THE RECENT STORMS will have provided plenty of cleaning up work. Carefully examine all freshly planted and wind shaken plants and trees, and insure them being made firm in the ground. Also see that all are properly staked and secured to prevent repeated loosening in ground,as when this takes place it is quite impossible for anything to root and thrive properly.

HARDY OR BRITISH FERNS should now be attended to. Remove all old dead fronds, and plant, clean, rearrange, etc. Where there is no replanting to be done a good top-dressing of loam and leaf-soil is very helpful; a shady position, though not necessary, is very beneficial if the shade is not too dense. When planting retain as much soil at the roots as possible, but do not bury the crowns deeply.

ROSES.—The last of the protecting material must now be removed from dwarf roses, and pruning may be proceeded with, though if desirable to ensure a late crop of flowers, it may be deferred until early in April, or if in what is known to be a position or locality exposed to late frosts, it is better to postpone pruning. Rose or briar hedges may be attended to and treated according to varieties. Strong growths may be tied in instead of removing them. Never attempt anything in the way of clipping.

GLADIOLI AND GALTONIAS (Hyacinthus candicans) may now be planted. The former should be planted about three inches deep, and galtonias a little deeper. If the soil is at all stiff or heavy a quantity of lighter sandy soil should be placed at the base of each bulb; they may be planted either singly in borders, or used in large beds as dot plants, or breadths of them may be arranged with some of the shorter growing annuals as a ground work for them, when very pleasing combinations may be made.

DAHLIA ROOTS.—Where early flowering dahlias are required the old roots may now be removed from the stores, divided, if necessary, boxed or potted up and placed in a cool light place, where growth may proceed gradually; these will bloom earlier than young plants though the flowers will perhaps not be quite so large. Early in April will be soon enough to start the general batch.

ANNUALS may still be sown under glass if necessary, as well as the general batch outside. Choose a warm, well-sheltered spot, and well prepare the soil. Earlier sowings under glass should be pricked off into boxes or cold frames, where they can be grown on quite sturdily without coddling; endeavour to have everything well hardened off. Portulacca is one of the best and prettiest annuals for sowing on hot gravelly or sandy soil, but April is soon enough to sow this; it transplants badly, and should be sown where it is to flower.

BEDDING PLANTS.—Continue to box up or pot off rooted plants of lobelia, ageratum, iresine, alyssum, fuchsias, and other bedding plants; grow them in a genial temperature until the required size is obtained. If there is still an insufficiency of plants required for bedding a further batch of cuttings may be inserted, and grown as quickly as possible without weakening them.

EARLY FLOWERS.—Pay close attention to all expanding flowers; many of the bulbs will rapidly approach their best condition; see that all flowers needing support are given it, to prevent them breaking or falling on the ground. A surface dressing of cocoanut-fibre on bulb beds is a good preventive of damage from splashing. Note the habits of different varieties, with a view of arranging for next season's planting, both in regard to colour and height. The sweet perfume of the wallflower will now become more and more pronounced; note any defect in the strain or variety.—E. F. Hazelton, Knowsley Gardens, Prescot.

HARDY FRUITS.

FIGS.—In the more favourable parts, where figs are grown, pruning and training may now be proceeded with, as by this time the shoots likely to produce the most fruit are readily ascertainable. Hard pruning should not be practised, but, if growing on walls, some amount is necessary annually to keep them in reasonable shape. The branches should not be too thickly trained, as they require ample room for extension. In cases where space is somewhat limited, and the trees grow too strong to be fruitful, the roots must be pruned at intervals. The best and heaviest crops of figs are usually to be found on trees whose roots are somewhat restricted, or when growing by the side of hard paths or roads, where the roots cannot easily penetrate, and the branches are allowed ample freedom. Be careful not to shorten back the young, promising, fruitful shoots, some of which may be trained over the older branches in a downward direction. In the more unfavourable parts, and where protection has been employed during the winter months, the material should now be gradually removed, and when the shoots have been somewhat exposed for a time pruning may be taken in hand and finished as soon as possible. Those intending to plant fresh trees should by all means avoid a rich soil; good drainage is essential, and a compost of moderately heavy loam, with plenty of old brick mortar, chalk, and a little well-decayed horse manure, the whole of which needs to be well mixed together and made firm before planting. I know of no variety for outside culture equal to Brown Turkey.

PEACHES, NECTARINES, AND APRICOTS. — In some favourable parts of the country good crops of fruits are annually produced without much protection, but in other localities, to be on the safe side, protection in most seasons is absolutely necessary. When the flowers are perfectly dry a few degrees of frost would seem to do no harm; on the other hand, if wet, 5 or 7 deg. is quite sufficient to destroy the greater part of the strongest and best blooms. Those favoured with glass coping experience but little difficulty, and also if blinds are suitably fixed and drawn down nightly and on very cold days, plenty of fruit will set. In Kent, where, under my care, I had about 400 yards run of peaches and nectarines on the open walls, and only in one season in thirteen years was the crop light, the trees were protected with two thicknesses of fish-netting fastened to the top of the walls, and kept at a reasonable distance from the trees by the aid of light poles sunk into the ground three feet away from the bottom, and the tops resting on the top of the walls, each pole being made quite secure. Here, where the climate is certainly less favourable, I always tie a few small Portugal laurel branches at intervals all over the trees, and then hang up two thicknesses of ordinary fish-netting, and, although this entails a little extra work, I am more than satisfied with the results. Apricots are treated in the same way. As the season advances, and the weather becomes warmer we gradually remove the material until it is safe to dispense with it entirely. A very good peach, which ripens just after the Dymond, is the Marquis of Downshire (Royal Ascot). With us this is one of the very best of the late midseason peaches.

ORCHARD TREES. — The time has now arrived when all young newly-planted trees should be finally staked and made quite secure against wind. First give the soil about the roots a good firm tread, and then drive in a good stake (if such was not done at the time of planting), place a soft pad of hay or cloth round the stem to prevent injury to the bark, and finally tie with good stout tar twine. Do not forget to thoroughly examine all kinds of young fruit trees, and should the ties be pinching the bark, renew such without delay, otherwise a great deal of injury may be done. After these have been made good see that the labels are correctly placed. If the system of hanging the labels by wire to the branches is used ample room must be allowed for thickening of the wood. I have seen much harm done to trees when wire ties have been overlooked. In some gardens lead labels are employed, the names being stamped thereon; the label is fastened to a stout stake eighteen inches in length, and then driven firmly into the ground, six inches away from the stem, so that no difficulty is experienced in finding the names in summer-time when the trees are in leaf. Take care that neither rabbits nor hares bark the trees. a strip of wire-netting placed round each stem, allowing ample room for the stem to thicken, answers well, and will last for several seasons.—H. Markham, Wrotham Park Gardens.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

St. Patrick's Day was celebrated gaily at the Royal Horticultural Hall, Westminster, where a wonderfully fine and interesting display of flowers and plants was made, and there was a very large attendance of visitors to see the good things provided. Early spring flowers were a great feature, but orchids, forced flowering trees and shrubs, cinerarias, carnations, and cyclamens were also splendid.

FLORAL COMMITTEE.

A bank of well-grown cinerarias was exhibited by Messrs. Sutton and Sons, Reading, and the flowers were all of pink or blue shades; the former showed a great variety of shades, from very pale pink up to deep old rose, while the blue varieties were very bright and clear. At one end of the bank was a small group of the curious cactus cinerarias. The Misses Hopkins, Shepperton-on-Thames, showed a small and bright group of alpines, chiefly anemones, scillas, primulas,and primroses. Some very beautiful carnations,all popular perpetual-flowering varieties, were shown by Mr. W. H. Page, Tangley Nurseries, Hampton, and with these were a few vases of Lilium longiflorum. Mr. H. Burnett, Guernsey, brought over some particularly fine carnations; the flowers of Mrs. Lawson, Marmion, Mrs. Burnett, Britannia, and Enchantress were grand.

A charming display of Primula cashmeriana and P. c. alba, with Daphne Mezereum, Scilla siberica alba, Adonis amurensis fl.-pl., and Cyclamen ibericum was made by Messrs. G. Jackman and Son, Woking, Surrey. Hybrid freesias, chiefly orange-tinted and lilac-coloured varieties, came from Messrs. Sutton and Sons, Reading; these show the interest now being taken in these fragrant flowers. In Messrs. Barr and Sons' group crocuses were a conspicuous feature, and with these were Rhododendron dahuricum, Oriental hellebores, muscaris, spiræas, scillas, forsythias, etc.

A handsome lot of perpetual flowering carnations from Messrs. Hugh Low and Co., Enfield, attracted a great deal of attention, as the flowers were large and bright; with these were Gerbera Jamesoni, about two dozen kinds of acacias, such as A. Drummondi, A. armata, etc., and a collection of Indian azaleas, and daphnes. Rose and pink-coloured cinerarias were extensively shown by Mr. J. Streeter, gardener to Mrs. H. S. Barton, Birtley Gardens, Bramley, Guildford; some of the plants carried very large heads of bloom; some cyclamen flanked the cinerarias. The Misses Kipping, Hutton, Essex, contributed a collection of coloured primroses and other alpines. Forced daffodils and muscaris, Rhododendron præcox, spiræas, Saxifraga Burseriana, primulas in variety, a beautiful pan of Saxifraga Boydi alba, anemones, and hardy heaths came from Mr. Field, gardener to E. Hambro, Esq., Hayes, Kent. Messrs. Jarman and Co., Chard, showed a few cactus-flowered cinerarias.

Forced flowering trees and shrubs were well shown by Messrs. James Veitch and Sons, Chelsea; there were lilacs, azaleas, and rhododendrons, Viburnum opulus sterile, fine wistarias, laburnums, the bright Cydonia Maulei, Cerasus serrulata, standards of Forsythia intermedia, and Staphylea colchica. The fine new Vitis Henryana and Libocedrus macrolepis were also staged by the Chelsea firm. Splendidly-grown cyclamens were staged by Messrs. James Veitch and Sons, these represented a very fine strain as in every case the flowers were of large size and substance, and the colours were clear and rich. The plants were also very freely flowered, and most effective. The same firm had a splendid lot of Primula Kewensis, Streptosolon Jamesoni, Indian azaleas—the latter were mostly of pyramidal shape, and very showy.

Gorgeously coloured bushes and standards of Azalea mollis were shown by Messrs. R. and G. Cuthbert, Southgate, Middlesex, and these were boldly grouped with viburnums, cytisus, lilacs, the deep-hued Magnolia Soulangeana nigra, and Prunus triloba, the whole making up a very fine and effective exhibit. Mr. L. R. Russell, Richmond, put up a very attractive group of Azalea mollis, forced lilacs, wistarias, Prunus triloba, and Clematis indivisa lobata.

A neat rock garden, prettily planted with alpine flowers and shrubs, was submitted by Mr. H. C. Pulham, Elsenham, Essex. Cyclamens were magnificently and extensively shown by the St. George's Nursery Company, Harlington, Middlesex. Alpine shrubs, primulas, saxifragas, etc., were exhibited by Messrs. J. Cheal and Sons, Crawley. Zonal pelargoniums in big bunches were famously displayed by Messrs. Cannell and Sons, Swanley; the pips and trusses, and the grand colours of Lucania, Saxonia, Umbria, Arabic, Hibernia, and Aldenham were splendid. A bolder display of alpines was made by Messrs. T. S. Ware, Lim., Feltham, whose anemones, saxifragas, and primulas were especially attractive; this firm has also a very fine strain of Primula japonica.

Some charming roses were exhibited by Mr. George Mount, Canterbury, who once again showed beautiful flowers of Mrs. J. Laing, Joseph Lowe, Richmond, Frau Karl Druschki; the new Joseph Lowe was well shown, the blooms fine, and on long stems. Messrs. J. Peed and Son, West Norwood, staged a good strain of Primula obconica, some early daffodils, primroses, saxifragas, and other alpines. A fine corner group of forced double peaches—white and rose coloured, and various pyruses, was set up by Messrs. W. Paul and Son, Waltham Cross; the yellow Banksian rose and the rare dwarf yellow Rosa Hugonis also came from Waltham Cross.

A bright exhibit of forced shrubs and early alpine flowers was arranged by Messrs. W. Cutbush and Son, Highgate; magnolias, spiræas, and lilacs were notable features. Miss A. M. Smith, Barnham, Bognor, showed some very good double primroses. From the Guildford Hardy Plant Nursery Company, Guildford, came Pulmonaria saccharata, saxifragas, and hardy heaths. In a second group Messrs. Cutbush and Son had fine batches of hepaticas, Tulipa Kauffmanniana, daffodils, hardy heaths, Rhododendron canadense, Primula rosea, and P. Forbesi.

In the large display made by Messrs. H B. May and Sons, Edmonton, there were batches of the pink Azalea Madame Morrent, fine cyclamens, Clematis Fair Rosamund, C. Lady Londesborough, C. Lord Wolseley, C. Miss Bateman, C. Mrs. Quilter, Primula Kewensis, and the useful Pelargonium Clorinda. The same firm had a number of new ferns, including the beautiful Nephrolepis Whitmani.

ORCHID COMMITTEE.

Mr. G. G. Whitelegge, gardener to J. Bradshaw, Esq., The Grange, Southgate, submitted a fine lot of orchids, and the especial feature of the group was the number of white cattleyas; these were C. Trianæ Esmeralda, C. T. Oberon, C. T. Prima Donna, C. T. alba, and C. T. Lowiæ; besides these there were many beautiful white forms of Lycaste Skinneri, Odontoglossum Rolfæ Kathleen, O. excellens Lowiæ, O. Queen Alexandra—very fine, and O. Harryano-crispum. A few grandly grown orchids were submitted by Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester, and the varieties were as fine as the culture. There was an Odontoglossum Adrianæ with a spike 4ft. 6in. long, and carrying a hundred flowers; a number of beautiful O. crispum, O. Andersonianum Westonbirt var., O. Queen Alexandra, Cattleya Enid Westonbirt var., L.-c. Luminosa Westonbirt var.—very beautiful, Dendrobium Perseus aureum, and D. Melpomene.

Messrs. Sander and Son, St. Albans, showed Cypripedium Rothschildeanum, Odontoglossum Harvengtense nobilior, O. Lairesse, L.-c. Bletcheyense, the curious Ophrys speculum, O. fusca, O. lutea major, and Cœlogyne Lawrenceana, and Cynorchis Kewensis. Messrs. Hugh Low and Co., Enfield, contributed a group of orchids, dendrobiums and odontoglossums being the chief features; there were also Arpophyllum hyacinthum, Cypripedium Graceæ, and Cymbidium Wiganianum.

Odontoglossums were brightly shown by Mr. Balmforth, gardener to F. Menteith Ogilvie, Esq., The Shrubbery, Oxford; O. crispum was prominent in great variety, and there were examples of O. triumphans and O. crispo-Harryanum. Messrs. Charlesworth and Co., Bradford, submitted Lælio-cattleya Elinor (A.M.), a beautiful rich yellow hybrid from L. Coronet and C. Schroderæ; Odontoglossum amabile, O. Gladys, Odontioda Heatonense, and the curious Miltonia Warscewiczi. From M. T. Pauwels, Meirelbeke, Ghent, Belgium, came Vanda suavis pallida (F.C.C.), a fine plant carrying two spikes, one having a dozen big white and buff flowers.

A group of very beautiful odontoglossums was set up by those very capable growers, Messrs. J. and A. McBean, Cooksbridge, Sussex. The varied forms of O. crispum were lovely, and all grandly grown, and a few small ones were brightly coloured and of fine form. The general shape and substance of the blooms was remarkably good. O. Adrianæ, O. Harryano-crispum, O. c. King Richard, O. c. Titus, O. c. Campania, O. excellens, etc., were also included. Mr. G. E. Day, gardener to H. S. Goodson, Esq., West Hill, Putney, showed a small group of odontoglossums that included O. Vuylstekei, O. crispum Lily Bourdas, O. Harryano-crispum, as well as Angræcum Sanderianum and Miltonia Phalænopsis.

Mr. White, gardener to Sir Trevor Lawrence, Bart., Dorking, showed a big plant of Brasso-cattleya himalayana carrying about four dozen white and purple blooms—a cultural commendation was granted. Mr. De Barri Crawshay, Sevenoaks, sent up Odontoglossum Waltonense, O. Elector, and O. Carmen, the latter a very pretty cross between O. crispum and O. Crawshayanum. Cattleya Suzanne Hye de Crom (F.C.C.), a beautiful white cattleya with yellow-throated lip, was shown by M. Jules Hye de Crom, Ghent, Belgium. Messrs. Heath and Son, Cheltenham, contributed a few sophronites, Epiphronitis Veitchi, dendrobiums, and cattleyas, and had also a small exhibit of primulas, saxifragas, and other alpines.

Messrs. J. Cypher and Sons, Cheltenham, had an excellent group of orchids that included numbers of beautiful dendrobiums, cypripediums, Epiphronitis Veitchi, Sophronitis grandiflora, Odontoglossum ardentissimum, Cypripedium Beekmanni, and the pretty C. Venus. Mr. W. P. Bound, gardener to Sir J. Colman, Bart., Gatton Park, Reigate, showed a group of Dendrobium Thwaitesiæ, showed how greatly the seedlings from this cross between D. splendidissimum grandiflorum and D. Wiganiæ var.

Mr. A. W. Jenson, Lindfield, Sussex,showed both cattleyas and odontoglossums in variety. Mons. M. Mertens, Mont St. Amand, Ghent, brought over a few good odontoglossums and cypripediums, all unnamed. Messrs. T. Moore, Lim., Rawdon, Leeds, showed Epiphronitis Veitchi, numerous dendrobiums, Phalænopsis Schilleriana, dendrochilums, and cypripediums.

DAFFODIL COMMITTEE.

This committee had very little work to do. The only exhibit before it was one of forced daffodils, a very clean and bright lot of flowers, shown by Messrs. Barr and Sons, Covent Garden. The committee resolved that varieties gaining awards and certificates be placed on a separate table in one of the annexes instead of being returned to the group.

FRUIT COMMITTEE.

Mr. W. J. Russell, Cyprus, showed a lot of dishes of magnificent oranges. Some of the fruits were of unusual size; the varieties were not named, but there were both oval and round varieties, and the largest of the former were 1½lb. weight. Messrs. G. Bunyard and Co., Maidstone, and Mr. A. Dean, Kingston-on-Thames, both showed apples, the Maidstone firm staging thirteen dishes, but the fruits disappeared in a remarkable manner.

CERTIFICATES AND AWARDS.

First Class Certificates.—Vanda suavis pallida, from M. Theodore Pauwels, Meirelbeke, Ghent; Cattleya Suzanne Hye de Crom, from M. Jules Hye de Crom, Ghent.

Award of Merit.—Lælio-cattleya Luminosa Westonbirt var.; and L.-c. Enid Westonbirt var., from Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

MEDALS.

Gold.—Messrs. James Veitch and Sons, Chelsea.

Silver-gilt Flora.—Mr. Whitelegge, gardener to J. Bradshaw, Esq., Southgate; Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

Silver-gilt Knightian.—Mr. Ansel, Cyprus, for oranges.

Silver-gilt Banksian.—Mr. Eric Hambro, Hayes, Kent; Messrs. R. and G. Cuthbert, Southgate; Messrs. H. B. May and Sons, Edmonton; Messrs. W. Cutbush and Son, Highgate.

Silver Flora.—Mr. L. R. Russell, Richmond; Mr. G. Mount, Canterbury; Mr. Burnett, Guernsey; Messrs. Hugh Low and Co., Enfield; Messrs. J. and A. McBean, Cooksbridge; Mr. Jenson, Lindfield; Messrs. J. Cypher and Sons, Cheltenham; Mr. Day, gardener to H. Goodson, Esq., Putney; Messrs. H. Low and Co. (orchids).

Silver Banksian.—Mr. W. H. Page, Tangley Nurseries, Hampton; Messrs. H. Cannell and Sons, Swanley; Messrs. William Paul and Son, Waltham Cross; Messrs. Barr and Sons, Covent Garden (one for hardy flowers and one for daffodils); Mr. Menteith Ogilvie, The Shrubbery, Oxford; Messrs. T. Moore, Lim., Rawdon, Leeds; Messrs. Sander and Sons, St. Albans.

Bronze Flora.—Mr. Streeter, gardener to Mrs. Barton, Bramley, Guildford; Messrs. T. S. Ware, Lim., Feltham; St. George's Nursery Company, Harlington.

Bronze Banksian.—Mr. R. Sydenham, Birmingham.

LECTURE ON FLOWERING TREES AND SHRUBS.

At the afternoon meeting Mr. George Paul, V.M.H., presided over a crowded meeting of Fellows, when Mr. George Gordon, V.M.H., gave a lecture on "Beautiful Flowering Trees and Shrubs," illustrated by between sixty and seventy lantern slides.

In his opening remarks Mr. Gordon said that until within a quite recent period one of the weak points in the formation and management of gardens was the failure to appreciate the importance of the more beautiful forms of arborescent vegetation in the creation and improvement of garden scenery. As the result of this failure in days gone by large numbers of gardens now lack the beauty and the interest which they might, and indeed should, possess. In a considerable number we find trees that belong to the hedgerow and woodland, instead of trees of more moderate stature and remarkable for the beauty of their flowers or foliage, or distinguished by their elegance of growth. In the park and in pleasure grounds of so large an extent as to afford space for their development there was no objection to the arboreal features containing a due proportion of oaks and elms, and of chestnuts and beeches. But in gardens of moderate dimensions there was not room for forest trees, and, therefore, trees that are of moderate size, and possessing some distinctive attribute of beauty, should alone be planted. More especially did it appear desirable that trees and shrubs remarkable for the beauty of their flowers should be more fully utilised, for they are so numerous as to afford a wealth of material for the production of colour effects.

It might be said that, given mild winters, a continuous procession of flowering trees and shrubs might be had throughout the year. The number of kinds flowering during the winter months is somewhat larger than was generally supposed to be the case, and a considerable proportion were decidedly attractive. But his object was to direct attention to the more beautiful kinds that bloom when the garden can be fully enjoyed, and that can also be successfully grown under ordinary conditions, he should, therefore, have to pass over those blooming in winter, and take as his starting point the almonds and double-flowered peaches, whose attractively coloured flowers are so welcome in the closing days of March. The double-flowered peaches, of which there are white, pink, and brilliant red forms, were recommended as especially suitable for small gardens, for, while immensely attractive, they do not soon outgrow a very moderate amount of space.

The charm of the Snowy Mespilus (Amelanchier canadensis) was referred to, and the immense value of the deciduous magnolias flowering early in the season was insisted upon. Magnolia stellata, in its white and rose forms, the Yulan (M. conspicua), M. Soulangeana, and M. Lennei were suggested as the best for gardens in which the space is so limited that but few can be planted. Of these, illustrations of both flowers and finely developed specimens in bloom were thrown upon the screen, and appeared to be received with special favour by the audience. In Mr. Gordon's opinion, we have no trees more beautiful, hardy or otherwise, than the three magnolias mentioned, and it was matter for surprise that they are not met with in the gardens of all classes, instead of being represented in a comparatively few only.

Closely following the magnolias in their time of flowering are the plums and the elegant Double Sloe (Prunus spinosa fl.-pl.), the exquisitely beautiful P. triloba, and the charming P. sinensis, in its white and rose-coloured forms, were mentioned as especially desirable. Even more strongly recommended were the crabs (pyrus), which give such a wealth of delicately tinted blossom during the spring months. Special reference was made to Pyrus malus floribunda and its varieties, Scheideckeri being mentioned as one of the best of the latter, to the Siberian Crab (P. baccata), and to P. aria. P. baccata was described as a rather large-growing, round-headed tree, producing a profusion of white flowers, and P. aria as a handsome tree, pyramidal in growth, producing large clusters of white flowers that are followed by brilliant scarlet fruits. Double-flowered cherries were spoken of as not less valuable than the crabs, and the fine specimens of Cerasus avium fl.-pl. (multiplex), C. pseudo-cerasus, and C. pseudo-cerasus J. H. Veitch thrown upon the screen fully justified the high opinion of their merits that was expressed by the lecturer.

The laburnums and thorns were grouped together because of their flowering at much the same period. Owing to the variability of the seedlings of the common laburnum it was suggested that for prominent positions in the garden trees that have reached the flowering stage should alone be planted. The Scotch laburnum was specially recommended because of the shapely tree it forms, the profusion with which it blooms, and the great length of the racemes. The double-flowered thorns came in for a full share of praise, and deservedly so, for we have no more beautiful hardy trees that bloom late in spring. The double scarlet, the double pink, and double white, and the pendulous single white were suggested as the best of the forms of Cratægus oxycantha for general planting.

The immense improvement that had been made in the lilacs was referred to, and it was stated that the number of varieties had now become so large that selection from them was extremely difficult, more especially in the case of those who required a few only. Mr. Gordon suggested that the Council of the Royal Horticultural Society would render the Fellows good service were they to conduct a trial of lilacs at Wisley. Slides of specimens of Rubra de Marly, Louvainensis, and Syringa chinense were shown as examples of good culture. With reference to the latter, it was pointed out that while it was raised at Rouen from a cross effected between the common and Persian lilacs, the botanists gave it a name that suggested China as the place of its origin, that, until quite recently, it was commonly known as the Persian lilac, and that it is sometimes described as attaining a height of four or five feet, whereas a height of ten feet is quite common, and one of fifteen feet is not unknown to those well acquainted with these shrubs.

The usefulness of the berberis was referred to, and B. Darwini and B. stenophylla, and its double-flowered variety, were mentioned as the most desirable of the many kinds for general planting; and it was suggested that the pruning should be limited to the removal of the exhausted wood and cutting back branches that are extending beyond the allotted space. The brooms were passed under review, and the finest kinds mentioned, the Spanish Broom (Spartium junceum) being specially commended for the fine colour effects produced during the summer months. Viburnums were recommended as some of the most useful of the summer-flowering shrubs, and of these V. tomentosum plicatum was referred to as one of the best. The mock oranges (philadelphus), genistas, rhododendrons, Ghent and mollis azaleas, hydrangeas, catalpa, and many other trees and shrubs received attention, and the finest of these, as of the other kinds, were illustrated by slides of finely developed specimens.

At the close of the lecture votes of thanks were accorded the lecturer and chairman.

Gardeners' Royal Benevolent Institution.

The other evening a concert, under the auspices of the Liverpool Auxiliary of the Gardeners' Royal Benevolent Institution, was held at the Bear's Paw, and Mr. A. H. Bright presided over a large gathering. The large room was tastefully decorated with choice plants and flowers, contributed by Messrs. R. P. Ker and Sons, Messrs. B. Webb and Sons, and Mr. C. A. Young.

Birmingham Gardeners' Association.

There was a fairly good attendance of the members at the fortnightly meeting on the 9th inst., to meet Mr. A. R. Brown, florist, at King's Norton, who gave a very interesting discourse upon "Florist Flowers," raised twenty years or more ago. The various kinds were taken alphabetically, and a few remarks upon the chief varieties were pertinently alluded to. The auricula, which is Mr. Brown's favourite flower, and which he has cultivated and exhibited at the principal exhibitions in England with marked success, received a full share of attention. He commented upon the popularity of the alpine or fancy auricula, and on the charms of the old show section. Next in order came the tuberous begonia, the advance of improvement being almost marvellous in the size, form and colour of the flowers, and in the habit of the plant. Similar remarks apply to the carnation and picotee, one of the aims of the raiser and cultivator being the securing stiff and robust flower stalks to render the flowers more suitable for decorative purposes. The marked improvement in the "yellow ground" show carnation which is rapidly attaining to a high degree of popularity, was referred to. In adverting to the system of exhibiting carnations in vases for decorative purposes, the essayist, whilst approving of the same, maintained that to exhibit the blooms in the highest state of perfection it was essentially nesary to adopt the old "show-board" procedure. The marguerite carnation also came under observation as a border flower. The chrysanthemum also came in for a share of attention, and the growing popularity of the summer or early autumn section was referred to. With reference to the incurved section of chrysanthemums, Mr. Brown said that, although the present-day blooms were exhibited somewhat larger than formerly, they lacked the refinement possessed by those of yore. The daffodils and other narcissi were generally alluded to, as was the great advance that had been made in several classes, the Pheasant-eye section being Mr. Brown's choice. Dahlias had brief reference made to them, the improvement in the elegant cactus section being mentioned in appreciative terms, and the desirability of securing varieties with lessened leaf development and longer and stouter flower-stalks was mentioned. The varieties forming the pompon section were, Mr. Brown said, gaining popularity. The sweet pea, of course, came in for special recognition. There were also several other kinds of florists' flowers which were brought under notice.

There was an animated discussion, in which Messrs. Walter Jones (the chairman), T. Humphreys, W. Spinks, C. H. Herbert, W. Gardiner, A. H. Christie, —. Giles, and others took part. Mr. Brown was warmly thanked for his lecture.

Bristol Gardeners' Association.

A well-attended meeting was held on Thursday, March 12, at St. John's Parish Rooms, presided over by Dr. Shaw. Mr. Folwell, representing the Bath Gardeners' Debating Society, gave a practical discourse upon the cyclamen, which, the lecturer said, was one of the most beautiful and fascinating of winter flowers, and should be grown well from start to finish, or be left alone. The use of rain-water alone was advised, and it was recommended that the larger proportion of the potting compost should consist of leaf-mould, as in their natural habitat the plants are invariably found growing under trees. It was also suggested that the plants be not too firmly potted. Judging by the vase of lovely flowers and foliage he had on view, Mr. Folwell is a successful cultivator of cyclamens. Dr. Shaw opened the discussion, and was followed by Messrs. Curtis, Scott, Birfield, Holt, Thoday, House, Garnish, J. Clark, Shelton, and Woodward. Hearty votes of thanks were given to the lecturer and chairman at the close of the discussion. Certificates were awarded to Mr. Folwell for a vase of cyclamen, to Mr. Woodward for two pots of cyclamen, and to Mr. Jennings for Cœlogyne alba. A special certificate went to Mr. Hunking for Dendrobium Lang Tang, mountain variety, and Lælio-cattleya Bletchleyensis. For three pots of hyacinths Mr. Shelton was first; Mr. Thoday second.

East Anglian Horticultural Club.

This club is still adding to its already large membership, and at the March meeting, held at the Boar's Head Hotel, Norwich, Mr. W. L. Wallis, the secretary, was busy enrolling new members for some time. After the usual preliminary business had been disposed of, Mr. T. G. Bishop, manager of Messrs. Daniels Brothers' Nurseries, read a very interesting and instructive paper upon "Ornamental Shrubs." He dealt with both the flowering and foliage sections, pointing out those adaptable for town culture and also the best positions to place the choicer subjects in. As one might expect, he covered a very wide range, and his tit-bits of practical information introduced here and there were much appreciated.

During the discussion which followed other subjects not previously commented upon were mentioned. Mr. T. B. Field spoke of his fondness for kalmias, while Mr. E. Peake spoke in praise of escallonias; Mr. J. Forder is an enthusiast for shrubs adapted for culture on the bleak East Coast, and specified buckthorn and tamarisk. The president, Mr. J. Powley, gave his early association with the aucuba, and its diœcious mysteries, and on this subject Mr. Perry mentioned his experience with Skimmia japonica. Mr. H. Goude favoured azaleas and kindred subjects. There were other debaters, and keen interest was taken in the subject. Mr. Bishop received a hearty vote of thanks for his essay.

The exhibition tables contained some very fine pot plants, and fruits of apples and pears. In the former section the bulbous flowers from Mr. F. Williams, gardener to Louis Tillett, Esq., M.P., Catton, were superb, and with them he gained full marks in the Girling Silver Cup Competition. Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, was a good second, and had the best exhibit of cut flowers, and also the best single-flowering plant. Mr. E. Foulger was at the head of fruit exhibitors, and also did well for plants. Messrs. C. Hines, C. Burtenshaw, W. Rush, W. Laws, E. Goldspink, and C. Fox also contributed creditable examples to the exhibition tables. The next meeting is fixed for April 8, when Mr. H. B. Dobbie will give a lantern lecture upon "The Earth's Vegetation."

Weybridge Horticultural Society.

At the March monthly meeting of this society Mr. H. J. Wright gave an instructive lecture on "The Cultivation of the Strawberry." The sixty members present followed Mr. Wright's remarks very closely and appreciatively. Some very fine exhibits of cinerarias, primulas, and tulips were displayed, and over these, and the lecture there was a lengthy discussion. Hearthy thanks were accorded lecturer and exhibitors.

THE BULB MITE (RHIZOGLYPHUS ECHINOPUS).

In reference to the article on the Bulb Mite (Rhizoglyphus echinopus) which appeared in the "Journal of the Board of Agriculture" for March, 1905, the methods of treatment there given have now been revised, and should read as follows:

1. This pest is very difficult to combat because the extremely tiny mites feed not only on the outside of the bulbs, but between the leaf scales of the bulb, feeding and laying their eggs in the interior, where they can scarcely be reached. The best plan is to burn badly infested bulbs, for the mites which have penetrated into bulbs cannot be reached. Infested soil should not be used for other bulbs.

2. In the case of mites which are more external the bulbs should be sprayed with paraffin, the treatment being repeated a fortnight later; or the bulbs may be washed in sulphide of potassium (liver of sulphur), 1oz. to one gallon of water, or brushed with this after removal of the outside scale leaves. This treatment is useful against fungi which follow the attack of the mite.

3. Infested bulbs may be fumigated with bisulphide of carbon. The bulbs to be treated should be placed in an air-tight receptacle, and a saucer, containing the bisulphide of carbon, should then be placed on the top of them, and the receptacle closed. The bulbs should be left in the vapour for forty-eight hours. This treatment could be usefully extended to imported bulbs, which ought to be examined for the mite. The formula for fumigation on a larger scale is one pint of bisulphide of carbon to 1,000 cubic feet of space. Bisulphide of carbon fumes are very poisonous, and should not be breathed, and no naked light (the operator, for example, should not be smoking) must be brought near them.

GRAPES AND HOW TO GROW THEM.—An illustrated guide to propagation, culture, and management in vineries, greenhouses, and in the open air. By J. Landell, F.R.H.S. Price 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

ROYAL GARDENERS' ORPHAN FUND.

The coming of age festival of this charity takes place on May 12, 1908, and in view of this interesting event, the secretary, Mr. Brian Wynne, writes as follows from 30, Wellington Street, Covent Garden, London, W.C.:

It will be within the recollection of those lovers of horticulture and practical horticulturists who assisted so enthusiastically in the founding of this charity in 1887, as a gardeners' memorial of the Jubilee of our late revered Queen Victoria, that its inception was very largely due to a suggestion made by Mr. H. J. Clayton, then gardener at Grimston Park, Tadcaster, from whom the committee has received the interesting and suggestive communication annexed hereto, and of which your kind perusal is respectfully requested.

It is the desire of the committee and of all steadfast supporters of the fund that its coming of age, after such a successful minority, should be worthily celebrated, and with this object in view it has been arranged that a dinner in aid of the charity shall take place on May 12, at which the president, his Grace the Duke of Bedford, K.G., has kindly consented to preside.

The suggestion made by Mr. Clayton that advantage should be taken of so interesting an occasion in the history of the fund to further strengthen its financial position by means of a popular shilling collection, to be added to the noble president's dinner list, meets with the committee's most cordial approval, and is heartily commended to the generous consideration of all workers in horticulture.

The small sum asked for individually can hurt no one, while 10,000 shillings means £500, and this sum would make a memorable and most acceptable birthday gift to the fund. Of course, the success of such an appeal as is now made will necessarily depend upon the number of willing workers in private and public gardens, nurseries, and seed establishments, etc., whose sympathies with a good cause will induce them to make collections, which, however small, would be gladly welcomed, and all help towards realising the grand total.

In the hope that the suggestion as to this general collection, and the laudable object for which it is made, will meet with your sympathy and approval—as the committee most earnestly trust that it may—I have pleasure in enclosing a collecting sheet herewith, and shall be glad to send you some leaflets explaining the objects of the fund, if so desired, as well as to give you any information that you may require with reference to its rules and management.

It is desired that all returns of collections made may be sent in by May 10, at latest, but the earlier the better; and due acknowledgment will be made of all sums received.

Most earnestly soliciting your kind co-operation and generous assistance in this mission of mercy to the poor and unfortunate fatherless children of our own kith and kin.

B. Wynne, Secretary.

Creepers for Walls.—Now is a most excellent time to plant creepers or climbers for clothing house walls. The order should go to the nurseryman as soon as the kinds of plants are decided upon: and meanwhile the sites should be prepared. To do a strong growing climber, such as a rose or a wistaria, justice on a house wall, a cubic yard of soil should be displaced. If poor, use good turfy loam for filling in and wheel the original soil away; it pays to do this really well, as then twelve feet to twenty feet of growth in a season may often be secured. If the gravel runs right up to the house wall, place a few of the brown rope-twist pattern edging tiles round the bed. This will keep the soil at home, and greatly facilitate watering. William Allen Richardson is a splendid rose for this purpose, and the wistaria, white jasmine, and mountain clematis are deservedly prime favourites.—E. J. K.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

EMPLOYMENT AT KEW.—A. B., Lincoln: Apply by letter to the Curator, Royal Gardens, Kew, stating age and experience.

AGRICULTURAL LEAFLETS.—A. W. C., Cheltenham: The leaflets will be sent post paid, and free of charge, on application to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W.

SHRIVELLED SWEET PEA SEEDS. — J. B. A., Shrewsbury: There is nothing the matter with the seeds. Some varieties have small, wrinkled, and marked seeds, and these, in comparison with the fine bold seeds of, say, Dorothy Eckford or Helen Lewis, appear to be ill-favoured. But this is only a varietal difference, and the seeds will germinate and produce as good plants as finer-looking seeds. Sow the seeds in pots in a greenhouse, transfer to a frame when the seedlings are two or three inches high, and plant out as soon as convenient.

SEEDLING POTATO.—H. T. P., Olney: The potatoes are evenly pebble-shaped, of fair size, and excellent cooking quality. The variety evidently keeps well and loses not of its quality in the keeping. For table use we consider it very good, but, of course, we are not in a position to give any opinion as to its cropping power, habit, or freedom from disease. Your best plan is to communicate with Mr. S. T. Wright, superintendent of the Royal Horticultural Society's gardens, Wisley, Ripley, Surrey, and ask that the variety be tested with other maincrop sorts. He will then let you know what quantity to send for seed purposes. It is only by a comparative test of this sort that the merit of the variety may be proved.

MOVING GOOSEBERRY BUSHES. — S. D. G., York: We should not hesitate to move the gooseberries at once, but we should arrange so that the roots of the bushes were exposed hardly at all. If you have some old potting soil, leaf-mould, and road grit, mix these together in equal proportions and remove the rougher portion; then use the finer material to bed the roots of the gooseberries in. Plant firmly, and quickly; give the bushes sufficient support against wind, and water them in thoroughly. The check will be so small as to be hardly noticeable. Pick the fruits green, so that the bushes may not be distressed. Directly dry warm weather is imminent, mulch the soil around and over the roots with short manure.

ROYAL HORTICULTURAL SOCIETY'S MEDALS.—E. A. H., Sheffield: This question is asked frequently. The medal awards made by the R.H.S. are as follows: (1) The Lawrence Gold Medal: This medal is only to be struck in gold. It is to be awarded independently by the direct vote of the Council, who will, as a rule, confine themselves to not more than two votes to amateurs and two to trade exhibits during the year. (2) The smaller gold medal: This medal is struck only in gold. (3) The Flora medal: This medal is awarded to flowers and ornamental plants, and is struck in three grades, silver-gilt, silver, and bronze. (4) The Hogg medal and (5) the Knightian medal: These medals are awarded to fruits and vegetables, and are struck in three grades, silver-gilt, silver, and bronze. (6) The Lindley medal: This medal is usually given to exhibits of botanical interest or for exceptional skill in cultivation, and is struck in three grades, silver-gilt, silver, and bronze. (7) The Banksian medal: This medal is used in all departments of the society's work, and is struck in silver-gilt, silver, and bronze.

FAILURE WITH TULIPS AND NARCISSI.—W. A., Bermondsey: The bulbs are, apparently, suffering from the effects of some outward application. The impure atmosphere would not be responsible for partial failure in certain beds, though beds near to a chemical works would suffer more from deleterious depositions than those further away. In the case of the tulips we feel sure that something unusual has occurred; it appears as though some material had been dropped inside the opening leaves, killing the flower bud, and causing the base of the leaves and the heart of the bulb to rot. Pretty much the same sort of thing would happen if a few drops of paraffin, or a good pinch of salt or nitrate, were dropped into each plant. In the case of the daffodils the evidence of mischief is not so clear, and the two bulbs sent were immature, non-flowering ones; but, of course, it would be much more easy to damage tulips than daffodils, owing to the formation of the leafage.

HERBACEOUS PLANTS FOR TOWN GARDEN.—G. G., Liverpool: The following selection comprises plants that can be depended upon to thrive in the majority of towns in which smoke and other impurities are above the average: Aquilegia Witmanni, Aster acris, A. amellus bessarabicus, A. a. roseus, A. formossimus, A. Novæ Angliæ William Bowman; A. Novi Belgi Robert Parker, A. puniceus, A. spectabilis major, Aubrietia deltoidea, Armeria plantaginea, A. vulgaris, Baptista lutea, carnations in variety—seedlings, because of their greater vigour, are especially desirable, Cardamine pratensis fl.-pl., chrysanthemums, summer-flowering, in variety; Campanula glomerata; Dodecatheon giganteum, Iberis corifolia, I. sempervirens, I. tenoreana, Iris primula, I. germanica, in variety—these are especially desirable for the pleasing effect produced when not in bloom; Orobus vernus, phloxes, spring and summer flowering, in variety; pyrethrums, single and double, in variety; pæonies, herbaceous, in variety; Saxifraga atro-roseus, S. spathulata, S. rotundifolia, Trollius asiaticus, T. altaicus, violas in variety.

CONSERVATORY PLANTS.—E. C., Malvern: It is not possible to give a complete answer to your question in these columns. The subject is a large one, indeed sufficient for a book of considerable size. You should consult our "Work for Week" columns, and act upon the advice given therein. You will also find the "Gardening Year Book" (post free, 1s. 2d., Gardeners' Magazine Office, 148, 149, Aldersgate Street, E.C.) very useful in this particular direction, as well as in others. In January the conservatory should be well supplied with forced bulbs and forced flowering shrubs; Chinese primulas, cyclamen, and arums are other leading subjects. For February there are the forced subjects, Calceolaria Burbidgei, Indian azaleas, and camellias. In March there should be no lack of bulbs in flower and forced azaleas, spiræas, Primula obconica, heaths, epacrises, clivias, freesias, etc. For April there are later batches of bulbs, clivias, hippeastrums, acacias, zonal pelargoniums, and carnations. For May there are early gladioli, clivias, vallotas, acacias, boronias, heaths, eupatoriums, cinerarias, calceolarias, gently forced mollis azaleas, and other shrubs, Sparmannia africana, streptocarpuses, etc. For June there are calceolarias, cinerarias, pelargoniums, and begonias, impatiens, arums, streptocarpuses, Rehmannia africana, Bougainvillea glabra, chorozemas, heaths, heliotropes, plumbagos, rhododendrons, etc. In July and August the garden is so gay out of doors that the conservatory need not be kept so bright, but there will be begonias and pelargoniums, heliotropes, achimenes, heaths, bougainvilleas, leschenaultia, streptocarpuses, schizanthuses, etc., to arrange with ferns and foliage plants. For September there are the later batches of summer flowers, many heaths, agapanthuses, Luculia gratissima, fuchsias, etc. October should find early chrysanthemums in flow humeas, eupatoriums, heaths, oleanders, and early salvias. November is the month chrysanthemums, scarlet salvias, with a few forced bulbs for the end of the month. I December we depend chiefly upon chrysanthemums, azaleas, carnations, winter-flowering begonias, eupatoriums, and forced bulbs.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

J. T., Shurt.—Cornus mas.

S. A. F., Torquay.—Pittosporum Tobira.

E. O. G., Mansfield.—Leucadendron argenteum.

J. H. J., Hull.—1, Crocus aureus; 2, Leucojum vernum.

R. H. J., Dalkeith.—1, Leonotus leonurus; 2, Eupatorium ianthinum.

H. A., Skipton.—1, Clematis indivisa lobata; 2, Grevillea Thelemanniana.

F. E. W., Cromer.—1, Odontoglossum luteo-purpureum; 2, O. pulchellum.

D. S. R., Streatham.—1, Kerria japonica fl.-pl.; 2, Acacia platyptera; 3, Pentas carnea.

C. F. G., Leicester.—1, Libonia floribunda; 2, Mussænda frondosa; 3, Masdevallia tovarensis.

M. E. B., Weston-super-Mare.—1, Daphne Mezereum; 2, Claytonia sibirica; 3, Arabis alpina; 4, Cydonia japonica.

A. N., Bedford.—1, Lycaste Skinneri, 2, a species of callipsyche, probably C. eucrosiodes; 3, Thyrsacanthus rutilans.

R. P., Shaftesbury.—1, Hæmanthus sanguinea; 2, Scilla bifolia; 3, Saxifraga ligulata; 4, Berberis canadensis; 5, Eranthis hyemalis.

M. M., Bournemouth.—1, Arum italicum; 2, Erythronium dens-canis; 3, Forsythia viridissima; 4, not recognised; 5, Omphalodes verna.

C. P. L., Rotherham.—1, Erica gracilis; 2, Boronia serratifolia; 3, Jasminum Sambac; 4, Dendrobium devonianum; 5, Monochætum sericeum; 6, Lachenalia Nelsoni.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. March 8 to March 14.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 8—Sunday	0 30	49	47	55	38
„ 9—Monday	5 35	43	41	47	42
„ 10—Tuesday	0 5	43	40	46	38
„ 11—Wednesday	3 10	41	38	46	38
„ 12—Thursday	5 40	30	30	48	26
„ 13—Friday	6 10	33	36	45	30
„ 14—Saturday	5 25	37	34	43	31
Means	3 50	40	38	47	35

Date. 1908. March 8 to March 14.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	Temperature of the Soil. At 9 a.m. At 2 ft. deep.	Temperature of the Soil. At 9 a.m. At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Mar. 8—Sunday	0.09	41	42	42	34
„ 9—Monday	0.06	43	43	42	39
„ 10—Tuesday	0.07	42	43	42	33
„ 11—Wednesday	—	41	43	43	36
„ 12—Thursday	—	40	42	43	22
„ 13—Friday	—	40	42	43	26
„ 14—Saturday	—	40	42	43	24
Means	(total) 0.22	41	42	43	31

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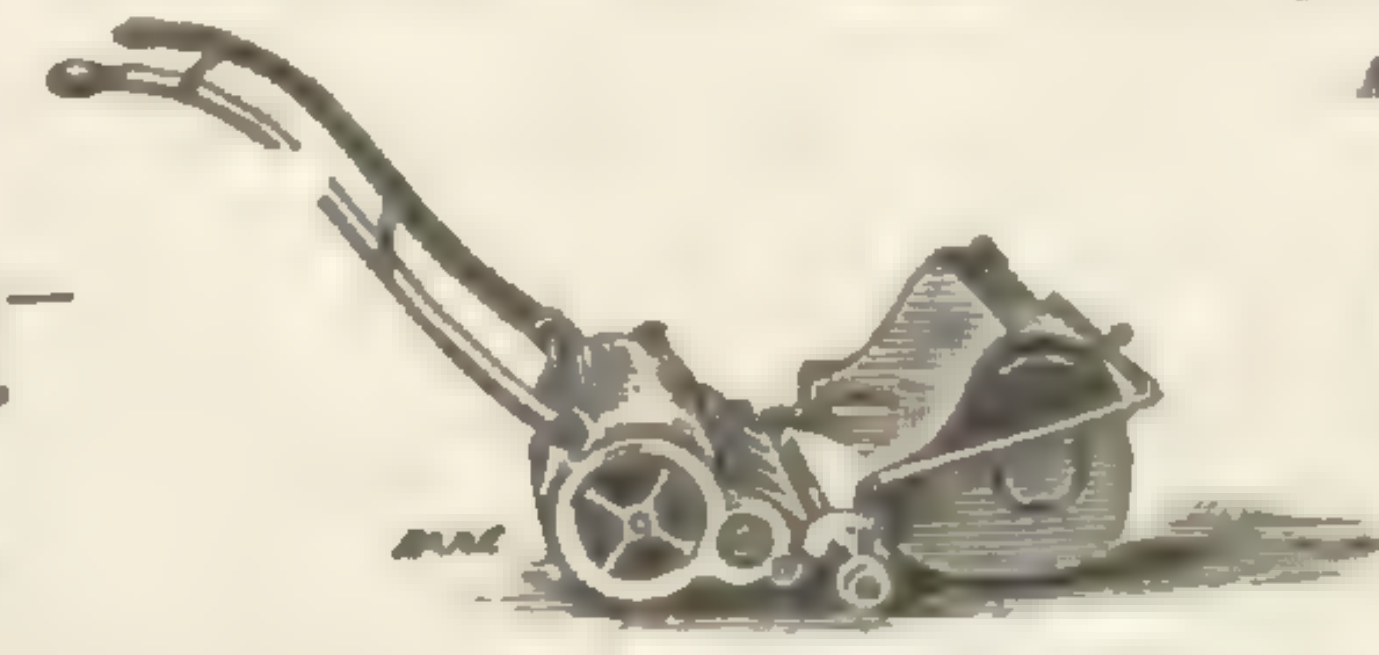

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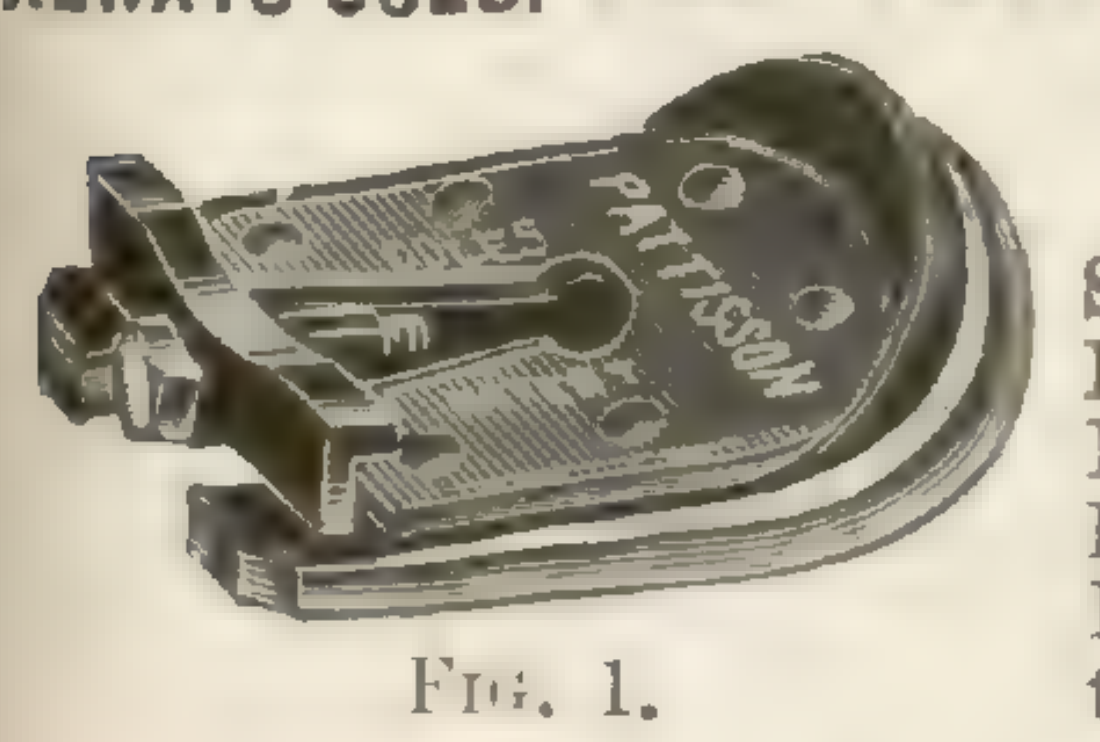

Fig. 1.

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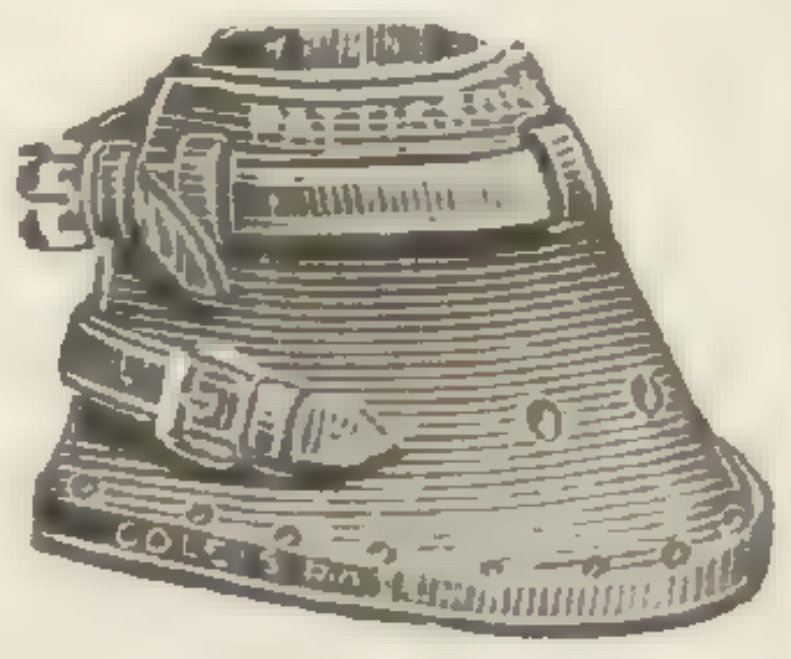

Fig. 2.

Illustrated Price List from—
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SUMMARY of the REPORT presented at the FIFTY-NINTH ANNUAL MEETING, held on the 5th March, 1908.

ORDINARY BRANCH.—The number of policies issued during the year was **86,080**, assuring the sum of **£8,156,865**, and producing a new annual premium income of **£466,357.** The premiums received during the year were **£4,480,377**, being an increase of **£189,406** over the year 1906. The claims of the year amounted to **£2,430,117.** The number of deaths was **8,243**, and **12,328** endowment assurances matured.

The number of policies in force at the end of the year was **843,206.**

INDUSTRIAL BRANCH.—The premiums received during the year were **£6,661,631**, being an increase of **£162,603.** The claims of the year amounted to **£2,563,090.** The number of deaths was **281,990**, and **4,494** endowment assurances matured. The number of free policies granted during the year to those policyholders of five years' standing and upwards who desired to discontinue their payments was **128,429**, the number in force being **1,290,758.** The number of free policies which became claims during the year was **32,104.**

The total number of policies in force at the end of the year was **17,459,835**; their average duration exceeds eleven years.

The assets of the Company, in both branches, as shown in the balance sheet, are **£68,006,284**, being an increase of **£4,119,276** over those of 1906.

In pursuance of the policy indicated in the last report, a scheme was approved by the Shareholders at meetings held in July last, admitting Industrial Branch policyholders, and the Superintendents, Assistant Superintendents, and Agents to specified shares in the profits of the Company.

The Directors are pleased to announce that in the Ordinary Branch a reversionary bonus at the rate of **£1 12s.** per cent. on the original sums assured has again been added to all classes of participating policies issued since the year 1876.

In the Industrial Branch a bonus by way of addition of 5 per cent. to the sums assured will be paid on all policies of over 5 years' duration, which become claims either by death or maturity of endowment from the 6th of March, 1908, to the 4th of March, 1909, both dates inclusive.

Messrs. Deloitte, Plender, Griffiths and Co. have examined the securities, and their certificate is appended to the balance sheets.

D. W. STABLE, } Joint
J. SMART, } Secretaries,

FREDERICK SCHOOLING, } Joint
A. C. THOMPSON, } Managers.

The Full Report and Balance Sheet can be obtained upon application.

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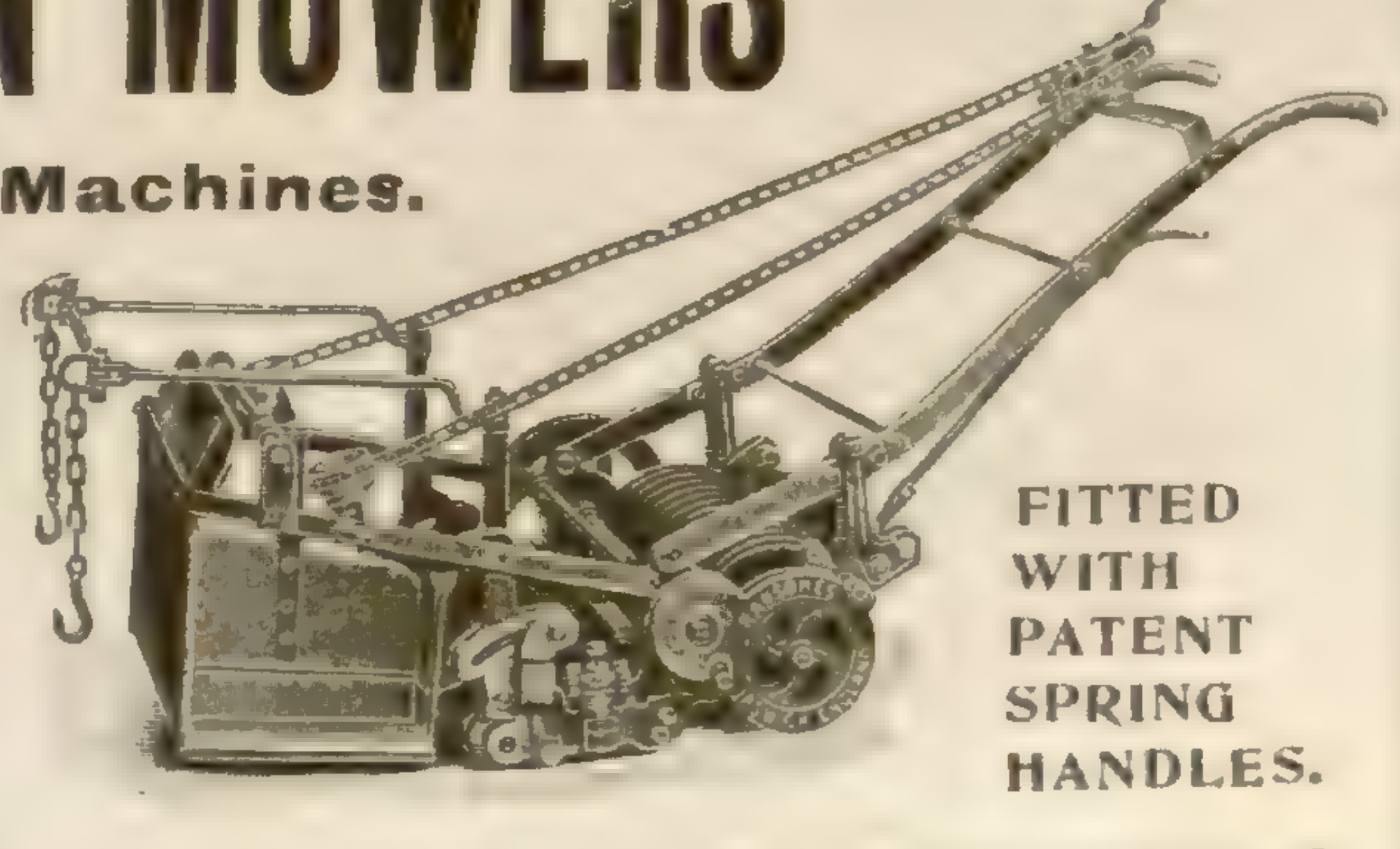
Royal Horticultural Society,
1906 and 1907, Silver Medals.



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NEW PLANTS, ETC.

◆

ERIA LONGISPICA.

A very curious Bornean orchid, producing a strong iris-like growth, and spikes about fifteen inches long, the latter crowded with small yellow, brown, green, and purple flowers. It thrives under stove treatment. "Bot. Mag.," t. 8,171.

PHILODENDRON COISINIANUM.

A bold and handsome aroid, and one that is of hybrid origin. It was raised by Messrs. Makoy, of Liege, and P. verrucosum is probably one of the parents. It is a stove climber, and has deep-green leaves from 1¼ to 2¼ft. long, and purple and green beneath. The spathe is crimson-purple, dotted with crimson, brown, and white. This is the first hybrid philodendron recorded. "Bot. Mag.," t. 8,172.

PÆONIA MLOKOSEWITSCHI.

A very beautiful yellow pæony from the Caucasus. It is a herbaceous perennial, has bluish-green leaves, and big bright yellow flowers. It is quite hardy under the treatment usually accorded herbaceous pæonies. A useful addition to the garden. "Bot. Mag.," t. 8,173.

VIBURNUM UTILE.

First discovered near Ichang in 1880, this shrub was introduced to cultivation by Messrs. James Veitch and Son, through their collector, Mr. E. H. Wilson. It grows about 5ft. high, and bears comparatively small flowers in dense terminal cymes; these are white, and followed by smooth black fruits. Quite hardy, free, and effective. "Bot. Mag.," t. 8,174.

HERBERTIA AMATORUM.

A pretty irid, from South America. Under greenhouse or frame culture it flowers for a long period, though individual flowers are short lived. The blooms are two inches across, rich violet-blue, with brown markings at the base of the inner segments. "Bot. Mag.," t. 8,175.

PSEUDOLARIX FORTUNEI.

A beautiful garden tree, and apparently a rare one in China. It will grow as high as 120-130ft., but needs good deep soil to be a success. It was originally discovered by Fortune, in Chekiang, in 1853. During spring the young foliage is yellowish green, and again in the autumn the leaves assume a rich golden-yellow hue before falling, hence the species is well called the Golden Larch. "Bot. Mag.," t. 8,176.

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, March 25.—Society of Arts.
Royal Botanic Society's Spring Show.
Junior Horticultural Examination at the Royal Horticultural Hall.
FRIDAY, March 27.—Beckenham Horticultural Society; lecture on "Syringing and Damping Down."
TUESDAY, March 31.—Royal Horticultural Society; Fruit, Floral, Orchid, and Narcissus Committees meet at 12 o'clock; lecture at 3 o'clock on "The History of the Cabbage Tribe," by the Rev. Prof. G. Henslow; Scientific Committee at 4 o'clock.
WEDNESDAY, April 1.—Society of Arts.
Winter Flowering Carnation Society at Royal Horticultural Hall.
Hayward's Heath Gardeners' Association; lecture on "Seakale and Rhubarb," by Mr. Jarrett.
THURSDAY, April 2.—Linnean Society Meeting.
TUESDAY, April 7.—Brighton Spring Show; two days.
Croydon Gardeners' Association; lecture on "Peaches and Nectarines," by Mr. Seabrooke.
National Amateur Gardeners' Association; lecture on "Beautiful Arrangements of Roses," by Mr. G. Gordon, V.M.H.
WEDNESDAY, April 8.—Examination in Horticulture at the Royal Horticultural Hall.
TUESDAY, April 14.—Royal Horticultural Society; Fruit, Floral, and Orchid Committees meet at 12 o'clock; Narcissus Committee at 11.30 a.m.; lecture at 3 p.m. on "Hardy Cacti and Other Hardy Succulents," by Mr. E. A. Bowles, M.A., F.L.S.; Scientific Committee at 4 o'clock.
WEDNESDAY, April 15.—Society of Arts.
Royal Caledonian Horticultural Society's Spring Show; two days.
THURSDAY, April 16.—Brighton Horticultural Society Meeting; lecture on "Botany for Gardeners," by Mr. E. F. Hawes.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Business is very good. Daffodils and violets are fine, but liliums are not so plentiful. Prices firm.

		s.	d.		s.	d.
Acacia	per doz. bun.	6	0	to	10	0
Adiantum cuneatum	per doz. bun.	5	0		9	0
Anemones	per doz. bun.	1	0		4	0
Arums	per doz.	1	6		3	6
Asparagus	per doz. bun.	1	6		6	0
Azalea	per doz. bun.	3	0		4	6
,, mollis	per bun.	1	0		1	6
Berberis	per doz. bun.	2	0		2	6
Camellias	per doz.	1	6		2	0
Carnations	per doz. blms.	1	6		2	6
,,	per doz. bun.	7	6		12	6
Cattleyas	per doz.	8	0		12	0
Cœlogynes	per doz. blms.	1	0		1	6
Croton leaves	per bun.	1	0		1	6
Cyclamens	per doz. bun.	6	0		8	0
Cypripediums	per doz. blms.	2	0		3	0
Daffodils	per doz. bun.	1	6		5	0
Eucharis	per doz.	2	6		4	0
Forget-me-not	per doz. bun.	3	0		4	0
French fern	per doz. bun.	1	0		3	0
Freesias	per doz. bun.	2	0		3	0
Gardenias	per doz.	2	0		4	0
Hellebores	per doz.	0	6		1	0
Hyacinths, Roman	per doz. bun.	4	0		5	0
Lapagerias	per doz.	1	0		2	6
Lilac	per bun.	3	0		4	0
Lilium auratum	per bun.	2	0		3	0
,, speciosum	per bun.	2	0		3	0
,, longiflorum	per bun.	3	0		5	0
Lily of the Valley	per doz.	6	0		9	0
Marguerites, white	per doz. bun.	3	0		6	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	6		3	6
Narcissus	per doz. bun.	1	0		4	0
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	5	0		8	0
Pernettya	per bun.	0	6		1	0
Ranunculus	per doz. bun.	6	0		9	0
Roses	per doz.	2	0		10	0
Smilax	per doz. trails	2	0		3	0
Spiræa	per doz. bun.	5	0		8	0
Stocks	per doz. bun.	3	0		4	0
Tuberoses	per doz. blms.	0	4		0	6
Violets	per doz. bun.	2	0		4	0
Wallflowers	per doz. bun.	1	6		2	0

Fruits.

There is a steady demand; apples are dearer, and oranges are more plentiful. Cape fruits sell well.

		s.	d.		s.	d.
Apples, Canadian	per barrel	17	0	to	23	0
,, Californian	per box	10	6		12	0
Bananas	per bun.	4	0		12	0
Cranberries	per case	9	0		10	0
Cob Nuts	per doz. lb.	4	0		5	0
Grapes, Alicante	per lb.	1	6		3	0
,, Belgian	per lb.	0	10		1	6
,, Muscats	per lb.	3	6		7	6
,, Gros Colmar	per lb.	1	3		3	0
,, Channel Islands	per lb.	0	9		1	0
,, Almeria	per barrel	10	0		20	0
,, Cape	per box	1	6		10	0
Lemons	per case	8	0		12	0
Nectarines, Cape	per box	6	0		10	0
Oranges	per case	7	0		30	0
Peaches, Cape	per box	5	0		10	0
Pears, Cape	per box	3	0		5	0
Pineapples	each	3	0		4	0
Plums, Cape	per box	4	0		6	0
Strawberries	per lb.	5	0		12	0
Walnuts	per bag	7	0		8	6

Vegetables.

Brussels sprouts are nearly over, but other greenstuffs are fairly good. Business brisk at fair rates.

		s.	d.		s.	d.
Artichokes	per doz.	2	0	to	4	0
Asparagus, Paris green	per bun.	3	6		5	6
,, English	per bun.	6	0		7	0
,, sprue	per bun.	0	7		1	6
Beans, French	per lb.	0	8		1	0
,, Madeira	per bskt.	2	0		3	6
Beet	per bush.	1	3		2	0
Brussels sprouts	per ½-bush.	1	3		1	6
Cabbage	per tally	3	0		6	0
Carrots	per doz. bun.	1	0		1	6
,,	per bag	2	6		3	0
,, French, new	per doz. bun.	6	0		8	0
Cauliflowers	per tally	6	0		8	0
Celery	per bundle	0	9		1	3
Celeriac	per doz.	1	6		2	0
Chicory	per lb.	0	3		0	4
Cucumbers	per doz.	4	0		8	0
Endive	per doz.	1	9		2	6
Greens	per bag	1	0		2	6
Horseradish	per doz. bun.	10	0		15	0
Leeks	per doz. bun.	1	0		1	6
Lettuce, cabbage	per doz.	1	0		2	0
,, Cos	per doz.	5	0		7	6
Mint	per doz. bun.	0	9		1	0
Mushrooms	per doz. lb.	8	0		12	0
Onions, English	per cwt.	3	0		4	0
,, Spanish	per case	5	0		6	0
Parsnips	per bag	2	0		2	6
Parsley	per doz.	1	6		2	0
Rhubarb	per doz. bun.	0	9		1	0
Savoys	per tally	3	0		4	6
Seakale	per doz. pun.	9	0		12	0
Tomatoes, Teneriffe	per package	12	0		16	0
Turnips, French, new	per doz. bun.	6	0		10	0
Watercress	per doz. bun.	0	4		0	6

LONDON POTATO MARKETS.

Business is quiet, and prices are not easily maintained.

		s.	d.		s.	d.
British Queen	per ton	90	0	to	100	
Blacklands	per ton	80	0		90	
Dunbar Maincrops	per ton	120	0		125	
Dunbar Up-to-Date	per ton	115	0		125	
Kent Up-to-Date	per ton	95	0		100	
Langworthy	per ton	90	0		105	
Lincoln Maincrop	per ton	95	0		110	
Lincoln Up-to-Date	per ton	90	0		110	
Royal Kidneys	per ton	80	0		90	
Reading Giants	per ton	80	0		90	
[illegible]	per ton	85	0		100	
New, French	per lb.	0	2		0	2

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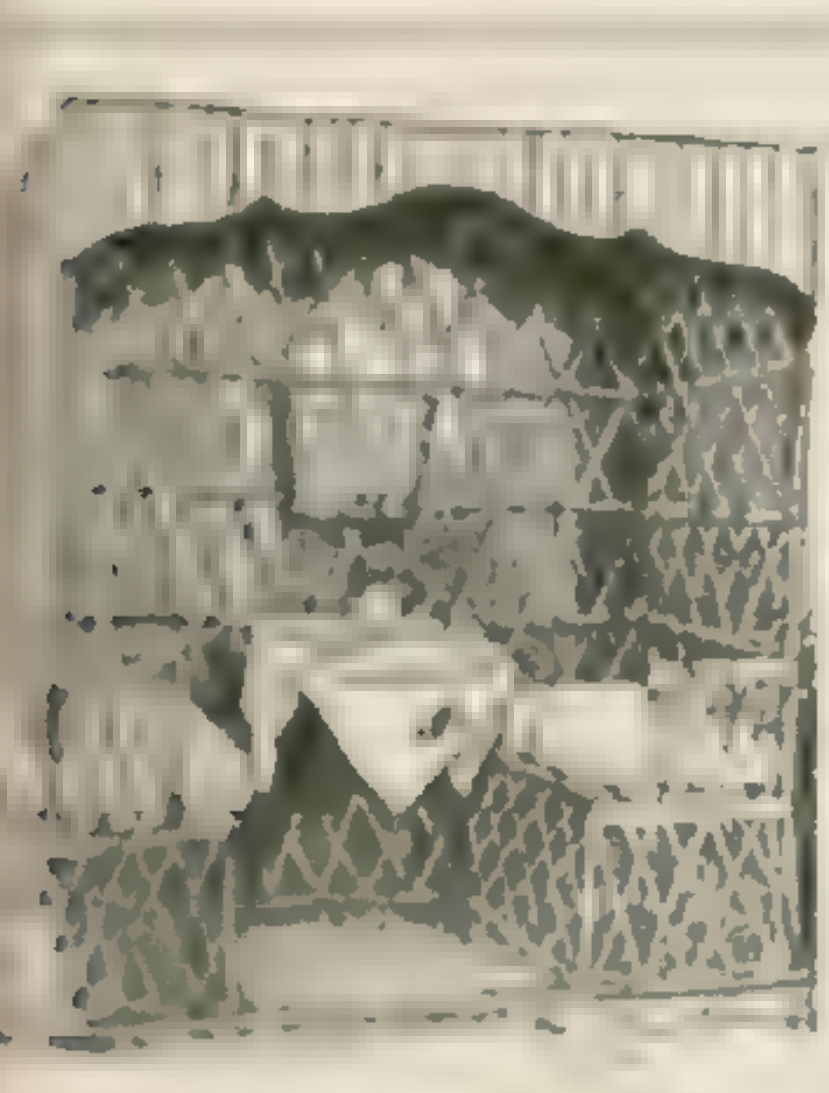

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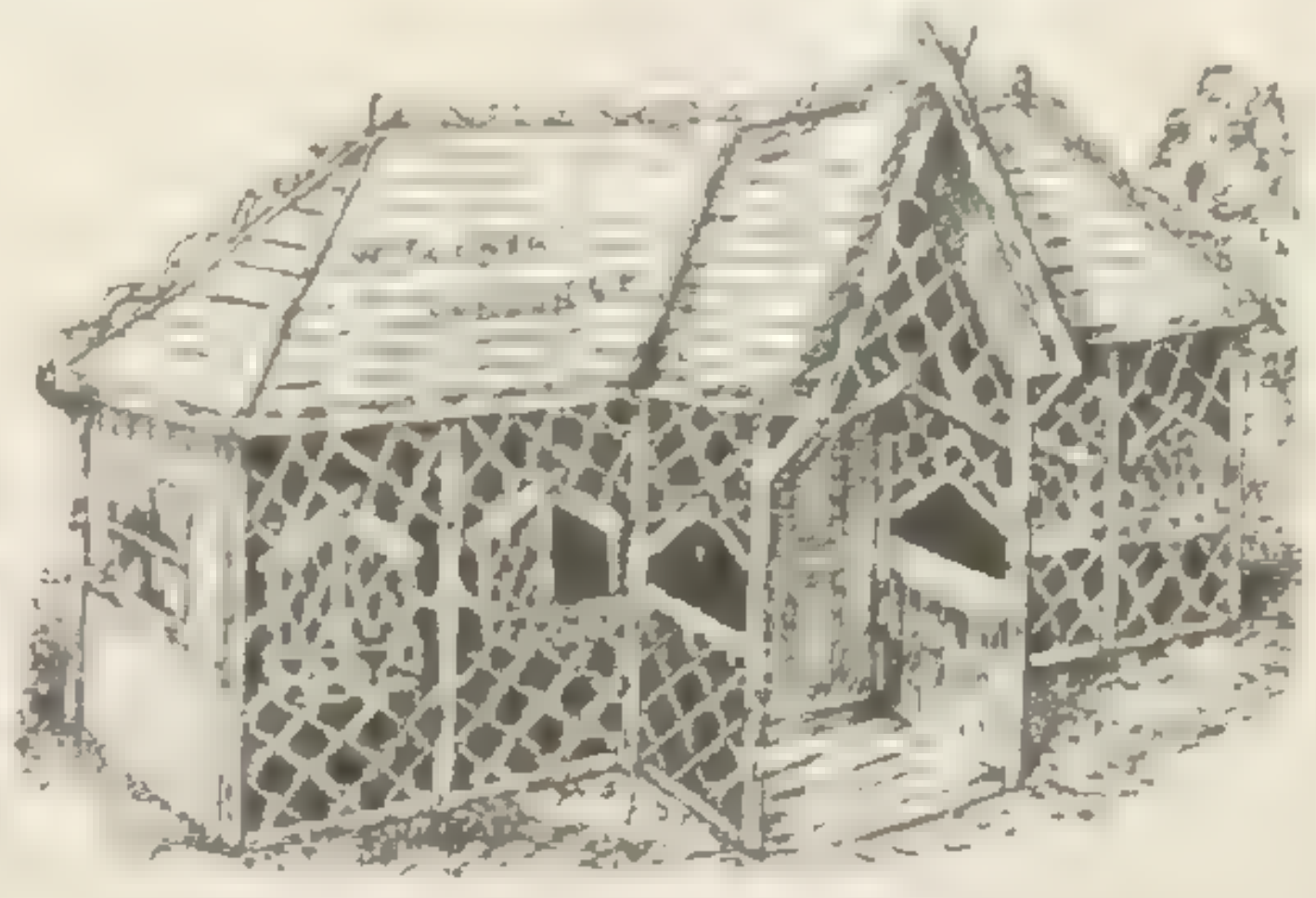

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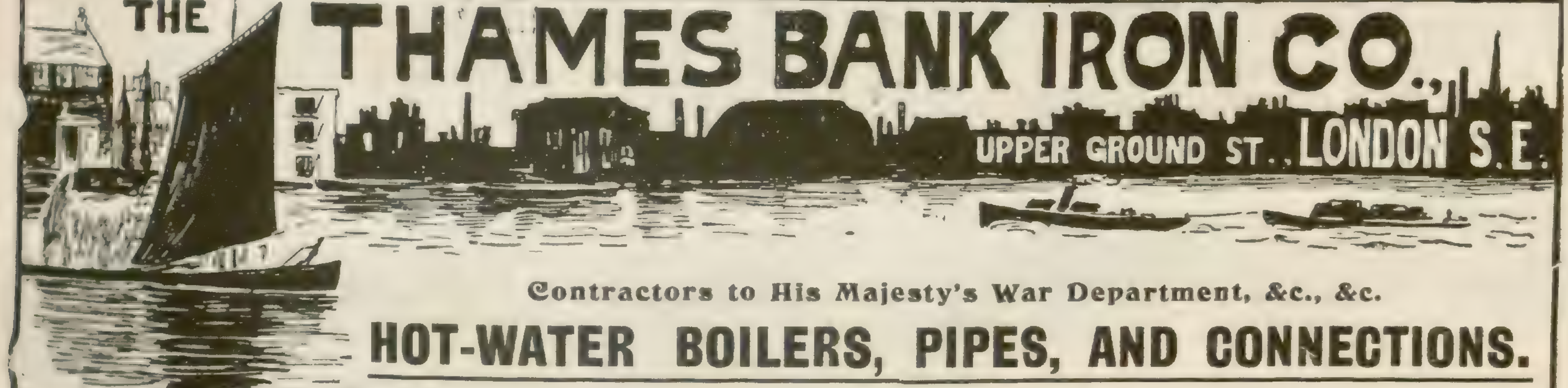

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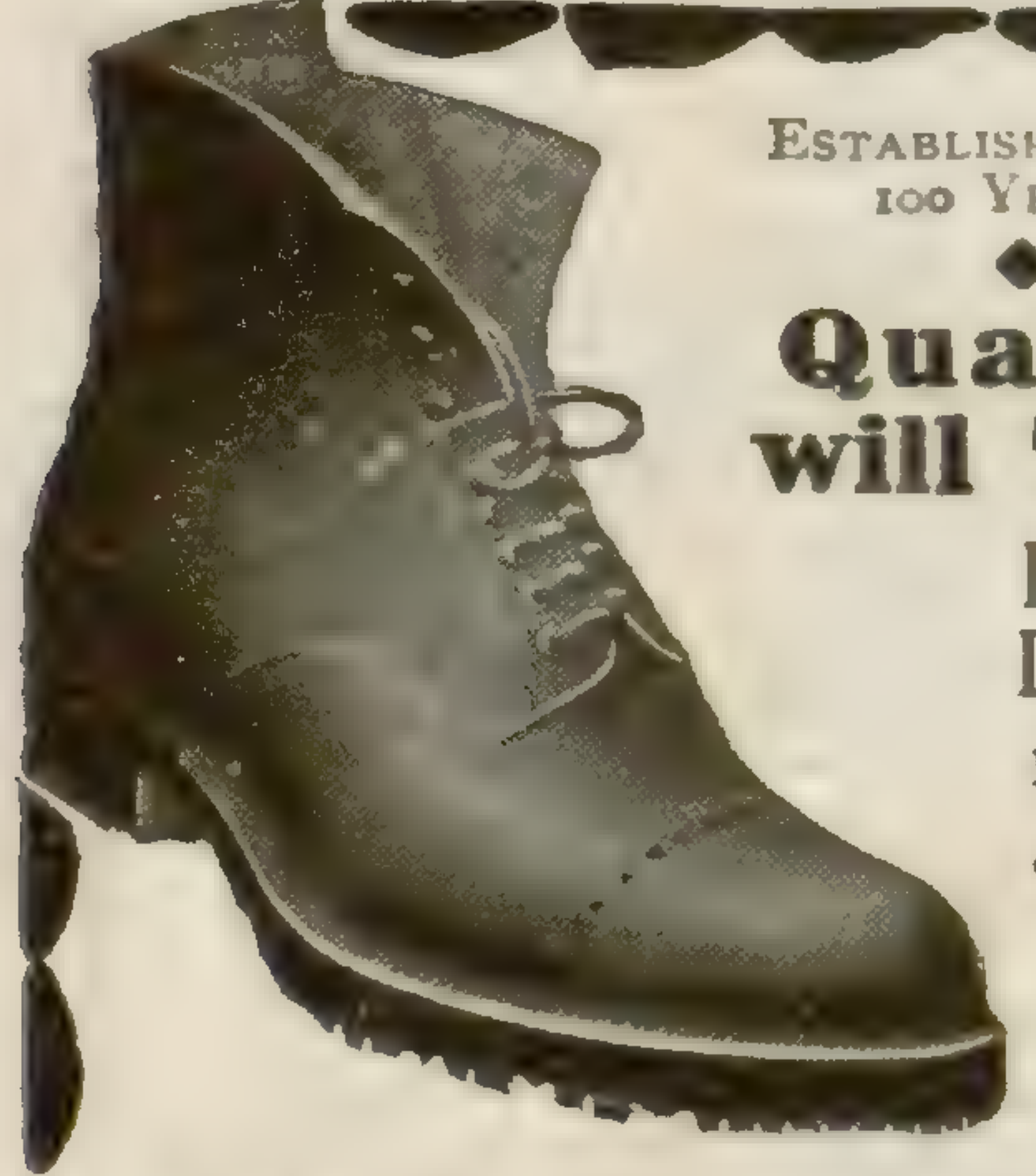

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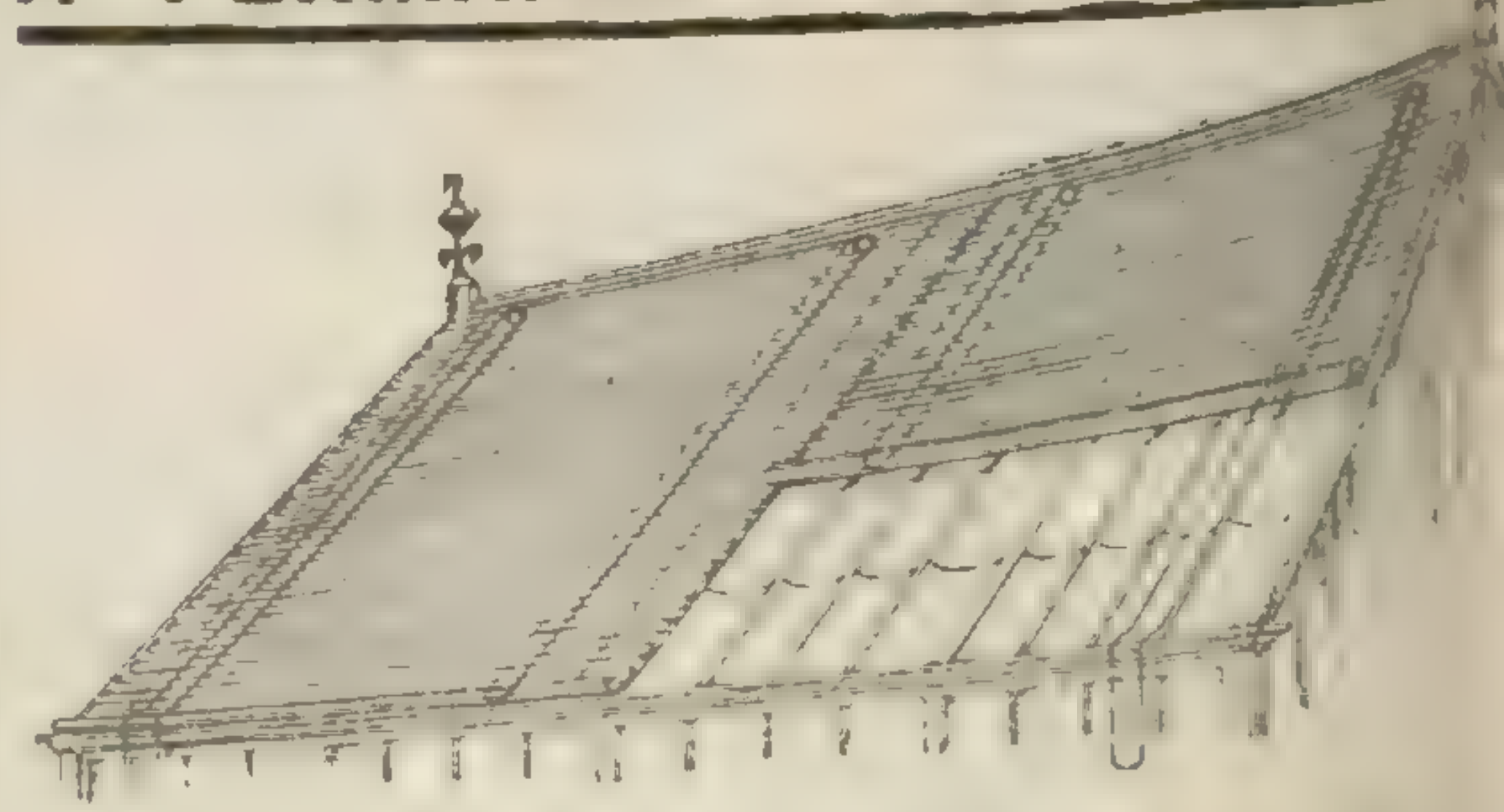

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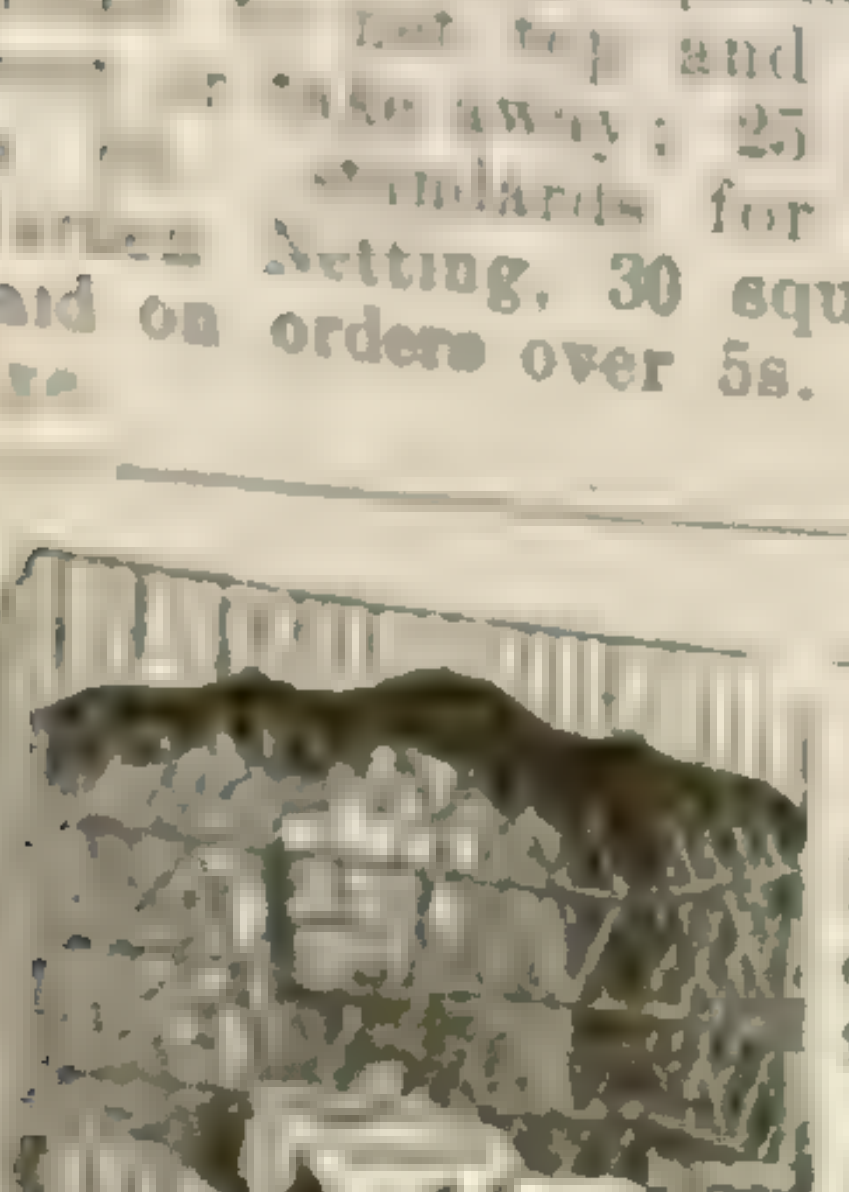

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For APRIL 4, 1908.

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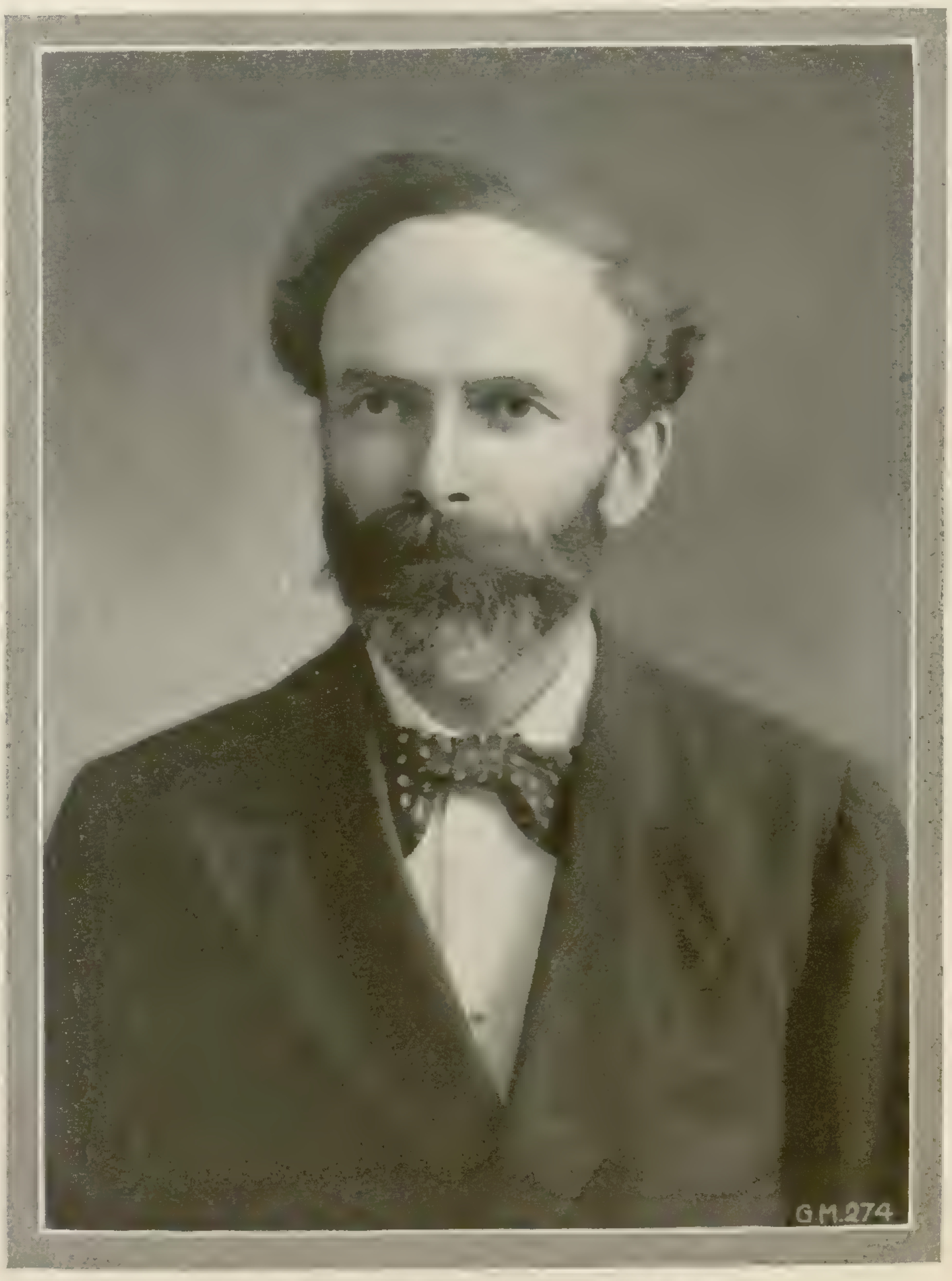
VOL. LI.—No. 2,839. SATURDAY, MARCH 28, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Plant Skeletons.

Although we cannot find any such hard lime-built systems of bones in plants as are common in the animal kingdom as a supporting framework for the tissues which form the flesh and vital organs, there is, nevertheless, in most plants a well-defined system of nicely distributed woody material which serves the same purpose, and is equally wonderful in its variety, and, when dissociated, in its beauty. Occasionally, but, we think, too rarely, we see beautiful examples of plant skeletons at our floral exhibitions, in which not merely the leaves or fronds with all their beauty and intricate vein systems are shown, but also the seed vessels, and even, in some cases, the fruits. A familiar idea of the complexity of the internal framework is given by the so-called loofahs used in our baths, which are derived from a species of gourd deprived of its soft cellular tissues. This, we think, is the only instance where such skeletons, in their intact form, are of commercial value; but in view of the beautifully designed and intensely hard internal skeletons of the opuntia, or prickly pear cactus, of which there are successive layers in the old thick pseudo-leaves of that genus, it is a great pity that good use of such is not make in inlaid cabinet and other work, for which Nature has fashioned them to perfection. Unfortunately, the operation of skeletonising is a tedious and delicate one, and not altogether devoid of unpleasant features, since it can only be effected by thoroughly rotting out the soft and perishable cell matter, which has then to be removed from its supporting framework prior to cleansing and bleaching the resulting skeleton, which may be of almost gossamer-like delicacy and brittle to boot. Nature occasionally does a little skeletonising on her own account in our gardens, when somewhat tough leaves display their denuded bones in the course of decay in places where that ever-busy sexton, the earthworm, has failed to find them; and at this time of the year we may get a glimpse of more complicated structures, where the spherical bladders of the physalis have partly rotted away and display the contained fruit like a cherry in a cage. We may also obtain an idea of the multiformity and general diversity of plan by holding up almost any fallen leaf to the light and noting the beautiful gradation of the veins, which, being sheathed in a woody integument, would, under proper treatment, stand alone as the skeleton. No two are alike even on the same tree, while between one species or genus and another the differences will be marvellous. Between the plant skeleton and the animal skeleton there is one fundamental difference in function. The bones of an animal constitute a mere supporting system capable of acting also as levers, in some cases, under the influence of the contracting and expanding muscles attached to them. They take absolutely no part in the circulation of the blood, and their service may be described as purely mechanical. In the skeleton of a leaf, however, we see preserved the circulatory system as well as that which acts as a mechanical support. The bones here are practically solidified sap channels through which, when the leaf was clothed with living cell tissues, the necessary sap was conveyed from below, and, this being elaborated, was used in conjunction with the absorbed carbonic acid from the air, to form the various components required for the service of the plant. These were in due course, distributed backwards through these channels to the various parts where they might be required to build up wood, fruit, or a store of nutrition, as the case might be. If we could watch the growth of the foliage we should always see the embryo vein structure acting as a sort of pioneer to cell formation, and the vein system of a leaf is precisely akin to the water-distributing system of a water company, with its great mains and smaller ones branching off them according to need of the thoroughfares traversed, and finally tapering away into domestic or other supply pipes as terminals. The return system, however, that we have spoken of puts the plant on a higher level of design and complexity, and demonstrates once again how far the works of Nature transcend the works of man.



MR. ROBERT NEWSTEAD, A.L.S.,
Lecturer in Economic Entomology at the University of Liverpool.

Mr. Robert Newstead, A.L.S., whose portrait it gives us special pleasure to present in this issue, has had a career as wonderful and varied as any depicted in the realms of fiction. Leaving school when ten years of age Mr. Newstead entered a printer's establishment at Aylsham, in Norfolk, but while there he qualified for and eventually secured a position as assistant telegraphist. But in 1872 he returned to school for six months, and then for ten years he followed the horticultural profession, and this association with horticulture made him familiar with the difficulties of the gardener's calling, and in later years he has frequently rendered the gardeners of Chester and district very much assistance in entomological matters. After his horticultural experience Mr. Newstead turned his attention to agriculture, in 1882, but after two and a-half years' experience he returned to his chief love, horticulture. But the wide experience he had gained and the careful studies he had made now bore fruit, and in 1886 Mr. Newstead was appointed Director of the Grosvenor Museum at Chester, a post he ably filled for nearly twenty years; indeed, until in April, 1905, he was appointed Lecturer in Economic Entomology and Parasitology at the University of Liverpool. In early life Mr. Newstead was a keen student of natural history, especially of entomology and ornithology; and he was associated with the late Miss Eleanor Ormerod, and also with the Duke of Bedford in the elucidation of life histories and remedies for insect pests and plant diseases. Mr. Newstead is an honorary member of the Royal Horticultural Society, and was elected an associate of the Linnean Society in 1902. There is not space here to tell of Mr. Newstead's many scientific treatises, of his work for the Home and Colonial Governments and several of the universities, and so we conclude this all too brief notice of splendid achievements with an expression of the hope that the effort now being put forth to establish a Dutton Memorial Chair of Tropical Entomology and Archnology in the Liverpool School of Tropical Medicine and the University of Liverpool, will be abundantly successful, because there is not the slightest doubt that the first person to fill the chair would be Mr. Robert Newstead.

Norwich Gardens.—In accordance with the announcement made in our issue of the 21st inst., we shall give in the issues for April 11 and 18, a fully illustrated description of a considerable number of the more noteworthy gardens in the vicinity of Norwich which has long been known as a "City of Gardens." The gardens that will be described will include those of Ashwellthorpe Hall, Blickling Hall, Boyland Hall, Crown Point, Dunston Hall, Gunton Park, Oakland House, Shotesham Park, Town Close House, and Westwick Hall.

Winter-Flowering Carnations will be extensively displayed at the Royal Horticultural Hall on Tuesday, April 1, when the society devoted to the interests of these flowers holds its exhibition. The annual dinner of the Winter-Flowering Carnation Society will be held at the Hotel Windsor at seven p.m. the same day, and will be followed by the annual meeting at eight o'clock.

Mr. R. H. Biffen has been elected to the recently established chair of Agricultural Botany at Cambridge University. Mr. Biffen is the author of numerous papers, the earlier of which dealt with the preparation of india-rubber and the coagulation of latex, and he has devoted a great deal of attention to fungi. His researches on the hybridisation of wheat and barley have attracted the attention of civilised Governments throughout the world, and attempts have been made, says "Nature," to induce him to leave England and place his services at the disposal of at least one foreign Government. It is satisfactory that largely owing to the generosity of the Drapers' Company Mr. Biffen will be able to continue to carry on his researches at Cambridge.

Elementary School Gardens. A Bill to promote agricultural education and nature study recently passed its second reading in the House of Commons. The Bill, introduced by Mr. Jesse Collins, provides, among other things, for school gardens in connection with elementary schools. The kind of education specified in the Bill is to be compulsory for rural and semi-rural districts, but optional in urban districts.

Metropolitan Public Gardens' Association.—Under the presidency of the Earl of Meath, this useful association continues to do good work in securing more open spaces for the Metropolitan district, in planting trees, laying out old gardens, and providing seats wherever there are suitable places for them. The twenty-fifth annual report of the association has just been issued from the offices at 83, Lancaster Gate, W., and proves most interesting reading. We have space only to point out that the chief work of the association during 1907 was in connection with the opening of Purley Beeches, Croydon; and Barking Road Recreation Ground, East Ham; the presentation of 1,500 plane and poplar trees to West Ham; the promotion of window gardening competitions in the poorer parts of the Metropolis; and the opposition to schemes that would have tended to spoil the beauty and usefulness of Hampstead Heath, Golders' Hill, and Milford Common.

Veitch Memorial Prizes.—We are informed that the Veitch Memorial Trustees will offer a first prize of £10 and a silver medal, a second prize of £5 and a bronze medal, and a third prize of a bronze medal for collections of five distinct varieties of grapes, three bunches of each variety, to include two distinct white varieties, at the Royal Horticultural Society's Fruit Show on October 15 and 16 next. They will also offer £5 and one medal for the best group of winter-flowering carnations, either in pots, or as cut flowers, or as a combination of both, to occupy a space of 100 square feet, at the Royal Horticultural Society's meeting of December 8, 1908, and the first meeting in April, 1909. All these competitions are open to amateurs only, and the exhibits must in each case be grown by the competitor.

Dr. Augustine Henry, whose introduction of many new and useful Chinese plants, and whose great assistance to Mr. Wilson made the introduction possible of many more fine plants from Western China, are well-known to our readers, was married last week to Miss Alice Brunton, daughter of Sir Lauder Brunton, the well-known physician. Dr. Henry has studied forestry in many countries since his retirement from the Chinese Customs Service, and he is now Reader in Forestry at Cambridge. Dr. and Mrs. Henry are spending their honeymoon on the Continent.

National Dahlia Society.—This important society will hold its exhibition at the Royal Horticultural Hall, on September 3 next. The schedule of prizes offered is now before us, and we find that in the trade section there are five classes devoted to show and cactus dahlias, five to cactus varieties, two to pompones and two to single varieties. In the amateurs' division there are six classes for show and fancy dahlias, eight for cactus varieties, two for pompones, three for singles, and four for decorative exhibits. There are ten open classes, chiefly for decorative exhibits of dahlias and suitable foliage. The schedule contains a "Dahlia Analysis" by Mr. Edward Mawley, V.M.H., the president of the society. With the schedule a supplement to the official catalogue and culture guide is sent. The new hon. secretary of the society is Mr. H. H. Thomas, [illegible] Shakespeare Road, Hanwell, Middlesex.

Trentham Park and Hall for Stoke.—The order of the Local Government Board for the federation of Stoke-on-Trent, Hanley, Burslem, Tunstall, Longton, and Fenton provides that the new borough, to be called Stoke-on-Trent, shall come into existence in November. The new borough will have an area of 11,154 acres, and a population of 236,000 people. The federation of these six pottery towns makes it possible for the district to accept the Duke of Sutherland's generous offer of the gift of Trentham Hall and Park for purposes of recreation.

Cotoneaster Simonsi at Hartpury House.—Mr. H. Prentice, of Hartpury House Gardens, Gloucester, sends us a few sprays of Cotoneaster Simonsi, each bearing a profusion of large brilliant orange berries. Mr. Prentice writes: C. Simmondsi is a grand wall plant as it is covered with brilliant berries throughout the autumn, winter and spring months, providing a picture of beauty that is admired by all who see it. A wall on the north front of Hartpury House is covered with it, and although the birds have stripped the plants in the shrubbery they have not touched a berry on the wall plants. It is surprising how quickly this cotoneaster will cover a wall if the growths are laid in at full length wherever there is room for them, and the other growths are spurred back in early autumn but not so as to remove any berries. One wall, sixteen feet high, is still a perfect blaze of orange-scarlet berries.

Grove Hall Park, Bow.—Of this finely wooded estate only about three and a-half acres now remain unbuilt on, and an effort is being made to save this from the hands of the builders, and preserve it for the people and children of Bow. About £200 of the needed purchase money remains to be subscribed. We understand that the London County Council have promised a liberal contribution towards the cost of acquisition, and will take over and maintain the property if it is acquired.

Nitric Diet and Nitro-bacterine.—Some little difficulty has arisen in connection with the two distinct subjects, i.e., Nitric Diet, and Nitro-bacterine, both of which are advertised in our columns. Some of our readers have not been careful to observe the correct title and address of the proprietors of these articles, and consequently some confusion has arisen. Nitric Diet is supplied only by Messrs. R. J. Barnes and Son, Wyche Road, Malvern, and inquiries for Nitro-bacterine should be addressed to Nitro-bacterine, "Review of Reviews" office, Norfolk Street, London, W.C.

Children's Spring Flower Shows.—Scotland sets an excellent example to the rest of the kingdom in her encouragement of children's flower shows. Within the last few days Dundee has held its exhibition, and there were 2,600 flowers staged, chiefly hyacinths, daffodils, and tulips, all grown by children. At Perth the children made no fewer than 4,000 entries, producing a fine display; and Dunfermline had 982 juvenile exhibitors from ten of its schools.

A New Ornamental Musa.—At a meeting of the Acclimatisation Society of Paris, M. A. Chevalier, who has returned from his mission to West Africa, called attention to a new musa found growing at Fouta-Djallon. This species, which has been given the name of Musa Mastreti, has a strong resemblance in its habit to M. ensete, and is remarkable for its large glaucous leaves. The fruits are cylindrical, bright yellow, and with but little pulp. They are eatable, but of poor quality. The species is of interest from the fact that the altitude at which it grows justifies the belief that it will be found quite as hardy as M. ensete, and therefore useful for the embellishment of the conservatory and the ornamentation of the pleasure grounds during the summer months.

Retrospective Exhibition of Chrysanthemums.—At the Paris Chrysanthemum Show in November last the librarian of the National Horticultural Society of France exhibited a large number of books from the society's library dealing with the chrysanthemum, and also many old coloured engravings of varieties long since discarded by growers. It is now announced that at the next exhibition in Paris there will be a special arrangement made for exhibiting articles of interest, literary and artistic, connected with the flower. The preliminary announcement says that the exhibition will consist of two parts. Firstly, books, publications, prints, engravings, pictures, and old catalogues relating to the chrysanthemum. Secondly, classes for old chrysanthemums in cultivation prior to 1896. There is no doubt but that Mr. Harman Payne's recently published bibliography of the chrysanthemum in the Journal of the National Horticultural Society of France (since issued in separate form) has done much to stimulate the literary interest among the French growers, and the exhibition in the first section will probably be of much educational value to those students of horticultural literature in France who are chrysanthemum lovers. In the second section there should be some probability of a good show. There are still in cultivation many old flowers raised forty to fifty years ago which will probably be best represented by the incurved and anemone sections. Queen of England, Alfred Salter, Beverley, Mr. Bunn, Empress of India, Mrs. G. Rundle, Fleur de Marie, Gluck, Mrs. Pethers, King of Crimsons, and perhaps a number of the old Japanese may still be found in some collections, and will be an object lesson for our French friends who have certainly done their part in the improvement of the modern show chrysanthemum.

Solomon Islands Indigo.—A collection of dried plants made in Ysabel Island, presented to Kew, in 1893 by Archdeacon Comins, included a "dye-plant used by natives for staining their tappa cloth." It was identified with Desmodium brachypodum, A. Gray, a species previously only known to inhabit Australia, where it has a wide range in the coastal region of New South Wales and Queensland. Further specimens were received in a collection made by the officers of H.M.S. "Penguin" in 1894-5; but these are not localised. Recently Mr. C. M. Woodford, Government Resident, British Solomon Islands, sent specimens to Kew accompanied by the following note: "I now send some dried specimens and some seeds of a shrub from Ysabel Island for identification. It is the source of the native indigo dye, and so far as I know is peculiar to Ysabel. It is used for colouring the native bark cloth. The leaves are sprinkled with salt water and slightly wilted in the sun. They are then chewed by the women and the result is a dull blue stain in the mouth which has a very unpleasant appearance. To stain the cloth the women spit or smear the saliva upon it, altogether a very primitive and objectionable process."

LILACS.

Following on my notes of the best lilacs to grow (p. 178), a few remarks relative to methods of cultivation, will not be out of place.

To grow lilacs really well, that is to obtain large panicles of fine flowers, the situation the plants are to occupy is important. Avoid a site where they will be robbed of their full share of light and space, or where the roots are interfered with by those of tall-growing forest trees, like the elm for instance. Air and sunshine are factors not to be ignored, and ample space is important. As to soil, the lilac is not at all particular; any deeply trenched well enriched garden soil is suitable; that which is inclined to be heavy is better than that of a sandy character, as in the former the rich colours are more pronounced. For established plants a liberal top-dressing of bonemeal in the spring, lightly forked in for the benefit of the surface roots, will be an advantage, following this with a mulching of half-decayed farmyard manure mainly for the purpose of conserving the moisture in the soil during the months of April and May when the flower panicles are developing.

Copious supplies of liquid manure early in May will be an advantage not only to the development of the current season's flowers but also for future growth of wood and leaves, as upon this depends the success of the future harvest of flowers.

As the newer varieties are grafted on various stocks, at no time should the sucker-like growths which freely spring from the stock below the graft be allowed to remain, as they rob the plants of that vigour which is necessary to the development of large flower panicles and the increased size of the individual flowers. The removal of suckers as they rise is most essential in the case also of lilacs on their own roots whether new or old.

The habit of growth differs very considerably, scarcely are there two varieties alike, some make compact bushes, while others are most ungainly. When planted it is well to prune the previous year's growth down to within an eye or two of the base with a view of inducing a better foundation for the future bush. Afterwards the cutting of the flowers will pretty well keep the plants within the required space, except that an annual examination of the growth is time well spent, removing then the weakly shoots that cannot give vigorous flower spikes, and thus allowing more space for the strong branches to develop.

E. Molyneux, V.M.H.

A FINE SPECIMEN OF A FINE LILAC.

Syringa alba grandiflora. Flowers, pure white.

THE VIOLET.

(Concluded from page 226.)

◆

Viola odorata.

This well-known plant is in a wild state spread over Europe and Russian Asia, and is common in various parts of Britain, while it is grown in almost every garden, and enormous quantities of it are sold in Paris, London, and many other cities. Its delicious odour distinguishes it from other violets. It may be grown where almost everything else but weeds would fail, forming carpets for open groves or the fringes of woods, of hedges, the open parts of copses, or for banks. It should fringe shrubberies, rock-gardens, or ferneries. In such positions it requires no care, and rewards the planter by filling the March air with unrivalled sweetness. It will grow on almost any soil, but best on free sandy loam, as I said before. It is well to naturalise the plant on sunny banks, fringes of woods, and on the warmer sides of bushy places, to encourage a very early bloom.

The cultivation of the sweet violet is of great importance, not only for private gardens but also to supply the vast demand for it in large cities. About Paris the cultivation of the sweet violets for the markets is largely carried on, and in some places three or four acres may be seen covered with these flowers. The ground is well exposed to the midday sun, and is rich, free, and warm. The plantations are made in the spring, and, of course, those required for the winter markets are grown in frames. Violets do not like forcing, nor do they need it if their crowns are ripened early.

The violet is said to have derived its name from the Goddess Io, on whose behoof, when in the form of a heifer, violets were made to spring from the earth. Whatever may have been the fabled perfections of that creation of old world imagination, they could not have connected the name with associations so sweet and elevating as those which it owes to the simple flower. The word violet breathes music and poetry without reference to any goddess. It was so much esteemed in ancient Athens that it was engraven in tablets all over the city. The citizens coveted no higher title than that of "Athenian" crowned with violets. The Romans, too, admired the flower, and showed their appreciation of it in ways suited to their genius. They cultivated it extensively in their gardens, and were particularly partial to a wine distilled from its flowers.

In the games of flowers held at Toulouse in the picturesque days of the troubadours, a golden violet was the prize awarded for the best poetic composition. The violet was the chosen flower of the lady who instituted the games. While undergoing imprisonment she sent it to her true knight as a pledge of her constancy, of which virtue it henceforth became symbolic among the troubadours. Thus early was it associated with poesy. Nor has the warrior disdained it. It was the chosen badge of Napoleon Bonaparte. During his exile his officers were in the habit of toasting him as "Corporal Violette"—the flower that returns with the spring. Even with the epicure has it found favour. A sherbert made of extract of violets was much esteemed in the East, of which Mahomet is reported to have said that it surpassed all other extracts, as far as he himself excelled the rest of creation.

Coming down to more recent times, we find it figuring largely in popular superstition, being regarded as lucky in some circumstances and unlucky in others. A pretty fancy that the nightingale only sang above a bed of violets is referred to by Milton in these lines:

"In the violet embossed vale,
The love-lorn nightingale
Nightly her sad song mourneth well."

The confectioner's art, too, has caught this sweet flower in its meshes. Fuller has snatched it from its rightful home and place in the world of flowers, crystallised it, and put in on our dessert tables. "Give me," cries one, "the substance of a thing," something that I can eat, or drink, or feel.

"A Poem for the money it will bring,
Flowers for the dainty meal."

It was also greatly esteemed for supposed medicinal qualities. In England in the olden time it was the recognised emblem of fidelity. Thus an old sonnet has it:

"Violet is for faithfulness."

Shakespeare tells of

"Violets dim,
But sweeter than the lids of Juno's eyes."

and sings

"To throw a perfume on the violet
Is wasteful and ridiculous excess."

Wordsworth, when he would convey an idea of the sweetness of a young maiden, compares her to

"A violet by a mossy stone
Half hidden from the eye,
Fair as a star when only one
Is shining in the sky."

As for Tennyson, he is continually referring to the violet. He weaves them in a "Wreath of March." One of the first signs of approaching spring he notices is that

"Thick,
By ashen roots the violets grow."

And again the sentiment he puts into the mouth of his May Queen is very emphatically his own:

"O sweet is the new violet that
Comes beneath the skies."

William Howitt says:

"Pluck the violets blue,—
Ah, pluck not a few,
Knowest thou what good thoughts
From Heaven the violet instils?"

So precious are they in the eyes of another poet that he sees them gleaming like amethysts in the dewy grass.

Sir Walter Scott gives us this gem:

"The Violet in her greenwood bower
Where birchen boughs with hazel mingle,
May boast itself the fairest flower
In copse or forest dingle."

We might have expected that in the New World beyond the Atlantic, new flowers would usher in the everywhere welcome season. But even there the modest violet is not overlooked. An American poet in proclaiming its return couples the old-world flower with a new-world bird. He says:

"The blue-bird and the violet are with us once again."

And this gem from James Russell Lowell:

"Violet! Sweet Violet!
Thine eyes are full of tears,
Are they wet
Even yet
With the thoughts of other years?
Violet! dear Violet!
Thy blue eyes are only wet
With joy and love of Him who
Sent thee,
And for the fulfilling sense
Of that glad obedience
Which made thee all that
Nature meant thee."

Tennyson again in his "Maud" sings thus:

"From the meadow your walks have left so sweet
That whenever a March wind sighs,
He sets the jewel-print of your feet
In violets blue as your eyes,
To the woody hollows in which we meet,
And the valleys of Paradise."

Homer speaks of "meadows purpled o'er with violets" as a "scene to fill a god with wonder and delight." Milton, with Eden's flowers to select from, requires "pansies and violets" to help in the formation of a couch in Paradise. This idea is fanciful. I do not know who wrote it:

"The violet varies from the lily as far
As oak from elm—one loves the soldier, one
The silken priest of peace—one this, one that."

Again yet another voice:

"Of all the flowers that make the earth so fair,
That bloom about our path where'er we go,
Give me the violet that lies hidden there,
And sheds its fragrance when soft breezes blow.

Like some dear friend for whose return we long,
We welcome thee, sweet harbinger of spring,
And hasten with the tribute of a song
For all the tender thoughts that thou dost bring.

When long ago in childhood's happy day,
We sought thee under April's fitful skies,
When through lone woods we rambled far away,
And wondered if ye bloomed in Paradise.

'Twas sweet humility that bade thee hide
Thy purple blossoms neath a lap of green,
Thy fragrance serving as the only guide
To woo us to the spot where thou wert seen.

And how year after year thou didst return
And lead our thoughts o'er half-forgotten ways,
Like some old song that we were wont to learn,
Thou whisperest fondly of our early days.

Fair flower, adieu, and thou shalt ever find
Upon my bosom a safe place to lie,
Secure from every storm and boisterous wind,
Breathe out thy life and in thy sweetness—die.

My pen is at the bottom of a page,
Which, being finished, here the story ends,
'Tis to be wished it had been sooner done,
But stories somehow lengthen when begun."

And where can the pen stop when it writes of so sweet a flower as this?

H. C. PHILBRICK.

Daphne Mezereum. — This common daphne, generally known as the Mezereon, is a British plant, and is a pretty object in gardens, where it is too little planted. Then its upright, leafless shoots are thickly covered with flowers, which, expanding on the bare branches, have a very pleasing effect. The type has rosy pink blossoms, and there are several named varieties, alba having white flowers, alba flore pleno double white, and atro-rubra deep red blooms. A collection of the different varieties will afford a charming picture when all the plants are in flower. The blossoms are succeeded by bright red berries, which, in the summer, are almost as attractive in their aspect as the flowers. The white-flowered varieties often bear orange-yellow fruits instead of red. Young plants are easily raised by sowing seed, and the seedlings will generally be found to vary considerably in the colour of their flowers.—S. W. FITZHERBERT.

SWEET PEA STREAK.

Fortunately for me I am practically unacquainted with what is termed streak in sweet peas. That there is something attacking plants in various directions, and under different conditions, is apparent by the alarmed statements that reach one from time to time. Perhaps it is only natural to suppose that something would come along in eerie form, appearing only to a chosen few before showing itself all round. A peculiar class of plants are these leguminosæ; it matters not whether they are annuals, herbaceous or shrubby, or perennials, they are all endowed with what are termed root nodules. Yet in spite of their individuality as regards free nitrogen it cannot be said that any one of them is an unconcerned agent when cultural methods are applied.

In restricted areas, where it is almost necessary to grow plants of this order repeatedly, whatever the annual treatment may be as regards manures, we should in time expect to be troubled with either fungoid or insect pests of sorts, more especially if preventive measures of some kind were not adopted. If we study the career of many of our popular garden plants we find that there have been times when their strength has been sorely tried, and we cannot expect the sweet pea to escape visitations from disease, more especially with overcrowding, and over-manuring with both organic and inorganic foods. If we require the finest products for exhibition purposes, animal or vegetable, these are treated out of their natural course to achieve some end, but such things at the end of their treatment lack stamina, they are constitutionally weaker, and in a sense, out of training—cannot stand sudden climatic changes without serious checks because of their succulent nature.

So far as we have heard, what is known as streak has only occurred with amateurs, but under what cultural or climatic conditions the plants have been grown we are not able to state. In cases where peas have gone off in the mysterious manner described by some growers, we should think it folly to attempt to grow in the same ground for some time unless unusually stringent measures were taken in every possible direction, and consider it the height of folly to use old sticks, wires, or other supports unless disinfected with a powerful insecticide strong enough to kill latent spores that may remain from the previous year, and in bad cases we should advise applying gas lime to the soil. The elaborate preparations advised by many growers for these plants, if carried out, need plenty of lime or chalk to keep the soil in a basic condition, and this is especially the case where acid manures like superphosphate of lime are given, and also when much ammonia sulphate is used.

The symptoms, so far as an outsider is able to judge, would appear to favour the opinion that eelworm is the cause of the mischief, and if such is the case it should be easy to diagnose. Striped flowers are plentiful enough during wet, cold seasons without stem disease, it is this latter we should like to be assisted in by having specimens sent for inspection. Suggestions have been made for cultural directions to be given in a definite form by the National Sweet Pea Society, even then we think each cultivator would pursue his own course, certainly no one course could be stated as being applicable to every grower.

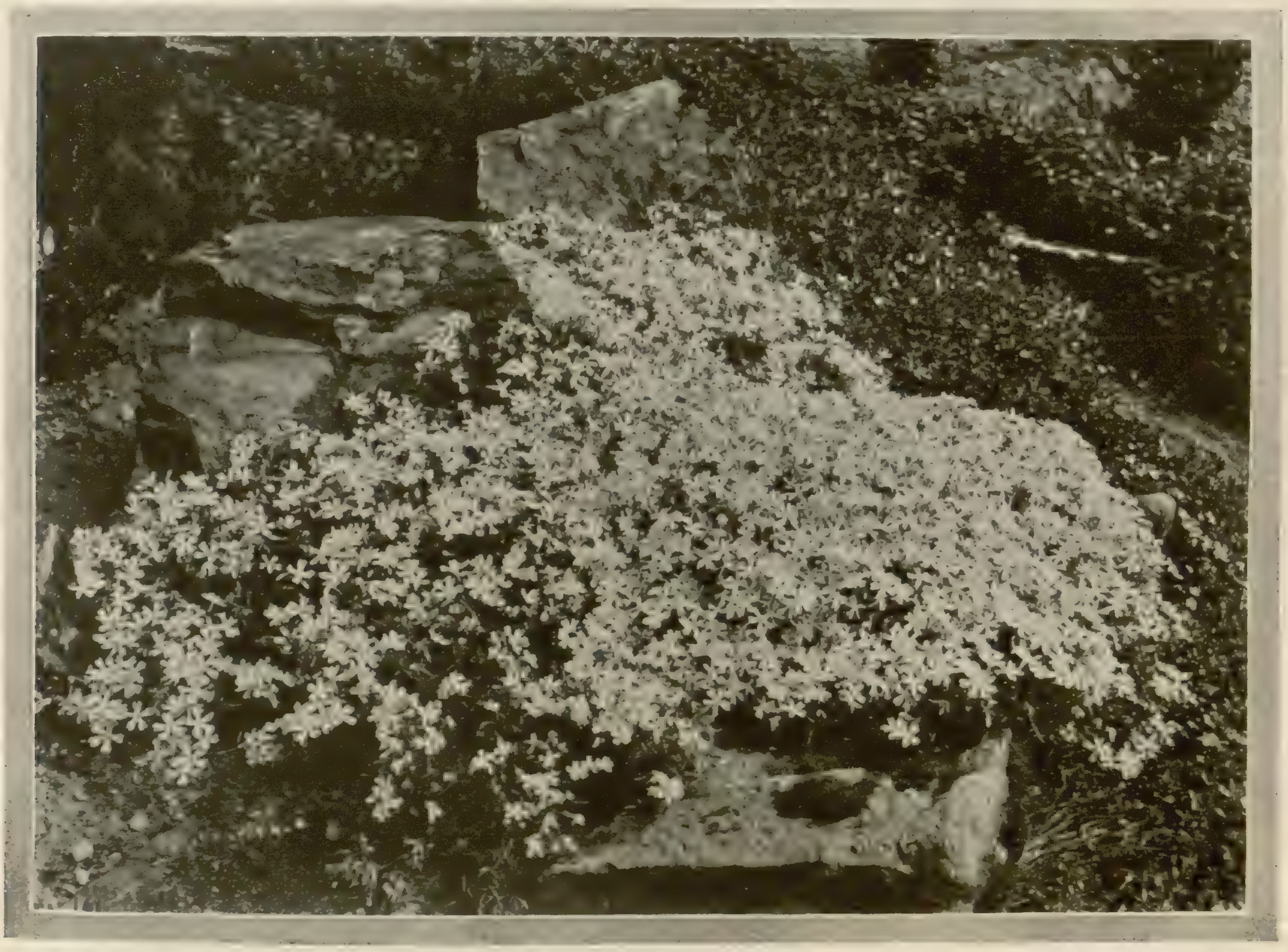
CHARLES FOSTER.

University College, Reading.

PHLOX STELLARIA.

This dwarf free-flowering plant is a charming subject for the rock garden. It is of looser growth and rather more upright habit than the majority of alpine phloxes, and therefore is very distinct in character. The flowers, produced in the greatest profusion, are silvery-grey, changing to white with age, and a big patch of this plant clambering over the rocks as we have it here at Mullaboden presents a delightful picture. Phlox stellaria loves a deep sandy soil in which a goodly amount of half-decayed leaf-mould has been mixed. As regards position there is no question that P. stellaria should be planted in full sunshine, because only in such a place is it seen to the fullest advantage. Fortunately, this species is easily propagated from cuttings, and these should be taken in the summer, after the flowering season is over, and put in firmly in boxes of sandy soil; if placed in a cold frame and kept shaded for a couple of weeks the cuttings root readily, and fine sturdy plants result.

Mullaboden. W. J. MITCHISON.



PHLOX STELLARIA IN THE ROCK GARDEN AT MULLABODEN, BALLYMORE EUSTACE

Dividing the Broad-leaved Saxifrage.—Time was when we called this plant Megasea cordifolia, but the modern dictum is for Saxifraga crassifolia. However, under either name it is one of the best of all hardy plants for the spring garden; and it is also not to be despised as a pot plant for the cold greenhouse. My object in writing now is to advise those who have old plants not to let the season pass without splitting them up, if they are any way bare in the centre. Single crowns severed and put in now make nice bold tufts of foliage later, and throw up really magnificent flower spikes which last a long while.—E. J. K.

LARGE ASPARAGUS AND HOW TO GROW IT.

Although many people, and perhaps with good reason, still prefer the small greenish-purple heads of asparagus, there is undoubtedly a strong demand—one that is making itself felt in private establishments—for the long white stems formerly imported solely from the Continent, but now placed on the market by several growers in England. Providing the soil is a fairly rich loam, and well drained, the production of large heads is an easy matter, but in wet, heavy clay lands more difficulty is experienced. Even when the ground has been drained sufficiently for ordinary crops the roots of the asparagus are liable to decay in winter.

Preparing the Ground.

In such soil it may be necessary to take out trenches two feet deep and one yard apart, their lower ends connected with a pipe drain, and if closely-bound green faggots, or eight-inches of brick rubbish are placed in the trenches, ample drainage will be secured, and the soil may be filled in. The whole ground should be moved to a depth of eighteen inches at least, keeping the richest spit at the top for the young plants to grow in, not burying the best soil, as is too often done. Advantage should be taken of frost to wheel on a heavy dressing of manure, that from the farmyard being the best for light soils: horse manure, wood ashes, or decayed refuse for those of a heavier nature. Fork it in in dry weather, bringing all the clods to the top and breaking them up, reducing the whole to a friable condition for planting in March or sowing the seeds in April.

Whether the soil is light or heavy, I much prefer to sow the seeds where the plants are to remain. For want of space plants are often raised elsewhere, and transplanted when one or two years old, but a slight check is sure to occur, and this is much increased when the plants are obtained from a distance; and if the roots are dried, badly packed, and roughly handled, the result may be disastrous.

Sowing the Seeds.

Sow the seeds on a fine day, when the soil appears quite dry, but is really moist beneath. The drills may be drawn one yard apart and two inches deep. Place the seeds in groups of six, at about eighteen inches apart, covering them and raking the ground level. Radishes, lettuce, or some such crop can be grown between the rows the first season. Weeds will most likely make their appearance before the asparagus. Dispose of them by using the Dutch hoe, first stretching a garden line over the drill and weeding it by hand. In a few more days the needle-like points of the seedling asparagus will be discerned, and as they grow the groups should be thinned gradually, until only the strongest plant is left in each. Timely support of the tallest grass and frequent hoeing is all that is needed. Watering will accelerate growth, but is not absolutely necessary.

Manuring the Beds.

In autumn, when the ripened growths are cleared away, sprinkle 1½oz. of kainit per square yard over the ground. A dressing of dung, suitable to the soil, may be given in winter, and forked in in February, being careful not to disturb the young plants. When the latter have attained some height, and the ground has been warmed by the sun, give another coating of flaky manure, such as that from an old hotbed. This may be four inches thick, and it serves two purposes—it keeps down the weeds, and conserves the moisture during summer. Manure of a more stimulating kind can be given by applications of finely-sifted nitrate of soda once a month during the growing season, at the rate of 1oz. per yard. Salt, though often recommended, is of doubtful benefit, and as the kainit already advised contains a large proportion, as well as potash, no other need be used. The writer has often seen exceptionally fine asparagus grown entirely without salt of any kind.

It is indispensable that the young plants should be firmly staked. They should now be growing strongly, and reach, in July, a height of four feet or more, and have as many as six or seven stems. When these are ripened and cleared away in November kainit and dung may be applied as before, and, in addition, superphosphate at the rate of 5oz. to every two yards, in spring.

Blanching the Stems.

As a few heads may be gathered from each plant in the following spring means must be taken to blanch them. Seaweed is often used for this purpose, the bed being thickly coated with it, but as most people are unable to obtain it, the French method is the best one to adopt. If the soil and the numerous top-dressings are forked up lightly in February and exposed to the action of frost, etc., a fine dry tilth is obtained. Such soil, after the Dutch hoe has been passed through it, is generally in fine condition for earthing up the crowns in a manner similar to that followed for potatoes. It must be done in dry weather, and the hills or ridges should be large. Asparagus earthed up in this way is ready to pull when the tops of the shoots appear through the ridges. An asparagus knife is then useful for removing a small quantity of the soil when the stalk is "pulled" or twitched off. During the fourth or fifth season the plants will, of course, be much stronger, and more may be expected of them, but the cutting should not be too severe, or protracted beyond the later days of June.

Planting Asparagus.

March is the best month to transplant the crowns. After the ground has been prepared take out a broad flat trench four inches deep with the spade, and placing the crowns at the right distance apart spread out their roots horizontally, covering them with the finest soil, and pressing it around them. Only a few plants should be lifted at one time, and these should never be allowed to dry. The treatment afterwards is the same as for seedlings; alternate plants may be removed for forcing in the third year, leaving the permanent plants a yard apart each way. Crowns that have been transplanted are more likely to benefit by waterings in June and July than those sown where they are to remain.

The Best Varieties.

Giant French is undoubtedly the largest and finest, but the stems are not numerous, and are produced rather late. Connover's Colossal is an early free-bearing kind, but only of moderate dimensions. Early Giant Argenteuil is a splendid variety, and combines many good qualities; it is largely grown for the Paris markets, but succeeds equally well in this country. All these three have purplish heads, but another Continental kind, known as Giant White Head has heads of a pale green colour. J. Comber.

Nymans Gardens, Handcross.

There is no better guide to the kitchen garden than Vegetables and Their Cultivation, by T. W. Sanders. It is a complete treatise on the general management of the garden, and the successful culture of vegetables, saladings, and herbs for home use. Price 5s. net, by post, in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

PHLOX DRUMMONDI.

These brilliantly-coloured varieties of Phlox Drummondi may be said to have taken the place of the verbena in the flower garden, though even now they are probably less commonly grown than almost any of the well-known bedding annuals. The reason for this lack of popularity is probably not far to seek, for they want the best possible cultivation if they are to be really a success, thin, weedy, straggling plants—the result of letting them take their chance, in laissez-faire style, with other annuals—giving no satisfaction whatever. I once heard someone remark that Shirley poppies would grow on a dust-heap, a remark which was verbally true, though no experienced grower would be satisfied with the result. So with Phlox Drummondi. Few annuals give a greater variety of brilliant colours, salmon-rose, pink, deep crimson, bright scarlet, violet, yellow, blush white, pure white, etc., while some have dark eyes, some white, and some none at all.

Though a somewhat fragile plant, even when well grown, it is not nearly so much injured by summer storms as many of the summer flowers are, and, though it may be beaten down, and the blossoms splashed with mud, yet it soon recovers, and, given a renewal of bright weather, and a judicious watering to clean the blossoms and foliage, it will show little trace of the rough treatment it has received after a few days. Some sorts grow only six inches in height, while others grow a foot or more, and lend themselves to very effective table decoration if suitably arranged, an operation which calls for a good deal of judgment.

These phloxes are only half-hardy annuals, and should be treated accordingly. To get them in bloom before the summer is too far advanced—and lateness of coming into flower is rather a drawback with many of the bedding annuals—they should be sown in gentle heat in light, rich soil in March, pricked off in boxes as soon as they are large enough to handle, and kept in a moderately cool house. If one has not a house at one's disposal, or cannot spare room, they may be sown in a cold frame at the end of March, and treated in the same way. In either case they should never be allowed to become stunted, either in the seed pan, or after being pricked out, for they never recover from it. The essential principle is to keep them growing straight on under the best conditions from the time the seedlings are up until they are put in their summer quarters. They should be hardened off gradually, not being set in full sunshine outdoors until their foliage has become thoroughly inured to the dry air. It is recommended to pinch out the central shoot when the plants are three or four inches high to induce a bushy growth and prolong the flowering season.

It is as small beds on the lawn that Phlox Drummondi shows off to the greatest advantage in all its brilliancy of colouring, and it is in this position that we can give it the conditions best suited to it. The site selected should be as sunny a one as possible, and if the bed has been well prepared the plants will stand a great deal of hot weather before they need watering. It is useless to plant them in shady or half-shady places, as no good results are ever obtained with them in this way, and it is equally useless putting them in a cold clay soil, unless long cultivation and rich manuring has improved the soil out of knowledge. I think the best beds of them I have ever seen have been in the chalk districts of Wiltshire, from which it may be inferred that a chalky soil is most favourable to them. If they do not get a sufficiency of sun and air, or if the soil is of too close a texture, they make thin weedy branches, showing the soil between; whereas in a suitable position as regards soil and sunshine, their growth is much more compact, with flowering shoots from every axil, the effect being a display of colour which few beds can beat. The plants may be put fairly closely together, say four to six inches in a hot position, when they will support each other; or they may be given more space, say, eight to ten inches, and some of the branches pegged down like verbenas. The best effect is produced when closely planted, the ground being covered more quickly, while the general growth of the bed is more uniform in height. Of course, much must depend upon the sorts grown, those growing a foot high obviously permitting of different treatment from those growing only six inches, for which there is only one way, as a bed.

Though recommended principally for bedding, there are other purposes for which these annual phloxes may be used, though the individual flowers may not, and probably will not, be so large, nor the effect so good, as when grown on specially prepared soil, and massed together. The dwarf varieties make good edgings to beds and borders, and where used in this way it is better to buy seeds of one colour only, though when filling a whole bed with them the mixed colours are more effective, as they generally contain a fair proportion of whites or light colours, and these serve to show up the others. The dwarf varieties, too, make good pot plants for the greenhouse, especially if cuttings are struck in autumn, when they will flower well in early spring. The taller varieties are sometimes used with good effect for carpeting the ground between taller plants when the soil has been well treated, though it would be useless planting them in such positions where the roots of strong-growing plants abstract both food and moisture. With beds of standard roses, where the soil has received a good mulching of manure year by year, and is therefore in good heart, and where, moreover, it can be cultivated to a depth of six or eight inches without seriously interfering with the roots of the rose trees, the taller varieties of these phloxes make a very good ground-work, growing just high enough to hide some part of the bare stems, but not making a dense enough growth to injure the well-being of the roses. For hanging baskets and for window boxes and balconies, they may be used to good purpose when well grown.

The Continental growers have done a great deal in improving the strain of Phlox Drummondi, and have given us not only larger flowers, but several different forms of it, among which may be mentioned Hortensiaeflora, a beautiful large-flowered dwarf strain of spreading growth, and Cuspidata, with irregularly-shaped carollas, which have developed spines, thus quite altering the character of the flowers, giving them the appearance of stars.

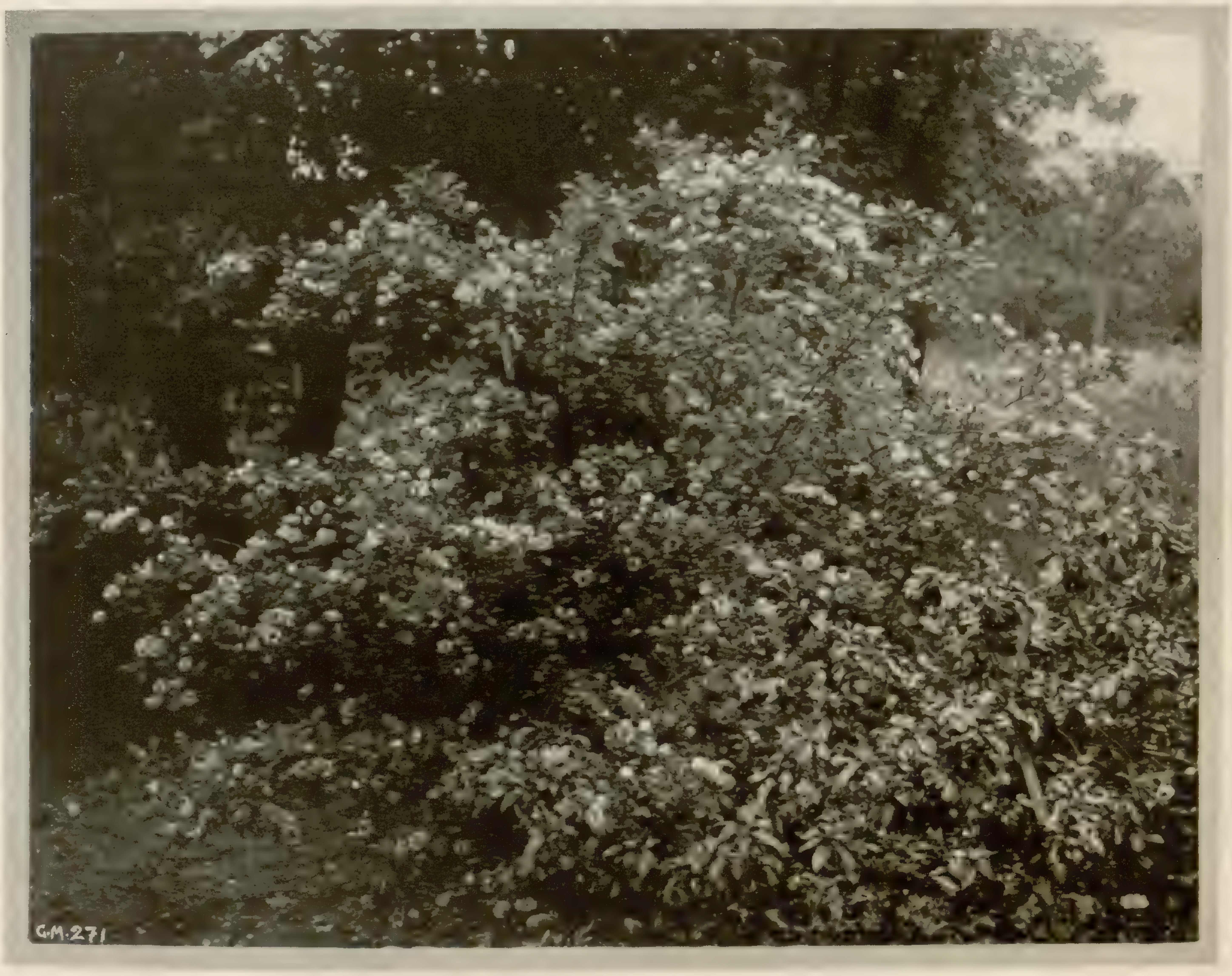
Alger Petts.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in Easily Grown Hardy Perennials, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

ROSA HUGONIS.

While enthusiasm for good garden roses grows stronger from year to year, there are many who are growing impatient of the ordinary garden forms, and are taking up the cultivation of many of the species. There are such a large number of beautiful species to make a selection from now, that this is little to be wondered at, as many of them fulfil all the requirements of a good garden rose. One of the finest species for decorative effect, and one of the latest introductions, is the lovely species depicted in the accompanying illustration. This free-flowering rose was raised at Kew from seed received in 1899, which had been collected in Western China by Father Hugh Scallan, who sent it to the British Museum, from whence it was sent to Kew. Its habit, spines, and structure of the flowers show it to be a near ally of the British Rosa spinosissima. The flowers are light yellow in colour, two inches in diameter, produced in profusion all over the bush in the month of June. The largest bushes at Kew are now about five feet high, but as these are still comparatively young, they will probably reach much larger dimensions.

C. P. Raffill.



ROSA HUGONIS AT KEW.
A new species with light-yellow flowers.

Planting Vines Outdoors for Foliage.—Vine leaves are such great favourites for dressing the dessert dishes in some places that there is a positive danger of unduly denuding the vines unless some means are taken to meet the supply. This is best done by putting in a few "eyes" of some of the cut-leaved vines which colour well in autumn, like Mrs. Pince. When growing well in five-inch pots the vines should be planted at the foot of an old wall.—E. J. K.

NEW PLANTS, ETC.

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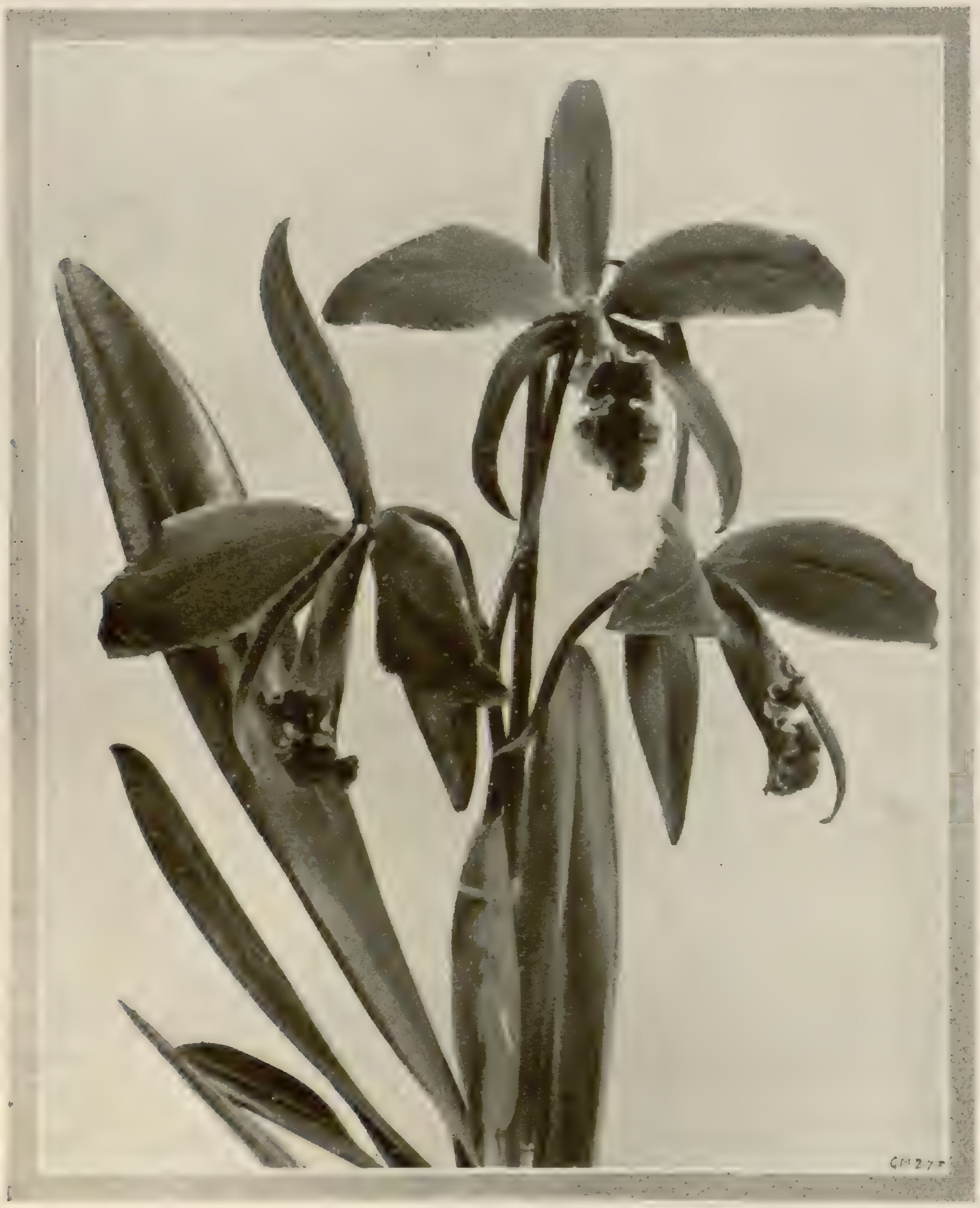
VANDA SUAVIS PALLIDA.

A noble orchid, bearing a pair of fine spikes, one of these carrying a dozen large substantial flowers. It is an albino form, the flowers being white, tinged with greenish-buff. Some orchid experts regard it as closely approximating to Vanda suavis Sanderæ. F.C.C., R.H.S., March 17. Mons. Theodore Pauwels, Meirlebeke, Ghent, Belgium.

LÆLIO-CATTLEYA ELINOR.

A very beautiful hybrid, derived from Lælia Coronet and Cattleya Schroderæ. It has fairly large flowers, that are of a most brilliant orange-yellow colour, and glisten in a charming manner. The plant carried three flowers, and provided a most attractive bit of colouring. The plant has now, we understand, passed into Major Holford's collection, at Westonbirt. A.M., R.H.S., March 17. Messrs. Charlesworth and Co., Heaton, Bradford.



LÆLIO-CATTLEYA ELINOR.

Flowers rich orange-yellow. A.M., R.H.S., March 17, Messrs. Charlesworth and Co., Heaton, Bradford.

CATTLEYA SUZANNE HYE DE CROM.

A very fine and beautiful cattleya that was extensively shown on March 3, but as cut flowers only were forthcoming no award was then made. On this occasion a flowering plant was exhibited. This lovely cattleya is a hybrid from C. Mossiæ Wagneri and C. Gaskelliana alba. The flowers are large, pure white, and with a yellow throat to the frilled lip. F.C.C., R.H.S., March 17. Mons. Jules Hye de Crom, Coupure, Ghent.

LÆLIO-CATTLEYA LUMINOSA WESTONBIRT VAR.

This is by far the finest variety we have seen of the hybrid from Lælia tenebrosa and Cattleya Dowiana aurea. It has very large, broad-petalled flowers, that are of a deep orange hue, tinged with bright carmine-red, and have each a fine deep purple lip. A.M., R.H.S., March 17. Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

CATTLEYA ENID, WESTONBIRT VAR.

A very bold, large-flowered form of the handsome hybrid between C. Warscewiczi and C. Mossiæ. It has bright rosy-purple flowers, and a pale margined, deep ruby-purple lip. A.M., R.H.S., March 17. Major Holford, Westonbirt.

ODONTOGLOSSUM GLADYS.

A charming and very distinct hybrid, derived from O. cirrhosum and O. Harryanum. In form of spike and shape of flower the newcomer most resembles O. cirrhosum, and for once in a way the influence of O. Harryanum is not predominant. The ground colour is white, tinged with yellowish-green, and on this is a rich suffusion of dark, yet bright, purple. A.M., R.H.S., March 17. Messrs. Charlesworth and Co., Heaton, Bradford.

GARDEN SEATS.—II.

One point which ranks equally in importance with the disposal of our garden seats is the nature and build of the same, and here, as in all garden architecture, must our goal be harmony, utility, and durability, for, if we attain not these, it were indeed better that we should walk our gardens with no opportunity of rest. Of all garden horrors there are none worse than inartistic and trivially-designed seats. How well do we not know that terrible "rustic seat," a thing composed of curved ends of branches, often brightly varnished, and overlaid with yet more pieces of wood distributed in patterns of diamonds, triangles, squares, and various fearful and wonderful designs abhorrent to the artistic eye, and still more disagreeable to the back rash enough to lean against them. Such an object is entirely out of place in art, and has a paltry, jerry-built effect that renders it an object of contempt.

Garden seats should necessarily harmonise with the garden itself, and there are so many beautiful models obtainable, and even genuine old designs at times to be found, that there should be no difficulty in making our places of rest among the most attractive of the garden delights. There are many opportunities for stone seats in the Italian style of gardening, and these, or those of heavy oak of simple design, look equally well in an Elizabethan or formal old-fashioned pleasaunce. In angles of walls, on each side of a stone gateway, under terraces, and in various nooks and corners of garden architecture, the wide stone seat or bench, with its paved surrounding floor, and comfortable back and arms, whether built into the masonry, or subsequently placed in its shelter, is at all times a thing of great value and attractiveness. Garden chairs should be of as simple and strong a build as possible, and, if they must be painted or stained, the colour should be one that is not unduly noticeable, a dark green, for instance, harmonising well with the surrounding foliage, while the silver-grey tones taken by old oak, after lengthened exposure to the weather, are often very beautiful, and are, doubtless, among the most pleasing from an artistic point of view, particularly in woodland scenery.

A great point to be remembered in the disposal of seats in a garden is, that there should be one for every emergency, one where the sitter may be sure of sun in the winter, one for shade, one for shelter from prevailing winds, another for retirement and peace, or for a favourite view. If possible, the ground underneath the seat should be paved, or prepared in some way against damp and discomfort, it always being borne in mind that this preparation should be as carefully thought out as the seat itself, so that it may harmonise with it. Above all things, garden seats should appear an integral part of the garden, and should never suggest that they were merely afterthoughts.

A charming adjunct to any garden is the paved and sheltered space, not too far removed from the house, set with chairs and tables, where meals can be served in comfort, provided it be fine overhead. Such a retreat may be protected by the rear foliaged branches of the trees and by the old grey wall that guards the sun-trap on the northern side. Here it is dry underfoot, the perfume and the sweet air of the garden is present, the distant landscape charms the eye, and the singing of the birds, grown tame with the hospitality of the house, may be enjoyed through the pleasant hours of the early summer evenings.

S. W. Fitzherbert.

PLANTS IN TUBS FOR TERRACES.

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Ivy-leaved Pelargoniums.

In many gardens the use of plants in tubs, when in quantity and of sufficient quality to claim admiration, add a distinct and telling charm to the surroundings. And the material well adapted for this purpose is ever increasing. Yet, after trying considerable numbers and varieties of plants I have found nothing to claim such general admiration as well grown specimens of the ivy-leaved pelargonium Madame Crousse, the pale pink flowers of this variety are produced in abundance, and the fine habit and vigorous growth are all that need be desired; Souvenir de Charles Turner is of similar habit and vigour, but the rich red flowers of this variety are less popular.

In the accompanying illustration six plants of the first named variety are shown, each about nine feet in height, and from four to five feet in diameter; they are grown in cut petrol casks in compost suitable for free growth. Iron rods of the desired height, connected at the top, are made so as to clasp the tubs round the mouth, and covered with a wide-meshed wire netting, over which the plants are trained. The cultivation and management is simple in the extreme. Eighteen months from the cutting will suffice to secure such plants as represented.

Agapanthuses.

It will be noticed that between every two plants of the pelargonium is one of the African lily (Agapanthus umbellatus). This plant has leathery, strap-shaped, bright green leaves two feet in length, and spikes three feet high carrying large heads of bright blue flowers. These make fine companions for the Madame Crousse pelargonium when grown in tubs, in these they will grow and flourish year after year with little attention if given plenty of water during the summer months, and the protection of an unheated house or pit during the winter months.

Aloysia citriodora.

This well-known plant, commonly called the Lemon-scented Verbena, is also well suited for tubs, and is remarkable for its delightful fragrance when the leaves or branches are handled. We have just now been pruning some plants which stand about twelve feet in height, and something like eight feet in circumference. After pruning (and it is remarkable how the dried leaves and prunings retain the delightful odour) this subject is easily increased by cuttings when placed in gentle heat. When in bloom during the summer the aloysia is very conspicuous and with its whitish or pale lilac flowers on long slender spikes, borne in great profusion, it somewhat resembles the tamarisk. It requires the protection of an unheated house or shed during winter.

Fuchsias.

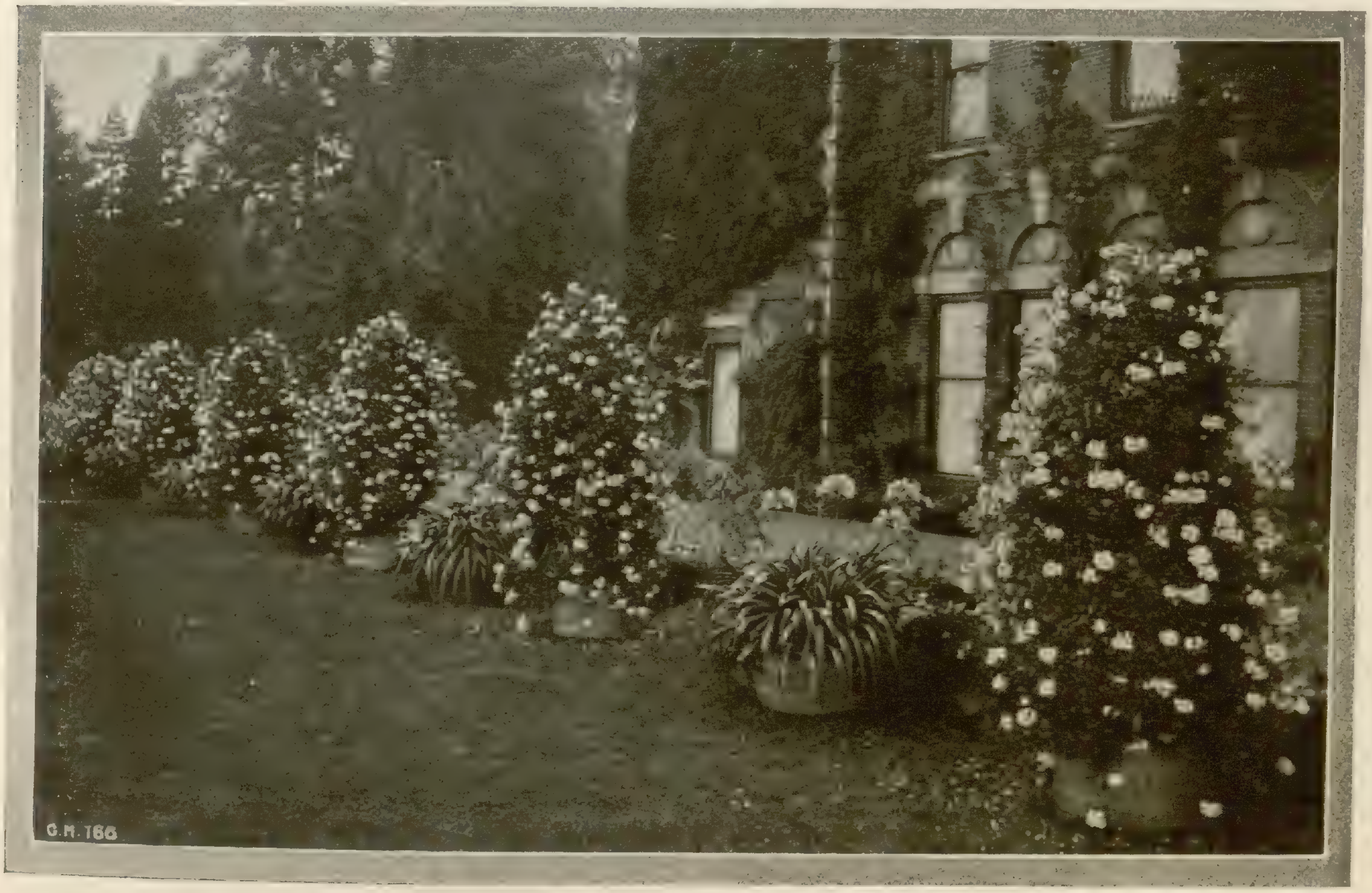
When well grown these make handsome plants for tubs, and it is surprising that they are so seldom used for this purpose. Many of the hardier varieties are fine when grown in good, rich, sandy loam and leaf-soil, and well supplied with water during the growing season; they require but slight protection during the winter, and they will go for weeks without a drop of water at that season.

Sweet Peas.

During late years the sweet pea has become such a popular favourite, the varieties so numerous, and cultivation so well and generally understood, that it is scarcely necessary to remind readers that for tubs it is a charming subject. I have grown sweet peas in this way for a number of years with the greatest success. The plants attain a height of from ten to twelve feet, and it is therefore sometimes difficult to find suitable positions in which to grow them in close proximity to the mansion where their delightful fragrance is so highly appreciated, but when tubs are used this difficulty is overcome and the plants flower profusely when given liberal treatment. All faded flowers must be removed so as to prevent the development of seed pods. The variety Miss Wilmott is much appreciated for table decoration, and when the tubs are placed on the north side of the mansion the charming colour is retained and flowering is in no way affected. The everlasting sweet pea is also a fine subject for tubs.

W. FYFE.

Lockinge Gardens.



IVY-LEAVED PELARGONIUMS, MDME. CROUSSE, AND AGAPANTHUSES, GROWN IN TUBS AT LOCKINGE PARK, WANTAGE, THE RESIDENCE OF LADY WANTAGE.

Iris Heldreichi.—The correct title of this iris is I. stenophylla, under which name it won a First Class Certificate at one of the Royal Horticultural Society's exhibitions. It is certainly one of the loveliest, as well as one of the easiest, to grow of all the bulbous irises, and is a very free bloomer. The flowers are four inches across, and are borne on stems four inches in height. As with so many of its race, there is considerable variation in the flowers of collected bulbs, and, where a number are in bloom simultaneously, a certain divergence in tint between the different flowers is clearly noticeable. In the three dozen now expanded on a warm south border many varieties of tint occur. Perhaps the handsomest form has violet-purple falls, delicately reticulated with white around the central yellow band, and purple standards. Some have lavender falls, and others purple-blue, the falls in each case being terminated with a violet blotch. The flowers are deliciously scented, and, in fine weather, last fresh for many days.—S. W. FITZHERBERT.

THE DRAINAGE OF ROCKERIES.

Among the many errors to be met with in examining rockeries in different parts of the United Kingdom, that of imperfect or improper drainage is noticeable, although not so common as some other mistakes of practice which are to be found in one's garden peregrinations. It seems, however, desirable to draw attention to this subject for the benefit of the many who are contemplating the construction of new rockwork, as well as for those who are suffering from the neglect of this requisite for all alpine flowers.

This evil of imperfect drainage is seen sometimes in rock gardens constructed of artificial material, such as those built of concrete, erected in situ, and without proper provision for the escape of surplus water. One has seen such rock gardens formed without egress for the water from the pockets provided for the plants, with the result that in wet weather their roots were in saturated soil, which, if long in this state, became soured and injurious to the plants it was intended to support.

In a lesser degree this has been seen in rockeries built with blocks of stone, laid too closely together to permit of the free escape of the surplus moisture, however well the structure looked to the eye.

Still another defect in the way of insufficient drainage has been met with, i.e., that of a rockery built on stiff clay, with only a surfacing of good soil, and even the clay heaped in such a fashion that the water did not run off it freely after passing through the surface soil, but collected in hollows, which became soured with the constant standing water.

Yet another defective system of drainage consists in its being too free and open,as is found in rockeries made up of loose stones or rubbish without the interstices being filled with light earth, which will fill up the cavities between the stones. The result of this is that the soil above is too dry, and that the roots of the deep-rooting flowers pass into air spaces instead of penetrating soil among the stones. Hence the failure of some deep-rooting plants in certain rock gardens and rockeries.

It may be said with confidence that few of these defects are to be found in rockeries made by expert professionals,most of whom now turn out excellent work in every way, although they are seen in the case of those formed both by amateurs and gardeners, especially among the former, many of whom have but the slightest knowledge of the needs of plants —a fact not surprising in view of the few opportunities they have had for gaining experience.

This discussion of these errors naturally leads to some hints as to how they may be avoided, but these need not occupy much space, seeing that the exposure of the mistakes naturally shows how to avoid them.

Artificial rockeries composed of concrete and other material of the kind should have the "pockets," or places in which the plants are to be inserted, with some through communication at the bottom, either into free soil beneath or to the front, so that any surplus water may escape. Each pocket is practically a flower pot, and its drainage should have the same attention as that we bestow upon these receptacles for the greenhouse or window. It need not necessarily be composed of crocks, as small stones will do quite well, but I advocate putting some light and porous soil among this drainage so that the roots may find access to it.

If well done there is little fear of choking up the drainage.

For the rockery composed of a mound of soil, or a series of mounds, the drainage may be more easily planned and carried out. A good layer, a foot or so thick, of stones or broken bricks, filled between with light sandy soil, with some peat or leaf-soil among it, will do wonders in maintaining the soil above in a fit condition, provided always that its exterior is not sealed up by other material which will prevent the egress of the water.

The depth of the soil above for the plants themselves, and, in consequence, the position of the drainage, depends upon the nature of the upper soil. If light, the drainage may be more than a foot down: if heavy, about a foot is as much as it ought to be in thickness.

Yet, after all, the best method to follow for those who have a supply of good material at hand, is to form the whole body of the rockery of a free, open soil, of such a kind that water will freely percolate through it, and then to make up the compost for the plants to suit them, assured that the drainage will be in perfect order. With this, and the firm planting so essential to success with alpine flowers, the rock garden will be a home indeed for the best of the flowers we seek to enjoy.

S. Arnott.

CARNATION NOTES.

Still we have to chronicle progress. The carnations, especially those of the perpetual type, seem to abound with new interest, and are making great strides in popular favour.

The notes on "Perpetual Carnations for Private Gardens" in the Gardeners' Magazine of March 7, pretty well cover the ground as regards cultivation and varieties for general use, but still one can find much to say regarding these useful favourites.

We are still weighing varieties in the balance, and some of the older varieties are gradually slipping down the scale, while new varieties are ever arising to compete for their places. One may give a few brief notes regarding those which are of sufficient merit to warrant a good trial by English growers, as soon as they are available.

The new crimson Harvard, which has been on trial for the past four years, is accredited with being a cross between the handsome Prosperity and the free-flowering General Maceo. The size of the former has been retained in Harvard, while it has followed General Maceo in freedom and quick growth. The flowers are three and a-half inches in diameter, of good form, and with a stout calyx; they travel well and keep splendidly. In addition to this, it is early, with long stems, and, like the valued Harlowarden, every shoot goes away to flower. If its good qualities are as pronounced in British hands, it will be a most valuable acquisition.

A new white variety which will doubtless come to the front rank when it is put on the market, is Georgia. It is regarded as an ideal white, being extremely productive, of grand size, and of fine form, in addition to being very fragrant. By the way, My Maryland, a recent comer, was splendidly shown a few days ago at the Royal Horticultural Society, eclipsing such famed sorts as White Perfection, etc. Growers should make a note of this variety, whether they are engaged in private or trade work. Another new variety is Faust, a very bright scarlet; it is rather lighter in growth than Victory, more free in blossom, with good long stems. It comes into flower early, and will give a good crop of blossom at Christmas, the calyx is good, and it is of medium size.

Speaking of Victory, there is a point of interest which requires clearing up. Mr. Slade omits it from his list of scarlets, and gives St. Louis, which is regarded by many as synonymous with Victory. Whether the same variety exists under the two names I cannot say, having only grown the form known as Victory, and not St. Louis. Perhaps some other grower can settle this point.

Many will be interested in the parentage of a new variety which was shown at the recent Carnation Show. The variety in question, Rosa Homewood, raised by a Thames Valley grower, failed to gain the coveted Award of Merit, but its taking colour attracted attention, and doubtless more will be heard of it. The parents of the newcomer were Duchess of Fife and Miss Joliffe, and it has the colouring and form of the Duchess, with the "tree habit" of the latter. It is certainly a most floriferous variety, as the raiser has fully proved, a house of it being a perfect mass of buds and blossoms. Had it been of larger size, it would have made a good exhibition variety, but for cut-flower work it should prove valuable, especially as the Duchess of Fife colour is so popular for bouquets, etc.

Yellow varieties are not as yet over plentiful, neither does there seem any great demand for them, but at the same time a few yellows will enrich a private collection, and add considerably to the range of colourings. In addition to those charming fancies of Mr. H. Burnett's, such as Ceres and Aurora (which I have noticed in a previous article, and which are deserving of wide-spread cultivation), there is the bright clear yellow Eldorado, which is of medium size, with good habit, and free-flowering. Golden Eagle, a good rich yellow, has a decided pink picotee edge, the blossoms are of large size, and produced on long stems. The soft lemon-yellow Golden Beauty, the flowers of which are lightly tipped with pink, is a strong-growing variety, with long, stiff stems. The blossoms are of grand size, with high, full centres. Mayor Pingree is somewhat similar in colour, but not quite so large in the flower, and the petals are occasionally flecked with white. The English-raised Mrs. Arthur Walkington, one of the best of Messrs. W. Cutbush and Son's seedlings, is a good profitable yellow, being deep in colour, of fair size, with good stems, and very free, and it is recommended for winter flowering. Gold Nugget is a robust, early, and continuous yellow. It is generally faintly marked with red, and provides a goodly number of medium-sized, well-built blossoms, which keep and travel well. There is also a yellow variety under the name of Victory; it is deep in hue, of good substance, and heavily marked with crimson.

In closing may I briefly draw attention to the Hon. Gladys Fellowes, a beautiful coral red sport from Mrs. Lawson, which has been well shown of late? It partakes of all the good characteristics of its parent, and its pleasing colour will doubtless render it a favourite with many growers in private places.

P. S. Hayward.

SWEET PEAS TO PERFECTION.—The new work, Sweet Peas and their Cultivation for Home and Exhibition, by C. H. Curtis, hon. secretary, National Sweet Pea Society, contains full information as to the selection, planting, and general management of sweet peas. The price is 1s. net (by post, 1s. 2d.), or bound in cloth, 1s. 6d. (by post, 1s. 8d.), from W. H. and L. Collingridge, 148, Aldersgate Street, London.

PRIMULAS AT WORDSLEY.

For a long number of years Messrs. E. Webb and Sons, of Wordsley, Stourbridge, have given very close attention to the production of high-class primulas for winter and spring flowering. The firm has been careful to select and re-select the varieties they have raised, always bearing in mind that good habit and freedom of flowering are as essential as fine form and size of flower; indeed, are often of more importance. But the florists' ideal of a full, rounded flower, plain or frilled, with a well-defined eye, has never been lost sight of, and therefore the Wordsley primulas resulting from these years of care are extremely beautiful and useful.

Among the many choice varieties raised by Messrs. E. Webb and Sons, special mention must be made of Snow Queen, a charming white primula, producing splendid pyramids of large pure white substantial blooms; and Ruby Queen, of similar type, but having very dark foliage and bright richly-coloured flowers. These two varieties are among the latest of introductions, and they set a very high standard of excellence at which to aim in future. Exquisite is another fine variety, or rather, a fine strain, because there are several distinct colours, but in each case the plants are particularly robust and floriferous, and they raise their large pyramidal heads of frilled flowers well above the foliage; for general effect and usefulness the red and white Exquisite varieties can hardly be excelled. The crimson Firefly, the exquisitely beautiful pink Modesty, the bold purple-crimson Eclipse, the carmine-rose Rosy Morn, the deeply frilled white Avalanche, the pretty and distinct Blue Belle, the vivid Scarlet Emperor, the bright salmon-rose coloured Meteor, and the wonderfully pretty Purity, with its pale lemon eye on a pure white ground, are all varieties of the highest merit and unusual beauty.

At Wordsley the primulas are finely grown, and present a fine picture early in the year, and the accompanying illustration shows one of the houses filled with plants from which seed is to be saved.

HOUSE OF FINE SINGLE PRIMULAS GROWING FOR SEED AT MESSRS. E. WEBB AND SONS' NURSERIES, WORDSLEY, STOURBRIDGE.

ANNUAL ASTERS.

These flowers—the China asters—are general favourites with most people during the late summer months, and now that there are so many distinct classes and varieties a very fine display can be maintained with them for a considerable time. But to secure a long period of flowering sowings must be made at intervals and the earliest sowing must necessarily be made in a warm frame or low span-roofed house. To be successful with asters they must be grown on from the start to the flowering period without any check.

The sowings should be made in boxes in finely sifted loam, leaf-soil, and old hotbed or mushroom-bed manure. Sow the seeds on a level surface, and press them down with a flat block or board. The seeds must be sown thinly, because if sown thickly they may come up well only to damp off quickly, and then the seedsman is blamed. Cover the boxes with sheets of glass or sprinkle a little moss over the surface to prevent the top of the soil drying. When germination has commenced remove the covering.

As soon as the plants have become large enough prick them out into other boxes or on to a spent hotbed; give them plenty of room, and as soon as they have become established and are growing nicely the lights should be removed on fine days so that the plants become robust and hardened to the weather. Eventually plant them out in well dug and freely manured ground, for asters love good feeding and pay for liberal treatment.

Take care, when pressing the plant into the ground, that the stem is not damaged, especially should this be guarded against when removing the plants in their early stages, for disease will take off a plant in its prime when the stem has been bruised during its early existence.

For late displays a good sowing should be made in the open about the middle of April. The soil should be fine and rich. Plants raised from this sowing are fine for a September display, and often give a grand lot of flowers until cut down by frost. In very hot weather the ground in which they are planted should have a mulching before the plants become large. The plants must be afforded ample room for leaf development, and have stakes afforded in the case of taller growing varieties.

The best asters for decorative purposes are the Comet varieties, single and double, in blue, white, rose, and scarlet; Ostrich Feather, white, and with very long petals, sometimes seven or eight inches across the flower; and Plume Asters, in white, blue, and rose. These types are excellent border plants, and as subjects for cutting are much in request. Giant Singles, in pure white, pink, blue, etc., are excellent, they have long graceful petals and yellow centres. There are many other varieties—Victoria, Quilled, Pæony-flowered, Chrysanthemum-flowered, etc., which, however, are more useful for displays in the beds and borders than for cutting.

Leonardslee Gardens. W. A. Cook.

Shading Cinerarias and Primulas.—The first sunbeam with a real sting in it finds out if anything is amiss with the roots of these plants, and one can tell at a glance which have had an overdose of manure or too much water. But even the strongest plants feel the sun when it makes one of its characteristic bursts, and to save such from suffering it is wise to lower the blind until the glare goes off a little. Or, if the lowering of the blind is objected to on behalf of other plants, a few sheets of paper laid on those which are suffering most will suffice. Pink tissue paper is at once the lightest and best for this purpose, as its tint keeps out the strongest actinic rays of light.—E. J. K.

HOW TO FLOWER CLIVIAS TWICE A YEAR.

It may be of interest to many to know that by the method I am about to describe I have flowered clivias twice a year, namely, in October and at their usual period, without any apparent ill-effects upon the plants themselves, the blooms being as large and well-coloured on each occasion as when the specimens were allowed to flower but once a year, each cluster being a perfect bouquet in itself.

Repotting is done after the plants have finished flowering at their usual period, and large tubs or pots in which they are likely to be kept for a number of years are provided. Perfect drainage is afforded, and a good strong potting soil used. This latter may be made up of three parts fibrous loam and one part well-rotted manure, with sufficient powdered charcoal and sand to keep it open.

After flowering, leaf growth is stimulated by giving the plants extra warmth and supplying them with plenty of water and liquid manure. About the beginning of June they are given cooler quarters, with plenty of air, and during the last week in June they are stood outside, choosing a shady situation, as strong sunshine is injurious to the plants at any time of the year. Less water is given to ripen and rest the plants, but at the same time it is remembered that they are evergreen, have no true bulb, and that the leaves simply start from a root-stock, therefore they are never dried off sufficiently to cause the leaves to die.

About the first week in September the plants are placed in an airy greenhouse and given more water, and in about a fortnight they are placed in a house where a temperature of 60 degrees is maintained, giving them water as required. Flower stems will soon show, and after these have produced their blooms the plants are placed in a slightly lower temperature, and kept drier until about February, when they are removed to warmer quarters and gradually given more water.

In the case of a large plant left in a tub or pot for a number of years, it is necessary to renew the top soil annually, providing a good rich compost.

We grow both C. miniatum and C. nobilis; the latter has its segments tipped with green, and has smaller flowers than those of the above species, and these are pendulous instead of being erect.

Thomas Francis.

Bromley Cross, near Bolton.

Ivy should now be clipped or cut, and where there are large surfaces on walls a simple and quick way of cutting is to fix an old scythe blade on a straight handle four or five feet long, and cut upwards with it, a large surface can soon be cut, and if care is taken no damage is done to the ivy. Other evergreen trees and shrubs may now be clipped or cut over. Now is also a good time to plant climbers from pots; plant them in good, well prepared soil to induce vigorous growth from the start.—E. F. Hazelton.

Propagating Phloxes by Cuttings.—There is hardly a plant in the whole of the outdoor garden which pays better for propagating by cuttings than the late-flowering phlox. The result in well enriched and deeply dug ground is a revelation, the variety often being improved out of all knowledge. Cuttings should be made now of the young shoots round the outside of established plants; they may even be pulled off with a few roots attached. In any case, they soon make nice little stuff if placed singly in small pots in a cold frame. At planting time they should be set out in triangles of three, the plants one foot apart all ways.—E. J. K.

BEETLE REVELATIONS.

(Continued from page 166.)

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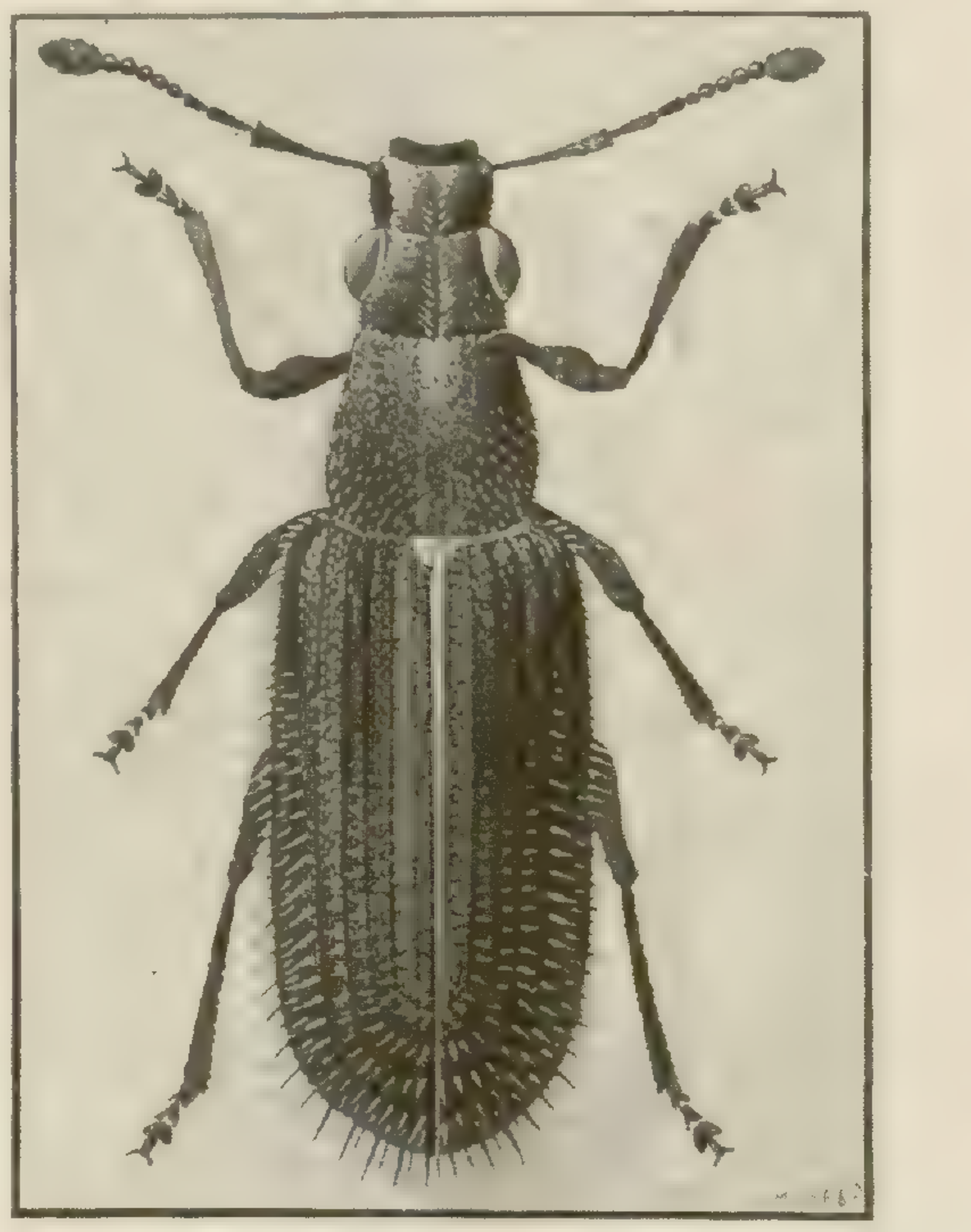
Pea and Bean Weevil.

The pea and bean weevils are exceptionally fond of all leguminous crops, among which peas, beans, and clover are included. They are especially troublesome to allotment holders and market gardeners, and when once they have obtained a complete habitation prove irremediable. Their grubs consume the roots, while they themselves feed upon the leaves, so that the attack is a very formidable and determined one. It is usual when an insect grub infests a plant, either in the ground or among the foliage, for it to give attention in its mature and perfect form to other kinds of vegetation. But here, as with the clay-coloured weevil, the case is different, and needs additional care in scrutiny and treatment.

The beetles themselves (belonging to the genus Sitonis) are about a fifth of an inch long, and greyish, with yellow lines along their backs, varying slightly in different species. They are nimble on the wing, and consequently enabled to quickly extend their operations. Gorse and broom prove attractions for them, so that readers who live near commons and heaths should be particularly on their guard against them. They share a deception practised by other beetles, inasmuch that when shaken to the ground they sham death, and their motionless bodies so closely harmonise with their surroundings as to be generally free from detection. When the weather is dull and dreary they become more lively, which is a trait only to be expected from night-loving insects.



PEA AND BEAN WEEVIL.

Although the damage they do is painfully evident, great notches being bitten out of the leaves, it is often attributed to slugs and sparrows, because of the concealing manœuvres of the insects. The beetles hibernate in barley ricks, stubble, and hedgerows, and come forth in the early spring to deposit their eggs just beneath the soil at the base of peas and beans. The grubs—white maggots really a quarter of an inch long when full grown—which hatch from them go direct to the roots, so that a weak solution of paraffin, if it could be used upon the ground before the grubs have found their way into the roots might prove useful, but once they manage to gain their quest it becomes next to impossible to dislodge them, since they mine channels along inside the roots, instead of fully consuming them. They live in the roots, not in the ground, a difference with a decided distinction.

Safeguards against their ascension as perfect beetles may be taken by solidly pressing the soil around the roots. Should they, however, gain access to the foliage the latter may be syringed with a mixture of soft soap and paraffin, or, as an alternative, lime or soot, either combined or separate, dusted over the leaves when the latter are wet could be adopted. Prolific manuring and close attention, so that the plants may, by strong growth, resist severe attacks are advisable to hasten the development of the pods. In this connection, the value of nitrogen bacteria-bearing compounds should be borne in mind, and tested. The grubs, or maggots, attain the perfect condition at about the end of May or beginning of June.

James Scott.

(To be continued.)

FORCING THE VEGETABLE MARROW.

The vegetable marrow is seldom recommended for forcing, nor is it, I think, except perhaps for the purpose of exhibiting, often grown under that condition. It is, nevertheless, more especially where great variety in the supply of vegetables is valued, well deserving of attention. When lately recommending it for forcing, I was asked the question, "what about its flavour?" and I replied that it was at least equal to that of forced dwarf beans, which are so commonly produced in private gardens, but in reference to this it may be said the marrows should be gathered while comparatively small, and be cooked whole, in which state the full flavour is preserved.

One reason, perhaps, why this vegetable is not more often forced, is from want of space to accommodate it, all the same it is not particular in this matter, and we have before now trained it in cordon fashion under rafters of houses containing dwarf beans, or similar subjects; but when grown in this manner plants must be placed sufficiently far apart to allow light for the crops beneath.

A suitable way of management is to sow seeds singly in small pots, and when the plants are well rooted shift them into six-inch ones, and later on finally place them in pots of twelve inches, or fifteen inches diameter. For the final potting loam, liberally mixed with broken horse droppings, forms a suitable compost, and this should be made tolerably firm in the pots. The plants are not very particular about temperature, and 60 degrees, if promoted by artificial means, will suffice. Water should be liberally supplied, particularly after the plants have become freely rooted, and while they are bearing fruit liquid manures may be advantageously afforded.

In the training of plants kept to one stem they should be stopped where they have reached the length of the rafters of the house allotted them, and their laterals be stopped at one leaf beyond the fruit and secured to the trellis; this treatment is all the more important if other subjects are growing beneath. It is advisable to [illegible] attend to fertilising the blossoms, for each blossom remains for a short time only in fit condition for this operation, and there is no certainty about the fruit swelling unless this is attended to. Owing to cordon trained plants remaining only for a comparatively short period in a bearing state, successional sowings should be made rather frequently.

T. Coomber.

The Hendre Gardens.

TUBEROUS BEGONIAS.

These useful summer and autumn flowering plants have been very popular for a long time both for conservatory and flower garden, for not only are they of easy culture, free flowering, and lasting, but their habit and varied colouring add to their worth. This class of begonias may be divided into four sections, i.e., singles having plain edged flowers, fringed or crisped forms, crested or feathered varieties, and the double forms. There has been a very marked improvement in all these of late, not so much in the size of their flowers as in their symmetry, together with good substance and a finer habit of plant. Growers, too, have become better acquainted with their cultivation, so that none but the best types are selected for the production of seed.

In a good habited plant the flower stalks should possess sufficient substance to carry the flowers well above the foliage and hold them in position without the aid of any supports, for nothing detracts so much from the beauty of plants of this class as staking, no matter how neatly the sticks may be inserted. In selecting plants then for the production of seed, only those that favour this habit should be chosen. There seems to be no difficulty in producing good habited plants both of the crimped edged and the plain forms, but the double and crested ones frequently either have not sufficient substance in the flower stalks to hold the blooms well up to view, or the stems are not long enough to carry the flowers well up above the foliage, and where this is the case all such plants should be discarded. Seed should be saved only from the finest strains and the most prolific bloomers.

Sowing the Seeds.

As a rule, unless special preparations are made early in January for raising the first batch of plants, they cannot be had of sufficient size to be of much service, therefore those who have not the convenience to raise an early lot would do well to fall back on one-year-old tubers, as they will give by far the least trouble. But where sufficient heat can be maintained from the beginning of the year onward to induce the seeds to germinate freely, and promote a healthy growth afterwards, with due care strong plants can be had by the end of June that will continue flowering until the autumn. As is generally known, the seed of the begonia is very small, and needs very careful handling. It should be sown thinly on the surface of the soil and shaded from the sun until the young seedlings appear. When in this small state careful watching is necessary to prevent the soil from either getting too dry or too wet, and no superfluous moisture must be allowed to hang about as the least drip from the roof often causes the plants to damp off.

As soon as the seedlings are large enough to handle they should be pricked off about half an inch apart in boxes or pans, the former being preferable, as they do not dry so quickly. A fine light rich soil should be selected, and this ought not to be pressed too firmly otherwise the roots cannot ramble so freely as they would in lighter soil. If a slight bottom heat of from seventy to seventy-five degrees can be maintained, with the house at sixty-five or seventy degrees, growth will be rapid, so that by the beginning of May the plants may be transferred to a mild hotbed made in a pit or frame. If planted out here about four inches apart each way in light rich soil, they will make sturdy growth. The plants will grow far more rapidly, and need much less attention if planted out than when grown in pots, and as they will be near the glass they will not become drawn, provided air is admitted on all favourable occasions.

As the plants come into bloom, and it can be seen which are the best, they may be lifted with good balls of earth and potted up for the greenhouse or conservatory, and if care be taken they will not receive any more check than follows when transferring them from one pot to another. It is, however, not every one who has the convenience to grow plants in this manner, therefore recourse must be had to other methods.

Tubers that are one year old do well for an early batch. These may be started into growth by placing them in shallow boxes covered with sifted leaf-soil any time from February to April, according to the period they are required to be at their best when in bloom. If the finest of the previous year's seedlings were selected when they were in flower there will be no difficulty in growing the requisite number of plants of each variety and colour, providing they were labelled in the autumn before the flowers faded. Plants started in boxes in this manner should be transferred to their flowering pots when they have made growths about three inches in length, and unless large specimens are required, pots six inches in diameter will be large enough, but where desired for exhibition purposes the plants may receive a shift into pots of larger size to induce them to grow more freely. As before stated a light rich soil should be provided, and where the loam is stiff, one part of leaf soil and one of decayed manure and one of loam forms a good compost, adding sufficient sand to keep the whole porous.

When the pots are filled with roots weak liquid manure may be given with advantage. The plants will need slight shade from bright sunshine, but the less of this the better for their well being, providing the foliage does not become scorched, and there is really not much danger of this if the houses are properly ventilated. When a too dense shade is given, neither the foliage or flowers are of good substance. Avoid a damp atmosphere in dull weather during the autumn as this has a tendency to cause the flowers to go off more rapidly than when a more buoyant, free, airy atmosphere is maintained. H. C. Prinsep.

Buxted Park Gardens.

Daphne indica.—In midwinter this lovely daphne flowers in the open in South Devon and Cornwall. There are two varieties, one bearing purplish-red flowers, and the other pure white blossoms tinged with crimson on the reverse. The latter, on account of its colour, is much to be preferred. The flowers of both are deliciously perfumed, and a single cluster will scent a room. It is no uncommon thing to cut twenty bloom-clusters in a single day from a good-sized bush. Some specimens in the south-west are six feet in height, and as much through. There is also a variegated form of this daphne, which is quite as hardy as the type. Daphne indica is held at Kew to be identical with D. odora, but in Nicholson's Dictionary of Horticulture the two are treated of as distinct species, with different dates of introduction. The plant is an evergreen, with leaves about four inches in length and an inch in breadth, which are of a dark, shining green. Plants should, if possible, be secured growing on their own roots, but, unfortunately, it is one of the subjects that suffers from the grafting craze, the stock generally used being the Spurge Laurel, Daphne laureola, or D. Mezereum. It, however, strikes readily from cuttings, and layers are easily procured from well-established bushes.—S. W. Fitzherbert.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

MILTONIA VEXILLARIA.—There are different methods advocated for the successful cultivation of M. vexillaria, and perhaps the greatest difficulties arise over the matter of repotting. All growers practically agree that annual repotting is desirable, but they differ as to the time when repotting may be carried out to the best advantage. I would point out that conditions under which the plants are grown must materially alter, if they do not altogether govern, the method of treatment. Since first writing on this subject in the Gardeners' Magazine I have advocated annual repotting at the season when the new roots make their appearance at the base of the growth. Rooting usually commences at the time when the new pseudobulb is being formed. The flower scapes also appear about the same time, but the plants are so rapid in their root action that, with proper treatment, the plants re-establish themselves so quickly in the new compost that no ill-effects are apparent from the operation when the flowers have expanded.

POTTING.—I advise that plants of M. vexillaria be turned out of their pots as soon as the new roots make their appearance; cut away all dead and decaying matter about the roots and base of the bulbs. The size of pot used must be governed by the strength of the plant; the pots should be clean, and filled to about one-half their depth with chopped bracken roots. The compost should consist of about equal portions of fibrous peat, chopped sphagnum, and broken oak or beech leaves, with sufficient rough sand or finely broken crocks added to render the whole porous. Press the compost firmly, but not hard, and care should be observed to have the base of the new growth on a level with the surface of the potting compost; there is a danger, if the growth is in any way buried, of an excess of moisture accumulating, which may cause rotting at the base. I like to have the plants slightly mounded up to the centre, above the rim of the pot. After repotting water with rain water, thoroughly wetting the potting compost. Keep the house rather close for a time, and give every encouragement that will aid the plant to become re-established. Frequent dampings between the pots, and light spraying overhead when favourable conditions permit, will be found beneficial. Shade carefully from glaring light until the roots get hold of the new compost, after which more light and the necessary encouragement must be given to assist in expanding the flowers and the development of the tints characteristic of the variations. M. v. superba, and the type with smaller flowers, which bloom later in the season, may have their repotting delayed, but, as a rule, they are found to be actively rooting at about the same time as the large-flowered types.

M. ROEZLI grows best in the stove or East Indian house. One rarely sees this species well grown, and yet at one time it was a prominent feature at exhibitions, but not being conveniently accommodated, since cooler orchids have become more cultivated it has almost disappeared. The cultural requirements of this species are practically the same as those afforded to M. vexillaria, in so far as repotting is concerned.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

POINSETTIAS.—These plants have a naturally erect habit, so that if specimens are desired attention must be given to pinching out the points of the earliest rooted plants. In this northern district we do not consider it advisable to stop the plants later than the middle of July. The flowers are insignificant, but the intense scarlet bracts around them cannot be surpassed for their charming colour, which is so useful at the season in which the plants bloom. When grown to single stems plants are more serviceable, and more accommodating for grouping in conservatory or house decoration. For this purpose it is not necessary to root the plants so early as those required for specimens. Select cuttings which are about two or three inches in length, take them off with a heel of the old wood attached, and place singly in small thumb pots. Keep them close in a bottom heat of about 75 to 80 degrees, taking care to remove damp or decayed leaves as soon as observed. Under this treatment root action will soon commence, when a little air admitted to the frame will gradually harden the plants before they are removed to a light position near the glass. Although poinsettias succeed best when exposed to the influence of the sun and light, they require a light shade after repotting, which ought to receive strict attention until they are finally potted into their flowering pots. The strongest plants will require pots about 6¼ inches in diameter. From plants raised later in the season a very useful stock of small material may be grown, and flowered in small 60-sized pots; these are most useful for table decoration. During August and September the plants may be grown under cooler conditions in heated pits or frames, but the temperature ought not to fall below 50 degrees. They may also be kept somewhat drier at the roots, and syringed less; under such treatment they will be kept dwarf, and thoroughly well ripened. The plants ought to be housed before the nights become too cold, or the foliage may suffer.

PANDANUSES.—P. Veitchi still retains its high position, and where table plants are required it forms a valuable and useful plant. It is also very handsome in a large state, when one is in a position to accommodate it. Plants are easily raised from suckers taken from the base of the old plants any time during spring, and they will form useful decorative material during autumn and winter. Pandanus Veitchi will show its colouring more distinctly when the roots are kept restricted.

PANAX VICTORIÆ may now be readily propagated from cuttings rooted in small thumb pots; it is of easy culture when grown in the stove.

CISSUS DISCOLOR.—To grow this successfully a brisk stove temperature is requisite. Cuttings should be selected from the young shoots, consisting of three or four joints, and placed singly in small pots and kept close they will root freely in a few weeks. Pot up the plants as soon as ready, using a good open rich compost of fibrous peat and loam. In all stages of their growth the plants require to be plentifully supplied with water, and syringed regularly overhead. They are well adapted for covering a trellis or back wall in the stove, a position in which they succeed best when planted out in a border. They should at all times be kept free from attacks of insects. The leaves also retain their colour better when moderately shaded from the hot sun.

GENERAL REMARKS.—Attention must be given to all seedlings, as required, and care exercised in shading from sudden outbursts of sunshine. Damping down the paths and stages must be done more frequently now.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

PLANTING VINES.—New borders made during the winter will be now in a good condition for planting, and the work should be done without delay. One-year-old canes are perhaps the most suitable, providing they are healthy, and have good roots; lay back the soil to about six inches deep, thoroughly wash the roots out in a tub of water in the house where they are to be planted, then lay the roots out all level on the bed, and cover them over with the soil. Plant from 3ft. 9in. to 4ft. apart. If space is available more room may be given; water in, tie the rods down, damp them over twice a day, and maintain a night temperature of 55 degrees, with 60 degrees by day. Allow the shoot nearest to the bottom wire to extend, but do not cut the upper part of the canes off for some weeks, in case they should bleed. As soon as the foliage has expanded allow air in the house at all times to ensure good matured canes. If a three-quarter span vinery is to be planted, and room is available on the back wall, this may also be filled in the same way, and the canes may run to the top in one season. As these will be planted as supernumeraries to the front or permanent vines they may be allowed to bear next season, providing the canes are strong enough. The practice of planting supernumeraries in the permanent borders does not give good results, as when they are flourishing they have to be cut out. A few in pots grown on the stage and run up between the front ones has perhaps more to commend it. The vines planted on the back wall may be allowed to extend more rapidly than the front ones, so as to meet present requirements in the shape of fruit, and they can be cropped heavily.

VINES that were started early with the intention of getting the crop off and planting young green canes, should be pushed on to their utmost limit. If the crop can be cleared early enough there is no better way of managing young canes, especially Muscat of Alexandria. Very often, in June and July, other work is very pressing, but extra labour is repaid by this proceeding; material for the border can be got ready, and if the canes are planted in July they will have a good start.

MUSCAT VINERY.—Where a few canes of Black Hambro are planted in the same house as the above no fear as to setting need be entertained, especially if a little circulation of air can be given on favourable occasions. Maintain an even temperature, and freely distribute pollen with a rabbit's tail. Keep the house somewhat drier at this period.

FIG HOUSE.—Regulate and stop the shoots of figs as required, with a view to having the growths well ripened for another season. Stop these at the fifth or sixth leaf, and reduce the syringing as the flowering stage is approached. Assuming that the roots are confined in a bricked-up border, they will take plenty of water, both liquid and clear; if the roots are rambling about the fruits are liable to drop off, and gross growth will result. Fig roots should be confined over ample drainage.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

SPINACH.—A good sowing of this vegetable should now be made in the hope of obtaining a good supply at the latter part of May. When the seedlings are two inches high they should be severely thinned, so that the plants left may have more room, and produce a more succulent and better flavoured leafage than if left crowded together. Ply the hoe between the rows of winter spinach at intervals.

ONIONS.—Advantage should be taken of fine weather to get the seed sown, but at the time of writing the soil is sodden.

EARLY CARROTS.—An early, quick-growing variety should now be sown on a warm border to succeed those in frames, as young carrots are always welcome. The main crop varieties may remain in the seed drawer a bit longer.

ASPARAGUS.—This excellent vegetable is always in great demand, so where very old beds exist, and these show signs of exhaustion, now is the time to prepare new beds. Asparagus requires a warm, rather light, rich soil, with good drainage. The ground should be deeply trenched, at least two feet, or more, if possible, working in as the work proceeds plenty of farmyard manure, burnt refuse, and old potting shed soil; and in addition to these ingredients the top spit taken from an old pasture and worked in will prove highly beneficial to the crop. When planting the roots the lines should be made three feet apart, and the plants put out at a distance of two feet apart in the rows. Spread the roots out carefully, and cover them about four inches deep. Two-year-old plants are the best to use, and if a little seed be sown each year in April there will always be young plants coming on for making new plantations annually. The best time for planting asparagus is just when the growths are about an inch long. The permanent beds should now be given a little top-dressing, composed of wood ashes and a little bone-meal, which will stimulate the crop.

VEGETABLES IN FRAMES.—Carrots, turnips, globe beets, etc., will require thinning a little, so that they may have a chance to bulb better. Give plenty of air when the weather is fine, but avoid cold currents at all times; damp the frames down in afternoons when it is warm, as this will be conducive to quick growth. Potatoes will want earthing up, and if the haulm is inclined to topple over, a few short sticks put in will support it. Cauliflowers and cabbages growing in frames may be given more air and moisture as they increase in size. Prick off Brussels sprouts and more cabbages, according to the number of plants required. Peas that were sown early in the new year should be syringed, and closed up with a little sun-heat to hasten on the crop.

MUSHROOMS.—Manure for forming new beds should still be collected, placed in any dry airy shed, and turned over daily. Continue to put in new beds, as soon as it is seen that the old beds are becoming exhausted. The beds will begin now to take more water, and also the house will require more moisture on the floors. Always use tepid water for the beds, and if a little salt be added it will have a beneficial effect on the produce.

HERBS.—Seeds of most varieties should now be sown in rows, and when the plants are large enough they should be transplanted into beds, keeping each variety separate, and properly labelled, which will save no end of trouble when the several kinds are asked for.

GLOBE ARTICHOKES.—The protecting material may now be removed from these, and the surface of the bed slightly dug over to admit air. The ground should be deeply trenched and well manured where new beds are to be made, but it is still too early to put out young plants.

VARIOUS SEEDS.—Small quantities of lettuce, radish, turnips, Brussels sprouts, cabbage, kales, cauliflowers, and broccoli should be sown either in lines or little beds. I always prefer the latter method, as the plants seem to get more air and keep sturdy from start to finish.—T. W. Birkinshaw, Hatley Park Gardens.

Thyrsacanthus rutilans.—This is a well-known intermediate house plant, whose very distinct and highly decorative features are scarcely recognised to the extent that their merits entitle them to. It belongs to the natural order acanthaceæ, and, like several of its allies, especially the aphelandras and Jacobinias, it is useless to stop it in order to obtain bushy plants, as it is only on the very stout shoots that the finest flower clusters are borne. Added to this the long pendulous racemes of the thyrsacanthus need to be well elevated in order to display the beauty of the flowers, and, even if the plant runs up to a height of 4ft. to 5ft., it is, in the case of vigorous examples, none too tall, as the strongest will even then hang down nearly to the pot. In the case of shorter plants, it is sometimes necessary to suspend them in order to allow for the development of the racemes. In the cultivation of this thyrsacanthus, a great point is to secure good cuttings in the spring, and to grow them afterwards without check. Too dry an atmosphere must be avoided as the leaves are rather liable to be attacked by red-spider, the only insect pests to give much trouble in their culture. This thyrsacanthus is a native of Colombia, and was introduced over half a century ago.—W. T.

SCIENTIFIC ASPECTS OF SOILS.

The following extracts from the highly important paper read by Professor F. H. King, at the Congress of Horticulture, at Jamestown, U.S.A., will be found not less useful to horticulturists in this country than to cultivators in America.

Composition of Soils.

Soils are an aggregation of rock and mineral fragments, carrying an admixture of organic debris, together with substances in soluble and colloidal condition. The productivity of soils is determined by their composition, by their structure, by their climate, and by the life activities within them. By composition we refer to their mineral and chemical nature; by their structure we refer to the size of the soil grains and to the segregation of them; by their climate we refer to their water content, their temperature, their aeration, their drainage; by life activities we refer to the inter-action of the roots of plants and micro-organisms upon one another, upon the soil grains, upon the organic matter, upon substances in solution and upon colloids.

The composition of soils, and their structure, so far as it influences weight, determine the absolute amount of plant food elements per unit volume, per cubic foot, per acre-foot, or per acre-four-feet, which is the depth to which most crops are able to feed, the depth to which they send their roots it all the factors of productivity are at their best. Composition, therefore, determines the endurance of a soil, the outermost limit of its productive capacity.

Mistaken Teaching.

Mistakes in teaching have resulted from confusing plant food elements with plant food. Rigid chemical analysis has demonstrated that primary rock, crushed to the fineness of soil, may carry per acre-four-feet, seventy-eight tons of potassium, 250 tons of calcium, 133 tons of magnesium, and even eight tons of phosphorus. So, too, an acre-four-feet of good soil may carry as much as 100 tons of potassium, forty-five tons of calcium, thirty-five tons of magnesium, and even twelve tons of phosphorus, and there is this much foundation in fact for the statement we have criticised. But these enormous amounts of plant food elements present in the root zone of field crops are no more to be regarded as plant food for those crops than they are food for the animals feeding upon pasture grass.

The food of plants, derived from the soil, is only certain substances which are dissolved in the soil moisture or which are carried in the soil in a form which may be readily so taken up as it is needed; and the amounts of these present in the root zone of field crops at any one time are relatively very small when compared with the amounts of the plant food elements from which they are derived. Much more is a soil like a pasture where plant food grows than like a bank or granary where it is stored, and just as a rich pasture may produce sufficient grass to carry a large herd, so may a fertile soil produce from day to day plant food sufficient for good crops. Just as pastures differ in the amounts of herbage on the ground and in the amounts they are able to add to this as it is fed away, so do fields differ both in the amounts of plant food present in the root zone at any one time and in the amounts they are able to add as this is withdrawn.

Soil Demonstrations.

Our own observations have demonstrated that four good soils, observed to produce 2.5 times the yield of corn and potatoes per acre that four poorer soils did under identical treatments, also gave up, when washed three minutes in five times their weight of pure water, 2.58 times as much plant food. Not only was there this difference in the amounts of plant food carried in water-soluble form in the best and in the poorer soils, but the amounts of this same plant food taken out of like areas of field by like numbers and kinds of plants during the same time was 3.2 times as great in the sap of the plants which gave the highest yield. Such observations would appear to fully justify the general conviction that increased yields should be directly attributed to better feeding and that better feeding is a direct result of larger amounts of plant food available to the crop. It is taught, however, by the Bureau of Soils, that all soil solutions are sensibly identical in composition and in concentration; that they are strong enough for large yields and that this strength will be indefinitely maintained. From these conclusions the Bureau further teaches that mineral fertilisers, green and stable manures and a good rotation of crops owe their efficiency to the power they have of neutralising toxic principles which tend to accumulate in cultivated soils, rather than to any power of increasing available plant food, an abundance of which at all times and in all soils is held to be present.

Available Plant Food.

While it is true that good soils may yield to pure water two, three, and more times the amounts of plant food that poorer soils will, and while the absolute differences may be as 3,200-pounds per acre-four-feet to 1,200 pounds, yet these quantities are so small in proportion to the total water present in the soil that one may with truth say, from the standpoint of the chemical balance, as Professor Whitney does, that the composition and concentration of all soil solutions are sensibly the same. Nevertheless, it is undoubtedly true that soil solutions are measurably different, both in composition and concentration, and from the standpoint of plant functions they must be profoundly so, for organic life is almost inconceivably sensitive to small quantities of matter.

Our published results show, too, that we are able to recover from the surface four feet of good soil as much water-soluble plant food of both potassium and phosphorus as would be removed from a field by nine forty-bushel crops of wheat per acre, and from poorer soils as much as would be removed by six such crops, and here is what has been thought a safe foundation for the contention that even in water-soluble form the poorest soils contain plant food enough for good yields. So there is, in absolute quantity, but not in available quantity. For example, a three-horse tread-power may be in such condition that when one horse is put upon it no work is done; adding a second horse may yet yield only half an available horse-power, but when the third horse is put in place its whole weight may yield effective power, so that the available work becomes three times what it was with two horses. So it may be with soils. Plant food enough for perhaps many crops must be present in order that enough for one may become available.

Natural Manuring.

So far as we know, either from published data or on a priori ground, there is no foundation for the hope that the supply of plant food in soils may be indefinitely maintained simply by good tillage and suitable crop rotations, which make positive additions only of nitrogen to the soil. The only way Nature has ever produced crops, and this is the way she has always maintained soil fertility, has been to return to the field the whole crop, and by working along this line for a thousand years together she never did and never can bring all her fields to an equality in productive capacity, as should be the case if all soils carry an abundance of plant food.

A very simple calculation, based on well-established data, will show that an exhaustion of the plant food elements, large as these amounts are, must necessarily follow any system of cropping which involves no return to the soil other than nitrogen. The amounts of plant food removed by certain crops are definitely known; the absolute amounts of plant food elements carried by good soils are known, and taking twenty tons of potassium per acre-foot, which is about the amount carried, a quantity equal to the whole of this would be removed in about 1,400 years by wheat yields of forty bushels per acre; and the entire amount of phosphorous carried by the surface foot is equivalent to only about 400 such crops. Careful records have shown, too, that the Mississipi river carries out to sea annually enough material to lower its entire drainage area one foot each 4,000 to 6,000 years, which means that the surface foot of soil may be completely removed and replaced by a corresponding layer from below at the same rate, but the rate of removal of potassium by a forty-bushel crop of wheat is three to four times as rapid as this, and the crop exhaustion for phosphorous is ten to fifteen times as rapid as rock is being converted into new soil on the average over the Mississippi valley.

Soil Structure.

From the standpoint of structure, soils differ very widely, both in the extent of their internal surface and in the character and extent of the segregation of their particles. These differences are fundamental, and very important in determining the relative productive capacity and in directing agricultural practice. An acre-four-foot of one-foot granite blocks would possess an internal surface of twenty-four acres to which water might adhere, upon which plant food might develop and where it might be stored, over which the roots of plants might spread and feed, and where soil organisms might dwell. To reduce the diameters of these cubes from one to one-thousandth of a foot would increase the internal surface one thousand-fold, making it aggregate 24,000 acres per acre of field. But even this surface is too small to maintain a high productive capacity. Our coarsest sandy soils possess an internal surface per acre-four-feet exceeding forty-five square miles per acre of field; our loams, 270 square miles; while our finest clay types possess an internal surface exceeding 1,300 square miles per acre of field. It is clear, therefore, that there must be wide differences in the productive capacity of soils due to differences of internal surface alone, even where their chemical natures may be identical. This must be so, because where there is more surface more water can be retained, plant food may form more rapidly and more may be stored and held in reserve and even accumulated during intervals of small demand, as well as retained against loss by leaching.

The innermost portion of water films investing soil grain surfaces, in my judgment, is held there with so much force as to be little subject to change, either by drainage or capillary movement, and also becomes highly charged with plant food, which likewise is strongly retained, escaping only by the slow process of diffusion when the roots of plants are placed in contact with the soil grain surfaces or when the excess hydrostatic and capillary portions of water are moving by. We have found, for example, that when a chemically cleaned sand was charged with a solution of potassium nitrate, ten repeated washings in twice its weight of distilled water still left in the films of moisture retained by the sand grains enough of the nitrate to represent 244 pounds per acre-four-feet. Plant food so retained by soils may still be available to crops, for their root hairs are similarly invested with water films, and when placed in apposition with the soil grains the water film becomes common to the two, and simple diffusion permits the root to feed upon the plant food so retained.

Drainage.

This brings me to consider a principle underlying proper land drainage. It is very important that when rain falls upon a field the excess water remains only just long enough on its way through the open water passages to saturate the soil; anything longer than this provides time and opportunity for the most valuable plant food materials carried in the water films about the soil grains to diffuse out into the moving water and so become lost in the drainage.

THE WINTER-FLOWERING
CARNATION SOCIETY.

GRAND EXHIBITION.
On WEDNESDAY, April 1st,
in the
ROYAL HORTICULTURAL HALL, VINCENT SQUARE.
Admission, 1 p.m. to 5.30 p.m., 1s.
ALL THE LATEST NOVELTIES.
The best display of Decorative Carnations ever seen in England is anticipated.
ANNUAL MEETING of the Society same night in Hotel Windsor, Victoria Street, S.W., at 8 p.m.
All particulars from the Hon. Sec.
Mr. HAYWARD MATHIAS.
Lucerne, Stubbington,
Fareham, Hants.

The Annual Meeting will be preceded by a DINNER (members and friends) in the HOTEL WINDSOR, at Seven p.m. Tickets, 4s. each, from the Hon. Assistant Secretary, Mr. E. F. HAWES, Royal Botanic Gardens, Regent's Park, London.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Royal Botanic Society.

After the few beautifully bright and spring-like days, it was especially disappointing to find that wet weather had set in in earnest on March 25, the date of the Royal Botanic Society's first show of the year. The exhibition was not a large one, but it was interesting. The alpine plants shown were numerous, in great variety, and contained many novelties. Forced flowers played their part, and cyclamens and primulas added brightness to the meeting.

Messrs. T. S. Ware, Lim., Feltham, arranged a bank of alpines in rockery fashion. Here they had coloured primroses, Primula frondosa, saxifrages in variety, hellebores, sedums, etc. One end of the exhibit was devoted to a strain of large-flowered forms of Primula obconica gigantea, a very fine strain; P. verticillata, Narcissus bulbocodium, Veltheimia viridiflora, Lachenalia lutea, Dendromecon rigidum, Trapæolum tricolor, etc. The Misses Hopkins, Mere Gardens, Shepperton-on-Thames, showed some very pretty coloured primroses and several species of primulas, with hellebores, saxifragas, iris, etc. A large group of very finely grown cyclamens, white, rose, red, crimson, salmon, and pink, was arranged by the St. George's Nursery Company, Harlington, Middlesex; the plants were in 48-sized pots, and carried a profusion of large, clean, substantial flowers. The setting of maidenhair fern helped materially to show up these useful flowers. The Salmon King variety shown by this firm is worthy of special mention.

Messrs. William Cutbush and Son, Highgate, set up an interesting exhibit of alpine and early hardy plants. The back of the display consisted of forced forsythias, lilacs, spiræas, magnolias, deutzias, pyruses, and azaleas, and in front of these were pretty batches of single white, single red, single pink, and double red and blue hepaticas, and Primula rosea. A few choice subjects were the handsome Incarvillea grandiflora, the blue primroses, Adonis amurensis fl.-pl., Stylophorum diphyllum—with bright golden flowers, and Iris sindjarensis.

Primula obconica grandiflora, a large-flowered strain, represented by a considerable variety of colouring, was largely and well shown by Messrs. J. Peed and Son, West Norwood; with these were P. Kewensis, a few forced daffodils, muscaris, and a collection of saxifragas, sedums, and other alpines. Mr. S. Mortimer, Rowledge, Farnham, contributed a few good flowers of carnations Jessica and Victory. Mr. T. Williams, Oxford Road, Ealing, contributed a table decoration in white and pale pink tulips.

Messrs. R. Felton and Son, Hanover Square, showed some large vases of exquisitely beautiful Richmond, Liberty, Mdme. Abel Chatenay, and Kaiserin Augusta Victoria roses, of Enchantress carnations, and beautifully flowered plants of the Comte de Kerchove azalea set in gilded baskets, and forced lilacs. The central feature of the exhibit was a rather extravagant floral design, representing a reindeer and sleigh. There was a small model reindeer a couple of feet high, with a nodding head, drawing the wicker sleigh. The body of the latter was decorated with single and double violets, daffodils, yellow marguerites, and acacia sprays, while the hood was composed of scarlet anemones, acacia, and sprays of Asparagus Sprengeri. The whole design was very novel, and attracted a great deal of attention.

Messrs. Robert Green, Lim., Crawford Street, W., put up a large bank of palms, Acer negundo, Azalea mollis, spiræas, tulips, and ferns, but with a little more time at disposal the group could have been made more effective.

MEDALS.

Gold.—St. George's Nursery Company, Harlington; Messrs. R. Felton and Co., Hanover Square.

Large Silver-gilt.—Messrs. W. Cutbush and Son, Highgate; Messrs. Robert Green, Lim., Crawford Street, W.

Silver Gilt.—Messrs. T. S. Ware, Lim., Feltham.

Large Silver.—Messrs. J. Peed and Son, West Norwood.

Small Silver.—The Misses Hopkins, Shepperton-on-Thames.

AWARDS.

Award of Merit.—To strain of cyclamen from St. George's Nursery Company, Harlington; to Stylophorum diphyllum, from Messrs. W. Cutbush and Son, Highgate, N.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, March 17.

Present: E. A. Bowles, Esq., M.A., F.L.S. (in the chair); Dr. M. C. Cooke, Messrs. C. E. Shea, R. H. Curtis, W. B. Hemsley, E. Hales, H. J. Elwes, J. T. Bennett-Poë, A. Worsley, L. de B. Crawshay, E. M. Holmes, W. C. Worsdell, G. S. Saunders, H. T. Güssow, and F. J. Chittenden (secretary).

AGAVE AND YUCCA DISEASED.—Mr. G. S. Saunders showed a specimen of each of these plants attacked by a fungus. Mr. Güssow took these to examine.

CURIOUS ROOT OF DANDELION.—Mr. E. M. Holmes showed a root of Dandelion having numerous lateral roots springing at right angles from the main root, and very much thickened.

INOSCULATION IN HORNBEAM.—Messrs. James Veitch sent branches of hornbeam (Betulus carpinus), taken from a garden hedge, in which a very perfect junction had occurred between the two by a sort of natural inarching or inosculation, as it is more properly called. Mr. Elwes drew attention to the fact that if young hornbeams are planted so as to form a lattice, as time goes on, inosculation occurs wherever two stems come in contact, and finally an impenetrable hedge is formed.

TUBERS OF SECHIUM EDULE.—Large tuberous roots of this plant, grown from a tuber plant in a pot in the Melon house at Wisley, about the beginning of September, were shown by Mr. Chittenden. The plant had produced several large tubers, and these are said to be very palatable when cooked, and greatly resemble yams in appearance. The plant had been received under the name "Chrystophine," and is also called "Choco." The plants had not fruited at Wisley.

CROSSES OF ALBINO ORCHIDS.—In reference to Mr. Hurst's communication to the last meeting upon this point, Mr. Rolfe wrote: "Paphiopedilum insigne Sanderæ x P. bellatulum album does not yield an albino hybrid (see Orchid Review, 1908, p. 72), as should have been the case according to the theory mentioned by Mr. Hurst at the last meeting. It has very numerous minute purple dots on both the petals and dorsal sepal, though the ground colour is whiter, and the spots fewer and very much smaller than when the ordinary forms of the species are crossed. P. bellatulum album 'selfed' would, I have little doubt, come true, and P. insigne Sanderæ x P. Lawrenceanum Hyeanum I should expect to give coloured hybrids, because it is a precisely parallel cross to P. insigne Sanderæ x P. callosum Sanderæ, and combines the same quite distinct sections of the genus. In fact, P. callosum and P. Lawrenceanum (with, of course, their albino forms) are very intimately allied. The mysterious 'factor' supposed to be involved, I believe to be simply the opportunity for reversion which is afforded by crosses between such diverse species. The two combinations last mentioned should certainly be attempted."

DWARF FORM OF RHODODENDRON TRIFLORUM.—From F. I. P. Magor, Esq., of St. Tudy, Cornwall, came a specimen of the dwarf form of Rhododendron triflorum, raised at the Royal Gardens, Kew, from seed sent there by Mr. Peter Barr. The plant is not a foot high, and flowers in Cornwall in the open from a month to ten weeks earlier than the type, the earliest date being the last week in February, 1905.

SEEDS GERMINATING IN FRUIT.—From Mr. Cave, of The Gardens, Holker Hall, Cark-in-Cartmel, came a fruit of tomato in which several of the seeds had germinated, some of the seedlings having thrust their way out through the wall of the fruit and become green. The phenomenon is not very uncommon, and examples may at times be found in oranges, lemons, melons and some other fruits, while in some plants such as the mangrove, it normally happens that the seed germinates while the fruit containing it is still hanging attached to the plant, and the same thing has been recorded as occurring in Sechium edule.

DOMINANCE AND REVERSION IN DENDROBIUM CROSSES.—Gurney Wilson, Esq., of Glenthorne, Haywards Heath, showed pseudo-bulbs of a cross-bred dendrobium, and of its parents, D. nobile Ballianum ♀ x D. nobile Murrhinianum ♂. The pseudo-bulb of D. nobile Ballianum is straight, while that of the other parent is zig-zag in growth, owing to the presence of a very marked projection at the nodes on each side of the pseudo-bulb alternately. Of the seedlings of this cross all showed in a marked manner in their pseudo-bulbs the zig-zag character of the pseudo-bulb of D. nobile Murrhinianum. In both parents the flowers are white, but have a faint purplish spot in the centre of the throat. In all the 150 cross-bred plants the flower has reverted to the typical colouration of the species, the spot in the centre of the throat being dark, and the other perianth pieces being marked with purple.

DISEASED PLANTS, ETC.—Several diseased plants and some insect pests were received, and will be reported upon at the next meeting.

Beckenham Horticultural Society.

On Friday, the 13th inst., Mr. Alexander Dean, V.M.H., gave a lecture before the above society, the subject being "Annuals." Councillor A. J. Baker, K.C.C., presiding. The lecturer made out a strong case for annuals, showing how good displays may be made with them, and with but a very moderate expenditure of money. Select lists of annuals were given, with flowers of white, blue, red, and yellow, and it was suggested for large beds to take, say, a dozen kinds with white flowers, or a dozen kinds with blue flowers, etc., etc., and mix the seeds together, and sow, and so have beds of distinct colours. These would not all flower together, but make an attractive display for a prolonged period. Mr. Dean was very warmly thanked at the close of his lecture, and the meeting tendered its thanks to the chairman.

The society's Certificate of Merit was awarded to Mr. J. Northfield, Raleigh, Beckenham, for well-grown plants of Primula obconica.

Reading Gardeners' Association.

At the first of the two meetings held by this association during March the subject for the evening was "Violets," and was introduced in a most practical and interesting manner by Mr. H. C. Loader, of Holme Grange Gardens, Wokingham, who first of all referred to the great popularity of this beautiful flower. It was beloved by all on account of its simplicity and fragrance. Full cultural details were given under the following headings: Position of frames, time to commence operations, situation, preparation of soil, propagation, planting, early summer treatment, preparing winter quarters, lifting and planting, ventilation, watering, etc. Fogs were mentioned as the worst enemies to the growth of violets. The other enemies were spot, red spider, and scald. There were several fine exhibits, notably a group of Sutton's superb cineraria, staged by Mr. J. Carter; several excellent plants of freesias, carrying some splendid trusses of flowers, shown by Mr. F. Alexander, The Gardens, Warden, Southcote Road West; an excellent display of seven varieties of violets by Mr. W. Turnham, The Gardens, Culham Court, Henley-on-Thames; and a bunch of La France violets of remarkable size by the lecturer.

At the second meeting the subject was "Some Insectarian Reflections," and was introduced by Professor Cole, of the Reading University College. At the outset the lecturer stated that he should treat the subject from a scientific rather than from a practical point of view. The various parts of an insect was dealt with, special emphasis being laid on the sight, smell, and flight. The life history of the green-fly brought a very interesting discourse to a close.

Croydon Gardeners' Association.

On Tuesday evening the usual fortnightly meeting of this society was held at the Sunflower Temperance Hotel, when Mr. F. Oxtoby presided over a capital attendance of members who had come to welcome an old member and supporter, Mr. W. Lintott, of Marden Park Gardens, and to hear what this successful cultivator had to say on "Grape Cultivation."

In a homely and at times humorous manner, Mr. Lintott described the methods he adopts to grow grapes. Knowing so well the excellent bunches Mr. Lintott exhibits at the various flower shows in this district, and also at the Royal Horticultural Society's Hall, London, everybody expected to hear of big sums spent to produce these premier exhibits, but in his opening remarks he dispelled those ideas, for apparently he grows them on most economical lines, thereby showing that with much perseverance and careful study of detail it is possible to produce such excellent results. His vine borders are made of ordinary garden soil, which is very surprising, for it is generally considered necessary to use only turfy loam and made in the piecemeal fashion. However, the secret of his success seems to be in the top dressing of the borders, by which he encourages surface roots as much as possible. The soil for top dressing is made of decomposed organic matter, wood ashes, and mortar rubble, and this is well forked in before starting the vines. Previous to this he allows the soil to become quite dry, then he applies clear water in abundance, followed by undiluted liquid manure from the stable manure heaps. This is constantly applied before the growing period commences. The surface dressing is then put on and moisture withheld from the roots till the grapes are set.

He was not forgetful of mentioning the essential point of well cleaning the houses and rods before commencing growth, advising the use of a good insecticide and hot water applied with a stiff brush, and this to be done thoroughly. His first houses are started in December in a temperature of 50 to 55 degrees by night, gradually increasing it to 60 to 65 degrees as growth appears. Early thinning he advises in most instances. Ventilation was another important item, and this must be carefully attended to, otherwise the dreaded rust will appear. When grapes are colouring plenty of moisture may be given, also more ventilation. Only slight shading is advocated by him. To obtain good fruit one must have good foliage, for the leaves are the lungs of the plant. Red spider and thrip must be watched for, and on the first signs of these pests sponge the affected parts at once. After cutting the bunches he advised thoroughly syringing the house and cleansing the foliage, when the necessary rest to the plants should be given. Mr. Lintott commences gathering in early June, and by the end of December the different varieties he grows completes his crop. Growing so many well-known sorts, there is only one new variety, Prince of Wales, he highly recommends.

Several questions were asked and answered, and the audience were unanimous in conveying a hearty vote of thanks to Mr. Lintott.

To add to the interest of the evening there was a fine display of exhibits, Mr. Edwards showing Van Sion narcissus, Mr. Chaff Clematis montana, Mr. Mills a grand specimen basket of nephrolepis, Mr. Oxtoby forced rhubarb, Mr. Thrower a well-flowered Lycaste Skinneri, and a very fine plant of Dendrobium nobile came from the gardens of Mr. Wagner, Coombe Road, which did great credit to his gardener, Mr. A. May.

British Gardeners' Association.

On the evening of Saturday, the 21st, a meeting of this association was held at "Carr's," Strand, for the purpose of forming a London branch. Mr. George Gordon, V.M.H., presided over a large attendance, and in his opening remarks suggested that the branch should devote a considerable share of its attention to the discussion of matters of an educational character. It was decided to form a branch, and that it should be governed by a chairman, vice-chairman, secretary, and a committee of twelve members. As the result of the election that followed this decision, Mr. E. F. Hawes was elected chairman, Mr. Frogbrook vice-chairman, and Mr. Heartless, of Waterlow Park, Highgate, hon. secretary.

Dutch Bulb Growers' Society of Haarlem.

Since January fortnightly meetings have been organised by this society, where new and interesting bulbous plants may be shown for certificates and awards. The following awards have hitherto been given, viz.:—

First-class Certificate to single early tulip, Brilliant Star, orange-scarlet with black base; to Tulipa Fosteriana, a species with enormous scarlet flowers, with yellow or black base; and to Hippeastrum procerum, a scarce, mauve-coloured species.

Award of Merit to single early tulip, La Reine des Reines, lovely pink; and to single early tulip, Hermann Schlegel (or Primrose Queen), a sport from the well-known La Reine; flowers light sulphur, shaded white.

Gold Medal for a group of new seedlings of Freesia Tubergeni; and Silver Medals for groups of forced single and double tulips and Darwin tulips.

Redhill and Reigate Gardeners' Association.

This association held its fortnightly meeting at St. Matthew's Parish Rooms, Redhill, on March 17, Mr. Seaman presiding. A Second Class Certificate was awarded to Mr. Cooper, of Kingswood, for six Primula obconica.

Mr. D. Watson, representative of the Guildford Gardeners' Association, read a well-thought-out paper on "Wild Gardening." Many questions were asked, and satisfactorily answered by the lecturer. A very hearty vote of thanks was accorded the lecturer for his very instructive paper, and he was elected a member of the Redhill and Reigate Association at the close of the meeting.

Sandhurst Gardeners' Association.

The fortnightly meeting was held in the Church Schools, Sandhurst, on March 17. A large number of members were present, and Mr. J. Evans occupied the chair. During the evening a button-hole and spray competition took place. The winner of first prize was Mr. C. Binfield, of Sandhurst Lodge Gardens. Mr. L. Dupond and Mr. D. Moyes acted as judges.

The remainder of the evening was occupied with questions asked by members, some of which were of much interest and caused a brisk discussion, in which Messrs. Townsend, Evans, Moyes, Chapman, Cooper, Comley, C. W. Goddard, M. Goddard, Dupond, and Shepherd took part.

Mr. Townsend, Sandhurst Lodge Gardens, staged pot plants of Staphylea colchica, cut flowers of Primula obconica and cyclamen, and some fine specimens of Windsor Castle and Up-to-Date potatoes. Mr. M. Goddard, Ambarrow Gardens, sent a well-flowered specimen of Tritonia crocea. A hearty vote of thanks was accorded Messrs. Townsend and Goddard for their exhibits.

Cardiff Gardeners' Association.

The 22nd annual general meeting of this society took place at the Philharmonic Restaurant on March 17, Mr. H. R. Farmer, F.R.H.S., presiding over a large attendance. The hon. treasurer (Mr. Malpass) produced the balance-sheet for the year, and this was considered satisfactory. The Hon. Secretary reported upon the successful meetings that had been held during the session 1907-8, and of the advance the society had made.

J. J. Wale, Esq., J.P., was asked again to become president; the vice-presidents were also asked to allow their names to remain. Mr. H. R. Farmer was re-elected chairman; Messrs. T. Malpas and R. T. Went were re-elected hon. treasurer and secretary respectively. The committee were also all re-elected, with an addition of three, making a total of eleven, due to the large increase of the district. A vote of thanks was accorded to the Editors of the London and Horticultural Press for their kindness in publishing accounts of the meetings throughout the year.

OBITUARY.

MR. WILLIAM OWEN.

Mr. William Owen, of the Greenbank Nurseries, Northwich, died a few days ago at the advanced age of 74 years. He was a most successful orchid cultivator, and was held in high esteem as a judge of horticultural produce.

SOME FAMOUS
GARDENS
IN AND ABOUT
NORWICH.

Blickling Hall,
Shotesham Park,
Westwick Hall,
Town Close House,
Crown Point,
Gunton Park,
Dunston Hall,
Ashwellthorpe Hall.
Oakland House,
Boyland Hall,

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ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

CINERARIAS.—M. J., Ripon: Choose the lesser evil; admit air at the top of the house. During the brightest part of the day a piece of canvas might be suspended along the front of the conservatory.

CHINESE PRIMULAS.—J. T. E., Brentwood: For producing plants to flower during the winter seeds should be sown now, or during the next month. We hope to deal with the matter in an early issue.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.—E. O. D., Leiston: We have forwarded your letter as requested, and now, in case it may be needed by some other reader, we give the secretary's address: Mr. William Collins, 9, Martindale Road, Balham, S.W.

AFFILIATION WITH THE N.S.P.S.—B. W., Leamington: You can obtain full particulars from Mr. C. H. Curtis, hon. secretary, National Sweet Pea Society, Adelaide Road, Brentford, Middlesex. The fee is 10s. 6d., and this entitles a society to a silver medal and a copy of all publications.

HANDY GARDENING DICTIONARY.—P. D. C., Montrose: You do not make it very clear what kind of book you want, but, so far as we can gather from your letter, the "Encyclopædia of Gardening" (3s. 6d., Messrs. W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.) will be a most useful and suitable work.

AZALEA MOLLIS AFTER FORCING.—M. J., Ripon: Keep the plants in a moderately warm house until they have finished their growth, then put them in a cooler house, and, finally, when weather permits, stand them out of doors in a sunny position, where they may remain until autumn, when they should be planted out or repotted for forcing again. Thin out the growths a little if the plants appear at all crowded.

BEGONIA GLOIRE DE LORRAINE SEEDING.—R. S. H.: Although Begonia Gloire de Lorraine does occasionally seed, it does not do so commonly. There are a number of sports from this very useful begonia, and the chief of these are Turnford Hall, Caledonia, and Mrs. Leopold de Rothschild. The latter is brighter, and has larger flowers than the type. Caledonia is dull white.

SWEET PEA DISEASES AND PESTS.—Y. W., Lingfield: Yes, you will find the chief of the diseases and pests that attack sweet peas, and, fortunately, they are not numerous, described in "Sweet Peas and their Cultivation" (1s. 2d., post free, from the GARDENERS' MAGAZINE Office, 148, 149, Aldersgate Street, E.C.). Some of them are illustrated, and in every case measures for preventing and curing attacks are given.

GHENT QUINQUENNIAL FLOWER SHOW.—T. B., Barnstaple: The sixteenth International Exhibition, held under the auspices of the Royal Agricultural and Botanical Society of Ghent, will open on April 25, and continue until May 3. The occasion will be of unusual importance, as it will mark the centenary of this famous society. The general secretary is Mons. A. Ceuterick, 140, Conpure, Ghent, Belgium.

VARIETIES OF LILIUM SPECIOSUM.—L. M. B., Exeter: This very popular lilium, frequently grown under the name of L. lancifolium, was first introduced in 1832, from Japan. It is one of the most valuable of lilies, responding readily to indoor and outdoor culture, and also lending itself to retardation. The type is white, with claret-red spots. The finest varieties are: Album, white; Krætzeri, very pure white; Melpomene, crimson and white; roseum superbum, rosy-crimson and white; and rubrum, the popular rich rose-red form.

DISEASED CARNATIONS.—Dianthus: The specimen sent gives evidence of a rather bad attack of Carnation Spot, a disease that does a great deal of damage in moist seasons. Judging from the example sent the plants were not well rooted when potted up, and this may in some measure account for the attack, as poorly rooted and otherwise weakly plants are always liable to disease. Cut away all the spotted and blotched leaves, spray the plants with a solution of sulphide of potassium, keep them rather drier at the roots, and stand them on pots or trellis-staging, so that air may circulate freely all around them.

NEW DAHLIAS.—A. L. C., Llandudno: The new cactus dahlias certificated in 1907 were: Mauve Queen (Cheal), The Bride (Cheal), a decorative cactus variety; Flame and Charles H. Curtis (Shoesmith); C. E. Wilkins, Ivernia, Rev. Arthur Bridge, Harold Peerman, Helium, Etruria, Saturn, Clara, and Dorothy (Stredwick). Peggy (Cheal), and Crimson Prince (Webb and Thompson), were the single varieties certificated. Meteor and Eclair (C. Turner); Beacon and Primrose (Stredwick); Lustre (Burrell); A. D. Stoop (Carpenter), and Mrs. J. Brunton (Mortimer), were cactus varieties that were certificated at the Wisley trials for their garden value.

SALT AS WEED KILLER.—N. C., Hitchin: The old custom of dressing walks with agricultural salt to kill weeds has much to recommend it. The application must be made on a fine dry day, as the salt is then more destructive, and not likely to be washed to the sides of the walk. The middle of May is a good time to give the application, and one dressing will usually suffice, but, if necessary, give a second towards the end of the summer. In the case of walks with live edgings, the salt must not be spread within seven or eight inches of the edge, and it should be distributed over the surface in sufficient quantity to form a thin layer. Hot brine is also very destructive to weeds, and does not discolour the walk. To make the brine add one pound of salt to one gallon of water, boil and apply hot.

NAMES OF PLANTS.

A. R. A., Ashford.—1, Garrya elliptica; 2, Gaultheria procumbens.

D. C. W., Carlisle.—Probably Pinus Laricio, a very poor specimen.

G. B., Walton.—1, Chionodoxa Luciliæ; 2, C. sardensis; 3, Saxifraga oppositifolia.

O. G. C., Leyton.—1, Selaginella Kraussiana; 2, Dendrobium Pierardi; 3, D. heterocarpum.

M. F. R., Bristol.—1, Saintpaulia ionantha; 2, Begonia nitida; 3, Pleroma macrantha; 4, Ada aurantiaca.

H. M., Bournemouth.—1, Helleborus corsicus; 2, Saxifraga Burseriana; 3, Cupressus funebris; 4, Sciadopitys verticillata.

W. A., Oldham.—The flowers were very shrivelled when received, but we believe both are forms of Dendrobium nobile, and No. 2 is the better variety.

NAMES OF FRUITS.

A. W., Cornwall.—Grange's Pearmain.

ARTICHOKE, Taunton.—The publication of your answer has been unavoidably delayed. 1, not recognised; 2, Lemon Pippin; 3, Beauty of Kent; 4, Winter Majetin; 5, Herefordshire Beefing; 6, Yorkshire Beauty.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. MARCH 15 TO MARCH 21.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 15—Sunday	4 40	30	29	41	23
„ 16—Monday	0 50	39	39	45	30
„ 17—Tuesday......	7 10	35	34	44	32
„ 18—Wednesday..	1 0	35	34	42	32
„ 19—Thursday ...	4 50	33	32	41	27
„ 20—Friday	2 5	28	27	40	24
„ 21—Saturday ...	3 40	36	35	46	28
Means	3 30	34	33	43	28

DATE. 1908. MARCH 15 TO MARCH 21.	RAIN.	TEMPERATURE OF THE SOIL, AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg
Mar. 15 - Sunday	0.03	39	42	43	17
„ 16—Monday	0.08	39	41	42	29
„ 17—Tuesday......	—	40	41	42	27
„ 18—Wednesday..	0.04	40	42	42	25
„ 19 Thursday ...	—	39	41	42	19
„ 20 Friday	—	38	41	42	17
„ 21—Saturday ...	—	38	40	42	29
Means ...	(total) 0.15	39	41	42	23

Prudential Assurance Company.—This old-established company continues to flourish and progress. We gather from the valuation report for the year 1907 that in its Ordinary branch the company had 843,206 life policies in force at the end of the year, assuring, with bonus, £93,263,920, and producing a premium income of £4,477,866 per annum. There are 3,769 life annuities payable, amounting to £128,289 per annum. The result of the valuation of the ordinary branch of the business is as follows: Life assurance fund, £36,404,367; reserve for life assurance and annuities, £34,938,049, leaving a surplus, including balance of £266,387 brought forward from 1906, of £1,466,318. In the Industrial branch the life assurance fund is £28,174,921, and the net liabilities £27,106,185, leaving, with the balance of £360,519 brought forward, a surplus of £1,068,736. From these surpluses the sum of £200,000 has been transferred to the investments reserve fund; £50,000 to the reserve fund of the industrial branch. £1,596,374 will be distributed among policyholders, superintendents, agents, and shareholders; and £688,080 will be carried forward. It is interesting to notice, as instancing the encouragement given to provide for old age, that the policies for life assurance and old age, combined, now number 1,626,789, although this branch was only opened in 1895; and they now produce an annual income of £730,313. Further, a sum of over £4,500,000 is provided in respect of free policies granted in lieu of discontinued assurances; for the increase of sums assured given to industrial policyholders; and also for the concession granted in respect of policyholders who have attained age 75 and whose policies have been 25 years in force. In addition to these benefits, a proportion of the profits for 1907 will be distributed by way of addition to the sums assured under claims arising from policies of over five years' duration.

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	10ft.	12ft.	14ft.	16ft. wide.
20ft.	£16 ...	£18 ...	£20 ...	£23
30ft.	£21 ...	£24 ...	£27 ...	£30
40ft.	£26 ...	£30 ...	£34 ...	£38
50ft.	— ...	— ...	£40 ...	£45

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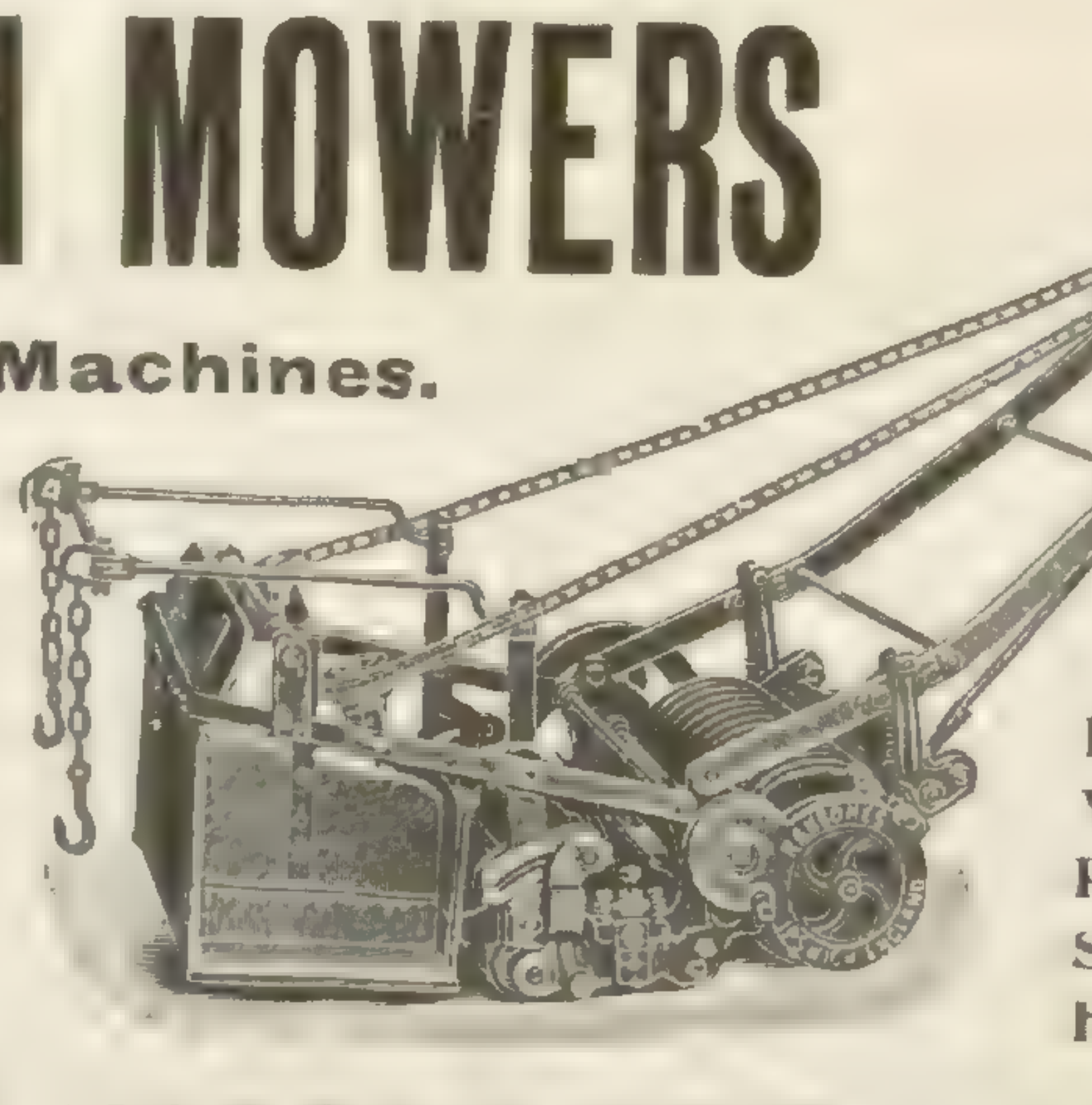

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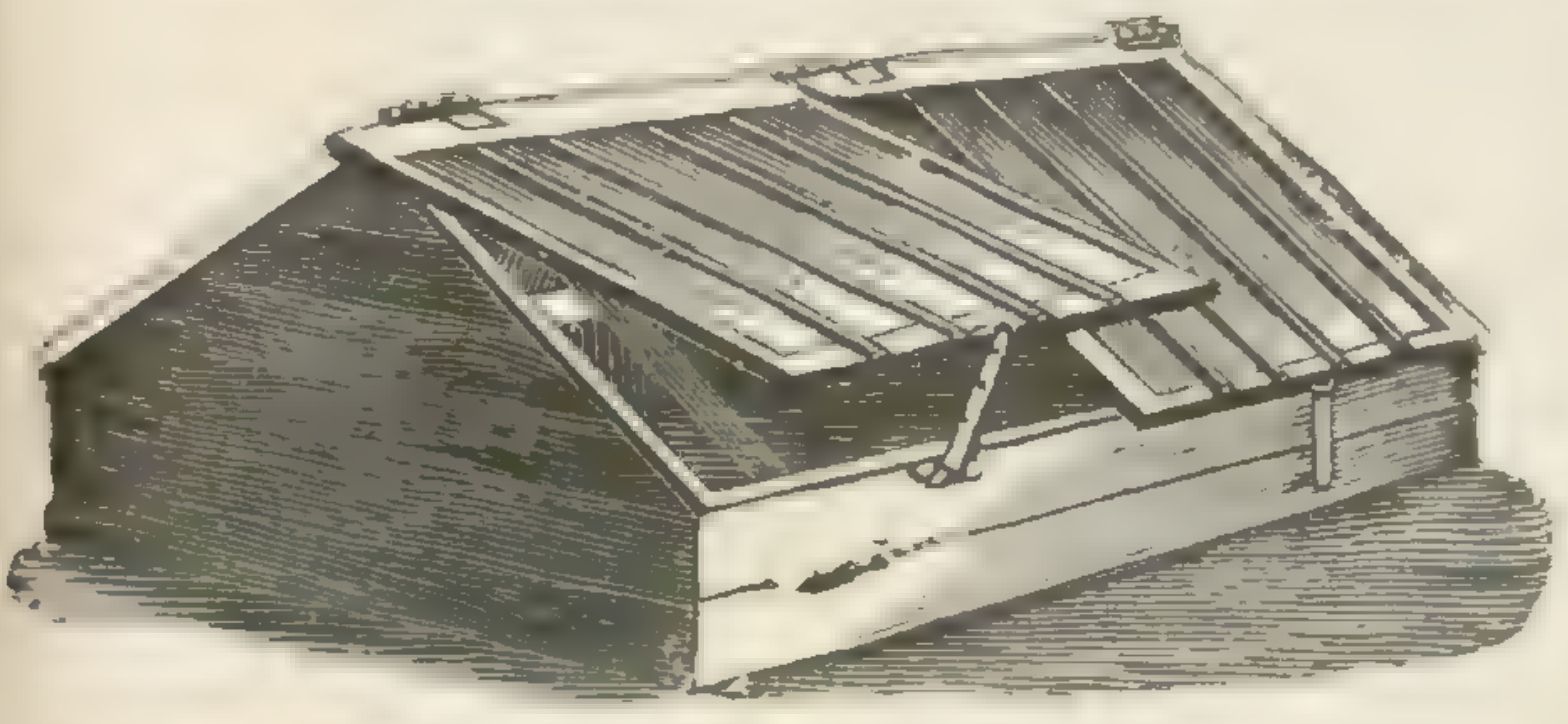

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12 ft. ,, 4 ft. ,,		4	0	0
6 ft. ,, 5 ft. ,,		2	15	0
12 ft. ,, 5 ft. ,,		4	15	0
12 ft. ,, 6 ft. ,,		5	12	6

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GOOSEBERRY MILDEW IN WORCESTERSHIRE.

At the Evesham County Petty Sessions on the 16th inst., a good deal of interest was taken by fruit growers in prosecutions instituted by the Worcestershire County Council under the American Gooseberry Mildew Order. Mr. Charles Barnett, market gardener, Cambria Road, Evesham, was charged on four summonses with failing to prune gooseberry bushes at Norton and Lenchwick in the manner prescribed by the order and to the satisfaction of an inspector of the local authority, the County Council. Mr. Graham Milward, who prosecuted, said the County Council considered the case was of great importance, and the Board of Agriculture had specially requested them to take these proceedings. He pointed out the great danger of the spread of American gooseberry mildew throughout the country and the need of preventive measures being enforced. The majority of growers in the district had behaved in an extremely proper and generous manner. Twenty-three had destroyed something like 33,000 gooseberry trees. Others, unfortunately, had not behaved so well, and by their neglect had endangered the property of the growers who did all they could to check the disease. Mr. Barnett did nothing under the first Order, and in December, when the Order as to pruning was issued, he was informed what he was required to do before January 31; but it was not until after that date that pruning was carried out. For over six months Mr. Barnett had not only defied the orders of the Council, but placed his neighbours' plantations in jeopardy. In Worcestershire there were 107 plots of land with this disease, and it was most important that all that was possible should be done to stamp it out. Evidence having been given, Mr. H. J. Smith, for the defence, said defendant had done all that was required by the order within a week or two of the time given him. The original Order was for the destruction of the gooseberry bushes, but the feeling of the growers, supported by certain expert evidence, was so strong against that Order that it was withdrawn, and the order requiring pruning substituted. He held that the defendant's slight delay in completing the pruning only constituted a trivial and technical offence. Defendant was fined £3, and costs, in the first case, and it was agreed that the other cases should be withdrawn on payment of costs.

There was a similar charge against Mr. John Woods, market gardener, Oat Street. Defendant said he took 42 bushes up and burnt them, obeyed the orders, and did everything he possibly could; but the weather was very bad, and he had not time to finish the pruning. He was fined £1, and £2 3s. 6d. costs.—"Birmingham Post."

FORTHCOMING ENGAGEMENTS.

TUESDAY, March 31.—Royal Horticultural Society; Fruit, Floral, Orchid, and Narcissus Committees meet at 12 o'clock; lecture at 3 o'clock on "The History of the Cabbage Tribe," by the Rev. Prof G. Henslow; Scientific Committee at 4 o'clock.

WEDNESDAY, April 1.—Society of Arts.

Winter Flowering Carnation Society at Royal Horticultural Hall.

Hayward's Heath Gardeners' Association; lecture on "Seakale and Rhubarb," by Mr. Jarrett.

THURSDAY, April 2.—Linnean Society Meeting.

TUESDAY, April 7.—Brighton Spring Show; two days.

Croydon Gardeners' Association; lecture on "Peaches and Nectarines," by Mr. Seabrooke.

National Amateur Gardeners' Association; lecture on "Beautiful Arrangements of Roses," by Mr. G. Gordon, V.M.H.

WEDNESDAY, April 8.—Examination in Horticulture at the Royal Horticultural Hall.

TUESDAY, April 14.—Royal Horticultural Society; Fruit, Floral, and Orchid Committees meet at 12 o'clock; Narcissus Committee at 11.30 a.m.; lecture at 3 p.m. on "Hardy Cacti and Other Hardy Succulents," by Mr. E. A. Bowles, M.A., F.L.S.; Scientific Committee at 4 o'clock

WEDNESDAY, April 15.—Society of Arts.

Royal Caledonian Horticultural Society's Spring Show; two days.

THURSDAY, April 16.—Brighton Horticultural Society Meeting; lecture on "Botany for Gardeners," by Mr. E. F. Hawes.

MARKETS.

◆

COVENT GARDEN.

Flowers.

There is a brisk demand for flowers, and prices keep up; the recent cold weather has delayed out-door daffodils, hence the firm rates for these flowers.

		s. d.		s. d.
Acacia	per doz. bun.	6 0	to	12 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 6		4 0
Arums	per doz.	1 6		3 6
Asparagus	per doz. bun.	1 6		6 0
Azalea	per doz. bun.	3 0		5 0
,, mollis	per bun.	1 0		1 6
Berberis	per doz. bun.	1 6		2 6
Camellias	per doz.	1 6		2 0
Carnations	per doz. blms.	1 6		2 6
,,	per doz. bun	8 0		12 6
,, Malmaison	per doz. blms.	8 0		12 0
Cattleyas	per doz.	8 0		12 0
Cœlogynes	per doz. blms.	1 0		1 6
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	6 0		8 0
Cypripediums	per doz. blms.	2 0		3 0
Daffodils	per doz. bun.	1 6		5 0
Eucharis	per doz.	2 6		4 0
Forget-me-not	per doz. bun.	3 0		4 0
French fern	per doz. bun.	1 0		3 0
Freesias	per doz. bun.	2 0		3 0
Gardenias	per doz.	2 0		4 0
Hellebores	per doz.	0 6		1 0
Hyacinths, Roman	per doz. bun.	4 0		6 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 0		4 0
Lilium auratum	per bun.	2 0		3 0
,, speciosum	per bun.	2 0		3 0
,, longiflorum	per bun	2 6		4 0
Lily of the Valley	per doz.	6 0		9 0
Marguerites, white	per doz. bun.	3 0		6 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 6		3 6
Narcissus	per doz. bun.	1 0		4 0
Odontoglossums	per doz. blms.	2 0		3 0
Pelargoniums	per doz. bun.	5 0		8 0
Pernettya	per bun.	0 6		1 0
Ranunculus	per doz. bun.	6 0		9 0
Roses	per doz.	2 0		10 0
Smilax	per doz. trails	2 0		3 0
Spiræa	per doz. bun.	5 0		8 0
Stocks	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	3 0		5 0
Tuberoses	per doz. blms.	0 4		0 6
Violets	per doz. bun.	2 0		4 0
Wallflowers	per doz. bun.	1 6		2 0

Fruits.

Oranges meet a good demand; apples sell well, as also do Cape fruits.

		s. d.		s. d.
Apples, Canadian	per barrel	10 0	to	20 0
,, Californian	per box	10 6		12 0
Bananas	per bun.	4 0		12 0
Cranberries	per case	9 0		10 0
Cob Nuts	per doz. lb.	4 0		5 0
Grapes, Alicante	per lb.	1 6		3 0
,, Belgian	per lb.	0 10		1 6
,, Muscats	per lb.	3 6		7 6
,, Gros Colmar	per lb.	1 3		3 0
,, Channel Islands	per lb.	0 9		1 0
,, Almeria	per barrel	10 0		20 0
,, Cape	per box	3 0		10 0
Lemons	per case	8 0		14 0
Nectarines, Cape	per box	6 0		10 0
Oranges	per case	7 0		30 0
Peaches, Cape	per box	5 0		10 0
Pears, Cape	per box	3 0		5 0
Pineapples	each	1 6		4 6
Plums, Cape	per box	4 0		8 0
Strawberries	per lb.	5 0		12 0
Walnuts	per bag	7 0		8 6

Vegetables.

Cornish cauliflowers are in great request, and seakale, rhubarb, and asparagus sell readily.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	4 0
Asparagus, Paris green	per bun.	3 6		5 6
,, English	per bun.	6 0		7 0
,, sprue	per bun.	0 7		1 6
Beans, French	per lb.	0 8		1 0
,, Madeira	per bskt.	2 0		3 6
Beet	per bush.	1 6		2 0
Brussels sprouts	per ½-bush.	1 3		1 6
Cabbage	per tally	3 0		6 0
Carrots	per doz. bun.	1 0		1 6
,,	per bag	2 6		3 0
,, French, new	per doz. bun.	6 0		8 0
Cauliflowers, Cornish	per crate	6 0		8 0
Celery	per bundle	0 9		1 3
Celeriac	per doz.	1 6		2 0
Chicory	per lb.	0 3		0 4
Cucumbers	per doz.	3 0		7 0
Endive	per doz.	1 9		2 6
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	10 0		15 0
Leeks	per doz. bun.	1 0		1 6
Lettuce, cabbage	per doz.	1 0		1 6
,, Cos	per doz.	5 0		7 6
Mint	per doz. bun.	0 9		1 0
Mushrooms	per doz. lb.	8 0		12 0
Onions, English	per cwt.	3 0		4 0
,, Spanish	per case	5 0		6 0
Parsnips	per bag	2 0		2 6
Parsley	per doz.	1 6		2 0
Rhubarb	per doz. bun.	0 9		1 0
Savoys	per tally	3 0		4 6
Seakale	per doz. pun.	9 0		12 0
Tomatoes, Teneriffe	per package	12 0		16 0
Turnips, French, new	per doz. bun.	6 0		10 0
Watercress	per doz. bun.	0 4		0 6

LONDON POTATO MARKETS.

Trade is rather slow, and top prices are rarely reached.

		s. d.		s. d.
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Blacklands	per ton	80 0		90 0
Dunbar Maincrops	per ton	120 0		125 0
Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	95 0		100 0
Langworthy	per ton	90 0		105 0
Lincoln Maincrop	per ton	95 0		110 0
Lincoln Up-to-Date	per ton	90 0		110 0
Royal Kidneys	per ton	80 0		90 0
Reading Giants	per ton	80 0		90 0
Sir J. Llewelyn	per ton	85 0		100 0
New, French	per lb.	0 2		0 2½

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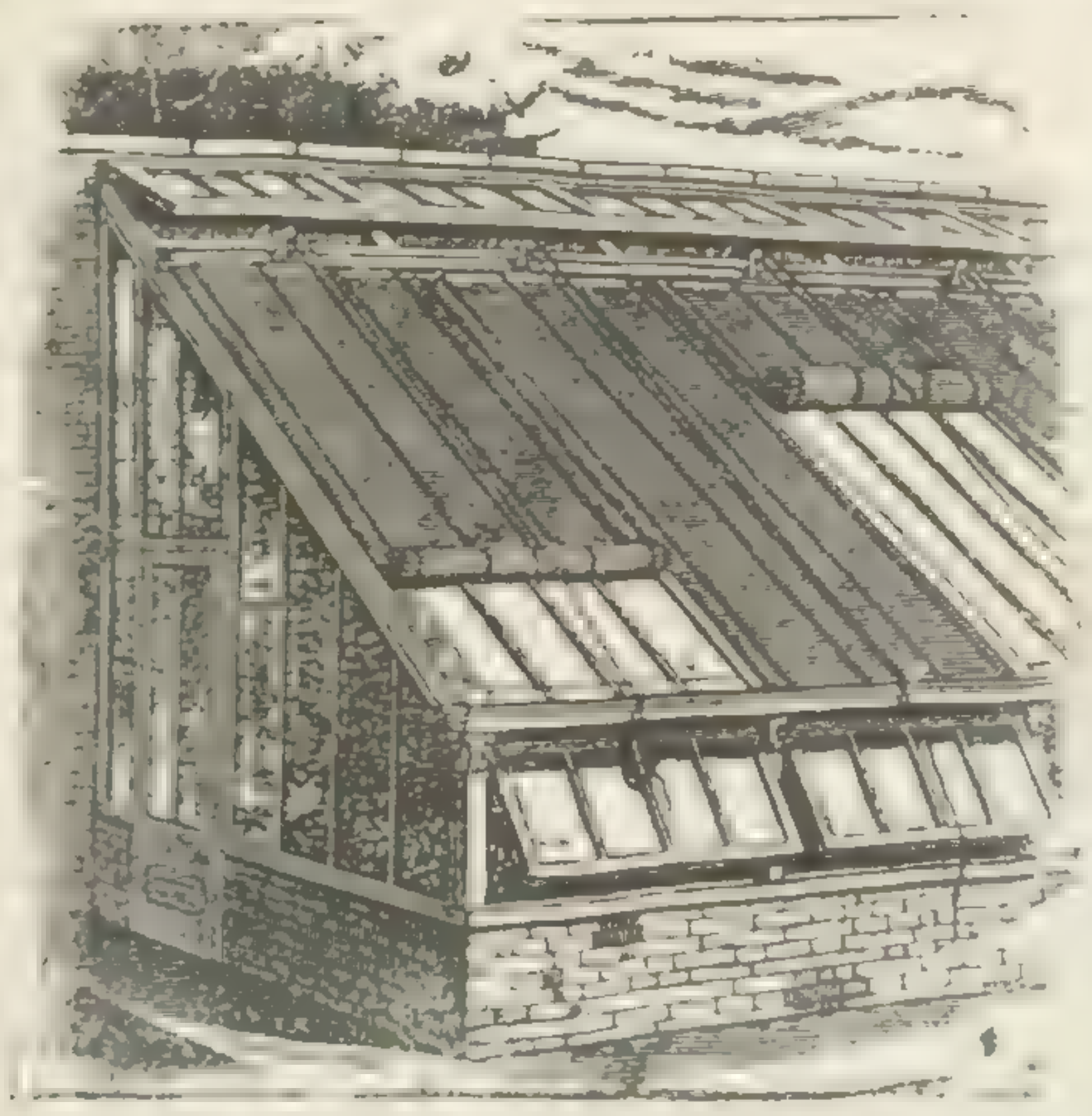

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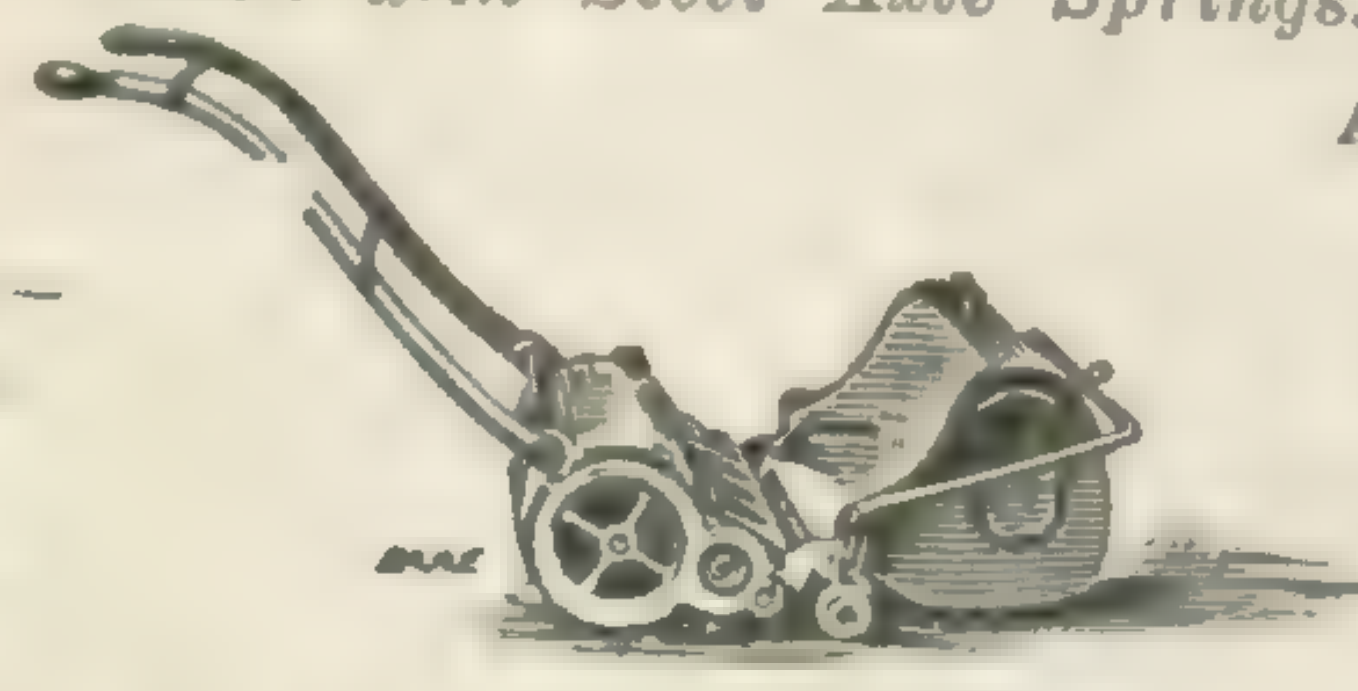

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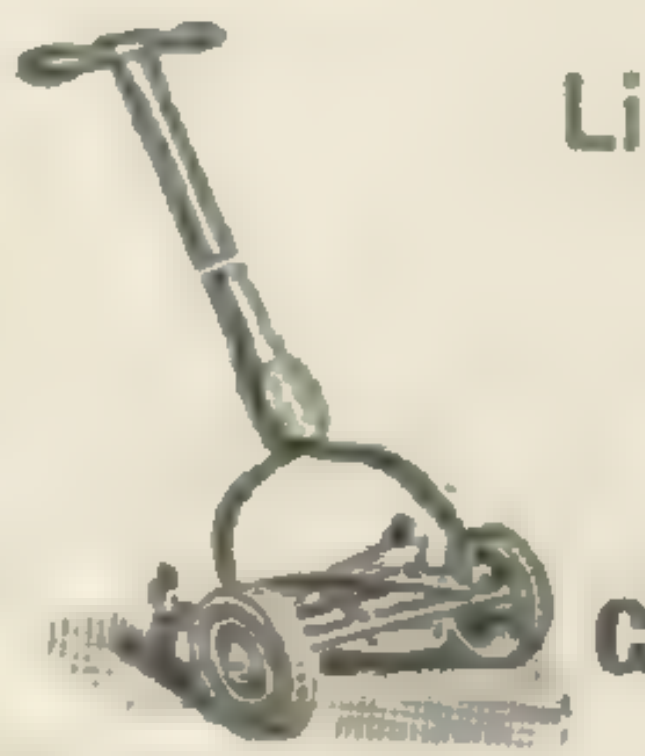

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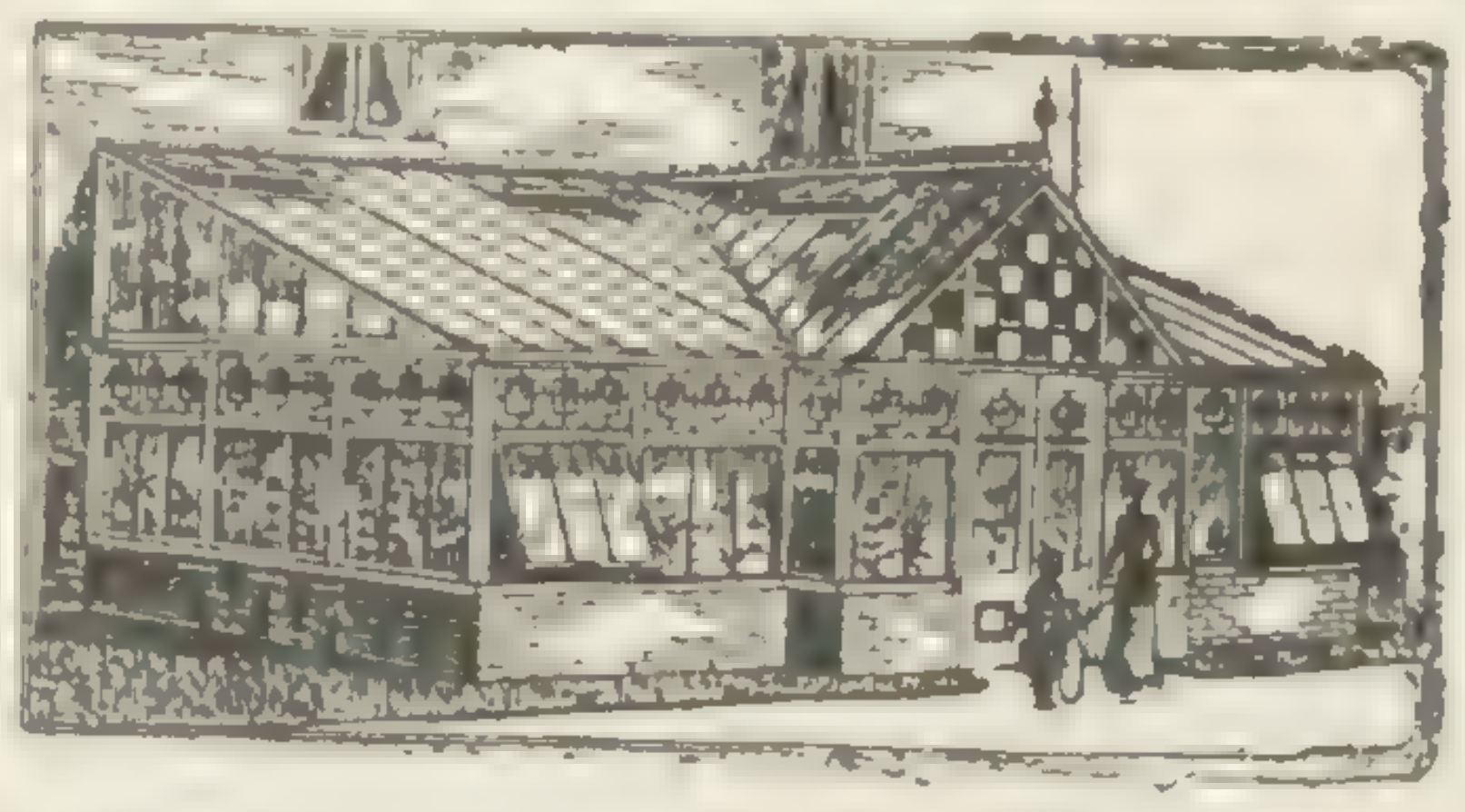

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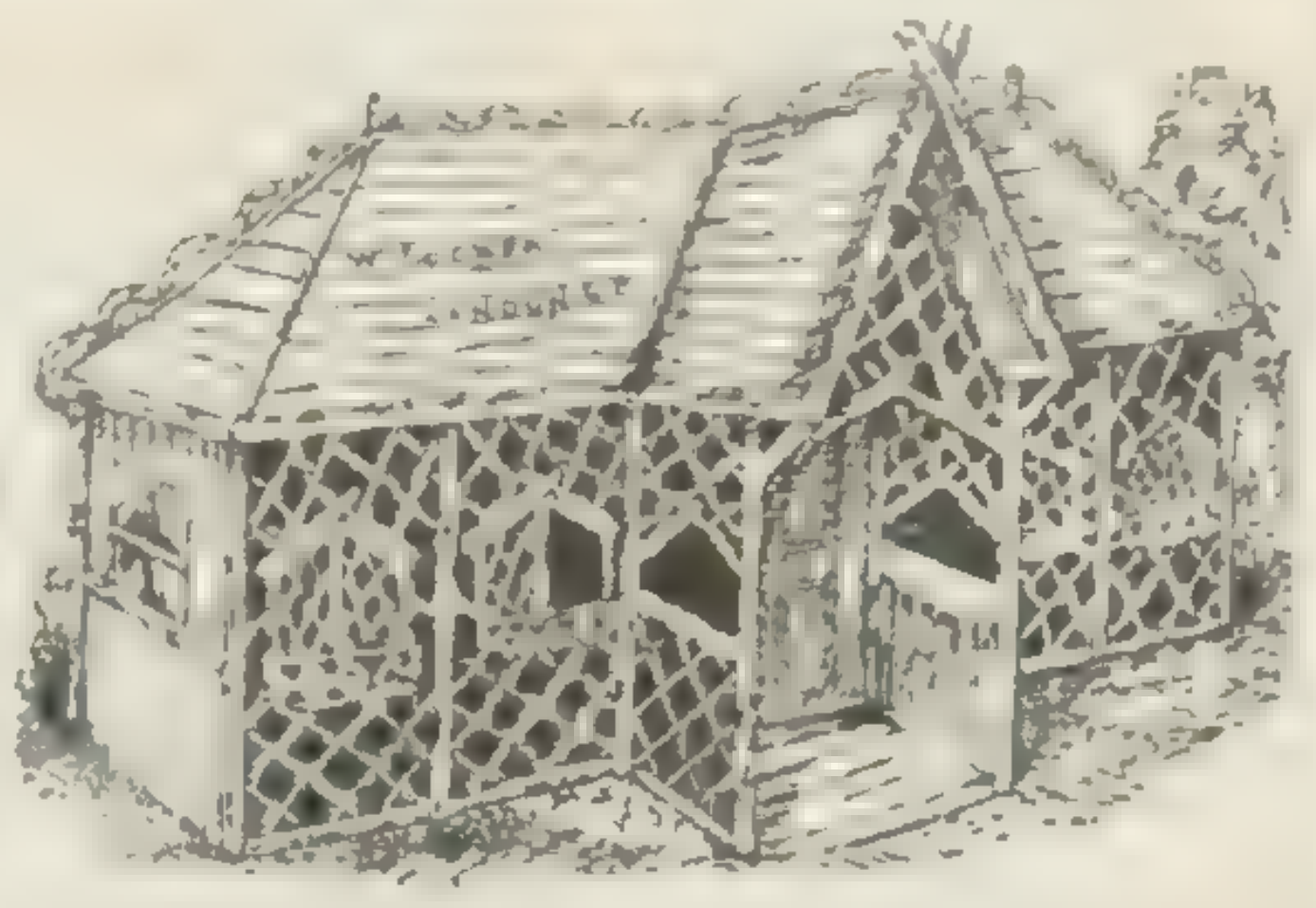

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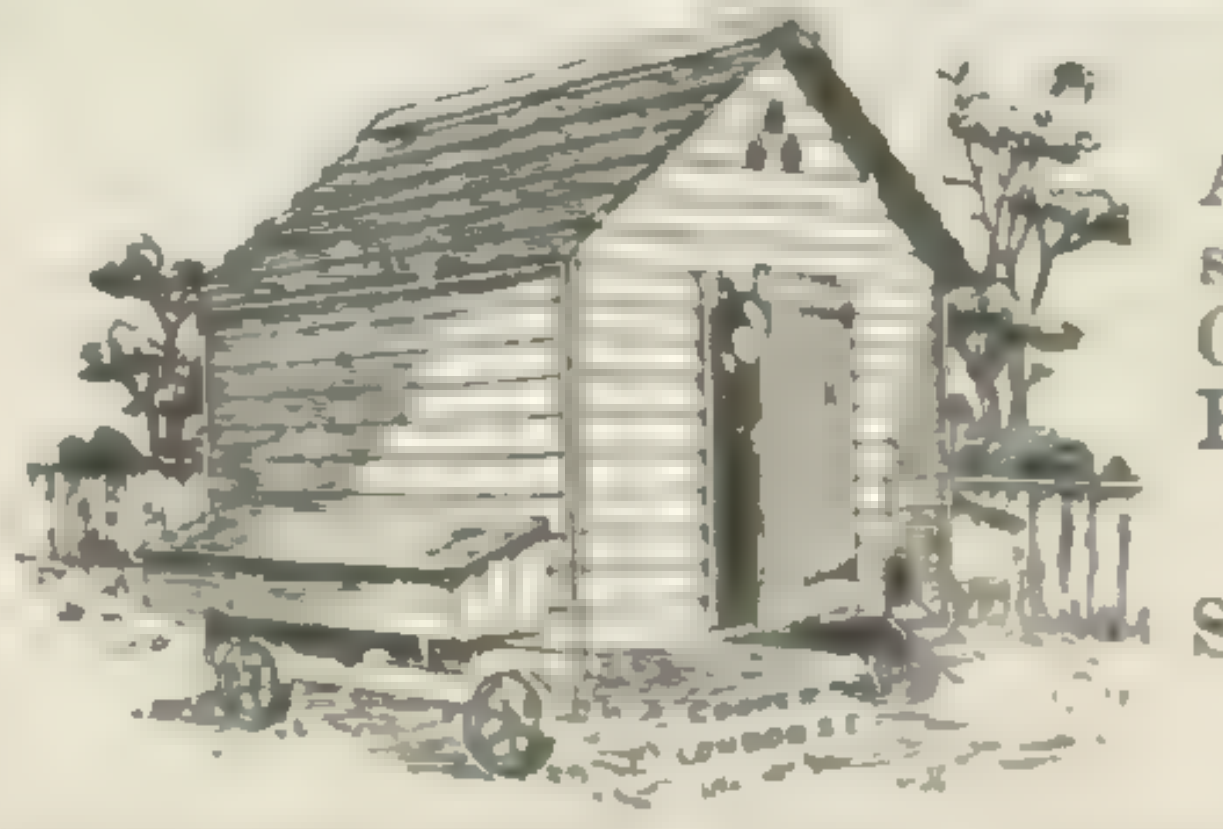

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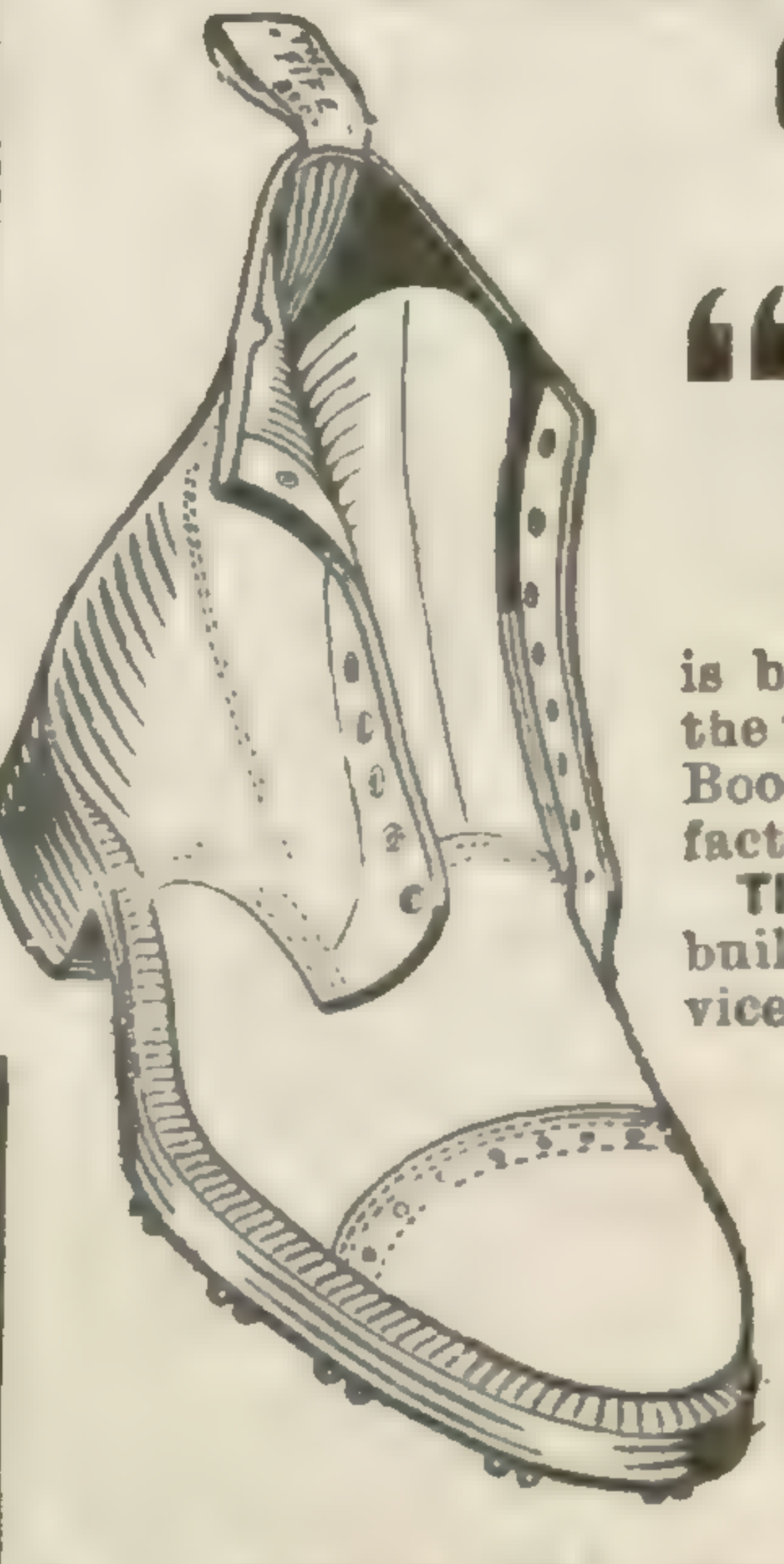

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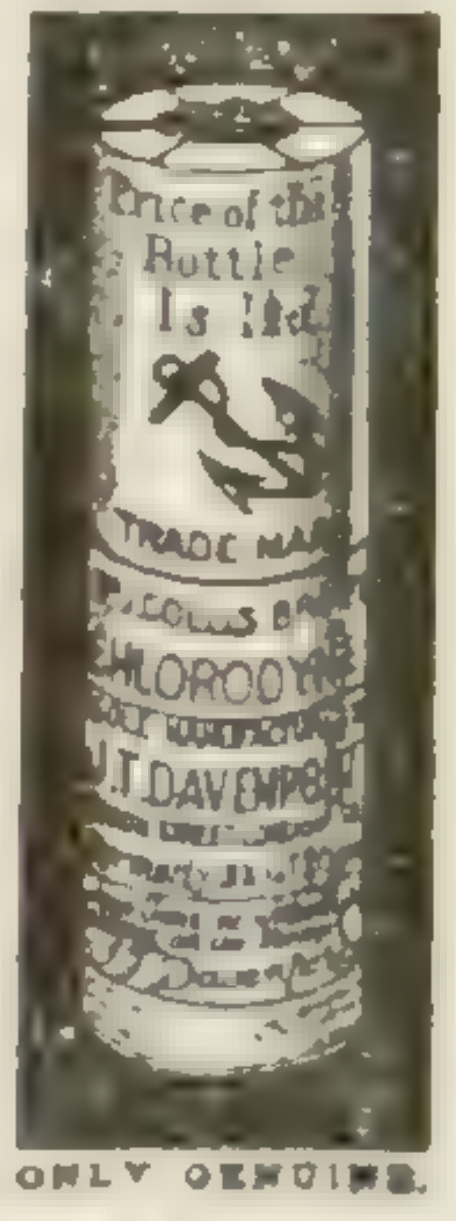

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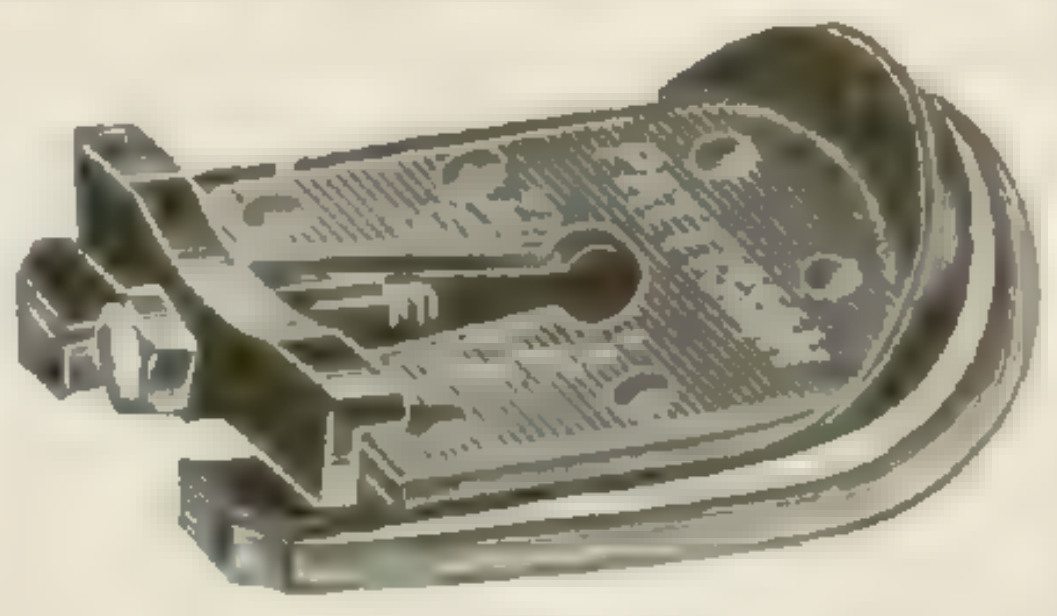

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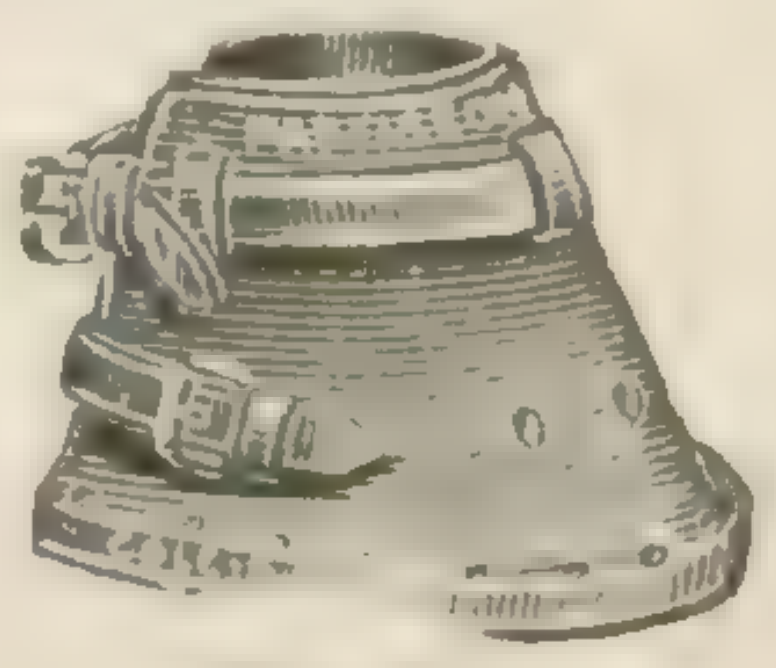

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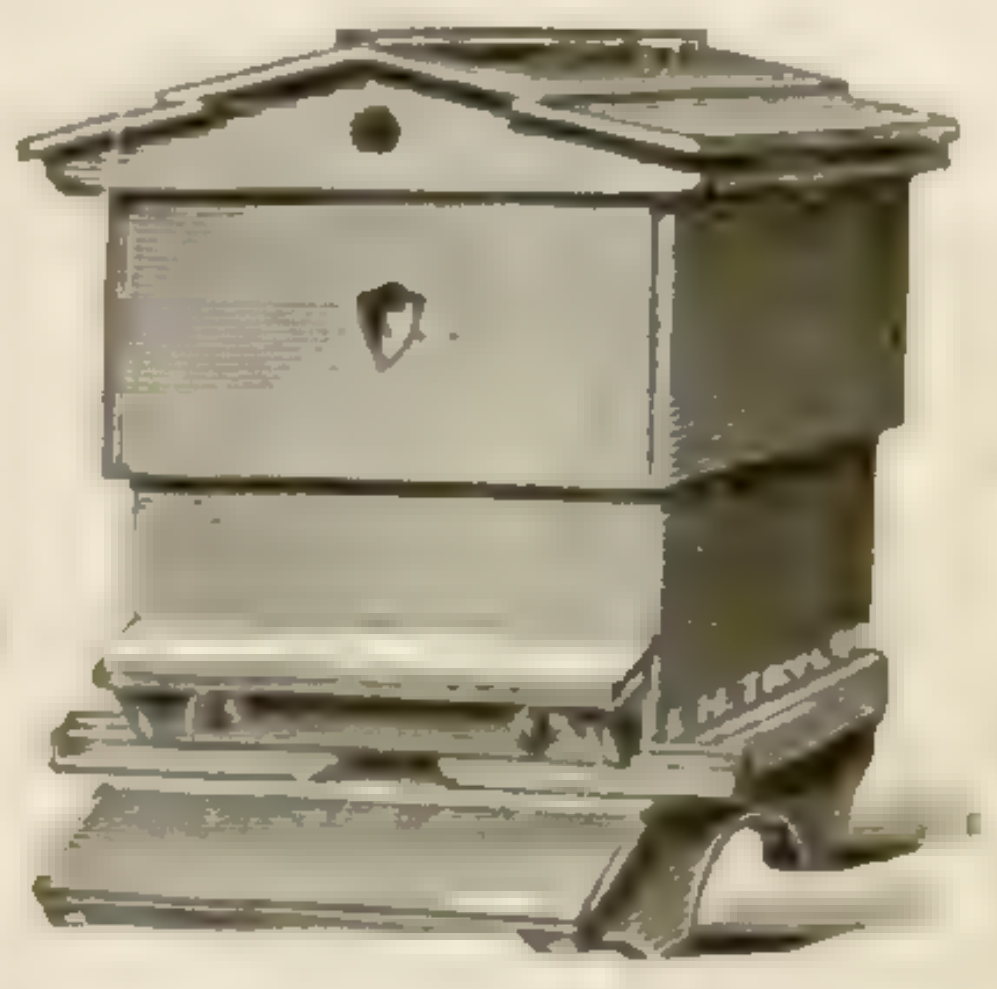

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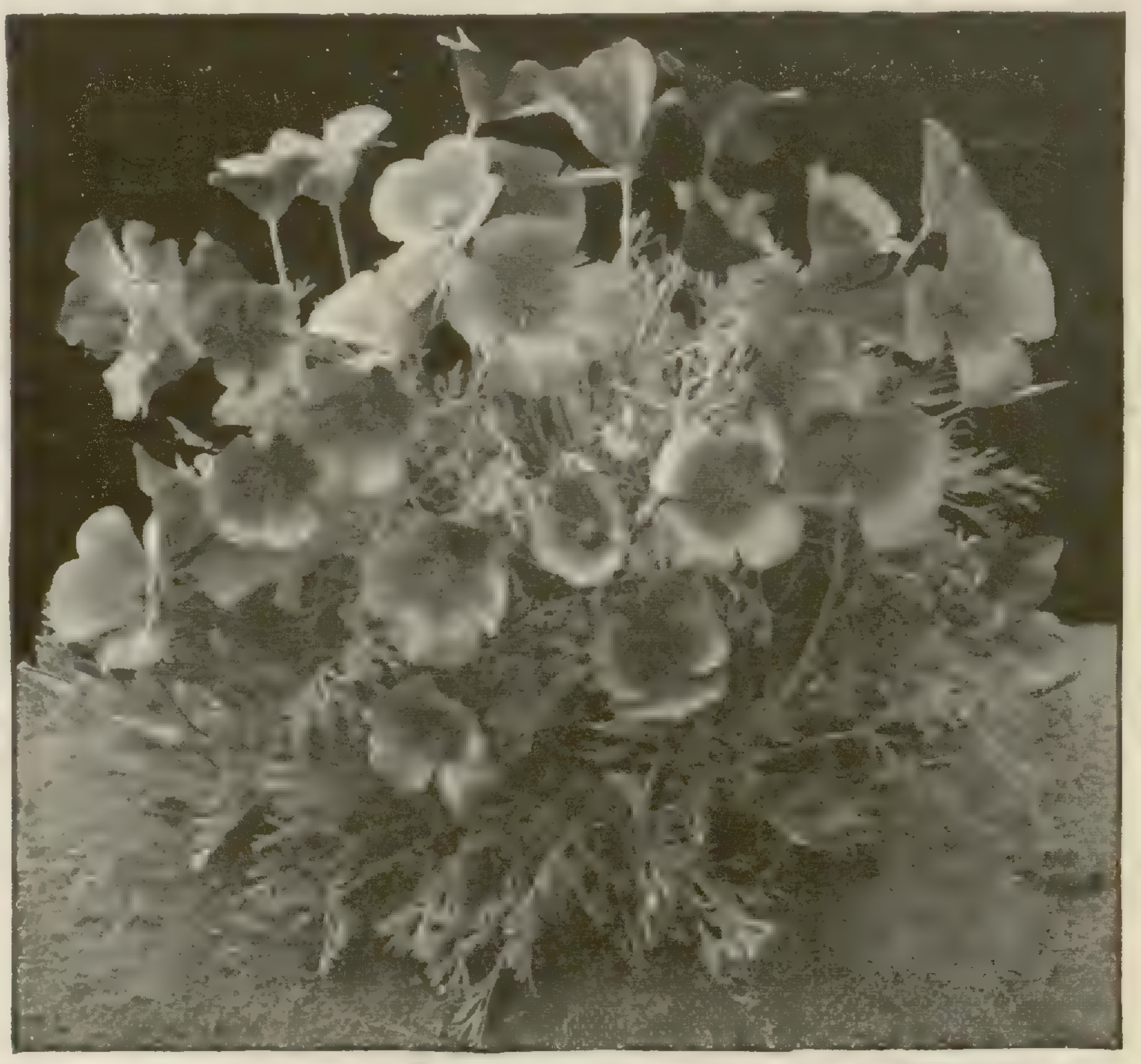

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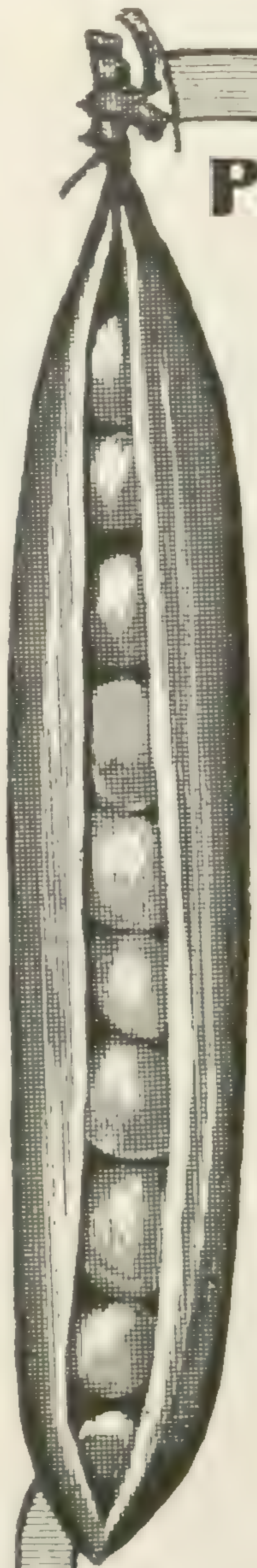

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Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

A LADY highly recommends a strong, active, middle-aged Man as HEAD WORKING GARDENER, who has had the entire management of an estate of 70 acres, gardens included; married, family grown up; 20 years' personal character; leaving through death. F. W., Triangle House, Taplow Common, Taplow, Bucks.

GARDENER (Head Working), Scotch.—Mr. JOHNSTON, Knightshayes Court Gardens, Tiverton, Devon, wishes to recommend D. FLETCHER as above; 14 years' experience, including all branches; 2½ years Inside here; age 30; highest references.

GARDENER (Head of two or more), thorough practical man in all branches; life experience; understands land and stock; strongly recommended by present employer as competent, conscientious, active, and trustworthy; age 42; married, no family. W. FOOTE, Redworth Cottage, Totnes, South Devon.

GARDENER (Head Working).—Mr. MACKENZIE recommends his Foreman, H. CLARY; life experience in all branches; excellent references; age 30. Gardens, Sherwood Park, Tunbridge Wells, Kent.

GARDENER (Head Working), where two or more are kept; middle-aged; life experience Inside and Out; hard working; good references from last and previous employers. G. BURGESS, 17, Eversleigh Road, Lavender Hill, London, S.W.

GARDENER (Head), where two are kept, or good SINGLE-HANDED; life experience in all branches; seven years in present situation; excellent references; age 34; abstainer; married, no family. E. WOOD, Vale House, St. James Lane, Muswell Hill, N.

GARDENER (Head Working where three or four are kept); life experience Inside and Out; early and late forcing; excellent character. H. P., 63, Chedington Road, Silver Street, Upper Edmonton.

GARDENER (Head Working), age 31, married; life experience in good places, including Syon House, Mereworth Castle, and Old Warden Park; 3½ years as Head; highest references. F. FRENCH, Covent Garden, Barming, Kent.

GARDENER (Head Working); life experience Inside and Out, in good places; 9½ years present; leaving no fault; good references; age 39; single. J. GREENLEES, Ravenstonedale, Westmorland.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head Working); married; age 39; thorough knowledge of fruit, flowers, and vegetables; life experience; highly recommended; sixteen years' head; economical manager. PENFOLD, 15, Helvetia Street, Catford.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working), age 40; thorough practical life experience in all branches; could lay out new place, or remodel neglected garden; grass land, cows, poultry, bees. Wife excellent needlewoman. H. W., 12, Croftdown Road, Highgate, N.W.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working).—HENRY H. COCHRANE, Esq., can highly recommend WM. GIBSON, as above; thorough practical experience, gained in first-class establishments; highest references as to character and abilities. Midlands preferred. Address WM. GIBSON, The Gardens, Eshwood Hall, Durham.

GARDENER (Head), where five or six are kept; 16 years' good experience; five years as Foreman in present place; age 32. W. LONGLEY, The Gardens, Swaylands, Penshurst, Kent.

GARDENER (Head Working). — Mrs. VENESS, having sold her property, heartily recommends her excellent Gardener, with her four years; experienced in all branches; 38, married, two girls 11 and two. GARDENER, 3, Claremont Road, Sidley, Bexhill.

GARDENER (Head Working).—F. SMITH seeks SITUATION with any Lady or Gentleman requiring a thorough all-round Gardener; first-class references; life experience; age 45; married, no family. Address Rose Cottage, Mellis, Suffolk.

MR. J. ALLEN, Gardener to Honble. R. STANHOPE, Revesby Abbey, Boston, Lincs, can strongly recommend W. EDWORTHY, who has been Foreman here for the past six years, to any lady or gentleman requiring practical, reliable Man as HEAD WORKING GARDENER; age 32; married when suited. Address W. EDWORTHY, as above.

MR. D. FAIRWEATHER wishes to recommend A. MUNDAY as Head Working or good Single-handed GARDENER. Thoroughly experienced in all branches, Inside and Out; good testimonials; 2½ years present situation; age 27; married; abstainer. Address either of above. Bifrons Park, Canterbury, Kent.

MRS. BULL, The Limes, Finsbury Park, N., highly recommends W. SEARLE as HEAD WORKING GARDENER of two or more; has been here three years; leaving through death; life experience; excellent references, including Waddesdon Manor; abstainer; age 31; married, one child.—W. SEARLE, The Limes, 16, Woodberry Down, Finsbury Park, N.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (Single-handed, or with Help), age 26; 10 years' experience; three years in present situation; can be well recommended. H. JENNINGS, Claremont Gardens, Esher.

GARDENER (Single-handed, or where help is given); age 27; 11 years' general experience; three years present situation. F. FELLOWES, The Gardens, Ranelagh Club, Barnes, S.W.

GARDENER (Single-handed or with help); 11 years' experience, Inside and Out; good references; age 26; single. S. C., 38, Belfast Road, Stamford Hill, N.

GARDENER (Single-handed) or GARDENER and CARETAKER; life experience Inside and Out; married; age 28; good reference; six years in present situation; leaving through death. F. W. PAXTON, Weyhill, near Andover, Hants.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER (Single-handed), age 30, life experience; 10 years as second of four, where plants, fruit, and vegetables are grown for exhibition; highly recommended. G. PARSONS, Pampisford, Cambs.

GARDENER (Single-Handed), experience in flowers, fruit, and vegetables; age 38; married, two boys, 11 and 7; good character; two years last situation; 11 years previous; understand cows if required. T. READ, Chesterfield Road, Ashford, Middlesex.

GARDENER (Single-handed with help, or Second where 3 or 4 are kept); 6½ years' experience as Foreman in last place; death cause of leaving; single; age 32; excellent references. G. EUSTON, Shrubs Hill, Sunning Dale, Ascot, Berks.

GARDENER wants SITUATION; Single-handed; 3½ years' in present situation; married. A. STEVENS, 179, Beechcroft Road, Upper Tooting.

GARDENER seeks SITUATION; married, age 38; life experience Inside and Out; excellent references and character from present place. Please state wages, etc., to GARDENER, c/o 10, Stanley Terrace, Lymbourn, Havant, Hants.

GENTLEMAN highly recommends his GARDENER; experienced in all branches; Inside and Out; understands Management of Cattle; age 47; total abstainer. R. MONTAGUE, The Dene, Ropley.

GENTLEMAN highly recommends GARDENER; single-handed, or with help; 5½ years' good character; age 28; single. ASKEW, 4, Mountfield Road, Ealing.

GARDENER (Single) seeks a SITUATION as Under, Inside and Out; age 23; good reference; Bothy preferred. H. GODDARD, Caryll's Cottage, Fay Gate, Horsham.

GARDENER. (Second). — Mr. F. W. SECKER, King's Standing, Burton-on-Trent, wishes to recommend A. BUDGE, age 28; 12 years' experience Inside and Out; married.—Address as above.

GARDENER (Under or Journeyman), age 21, seeks SITUATION; seven years' experience Inside and Out. Can be well recommended. H. BEES, The Gardens, Crown East Court, Worcester.

GARDENER, energetic, 16 years' experience all branches; 6½ years' last place as head; age 34; married, no children; excellent characters. HARRIS, Beeleigh Falls, Maldon, Essex.

GARDENER seeks SITUATION as under Inside and Out; age 23; good references; bothy preferred. H. GODDARD, Carylls Cottage, Fay Gate, Horsham.

GARDENER (Inside and Out), age 25, ten years' experience; 4 years last place; with a good character; single. Disengaged. Mr. J. PULLINGER, Strood Lodge, B.B. Heath, Horsham, Sussex.

FOREMAN (Outside), age 27, 13 years' experience, chiefly in Hardy Fruit, Vegetables, and Pleasure Grounds, including two years in the Royal Botanic Gardens, Kew.—C. W. MAYHEW, 308, Kew Road, Kew.

FOREMAN, age 27, seeks SITUATION (Inside), where two or three are kept; three years last situation; highly recommended; disengaged. A. WHITE, Askerswell, Dorchester, Dorset.

FOREMAN (Inside).—Mr. PINNOCK, Little Gaddesden House, Herts, will be pleased to recommend H. HUGHES; 11 years good exp[illegible] house decorations; good testimonials; age 2[illegible] preferred.

FOREMAN or good SECOND; well up in all branches; age 28; last place three years; [illegible] references. THORNLEY, Sibton Park North, [illegible]ford, Suffolk.

JOURNEYMAN seeks SITUATION Inside; nearly eight years' experience Inside and Out; age 22; abstainer; good references. Apply G. ANDERSON, 63, Woodside Road, Tonbridge, Kent.

JOURNEYMAN (First), Inside; 10 years' experience; age 36; can be well recommended; two years last situation; bothy preferred. F. OSGOOD, 3, Clover Nook, Ackender Road, Alton, Hants.

JOURNEYMAN (Inside or Inside and Out); age 23; 8 years' good, all-round experience; excellent references; 3 years last situation. H. J. MARLOWES, Nursery, Hemel Hempstead.

JOURNEYMAN, First (Inside), in [illegible] establishment.—Mr. BLOXHAM, The Gardens, Shirle Hill, Sheffield, will be pleased to recommend F. HERRIDGE as above; age 24; 10 years' good references.

MR. LONGHURST, Bradfield House Gardens, Bradfield, Berks, wishes to recommend Young Man as JOURNEYMAN (Inside and Out); age 20; abstainer; 2 years present place; Bothy preferred.

MR. REYNOLDS, The Gardens, [illegible] Hall, Gt. Yarmouth, would be please[illegible] commend CHAS. LEACH, as JOURNEYMAN [illegible] Gentleman or Gardener wanting a steady [illegible] working Young Man; age 22. Leaving [illegible]

NURSERY MANAGER of wide exp[illegible] in all branches of Commercial H[illegible] seeks RE-ENGAGEMENT. Testimonials w[illegible] mitted which prove capability to entirely [illegible] extensive Business. Would be pleased to [illegible] Proprietors, or Gentleman prepared to Finance a [illegible] concern. Apply S. K., Office of this Paper.

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SITUATION required by a middle-aged Scotsman who has had a life experience in all branches of horticulture; has held important positions in Scotland, England, and Ireland, and can be highly recommended for a post as superviser of [illegible] private or public gardens. Apply, J. M[illegible] this Paper.

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IMPROVER (18) seeks SITUATION Inside as above; strong and active; two years in present place; can be well recommended. GEO. CRADDUCK, The Gardens, Sandhurst, Tunbridge Wells.

LAD (16) seeks SITUATION in Gentleman's family as HOUSE BOY and assist Gardener; good reference. F. HATT, 4, S.E. Cottages, Edenbridge, Kent.

YOUNG MAN seeks SITUATION as ASSISTANT to Estate Carpenter; 6 years' experience in the Building Line; good references. F. GEORGE, Camden Hill, Chislehurst, Kent.

YOUNG MAN (age 19), seeks SITUATION in kitchen garden and pleasure grounds; three years' experience; highly recommended. A. BETTS, Poole Hills, Nantwich, Cheshire.

YOUNG MAN, desirous of improving his knowledge, wants SITUATION, Inside and Out; age 20; three years' experience; good character: five years' last situation. G. HAYNES, The Gardens, Knolton Hall, Ellesmere, Salop.

YOUNG MAN as UNDER GARDENER, good experience of work both Inside and Out; well recommended; strong; age 22. HARRIS, 19, Blenheim Road, Dartford, Kent.

YOUNG MAN (22) seeks SITUATION (Inside or Inside and Out); 5½ years' reference; South-Eastern counties and lodgings preferred. G. H. FUGGLE, The Grange, Goudhurst, Kent.

YOUNG MAN, age 19½, wants SITUATION in Kitchen and Pleasure Garden; 2½ years' experience. Apply LEWIS, 69, Canon Street, Winchester, Hants.

YOUNG MAN, 23, seeks SITUATION, five years' good experience, Inside and Out; good references; second of five at present. Apply WESTCOTT, Collingwood Tower, Camberley.

YOUNG MAN, age 19, requires SITUATION in good establishment, Inside or Inside and Out; two years present; excellent character; free when suited. J. RENYARD, 73, Birkbeck Road, Enfield, Middlesex

YOUNG MAN seeks SITUATION in Kitchen Garden and Pleasure Grounds. H. GARLAND, The Gardens, Epping House, near Hertford, Herts, will be pleased to recommend W. MORGAN as above. Can also drive oil engine; age 22 years; five years' experience; good references.

YOUNG MAN seeks SITUATION, Under Gardener, Outside, or where can assist with Inside; age 22. South or London district preferred. Address G., Price's Library, Horsham, Sussex.

YOUTH, age 16, seeks SITUATION in a good establishment, Inside and Out; bothy preferred; tall; willing, and strong; well recommended. State particulars. BUNDY, Benoledon Towers, Southampton.

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WANTED, by a Gentleman who is directing his own garden work, a thoroughly practical and experienced MAN who understands all glass work, grapes, melons, peaches, etc., and is willing to make himself generally useful Inside and Out. A good Foreman would suit; but must be able to give references (personal if necessary) as to his ability. It is only a small place but a considerable quantity of glass-houses, and a second man is kept. Apply by letter, stating age and all particulars to The Grove, Carisbrooke, Isle of Wight.

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WANTED YOUNG IMPROVER (Outside), wages 15s., and room. Apply Mr. CHALK, The Gardens, Glanmawddach, Dolgelly, N. Wales.

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For APRIL 11, 1908.

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KELWAY & SON,
The Royal Horticulturists,
LANGPORT, SOMERSET.

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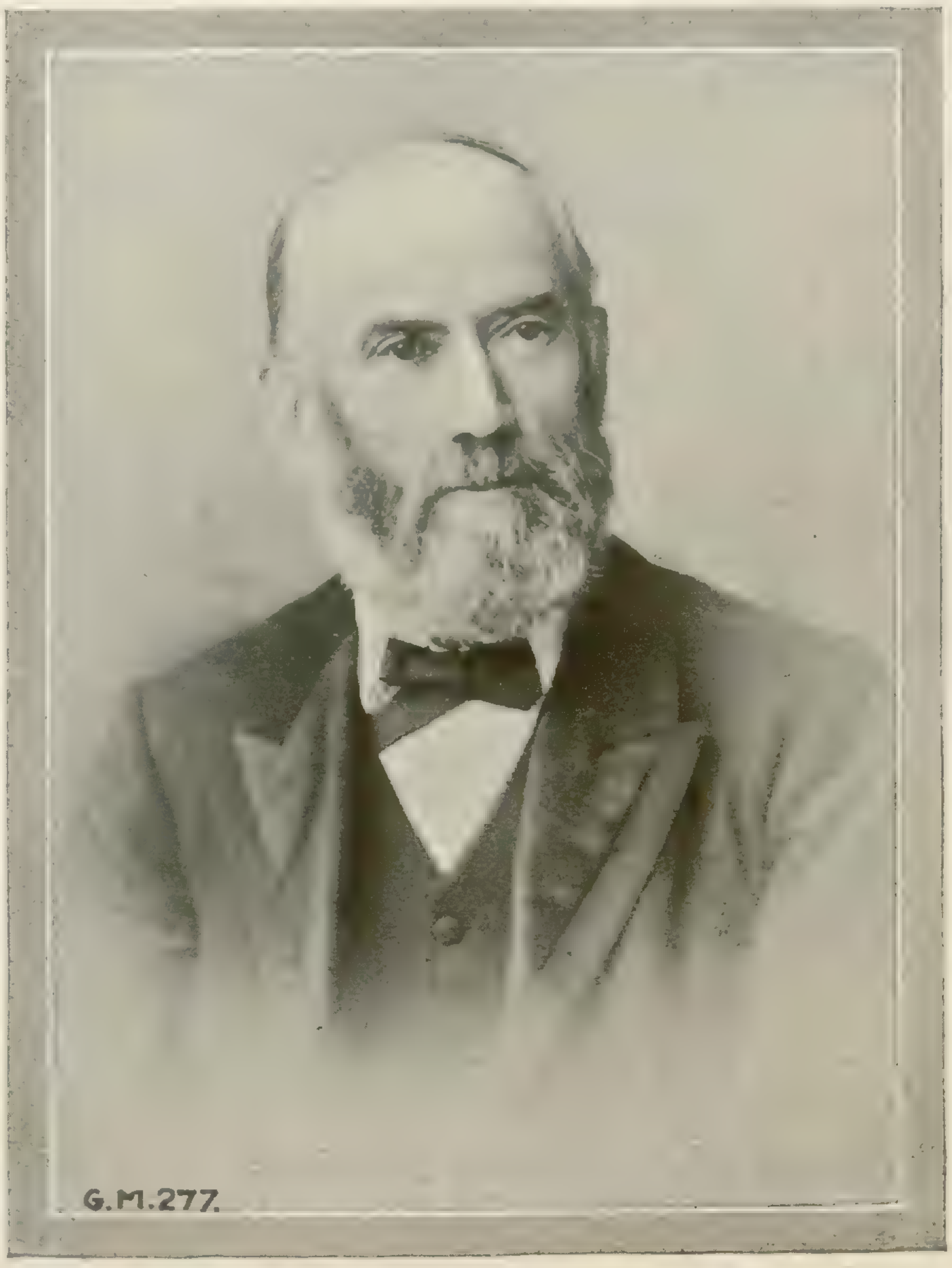
THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Protection of Fruit Trees.



G.M. 277.

MR. ALEXANDER DEAN, V.M.H.

Considering the extreme variability of the English climate and the immense amount of damage that in most years is done in fruit gardens and orchards by spring frosts, it is somewhat surprising the question of protecting fruit trees during the earlier stages of their crop should not have received attention more in accordance with its importance than has yet been the case. There is no difference in opinion as to the advisability of protecting peach and nectarine trees during the period in which the reproductive organs and the young fruits are liable to injury, and it is quite common at this season of the year to see them enjoying the shelter of netting or tiffany or some other suitable material. But when we turn to apricots, pears, and plums, we find them in by far the majority of gardens left to battle with the elements, although protective measures are really not less necessary than in the case of the other two fruits mentioned. Apricot, pear, and plum trees are equally as susceptible to injury from frost during the flowering stage and for some time afterwards, and their fruits are of the highest importance in the economy of the household. Some of our readers may perhaps be disposed to regard pears and plums as more useful than peaches and nectarines, but for our present purpose there is no occasion to institute comparisons between the several kinds. It is sufficient to know that supplies of all are a necessity, and that the value of crops of choice pears and plums is more than sufficient to balance the cost of protective materials and the labour inseparable from their use. We would therefore strongly advise that trees of these two fruits trained to walls, should be protected in precisely the manner as peaches and nectarines placed under similar conditions. An ideal system of protecting wall trees is a glass coping twenty-four or thirty inches in width, with tiffany or fish netting suspended from the lower edge. If tiffany is used, a wire should be fixed along the lower edge of the coping, and a second wire at a distance of about twelve inches from the surface of the border. With this arrangement and large hooks along the ends of the tiffany curtains it will be quite easy to partly uncover the trees during the day and cover them at night. The hooks will, of course, slide easily along the wires, and the tiffany can be put up and taken down with less trouble than when rings are used. Fish nets and tiffany suspended from immediately under the wall coping and kept at a distance of about twelve inches from the surface thereof afford most efficient protection, and as they are comparatively inexpensive they have much to recommend them. The protection of trees occupying positions in the open quarters is a much more difficult matter, but notwithstanding this fact, much might be done in the protection of bush and pyramidal trees not exceeding five or six feet in height. With the aid of a few poles of a suitable height and a strip of tiffany or fish netting, a tree can be so enclosed that frosts of quite exceptional severity will alone do any material damage. It is not beyond the power of the cultivator to protect trees growing in the open that exceed the heights mentioned; but a quite different method must be adopted. Textile fabrics and poles have to be abandoned, and fires in metal pots brought into requisition. In America it has long been the practice when a sharp frost is expected during the flowering season to light fires at different points in the orchards, and to burn materials that will create sufficient smoke to more or less envelop the trees, and thereby check the radiation that is so active under a cloudless sky. It has been long known that the results have fully justified the practice, but this method of fruit protection was not put to a practical test in this country until within a quite recent period. Two or three of the more advanced fruit growers in Worcestershire tried the effect of "smudges" in protecting the embryo crop of orchard fruits from injury by frost, and the results obtained were such as to convince them of the value of smoke as a protective medium. In carrying out the trials metal pots, provided with cross handles and movable lids, were placed at certain distances apart on the windward side of the orchard, and a substance remarkable for the density of the volume of smoke it gives off placed in them. The pots were placed under the charge of a man whose duty it was to closely watch the weather and ignite the fumigant immediately there were signs of frost. It was found that not only did the smoke check radiation, but raised the temperature of the air about the trees within a short time of the fires being lighted, and thus kept the blossom and young fruits safe. This method of protection necessarily involves some expense and trouble, but the cost was found to be very small as compared with the value of the fruit obtained from the protected orchards. In the case of a small orchard it would not pay to employ a night watchman, but this would hardly be necessary, as an electrical thermometer could be so fixed as to give the necessary alarm on any material fall in the temperature, and the lighting of the fires in a few pots can be accomplished in a very short time. The possibilities of this method of protection appear to be such as to warrant further trials, both in private orchards and commercial fruit plantations.

Mr. Alexander Dean, V.M.H., is a striking personality in the horticultural world, and as writer, raiser, lecturer, and judge he is very widely known. He is the younger of three very capable brothers, and while Mr. William and Mr. Richard Dean devoted their attention largely to flowers, Mr. A. Dean has given more attention to vegetables and fruits, and has done more perhaps than anyone living in advocating an extended cultivation and exhibition of the former. Mr. A. Dean raised many good potatoes when at Bedfont, and of these the best known now is The Dean. He has long been a prominent member of the Royal Horticultural Society's Fruit and Vegetable Committee, and, with Mr. E. Beckett, V.M.H., he started the movement that led up to the Vegetable Exhibition and Conference held at Chiswick in 1903. In the same year, Mr. A. Dean initiated a Gardeners' Dinner, and this was by far the most successful function of its kind ever held. It took place at the Holborn Restaurant, in the King's Hall, on September 29, 1903, on the evening of the first day of the last and great Fruit and Vegetable Show at Chiswick already referred to; Mr. Dean acted as secretary to the movement, and there were about five hundred gardeners and garden lovers present at the dinner. As a lecturer and instructor in horticulture under the Surrey County Council Mr. Dean has taken a prominent part in the advancement of horticultural education, while as a judge of vegetables and fruits he has few equals. Of sturdy, fearless, and independent character, Mr. Dean has been most emphatic in declaring his opinions on matters horticultural in the horticultural press, and this has led to many a fierce fight, through which the redoubtable "A. D." has usually emerged triumphant, and never conquered. The horticultural charities and gardeners' associations have no more earnest advocate than Mr. A. Dean. A few years ago he was awarded the Victorian Medal of Honour in Horticulture, an honour well deserved. Mr. Dean now resides at Kingston-on-Thames, where his strenuous advocacy of window and flower garden competitions has led to a material improvement in the appearance of the town. Though past the allotted span of life, Mr. A. Dean is as keen and vigorous as many men twenty years younger, and we hope that the future holds yet many more years of usefulness for him.

Some Notable Norwich Gardens.—In accordance with previous announcements we shall give in the issues of the 11th and 18th inst., a fully illustrated account of some of the more noteworthy gardens in and around the City of Norwich. The gardens that will be described and illustrated will include those of Ashwellthorpe Hall, Blickling Hall, Boyland Hall, Crown Point, Dunstan Hall, Gunton Park, Oakland House, Shottesham Park, Town Close House, and Westwick Hall.

Poison and Pharmacy Bill.—The Joint Committee of the Lords and Commons, to whom this Bill has been referred, held its first public meeting on Tuesday, when several witnesses were examined. With a view to facilitate the sale and purchase of weed-killers, sheep dips, and other poisonous substances used in agriculture and horticulture, Clause 2 of the Bill empowers local authorities to license persons other than chemists to sell such articles. Mr. T. H. Middleton, an assistant secretary of the Board of Agriculture, who was the first witness examined, stated that the view of the Board was that there should be no monopoly in the sale of such poisonous substances as weed-killers and sheep dips, and the present restrictions should be relaxed. The Board agreed that every possible precaution should be taken to avoid the mistakes which often involved death, but these mistakes were, in the opinion of the Board, not so much due to the class of persons who sold them as to the manner in which they were put up. Therefore, the view of the Board was that the regulations as to the form in which these substances were packed should be made very stringent. Mr. T. W. Russell, M.P., in the course of his evidence, strongly urged the inclusion of Ireland within the scope of the Bill.

Centenary of the Société Royale de l'Agriculture et de Botanique de Gand.—The following is the official programme of the several functions associated with the celebration of the centenary of the Royal Agricultural and Botanical Society of Ghent. Friday, April 24, reception of the Jury at the Casino at 9 a.m.; lunch at 2 p.m.; Botanical conference at 5 p.m.; gala performance at the Theatre Royal, organised by the Society "l'Avenir Horticole" of Ghent, 8 p.m. Saturday, April 25, official opening of the international horticultural exhibition, 11 a.m.; visit of the King of the Belgians and Royal Family; reception and fête by the municipal authorities of Ghent at the Hotel de Ville at 8 p.m. Sunday, April 26, official inauguration in the Place du Comte de Flandre of the memorial to the Comte de Kerchove de Denterghem at 11 a.m.; market flower show in the Place d'Armes at noon; raoût offered to the members of the Jury by the Chambre Syndicale of Belgian Horticulturists at the Bourse de Commerce, at 1 p.m.; and banquet in the saloons of the Theatre Royal at 5 p.m. Generous as have been the Belgian horticulturists on the occasion of the Ghent quinquennials they give promise of surpassing themselves on this occasion, and strangely constituted must be those of their guests who do not return home immensely gratified by the splendid hospitality shown them.

History of the Cultivated Cabbage.—At the afternoon meeting of the Royal Horticultural Society on Tuesday last Professor G. Henslow, V.M.H., gave an interesting lecture on the origin of the cultivated cabbage. He traced the history of the cabbage from the time of Cato, 200 B.C., to the present day, and, with the aid of lantern slides, showed the various changes that the cabbage has undergone during the past twenty centuries. Unfortunately, a considerable proportion of the slides were less clear than could have been desired, and the objects thrown on the screen by the aid of these could not be very well seen from distant parts of the room.

Diseased Potatoes. — Two diseases, hitherto unknown in England, affecting potatoes are reported upon in the Royal Agricultural Society's "Journal." Mr. Carruthers, the consulting botanist, states that some tubers had been stored in a somewhat moist place. In a short time there appeared patches of a dark mould, composed of short olive-green bristles. The tissues of the potatoes underneath these patches were brownish coloured. The fungus was found to be Stysanus Stemonitis Corda. This has been hitherto considered as growing only on dead organic matter, but the experiments recently conducted at the German Biological Station at Dahlem have proved that the fungus produces rot in potatoes, which spreads from tuber to tuber when stored in pits. It is also reported from America that the brown disease in potato is caused by this fungus. The spores have readily germinated in the laboratory on healthy tubers which were soon covered with the dark mould. Well-ventilated pits will greatly hinder the growth of this fungus. The other disease manifests itself in raised spots of varying size on the surface of the tuber. At first the epidermis covers them, but by and by the skin bursts and exhibits an olive-green powder, giving to the potato a scurfy appearance. The powder under the microscope is found to be the spore balls of the slime fungus Spongospora Solani Brunch. These balls form irregular roundish or elongated hollow bodies, having somewhat the appearance of a minute sponge, hence the name given to the fungus. The disease was first observed by Brunchhorst, in Holland, in 1886, and has been detected thereafter in several European countries. It has been noticed and has been described by Professor Johnson, of Dublin, in 1906. Though the disease and its cause are known, there has yet to be discovered the manner in which the fungus obtains entrance into the tuber and develops there. Experiments instituted for this purpose are being prosecuted.

The Ghent Jury.—The jury appointed to make the awards at the centenary exhibition of the "Société Royale de l'Agriculture et de Botanique de Gand" will consist of nearly 250 members, and will include representative horticulturists from Great Britain, Germany, America, Austria, Belgium, Brazil, Denmark, Egypt, Spain, France, Holland, Italy, Grand Duchy of Luxembourg, Russia, Sweden, and Switzerland. The British members of the jury are Lord Redesdale, Major Holford, Lt.-Col. D. Prain, and Messrs. James Backhouse, Thomas Bevan, H. G. Cove, C. H. Curtis, Herbert Cutbush, De Barry Crawshay, Findlay, James Gutteridge, R. W. Ker, Stuart Low, W. H Massie, J. McMeekin, F. W. Moore, J. S. Moss, George Nicholson, J. O'Brien, C. E. Pearson, R. H. Pearson, H. T. Pitt, John Robson, Thomas Rochford, R. A. Rolfe, F. Sander, H. J. Veitch, W. Watson, John Weathers, and Brian Wynne.

The Horticultural College, Swanley.—From the recently issued report we learn that the progress reported at the close of 1906 in the various departments was well maintained, and several improvements carried out during 1906. The chief feature of the year is said to have been the establishment of the course of natural history, which has for its object the training of third year students who have passed the ordinary gardening course at the college and wish to increase their knowledge of natural history subjects in order to qualify as teachers of gardening and Nature study. There is a growing demand for teachers so equipped throughout the country which, it is hoped, this course may do something to meet. A new laboratory and preparation room have been fitted up, and these form a valuable and much-needed improvement in the accommodation for the staff and students in their scientific work.

Sandringham Flower Show will, by permission of His Majesty the King, be held on Wednesday, July 22, in Sandringham Park. The exhibition is held under the auspices of the Sandringham Estate Cottage Horticultural Association, and the King and Queen offer prizes for the best-kept cottages and best cultivated gardens on the estate. On show day the gardens, houses, stables, and kennels will be open to the public.

Pear Blister Mite.—Referring to this minute pest (Phytoptus pyri) the "Journal of the Board of Agriculture" declares that there is not much danger of future infection from any mites which may fall with dead leaves. The mites are very small and have limited powers of movement and even if they survived would be unlikely to get back to the trees. The winter is usually passed in the buds. Hand-picking the leaves that are attacked may be practised in the summer, and the trees should also be sprayed in spring with paraffin emulsion and liver of sulphur. Much good may be done by spraying in winter with paraffin emulsion, care being taken that the buds are reached with the spray.

New Fernery at the Edinburgh Botanic Gardens.—In the course of the next few weeks a fine new fernery will be opened to the public in the Edinburgh Botanic Gardens. The structure has been constructed by Messrs. Mackenzie and Moncur, at a cost of £2,400. It is 70ft. long, 57ft. wide, and 16ft. high, with a dome 25ft. high at one end, which gives access to the Nepenthes House. The house will be devoted to tropical ferns, all planted out; the greater part of the plants will be set out in a rockery composed of red sandstone. Two other houses, each 50ft. long, form a part of the new range, and one of these is for temperate ferns, and the other for heaths. Considerable improvements are also being made in the Rock Garden where Pudding-stone, from Callander, is being extensively used. A new rock garden along the Inverleith Row end of the gardens is also another addition and improvement.

Luminosity in Plants.—In a paper read before the Botanical Society in Edinburgh recently, Miss Bertha Chandler, M.A., pointed out that potatoes in a state of decomposition occasionally give off light, but, as a rule, luminosity is confined to the lower plants, such as the fungi, notably the Agarics. The luminosity of decaying wood was attributed to fungi, and it was also shown that decaying leaves were sometimes luminous.

Nitro-bacteria and Sweet Peas.—Dr. J. Howard-Jones, M.D., D.Sc., medical officer of health at Newport, writes: The subject of the inoculation of sweet peas and other leguminous seeds and plants with nitrogen-fixing bacteria is much discussed at present. It might, therefore, be interesting to your readers to know the results of experiments made locally last year. I obtained material for making cultures of the various varieties of these organisms from Professors Bottomley, King's College, and Kellerman, U.S.A. Department of Agriculture, Washington, and treated sweet peas and scarlet runners at Alltyryn Hospital garden with excellent results. The show of sweet peas was magnificent. The inoculated plants produced a larger average number of blossoms per spike and peas per pod than the "control" plants grown under ordinary conditions, whilst the yield of the inoculated French beans was, according to the gardener's statement, more than 25 per cent. greater than that of the untreated plants.

BEGONIA LADY CROMER.

Messrs. T. S. Ware, Lim., Feltham, are fortunate in having Mr. Pope at the head of their begonia department. Mr. Pope was formerly with Messrs. J. Laing and Sons, but for very many years he has now had full charge of Messrs. Ware's begonias, growing these beautiful flowers at Bexley, where he has numerous glass houses and a large piece of suitable land. A very large space would be needed to even enumerate the fine double and single begonias Mr. Pope has raised, but those of our readers who have visited the Temple Show during recent years have had ample evidence of his skill.

Three double varieties that attracted a great deal of attention at the Temple Show of May last, and which we may expect to see finely shown next month, are Rhoda Pope, William Marshall, and Lady Cromer, each of which gained an Award of Merit. Rhoda Pope is a magnificent soft pink begonia, that has double flowers of wonderful size and substance. It has the appearance of a grand, fully-opened rose, and its petals are of great breadth and charmingly rounded and finished. William Marshall is a splendid double variety, of good size and grand habit. It has vivid and very clear orange-scarlet flowers, with the broad petals exquisitely crimped and fringed. One of the most handsome of begonias.

Lady Cromer is a very large and beautiful double variety, that has broad, but not very deep, flowers. It has some general resemblance to a pæony, though we have never seen a pæony so beautiful. The colour is lovely bright pearl pink, an exquisite shade, with salmon tinting at the base. This is a delightful variety, and was generally regarded as the best begonia at the Temple Show of 1907. The present illustration gives a good idea of the form of the flowers of this variety, but fails to convey the beauty of its exquisite colouring.

DOUBLE BEGONIA LADY CROMER.
Flowers bright pearl-pink, shaded with salmon.

LATE-KEEPING DESSERT APPLES.

In agreement with Mr. Markham's wish, I am pleased to give a few notes respecting the best late-keeping dessert apples at The Hendre. Of these Sturmer Pippin is the longest keeper, and one of the most prolific bearers either grown as a bush or standard, and it makes a splendidly shaped tree in either form. The necessity of leaving its fruit late in the season before gathering it, and the fact that it is best flavoured when grown in a warm situation are well known. That its flavour is excellent here may be gathered from the fact that I have been asked by some of my employer's guests how we manage to keep Cox's Orange Pippin so well!

Lord Hindlip is another of our best-keeping highly-flavoured apples, of which, however, we have only three trees, and these are bushes not quite fully developed. Its fruit is handsome, conical in shape, and of suitable dessert size; probably this variety will, when better known, become very popular. Scarlet Nonpareil is not here a regularly heavy cropper, though it well deserves its place. In some seasons it carries heavy crops. It is naturally a weak grower, but it makes a clean, symmetrical bush.

Allington Pippin is a deservedly popular variety, and is one of the most constant bearers and most handsome varieties we possess. We have six healthy bushes of it, and they invariably carry a more or less good crop of fruit. It keeps longer than it is usually believed to do, and improves in flavour by keeping, and until this was pointed out to us we used it too early in the season.. It has been said that I overestimate its value, be this as it may, my opinion has been formed from our experience with it. One of our most useful late-keeping varieties is Brownlees Russet; this makes a handsome, moderately strong bush, and rarely fails to bear good crops of fruit which keep well throughout February, and we have still (March 25) some good dishes of it in sound condition.

The well known old variety Reinette de Canada also succeeds remarkably well here, either as a bush or standard, but neither its trees or fruit can be classed as handsome; by grading its fruit, however, valuable examples both for dessert and the kitchen can be procured. Two other late dessert apples that do well in this district though we do not grow them, are Court Pendu Plat and Fearn's Pippin.

It may interest Mr. Markham and others to hear that Lord Burghley, which is one of his best late apples, is almost a failure here, we seldom secure a good dish, though we have three trees. Northern Greening, which succeeds so well with Mr. Markham, is also unsatisfactory here; we have seven pyramid trees of it. In Sussex, as a standard growing upon heavy ground similar to ours, I have seen this old variety very heavily laden with capital fruits.

Apart from the good long-keeping culinary kinds previously noted, Belle du Pontoise is a handsome free cropper, of excellent quality, that may be classed amongst the best that we grow. Alfriston and Betty Geeson are also highly valued here.

With reference to Mr. Markham's remarks about stocks, it may be mentioned that they have considerable effect upon varieties grown here. For example, we have six bush trees of Gascoigne's Scarlet Seedling, some of them worked upon the crab, others on the paradise, and the difference in the trees is remarkable. Those on the crab are strong in growth, and had to be root pruned to induce fruitfulness, the fruits being large, handsome, but not highly coloured. On the other hand, those on the paradise are moderate growers, prolific without being root pruned, while their fruit is of medium size, and very highly coloured. T. Coomber.

The Hendre Gardens.

Sowing Lawn Grass Seed.—Where this is contemplated, either in forming new lawns or renovating patchy old ones, it should now be attended to. If the ground has been recently dug great care must be exercised in having it well firmed down and level all over, or when settling takes place an uneven surface will ensue. It should be well rammed with large wooden rammers, or rolled with a heavy roller, levelled, raked, and again rolled to obtain an absolutely smooth surface. Choose a calm day, and sow the seeds broadcast and evenly all over, lightly rake in and give another rolling: never attempt sowing when wind is at all strong, as an even distribution of seeds would then be quite impossible. Seed may be sown up to the end of April, but it is not desirable to sow later than that.—E. F. Hazleton.

POTATOES AND THEIR CULTURE.

Almost every person who has a garden, large or small, deems it incumbent upon him to grow part, or all, of his supply of potatoes. This leads to their culture being very frequently attempted under conditions and on soils totally unsuited for good produce. A glance at the market reports will readily show the varying qualities produced by certain soils, the nearest approach to perfection being reached in the red soil of the Dunbar district, and then we get a falling rate through "Kents," "Lincolns," etc., down to the "Blacklands" of the Fens, all this proving that soil is the most important factor in the production of good potatoes.

As gardens in the same district often vary greatly in this matter of soil, the difference being due to the length of time the garden has been under cultivation and the treatment it has had during that period, and not often to the advantage of the highly cultivated plot, our first consideration must be given to the soil. My own experience is that virgin soil, especially that which has been common land, and preferably where furze (gorse) has grown, freely produces during its first years of cultivation, not only heavy crops, but crops also of the highest quality. Such soil is usually what we term "sweet," and if properly broken up, it is friable, and these two factors, viz., friability and sweetness, are necessary to grow potatoes of high quality. On this we should base our cultural operations according to the plots with which we have to deal.

In dealing with a soil which has been soured by a too liberal use of animal manure a good liming is essential, the lime to be slaked in small heaps on the surface and then spread at the rate of about one ton to the acre, and mixed with the soil by digging. Liming both sweetens the soil and adds to its friability, and should be carried out on soil deficient in lime about once in five years. Animal manure should be applied in a thoroughly decayed and easily pulverised condition; clods of fresh or very slightly decayed manure are inimical to the growth of the plants. Concentrated or artificial manures should be used with care, and only after making one's self acquainted with the nature and deficiencies of the soil. For a general artificial manure applicable to most soils the Board of Agriculture recommends one cwt. each of sulphate of ammonia and sulphate of potash and 2cwt. of superphosphate to the acre, in conjunction with some animal manure.

Given a choice of soil I should choose a sandy or moderately light loam, and anything in the way of additions to the soil which will go to produce a deep staple of that nature, always bearing in mind the value of "sweetness."

Choice of Seed Potatoes.

Next we have to consider the question of seed potatoes for planting, and I may say here that well-authenticated trials have given such increased results when the seed has been obtained from a distance, say, Scotch or Irish seed for English gardens, that the mere cost of carriage of such seed, as compared with results is not worth considering. The reason for this is not quite apparent, but the fact remains, and I strongly advise all growers to get new seed from a reliable source and from soil of a different nature each year. The size of the seed potatoes is not important, providing whole sets are not less than 2oz. in weight, and cut sets approximately the same. Cut sets should be prepared a day or two before planting, and the cut surfaces dipped in slaked lime, as this will dry up the wound and prevent the set from rotting prematurely.

I do not propose in this article to recommend special varieties, for the reason that varieties are so numerous, and some which do really well in some districts are failures in others, both in the matter of quality and quantity. The best advice one can give in this connection is to gain some local knowledge and to work upon it. Certain varieties will be largely grown in one's own particular district, and these are the ones to select as the main stay, though, of course, there can be no objection to the trial of a new variety now and then. I will only say that when once a variety has been found to be of poor quality in a normal season that variety should be discarded, no matter how good it may be as a cropper.

Planting.

Planting should take place from the end of March and throughout April and even in May. The great thing is to have the ground in a perfect working condition at the time, and haste to plant is often followed by disastrous results if the soil is in the least degree pasty. It is far better to wait until the conditions are right, so that the soil will not stick to the boots when walking over it. The depth to plant may vary from about 5in. to 7in., the greater depth being suited for light soils and for strong-growing varieties. As regards distance apart for the seed, this should be governed by the strength and height of the haulm, and may vary from 1ft. to 3ft. in the row, and the rows at sufficient distance apart to allow moulding up to take place without exposing the roots.

Where the sets can have the advantage of being laid out thinly and exposed to light several weeks before planting, the new shoots become strong and robust; the method is ideal, but not always possible, and very good sets may be got from heaps of seed potatoes, providing these have been keep sufficiently cool during the winter months, and up to the time of planting.

Assuming that the ground has been dug and manured in the autumn, the best method for garden culture, if it has become at all solidified, will be to fork it through deeply before planting. In sandy soils one may plant with a dibber and draw the soil into the holes by dragging the foot along the row, but this kind of planting is not satisfactory in the majority of soils, and the best method for general application is to throw out a trench with the spade and cover in again either with a spade or a heavy draw hoe. J. C. Tallack.

(To be continued.)

Cockchafer Grubs.—An old country woman once declared that Adam deserved no credit for naming the pig, as anybody would know what to call such an animal; even so no gardener deserves credit for recognising the grub of the cockchafer as a foe, for its appearance would condemn it. But it has a nasty knack of not putting in an appearance until coercion is resorted to, though all the while it may be working overtime under the ground. If the young cabbages or any similar plants at this season are retrogressing instead of progressing it is more than likely that this unwholesome pest is at the root of the trouble. To make sure, set a sharp boy to work with a hand-fork and a tin of paraffin round suspected plants. The fork is to stir the soil to about two or three inches deep; the paraffin is to take the captures—the big, fat, greenish grubs.—E. J. K.

SEDUMS.

The great range and interest of the sedums compels at least some definite notice from all gardeners and garden lovers who are fond of rock gardening. In addition to forming a fascinating study, they are among the most useful of all alpine and rock plants. One may find among them gems for all positions in the rock garden, and the majority are of such easy culture, and provide such splendid masses of flower and foliage, that they must of necessity be given a place.

Sedums are of special value for beautifying exposed positions, and they give splendid effects by judicious massing with the saxifrages, thymes, rock cistus, heaths, aubrietias, alyssums, and other kindred plants.

The taller, erect-growing sedums are especially adapted for making masses on the outstanding bluffs and the more exposed ledges. Such forms as S. maximum, with its ruddy leaves and whitish-red blossoms, and its variety, S. purpureum, with its purple-hued foliage and masses of flower, are well adapted for such positions. Equally suitable is S. Maximowiczi, a bright showy yellow, with light green foliage, which contrasts effectively with the deep hues of the preceding.

If a fair amount of soil is present then the showy S. spectabile, which has long been a favourite garden plant, and its newer variety, S. s. atro-purpureum, a rich crimson-hued form, may be used in conjunction with the others, and they will be found to provide a distinctly pleasing feature.

But I believe I am justified in saying that the low-growing and trailing sedums are the most popular, and the most charming. On an old rockery great masses of the snowy-blossomed S. album, the red foliaged and golden flowered S. obtusatum, the greeny-bronze S. sexangulare, and its golden blossoms, produce a charming effect. The pink and green of S. Ewersi, to say nothing of the great trailing masses of S. spurium or S. stoloniferum, with its crowds of pink flower heads, and its white and deep crimson varieties, which are gloriously effective, give a glowing picture of roving beauty during the summer months. These sedums one should not omit, and a further selection would include S. Kamschaticum, with its deep green foliage and orange-coloured blossoms; its pretty form S. K. fol. var.; S. cæruleum, the pretty annual blue species, with bronzy-green foliage; S. neglectum, the lighter growing variety of S. album; S. telephoides, a strong trailer, with glaucous leaves, and pinkish-purple flowers; S. rupestre, a strong showy yellow species; and the useful S. ternatum, which, like S. cæruleum, is an annual, but differing in the rich bronze leaves and whitish flowers.

Other notable sedums include the pretty pink American S. pulchellum; the dwarf S. glaucum, a grey lichen-hued species, and its golden variety, aureum; S. pubescens, a showy form, with deep green foliage and crimson flowers; and S. acre, the old yellow stonecrop, and S. dasyphyllum, a bluish-leaved species with white flowers.

In my mind, the necessity of growing the sedums, so as to bring out the richest hues their foliage is capable of, is the greatest point in the culture of these useful plants. To accomplish this in the highest degree one requires an open, windswept position, which receives the full play of the sunlight, and of every gale that blows, and a poor gravelly soil, in which the creeping stems may readily root, but which will at the same time ensure that close, sturdy habit of growth which is so admired in plants of this character. Thus one obtains perfection in the colouring of the sedums; the strong winds will keep the growths hard, and close down on the rock face, and the poor soil and sunshine combined will work wonders in the hues of the foliage.

Here you will get S. obtusatum a rich deep ruby-red, which would be green in a shady or moist spot; S. album, S. ternatum, S. sexangulare, and others will take on those lovely bronzy shades which blend so admirably with the grey weather-scarred rocks. The glaucous species will be brightened and rendered more distinct, while S. stoloniferum, and its variety rubrum, will deck themselves out in deep reddish hues, that of rubrum being almost purple in a suitable position. It will be found that these lowly sedums, which often look unkempt and straggling when they are grown in shady or moist positions, are quite different plants when they are out on the rock face, scorched by sun, and swept by winds. Then they are in their element, and it is then that the flower lover can understand and see their marvellous beauties, it is then that they can be appraised at their full value.

P. S. Hayward.

SEDUM CÆRULEUM IN THE EDINBURGH BOTANIC GARDENS. [Photo: D. S. Fish.

A low-growing annual species, with pale blue flowers.

St. Dunstan's, Regent's Park, the late Lord Aldenham's London villa, has been acquired by Lord Londesborough. It occupies a position near the Royal Botanic Gardens, and, like many other of the fine residences in the park, it has an ample garden.

GLADIOLI.

The stately and beautiful gladioli are steadily growing in favour, and each year one finds them more extensively cultivated in both public and private gardens, although in the former they do not appear to have yet found that favour their effectiveness would seem to warrant. Although gladioli may be had in flower in July if the early-flowering strains are planted, it is for late summer and autumn flowering we most appreciate them. The present season has been so cold and wet that it is necessary to point out the need for caution in planting. March is not too early, and May is not too late for planting gladioli, provided the conditions are suitable.

In this year of grace, with its unusually heavy March rainfall, those who delay planting are more likely to secure the best results. From now onward, soil and weather permitting, gladioli corms should be planted, either in beds where a low-growing subject is used as a carpeting, or in masses in the flower border, or in drifts in the front of a shrubbery border. But wherever gladioli are planted the soil should be in good condition, and if it was deeply worked and freely manured with decayed manure last autumn, and left rough all the winter, it will be in fine condition to give good results. Gladioli have no objection to fairly stiff soil, providing this is well drained. On light sandy soils there is need for mulching and watering during dry seasons, whereas on the more substantial medium surface hoeing is all that will be necessary, although mulching may be given.

The depth and distance apart at which to plant gladioli corms must depend on the character of the soil and the strength and vigour of the corms and varieties. As a general principle we may allow twelve inches each way between the corms, and a depth of from four to six inches. Some folks advise planting the corms five or six inches apart in rows one foot apart, but while I am well aware that gladioli root deeply rather than broadly, thick planting is not conducive to good effects. It is a common practice to surround each corm with sand at planting time, placing some in the hole before inserting the corm, and some over it before returning the soil. This is very well in heavy soils, and in any case it serves to encourage root action, but it is by no means the matter of necessity so many would have us believe.

After planting there is little to be done beyond weeding and hoeing until the spikes appear in July and August, but then, if the fullest results are to be secured, it is important that every spike receives the support of a neat stake. With a little care it is quite possible to stake every spike securely, giving it one firm tie, without permitting the stakes to be unpleasantly obvious. All too often we have thunderstorms in late summer, and if the gladioli spikes are not staked they are liable to be snapped off by the storm.

Although every credit must be given to Herr Max Leichtlin, Mons. Lemoine, and others for their efforts in the improvement of gladioli, and the creation of new forms, the greatest credit belongs to Messrs. Kelway and Son, Langport, Somerset, who for about half a century have worked wonders with these flowers and raised them to their present high position in the garden. This firm has given us vigorous plants, stately spikes, substantial flowers, and a wonderful variety of colouring, and, fortunately, it has been found that these gladioli are amenable to cultivation in town gardens, though, possibly, they gradually become exhausted under such trying conditions; this, however, need not prevent their culture in towns, providing the cheaper or unnamed varieties are grown. It is not necessary here to give a long list of names of the finest of the varieties, because so much depends on personal taste, but I have been much struck by the great improvements made in late years in the direction of yellow colouring. The present illustration shows a variety named Cloth of Gold that marks a great advance in clear yellow, and it was exhibited last autumn by the Langport firm. Antilco, Bullion, Canary Bird, Davy, Demo, Floradora, Golden Sceptre, Mr. J. M. Skittery, Leader, very fine; Miss Zena Dare, Primrose, Alice Wood, Baron Goldstein, Lacæna, La Parisienne, Miss Warren, Ophir, Pepita, Spicillus, Felicite, and Richard Milner are all beautiful yellow varieties, but some of them are still rather expensive, though others are as cheap as good hyacinths.

C. B.

THE AFRICAN BLEEDING NUN.

But for its comparative tenderness, which compels its being cultivated under protection in all except the warmer parts of the three kingdoms, the African Bleeding Nun or Sowbread (Cyclamen africanum) would be highly valued by all who care for the smaller hardy flowers, so beautiful is it in every way, either when in bloom or when its exquisitely marbled leaves are in their perfect beauty in the depth of winter.

It is, justly, I believe, classed by Mr. J. G. Baker with the beautiful C. neapolitanum, that eminent authority considering it only a geographical form of that valuable species, but in its beauty it appeals to us even more than that, the most reliable of all our hardy cyclamen.

Like C. neapolitanum, it is an autumn bloomer, opening its pretty white, or red-tinted flowers, each with a purple spot at the base, in September or October, these being followed by the leaves, which are not at their best until December, when they are simply exquisite, the greater size giving more beauty than those of the Naples cyclamen, seeing that the marbling is more conspicuous on the dark green ground colour. This will be understood when it is realised that the leaves are from six to eight inches in length and breadth, and that their rounded outline is prettily toothed, and the whole surface ornamented with white marbling on a glossy green ground. Nestling under a tree, a group of Cyclamen africanum is a picture in its season. Unfortunately its hardiness is not commensurate with its beauty, and it is prudent to give it a little protection in winter, either a covering of fern fronds well pegged down, some spruce or other evergreen branches, or a little straw, well secured to the ground, or (preferable to all) a handlight with a piece of matting over it in severe winters. The writer has experimented with it in the open without protection, and, while it might be safe in a moderate season, it was certain to succumb to an unusually inclement one, even in a sheltered corner beneath a tree. He cannot thus recommend it for any place where severe winters are experienced, without any protection. Plants can generally be secured in pots, but dry corms may be planted as soon as they can be obtained.

S. Arnott.

ANNUALS FOR THE GREENHOUSE.

In most gardens where the glass accommodation is limited, and a constant display of bloom has to be kept up in the greenhouse and conservatory, the gardener's resources are usually taxed to the utmost to obtain sufficient plants in bloom to meet requirements, particularly where cut flowers are in constant demand. There are, however, many annuals of easy culture which make charming subjects for this purpose; in fact, there are but few of the soft-wooded plants that may not be treated in this manner; cinerarias, cyclamen, calceolarias, primulas, and the like are all treated more or less as annuals, and in addition to these there are many others that may be grown from seeds in the same way, some blooming a short time after being sown, while others need some months to bring them to perfection.

Take the schizanthuses as an example: if these are raised in the autumn they will not bloom until the spring, while if raised in the summer the plants will bloom in a few weeks. There are, however, some kinds that are more tender, and require the assistance of a hotbed or other heated structure to induce the seed to germinate and grow freely. A few of these are enumerated below, but they by no means exhaust the list.

Lobelia tenuior.

This charming half-hardy annual makes a splendid plant for conservatory or greenhouse. It is of upright habit, having flower stems about a foot high, and sufficiently stout to carry the flowers erect without the aid of sticks. Seeds may be sown in batches during the spring and early summer if a constant supply is required for some time. When grown in the open and in the full sunlight the flowers are dark blue in colour, but in the shade they are of a lighter hue. Seeds sown in the early spring should be pricked off into five-inch or six-inch pots, about half a dozen plants in each. They should be grown on a shelf near the glass, or when the weather is sufficiently warm may be transferred to a cold frame, where, in the mild weather, the lights may be drawn off to keep the plants as sturdy as possible. If well supplied with nourishment when in bloom the plants will give a succession of flowers for a considerable time, and as they become shabby fresh ones may be introduced to keep up the supply.

Nemesias.

All the varieties of nemesias make charming subjects for the greenhouse and conservatory, and if batches are raised at intervals of about a month from early spring a constant supply of plants may be had in bloom through the summer months. The early batches will not even require a heated structure to induce the seeds to germinate, but where they are intended to bloom very early it will be necessary to bring the young plants forward in gentle heat. When the seedlings are large enough prick them off, five or six in a 32-sized pot, and grow them on in a light airy structure until they commence to bloom. During the summer the plants may be grown in the open, and introduced into the conservatory as they come into flower. A batch should also be grown in the open ground for the production of seeds, as these are much better saved from strongly grown plants. The flowers are of various colours; there are, however, several new forms, such as Orange Prince, Blue Gem, and the like, that are quite distinct, and where separate colours are required these are very desirable.

Petunias.

There is an almost endless variety of these, and for richness and diversity of colouring in their flowers, together with the length of time the plants remain in perfection when in bloom, they are great favourites for the greenhouse and conservatory, either in pots or baskets. To grow these well the seeds should be sown in gentle heat in spring, or they may be grown from cuttings if old plants have been preserved through the winter. Seedlings, however, are preferable, and bushy plants may be had in a short time if potted into six-inch pots, but those who are desirous of having large specimens must pot them on into those ten inches or twelve inches in diameter, and peg the shoots down to induce them to break more freely. When established in these, if liberally treated while growing, they will make large specimens in a short time. Smaller plants are more useful for the conservatory, and those grown in six-inch pots will be quite large enough. If a later batch is required a second sowing may be made in May to produce plants that will flower late in the autumn.

Browallia speciosa major.

This very pretty flowering plant makes a fine subject for the greenhouse or conservatory, as its bright blue flowers, which are produced on the tips of the slender growths, are very attractive. Moreover, as the plants are of such easy culture anyone possessing a heated pit or frame is able to raise a batch. For early flowering it is preferable to sow the seeds in the autumn, and grow the plants on the greenhouse shelf through the winter, when, if potted off in early spring, these will flower through the summer. Seeds may also be sown in heat in spring, and as soon as the plants are large enough to handle they must be pricked off into pans or shallow boxes, and placed over a gentle hotbed until about an inch high, when they ought to be potted, three in a six-inch pot. If well looked after these should give a succession of flowers until the cold weather sets in. Browallias like a light, rich soil, with a fair amount of warmth while growing, but when in bloom the temperature of an ordinary greenhouse suits them admirably.

Coleus thyrsoideus.

Though this plant may be readily propagated by cuttings, like other members of the same genus, it can also be raised freely from seeds. When well grown, the long tapering spikes of rich blue flowers are very attractive, especially through the dull winter months. Seeds sown in spring should be placed in gentle heat, and when the seedlings are large enough they must be potted in small pots and returned to a heated pit until established. When the pots are filled with roots give the plants a shift into those of five inches or six inches in diameter. As the weather becomes warmer they may be transferred to a cold frame for the summer, pinching them back once or twice to induce the plants to become more bushy. As the autumn approaches they should be removed to a warmer structure, where they will soon commence to send up their terminal flower spikes.

Torenias.

There are several torenias that are well worthy of a place in all gardens. Years ago one was accustomed to see the old Torenia asiatica exhibited in a collection of stove and greenhouse plants. Now, however, torenias are treated as annuals. Sown in heat in early spring, the seeds soon germinate, and in the course of a few weeks the seedlings are large enough for pricking off, which should be done as soon as the plants have made a couple of rough leaves. When about an inch high prick them out, three into a six-inch pot, in light, rich, sandy soil, and return the plants to a gentle hotbed, where they will make rapid growth. The points of the shoots should be removed when the plants are about two inches high, to induce them to break freely and make bushy specimens. If this operation is repeated two or three times, and the roots are liberally supplied with moisture, in the course of a few weeks they will be a mass of bloom. T. Fournieri grandiflora is one of the best, as the light blue flowers harmonise so beautifully with the deep purple blotches and yellow throat. T. Bailloni has yellow blotches and purple throat.

GLADIOLUS CLOTH OF GOLD.
Flowers citron-yellow, with rosy-yellow lower segment.

Exacum macranthum.

Though by no means a new plant, as it has been known to gardens for more than half a century, this is rarely seen, and certainly is not known so well as it deserves to be. There is no winter-flowering plant that is more attractive, and certainly none more worthy of a place in our stoves or warm greenhouses. The flowers, which are produced at the ends of the growths, are of a deep, rich, dark blue, about two inches in diameter, and form a peculiar contrast to the bright yellow stamens. In shape they much resemble the gentians, to which they are closely allied. Seeds should be sown in spring, in a light, peaty, sandy soil, and be placed on a hotbed. When the seedlings are large enough to handle they should be put into small pots, and returned to the hotbed, and when the soil in these becomes filled with roots place three in a six-inch pot, as by so doing nice bushy specimens may be produced in a short time. The plants should be grown in a heated pit throughout the summer, and they will commence to bloom in the autumn, continuing in flower through the winter.

H. C. Prinsep.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

THE WILD GARDEN—III.

Numbers of the stronger-growing herbaceous plants are well adapted to naturalisation, especially if the ground be well prepared and enriched before they are put out. The common crimson pæony, P. officinalis, is effective when planted in groups in the grass; the acanthus, with its giant arching leaves is always a noble object, and the Japanese anemone succeds well at the edges of woods. Arundo donax, a great reed fifteen feet or more in height, with blue-grey foliage, is a handsome subject, as is the pampas grass, and the somewhat similar, but more graceful, New Zealand reed, Arundo conspicua. The more vigorous species of the perennial aster, or Michaelmas daisy, are quite at home in the wild garden, and the bamboos, with their tapering shoots and feathery foliage, are always attractive. Some of the more robust of the campanulas will do well, such as C. latifolia, an English plant, C. rapunculoides, and others. Crambe cordifolia, with bold foliage and tall flower heads, composed of innumerable tiny white blossoms, is a striking plant, and the perennial delphiniums are valuable for their tall blue bloom spikes.

A CHARMING EFFECT PRODUCED BY BLUEBELLS IN THE QUEEN'S COTTAGE GROUNDS, KEW.

In a sheltered site the tall Eremurus robustus makes a noble picture, and the giant sea holly, Eryngium pandanifolium, with spined leaves six feet in length, and flower stems ten feet in height, is fine in contour, and has been grouped effectively in the wild garden in the south-west. Heracleum giganteum, the great cow parsnip, will quickly overcome all surrounding vegetation, and rear its huge white flower umbel to a height of ten feet above its handsome foliage.

Other good perennials are the globe flowers, trollius, for damp spots, day lilies (hemerocallis), Ænothera Lamarckiana, onopordon (the cotton thistle), Polygonum cuspidatum, and P. sachalinense; the great Oriental poppy (Papaver bracteatum), solidago or golden rod, tritomas, the mulleins or verbascums, yuccas, Ranunculus aconitifolius, Monarda didyma (the bergamot or bee balm), German irises, hypericums of the stronger sorts, Inula glandulosa, herbaceous spiræas, Ferula Linki, the perennial sunflowers (helianthus), while white foxgloves are unexcelled for wild garden planting, vistas of snowy spires thrown into strong relief by a verdant background forming a delightful picture.

The beauty of the wild garden may be much enhanced by the judicious planting of flowering shrubs and trees, some of which will add brightness to the landscape for eight months out of the twelve. The prunus family is particularly ornamental. P. Davidiana alba, and its pink form, often flower in January. The purple-leaved P. Pissardi bears its white blossoms in March, and P. triloba flore-pleno is a lovely little tree with rose-coloured flowers. P. amygdalus nana is a dwarf shrub with pink blooms, and many others of the race are very attractive. Amelanchier canadensis is a charming sight in the early spring, when its countless white flowers are contrasted with the amber-brown of the young foliage. The berberis also has many handsome species, such as B. Darwini and B. stenophylla, while B. Thunbergi turns crimson in the autumn. The white-flowered Choisya ternata is practically hardy, as is Olearia Haasti and several other species, such as O. macrodonta, O. nitida, and O. stellulata, can be grown in the warmer localities.

The cistuses are especially good shrubs for light soil, and the scarlet thorn, with its double variety, is well known to all. Eucryphia pinnatifolia is a beautiful tree bearing a profusion of large white flowers in August, and is fairly hardy, while Exochorda grandiflora, the pearl bush, with its white flowers, is an exceedingly attractive sight in the spring, and in the autumn the Venetian sumach, Rhus cotinus, is effective with its clouds of feathery purple. Pavia macrostachya is another good autumnal tree, bearing white, chestnut-like spikes of bloom in August. Cornus mas, the Cornelian cherry, is a pretty little tree bearing in February and March tiny yellow flowers on its leafless branches. Brooms are very valuable for light ground, the pale sulphur Cytisus præcox, the golden C. scoparius, and its crimson and yellow variety, C. Andreanus, with the white C. albus, being very decorative.

Several of the deciduous magnolias are available for wild garden planting, and the lilacs (syringa), the diervillas or weigelas, the yellow-flowered Forsythia suspensa and F. viridissima, Garrya elliptica, with its long, hanging catkins, Halesia tetraptera, the snowdrop tree, Xanthoceras sorbifolia, the shrubby spiræas, of which there are many most attractive species, Kerria japonica and its double form, Rhodotypos kerrioides, sometimes known as the white kerria, and the flowering currants (ribes) should all flourish where sites are chosen specially for them.

The graceful abandon of climbers adds much to the beauty of the landscape, and these plants should be largely used in the wild garden. There are few prettier sights than Clematis montana veiling a tree forty feet high with its ivory-white flowers at the close of May. C. balearica or calycina grows rampantly in the south-west, and commences to bear its white, purple-spotted flowers in January, while C. flammula, C. paniculata, and C. graveolens are also available. Most species of honeysuckle are at home in the woods, and Polygonum baldschuanicum is unrivalled for growing at the foot of an old fir, which in the summer it will smother with its large flesh-pink bloom clusters. Climbing roses of the more vigorous sorts will readily clamber into trees, and few prettier pictures can be imagined than an old apple tree whose head is shrouded by rose blossom. The white jasmine will also succeed under like circumstances, as will the wistaria in an open and sunny situation. Muehlenbeckia complexa is perfectly hardy in Devon and Cornwall, and will drape a cliff for a height of forty feet or more with its black stems and tiny rounded leaves, while in the vines we have foliage of the most ornamental description, which in many species, such as the noble Vitis Coignetiæ and V. Thunbergi, assumes a gorgeous autumnal colouring.

S. W. Fitzherbert.

Filberts and Cobs.—Where these are much appreciated it should be the growers aim to get the nuts as fine and large as circumstances will permit. In Kent and some of the southern counties the bushes are extensively grown, and yield, almost annually, excellent crops, which, from a financial point, are very profitable. The bushes are trained basin-shape, and are well pruned annually, from the middle of February and onwards, according to the quantity grown and the time the male catkins open. When pruning, keep the centres well open, spur back some of the stronger growths, and encourage a quantity of twiggy branches to produce plenty of tiny pink blooms. All suckers should be grubbed, and the land be kept free from weeds, etc. Do not over-feed with rich manure, otherwise the bushes will grow too strongly to be fruitful, and nuts like a sweet sandy loam, and a somewhat sheltered position. Young plants selected for new plantations should have a clean stem about 15 inches from the roots to the lower branches, and the individual shoots to form the future bush should be as equidistant as possible. When pruning, make the cuts so that the terminal shoots are produced from an outside bud. If this be practised annually, the bush will grow into the desired shape, and as it increases in size other branches may be allowed to grow so that, instead of five or six shoots, as at the commencement, there will be fully double that number by the time the bush is seven feet high.—H. Markham.

LETTUCES.

Throughout the year the lettuce stands pre-eminent as a salad plant, and during the summer months it is very largely used in almost every household. During hot weather it is very appetising, and, fortunately, this is the season of the year when it can be produced in plenty. The late winter and early spring months are the most difficult times in which to obtain it in anything like large quantities, unless skill and appliances in the way of pits and frames are used.

The earliest cutting of young lettuce is best produced by making a sowing in pans or boxes very early in the year, in a temperature of about 50 degrees, and the plants grown on sturdily near the roof glass, where the maximum amount of light can reach them. When they are large enough prick them out at about eight inches apart in a frame, in porous soil, over a mild hotbed, which is made principally of leaves, and trodden firmly. This retains a steady, lasting heat, conducive to forcing a firm desirable growth. Ventilation to the frame is only required to a limited extent during early growth, but a genial atmosphere may be kept up by the evaporation from the hotbed. By this method valuable small heads can be procured in March; when the plants have attained a usable size afford more air to the frame, and so prolong the crop.

G.M. 275.

VIEW IN WILD GARDEN, SOUTH LODGE, HORSHAM.

The selection of suitable varieties is an important factor in bringing about success or otherwise for the different seasons, and the frequent sowings that have to be made during the year. All the Year Round, Golden Ball, and Earliest of All are good varieties for this early sowing, and also for the next, which, under the same conditions as the last, should be made in February, and the plants grown steadily. When large enough they may be pricked out in a frame similar to the early plants, but without the aid of the hotbed. These will form a succession to the above if they are kept in a rather confined atmosphere until the plants are well established, when air may be more freely admitted as the weather allows.

A March sowing should also be made in a frame to provide a batch of plants to plant out in a high sheltered border to succeed the frame supply. For the April sowings there will be no need for protection, and they should be made in the open; in fact, towards the end of the month the reverse order of things will have to be considered, by making plantations in the most exposed part of the garden. The tops of celery ridges are excellent sites for early summer crops, but in any case the ground should be rich and deeply tilled. Unless there is a special preference for the cabbage varieties of lettuce the Cos type is the better for summer use, the leaves, being of thicker texture, remain crisp longer when cut.

During the summer private families are often in town, and the lettuces have to be packed and forwarded; if properly tied up and the whole leaves kept intact, the Cos varieties will arrive in a much more satisfactory condition than the cabbage varieties. An ideal early Cos lettuce for this purpose is Little Gem (Dickson and Robinson). It turns in quickly, with self-folding leaves, is very solid and profitable, and blanches easily. Champion White, London White, and Balloon are all good and serviceable for sowing up to the end of August.

The July and August plantings should be made in the most moist and cool part of the garden. If the weather is hot and dry no crop will repay better the labour of giving the plants a thorough watering, and a top-dressing of spent mushroom manure or mowings from the lawns to the depth of about an inch will also be of the greatest assistance in promoting good growth. For the September sowings a protected situation has to be chosen, such as a south border.

If a winter supply is expected a corresponding provision has to be made by sowing not later than the second week in September, to allow the plants to become of sufficient size before autumn frosts check their progress. When the plants are about an inch high they should be thinned out to eight inches apart, and the spare plants planted in pits and frames to become established, and in readiness to be covered with lights in November, when the severity of the weather makes this necessary. Rows may also be planted at the foot of south walls or other sheltered positions. Sugarloaf, Bath, All the Year Round, Hicks' Hardy, and Stanstead Park are all hardy and good varieties, but the last-named is, in my opinion, far the best for giving a constant and unfailing winter supply. If the plantation in the border can be protected with lights, useful heads will be produced up to Christmas.

Those in pits and frames may be lifted and blanched in the mushroom house, in batches as required, during the months of January and February, while the plants from the rows planted under the walls may be blanched by placing six-inch pots over them a fortnight previous to cutting.

The past winter has not been exceptionally severe, and the plants that have come under my notice have wintered well and produced good heads, especially the variety recommended, which, to some extent, goes to show its hardiness and suitability to those who have to face the sometimes difficult problem of providing lettuce in and out of season.

C. Flack.

Cholmondely Castle Gardens.

THE CARE AND MAINTENANCE OF THE LAWN.

It is not too much to say that the well-kept lawn is one of the most important features of the garden, contributing to our enjoyment not only as a setting to the flower garden and shrubberies, but also for use in the various summer games indulged in, in this country.

A badly kept and weedy lawn is an abomination, and no matter how perfect a lawn may be when first laid down and established, unless prompt action is taken in the extermination of weeds when first seen, the renovation of portions that have become thin and sparse through a variety of causes, and constant attention to mowing and rolling, it will rapidly deteriorate and lose its character. I have noticed many amateurs engaged in the spring months in the work of lawn renovation, and despite the advice proffered in these columns they will persist in sowing the seeds on the surface and then scratching the ground as if they were afraid of injuring the seed, and the result is failure.

The work should be done in a very different way, the portions to be sown being deeply dug, adding a small quantity of short manure; then it must be thoroughly solidified and rolled, and then the seeds may be sown evenly and thickly over the whole surface, followed by an energetic raking with an ordinary hay rake and another rolling which will complete the task. The lusty sparrow is very fond of the seeds, and unless black cotton is suspended on sticks about four inches from the ground the birds will spoil a great quantity, but happily this ruse is effectual in bluffing them.

As regards after-treatment the new lawn should not be cut so closely as old turf for some weeks, and in passing over it the handles of the machine should be slightly lowered, thereby removing about half the length of grass. To renovate a lawn with turf is a much more expensive business, but where outlay is no object and really good pasture turf, free from rank weeds, is available, it is certainly preferable, and may be put down at this season with perfect safety. It is a good plan to thoroughly examine the turf prior to laying it as weeds are then readily removed.

Weeds on Lawns

will soon make their presence known, and the deep-rooted dandelion has already become active, and only needs a few warm days to develop its perfect inflorescence, and unless checked, to scatter its seeds broadcast. The recent heavy rains have thorougnly moistened the soil to a good depth and made the matter of eradicating these weeds, together with others of rank growth, an easy matter. In removing the first-named with a spud, a considerable portion of the root will be detached; still, unless the hole is filled up with salt, the remaining portion will throw up a dense crop of growths. The plantain is an inidious wood, as it almost imperceptibly fills the lawn if left unchecked for a season. Its prostrate habit will account for this, and one often sees hundreds of the seed stems among the grass maturing and doing their best to destroy the beauty of the lawn. I hardly think the wild ranunculus is a much less sinner, as where allowed to become established it completely ousts the finer grasses, and trails along with great rapidity. Plenty of people raise their voice on behalf of the daisy and think it a great pity to exterminate it from the lawn, but as it creates weedy patches and detracts from the appearance of the grass it must be relegated to the meadow in company with the ranunculus.

Moss, too, is not by any means desirable, and renders the work of cutting very laborious, and it is a matter for surprise that it is allowed to grow seeing how easily it is destroyed. Provided it is well raked out in the autumn and a heavy dressing of rotten manure applied, followed by a heavy dressing of lime and soot in equal quantities in spring, it will be conspicuous by its absence, and this leads me to say that an impoverished condition of the soil, together with improper drainage is responsible for its appearance.

It would be well if everyone would bear in mind that in mowing the grass each week throughout the summer, and carting away the grass to the rubbish heap, the plant-food of the soil is being removed, and that unless annual top-dressings are afforded, especially on light land, the lawn will assuredly deteriorate. Personally I am a strong advocate not only of an autumn dressing of animal manure, but a spring dressing of nitrate of soda or sulphate of ammonia, not forgetting that a lengthened drought considerably weakens the finer grasses, hence the necessity of artificial watering at such times, and for small gardens there is nothing better than the revolving sprinklers which evenly distribute the water over the whole surface, and by their steady action thoroughly moisten the ground.

Where there are big areas of grass and it is impossible to water the whole, I would recommend that the grass be cut without the box in times of extreme drought, as by so doing the cut portion affords grateful shade to the roots, and, further, is invisible an hour or two after the operation.

Walter H. Aggett.

CARE OF GARDEN TOOLS.

It does not require a very keen eye to discover whether the garden tool shed is in keeping with the other parts of the establishment, for when one sees a rusty spade left in the celery trenches, water pots pushed in any out of the way place, the lawn mower left in the shrubs close to where it was last used, and the hose pipe left out in all kinds of weather, there must be something lacking on the part of those in charge. To let men leave their tools about in this manner at once shows a lack of interest on the part of the gardener, for he alone is to blame for such slovenly habits. The first thing to be instilled into the minds of young men when engaging them is tidyness in everything, from the stokehole and potting shed to the plants in the conservatory or flowers in the mansion. If one finds tools left about uncleaned, after due caution, my advice is to get rid of the delinquent, as he will never make a tidy gardener.

A word or two must be written about watering cans, though these do not form such an important part in gardening as they did in days gone by, as their place is in a great measure taken up by the standpipe and garden hose. Still they must be used in all gardens, both large and small. Many, however, are not required during the winter season, and these should receive a coat of paint both inside and out, and be turned up, so that it is not possible for any water to lodge in them. Rust soon eats its way through the thin coating of tin when the cans are allowed to stand about in all weathers, therefore the cans should be hung up in a dry shed.

H. C. P.

TIGRIDIAS AND THEIR CULTURE.

The tigridias are perhaps the only bulbous Irids from America that have stayed with us since Dean Herbert's time; other genera have had a shorter sojourn and have been neglected by gardeners, or have found their proper home in botanic gardens where a plant need not be perpetually in flower to please.

The huge gorgeous flowers of the old T. Pavonia attracted greater attention from the first, and, despite its fugacious character, and colour scheme suggestive of an amateur artist's palette, it found hosts of admirers. It has improved somewhat under cultivation if one may judge from earlier paintings, and now gives us flowers five inches across, scarlet petalled—the petals uniting to form a shallow basin of orange-yellow most unmistakably spotted with scarlet, also grandiflora or speciosa is just an improved Pavonia—the petal limbs more rounded, broader, and of a deeper scarlet, whilst the colouring is a little less crude; lilacina is equally large but entirely different in colouring. Here the petals are of a dark lilac-rose, the base white, spotted with dark red. It is splendid when it first opens, but later in the day the lilac tint becomes dominant, and it loses much of its attractiveness; alba, the white Pavonia with crimson-spotted cream-coloured base, and alba immaculata, are lovely flowers that the artist can appreciate, the latter variety has no spotting whatever, but the base is slightly chrome-tinted.

The smallest varieties are the most refined. Conchiflora, the Mexican Shell flower, pale yellow, with a basin literally crowded with crimson spots; aurea, [illegible] gold with purple spotted base; lutea immaculata, pale yellow and unspotted; and rosea also self-coloured, are the gems of the genus. These lesser tigridias lack the vigorous constitution the giants possess. They are plants for the specialist, who would delight in their exquisite form and soft refined colouring. Pavonia, lilacina, alba, grandiflora, and immaculata will suit the gardener better, their flowers are larger and held well above the foliage, and those that have colour have it in plenty. They look far more interesting planted in mixture than in colour blocks, and the giant varieties accentuate the purity of the whites.

I cannot recommend tigridias for the mixed bulb border; they should have a special site, choosing a light soil, and depress the bed below the general level. They will start freely in quite ordinary soil normally moist, but after the second and third leaves are developed they enjoy an occasional flooding. It does not matter if the border is as wet as a swamp for a week or two at midsummer, they will enjoy it the more provided they have started well. One gets grander leafage, finer and stronger flowers for a longer period, and ultimately bigger bulbs at the end of the season than is possible under ordinary treatment. Winter storage is a vexed question with tigridias.

There is always a wastage of bulbs left in the ground, due to frosts, damp, decay, and more often to mice. One cannot do better than lift them when the leaves change colour, fill a box or flower-pot with wet mud, plunge the bulbs in it and allow all to dry. The bulbs, when taken out of their mud casing in spring, are quite fresh and plump.

G. B. Mallett.

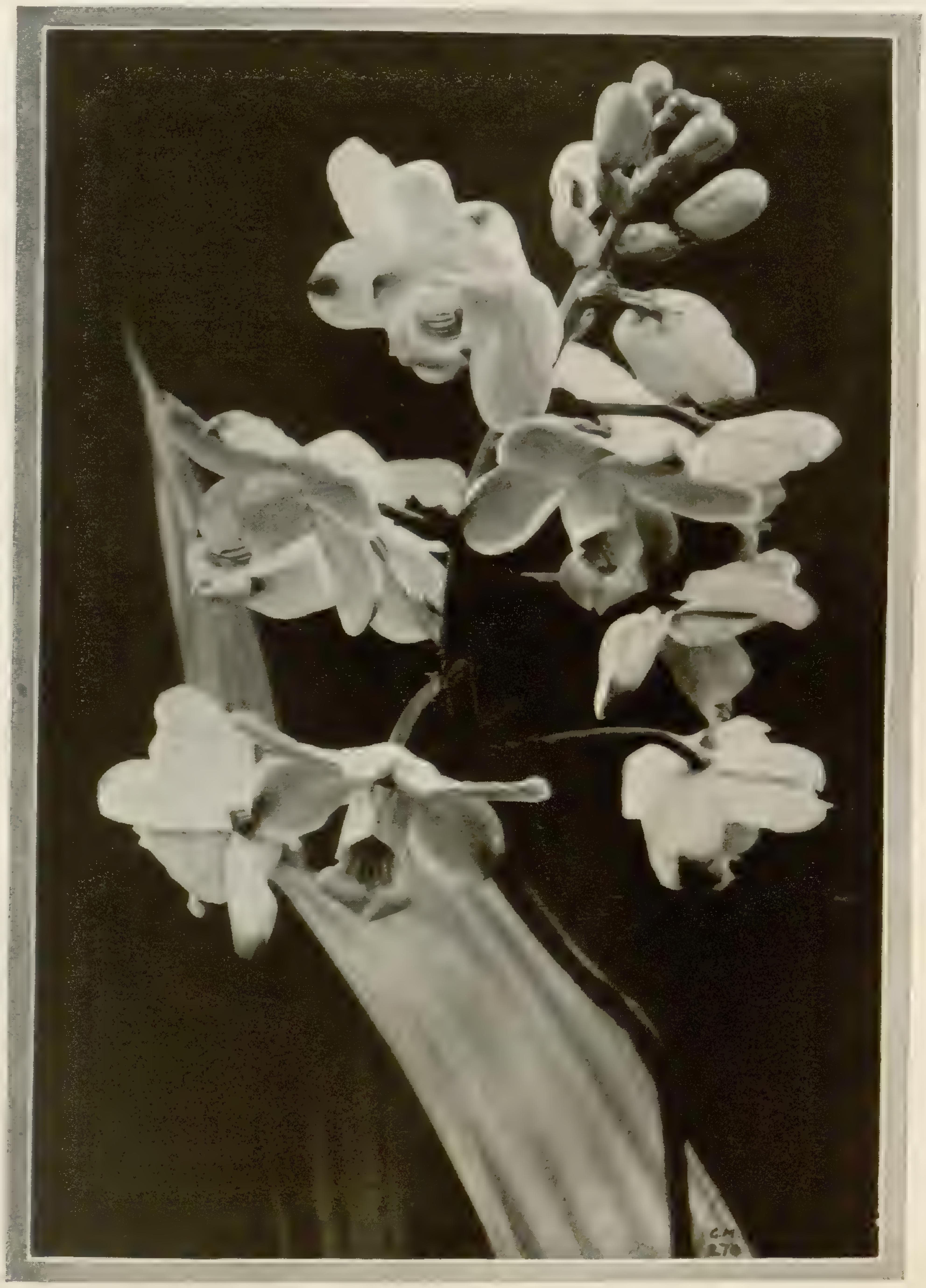
EULOPHIELLA PEETERSIANA.

A fine specimen of this strikingly handsome orchid is at present in flower at Kew in a warm house. When first exhibited in 1898 before the Royal Horticultural Society by Sir Trevor Lawrence, Bart., Dorking, this species created quite a sensation in the orchid world, and the Orchid Committee awarded it a First Class Certificate.

The Kew plant is in vigorous condition at the present time. Early in January it commenced to push up two strong inflorescences, one of which was removed at an early stage. The other one has now reached a height of four feet three inches, the top of which is shown in the accompanying illustration. The lower flowers are three and a-half inches in diameter, but the blooms gradually become smaller as the raceme extends. In colour they are a lovely rose, shading to rosy-purple near the tips of the perianth segments. The lip is white, margined with rosy-purple, and with three to five erect yellow crests. The throat is white, with several lines of yellow extending nearly to the base. The leaves are plicate, bright green in colour, arching towards the top, the largest being four feet two inches long, and four and three-quarters inches broad, and tapering towards both apex and base.

The conditions under which this orchid thrives are those of the East Indian House, where the conditions are hot and moist. The compost used is a mixture of sphagnum and peat, and the plant has never been allowed to become dry at the roots at any time of the year. Heavy shading was provided during the summer months, but full exposure given at other seasons.

Kew. C. P. Raffill.



EULOPHIELLA PEETERSIANA.

Flowers large and fleshy; rose and rose-purple, with a white, yellow-crested lip.

PERPETUAL CARNATIONS FOR PRIVATE GARDENS.

The bench system of culture may answer for the market grower, but pot culture is the most convenient for the private grower, as he may require some of the houses for other occupants during the summer months, and the plants are also more easily handled in pots, if space is limited. Carnations, from the cutting to the time they have finished flowering, should be manager by one man, for, as with many hard-wooded subjects, "too many cooks spoil the broth," so it is with carnations.

The atmospheric moisture required, and careful watering, especially during the winter months, are two cultural details which require careful attention. It is more than probable that the dreaded "rust," to which some varieties are subject, is largely induced by negligence or ignorance in these two matters. Many varieties seem immune from "rust," but I am fully convinced that varieties which are affected by it are at their worst when an excess of moisture is permitted. This was particularly noticeable during last October and November, when there was an unusual rainfall and a heavy moisture-laden atmosphere. Of the variety Mrs. Burnett, which is subject to "rust," our first batch of this variety to flower was rather badly attacked, but with drier surroundings we soon checked the progress of the disease, and since then other plants of Mrs. Burnett have shown no more "rust" than many of the Americans.

Disease appears to be constitutional with many varieties, and greatly aggravated by local influences, for I have plants side by side, some affected and others perfectly free. We need to work from those varieties which are immune. T. H. S.

THE INFLUENCE OF INARCHING.

The operation of inarching is frequently practised in vine culture as a means of either establishing quickly a young vine on an already established one, so as to bring it into fruiting without loss of time, or to counteract some defect which one variety may possess as compared with another.

I may safely assume that there are few gardens where the Madresfield Court grape is grown, in which, in a greater or lesser degree, the berry-splitting propensity of the variety is not known. This cracking or splitting of the berries has been attributed to several causes, and many remedies have been advised, in some cases effective, in others ineffective. Why the berries of this vine should crack in one garden and not in another, under apparently the same system of culture, is not the object of this note; much ink has been spilt over it, and we are no "forrader."

Several seasons ago, wishing to have a Madresfield vine in an early house, and to bring it into a fruiting condition as quickly as possible, I inarched some rods on a Black Hamburgh vine, and hoped the inarching would prevent cracking. This hope was not fulfilled, in fact there was more cracking on the Hamburgh stock than in the case of the Madresfield Court on its own roots. The experiment has not been successful, and I prefer to keep Madresfield Court on its own roots, as it then gives finer berries, and bunches with a normal amount of berry splitting. The berries from the inarched vine were much smaller than those from Madresfield Court on its own roots. It should, however, be noted that Madresfield on its own roots grows extra strong here, whereas Black Hamburgh is one of the weakest growers; another instance of soil influence.

A vine which does show the beneficent influence of inarching, and which is apparently improved in quality and appearance, is the variety Melton Constable. This vine, on its own roots, too closely resembles Gros Colmar, and if the latter variety is one of its parents, it must have been the predominant partner. We have Melton Constable inarched on Black Hamburgh, and also on Alicante. Growing on the latter variety it appears to give the best results in colour and flavour, and so grown is preferable to Gros Colmar on those two points.

While inarching enables one to fruit a new variety more quickly than might be the case on its own roots, a careful selection of stock for the scion appears to be desirable. T. H. Slade.

Poltimore Gardens.

HISTORY OF THE GHENT FLOWER SHOWS.

In view of the fact that the Société Royale d'Agriculture et de Botanique de Gand will, in a few weeks hence, celebrate its centenary, and a number of British horticulturists will take part in the great exhibition and other functions associated with the celebration, a few particulars of the development and work of the society can hardly fail to prove of interest.

In the opinion of Mr. A. Ceuterick, the secretary general, it would be a mistake to suppose that the society owed its origin to a fraternity or guild of gardeners of the old school, as in the case of so many societies associated with the professions that have sprung from existing bodies of workers. There has long existed in Ghent a taste for horticultural and floricultural products, and it would appear that about the year 1622 Bishop Triest, who was long known for his interest in art and taste for flowers, formed a brotherhood of gardeners, with St. Amand and Ste. Dorothée as the patron saints. In addition, a society of amateurs was founded at Ghent in 1669 by Abbot Reyntkens, who was devoted to horticulture, and wrote a book thereon, which was published in 1675. These two fraternities did excellent work in the encouragement of horticulture, but, as in the case of all the other organisations, they were suppressed by the decree of August 18, 1792. Notwithstanding this, the taste for flowers continued to increase with the prosperity of the community. The number of gardeners in the employment of the large landed proprietors and the wealthy amateurs rapidly increased, and little by little commercial cultivators, half florists and half market gerdeners, became established about Ghent.

It was chiefly along the Conpure that the establishments of these latter were met with. Even after the great changes in this part of Ghent the horticultural establishments remained. The old establishment of Linden had not been turned into building ground, and a new street—Liévin de Winne—been formed thereon, and on the left-hand side of the river, behind the Salon Napoleon, there was a large open space available for cultural purposes. At the commencement of the 19th century there was, on the right-hand side of the river, and at the point where the passage of the Conpure joined the paved roadway, a public-house, bearing the sign, "In Frascati." It was occupied by a gardener, and his fellow gardeners, of whom there were considerable numbers in the neighbourhood, were the principal customers. A goodly number of amateurs also visited the house for the purpose of meeting those having tastes similar to their own.

About this time England, favoured by the increase of her colonial possession, and the development of her commercial relations with foreign countries, was making rapid progress in horticultural matters. New plants were being introduced almost without ceasing, and immense improvements were being made in cultural methods. The nursery trade in England had become of considerable importance at the commencement of the 19th century, the nurserymen issued catalogues of the plants, etc., they had for sale, and these were distributed throughout the European continent. By the catalogues and other means, information as to what was being done in Great Britain reached the horticulturists in and around Ghent. Their curiosity was aroused, and from time to time amateurs, private gardeners, and nurserymen, made a journey to England both to purchase novelties and to learn something about the advanced methods of culture. It is not difficult to imagine the interest with which the return of the fortunate travellers was anticipated, or that there was a full house in the evening of their return to their usual position among their friends at the Frascati.

It was at one of the meetings at this inn that the Société Royale d'Agriculture et de Botanique had its origin. On October 10, 1808, Frans Van Cassel, who had returned from England a short time previously, described to his friends what he had seen in England, and he proposed that a society should be formed at Ghent for the purpose of organising exhibitions of flowers, etc., with a view to assist the development of commercial horticulture and a love for flowers in the city. The proposition was received with enthusiasm, and at a subsequent meeting Avocat Lebèque one of the principal judges and a distinguished amateur horticulturist, was requested to prepare the rules. The rules having been prepared, they were, in conformity with the law, submitted to the Mayor, M. Pycke, and duly confirmed. Of the forty-seven persons who assisted at the foundation of the society, eighteen were gardeners, and the other founders included architects,doctors, lawyers, hosiers, plumbers, painters, and a police commissioner. The first officers were: President, Van de Woestyne, a member of one of the great Ghent families; secretary, M. Lebèque, advocate and judge; and treasurer, M. Goethals, advocate.

The objects of the society, and the means by which they were to be effected, were defined in the second and fourteenth rules. In the first of these it is declared that the objects were the extension of a knowledge of botany, and the improvement of the methods of cultivation of indigenous and exotic plants. In the fourteenth rule it was stipulated that there should be a public exhibition annually of flowers and shrubs in one of the rooms in the garden of Frascati and that the exhibition should be announced in the "Gazette de Gand" eight days in advance. To render the exhibition interesting and useful, each member was required to send two pots containing plants, flowers, or shrubs, or pay a small fine. Members could send more than two pots, but not more than six. The arrangement of the exhibition was made by five specially appointed commissaires, and the members had to accept without murmur the position in which their plants were placed, or pay a fine.

In carrying out its programme the society held its first exhibition at "In Frascati," February 6, 1809. This proved most gratifying to the promoters, and the subsequent shows were so successful that in 1815 it was found necessary to provide more room for them. It was then arranged to hold them in the garden of "In de Zaal Flora," a public-house in the Rue de la Caverm, and a spacious building was specially erected for the purposes of the shows. Three years later the King evinced a warm sympathy with the objects of the society, and the committee asked him to permit them to add Royale to the title, and grant them a coat of arms, and he at once granted the requests. The coat of arms was composed of a watering pot, spade, rake, and other gardening tools, with the motto, "Veneficia mea, Quirites; haec, sunt."

The society continued to prosper, and, with an increase in the membership and in the interest in the exhibitions, these latter increased so rapidly that in 1827 much more space was required for the display of the products. By a resolution of the City Council the vestibule of the Hotel de Ville was placed at the disposal of the society. In the years 1830 and 1831 the exhibitions were held in St. George's Hall, but in 1832 the society returned to the Hotel de Ville, where it remained until 1836, except that in 1834 it held its exhibition at the Palais de l'Université. The continuous growth of the society and the enormous expansion of the shows induced some of the members to seriously consider the question of obtaining a home worthy of the high position to which the society had attained. A company was formed for the purpose of providing a new location of a suitable character, and it was fortunate in having presented to it the site on which the Casino, with its gardens, now stands, and this, by the way, is near the birthplace of the society. Continuing its career with unabated prosperity the society erected in 1866 the magnificent winter garden with which visitors to the quinquennials held since that year are familiar. Recognising the fact that increased space would be required for the centenary exhibition, a new building was added to the existing structures in 1906.

The Société Royale d'Agriculture et de Botanique de Gand has throughout the hundred years over which its history extends held an exhibition annually; but many years ago it decided to hold every fifth year an exhibition on a greatly enlarged scale, and of an international character, and these great gatherings have had unvarying success. They have had the effect of bringing to Ghent every fifth year many hundreds of the leading horticulturists from all parts of Europe, and making the city famous for its horticultural products. In 1884 the society organised the first International Chrysanthemum Show held in Belgium, and since that year it has held other excellent shows of a national character.

The society has by no means confined its attention to the holding of shows. Within a few years of its foundation, close attention was given to the many important questions relating to agriculture, arboriculture, fruit culture, market gardening, and the cultivation of ornamental plants. As early as 1813 it established a prize with the object of encouraging the development of nurseries for fruit trees. Another prize was instituted for the purpose of stimulating an interest in the plants believed to be indigenous to the department of Escaut. It gave many other prizes for the encouragement of gardening, and a number of special prizes for the encouragement of agriculture, but in the course of time the society became so impressed with the importance of local horticulture that it was felt necessary to limit its activity to this branch of its work.

In this brief sketch of the society and its work it is not possible to do more than give an outline of its accomplishment. At the commencement of the nineteenth century horticulture, practically speaking, did not exist in Belgium, and Ghent, in the matter of gardening, did not differ materially from other cities. Under the beneficial influence exercised by the society Belgium has become a country of market gardens, and Ghent a city that has no equal as a centre of commercial horticulture.

For much of the information here given we are indebted to an interesting contribution by M. A. Ceuterick, the general secretary of the society, to our enterprising Belgian contemporary "Le Tribune Horticole." In making this acknowledgment we would express the hope that, in accordance with our anticipations, the centenary celebration will prove an unqualified success.

G. G.

Asparagus plumosus.—There are many very pretty evergreen species of asparagus which are useful for greenhouse culture, but the above is the most popular, and has proved a most valuable plant for market purposes, the cut branches being extensively used in almost all floral work. It has to a great extent superseded the maidenhair fern, and is popularly known as the asparagus fern, though it is not in any way related to the fern family, being a flowering plant, and belonging to the natural order liliaceæ. These subjects are often treated as stove plants, but when grown in a high temperature, they may make satisfactory progress, but will soon lose their tiny leaves if exposed to the cold, but if started and grown on in a moderate temperature they stand exposure much better. All the species are very impatient of shade, and will not do under the shadow of other plants. They also require more root room than many other plants, and the roots, being of a fleshy nature, they require careful handling. In repotting, the thick, fleshy tubers of such sorts as Spren[illegible] and others of a similar nature, may [illegible] thinned out, all the old soil shaken away, and the roots washed quite clean, and if [illegible] before they get quite dry, they will take [illegible] of the new soil and start away at once. [illegible] a compost consisting chiefly of good [illegible] loam, with the addition of a little leaf-[illegible] manure, and sand, with good drainage.—B. Field, Ashwellthorpe Gardens.

SPRING WORK AMONG ROSES.

Roses have already begun to grow, but the basal eyes are still dormant. Pruning may commence at the end of March, starting with those varieties of the hybrid perpetual division that are in the most sheltered part of the garden. Another batch may be pruned ten days later. The first week in April will be early enough for the teas. In pruning hybrid perpetual roses, about 4in. of last year's shoots should be left near the base on young plants, while those established some years should be cut a trifle lower or the heads will become unwieldy, especially if standards. In the case of teas and noisettes, a prominent bud should be selected somewhere within 3in. or 4in. of the base of last year's growth, and by pruning back to such a bud we are assured of a strong shoot from this point. When tea roses are cut hard back the growth is more robust, and consequently the blossoms are finer. Moss Roses should not be pruned so closely; the vigorous shoots made last year should have their points removed, and be pegged down to within a few inches of the soil. In this way they cover the beds, and from each joint, consequent upon the check the sap receives by the depressing of the shoots, an abundance of blossoms is obtained.

The Penzance sweetbriars, which are most beautiful in their colour and freedom of blossoming, succeed best with but little pruning. Planted singly on grass and allowed to ramble away at will, removing any weakly growing shoots, they are most interesting. Trained loosely up poles at the front of a shrubbery they make a brave show, especially where backed up with evergreens, which act as a foil to the brilliant-coloured blossoms of such varieties as Meg Merrilies.

The beds and borders in which roses of any section are growing should be now lightly forked over, burying the manure employed in mulching as it will not be required as a protective material any longer, and dug in it will serve to nourish the plants and promote stronger growth and consequently finer blossoms.

Plants of the Gloire de Dijon class growing against walls produce the best blossoms from the wood of the previous summer's growth, should be neatly fastened to the wall. Lamarque, Aimee Vibert, and such of the old-fashioned roses as Jaune Desprez, that blossom in abundance from growth of the current year, should be pruned hard back to enable the growth to push strongly. Such roses need a good deal of attention in order to maintain them in a neat manner throughout the summer; therefore, an early start is imperative so as to lay the foundation growth in its proper place. In many instances it is not practicable to stimulate these old plants with short manure because of their position against the walls of the dwelling house, and the roots may be under the grass of the lawn. In this case heavy soakings of liquid manure in the spring will be decidedly beneficial.

S. H.

Calceolarias may be transplanted from their winter quarters into a sheltered border, where protection can be given; see that soil is well pulverised, and a good addition of sandy leaf-soil added; when plants are required for planting in their summer quarters, they will then lift with good balls of roots, and there will not be so many failures with them during summer.—E. F. Hazelton, Knowsley Gardens, Prescot.

BEETLE REVELATIONS.

(Continued from page 248.)

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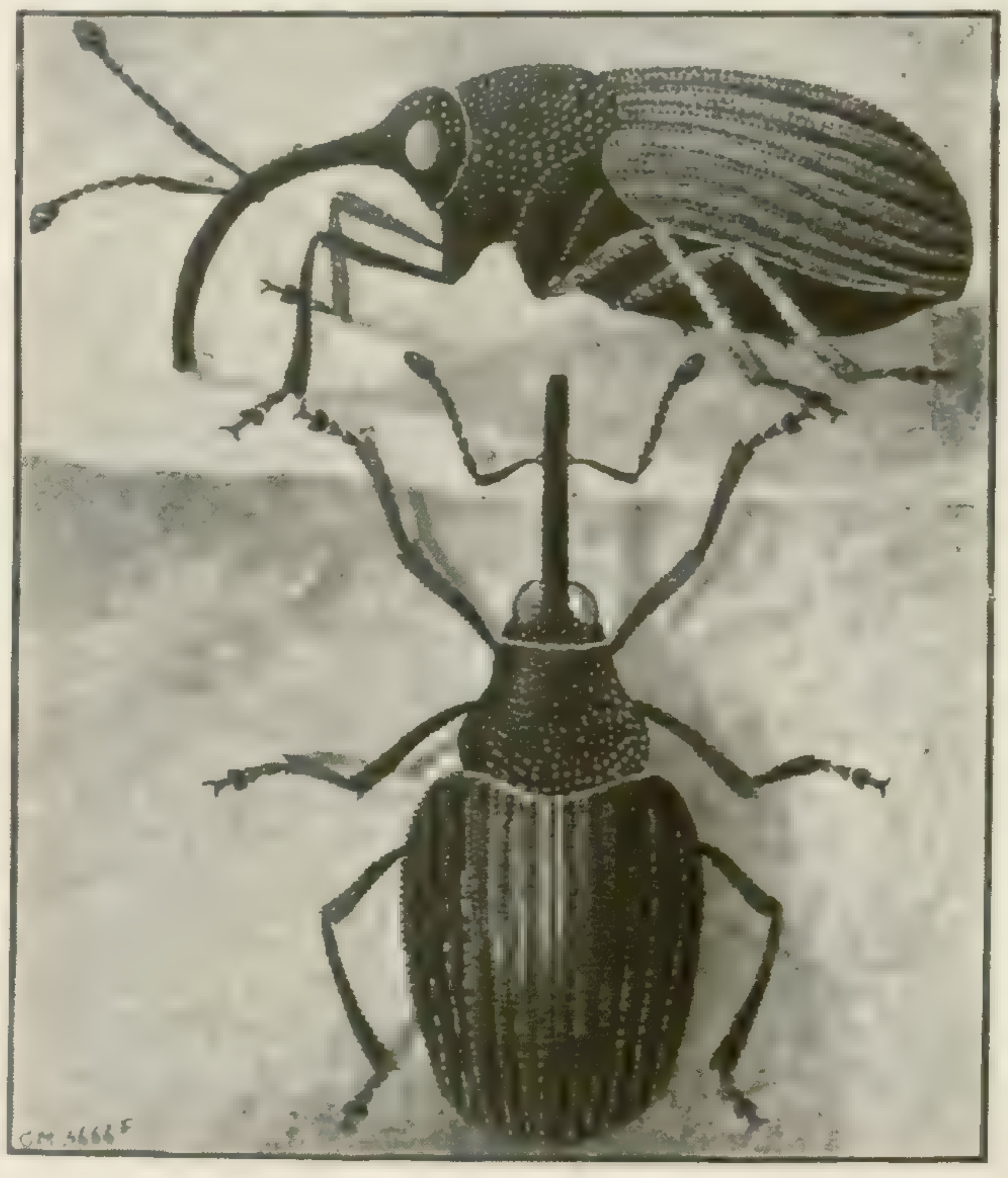
Cabbage Gall Weevil.

Many gardeners must have often wondered what causes the gall swellings on roots of cabbages and turnips, the excrescences frequently being as large as hazel nuts, and very numerous. These deleterious consequences are directly due to the influence of the grubs of the gall weevil, a tiny creature of a dull black shade, from an eighth to a twelfth of an inch long, named Ceuthorynchus sulcicollis. The grubs are of similar length, yellowish-white, with brown heads, and footless. They habitually lay in their self-raised galls in a curled-up attitude.

The eggs are laid early during the summer on the roots of cabbages and turnips, and the grubs hatch therefrom within ten days, and immediately begin, through the irritation of the tissues due to their confined action, to cause the gradual enlargement of the parts. As may be understood, it is very difficult to dislodge them from this concealed position, so that one is faced with the annoying futility of direct insecticides. But inasmuch that their pupation or chrysalis state is undergone in the ground about the roots, the bisulphide of carbon remedy might sometimes come in serviceable.



CABBAGE GALL WEEVIL.
(Ceutorhynchus sulcicollis.)

Although the chief evidence of damage lies in the roots, prolonged attacks result in the complete decay of the plants. As they pass the winter in a kind of hibernation within their galls cabbages which look promising may suddenly exhibit ill-health owing to the grubs' renewed activities.

Charlock (wild mustard) and other cruciferous plants encourage their abundance, and these should be persistently destroyed if the pest has proved at all troublesome.

Plenty of gas lime in the soil will act as a deterrent. Destroy all cabbage stocks which have been affected.

James Scott.

(To be continued.)

Roses may be grown to perfection by following the instructions given in Roses and Their Cultivation, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

SEEDLING ODONTOGLOSSUMS.—Fire heat during winter, and excessive hot weather in summer, appear to be the greatest drawbacks in the successful rearing of seedling odontoglossums. I might also add that lengthened periods of dull, sunless weather, when evaporation is slow, and the plants have the potting compost wet about them for long periods, also proves detrimental to seedlings in a small state. It is at such periods that algæ and weeds grow very rapidly, and spread over the surface of the potting compost, and choke the growth of seedlings even when they have reached leaf growth. The removal of these is one of the operations which take a long time to do, and there is little to show for one's work, but unless these weeds are removed there is very little prospect for the young plants. Carefully cut away with small scissors any growth likely to bury the young plants, and with a pointed stick remove any moss that may be on the surface of the compost. It is tedious work, but keeping the seedlings free is the only means of securing satisfactory results.

OLDER SEEDLINGS.—From the present time growth is very rapid in plants that are in a more advanced state. Every encouragement should be given to enable the plants to reach the first-bulb stage, for after the first pseudo-bulb is completed they are not nearly so difficult to deal with, and the rate of growth is practically doubled, for whereas it takes about two years to make the first pseudo-bulb, the next growth is completed in about one year, or less. It is remarkable the difference in the plants and the advancement they make when treated according to their requirements. I think it is quite possible to procure pseudo-bulbs and flower them from the first-made growths, but to acquire these desirable results no delays or checks must occur in the early stages, and the plants must be grown on as rapidly as possible.

POTTING.—Many seedling odontoglossums will be rooting at the present time, and when the roots are in an active state any repotting necessary should be attended to. Seedlings also in a small state will be found emitting roots, and may in this condition be removed from the seed beds and pricked out singly, or several together, in pots or pans. See that the pots are clean, and fill them to about half their depth with clean broken crocks or chopped dried bracken roots. We use as a potting compost about equal portions of chopped fibrous peat, sphagnum moss, and broken leaves, with sufficient sand and broken crocks intermixed to render the compost porous. The compost must be varied in the matter of coarseness to suit the sizes of pots used, and the strength of the plants. Water with rain water as soon as potting is completed, and keep ample moisture about the plants by frequently damping the floors, etc. Spraying overhead is desirable when the outside conditions are favourable. Shade carefully from strong light, and afford every encouragement that will assist the plants to root freely and develop growth.

SPRAYING.—We find it desirable to spray odontoglossums at regular intervals. Thrips are the greatest pests, and where houses are surrounded by, or situated near, herbaceous borders, thrips are plentiful during summer and autumn. Spraying with an approved insecticide fortnightly during the summer months keeps the pests in check, but careful observation is necessary where flower scapes are developing at the present season.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

COLEUSES.—There are few fine foliaged plants to surpass these in brightness and variety of colours, and one often wonders why they are not more popular; it is, perhaps, because they are often grown under unfavourable conditions. Too much heat and shade are usually given. As soon as the days begin to lengthen, and we get more sunshine, propagation should commence; if the first cuttings are not so strong as might be desired, they will soon gain strength after they are rooted, and the tops may be taken off, and these will often make good plants quicker than direct cuttings. Coleuses should be grown on without any stopping, and therefore it is of the first importance to have a good base. If plenty of room is given they will branch out naturally and make fine pyramidal plants. They will do well in almost any ordinary compost, providing it is not too heavy. Good drainage should be given, and, in potting, the soil should be pressed only moderately firm. During the early part of the season they do best in a fairly warm house, but should be kept up as closely to the glass as convenient, and have all the sunlight possible; later on they will do well without any artificial heat. Quite large specimens may be grown in eight-inch pots; and, by exposing them to all the sunlight possible, they not only make short-jointed, sturdy plants, but the colours are much brighter.

ISOLEPIS GRACILIS.—This ornamental grassy plant is quite indispensable for greenhouse decoration. It is very easily propagated by division of the old plants, the smallest tufts quickly becoming established if given moist quarters. Now is a good time to divide the plants, using pots about three inches in diameter, and giving a light, leafy, open compost, and good drainage. They are all the better if given intermediate quarters for a few weeks until thoroughly established, when a cool but shaded house suits them well. These plants look well arranged alternately with Panicum variegatum as an edging in a shady greenhouse.

IVY-LEAVED PELARGONIUMS.—The present is a good time to strike cuttings for autumn and winter blooming plants; they root freely now with the advancing light, and will keep sturdy, hard little plants that, if kept potted on as required, will not flower much until winter. Three or four cuttings rooted in a four-inch pot make nice little material for furnishing baskets. These should be lined with moss, and a suitable compost will be loam and leaf-mould, with a little good fertiliser and plenty of rough silver sand. This will be suitable for pot culture as well. Single plants flower well if finished in the eight-inch size, and these they will easily fill if well grown during the summer. Light pits are best for them, and the plants should be frequently pinched to induce a well furnished specimen, the flower buds being picked out as soon as they can be seen, until within a month of the time they are wanted to bloom.

PALMS.—These will now require attention, and, while in no way fastidious as to the date they are repotted, the present may be taken as a suitable season in which to undertake this work. A compost made up of the following will suit the class of palms usually found in greenhouses: Fibrous loam two parts, leaf-soil one part, and a half part of silver sand, and the remaining portion made up equally of ground charcoal and oyster shell. A little peat should also be incorporated, and the whole well mixed several times before using. Clean pots, liberal drainage, and firm potting are essential. A thorough cleansing of the foliage should follow. The syringe must be carefully used, especially in dealing with the more delicate types.

STREPTOCARPUSES.—These are most useful plants. The flowers are gloxinia-like in character, and produced in great profusion and in many shades of colour, and are well adapted for decorating. Young plants grow and flower the best, and especially so when raised from seeds, that should be sown now. They germinate freely in a light sandy compost, and in a moist, warm house. They are dwarf, and can be grown to a high state of perfection, with the assistance of stimulating manures, in very small pots. The only pest with which they are troubled is greenfly, and this can be easily kept in check by fumigation.—T. B. Field, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

A LATE SPRING.—The cold, sunless weather we have had in Lancashire has made things very backward, so that many plants are flowering much later than usual, which, though disappointing now, will probably be to our ultimate advantage and pleasure. The watchful cultivator will act accordingly, though it may perhaps mean some little departure from previously arranged plans. The last of winter protecting material should now be removed, though if any quantity has been employed it will be best to remove it at intervals. The fritillarias, anemones, sisyrinchiums, leucojums, primroses, narcissi, violets, doronicums, etc., will be rapidly opening, giving more and more pleasure to the lover of flowers.

BULBS IN GRASS.—Where there are orchards, grass land, or pleasure grounds not already filled with bulbs, the old forced ones may be used for that purpose; if it is not convenient to keep them until fully ripened and dried off, they may be planted direct into the ground, and though probably a number will die, others will survive, gradually regain their strength, and establish themselves in a season or two, but I would not advocate using quite the very earliest forced ones for that purpose, while Roman hyacinths are quite useless for it.

FLOWERING SHRUBS.—Where there are suitable places on lawns or in the grounds for single specimen plants of the Moutan or tree pæonies now is a good time to transplant these from pots, if they have not made premature growth. Plant in good, rich, well-prepared soil. Protection from late frosts will be desirable. Before growth proceeds thoroughly examine all grafted plants and shrubs, such as standards of golden privet, rhododendrons, lilacs, Moutan pæonies, etc., and remove all suckers that may have been overlooked, or these will soon overpower the scion, eventually killing it. Magnolias will be expanding their blooms, and where trees are not too large protection should be given when frosts are imminent. Ribes, pyrus, and daphnes are not so tender.

PENTSTEMONS, antirrhinums, violas, etc., may now be planted in their flowering quarters; masses of each variety are preferable to indiscriminate mixing, as the effect is much more pleasing, and additional features can be made.

VIOLETS, as they pass out of bloom, should be lifted, and if the ground is to be again occupied with them give a good dressing of decayed leaf-soil, wood ashes, chalk or lime refuse; dig it in, and then divide plants to good single crowns, and replant at from nine to twelve inches apart, according to the vigour of growth; if the common sweet-scented violet is to be used six inches will be sufficient. Keep the plants well sprinkled or watered if the weather is at all dry, and should slugs be troublesome a dusting of soot or finely sifted wood ashes will be beneficial. All runners should be kept pinched off.

ANNUALS.—Continue to attend to pricking off annuals under glass, and a further sowing of these outside may be made for late blooming. Sub-tropical and other bedding plants must be kept growing, but avoid drawing them up in weakly condition. If circumstances compel their cultivation with other things, remove them from such unfavourable conditions on the very first opportunity, and gradually inure them to cooler and more open treatment. If zonal pelargoniums and other plants are getting too tall and leggy, pinch or stop them to induce a more bushy growth. Where bedding plants are in pits or frames remove the lights from them on all favourable opportunities.

MOWING.—If not already done, insure all mowing machines being in thorough repair, as mowing will now soon have to be commenced in earnest.—E. F. Hazelton, Knowsley Gardens, Prescot.

HARDY FRUITS.

GRAFTING.—Trees which may have been headed back to be regrafted with more suitable varieties should be carefully examined, and as soon as it is found that the bark will part freely from the wood grafting may be proceeded with. It is not much use attempting to regraft old worn-out trees, but those healthy and vigorous will, when regrafted, soon make fruitful heads, and go on fruiting for many years. If the trees are large crown grafting is the most suitable method to adopt, but in the case of small trees with stems half an inch or so in diameter, whip grafting is the more suitable. The branches of large trees should not be too severely shortened. I generally leave from one to two feet above the secondary branches so that more grafts may be placed on each tree to refurnish it more quickly. Those varieties which show fresh growth the earliest should be first taken in hand. The scions must be clean, firm, and well matured young wood about nine inches in length. Take a slice off the butt end about two inches long; make a slit the same length on the stock, and then raise the bark with a suitable flat-pointed stick, and then push in the graft. If the stock and scion are in good order there is not much doubt but the grafts will "take." Bind the grafts fairly firm, and encase the junction with a mixture of clay and cow manure thoroughly beaten into a moist paste. For whip grafting, instead of covering up the wounds with clay, use grafting wax, obtainable from seedsmen. Pears, plums, apples, cherries, etc., may all be grafted during the month of April; make a very careful selection of the most suitable varieties for the different purposes by way of keeping up a long supply of fruit.

LAST SEASON'S GRAFTS.—Examine carefully those trees which were grafted last year, and should the growths be strong they may be shortened back to within a reasonable length from the stems; see that they are securely fastened to prevent them being blown out when in full leaf. If a piece of stake be tied to the old branch and sufficiently long to fasten the grafts thereto, no harm will then be experienced.

STRAWBERRY BEDS.—Some of the varieties have suffered somewhat from the severe frost, and the leaves have a very scorched appearance, notably Waterloo and Royal Sovereign. But younger plants appear to be strong and less injured. Permanent beds, if not already done, should be mulched, and littered down; first examine the beds and remove any weeds, give them a liberal dressing with soot, spread on a good dressing of manure, and cover over with litter from the stables; the latter will be washed clean and sweet by the time the fruits are ripe, and will serve to keep them clean and free from grit. Young plants need to be made firm by giving them a good treading about their roots; they may then be lightly hoed, and then mulched; especially is this desirable on light dry shallow land. Plants intended for an early supply which were raised last July in small pots, and may have been planted on a snug border, need going over in the same way. These should be littered down, and when the flowers are about to open have ample material in readiness for a protection in case of a sharp frost. I have saved many crops by simply placing a handful of litter over the flowers when there has been signs of frost.

CUTTINGS of gooseberries, currants, etc., should not be overlooked now that the frost is out of the ground. They may have been loosened, and if neglected very bad results will follow. First push the cuttings in firmly and then give a good treading to firm them, then run the hoe lightly between the rows, and leave a crumbly surface to prevent cracking of the soil. If the weather should prove dry before rooting has taken place cuttings should be well watered whenever necessary.—H. Markham, Wrotham Park Gardens.

DEVON COUNTY AGRICULTURAL ASSOCIATION.
PLYMOUTH SHOW, May 19th, 20th, and 21st.
HORTICULTURAL SECTION.
[illegible] SYMONS, Esq., Chaddlewood, Steward.
APPLICATIONS FOR SPACE invited from the Trade [illegible] Growers. Full particulars of
CHAS. WILSON, Local Secretary,
4, North Hill, Plymouth.

SHREWSBURY GREAT FLORAL FETE.
Aug. 19th and 20th, 1908.
Cash Prizes are offered amounting to above £1,200, with Cups, Medals, etc.
[illegible] may be had, post free, on application to the Hon. Secs.
Messrs. ADNITT and NAUNTON, Shrewsbury.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

MARCH 31.

With bright spring sunshine pouring through the glass roof of the hall, and illuminating the spring flowers within, those who visited the R.H.S. meeting of March 31 had a very pleasant time. Orchids were comparatively scarce, but forced shrubs, carnations, alpines, and hyacinths provided a full and bright display.

FLORAL COMMITTEE.

Winter-flowering carnations, in pots were well displayed by Messrs. Jas. Veitch and Sons, Chelsea, who also submitted batches of Eupatorium probum, Primula obconica, Primula Kewensis, and P. K. farinosa, Rhododendron Veitchianum, Boronia megastigma, and the useful B. m. aurea, Crowea angustifolia, Clianthus puniceus, and Streptosolon Jamesoni. In another group they had a handsome lot of blue hydrangeas, as well as Hydrangea Thos Hogg, Cerasus Jas. H. Veitch, lilacs, deutzias, Vitis flexuosa, V. [illegible], and the curious Grevillea sulphurea, the whole making up a fine group. The Misses Hopkins, Mere Gardens, Shepperton-on-Thames, had a very pretty little show of coloured primroses, double and single, muscari, primula species, and alpine shrubs.

Carnations were beautifully shown by Messrs. Bell and Sheldon, Guernsey; this firm had grand flowers of Enchantress, Robt. Craig, Nelson Fisher, Evangeline, Mrs. Lawson, and Britannia. Mr. C. Foster, University College Gardens, Reading, showed three [illegible] of Zvolanek's winter-flowering sweet peas, the flowers were of good size and prettily coloured. The fine Magnolia Campbelli and Aloe ciliaris were shown by [illegible] Countess of Ilchester, Abbotsbury, Dorchester. A large display was made by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, and it consisted of a splendid lot of winter-flowering carnation flowers, these making a very notable feature, the Baby [illegible] rose, Mdme. Abel Chatenay rose, [illegible] Metrosideros floribunda, etc.

An interesting group of roses came from Messrs. Frank Cant and Co., Colchester; this firm had pot plants and cut flowers of Lady [illegible], Reine Carola de Saxe, Cecile Brunner, Mdme. Constant Soupert, Betty, Liberty, [illegible], and other delightful varieties.

A very large and striking exhibit of hyacinths in pots, arranged across the end of the hall, was staged by Messrs. R. and G. Cuthbert, Southgate, N. There were four long lines of plants, reminding one of the [illegible] of five and twenty years ago. There were about 160 varieties, and among the many Captain Boyton, Alba maxima, Cit-[illegible], City of Haarlem, Jacques, Cardinal [illegible], Electra, King of the Blues, Grand [illegible], [illegible] of the Reds, and Duke of [illegible], were conspicuous. A small group of [illegible] plants was staged by Mr. H. C. [illegible], [illegible]ham, Essex.

[illegible] hyacinths, a race that follows the [illegible] variety, were largely and well shown by Messrs. Sutton and Sons, Reading; these are very useful hyacinths for conservatory decoration or for cutting. The varieties were Giant Primrose, Giant Blue, and Giant White; the Reading firm also showed a very effective lot of cactus-flowered cinerarias in various shades of colour. Clematises in great variety, grown on small balloon trellises, and also trained fan-shaped, were shown well by Messrs. Richard Smith and Co., Worcester; Edouard Desfosse, Mrs. Cater, The Queen, Sir Garnet Wolseley, Standishi, Nellie Moser, and Albert Victor were varieties that attracted special attention.

Messrs. H. B. May and Son's exhibit consisted of choice ferns, the single perpetual rose Princess Ena, Clematis Nellie Moser, Pelargonium Clorinda, and cinerarias. Messrs. G. and A. Clarke, Dover, arranged a small rock garden, with hepaticas, primroses, polyanthuses, saxifragas, Iris reticulata, lachenalias, etc.

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CLEMATIS SIR GARNET WOLSELEY.
A fine specimen, exhibited by Messrs. Smith and Co., at the R.H.S. meeting on Tuesday last. Flowers rich blue.

Messrs. John Peed and Son, West Norwood, sent up a display of perpetual carnations, showing all the popular varieties; they also contributed a group of alpines and a collection of caladiums, the latter proving very attractive.

Messrs. W. Cutbush and Son, Highgate, made up a bold and effective display of perpetual-flowering carnations, showing popular varieties in big vases. The same firm showed forced shrubs, and alpine and early herbaceous flowers in great variety; their primulas were a leading feature.

Mr. W. H. Page, Tangley Nursery, Hampton, put up another of his charming displays of carnations and liliums, arranging large vases of splendid blooms over a bed of maidenhair ferns. Mr. A. F. Dutton, Iver, Bucks, had a goodly lot of carnations, arranged in tall glass vases; Rose-pink Enchantress, Beacon, and Robert Craig were especially well represented. Mr. L. R. Russell, Richmond, set up a beautiful bank of forced flowering shrubs, the mollis azaleas, clematises, lilacs, forsythias, prunuses, wistarias, cytisuses, and laburnums being charmingly arranged with palms, ferns,and euryas,making up a delightful exhibit. Messrs. Heath and Son, Cheltenham, submitted an interesting collection of Cape pelargoniums that attracted a great deal of attention by reason of their fragrance. Messrs. Paul and Son, Cheshunt, submitted forced wistarias, cytisuses, Coronilla pygmæa glauca, Cytisus Firefly, Lonicera fuchsioides, and other interesting shrubs.

Mr. George Mount, Canterbury, brought up vases of lovely blooms of Joseph Lowe, Capt. Hayward, Frau Karl Druschki, Richmond, and Mrs. John Laing roses—a beautiful group. Messrs. H. Cannell and Sons, Swanley, made a big blaze of colour with their zonal pelargoniums, set up in large vases; the flowers and trusses were magnificent.

Early rhododendrons were grandly shown by Mr. R. Gill, Penryn, Cornwall, who had a big plant of the free-flowering R. ciliatum and handsome trusses of R. Shilsoni, R. arboreum varieties, R. barbatum, R. Blood Red, and other beautiful and gorgeous forms. Rhododendron Purity (A.M.), a lovely white rhododendron of beautiful form and pure whiteness, was shown by Mr. Charles Turner, Slough. The pretty purple-blue Viola gracilis (A.M.), and Shortia uniflora (A.M.), were shown by Messrs. R. Wallace and Co., Colchester. Several charming dwarf irises came from Mr. C. G. Van Tubergen, Jun., Haarlem, Holland, and one, I. sind-pers var. Amethyst, gained an A.M.

Glorious perpetual carnations were shown finely by Mr. H. Burnett, Guernsey, whose blooms of Enchantress, Rose pink Enchantress, Marmion, Mikado, Mrs. H. Burnett, White Perfection, Robt. Craig, and Beacon were perfect. Among Mr. Burnett's seedlings we saw a splendid big red variety with blooms five inches across. Messrs. R. Wallace and Co., Colchester, submitted a small collection of early Darwin tulips, associated with baskets of hepaticas, Anemone pulsatilla, Iris reticulata, crocuses, Shortia uniflora, fritillarias, and Dog's Tooth violets. Some good amaryllis were exhibited by Mr. F. Baker, gardener to Major Lister, Warningled Grange, Hayward's Heath, but many were rather past their best, and others had suffered during their journey to the show.

ORCHID COMMITTEE.

Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester, showed a magnificent specimen of Ada aurantiaca, carrying over fifty spikes of orange-scarlet flowers; and Cypripedium Helen II., Westonbirt var. (F.C.C.), Cattleya Suzanne Hye de Crom var. Jungfrau, a beautiful yellow-lipped cattleya (F.C.C.), was sent by M. Jules Hye de Crom, Ghent, who also showed Odontoglossum crispum Jules Coene, finely blotched. De Barri Crawshay, Esq., Rosefield, Sevenoaks, submitted Odontoglossum Astarte and O. Andalusia, the latter resulting from O. Andersonianum and O. loochristiense. Cattleya Schroderæ Queen Alexandra (F.C.C.), a magnificent flower, with a bluish zone round the yellowish throat, was shown by Messrs. Sander and Sons, St. Albans. A seedling O. crispum, heavily blotched, was shown by Messrs. Wm. Bull and Sons, King's Road, Chelsea; this was sown on March 3, 1905, and opened on March 30, 1908.

Odontoglossum percultum J. R. Roberts (A.M.), a beautiful orchid, with a spike of fourteen handsome rosy red-marked flowers, came from Mr. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford; from the same collection came O. Judith (sceptrum and loochristiense), and Cymbidium J. G. Fowler. Mr. H. J. Chapman, gardener to Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne, brought up Phaius Clive (F.C.C.), a superb hybrid from P. Norman and P. tuberculosus; and Phaio-calanthe delicata with white and rose flowers. Messrs. Heath and Son, Cheltenham, staged Epiphronitis Veitchi, Sophronitis grandiflora, and numerous cypripediums.

Mr. G. E. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney, showed Cattleya intermedia nivea finely, an Odontoglossum hybrid from O. amabile and O. Rolfeæ—a grand flower, and several cypripediums. Cattleya Schroderæ was well shown by Mr. A. W. Jensen, Lindfield, Hayward's Heath, and in addition to several good varieties, there were numerous good forms of Odontoglossum crispum, including one with a rosy-purple ground colour and red-brown blotches.

Several pretty odontoglossums were exhibited by Mr. P. Forster Alcock, Northchurch. Mr. Balmforth, gardener to F. M. Ogilvie, Esq., The Shrubbery, Oxford, showed Odontoglossum Alexandrovitch, a purplish crispum variety. A cultural commendation was awarded to Mr. H. Tyrsoe, gardener to Miss Fitzpatrick, The Lodge, Bedford, for a fine example of Cyrtopodium punctatum, carrying five tall spikes of yellow and scarlet flowers.

DAFFODIL COMMITTEE.

The best exhibit of daffodils came from Messrs. Cartwright and Goodwin, Kidderminster, who staged pots of Golden Spur, Mervyn, White Lady, Alton Locke, Madame de Graaff, and Glitter, as well as cut flowers of these and other varieties. Mervyn, a shapely seedling from Emperor and obvallaris, and Evangeline, the latter a charming Leedsi variety with yellow cup, were both fine. Early tulips and some splendid vases of Chionodoxa gigantea, C. Lucilliæ, and C. sardensis, were shown by Messrs. R. H. Bath, Lim., Wisbech.

Daffodils were freely shown by Messrs. Barr and Sons, Covent Garden, and their display was edged with crocuses, anemones, and chionodoxas; this firm had also some early Darwin tulips, and vases of very pretty yellow, cream, and white freesias. With these were a few early hyacinths, anemones, hepaticas, and irises. Miss F. W. Currey, Lismore, Ireland, sent over a group of early daffodils, but the flowers were rather small; Sir Watkin, Victoria, Snowflake, Sirius, King Alfred, Artemis, Torch, and Golden Spur were the leading varieties. Mr. Charles Dawson, Gulval, Penzance, showed some charming daffodils that included some pretty flowers of Homespun, Calista, Althæa, Monica, Seamen, Leonard, and Nipper.

FRUIT COMMITTEE.

Royal Sovereign strawberries were splendidly shown by Mr. A. Grubbe, gardener to C. F. Raphael, Esq., Shenley, Herts, who staged a couple of dozen fruiting plants and six punnets of first-rate fruits. Oranges were famously staged by Messrs. Thos. Rivers and Son, Sawbridgeworth, Herts; there were splendid fruits of St. Michael's, Egg, Plata, Dom Louise, Navel (A.M.), Achilles, and Malta Oval oranges, and Paradise citrons and several varieties of lemons.

HYACINTH COMPETITION.

The hyacinth competition for prizes offered by the Royal Dutch Bulb Growers' Society of Haarlem, proved interesting, and though a goodly number of plants were shown, we believe that twenty-five or more years ago hyacinths were much finer than we saw them on this occasion.

For eighteen varieties equal first prize was awarded to Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, and Mr. R. T. Bushell, High Street, Wavertree, Liverpool; City of Haarlem, King of the Blues, Enchantress, Mary, Captain Boyton, General Vetter, Koh-i-noor, and Sarah Bernhardt were the leading varieties.

First prize for twelve hyacinths fell to Mr. James Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden; Mr. G. Mackinlay, gardener to the Hon. Whitelaw Reid, Wrest Park, Ampthill, Beds, second; there were four entries in this class, but the spikes were not especially good. For six plants Mr. W. H. Parr, gardener to F. A. Bevan, Esq., Trent Park, Barnet, led, and Mr. H. J. Bartleet, Severndroog, Shooter's Hill, was second. In the trade class for twenty-four plants Messrs. R. and G. Cuthbert, Southgate, were the only exhibitors, and they were awarded first prize.

CERTIFICATES AND AWARDS.

First-Class Certificate. — To Cattleya Suzanne Hye de Crom Jungfrau, from Mons. J Hye de Crom, Ghent; Brasso-Cattleya Digbyano-Schroderæ superba, from Messrs. Charlesworth and Co., Heaton, Bradford; Cypripedium Helen II., Westonbirt var., from Major Holford; and to Phaius Clive, from N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne.

Award of Merit.—To Dendrobium Thwaitesiæ Bound's var, from Sir J. Colman, Bart., Gatton Park, Reigate; Cattleya Schroderæ Queen Alexandra, from Messrs. Sander and Sons, St. Albans; Odontoglossum percultum J. R. Roberts, from J. Gurney Fowler, Esq., South Woodford; Cypripedium Berkeleyanum, from J. Forster Alcock, Esq., Northchurch; Rhododendron Purity, from Mr. Chas. Turner, Slough; Viola gracilis and Shortia uniflora, from Messrs. R. Wallace and Co., Colchester; Iris sind-pers Amethyst, from Mr. C. G. Van Tubergen, jun., Haarlem, Holland; and to Navel Orange, from Messrs. T. Rivers and Sons, Sawbridgeworth, Herts.

MEDALS.

Silver-Gilt Flora.—Messrs. Jas. Veitch and Sons, Chelsea; Mr. L. R. Russell, Richmond; Mr. H. Burnett, Guernsey; Messrs. Richard Smith and Co., Worcester.

Silver-Gilt Banksian.—Messrs. Bell and Sheldon, Guernsey.

Silver Flora.—Mr. G. Mount, Canterbury; Messrs. W. Cutbush and Son, Highgate; Messrs. H. Low and Co., Enfield.

Silver Banksian.—Messrs. R. and G. Cuthbert, Southgate; Messrs. R. Felton and Sons, Hanover Square; Mr. W. H. Page, Tangley Nurseries, Hampton; Messrs. H. B. May and Sons, Edmonton; Messrs. Cartwright and Goodwin, Kidderminster.

Bronze Flora.—Messrs. F. Cant and Co., Colchester; Mr. A. F. Dutton, Iver, Bucks; Mr. R. Gill, Penryn, Falmouth; Messrs. J. Peed and Son, West Norwood, S.E.; Messrs. R. Wallace and Co., Colchester; Mr. G. Reuthe, Keston, Kent; Messrs. T. S. Ware, Lim., Feltham.

Bronze Banksian. — The Misses Hopkins, Mere, Shepperton-on-Thames.

Winter-flowering Carnation Show.

There was a very fair display of perpetual-flowering carnations at the Royal Horticultural Hall on April 1, but by no means a sufficiently large one for so big a hall, and had not a large number of exhibits been left over from the previous day, the visitors would have been very disappointed. The carnation flowers were on the whole very finely shown.

COMPETITIVE.

In the classes for thirty-six blooms of one variety, in the several colours, there was a moderate competition. For a white variety, Mr. W. H. Lancashire, Guernsey, led with White Perfection, showing some grand flowers; Mr. W. E. Wallace second with Lady Bountiful; and Mr. G. Lange, Hampton, third, with White Perfection. For a blush variety, Mr. W. H. Page scored with beautiful flowers of Enchantress; Mr. W. H. Lancashire second; and Mr. E. H. Sams, Worthing, third, with the same variety, all showing well.

The best light pink or salmon variety was Fiancée, shown by Mr. G. Englemann; it is a fringed variety, but only merited a second prize. Mrs. T. W. Lawson was well shown in the deep pink class, and to Mr. W. H. Lancashire was awarded first prize for a grand vase; Mr. W. H. Page second, and Messrs. Morres and Co. third, the latter showing very big but rather dull flowers. Mr. W. H. Lancashire came first for a crimson variety, with President, and Mr. C. Englemann second with Harlowarden. Mr. Lancashire scored for a scarlet variety with very bright flowers of Robt. Craig, and Mr. C. Englemann second with Victory, very fine. The only fancy variety shown, Jessica, was exhibited by Mr. C. Englemann; a third prize was awarded.

In the smaller classes, for eighteen blooms of a variety, Messrs. Bell and Sheldon led for a white with Lady Bountiful; Mr. W. E. Wallace, Eaton Bray, second, with White Perfection; and Messrs. Morres and Co. third with the latter variety; five competitors. The best blush variety was Enchantress, shown by Messrs. Bell and Sheldon; Messrs. B. and V. Haig, Maidenhead, second; and Mr. C. Englemann third with the same fine variety; five entries. In the light pink class Mr. A. F. Dutton, Iver, Bucks, led with Winsor, very fine; Messrs. Bell and Sheldon second, with Winsor; and Mr. C. Englemann third, with Mrs. H. Burnett. In the deep pink class, premier place was awarded to Mr. W. E. Wallace for Aristocrat, finely coloured; second to Messrs. Bell and Sheldon for Mrs. T. W. Lawson; and Mr. S. Mortimer third, for the latter variety. The President won first place in the crimson class for Messrs. Bell and Sheldon; Messrs. Morres and Co. second, with Harry Fenn; and Messrs. B. and V. Haig third, with Harlowarden.

There was a strong competition in the scarlet class, there being nine entries. Mr. A. F. Dutton, Iver, Bucks, scored with brilliant flowers of Beacon; Messrs. Morres and Co., second, with Robt. Craig; Mr. E. H. Sams, third, with Robt. Craig. For a vase of any variety not in commerce, Mr. W. H. Lancashire was awarded a first prize for Ivan[illegible], a variety much in the way of Mrs. T. W. Lawson. In the "any other colour" class Mr. C. Englemann was first with the [illegible] scarlet-flaked Imperial.

Mr. Burnett's special prize for the [illegible] vase of Mrs. H. Burnett was won by Mr. W. H. Lancashire; Mr. A. Smith's [illegible] prize for Britannia was won by Mr. W.

Wallace; Dr. Kyffen's special prize for the best vase in the large vase classes was won by Mr. W. H. Lancashire with his grand first-prize vase of Robert Craig.

AMATEURS.

Mr. A. T. Paskett, Groombridge, was the only exhibitor in the amateurs' class for a dozen carnation plants, and he was awarded first prize for a fairly good set.

In the same division there were two competitors in most of the cut flower classes, three flowers in each entry. Mr. J. Vert, gardener to Lady Howard de Walden, Audley End, Saffron Walden, scored for a white variety with Lady Bountiful; Mr. Paskett second with White Perfection. The same competitors occupied similar positions for a blush variety, with Enchantress; and for a deep pink variety with Winsor and Mrs. T. W. Lawson respectively. Mr. Paskett was placed second with Salmon Lawson, and Mr. Vert third with Welcome, in the light pink class. Mr. Vert scored for a crimson with Crimson Glow, and Mr. Paskett came second with Harlowarden. Mr. Vert was awarded a first prize for Robt. Craig, scarlet, and also for a mixed vase; Mr. Paskett coming second. Mr. Vert, in every case, showed flowers with long stems, and Mr. Paskett short ones.

DECORATIVE EXHIBITS.

For a vase of carnations arranged for effect, Mr. W. H. Lancashire, Guernsey, led with about a dozen fine flowers of Mrs. H. Burnett; Messrs. B. and V. Haig second with mixed varieties. Mr. A. F. Paskett, Groombridge, was winner of the first prize for a basket of carnations, scoring with a charming arrangement of pink and red flowers. Mr. Hayward, Kingston-on-Thames, led for a bouquet of Enchantress, and he was also to the front for three sprays and three buttonholes, Messrs. B. and V. Haig following in each case.

NON-COMPETITIVE.

Messrs. Jas. Veitch and Sons, Chelsea; Messrs. J. Peed and Son, West Norwood; Messrs. W. Cutbush and Son, Highgate; Messrs. Heath and Son, Cheltenham; Messrs. Richard Smith and Co., Worcester; Messrs. Thos. S. Ware, Lim., Feltham; Mr. G. Reuthe, Keston, Kent; Mr. W. H. Page, Tangley Nurseries, Hampton; Mr. A. F. Dutton, Iver, Bucks; Messrs. H. B. May and Sons, Edmonton; Messrs. G. and A. Clarke, Dover; Messrs. Hugh Low and Co., Enfield; and Messrs. Bell and Sheldon, Castel Nurseries, Guernsey, all left their exhibits over from the R.H.S. exhibition, and these are described in our report thereof.

Messrs. Morres and Co., Castel, Guernsey, submitted a lot of handsome blooms of good carnations; their best vases were of Mrs. Thos. Lawson, Beacon, White Perfection, Britannia, and Enchantress. Mr. C. Englemann, Saffron Walden, set up delightful flowers of Lady Bountiful, Prosperity, Enchantress, Red Ridinghood, The Cardinal, Mikado, Victory, and Rose Pink Enchantress, in large vases.

Mr. C. F. Walters, Deanland Nurseries, Balcombe, Sussex, staged a group of handsome carnations, showing large vases of pink Malmaisons, Enchantress, Britannia, White Perfection, Beacon, Mrs. T. W. Lawson, Harlowarden, and Rose Pink Enchantress. Mr. G. Lange, Hampton, had some famous vases of Fair Maid, Winsor, Mrs. T. W. Lawson, Aristocrat, Mrs. Patten, Enchantress, Britannia, and other good varieties.

NEW VARIETIES.

A first-class certificate was granted for the big fancy variety named Marmion, which we figured some time since; and an Award of Merit to Mikado, deep heliotrope. Both these were from Mr. H. Burnett, Guernsey.

MEDALS.

Gold.—Mr. W. H. Page, Hampton; Mr. C. F. Walters, Balcombe; Messrs. Hugh Low and Co., Enfield; and Mr. H. Burnett, Guernsey.

Silver-gilt.—Messrs. Bell and Sheldon, Guernsey; Messrs. Morres and Co., Guernsey; Mr. A. F. Dutton, Iver, Bucks.

Silver.—Mr. G. Lange, Hampton; Mr. C. Englemann, Saffron Walden.

Birmingham Gardeners' Association.

The fifth fortnightly meeting of the spring session was held on March 23, when Mr. Alfred Cryer, gardener to J. A. Kenrick, Esq., Berrow Court, Edgbaston, was responsible for an interesting and instructive chat upon "Bulbs for House Decoration and Exhibition." Mr. Walter Jones presided over a very good attendance of the members.

Mr. Cryer, who is a well-known and successful gardener, prefaced his subject with remarks on the climatal exigencies pertaining to those in close proximity of a manufacturing town, as compared with those favoured with a clear atmosphere. His own practical experience had been for upwards of the last twenty years, under the less favourable conditions, consequently he could not bo expected to successfully compete with those placed under more auspicious circumstances. In dealing with early spring-flowering forced bulbous plants, the lecturer naturally commenced with narcissi, and in the case of the plants for table decoration, he advocated the planting of a dozen or more bulbs in bowls or pans, each containing one variety only, and when in a state of inflorescence, they could readily be introduced to the ornamental bowls or vases, and at once present an imposing effect. So also a similar procedure could follow with tulips, lilies of the valley, and other suitable subjects. The cultural and decorative properties of lilies, and numerous other bulbous plants, were more or less commented on, both for border and for forcing. It may also here be noted that Mr. Cryer adverted to the highly decorative value of the hippeastrums, of which he is a notable expert and specialist, having raised numerous high-class seedlings.

The subject-matter was interestingly discussed by several of the members, and a hearty vote of thanks was accorded Mr. Cryer.

Bristol Gardeners' Mutual Association.

A well-attended meeting was held on March 26 at St. John's Parish Rooms, presided over by W. E. Budgett, Esq. In opening the proceedings the Chairman referred in feeling terms to the death of Mr. Orchard, late gardener to Arthur Baker, Esq., Henbury Hill, and proposed that the secretary write a letter of condolence to Mrs. Orchard. Mr. J. C. House seconded the motion, which had the support of all members.

The subject for the evening was "Weeds," by Messrs. Garnish and Jennings. Mr. Garnish opened the subject, and said he experienced a difficulty in what to say and what to leave unsaid owing to the wide scope of the subject. He explained that there were tall, dwarf, creeping and climbing, perennial, and annual weeds. In the herbaceous border there were, the speaker said, some plants that were no better than weeds when neglected. He concluded by saying that weeds were a blessing as their eradication caused labour.

Mr. Jennings dealt with weeds in their various aspects, such as unsightly weeds in paths, but recommended weed killers. He found an old wall a very prolific place for dandelions, etc., but advised spraying the wall, as by so doing it would save trouble, as seed blew a long way when ripe. The speaker found it hard work in keeping a lawn free from weeds, but advised, when possible, to lift the turf and hand weed it. Mr. Budgett opened the discussion, and was followed by Messrs. Clark, Lee, Curtis, Binfield, Shaddick, and House.

For a lady's spray and a gentleman's buttonhole, for under-gardeners only, Mr. Grieve was first, Mr. Coombes second, Mr. Attwell third, and Mr. Austey was awarded an extra. Certificates were awarded to Mr. Holt for four pots of mignonette; Mr. Curtis for Dendrobium fimbriatum oculatum; and Mr. Shaddick for Dendrobium nobile.

NEW BOOKS.

THE BOOK OF GARDEN PESTS.

By R. Hooper Pearson, F.R.H.S. (John Lane, The Bodley Head, London.) Price 2s. 6d. net.

The publication of this important addition to Mr. Lane's list of handbooks of practical gardening is a matter of considerable interest, inasmuch as it affords a strong proof of the fact that cultivators are becoming keenly alive to the desirability of their possessing a knowledge of the best methods of dealing with the various plant pests. With this increased interest in the matter which has an important bearing upon the degree of success attained there is good cause for satisfaction. It is satisfactory because, with a knowledge of the best methods of preventing attacks, and dealing with infestations at his finger ends, the cultivator has his daily task materially lightened as compared with the time when but little was generally known of the more destructive of fungoid diseases and insect pests.

There are, of course, many good books on plant diseases and injurious insects, but there is not, as far as we are aware, one that is on the same lines as that now before us. In the majority of cases fungi and insects are dealt with in separate books, and to this there is no objection except that of cost, which, to a very considerable proportion of those engaged in practical horticulture, is a very serious matter. In the "Book of Garden Pests" both fungi and insects are dealt with, and as the several kinds are arranged under the respective host plants, the reader is able to find, with the smallest amount of trouble, any enemies with which his plants may have been attacked, and full information relating to the best methods of combating them. If, for instance, his ferns have become unhealthy, and he turns to the section devoted to them, he will, with the aid of the information given therein, learn whether they are being injured by weevils, scale, aphis, root-feeding mealy bug, or fern rust. Having ascertained the cause of the injury that is being done, it will be found a very simple matter to discover the best remedy and the method of application. In addition to the sections into which ornamental plants, fruits, and vegetables are grouped, there are chapters on pests common to many species of plants, common to fruit trees, and common to vegetables, and on insecticides and fungicides. The book is so admirably arranged, freely illustrated, and concise, clear and sound in treatment, that it can be recommended as one of the most valuable contributions that has of late been made to horticultural literature, and we heartily congratulate Mr. Hooper Pearson on the splendid success he has achieved.

FLOWERS AND FRUITS FOR THE HOME.

By I. L. Richmond. (T. N. Foulis, 13 and 15, Frederick Street, Edinburgh.

A brightly written book, admirably adapted to the requirements of the amateur horticulturist, in which Mrs. Richmond deals with such subjects as bulbous plants, carnations, basket plants, hardy climbers, flowering trees and shrubs, chrysanthemums, tuberous begonias, and small and wall fruits, in an instructive manner.

PERMANENT AND TEMPORARY PASTURES.

By Martin J. Sutton, F.L.S. (Simpkin, Marshall, Kent, and Co., Lim., London.) Popular edition, price 1s.

In issuing a popular edition of his great work on the formation and management of pastures at the price of one shilling, Mr. Martin J. Sutton has rendered a service of immense value to those of limited means who are interested in grass lands. Twenty-two years have elapsed since the first edition was published, and during this period it has been our duty to speak of the successive editions in appreciative terms, and the edition that is now before us fully confirms the high opinion we have had of the work. This edition, although published at so low a price, leaves nothing whatever to be desired in the matter of paper and printing, and has been carefully revised.

ROSE GROWING MADE EASY.

By John G. Lockley. ("Amateur Gardener" Proprietary, 14, Moore Street, Sydney.) Price 1s. 6d.

A well-written and freely illustrated book on the cultivation of roses, that should prove of much value to amateur rosarians in New South Wales. The dates of introduction of the varieties included in the best hundred roses require careful revision.

VILLA GARDENS.

By W. S. Rogers. (Greening and Co., Lim., London.) Price 6d.

A book that should be useful to amateurs with small gardens who desire to render them as beautiful and interesting as possible. The author has provided a large number of excellent plans for laying out small areas of garden ground, and gives much useful advice on the points requiring attention.

THE CASE FOR THE GOAT.

By "Home Counties." (George Routledge and Sons, Lim., London.) Price 3s. 6d.

The author, who has a high opinion of the value of the milk supply derived from the goat, has set himself the task of endeavouring to remove the ignorant prejudice against the animal, but whether he succeeds or not, he will have the satisfaction of knowing that he has presented the case for the goat in an admirable manner. There is, of course, much to be said both for and against the keeping of goats for the purpose of contributing to the milk supply of the household. The milk is unquestionably rich and nourishing, and therefore most valuable as an article of diet for young children, and especially for those who have a weakly constitution. Not only is the quality high, but the supply is quite sufficient to give an ample return for the cost of food and the time involved in the management of the animals. In the case of goats, as of other domesticated animals, good management is essential to ensure successful results, and, as a matter of course, well-bred animals can alone be depended upon to prove satisfactory. Those who are at all interested in goats will do well to obtain a copy of the work and make themselves masters of the contents. If they do this they will not only be fully acquainted with the author's views on the more important points relating to keeping goats for profit, but they will know what the views of other goat keepers are on such questions as breed, milk production, food supplies, and management. The book is freely illustrated.

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

TUESDAY, April 7.—Brighton Spring Show; two days.
Croydon Gardeners' Association; lecture on "Peaches and Nectarines," by Mr. Seabrooke.
National Amateur Gardeners' Association; lecture on "Beautiful Arrangements of Roses," by Mr. G. Gordon, V.M.H.
Truro Daffodil and Spring Flower Show; two days.

WEDNESDAY, April 8.—Examination in Horticulture at the Royal Horticultural Hall.

THURSDAY, April 9.—Glamorgan Spring Show.

TUESDAY, April 14.—Royal Horticultural Society; Fruit, Floral, and Orchid Committees meet at 12 o'clock; Narcissus Committee at 11.30 a.m.; lecture at 3 p.m. on "Hardy Cacti and Other Hardy Succulents," by Mr. E. A. Bowles, M.A., F.L.S.; Scientific Committee at 4 o'clock.

WEDNESDAY, April 15.—Royal Society of Arts.
Royal Caledonian Horticultural Society's Spring Show; two days.
Tunbridge Wells Daffodil Show.

THURSDAY, April 16.—Brighton Horticultural Society Meeting; lecture on "Botany for Gardeners," by Mr. E. F. Hawes.

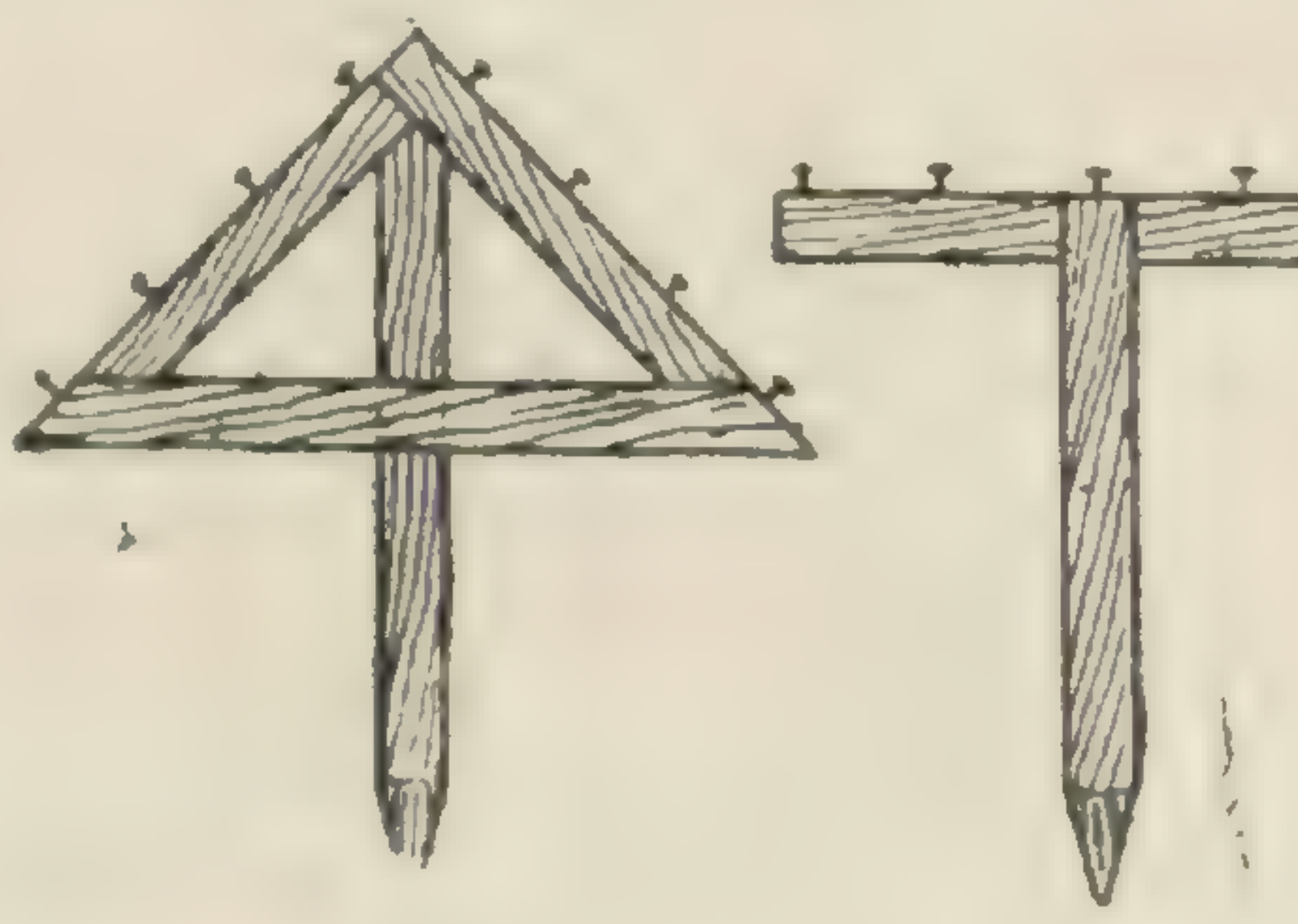
MONDAY, April 20.—Easter Monday.

ANSWERS TO CORRESPONDENTS.

EVERGREEN BEECH.—N. O. R., Andover: The evergreen beech is Fagus betuloides, a native of Terra del Fuego. It has bluntly ovate leaves that are tough, and of a rich shining green colour. It is perfectly hardy, and, during winter, when so many trees are bare, it is particularly handsome. So far as we are aware, the Evergreen Beech is not difficult to cultivate.

MADONNA LILIES.—T. N. W., Lydney: The best, and, indeed, the only proper time to transplant the white Madonna lily is directly after it has finished flowering. It is almost leafless at that season, but it soon begins to make a small tuft of new leaves, and these keep green throughout the winter. Do not disturb the plants now, and unless the clump is a very large and dense one, or there are other good reasons for removal, do not disturb the bulbs after they have flowered, but give them a good top-dressing of dried cow manure and leaf-mould.

PROTECTING SEEDLINGS WITH THREAD OR COTTON.—A. A. L., Winchester: Where birds are troublesome in the spring, and there are few gardens in which they do not levy toll on the seeds and the juicy seedlings when protective measures are not resorted to, for protecting seeds and seedlings in beds, it is a good practice to fix sticks about six inches apart on each side of the beds, and then stretch black thread across them in all directions a few inches above the surface. Rows of peas and other seeds can also be protected by stretching black thread along them, but the following plan is preferable. Obtain some laths about one inch by three-quarters of an inch, and make stretchers of triangular or T-shape, as shown in the accompanying illustrations. Fix nails along the top, as shown, and place the stretchers six or seven feet apart, and then stretch thread along the rows, giving the strand a twist round a nail to make it secure.



THREAD STRETCHERS.

SEEDLING CARNATIONS.—T. S., Devon: The crimson variety has very intense colouring, indeed, we are afraid the colour is almost too deep to be really effective; the calyx bursts, and this is a defect. The cream-coloured seedling impresses us with its fine calyx and soft colouring; if the petals were a little smoother it would be very fine. We should like to see blooms again, as both varieties are of considerable promise.

HYBRID SAXIFRAGAS.—F. E. B., St. Neots: There are several very useful and beautiful saxifragas of hybrid origin, and among the most popular for garden use are: S. Andrewsi—S. Geum x S. Aizoon; S. apiculata—S. aretioides x S. scardica; S. Boydi—S. aretioides x S. Burseriana; S. Macnabiana—S. Cotyledon x S. lingulata or S. Hosti: and S. Salomoni—S. Rocheliana x S. Burseriana.

BASAL GROWTHS IN CHOICE LILACS.—M. F. S., Norwich: The growths springing up from the base are suckers produced by the stock, and should be removed. Carefully remove the soil around the suckers so as to trace them back to their source, and then cut them back as closely as possible. Such suckers rob the choice variety, and, if allowed free course, will eventually overpower it completely.

LIME TREES ON LIGHT SOIL.—C. G., Southampton: About the worst possible tree for planting in light thin soils is the lime tree, because it suffers quickly from drought, and is one of the first of trees to be defoliated in a dry summer. In deep soil, and a moderately moist district lime trees are very beautiful and graceful; in fact, few trees are more beautiful, but as town trees, and on light soils they are not a success.

BEZI MAI PEAR.—D. J., Hereford: This variety appears to be but little grown nowadays, as there are so many better pears. It is a very late variety, coming into use in May, but it rarely has a sufficiently long and hot summer to do it justice in this country. It was raised in Brussels by M. J. de Jonghe, and first fruited in 1856. The late Mr. Blackmore, who tested so many pears at Teddington, described it as "fit for a nether millstone."

EARLY-FLOWERING CHRYSANTHEMUMS. — M. E., Southport: Lift the old stools and pull them to pieces, discarding the hard central portion. Every piece that has roots attached will make a plant if carefully treated. It is a good plan to set out the pieces six inches apart in a nursery bed of rich soil, as here the plants will receive a little extra attention in the way of watering, etc., and they will soon make sturdy plants that may be transferred to the positions they are to flower in as opportunities occur.

DISEASED GERANIUMS.—H. S., Tooting: In many cases the plants are suffering from a fungus attack in the stems, but we are not certain whether this is the cause of the damage or whether it follows after a severe check caused by over-watering. We have seen plants suffer in similar fashion when watered with ice-cold water. All you can do is to take off the tops and insert them as cuttings in a warm pit. Heavy fogs following after the plants have been well watered prove very injurious to soft-wooded plants grown in the London district.

BASKET PLANTS FOR A STOVE.—S. S., Aylesbury: There are many subjects suitable for filling baskets to hang in a large stove, and among these the ferns figure largely. Asplenium longissimum, Davallia fijiensis, several of the nephrolepises, D. polyantha, D. tenuifolia Veitchi, Gymnogramma schizophylla gloriosa, Adiantum caudatum, A. dolabriforme, and A. cuneatum grandiceps are a few good ferns for the purpose. Several young plants of Cissus discolor placed in a basket and trained round the wires and up the chains produce a fine effect. Acalypha hispida, Æschynanthus splendidus, A. tricolor, A. Lobbianus, A. Boschianus, Fittonia argyroneura, Russellia juncea, Selaginella Galeotti, and Utricularia montana are other subjects that may well be pressed into service.

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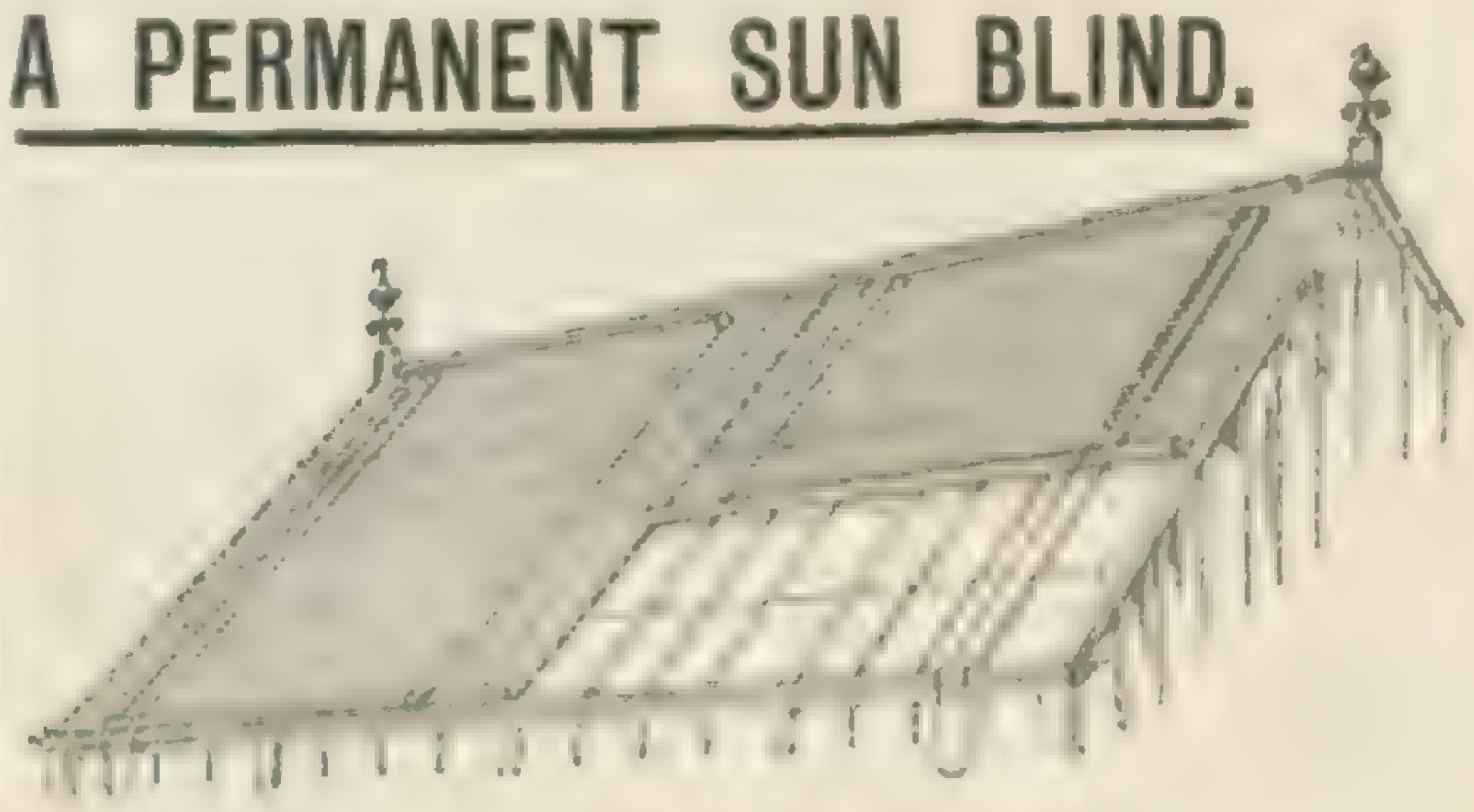

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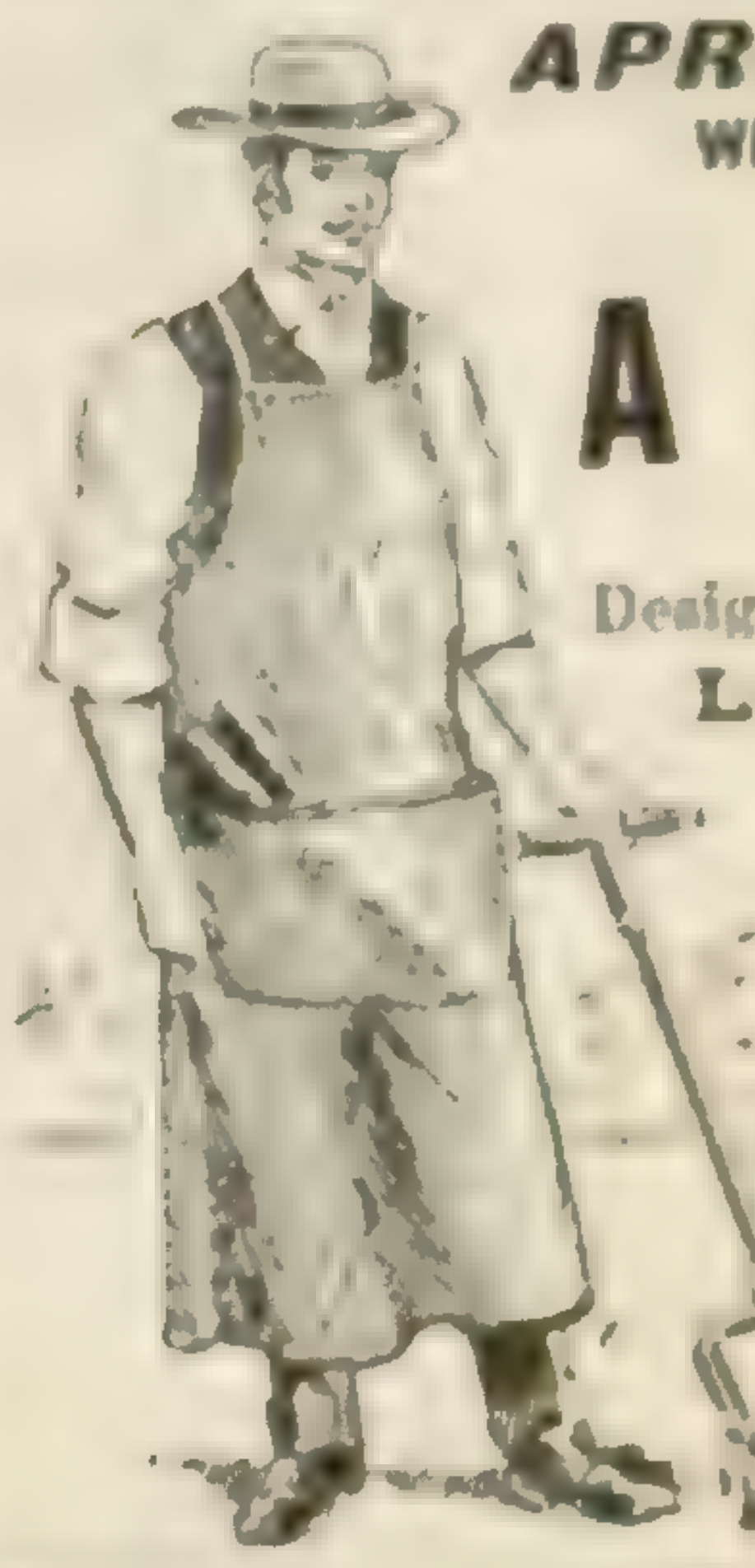

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ROSE STAKES IN BEST REDWOOD—1 in. square, 4 ft. long, 8d.; 5 ft., 10d. 1½ in. square, 4 ft., 1s. 3d.; 5 ft., 1s. 6d.; 6 ft., 2s. [illegible] Price lists free.—PATRICKS, Otley, Yorks.

BEES IN PEACH HOUSES.—N. E. S., Canterbury: It is a capital plan where there are several peach and orchard houses to follow each in the order of flowering, to place a hive of bees in each house successively; the bees will attend to the fertilisation of the flowers during their search for honey. Mr. Hudson uses a hive of bees in his orchard houses at Gunnersbury.

PALAFOXIA HOOKERIANA.—C. H. R., Harwich: The Palafoxias form a small genus of the order Compositæ, and they are natives of Northern and Central America. They are half-hardy annuals, at least, those in cultivation are best so treated, though the several species are seldom seen in gardens. P. Hookeriana makes a bushy plant about a foot or more high, and it carries its rosy-carmine flower heads in clusters. Seeds should be sown at once in gentle heat, and the seedlings pricked out into boxes of light soil as soon as they are large enough to handle. They must be hardened off in due course, and planted in light soil in a warm position.

A MOSS-LIKE PLANT.—P. S. H., Bristol: We are in some doubt as to the plant you refer to, but, failing selaginellas of the S. Kraussiana type, which you dispose of, we can only conclude that the moss-like plant you have seen is Helxine Solieroli. This is a tiny plant, not at all unlike a mossy selaginella at first sight, but it is in no sense related to the selaginellas and ferns. It belongs to the great Nettle family, and is hardy in the southern counties. In a cool house it might well be used as an edging plant in the same way that Selaginella Kraussiana is used in a warmer house. It creeps and roots with the utmost freedom, and is propagated by pulling a little tuft to pieces and inserting the smaller tufts in sandy soil; large sixty-sized pots, well filled with Helxine Solieroli, with the moss-like greenery hanging over the rim, are very pretty objects, and the green is so deep and rich that it is very suitable for association with flowering plants of all kinds. Some few years ago Mr. P. Waterer exhibited a large group of phloxes at the Royal Horticultural Hall, and margined the display with Helxine Solieroli, in pots, and it was noticeable how few people knew the plant, but how all admired it. Helxine Solieroli comes from Corsica and Sardinia, and is obtainable through the nurserymen who advertise in our columns.

NAMES OF PLANTS.

L. C., Carlisle.—1, Primula verticillata; 2, P. marginata.

T. M., Wolverhampton: 1, Aphelexis humilis; 2, Nepenthes Mastersiana; 3, Ada aurantiaca.

G. N. G., Gloucester.—1, Saxifraga oppositifolia; 2, Adonis amurensis; 3, Chionodoxa Luciliæ; 4, Erica carnea.

A. T., Chester.—1, Sequoia gigantea; 2, Acacia cultriformis; 3, Polygala Dalmaisiana; 4, Odontoglossum cirrhosum.

J. W. Ripon.—1, Anemone hepatica; 2, Adonis amurensis; 3, Pinus Laricio; 4, apparently Cupressus funebris; poor specimen.

C. R., Exmouth.—1, Pittosporum Tobira; 2, Hibbertia dentata; 3, Acacia Drummondi; 4, Camellia reticulata; 5, Rhododendron arboreum; 6, Acacia armata.

D. P., Grosmont.—1, Cupressus Lawsonianus Silver Queen; 2, Abies concolor; 3, A. grandis (Gordoniana); 4, Pinus Cembra; 5, Abies Nordmanniana; 6, Cupressus Lawsonianus gracilis aurea.

Flowering of Calanthe Veitchi.—With reference to the inquiry relating to the flowering of this beautiful calanthe made by Mr. Pragnell, the average number of flowers on a spike produced by the plants grown here is 40. Of this number we have about thirty expanded flowers at one time, all quite fresh. At times a few produce 45 blooms. As a rule only one spike is allowed to each pseudo-bulb, and when there are two spikes the number of flowers is about 30.—J. MAYNE, Bicton, Devon.

LETCHWORTH GARDEN DESIGN EXHIBITION AND COMPETITION, 1908.

The Garden City authorities at Letchworth have instituted the following interesting competitions:—

Class 1.—Design for gardens of a suburban residence, drawings of which will form part of the particulars furnished to each competitor. These drawings will include a site plan giving levels. Class 2.—Design for gardens for above, to include a rose garden. Class 3. —Design for gardens for above, to include a Kelway herbaceous border. Prizes: Class 1, first prize, £5; class 2, first prize, £3 3s., given by Mr. Robert Harkness, rose grower, Hitchin, Herts; Class 3, first prize, £5; second prize, £3 10s., both given by Messrs. Kelway and Sons, Langport, Somerset.

Class 4.—Design for gardens for a block of ten cottages, to be built as a speculation on a corner site, six facing east and four facing north. Drawings, including site plan with levels shown thereon, form part of the particulars supplied to competitors.

Entrance fee for each of the above classes, 2s. 6d. For full particulars, intending competitors should write to the Estate Office, First Garden City, Lim., Letchworth, Herts, inscribing letters, "Garden Design Competition."

The drawing, embodying part of the particulars given to each competitor, has been kindly prepared for the purpose by Messrs. Barry Parker, and Raymond Unwin, architects, Letchworth. All designs sent in for competition, which are to reach the Estate Office, First Garden City, Lim., Letchworth, not later than June 1, 1908, must bear a nom de plume only, and must be accompanied by a sealed envelope giving the competitor's name and address. Designs sent in for class 3 are to become the property of Messrs. Kelway and Sons.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. MARCH 22 TO MARCH 28.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 22—Sunday	1 20	45	39	46	34
,, 23—Monday	6 35	43	42	55	41
,, 24—Tuesday......	8 0	45	43	56	32
,, 25—Wednesday..	—	42	42	47	41
,, 26—Thursday ...	—	41	41	45	39
,, 27—Friday	5 0	40	39	52	38
,, 28—Saturday ...	6 5	42	39	49	40
Means	3 50	43	41	50	38

DATE. 1908. MARCH 22 TO MARCH 28.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg
Mar. 22—Sunday	0.22	38	41	42	24
,, 23—Monday	—	40	41	42	38
,, 24—Tuesday......	0.17	41	42	42	25
,, 25—Wednesday..	0.45	44	43	42	39
,, 26 Thursday ...	0.01	43	43	43	38
,, 27 Friday	0.10	42	43	43	30
,, 28—Saturday ...	—	43	44	43	35
Means ...	(total) 0.95	42	42	42	33

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Dunbar Up-to-Date	per ton	115 0		120 0
Kent Up-to-Date	per ton	90 0		100 0
Langworthy	per ton	90 0		105 0
Lincoln Maincrop	per ton	95 0		110 0
Lincoln Up-to-Date	per ton	90 0		110 0

MARKETS.

◆

COVENT GARDEN.

Flowers.

Brighter weather has increased supplies. Business is very good for the season.

		s. d.	s. d.
Acacia	per doz. bun.	6 0	12 0
Adiantum cuneatum ...	per doz. bun.	5 0	9 0
Anemones	per doz. bun.	1 0	3 0
Arums	per doz.	1 6	3 6
Asparagus	per doz. bun.	1 6	[illegible]
Azalea	per doz. bun.	3 0	[illegible]
,, mollis	per bun.	1 0	1 6
Berberis	per doz. bun.	1 [illegible]	2 6
Camellias	per doz.	1 6	2 0
Carnations	per doz. blms.	1 6	2 6
,, ...	per doz. bun	8 0	12 6
,, Malmaison	per doz. blms.	8 0	12 0
Cattleyas	per doz.	8 0	12 0
Cœlogynes	per doz. blms.	1 0	1 6
Croton leaves	per bun.	1 0	1 6
Cyclamens	per doz. bun.	6 0	8 0
Cypripediums	per doz. blms.	2 0	3 [illegible]
Daffodils	per doz. bun.	1 6	[illegible]
Eucharis	per doz.	3 0	4 [illegible]
Forget-me-not	per doz. bun.	2 0	[illegible]
French fern	per doz. bun.	1 0	3 0
Freesias	per doz. bun.	2 0	3 [illegible]
Gardenias	per doz.	2 0	4 [illegible]
Hyacinths, Roman	per doz. bun.	4 0	[illegible]
Lapagerias	per doz.	1 0	2 [illegible]
Lilac	per bun.	3 0	4 [illegible]
Lilium auratum	per bun.	2 0	[illegible]
,, speciosum	per bun.	2 0	3 [illegible]
,, longiflorum	per bun	2 6	4 [illegible]
Lily of the Valley	per doz.	6 0	[illegible]
Marguerites, white	per doz. bun.	3 0	[illegible]
,, yellow	per doz. bun.	2 0	3 [illegible]
Mignonette	per doz. bun.	3 0	[illegible]
Narcissus	per doz. bun.	1 6	4 [illegible]
Odontoglossums	per doz. blms.	2 0	[illegible]
Pelargoniums	per doz. bun.	5 0	[illegible]
Ranunculus	per doz. bun.	3 0	[illegible]
Roses	per doz.	2 0	10 [illegible]
Smilax	per doz. trails	2 0	3 [illegible]
Spiræa	per doz. bun.	5 0	[illegible]
Stocks	per doz. bun.	3 0	4 [illegible]
Sweet Peas	per doz. bun.	3 0	[illegible]
Tuberoses	per doz. blms.	0 4	0 [illegible]
Tulips	per doz. bun.	5 0	[illegible]
Violets	per doz. bun.	2 0	4 [illegible]
Wallflowers	per doz. bun.	1 6	2 0

Fruits.

There is a good demand for cranberries, [illegible] oranges, and bananas; the latter are cheaper.

		s. d.		s. d.
Apples, Canadian	per barrel	10 0	to	[illegible]
,, Californian	per box	9 0		[illegible]
Bananas	per bun	3 0		[illegible]
Cranberries	per case	8 6		[illegible]
Cob Nuts	per doz. lb.	4 0		[illegible]
Grapes, Alicante	per lb.	1 6		[illegible]
,, Belgian	per lb.	0 10		[illegible]
,, Muscats	per lb.	3 6		[illegible]
,, Gros Colmar	per lb.	1 3		[illegible]
,, Channel Islands	per lb.	0 9		[illegible]
,, Almeria	per barrel	10 0		[illegible]
,, Cape	per box	3 0		[illegible]
Lemons	per case	8 0		[illegible]
Nectarines, Cape	per box	6 0		[illegible]
Oranges	per case	7 0		[illegible]
Peaches, Cape	per box	5 0		[illegible]
Pears, Cape	per box	3 0		[illegible]
Pineapples	each	1 6		[illegible]
Plums, Cape	per box	4 0		[illegible]
Strawberries	per lb.	5 0		[illegible]
Walnuts	per bag	7 0		[illegible]

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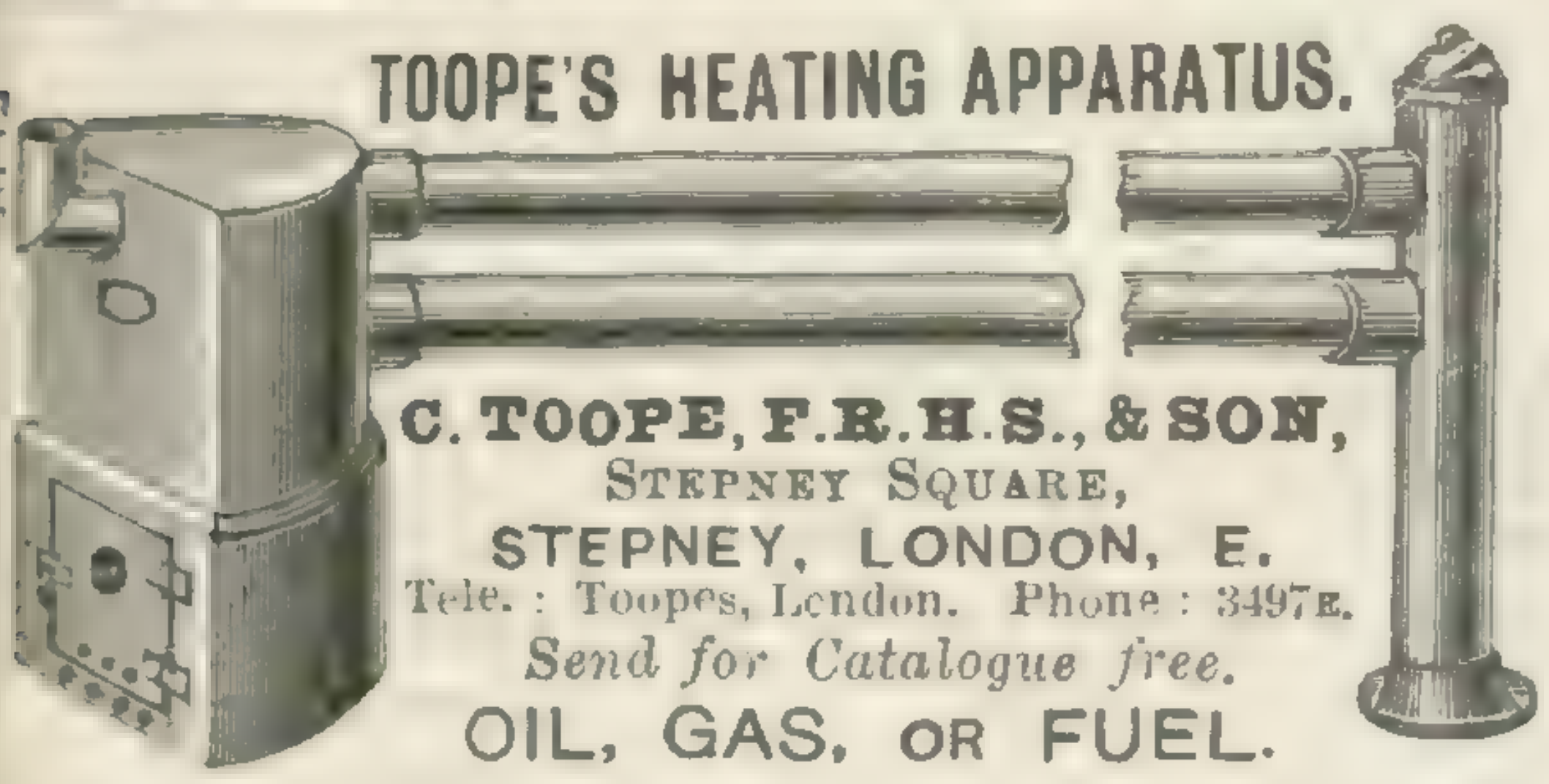
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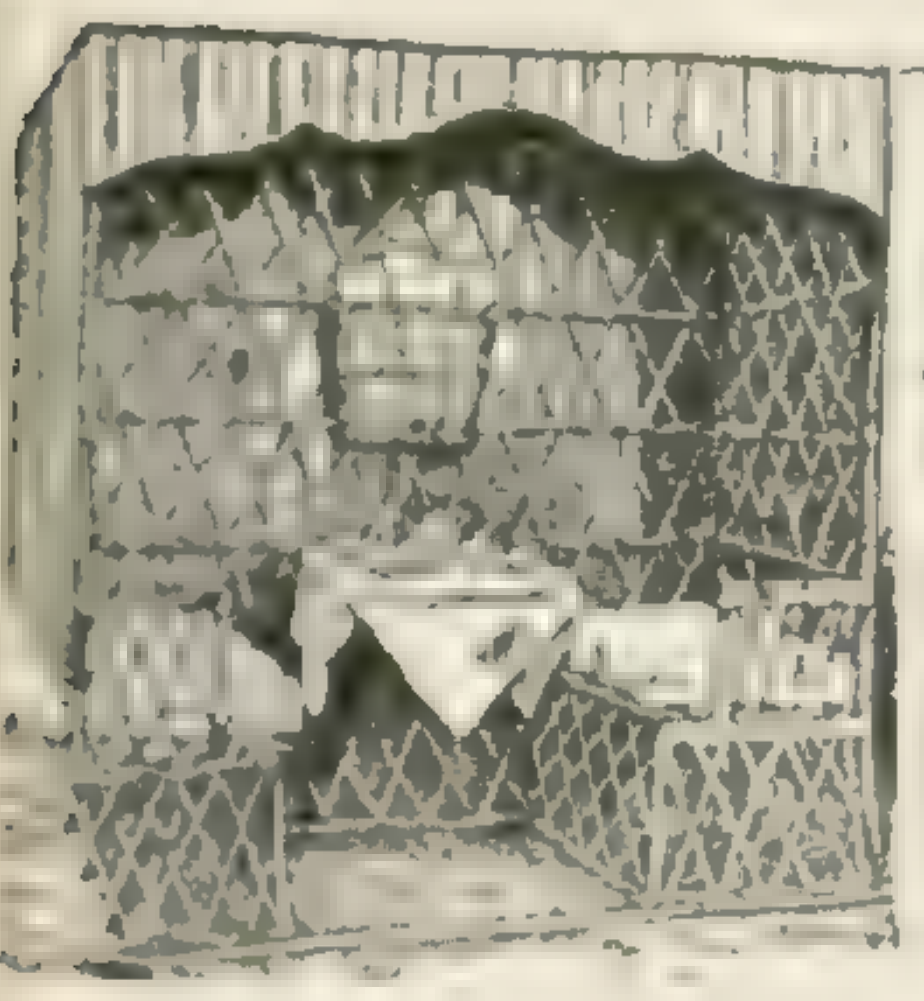
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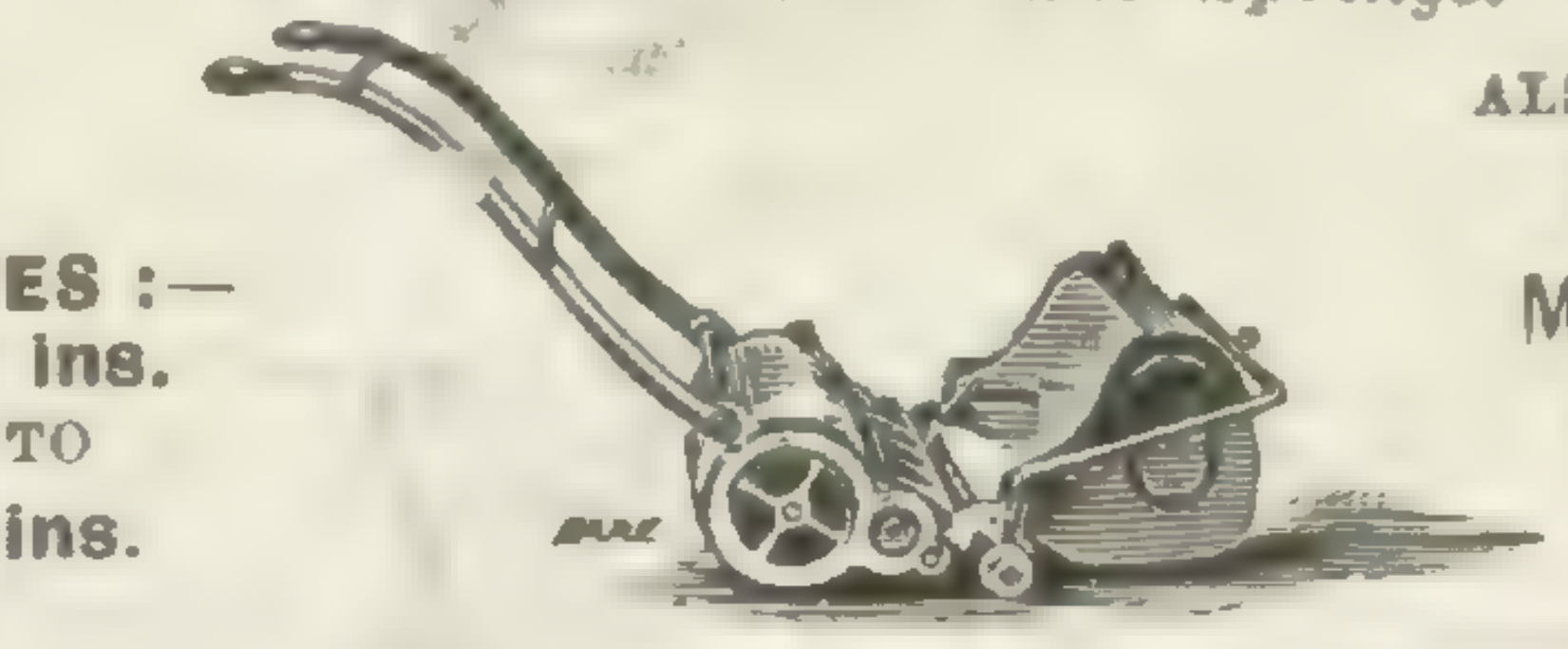
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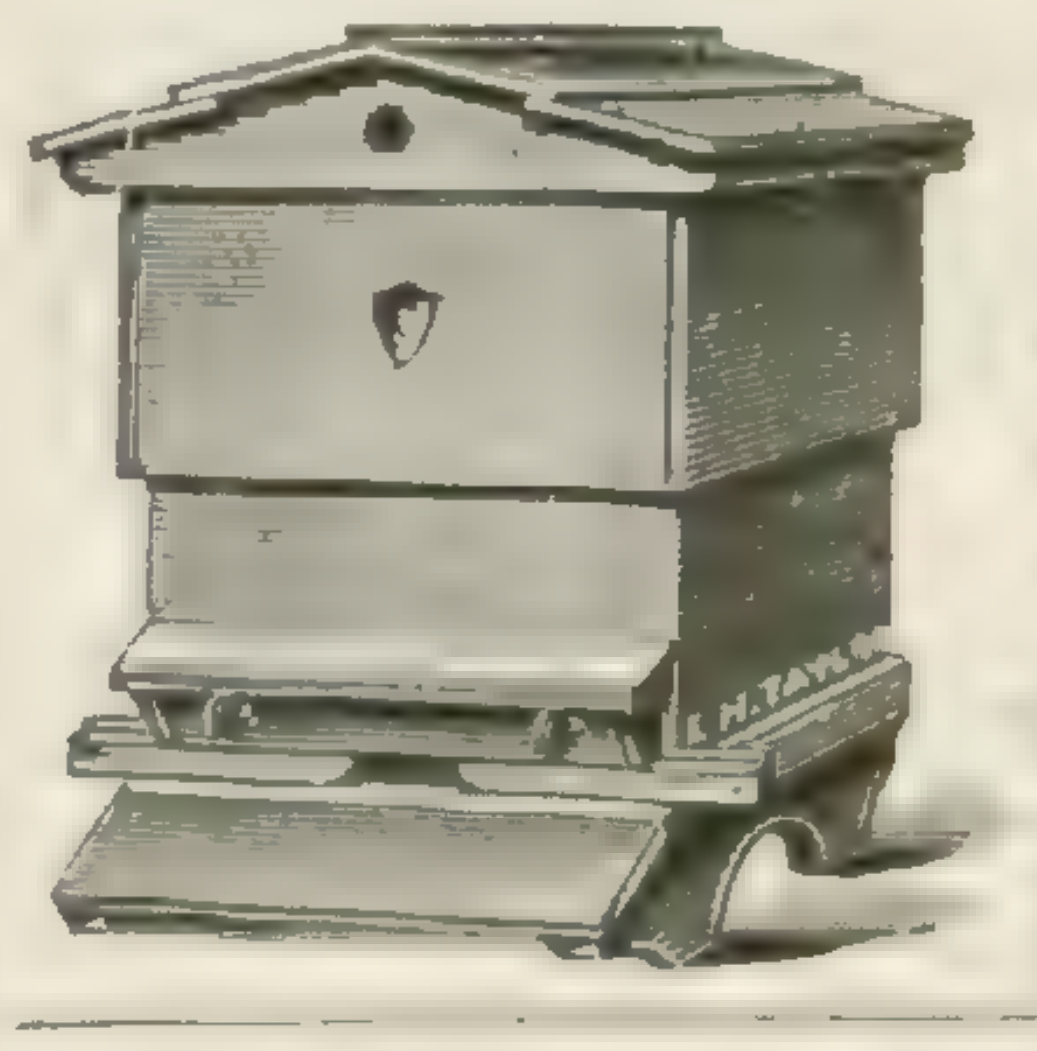
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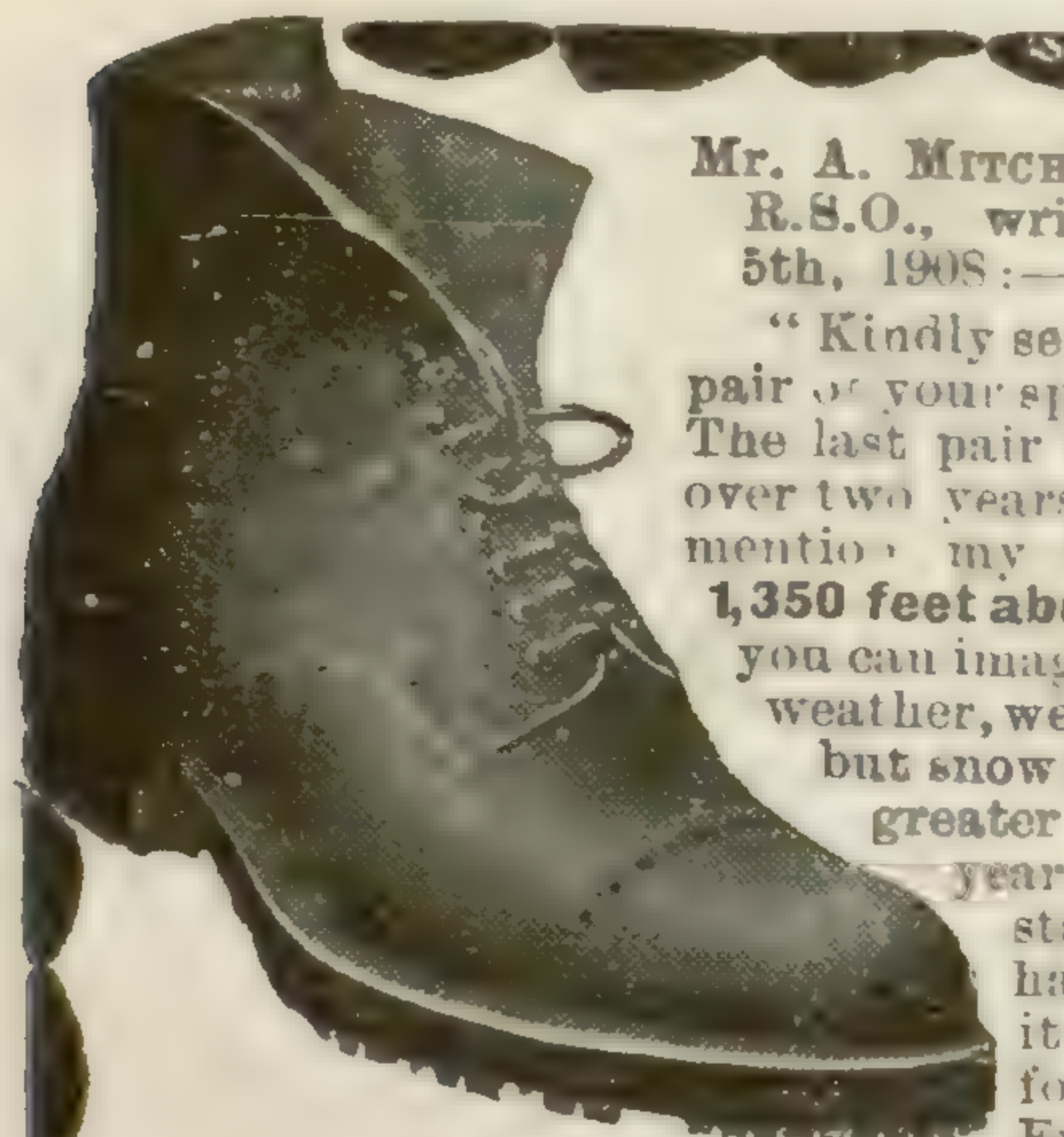

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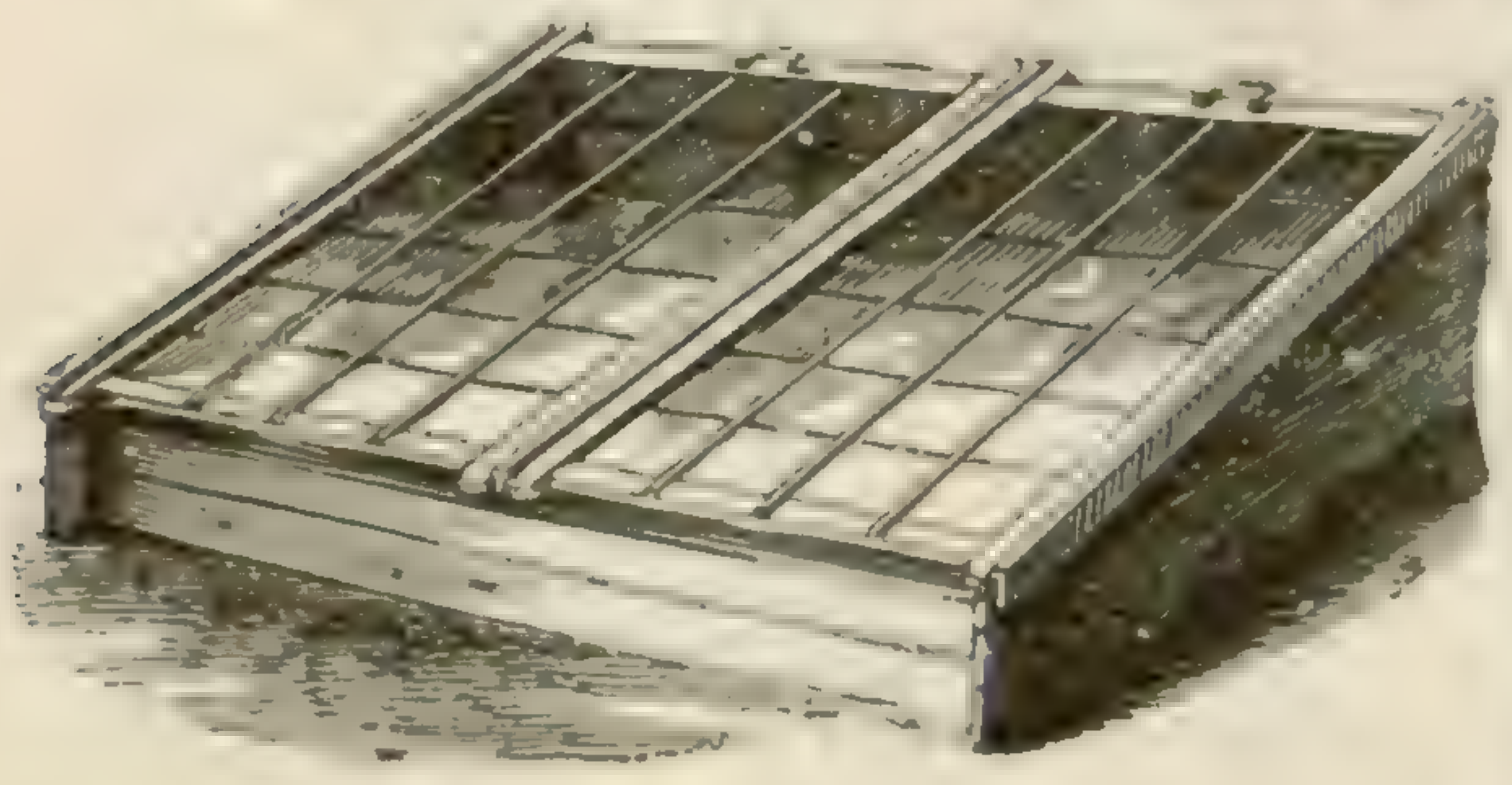

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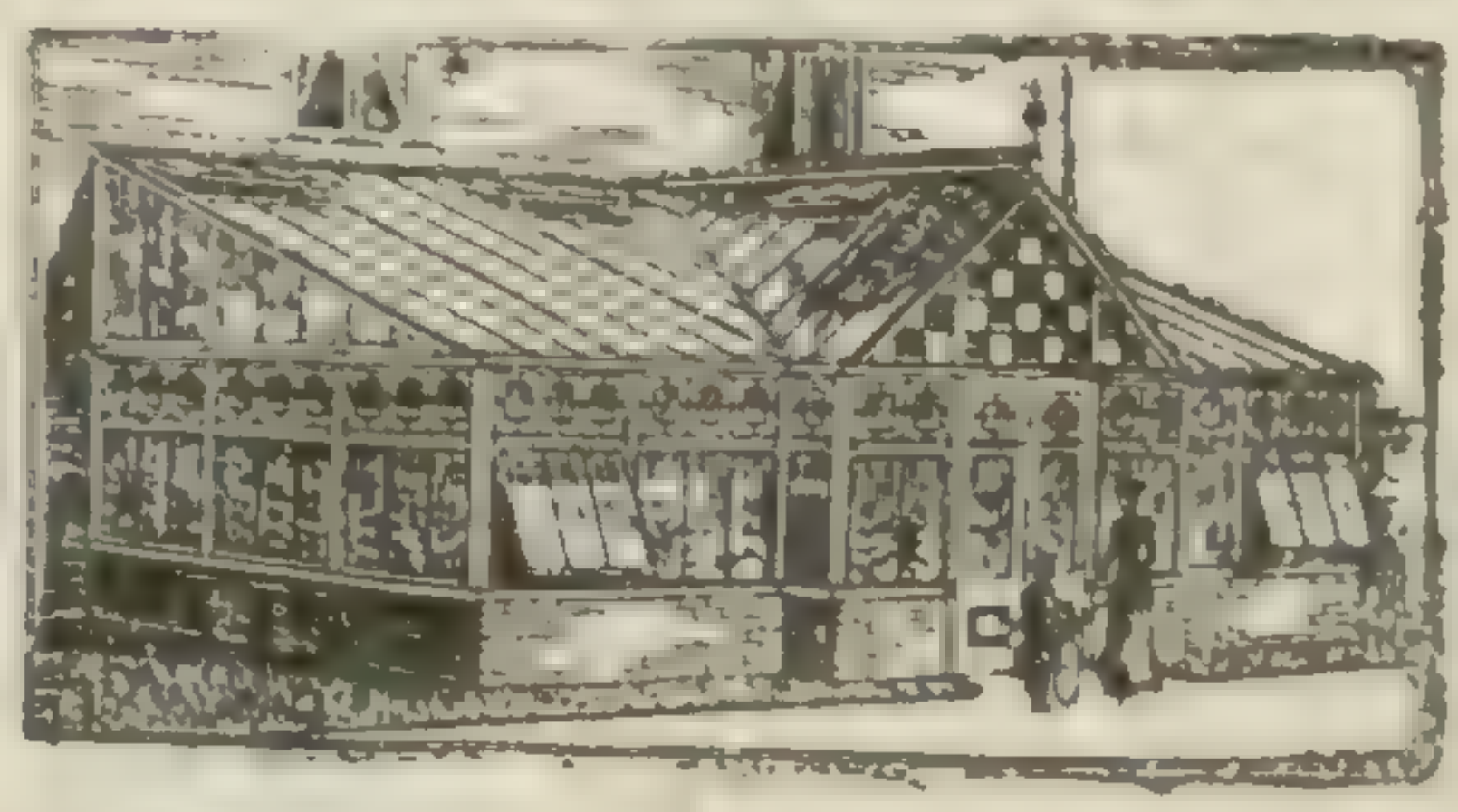

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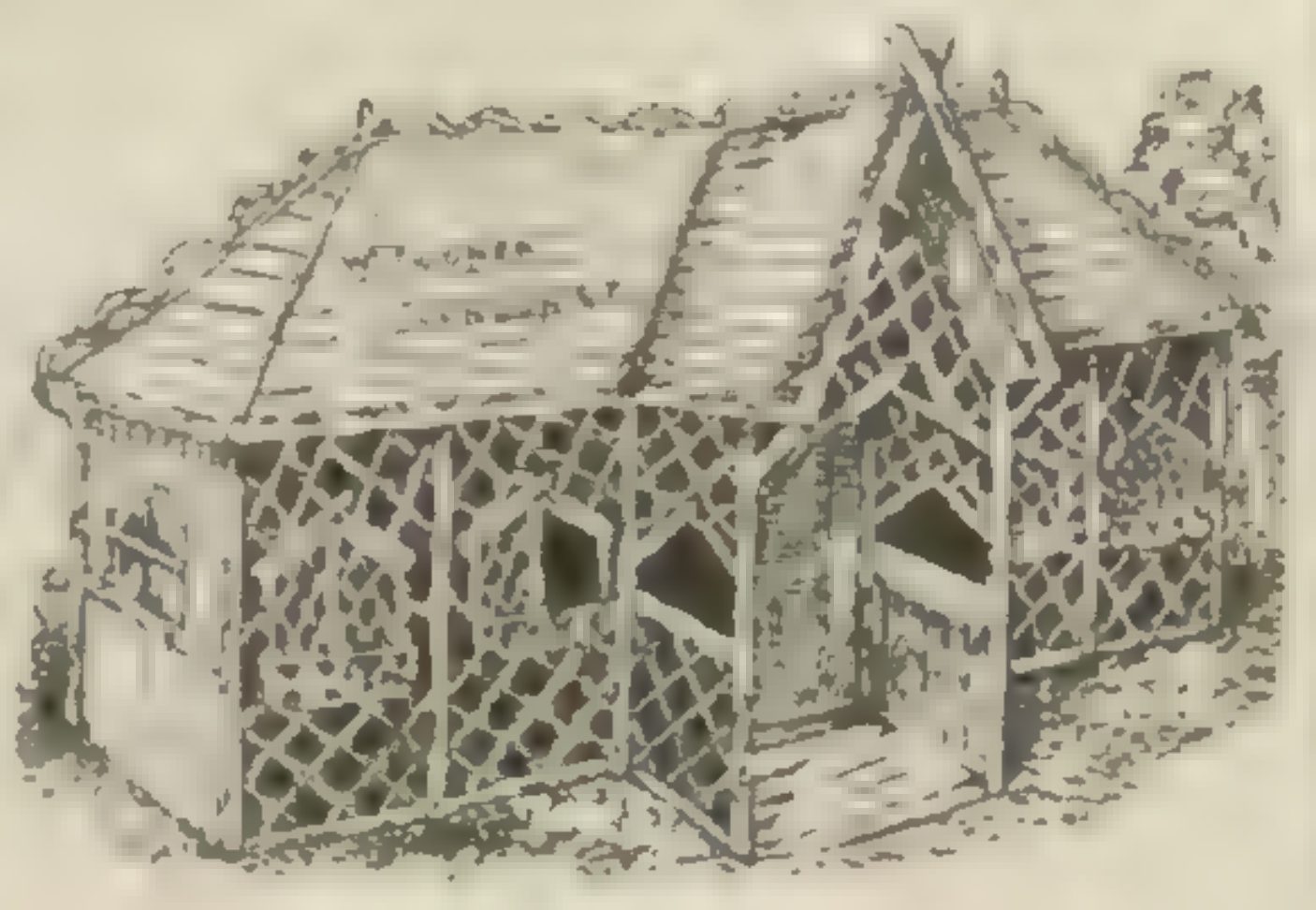

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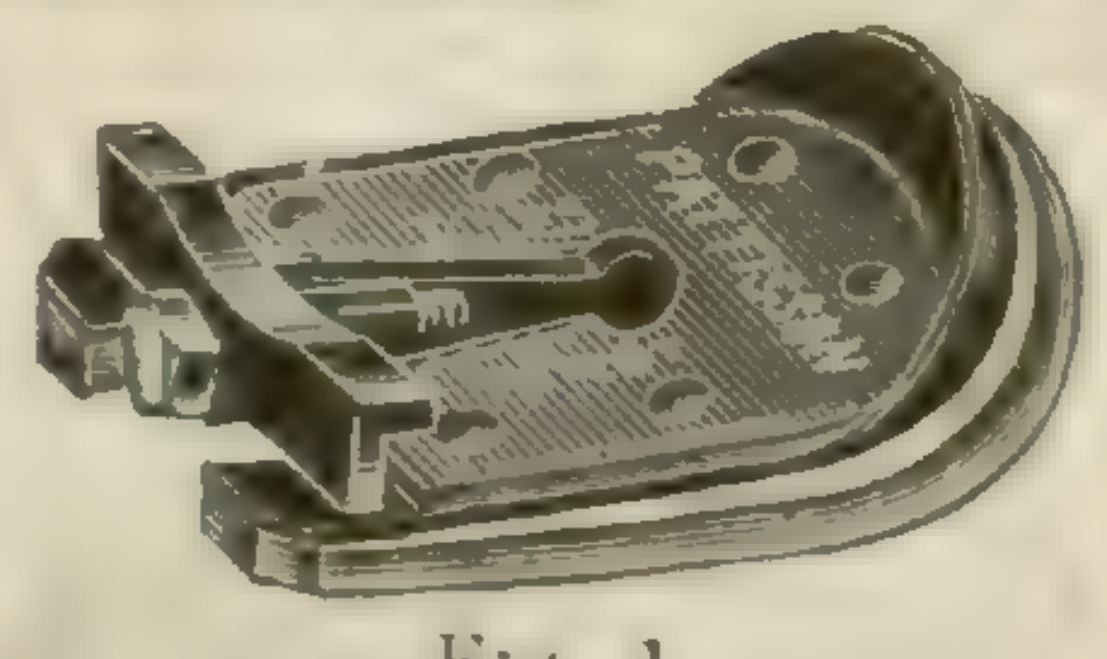

FIG. 1.

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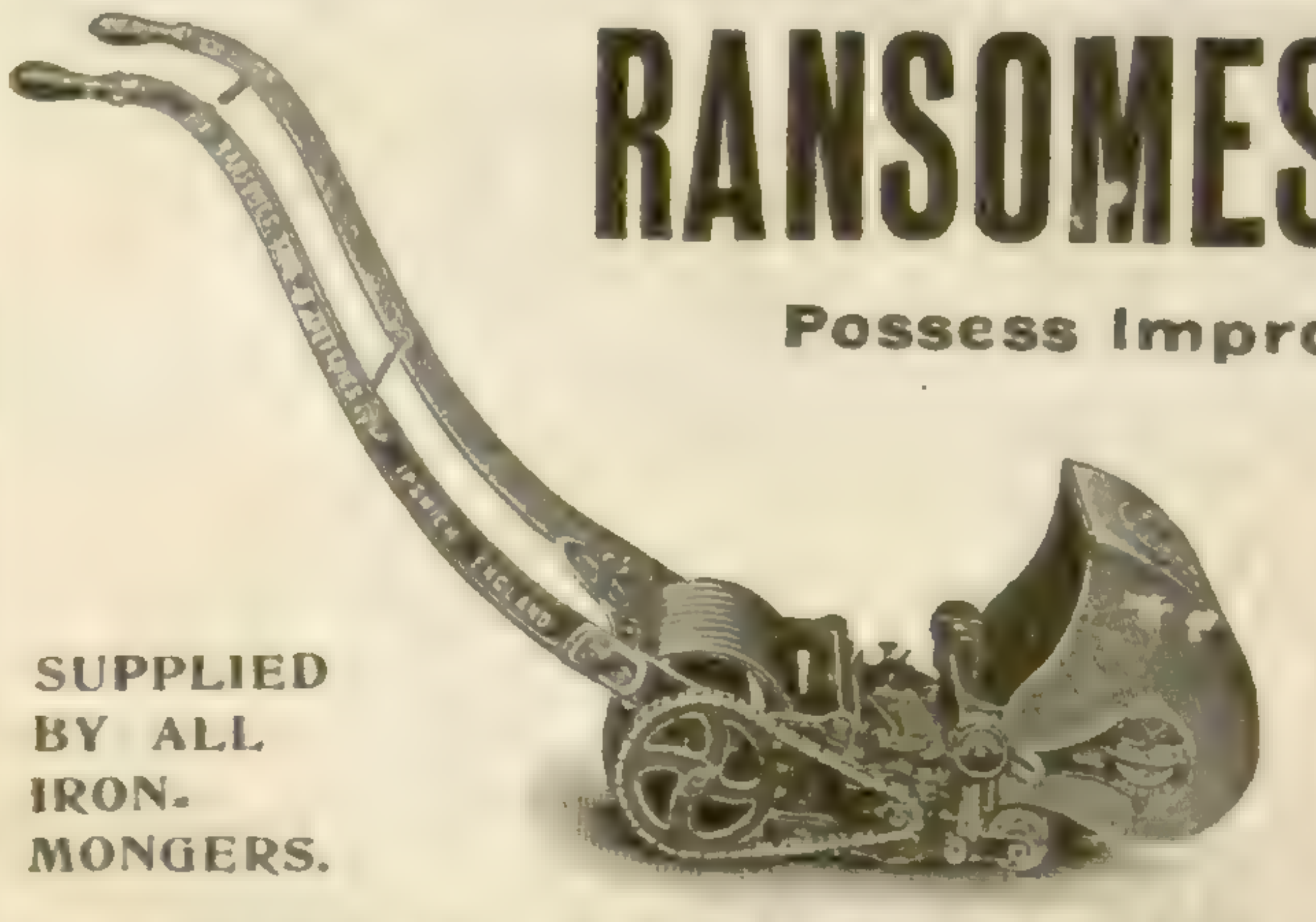

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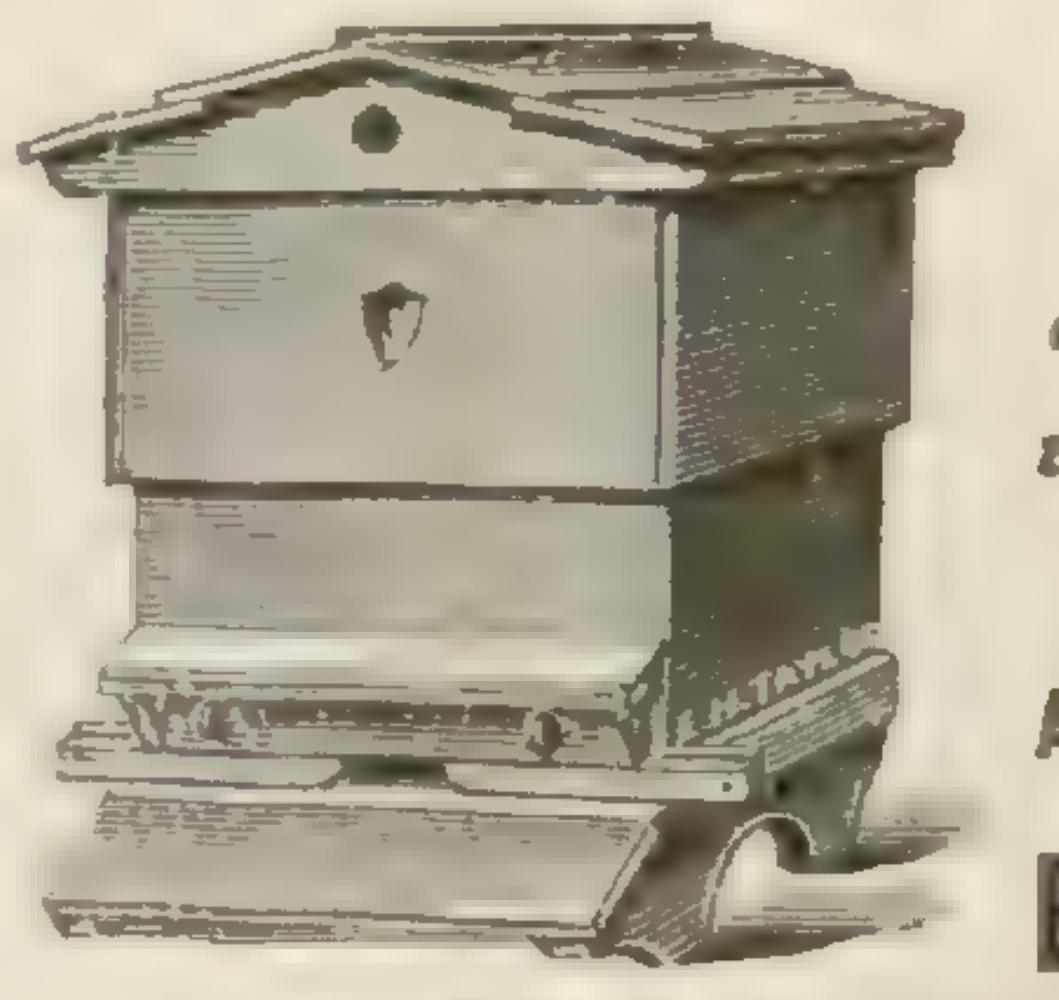

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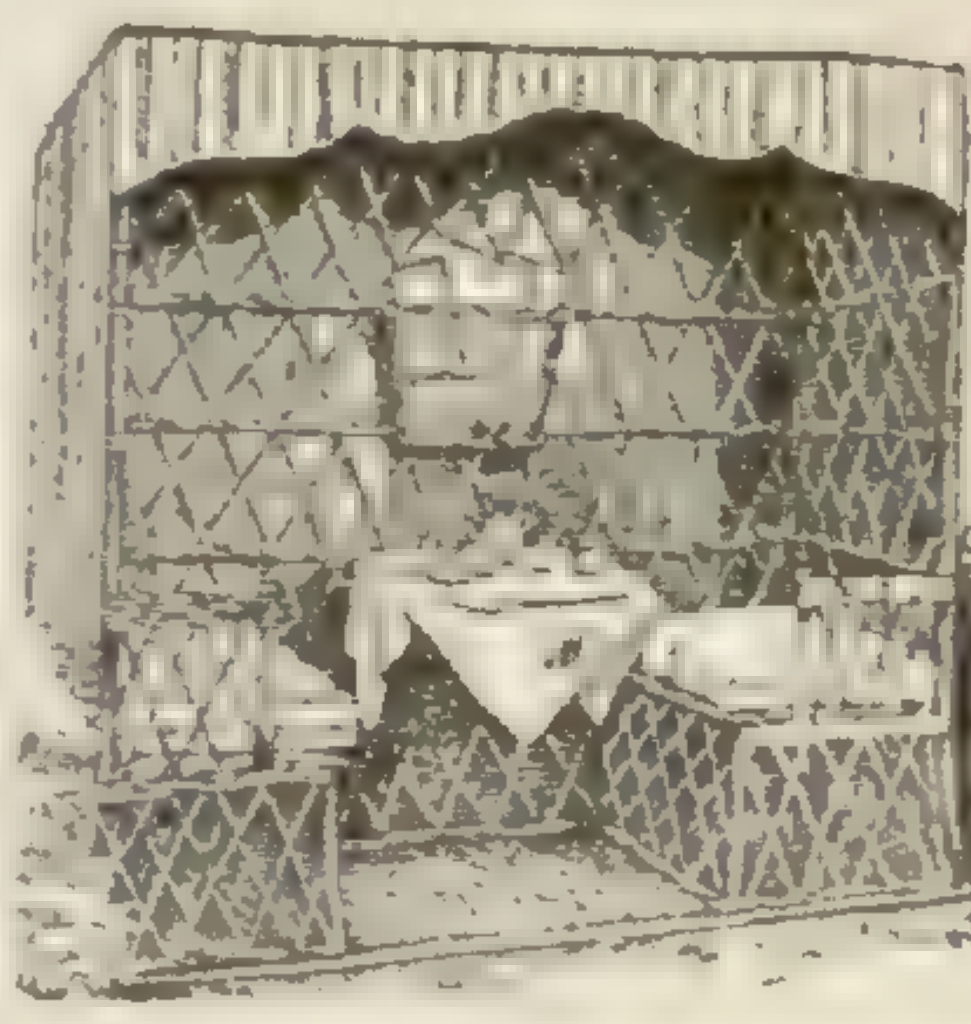

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Situations Wanted.

GARDENER (Head).—W. A. STEARNS, Esq., wishes to highly recommend T. J. WHEELER to any lady or gentleman requiring the services of a thoroughly experienced man; leaving through breaking up the establishment; seven years present place; married; age 37; land and stock if required. The Lodge, Englefield Green, Surrey.

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GARDENER (Head Working); life experience Inside and Out, in good places; 9½ years present; leaving no fault; good references; age 39; single. J. GREENLEES, Ravenstonedale, Westmorland.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head Working); married; age 39; thorough knowledge of fruit, flowers, and vegetables; life experience; highly recommended; sixteen years' head; economical manager. PENFOLD, 15, Helvetia Street, Catford.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working); experienced Inside and Out, with Vines, Peaches, Stove and Greenhouse Plants, Flower and Kitchen Gardens; highly recommended; married; age 39. CHARLES DUNN, Government House, Camberley.

GARDENER (Head Working); married, no family; thoroughly competent in every branch; Land and Stock if required; also capable of Managing gentleman's Private Estate; 18 years' highest character; also highly recommended by present employer. WAITE, Bennington Park Gardens, Stevenage, Herts.

GARDENER (Head Working). — Mrs. VENESS, having sold her property, heartily recommends her excellent Gardener, with her four years; experienced in all branches; 38, married, two girls 11 and two. GARDENER, 3, Claremont Road, Sidley, Bexhill.

GARDENER (Head Working).—F. SMITH seeks SITUATION with any Lady or Gentleman requiring a thorough all-round Gardener; first-class references; life experience; age 45; married, no family. Address Rose Cottage, Mellis, Suffolk.

GARDENER (Head Working).—S. PRAGNELL, past 23 years head gardener to H. C. Wells, Esq., D.L., Broomfield Lodge, Chelmsford, seeks RE-ENGAGEMENT; highly recommended for character and competence to manage extensive gardens, etc. Address above.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

MR. J. ALLEN, Gardener to Honble. R. STANHOPE, Revesby Abbey, Boston, Lincs, can strongly recommend W. EDWORTHY, who has been Foreman here for the past six years, to any lady or gentleman requiring practical, reliable Man as HEAD WORKING GARDENER; age 32; married when suited. Address W. EDWORTHY, as above.

GENTLEMAN highly recommends his Head Gardener, C. WARE; 5 years' good character; age 37; leaving on account of property being sold; married, no family; previous references excellent. HERBERT TAYLOR, Grayrigg, Parkstone, Dorset.

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AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (Single-handed, or with Help), age 26; 10 years' experience; three years in present situation; can be well recommended. H. JENNINGS, Claremont Gardens, Esher.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER (Single-handed with help, or Second where 3 or 4 are kept); 6½ years' experience as Foreman in last place; death cause of leaving; single; age 32; excellent references. G. EUSTON, Shrubs Hill, Sunning Dale, Ascot, Berks.

GARDENER (Single-handed) seeks RE-ENGAGEMENT, or where help is given; 9 years' experience; age 24; single; good refs.; willing and obliging. F. TOPPS, Carlton Lodge, Grantham.

GARDENER (Head of two, or good Single-handed); twenty years' experience, Inside and Out; good references; age 35; married; disengaged. W. HURST, The Lodge, Grove House, Dulwich Common.

GARDENER (good Single-handed, or where another is kept), life experience, Inside and Out; age 31; married; good references. E. AUSTIN, 2, Crescent Cottages, Sth. Bersted, Bognor, Sussex

GARDENER wants SITUATION; Single-handed; 3½ years' in present situation; married. A. STEVENS, 179, Beechcroft Road, Upper Tooting.

GARDENER (Single-handed or otherwise); age 29; married; life experience in all branches Inside and Out; good references. A. WHITE, 117, Lingfield Road, East Grinstead.

GARDENER (Single-handed or Second); good experience, Inside and Out; 2¼ years present place; good character; age 23; single. J. PENDREY, The Gardens, Silvermere, Cobham, Surrey.

GARDENER, age 26, single, wishing to improve his position, desires ENGAGEMENT on gentleman's estate where three or more are kept; willing to learn Inside and Out; good references; disengaged April 16. A. JOY, Sandroyd Place, Cobham, Surrey.

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MR. GILLIAT, Chorleywood Cedars, wishes to recommend N. SIDWELL as GARDENER where two or three are kept; long experience under glass and outside, with a good knowledge of his work; married, no children. Address, N. SIDWELL, Kennell Cottage, Chorley Wood.

GENTLEMAN highly recommends his GARDENER; experienced in all branches; Inside and Out; understands Management of Cattle; age 47; total abstainer. R. MONTAGUE, The Dene, Ropley.

GENTLEMAN highly recommends GARDENER; single-handed, or with help; 5½ years' good character; age 28; single. ASKEW, 4, Mountfield Road, Ealing.

GARDENER (Single) seeks a SITUATION as Under, Inside and Out; age 23; good reference; Bothy preferred. H. GODDARD, Caryll's Cottage, Fay Gate, Horsham.

GARDENER, married, age 26, no family, seeks SITUATION as SECOND or SINGLE-HANDED; life experience in all branches of [illegible] work Inside and Out; have excellent references. Apply JEFFREY, 9, Arthur Road, Christchurch, Hants.

GARDENER.—COL. MALTHUS highly recommends H. GADD, as SECOND, Inside, or Inside and Out; age 24; life experience; six years in present place. H. GADD, Dalton Hill Gardens, Albury, near Guildford.

GARDENER. (Second). — Mr. F. W. SECKER, King's Standing, Burton on Trent, wishes to recommend A. BUDGE, age 28; 12 years experience Inside and Out; married.—Address as above.

GARDENER (Second), Inside and Out; life experience; excellent reference; age 25; disengaged. C. GOULD, The Gardens, Bridgen Place, Bexley, Kent.

FOREMAN (Inside).—S. MILLINGTON, Rigmaden Park, Kirby Lonsdale, Westmorland, can highly recommend J. JONES as above; 10 years experience; South preferred; two years as Foreman here. Apply J. JONES, Vron Cottage, Weston [illegible] Chirk, Shropshire.

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SITUATION as UNDER GARDENER; [illegible] married; age 29; good character. W. [illegible] Cottage, Frimley Lodge, Frimley Green, [illegible]

JOURNEYMAN (Second Inside or Inside and Out); age 22; 7 years' experience; excellent references; Bothy preferred. W. [illegible] of Mrs. T. Smith, East Rudham, King's Lynn, Norfolk.

JOURNEYMAN (First), Inside; [illegible] experience; age 26; can be well [illegible] two years last situation; bothy preferred. [illegible] OSGOOD, 5, Clover Nook, Ackender Road, Alton, Hants.

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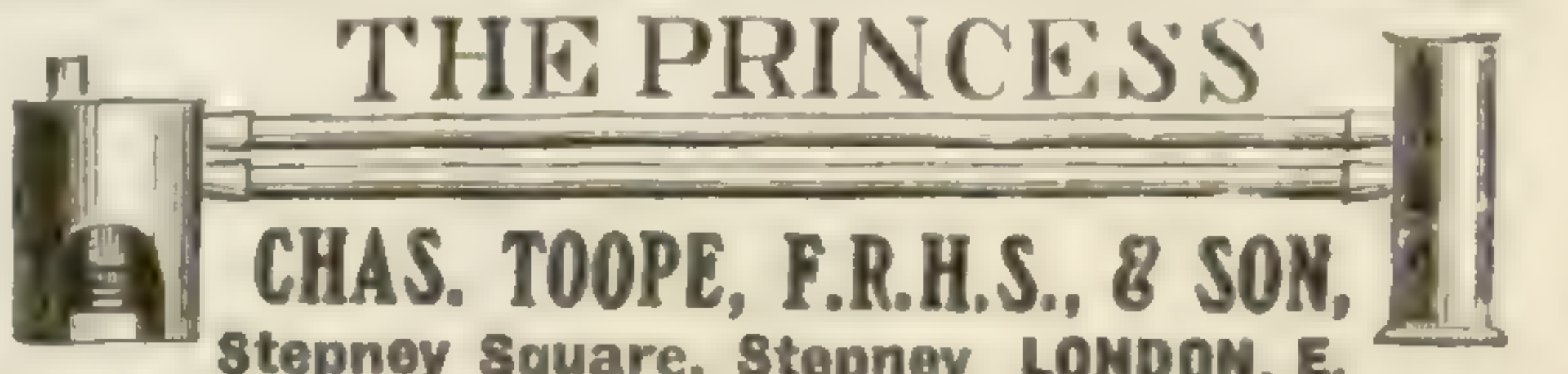

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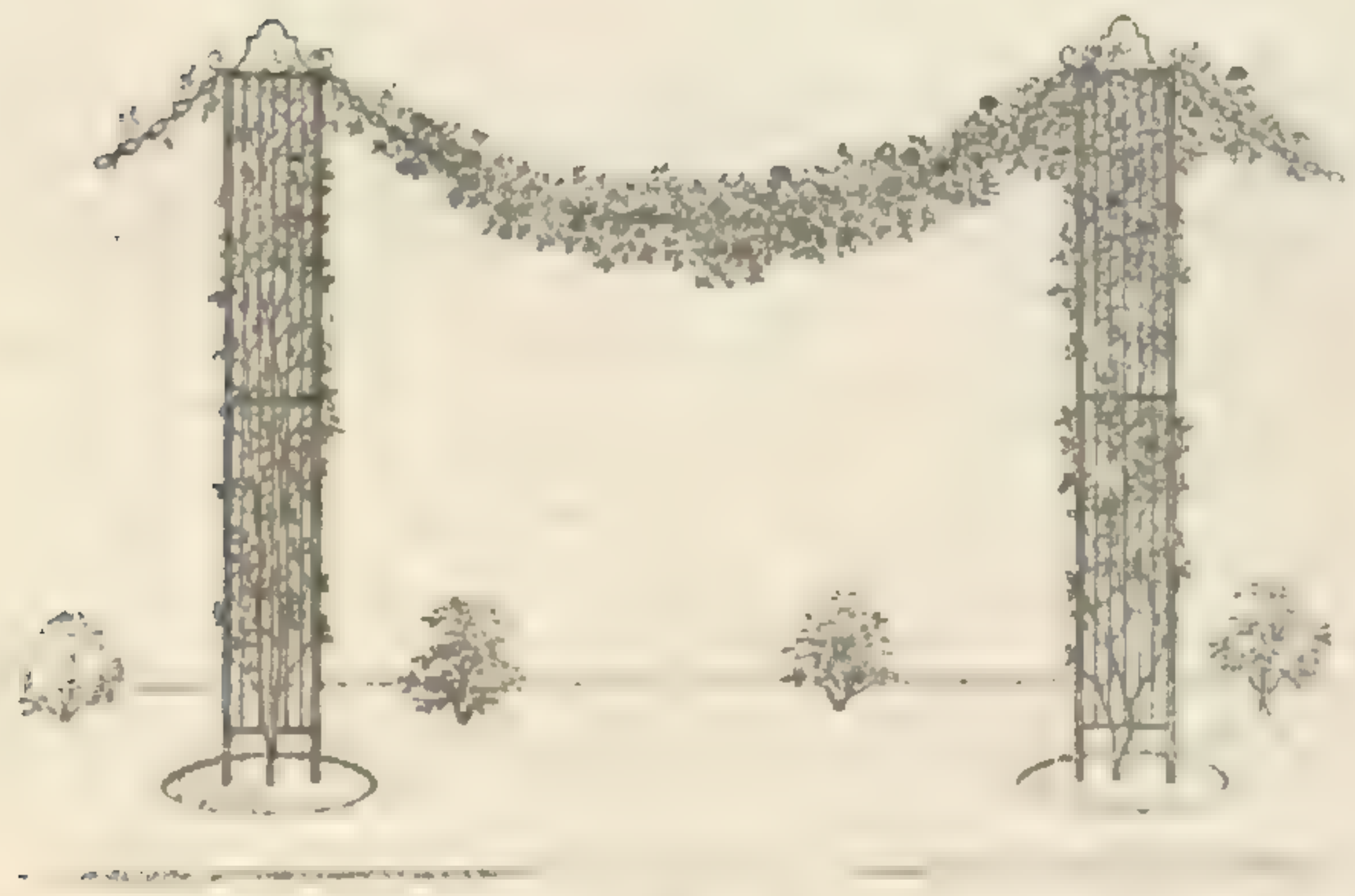

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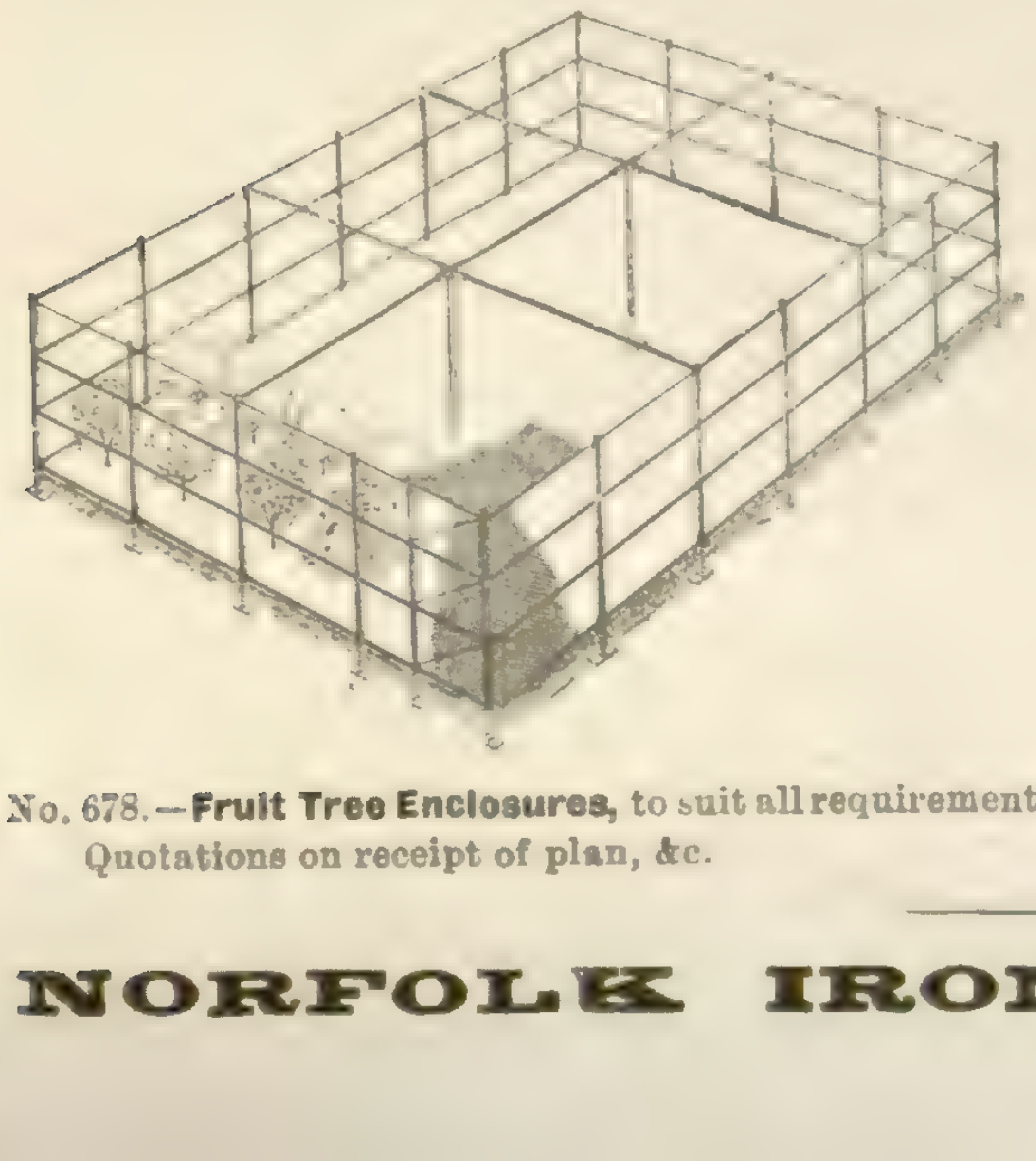

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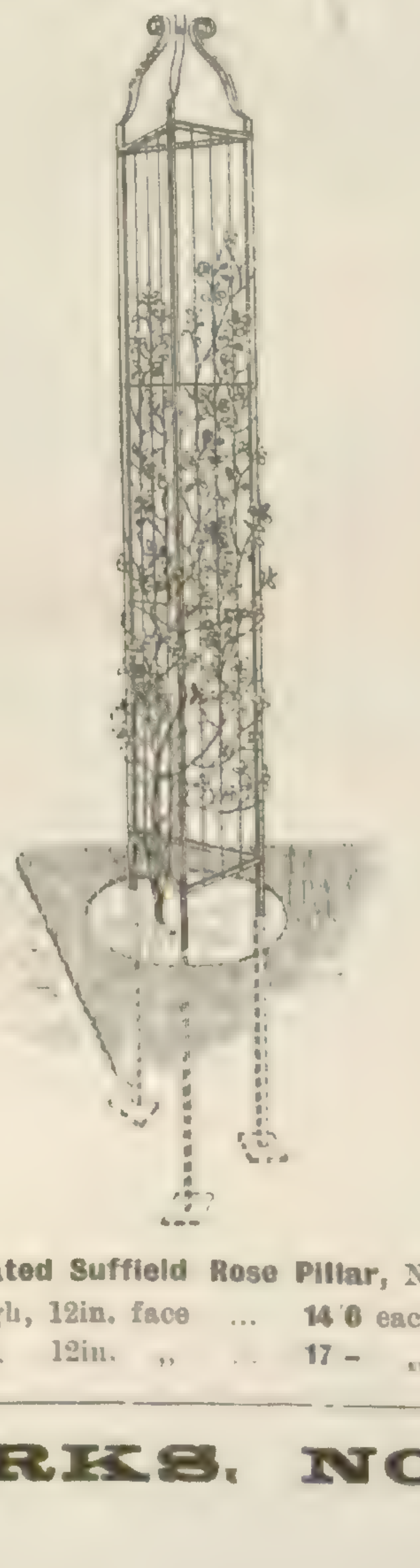

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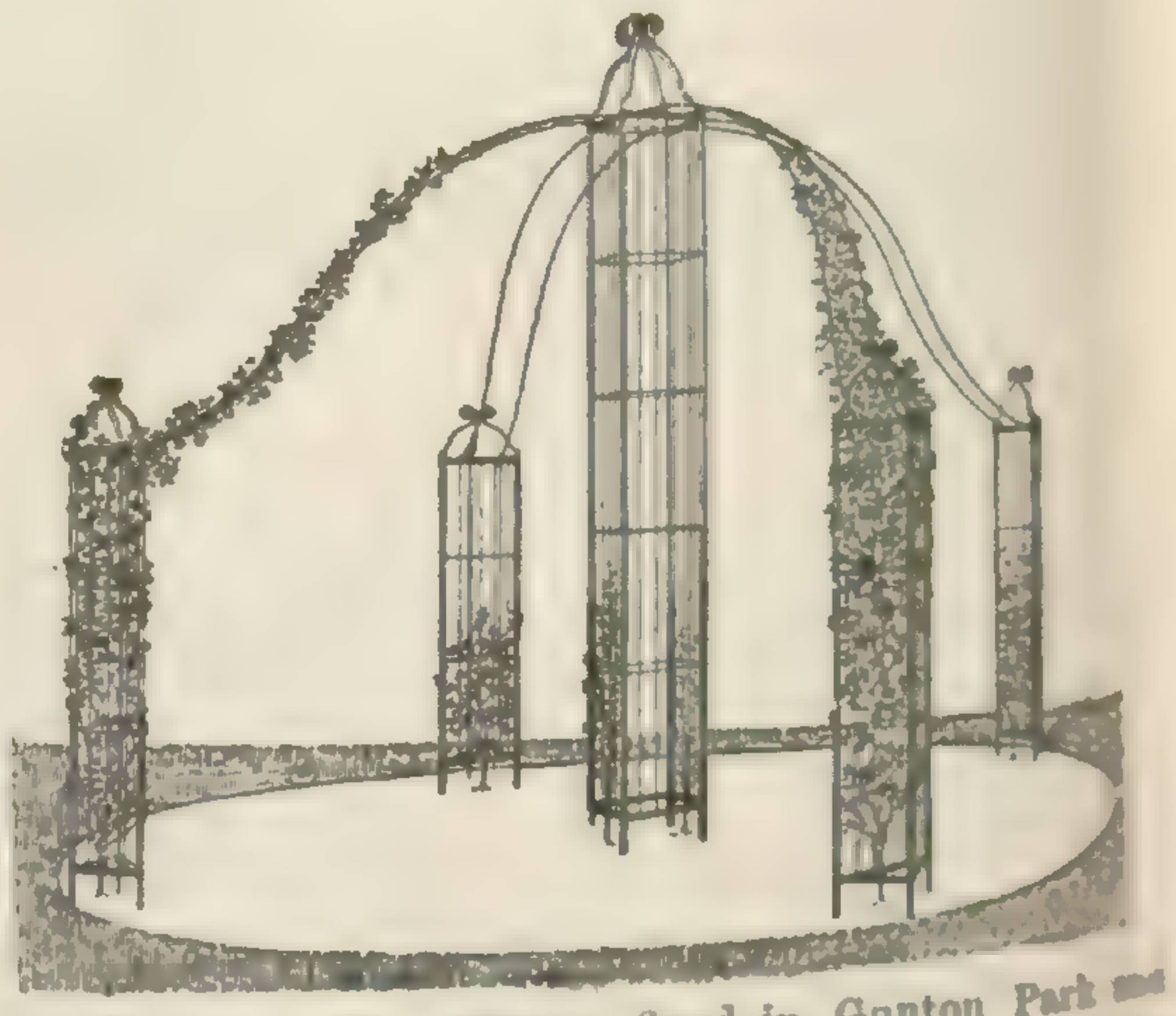

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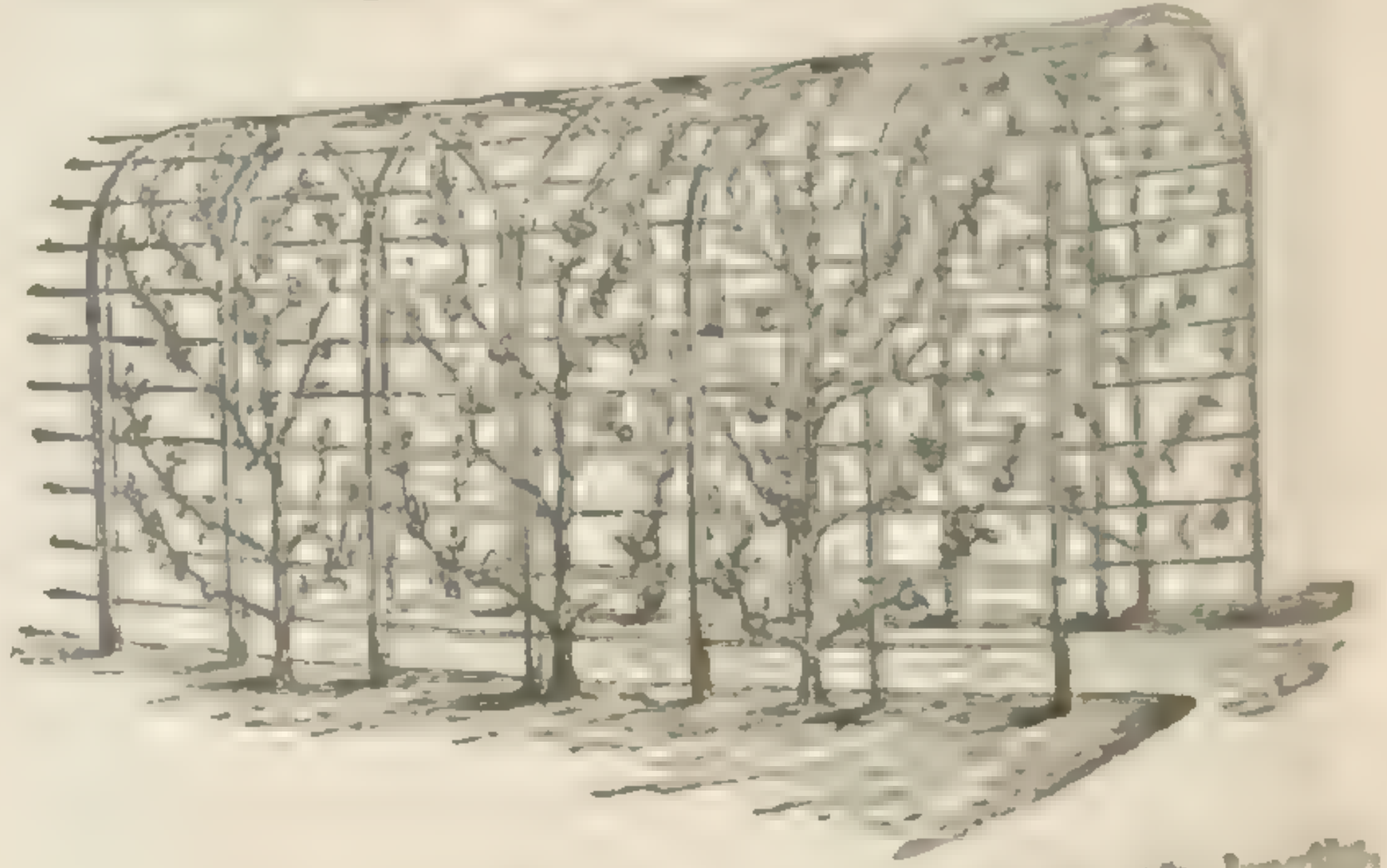

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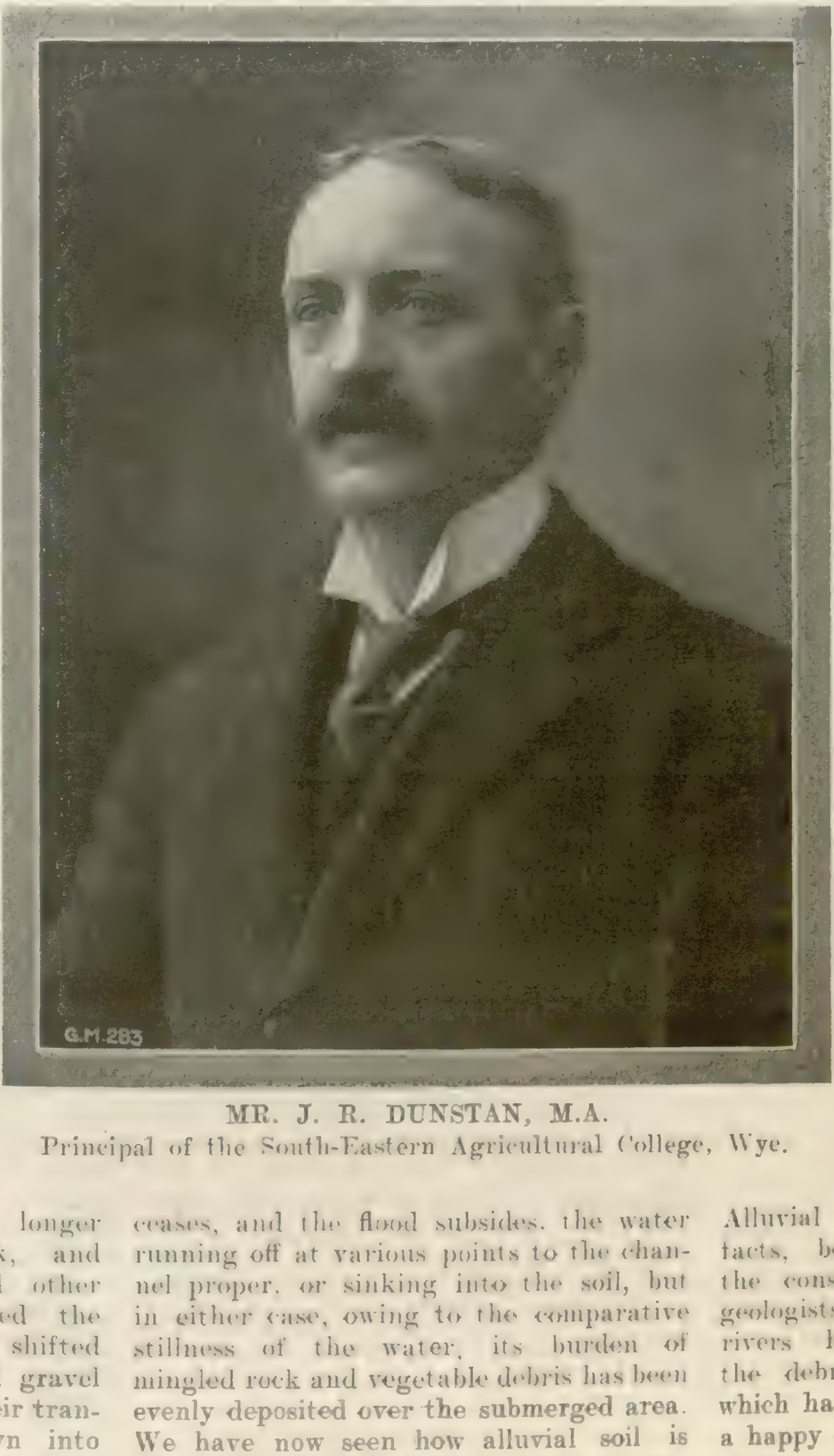
VOL. LI. No. 2,841. SATURDAY, APRIL 11, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Alluvium.

Since alluvial soils are undoubtedly the most fertile and valuable to both the horticulturist and the agriculturist, a little consideration of what they consist of, and how they are formed, may not be out of place, especially as they are so generally distributed even over areas now far from water that their origin is apt to be overlooked. Although they may differ to some extent in their composition, they all agree in being a mixture of the debris of rock formations and vegetable matter, and this, as a rule, forms a compost of such richness that virgin alluvial may bear many successive heavy crops before it shows any signs of exhaustion. To arrive at an idea of how this compost is formed, we must make our way to the higher levels, where the rivers begin to become such by the meeting of innumerable tributary streams, which are fed by the rain or snowfall of the hill or mountain districts concerned. In fine weather we may find these streamlets running down their glens or traversing their channels in the open as clear as crystal, and we look in vain for the evidence we seek, unless we be in glacier land, of which more anon. Revisit them, however, in stormy, rainy weather, and the scene is changed. A rushing, roaring, boiling flood is now rushing downward through every channel, and this is no longer clear, but turbid and thick, and laden with debris of trees and other vegetation. In the stream bed the very rocks themselves may be shifted and, in any case, the stones and gravel are being carried along, and in their transit are wearing themselves down into smaller gravel and finer sand, and by their attrition taking a modicum off the stubborner rocks in their course. The dead leaves, branches, and other debris carried down are ground up with the rocky material, and the mixture goes down with the laden flood to swell the nearest river on its way to the distant ocean. Let us now descend a bit to lower levels, traversed by sinuous brooks, rivulets, and rivers, which we may now find meandering through perfectly flat plains of greater or less extent. The rainfall has been great, too great indeed for the ordinary channels of these streams to carry immediately away, and the level plain is flooded. The rain ceases, and the flood subsides, the water running off at various points to the channel proper, or sinking into the soil, but in either case, owing to the comparative stillness of the water, its burden of mingled rock and vegetable debris has been evenly deposited over the submerged area. We have now seen how alluvial soil is formed in the first case, and how its fertility is brought about, and we can also gather that the level plain in question is simply and solely the result of successive inundations and deposits of similar character. In time the river bed is cut deeper and deeper, and also alters its course, as it cuts away its banks, now on one side and now on the other, and hence we may eventually find deep alluvial deposits far away from the streams which formed them, to say nothing of those upward movements of the land itself, which may determine their existence on a vast scale far from any existent river at all. We may, however, find great accumulations of alluvial soil under somewhat different circumstances, as, for instance, near the mouths of great rivers, which, despite the deposits they may have made in their upper reaches in the way above described, yet reach the ocean with a considerable burden of alluvial debris. Meeting the ocean water their flow is checked, and this inevitably means a settlement. In this way deltas are formed, and in the case of the Nile this delta is of enormous area, and by its accumulation has, as is often the case, led to the river splitting up into several branches, which wind their way through the accumulated land, and are constantly adding to it. In many large lakes there is a constant silting up at the mouths of the rivers which empty themselves into them, as, for instance, at the head of Lake Geneva, where the rapid Rhine, fed by the melting snows of the Alps, constantly brings down enormous quantities of alluvial soil, which deposits itself so entirely when it reaches the still water of the lake, that the river at the lower end issues as clear as crystal, and as purely blue as the unsullied Atlantic itself. Alluvial soil may, in view of these facts, be considered as that part of the constant waste of the land which geologists term denudation, which the rivers have left behind them, plus the debris of vegetation of all kinds which has become mixed with it en route, a happy combination indeed for mankind, as plant cultivators of all kinds need hardly be told.



MR. J. R. DUNSTAN, M.A.
Principal of the South-Eastern Agricultural College, Wye.

Mr. J. R. Dunstan, M.A.—Although the South-Eastern Agricultural College, as suggested by its name, has for its chief object the teaching of the science and practice of agriculture, more than sufficient attention is devoted to horticulture to justify the work of the college being of much interest to those who are concerned with that important art. We have proof of this in the fact that seven members of the staff devote themselves to horticulture, and other aspects of education that have a direct bearing thereon, and there are well-equipped fruit and vegetable gardens with an area of about eighteen acres, with a range of glass sufficient to afford students an opportunity of becoming acquainted with the production of the various crops that can be grown under glass. With a knowledge of the fact that the teaching of agriculture and horticulture is happily combined in the curriculum, we have watched the growth of the college with much interest since it was opened at the end of 1894. More especially have we been interested in the rapid increase in its extension and popularity during the period—now some six years—that Mr. Dunstan, whose portrait we have the pleasure of giving, has occupied the position he now holds. When Mr. Dunstan was appointed principal of Wye College in 1902 there were 55 students, and now there are 125, an increase so large as to testify in no uncertain manner to his administrative abilities. The success he has achieved has not, perhaps, been greater than those who were acquainted with his work might have expected, for he came to the college with a record of which any man might well have been proud. Educated at St. Paul's School and Merton College, Oxford, and subsequently doing good work as a University Extension Lecturer, Mr. Dunstan was appointed Director of Agricultural Education for Notts County Council in 1891, and subsequently received other appointments connected with agricultural and technical education in the county. In 1900 he was appointed director of the Midland Agricultural and Dairy Institute for the counties of Notts, Derby, Leicester, and the Lindsey Division of Lincolnshire, and this position he occupied until he came to Wye. Mr. Dunstan was a few years since awarded the silver medal of the Royal Society of Arts for his paper on the milk supply.

Royal Botanic Society's Subscriptions.—At a recent meeting of the Fellows of this society the council submitted a proposal for so amending the bye-laws as to enable them to alter the rate of subscription. It was explained by Mr. J. R. Diggle, that until the close of last year the club in the society's gardens was under the control, not of the council, but of a Club Committee. To become members an additional subscription had to be paid, and to this arrangement many Fellows had a strong objection. The council, after careful consideration, decided that the club as a separate institution should cease, and they proposed an alteration in the bye-laws by which the annual subscription would be raised from two to three guineas; and that all the Fellows would enjoy the advantages of the club. Life Fellows, who had compounded by the payment of £25, would pay an annual subscription of £1 1s., or a sum of £5 5s. There was a lengthy discussion on the proposed alteration, and at the close of the ballot Mr. Pembroke S. Stephens, K.C., who presided, announced that 61 had voted for the alteration and 23 against, and, therefore, as a three-fourths majority was required the motion had not been carried.

Metropolitan Public Gardens.—At the monthly meeting of the Metropolitan Public Gardens Association it was reported that the Housing and Town Planning Bill was under consideration, and, while the latter portion of the Bill was generally approved, it was pointed out that certain amendments were required in the first part for the proper protection of public open spaces and recreation grounds, and it was decided to take steps in order to secure such amendments. Various contributions from friends and supporters of the association were announced towards Ludshott Common scheme, for which about £550 is still needed, the proposed addition of 12 acres to Ruskin Park, for which a balance of about £5,000 is needed from voluntary sources, and the Barking Road and Bow Recreation Grounds, for which £800 and £200 are respectively required to complete the purchase funds. Progress was reported regarding the acquisition of 30 acres at Norwood, for which £2,000 is outstanding.

Daffodil Competition.—At the Royal Horticultural Society's meeting on Tuesday, the 14th inst., a silver cup, of the value of seven guineas, will be offered by Messrs. Barr and Sons for a group of daffodil blooms grown entirely out of doors. The group must contain representatives of each section—magni, medio, and parvi-coronati—and not less than thirty distinct varieties. Not less than three or more than nine blooms of each variety must be staged, and any hardy foliage may be used. Past winners of the cup may compete, but will not be eligible to receive the cup more than once in three years. In the event of any previous winner being placed first he will be awarded a medal, and the cup will go to the exhibitor of the next best group should it be considered of sufficient merit.

Royal Visits to Gardens.—On Tuesday afternoon the Queen and the Empress Marie, accompanied by the Princess Victoria, visited the Royal Gardens, Kew, and spent some time in the inspection of the more noteworthy of the many objects of interest. The gardens are now rapidly putting on their spring dress, and afford an excellent foretaste of the beautiful displays of spring flowers in the grass and elsewhere that visitors will have the opportunity of enjoying during the Easter holidays. On Wednesday afternoon their Majesties visited the gardens of the Royal Botanic Society, Regent's Park.

Extraction of Essences of Flowers.—The Italian Government offer prizes amounting to £400 for the most economical process of extracting the essence of bergamot and lemon for commercial purposes. The different processes submitted for competition will be subjected to systematic trials by a special commission, and the expenses in connection therewith will be defrayed by the Ministry of Agriculture, to whom entries must be made not later than January 1, 1909.

R.B.S. and its Late Gatekeeper. It will be remembered by many of our readers that Parkes, the gatekeeper at the principal entrance of the Royal Botanic Society's gardens, Regent's Park, retired in September, 1906, after 60 years' service. As Parkes was in his 78th year, and had discharged his duties in a most satisfactory manner, and the society was not in a position to provide a pension, the council invited subscriptions from the Fellows to a testimonial to be presented to him. It was suggested in the circular sent out that "a purse of money will be the most suitable gift." The response to the circular was so liberal that the sum of £500 was received. The council hesitated to pay over so large an amount, and suggested that an annuity be purchased for Parkes and his wife, and they issued a circular to the subscribers asking them whether they agreed to the suggestion. A large majority of the subscribers did not send any reply, and the council considered the matter settled. The amount contributed by the dissenting subscribers was handed to Parkes, and the council was prepared to provide an annuity of £50 for Parkes and one of £26 for his wife should she survive him. Parkes expressed the wish to receive the testimonial in a lump sum, and subsequently commenced legal proceedings. The case came before Mr. Justice Eve, in the Chancery Division of the High Court of Justice, on the 3rd inst., in the form of a motion for an injunction to restrain the society from dealing or parting with the money, which the council were willing to pay into Court. The Judge decided in favour of Parkes, and in the course of his judgment said, the subscriptions were asked for in order that the money might be applied in a certain way, and as soon as it was received it became a trust fund for the benefit of Parkes, who had a right to ask that it be handed over to him.

Bird Protection.—At the annual meeting of the Royal Society for the Protection of Birds, which was held a few days since, Lord Stamford, who presided, stated that inquiries flowed in continuously for additional watchers and for help in watching, for inspectors, for lecturers, for further educational work in the schools, for effort in connection with Imperial and county enactments, for investigations, appeals, and for prosecutions. Communications with the Home Office had elicited the reply that, if a Bill on the subject of the protection of wild birds was introduced during the present Session of Parliament it would be a consolidation Bill. Having regard to the terms of the letter, it was not considered advisable to press for legislative enactments until a strong consensus of opinion clearly and definitely indicated the lines on which such changes would be most judicious and effective. The need of purely educational work became more and more apparent to all who had the cause of the protection of birds at heart. In recent years they had had encouragement from the highest quarters. Mr. Montague Sharpe said that before further legislation was introduced it was advisable to obtain additional information, and with that object the society's gold medal was being offered for the best essay on "Comparative Legislation for the Protection of Birds."

National Flower Show in America.—The National Flower Show, to be held by the Society of American Florists and Ornamental Horticulturists in the City of Chicago, November 6 to 15, 1908, inclusive, will, we are informed, be the largest and most extensive exhibition of plants and flowers ever undertaken in the United States. All the horticultural interests of the Continent will be brought to bear to make it noteworthy and interesting. The plantsmen and allied interests have subscribed a guarantee fund of 13,000 dollars, insuring all expenses and premiums, and about 8,000 dollars in cash prizes and numerous cups and medals will be awarded. This committee cordially invites foreign plantsmen having new and rare plants to take this opportunity to exhibit the same to the American public. Suitable awards will be given to all deserving new plants or horticultural devices which may be sent for exhibition. Mr. E. G. Hill, of Richmond, Ind., is the chairman of the Committee on Foreign Exhibits.

Continental Potatoes in England. During 1907 the Agricultural Department of the University of Leeds tested several Continental varieties of potatoes that possess a high reputation as disease resisters. These varieties were Daisy, a Dutch variety; and Professor Wohltmann and Apollo, of German origin. It was found that these varieties fully sustained their reputation for disease resistance, but they produced only half a crop as compared with British varieties. Stuntney Surprise and Up-to-Date were home-raised varieties that were not diseased, but all other British varieties were more or less affected.

Royal Agricultural Society's "Journal" for 1907 has been published within the past few days, and is remarkable alike for the admirable manner in which it is presented and the great interest of its contents. While wholly devoted to agricultural matters, there are several articles that well deserve the careful attention of horticulturists, more especially those on "Useful and Injurious Wild Birds," by Mr. C. F. Archibald, and "Injurious Fodder and Poisonous Plants," by Mr. H. T. Güssow.

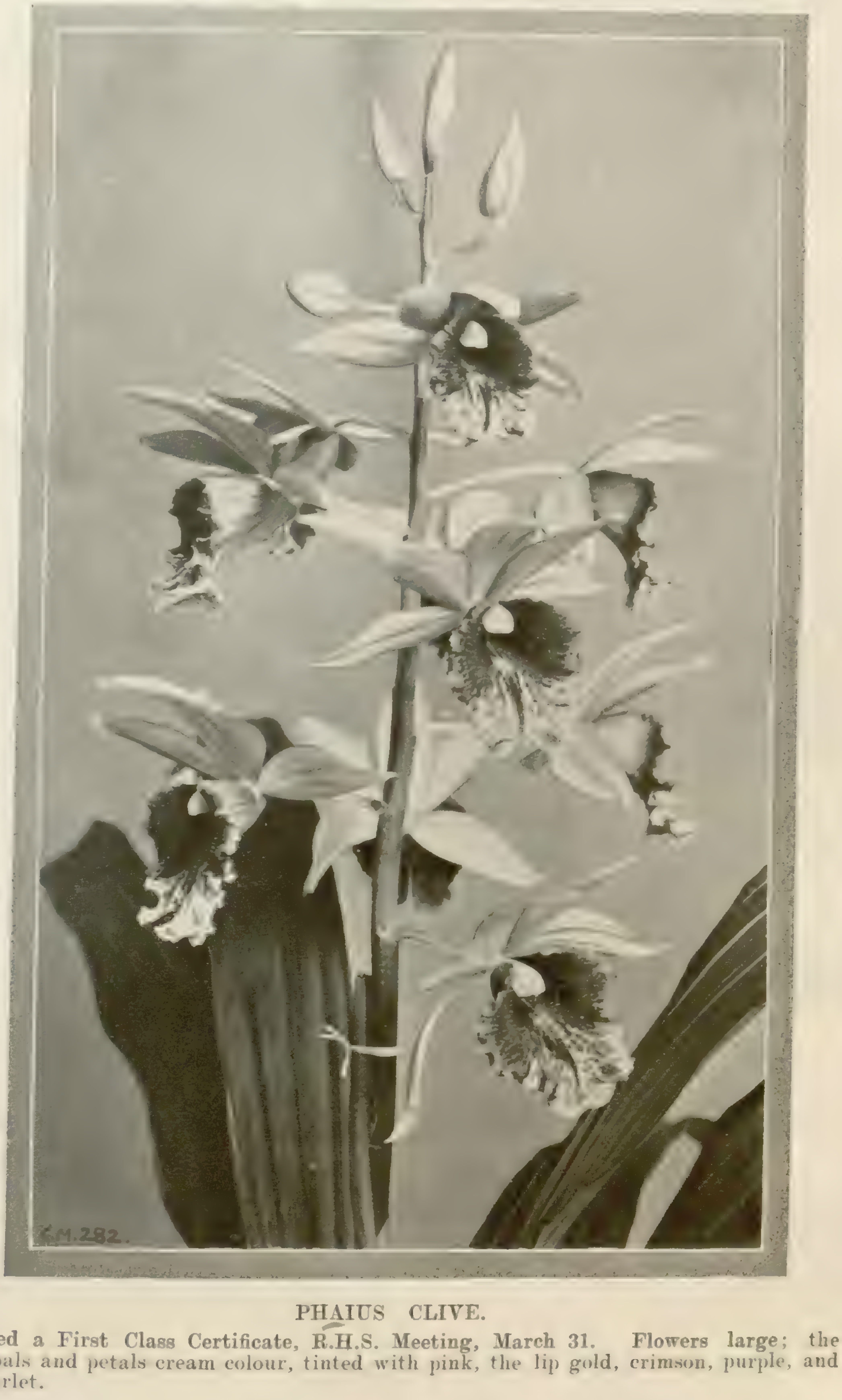
Grass Culture of Fruit Trees.—During the past three years experiments have been conducted at the Harper Adams Agricultural College, Newport, Salop, for determining the growth of fruit trees when planted on grass as compared with trees growing in cultivated ground. The report is now before us, and from this we learn that Messrs. Dickson and Co., Chester, presented twenty-four apples for the purposes of the experiment, eight each of Bismarck, Bramley's Seedling, and Cox's Orange Pippin. These were planted in four rows, two trees in each row. The grass upon which the trees are planted is manured regularly with farmyard and artificial manure, the grass is mown and removed, while special manures are used on the cultivated portion for each crop. The difference between the trees on grass and those on cultivated ground has throughout been very marked. Growth during 1907 averaged about twelve inches in the trees on grass, while the trees on the cultivated land made an average growth of twenty-five inches. The trees were measured at a distance of four and a-half feet from the ground, and the result of this measurement is summarised in the report and compared with the diameter of the trees in 1905 and 1906, and with reference to this it is of interest to observe that the relative increase was much greater in 1907 than in the two previous years. At the commencement of the year last mentioned the experiment was modified by removing from around the stems of alternate trees on grass a square of turf. The surface ground laid bare (four square yards to each tree) was forked over without disturbing the roots, and kept free from weeds throughout the year. "The effect of this treatment was," we are told, "soon visible, and the growth made during the summer was strong and healthy."

Natal Botanic Gardens.—The Natal Government have found themselves obliged to reduce the expenditure upon the Natal Botanic Gardens and the Herbarium. The grant to the Herbarium has been taken away entirely, whilst the grant to the gardens has been reduced from £350 to £150. This action has, says the "Kew Bulletin," necessitated the discharge of two of the assistants and a considerable reduction in the salaries of the director and his curators. It is difficult to see how the important work of the department can be carried on effectively under these straitened circumstances.

NEW PLANTS, ETC.

PHAIUS CLIVE.

A beautiful and striking orchid, obtained by crossing Phaius Norman with Phaius tuberculosus. P. Clive apparently grows freely, and it produces a tall spike that carries numerous attractive flowers. The sepals and petals are creamy, tinted with pink, and the fine lip is a wonderful combination of gold and crimson and scarlet and purple. F.C.C., R.H.S., March 31. Mr. H. J. Chapman, orchid grower to Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne.



PHAIUS CLIVE.

Awarded a First Class Certificate, R.H.S. Meeting, March 31. Flowers large; the sepals and petals cream colour, tinted with pink, the lip gold, crimson, purple, and scarlet.

CYPRIPEDIUM HELEN II. WESTONBIRT VAR.

This is a very large and bold cypripedium, but it lacks distinctive colouring. It is like a pale C. insigne Harefield Hall var., with broadened tips to the petals and a rounded lip. The colour is greenish, with dull purple spots and shading. It is one of the largest hybrid cypripediums. F.C.C., R.H.S., March 31. Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

ODONTOGLOSSUM PERCULTUM J. R. ROBERTS.

A handsome odontoglossum with large shapely flowers set rather closely on a big spike. There were fourteen flowers on the plant staged. The sepals and petals are light rosy-lilac, freely marked with deep and bright red-brown, the markings being largest in the centre of the segments. The lip is similarly coloured, with a yellow disc. A.M., R.H.S., March 31. Mr. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford.

CATTLEYA SCHRODERÆ QUEEN ALEXANDRA.

An exceptionally fine form of this useful and fragrant cattleya. The flowers are large, finely proportioned, and stand up well. The sepals and petals are pale lilac, while the large lip has an orange-yellow throat, with a zone of light bluish-purple between it and the paler apex. A beautiful orchid. A.M., R.H.S., March 31. Messrs. Sander and Sons, St. Alban's.

CATTLEYA SUZANNE HYE DE CROM JUNGFRAU.

Another wonderfully beautiful white cattleya, with very large, finely-formed flowers that are pure white, but have a clear soft yellow throat and a broad labellum. F.C.C., R.H.S., March 31. Mons. J. Hye de Crom, Ghent.

RHODODENDRON PURITY.

A large-flowered greenhouse rhododendron, somewhat similar to R. fragrantissimum. The blooms are broad and beautifully shaped, the divisions of the corolla mouth being prettily rounded. The flowers are very substantial, and of the purest whiteness, with a small pale lemon-yellow mark on the lower segment. A.M., R.H.S., March 31. Mr. Charles Turner, Slough.

VIOLA GRACILIS.

A charming species, with neat spathulate leaves and bright purple, crimson-shaded flowers. The latter are carried well above the leafage, on stout, erect footstalks, and they are freely produced. It is a Grecian plant, and one that should commend itself to lovers of the smaller hardy subjects. A.M., R.H.S., Messrs. R. Wallace and Co., Colchester.

VIOLA GRACILIS.
A beautiful species, native of Greece, which received an Award of Merit at R.H.S. Meeting, March 31. Flowers, bright purple, shaded crimson.

SHORTIA UNIFLORA.

A dainty little alpine from Japan. It is not new, but as yet it is not largely known. About three inches high, it produces fairly large, pale pink flowers, that are prettily frilled. A.M., R.H.S., March 31. Messrs. R. Wallace and Co., Colchester.

IRIS SIND-PAR AMETHYST.

This beautiful dwarf iris is the result of crossing Iris sindjarensis with I. persica purpurea. As shown, it is less than six inches high, but the flowers are large and very attractive; the colouring is purple-blue, the falls being especially rich and bright. I. amethyst is one of the prettiest members of a beautiful race. A.M., R.H.S., March 31. Mr. C. G. Van Tubergen, jun., Haarlem, Holland.

POTATOES AND THEIR CULTURE.

(Concluded from page 260.)

Those who plant potatoes on warm, sunny borders for early supplies must be on the alert for the appearance of the tops above ground, this being the signal for drawing a slight ridge of soil over the tops as a protection against night frosts, as many of the early sorts only make one growth from each eye, and the growths do not branch, consequently it is of the first importance that their tips are not injured in any way. A sprinkling of dry strawy litter will answer the same purpose, but its removal by day and return at night gives more trouble, and it is only advised in special cases: in fact, the struggle after very early potatoes is not to be generally recommended, as the trouble they give, except in the very mildest districts, is seldom repaid by the results, unless frame culture pure and simple can be indulged in.

Hoeing and Earthing.

Returning to the main crops, when these are about four inches above ground, or before this if weeds are showing plentifully, the whole surface should be hoed through, choosing a time when the soil is in good working condition, and taking care not to injure the stems. This hoeing will assist growth, and will leave the ground in good condition up to the time when the important operation of "earthing up" should be taken in hand, this being done as soon as the growth is tall enough to allow of the necessary ridge of soil being pulled up to the stems from the space between the rows.

If earthing up is not done early the chances are that the tops will have fallen over, and this makes the work more difficult, and the danger of injury much greater. A point to remember is that earthing up should not be done when the soil is in very dry condition, as this would let the drying air into the roots and newly-formed tubers, which, under such conditions, would experience a great check. The soil should be in that state which is known as "neither wet nor dry," a much-desired state to the cultivator of all garden crops.

The form of the ridge of soil when finished is an important point. Had we no disease to contend with one would recommend a ridge with a flat top, but as this would catch any disease spores washed down by rain from the tops, it is advisable to bring the ridges to a sharp angle at the apex, so that any spores washed down would be washed away from the tubers, and not towards them.

Spraying and Lifting.

After earthing up, the next important item of culture is that of spraying the foliage above and below with Bordeaux mixture, or some modification of this as a preventive of disease. This spraying should take place about the end of June, and if thoroughly done it should not need repetition, though in some cases and seasons it may be wise to spray a second time a month later.

When the haulm has sufficiently ripened lifting should take place as soon as possible, as the longer the tubers are left in the ground the more likely are they to suffer from disease, as by this time of the year disease spores will be floating in the air ready to become active on reaching their host, for disease prevention is not universally adopted, and the spores from a distant field may easily be carried to tubers exposed by lifting. For the same reason the tubers should be gathered up immediately they are lifted, and not allowed to lie on the surface to dry, for if the proper weather is chosen for lifting operations they should be quite dry enough for storing.

Storing.

Storing may mean placing the tubers in a cool shed or a cellar, the cooler the better, provided it is frost-proof; or it may mean putting them in a clamp in the open. Clamped potatoes keep well if the clamp is properly made. The heap should be made on the level ground, the tubers being first covered with dry bracken, and on this several inches thick of soil should be thrown, the soil being provided by throwing out a trench all round and almost close up to the heap. This leaves the tubers in a high and dry position, and if sufficient soil is put on them to keep out frost no system of storing could be better. The only drawback to this system of storing is difficulty of access in frosty weather, without letting frost reach the tubers, but this is avoided by choosing mild weather for getting out the requisite quantities to meet any emergency, and by carefully closing up the clamp after each visit.

Potatoes stored in sheds and cellars will require occasional overhauling, after midwinter is past, to rub off any young growths that may be forming at the expense of the tubers. This is especially the case where the store is warmer than it should be.

J. C. Tallack.

Shipley Hall Gardens.

The Hyacinths exhibited at the Horticultural Hall on Tuesday week in competition for the prizes offered by the bulb growers in Holland fell short of expectations, and some disappointment was felt by our Dutch friends. Possibly the results would have been much better had the donors offered the prizes early in the autumn, and freely advertised the fact that arrangements had been made for a competitive display, and thus enabled growers to make their arrangements accordingly.

SOME NORWICH GARDENS.—I.

Having had many opportunities for visiting Norwich in connection with horticultural matters, and always under the most pleasant conditions, and of seeing a goodly proportion of the numerous fine gardens in the vicinity thereof, I have for a long period been very favourably impressed by the city. With a fuller acquaintance with that section of the community specially interested in gardening, the impression received many years ago has become so deepened that I could unhesitatingly say, as was said by Queen Elizabeth when leaving the city after her historical visit in 1578, "I have laid up in my heart such goodwill as I shall never forget Norwich."

TERRACE GARDEN, GUNTON PARK.

The city has much to commend itself to the notice of those who take an interest in the history and development of the great populous centres that form so important a feature of England. It is rich in archæological and historical associations, contains many important public buildings, a richly-furnished museum, and more churches than any other city of the same size in the United Kingdom, chief among them being the cathedral, which for several centuries has been one of the most conspicuous landmarks in this part of England. The museum is especially rich in specimens illustrative of the science of ornithology, the collection of birds of prey being considered by those who are well able to speak with authority as one of the finest in the world, while British birds are represented by a collection remarkable for its completeness. Here there is also a fine series of mammalian remains from the forest beds along the Norfolk coast, and especially in the neighbourhood of Cromer. These remains include several species of elephants, hippopotamus, rhinoceros, the mastodon, and other animals that ranged over the vast area of which the British Isles formed a part when tropical conditions obtained over the northern parts of Europe. The museum also contains a valuable herbarium, wherein are specimens of all the British plants, and a good library of botanical books.

Mention of the herbarium and comprehensive botanical library recalls to mind the fact that Norwich can boast of having been the birthplace of three botanists, who attained to the highest distinction, and will ever be remembered by botanists of this country for the splendid services they rendered to botanical science. These were Sir James Smith, M.D., the founder and first president of the Linnean Society, and the author of "Flora Britannica," "Flora Græca," and other works of considerable importance in their day; Sir William Hooker, who for many years was director of the Royal Gardens, Kew, and did much to place them in a foremost position among the botanical establishments of the world; and Dr. Lindley, the author of numerous works relating to botanical science, and for many years an active member of the governing body of the Royal Horticultural Society. Considering the immense influence for good these three great men exercised on the study of plant life, it is very gratifying to know that the interest in botanical science is at the present time kept fully alive at Norwich.

The East Anglian Horticultural Club, which has its headquarters in the city, established a botanical section some years ago, and this, under the skilful direction, chiefly of Mr. E. Peake, has proved highly successful. Meetings are held at regular intervals, and are well attended, many members coming long distances without regard to the weather being favourable or otherwise to cross-country journeys. With a membership of upwards of three hundred, the club is one of the strongest of the many gardeners' associations in the country, and, as the result of a well-devised policy, the monthly meetings are well attended, and a keen interest evinced in the proceedings. While the East Anglian Horticultural Club is engaged in keeping horticulturists in the district in close touch with each other, and affording them facilities for discussing matters that have a bearing on the practical work of the garden, the Norfolk and Norwich Horticultural Society gives them opportunities for the display of the products of their skill. This society, of which Mr. W. Smith is the able secretary, is splendidly managed, and its exhibitions held in the spring, summer, and autumn are models of what competitive gatherings should be. Some sixty-five years ago the first chrysanthemum show in this country was held at Norwich, and last November one of the finest exhibitions of the season was held in the city, and the devotees of the "Queen of Autumn" have shown a degree of constancy that is probably unique; but if that be not the case, it is deserving of the heartiest commendation.

Mention has thus briefly been made of the keen interest that is now being taken in and around Norwich in the various aspects of horticulture, because of it having been long known as a "city of gardens," and the gratification that is derived from the evidence on all sides that at the present time gardening is being conducted on lines worthy of the city's traditions. How long Norwich has been called a "city of gardens" it would not be easy to say, but Fuller, in referring to the gardens, writes, "to which the Dutch brought not only their profitable crafts, but pleasurable curiosities, being the first who advanced their use and reputation here. Great is the art of ameliorating them, and the Rose of Roses (Rosa Mundi) had its first being in the city." Norwich appears to have greatly impressed Evelyn, who, as so well known, was keenly interested in gardening, for after his visit he described it as "One of the largest, and certainly after London one of the noblest, cities of England. . . . The suburbs large, the prospects sweet, with other amenities, not omitting the flowers, in which all the gardens excel." Not only were flowers largely and most successfully cultivated in the gardens in and around Norwich, but the banks of the Yare were at a very early period celebrated for the growth of vegetables for market, and Drayton, not to be deterred by the prosaic character of a market garden, has recorded their fertility in verse.

BOWERS OF RAMBLING ROSES, GUNTON PARK.

Whatever may have been its claims to the title of a "city of gardens" in bygone days, there can be no question that Norwich is fully entitled to such designation at the present time. In and near no English city is gardening more extensively and successfully carried on, and where the pleasure derived therefrom is so freely participated in by all classes of the community. The streets in the centre of the city are rather narrow, and somewhat perplexing in their arrangement, but the roads that radiate from the city boundaries in various directions are of great breadth, and remarkable for the fine gardens with which they are flanked, and their picturesque appearance. These gardens are varied in size and arrangement, but they are invariably well kept, and from the opening days of spring to the closing days of autumn they are gay with flowers and rich in sylvan charms. Especially are they noteworthy for the succession of delights they afford those who walk or drive along the road in the season of roses, for these flowers revel in the climatic and soil conditions that obtain. There are villa gardens well nigh innumerable alongside the principal roads, and no great distance from them are numerous gardens of the first rank. To the south of the city are the gardens of Dunston Hall, Keswick Hall, and Shotesham Park; to the south-west those of Ashwellthorpe Hall, Boyland Hall, Colney Hall, and Oakland House; to the south-east those of Crown Point; to the north-east Blickling Hall, Gunton Park, Rackheath Park, Sprowston Hall, Westwick Hall, Worstead Hall, Wroxham Hall; and to the north Catton and Stratton Strawless Parks. The number of good gardens is indeed so large as to render it practically impossible to describe and illustrate all of them in a manner adequate to their importance. To have made a selection from them in exact accordance with their merits would have been extremely difficult; and all that will be attempted will be to briefly describe gardens that are fully representative of the district, and that could be the most readily visited in the time at disposal.

Gunton Park.

The gardens of Gunton Park, the seat of the Hon. Colonel Harbord, have, as the result of the splendid work that has been accomplished in them, been regarded for thirty or more years as one of the most important and best-kept horticultural establishments in the United Kingdom. The high reputation the gardens have so long enjoyed is fully maintained, and it is well within the mark to say that at no time during the long period over which the writer's acquaintance with them has extended have they possessed greater interest or afforded so striking an example of high keeping. Gunton Park gardens are well and widely known, but for the information of those who are not acquainted with the exact whereabouts of this fine seat, it may be stated that Gunton Park is situate about fifteen miles to the north-east of Norwich, and is about two miles from Gunton station, on the line of railway between the city and Cromer. The district is remarkable alike for its fertile soil and high farming, and both cereals and root crops are grown with much success, and contribute in no small degree to the great charms of the landscape at the season of the year when the summer merges into autumn. On the way from Gunton station, and also from Cromer, some five miles distant, one, however much the mind may be occupied with matters horticultural, cannot fail to make mental note of the large open fields, with their neatly-trimmed hedges and thriving crops.

The mansion occupies a commanding position on the high ground near the centre of the splendidly wooded park, which has an area of about 1,700 acres. The aspect is due south, and from the broad terrace on the garden front are obtained views of surpassing loveliness. In the making of the glorious pictures that are obtained from the terrace and other points of advantage in the grounds, woodland and water, rolling meadow and cornfield, and specimen trees enter into their composition, and contribute their full share to the distinctive beauty of the scenery. In the finely-wooded park beeches and oaks, silver firs and Spanish chestnuts predominate, and, for the most part, they are represented by trees of noble proportions. In the plantations that bound the extensive pleasure grounds are many hundreds of trees of the kinds mentioned in the highest state of development, with numerous fine examples of other kinds. These plantations are not only of interest for the many fine trees and shrubs they contain, and for the delightfully cool retreats they afford when the summer's sun is at the zenith of its power, but they are of immense value as shelter from the winds from the north and north-east, that sweep across the country with terrific force at certain seasons of the year.

East of the mansion is an immense sweep of lawn, as indicated in the illustration, and this would well serve as a model of what an expanse of turf associated with a great house should be. In the foreground the beds, filled with lavender, Veronica Traversi, and other subjects remarkable for their quiet colouring, have a charming appearance; and on the opposite side of the lawn are bold, tastefully arranged groups of coniferous trees and shrubs with glaucous and golden leafage. On the west side of the mansion the pleasure grounds extend for an immense distance. Contiguous to the mansion is the spacious tennis ground, and immediately beyond, but somewhat secluded, is a beautiful arrangement of trees and shrubs remarkable for their elegant habit or distinctive leaf colouring. Here also is a remarkably fine avenue of bamboos, formed with Arundinaria japonica (Bambusa Metake) and A. Simoni. The bamboos are in the most vigorous state of health, and have a height of fourteen or fifteen feet, and the avenue, which leads up to an ancient yew, is at once graceful and imposing. Of late years a considerable amount of thinning has been done in the plantations and shrubbery borders on the west side, and a material improvement thereby effected, inasmuch as many fine views over the park have been opened out, and several delightful peeps of the lake obtained.

The terrace garden on the south side of the mansion is one of the most attractive of the many good features of the gardens. We can well remember the rich effects that were produced in this garden by the massing of tender bedders, and the time when these had to make way for hardy herbaceous plants, but we are unable to call to mind any arrangement of so pleasing a character as that of last year. The accompanying illustration so clearly shows the materials used, and the method of arrangement adopted, that description is quite unnecessary. It should, however, be mentioned that the border at the foot of the terrace wall is planted with rambling and dwarf roses, and as the conditions are well suited to their requirements they grow vigorously and bloom profusely. The rose bowers at the east end of the terrace garden present a delightful appearance, and there should be many gardens in which a similar arrangement might be made for the cultivation of rambling roses. Varieties new and old have been utilised in clothing the bowers, and the borders between them have, as shown in the illustration, been filled with roses of dwarf growth. The rose bowers and pillars were erected by Messrs. Barnards, Lim., Norwich, from Mr. Allan's design, and are not less remarkable for excellent workmanship than for their elegance.

The kitchen garden is some distance to the east of the mansion, and herein one might linger long, for here are the vineries, in which have been produced the grapes with which Mr. W. Allan, who has long been in charge, has achieved his many triumphs at the international and other great gatherings. There are four vineries, with a combined length of one hundred and twenty feet, and herein have annually been produced heavy crops of splendidly finished grapes. Within them have also been conducted many experiments in the grafting of vines, and all of interest in their bearing upon grape culture, but space will not admit of their being referred to in detail at the present time. The peach and fig houses, if somewhat less interesting than the vineries, are not less remarkable for the results obtained from them, as the crops are invariably heavy, and of the highest quality.

VIEW IN PLEASURE GROUNDS, GUNTON PARK.

The hardy fruits in the open are also of exceptional interest, for, as demonstrated by the collections contributed to the leading exhibitions, Mr. Allan is a past master in the art of pear culture. The district is not specially adapted to the cultivation of choice pears, one of the great drawbacks being the east and north-east winds, which in this corner of Norfolk are very destructive in their effects upon tender vegetation. Yet the pear trees are models of their kind, and produce an abundance of finely-finished fruits. Mr. Allan has raised several strawberries remarkable for their high flavour, and he has specially distinguished himself in the art of discovering good fruits. He was perhaps the first of the cultivators to recognise the merits of President Barabe pear, which ripens at Christmas, and has no equal for flavour at that season, and bring it into prominent notice, and he was certainly the first to discover the merits of the Norfolk Beauty apple, one of the finest of all the culinary varieties, and now rapidly coming into general cultivation. A more recent achievement in the same direction is the Blickling pear, which, on being submitted to the Fruit Committee of the Royal Horticultural Society, in January, 1907, received distinction as in the case of the apple.

In the kitchen garden also are great breadths of carnations and roses for the supply of cut flowers, and recently has been erected by Mr. A. Harris, horticultural builder, of Ealing, a large span-roof house for the cultivation of American carnations in accordance with modern methods, and from this structure thousands of splendidly developed blooms are obtained annually. While entering heartily into carnation culture under glass, Mr. Allan does not appear to have in any way abated his interest in violets, for at the Norwich Exhibition in November last we found him, as usual, occupying the premier position with these fragrant flowers.

THE HIMALAYAN BRIAR ON PERGOLA, WESTWICK HALL.

Blickling Hall.

This, the Norfolk seat of the Marquess of Lothian, affords much that is of antiquarian and horticultural interest, and is moreover so rich in historical associations, and remarkable for the beauty of the scenery within its boundaries, as to be well able to give abundant pleasure to visitors with tastes of a widely divergent character. In visiting Blickling Hall one is reminded that Aylsham, one of the most interesting of the towns in the district known as the "Garden of Norfolk," and about one and a-half miles distant, was, during the reigns of Edward II. and Edward III., one of the principal seats of the linen trade, and that later it acquired considerable fame for its woollen manufactures. It need not be said that these industries have long since disappeared from the town, and that its commerce is now limited to meeting the requirements of the residents of the agricultural district of which it is the centre. The only evidence of the position occupied by Aylsham as an industrial centre is that afforded by the numerous handsome houses of red brick on the outskirts of the town that were once the residences of the manufacturers, and are now occupied by families who appreciate the charms of country life and the fine bracing air for which this part of the country is famous. Aylsham Church is not less interesting to horticulturists than to archæologists, for in the churchyard are the remains of Humphry Repton, who died exactly ninety years ago. On the tablet which marks the position of the grave of this great landscape gardener are the following lines:

> "Not like Egyptian tyrants consecrate,
> Unmixed with others shall my dust remain;
> But mold'ring, blending into earth,
> Mine shall give form and colour to the rose;
> And while its vivid blossoms cheer mankind,
> Its perfumed odours shall ascend to heaven."

Blickling Hall, some twelve or thirteen miles north of Norwich, is readily reached from either Aylsham Town or Aylsham railway stations. The second of the two is considerably the nearest, but the first-named has the advantage of giving the visitor an opportunity of paying respect to the memory of Repton, who, in his day, did so much to give breadth and beauty to the English landscape. Blickling Hall is generally considered one of the finest brick mansions in this country, and the front, with its broad approach flanked on either side by rows of clipped yews and limes, is highly picturesque and decidedly beautiful. Chief Justice Hobart laid the foundation of the mansion, which was completed in 1868, but the west front was rebuilt about the middle of the eighteenth century owing to a portion having been destroyed by fire. Sometime the seat of the Boleyns, and, according to Blomfield, the birthplace of Anne Boleyn, the second wife of Henry VIII., who lived there until 1512, Blickling is especially rich in historical associations, but with those it is not within the province of these notes to deal.

The environment of this fine old mansion are in admirable keeping with it. The park and pleasure grounds extend over upwards of 1,000 acres, and are splendidly wooded, the most noteworthy of the trees being beeches, cedars, firs, oaks, and pines, with not a few planes, that, like the other trees mentioned, have attained to noble proportions. Within the park is a lake a mile in length and of proportionate width; and it has been so skilfully disposed that from whatever point it is seen it is found to contribute immensely to the charm of the beautiful landscape.

The delightful old-time flower garden, some two acres in extent, is situate on the east side of the mansion, which has a very stately appearance as seen from the far side of the garden, with the beds of flowers and shrubs as a foreground. The garden is devoted chiefly to hardy herbaceous plants and other perennials of bold growth, and those which are quite hardy are taken full advantage of. The beds are on the grass, which is intersected by broad gravel walks, and the bold masses of hardy and half-hardy plants they contain produce during the summer and early autumn months an effect that is not only delightful in itself but is in keeping with a mansion that has a history extending over between three and four hundred years. Interspersed with the beds of flowering and ornamental-leaved plants are yews, thuias, junipers, and other conifers that can be kept to a small size and formal in outline with shears or knife. Specimen flowering plants in tubs are fully utilised, and as Mr. Oclee, who has long had charge of these famous gardens, is especially successful both in their production and disposition, they enhance in no small degree the general effect.

Contiguous to the flower garden are clipped hedges and other fine examples of topiary work that are admirably in keeping with the general scheme. The pleasure grounds are chiefly to the east of the mansion, and are surrounded on three sides by a broad terrace, from which magnificent views are obtained over the park with its glistening lake, and the surrounding country, which hereabouts is finely wooded and well diversified. Within the pleasure grounds are fine masses of choice rhododendrons, which grow with remarkable vigour in the strong loam characteristic of the district, and bloom profusely. Surrounding the pleasure grounds are plantations through which green drives have been formed, and these provide delightful retreats in summer weather, and afford charming peeps of the stately mansion from various points.

The numerous plant and fruit houses are located in the kitchen garden, to the west of the mansion, and form a feature of much interest, as will be readily understood when it is stated that Mr. Oclee has long enjoyed a high reputation for his skill as a cultivator of both flowers and fruit. Peaches and grapes are especially well grown on an extensive scale, and the several spacious structures devoted to these important fruits afford each season object lessons of much value to the less experienced cultivators who have an opportunity for visiting these gardens. The walls of the kitchen garden are, in accordance with the practice that obtains, clothed with fruit trees, and a considerable area of border space is devoted to hardy flowers, those suitable for the supply of cut flowers being strongly represented.

Westwick Hall.

Situate within a short distance of the historic village of Worstead, once the centre of the worsted industry in this country, and now famous for its large and beautiful church, Westwick Hall, the fine seat of Major Petre, takes high rank among the great houses in the north-eastern corner of Norfolk that are remarkable for the extent and interest of their gardens.

A BEAUTIFUL ARRANGEMENT OF HERBACEOUS PLANTS, WESTWICK HALL.

Westwick Hall is about two miles distant from Worstead station on the Norwich and Cromer branch of the Great Eastern Railway, and the walk or drive thence through the finely wooded and rolling country characteristic of the district is extremely pleasant. If the way to the gardens is pleasant, a walk through them is doubly so, for Major Petre takes a keen interest in all that relates to them, and encouraged by the generous appreciation of his employer, Mr. George Davison has been so lavish in the skill that he has brought to bear on them that they have become famous throughout the country. In mentioning this it is of interest to recall the fact that the owners of Westwick Hall have for several generations past devoted close attention to their fine estate and beautiful gardens, and that Mr. Davison has had his father and grandfather as his immediate predecessors, and occupies a position that is probably unique, and if this be not the case, the position is one that is by no means common. As far back as 1841 we find in the Gardeners' Magazine Mr. J. Grigor expressing his opinion that "The horticulturist and florist will be equally delighted in visiting this seat, the general excellence of which must strike everyone."

What was true of Westwick Hall sixty-seven years ago is true at the present time, for within the gardens there is plenty to interest the visitor, whatever may be the trend of his taste. The fine old creeper-clad mansion has an admirable setting of widespreading lawns, admirably arranged shrubberies, stately deciduous and coniferous trees, and at a short distance from it is an extensive lake, which contributes greatly to the charm of the scenery, and forms a much-appreciated home for wild fowl of divers kinds. Splendidly developed are the greater portion of the beeches, oaks, pines, and other forms of tree life in the pleasure grounds, and the enclosures contiguous thereto; but one of the most noteworthy of the features of Westwick Hall is formed by the plantations of Pinus Pinaster, some of which were planted near the beginning of the eighteenth century. This pine has a wide distribution both in Asia and Europe, and was introduced to this country by Gerard previous to the publication of his "Herball" in 1596. It was rather largely planted in England, both as an ornamental tree and for economic purposes. At Westwick Hall the planting of this conifer was commenced in 1702, and as it was found to thrive the work was continued at varying intervals until the plantations extended over a large area. An account of these was given in the "Transactions" of the Royal Society of Arts, Vol. xxviii., from notes made in 1809, and from this it appears that Mr. J. B. Petre, the father of the then owner, raised over 200,000 trees from seed gathered from trees growing on the estate. With these he planted upwards of 500 acres of land, and through this area he made a drive five miles in length. The situation was then bleak, and the soil sand, covered with heath and resting on a coarse hard gravel or dead yellow sand. Yet the trees grew vigorously, and in the course of seven or eight years had a girth ranging from fifteen to twenty inches. The success achieved in establishing thriving plantations of Pinus Pinaster on land on which previously nothing but the common heath had been found to thrive was considered worthy of recognition, and accordingly the Council of the Royal Society of Arts awarded Mr. Petre their gold medal.

Although there are other features of the estate hardly less interesting than the formation of the plantations of pine under great difficulties, it is necessary to return forthwith to the many objects of interest in the gardens with which we are at the present time most concerned. It would be interesting to linger among the trees and shrubs with which the gardens are furnished, and derive full advantage from the lessons they are so well able to teach, but time had to be economised when visiting Westwick Hall, and now the question of space arises, and the notes have to be restricted far more than one could wish. It must indeed suffice to say that trees and shrubs form a feature at once attractive and interesting, and that they contribute very materially to the manifold attractions of the garden in the several seasons of the year.

Hardy herbaceous plants have long been cultivated with quite exceptional success, and the fame which the gardens have for so long a period enjoyed is largely due to the glorious displays they annually produce, and the magnificent collections of cut flowers they have furnished for the principal exhibitions held in East Anglia. The number of first prizes that have come to

Westwick Hall Gardens for hardy flowers must be large, for it is a rare occurrence to see a collection contributed by them with other than a first prize card attached to it at an exhibition. The principal herbaceous borders are on the west side of the kitchen garden, but without the walls, and otherwise so arranged as to form an essential part of the pleasure grounds. The enclosure is bounded on one side by the kitchen garden wall, and on the other by a high hedge, and is intersected by a broad walk. The illustration of the border that is given herewith will sufficiently indicate the splendid development to which the occupants of the border attain during their respective seasons of flowering. About one-half of the border on the west side of the walk is shown in the illustration, and with reference to the other half, and the whole of the east border, it must be said that they were in the summer, when the photographs were taken, fully equal to the portion illustrated. In the planting of these borders none but the finest kinds were given a place, and they consequently are excellent examples of selection, as well as cultivation. Mr. Davison has been successful in improving some of the types, and he has succeeded in raising an extremely fine form of Erigeron speciosum, which has received the varietal designation of Quakeress.

SWEET PEA WALK WITH MARGINS OF POPPIES, SHOTESHAM PARK.

The walk that divides the herbaceous borders takes a sharp turn to the right a little farther on, and the right-hand border beyond affords suitable quarters for shade-loving plants. Here the wall is draped with the elegant-growing and brilliantly-coloured Tropæolum speciosum, which grows so freely and blooms so profusely as to suggest that the conditions at Westwick Hall are not less favourable for its development than are those which obtain in the Scottish Highlands. In the border, at the foot of the north wall, is the finest colony of Orchis foliosa that has a place in British gardens, but as it was described and illustrated in these pages early in the autumn of last year, further reference is unnecessary. It is now a matter of common knowledge that for some years past Mr. Davison has devoted a large share of his attention to the improvement of montbretias, and that as the result of his labours cultivators have now at their command a new and remarkably fine race of these beautiful flowers, of which Prometheus is one of the most noteworthy of those in commerce.

Immensely attractive is the pergola devoted to rambling roses, for the selection was judiciously made, and the whole of the plants are in the rudest health. A portion on which the Himalayan briar is running is herewith illustrated, but several other roses were not less remarkable for flower production, especially noteworthy being the specimen of Paul's Carmine Pillar, which annually produces a display that is dazzling in its brilliancy.

Of the orchard and kitchen garden it must be said that they are in keeping with other departments, and that no better proof could be desired of the success with which fruit growing is carried on than the collection of apples with which premier honours were obtained by Mr. Davison at the Norwich Chrysanthemum Show in November last.

Shotesham Park.

Shotesham Park, the residence of R. Fellowes, Esq., is situate some six or seven miles south of Norwich, and in the journey there by road the visitor passes through some of the most beautiful scenery in the eastern counties. The rolling meadows and woodlands which is passed through when the suburbs of the city are left well behind will perhaps appeal the most strongly to many visitors, and certainly the series of delightful pictures they form are such as to attract and hold the attention; but we were perhaps the most interested in that portion of the great Ipswich road that may be included within the suburban area. From within a short distance of the city boundary to a couple of miles or so beyond the road is flanked by residences of varying sizes, and surrounded by gardens remarkable for the taste with which they were designed and planted, and for the excellent condition in which they are maintained. To us this part of the route was of special interest for the evidence obtained of the great love for horticulture that exists among the well-to-do section of the residents within and near the city.

The mansion, which occupies a commanding position in the spacious park, was built about 1758, and is of handsome elevation. Standing amid sylvan charms of unrivalled beauty it has for its setting a broad expanse of closely-shaven lawn, unbroken by flower beds, or so few in number that they escape attention. The enclosure on the side from which the mansion is entered contains several large cedars of Lebanon that were probably planted when the house was built, and have since been allowed to grow without restriction. From the south side the pleasure grounds extend for a long distance, and herein are numbers of coniferous and deciduous trees that are quite unique in their development, as, for example, the magnificent weeping ash illustrated and the finely developed example of Wellingtonia gigantea which occupies a conspicuous position in the illustration of sweet peas, which are here grown with quite exceptional success. The beeches and cedars are particularly fine, as also are the lilacs, Portugal laurel, and other deciduous and evergreen shrubs.

Sweet peas are very highly esteemed at Shotesham Park, and in consequence they are grown extensively. The broad walk that intersects the main walk through the kitchen garden has on each side during the summer months a row of these fragrant flowers set back four or five feet from the box edging, and while yielding abundant supplies of flowers for indoor decorations, they form a screen to the quarters devoted to vegetables. Outside the kitchen garden is the sweet pea walk herewith illustrated. This walk is 164 yards in length, and the sweet peas were arranged in clumps about four feet apart, and the plants were fully eight feet high. The flowers were being produced in great abundance, and, as will be gathered from the statement that in many instances the stalks were twenty inches long and four blooms on a stalk, they were of high quality.

Proceeding at right angles from the far end of the walk illustrated was another long border of sweet peas, also in excellent condition. This border was to the right of the walk, and to the left is a border containing many plants of much interest. Among other things is a large [illegible] of hardy orchids, which are evidently [illegible] at home, and enjoying the conditions [illegible] essential to full development, and [illegible] edging there is a broad band of Gentiana acaulis, which has a length of eighty yards, and must present an extremely [illegible] appearance when in bloom. Running [illegible] over the wall at the back of the border is the brilliantly-coloured flame flower (Tropæolum speciosum), which here, as in some other Norfolk gardens, grows with great vigour.

A west border, within the kitchen garden, is devoted to bulbous iris and other spring-flowering bulbs, and not far distant are the beds of carnations, which form an attractive feature and produce an abundance of bloom for decorative purposes in a cut state. The beds contain about 800 plants, in some 50 varieties, and are of interest for the information they convey regarding the relative merits of the border varieties now in cultivation.

The plant and fruit houses are numerous, and while all the houses contain much to interest visitors, those devoted to the fine collection of orchids are the most interesting. The collection is particularly rich in the finer forms of lælio-cattleyas and cypripediums, while other kinds are freely represented, and there are large numbers of seedlings in various stages of growth. In the collection are many large, finely-developed specimens, and with some of these Mr. L. Smith, the able head gardener, obtained several premier awards in a particularly close competition at the Norwich show in November last. In the stove a remarkably fine form of Gloriosa superba at once attracted attention. and on inquiry being made with regard to its place of origin, it was ascertained that it had been brought from Ceylon some years ago by a member of the family.

Fruit culture under glass is carried out on a large scale, and with much success. In the four big vineries were crops of Muscat of Alexandria, Black Hamburgh, Alicante, and Gros Colmar—grapes that proved to demonstration Mr. Smith's skill as a grape grower. In one of the peach houses we were interested in a tree of Bellegarde peach, which occupies a space of 28 feet by 17 feet, and was carrying a crop of 700 fruits.

Hardy herbaceous plants are grown extensively and well, and roses are cultivated with much success. Especially noteworthy were the fine arches of Lady Gay, Alberic Barbier, Dorothy Perkins, and Crimson Rambler, the last-named being remarkable for its depth of colour. Of much interest was the well-flowered specimen of a variety of the Damask rose that has been grown at Shotesham Park for upwards of 100 years.

George Gordon.

⁂ The second of the two articles on "Some Norwich Gardens" will appear in our next issue (April 18). The gardens will comprise those of Ashwellthorpe Hall, Boyland Hall, Crown Point, Dunston Hall, Oakland House, and Town Close House.

Good Supports for Sweet Peas.—Good supports for sweet peas grown in clumps, or wide hedges, are the young larch trees thinned out from new plantations, where they have been used as nurses. If they can be procured from 8ft. to 10ft. high, they will answer admirably, and should be fixed into position by letting them in the ground eighteen inches to two feet before planting the peas, retaining as many as possible of the lower branches. For clumps they should be fixed 6ft. to 8ft. apart, afterwards planting the sweet peas from pots, using three pots, six to eight plants in a pot, to form a clump. The plants will need an occasional training to get them regularly over the "trees" or supports. It is essential that the trees should be fresh, I mean trees cut this last winter, as peas will not cling properly to old wood. The wind will not blow the peas out of the supports if fresh trees are used. — H. Prentice, Hartpury House Gardens, Gloucester.

BEAUTIFUL FLOWERING TREES AND SHRUBS.

The lecture given by Mr. George Gordon, V.M.H., at the meeting of the Royal Horticultural Society, Vincent Square, on Tuesday, March 17, came at a most opportune time, and, judging by the crowded audience and the close attention paid to all the lecturer said, it is evident more interest is being taken in these interesting and beautiful subjects. Intending planters would do well to make notes from time to time during the coming season of the various species and varieties. As there is now such a wealth of beautiful subjects suited for both large and small gardens alike, which will thrive and flourish in almost any soil, and all parts of the country.

A MAGNIFICENT SPECIMEN OF THE WEEPING ASH, SHOTESHAM PARK.

And, as Mr. Gordon pointed out, these can be purchased for practically the same cost as the most common subjects.

It is painful indeed to see valuable sites in very many of our best gardens occupied by the most common of shrubs and trees, where the more beautiful and rare would succeed, and give so much variety and pleasure. For some reason or another the shrubbery is the last to receive attention in the garden, the result being, however well and carefully it may have been planted, in a few years it becomes an entangled mass. The better things become crowded out, and give place to the coarser kind, such as laurel, yew, privet, box, and the like, and even these, all beautiful in their way when well treated, are poor, miserable specimens when much crowded. These are all excellent when planted judiciously and kept within bounds, both for appearance and affording shelter, but they ought not to be allowed to encroach and spoil the more choice and less rampant growers.

One could hardly credit the large number of varieties and species there are unless pains be taken to visit some of our best formed collections in various parts of the country, at different seasons of the year, Kew, of course, being extremely rich in these, and always properly named. There is scarcely a day in the whole year but some one or another is not in flower. And very many which are not thought to be sufficiently hardy for planting in the open can be safely relied on if suitable sheltered places are selected, and a small amount of protection afforded them in very severe weather.

Unfortunately, very few young men of the present day realise the importance of studying this branch of gardening, and very many, when they attain to an important position as head gardeners, are sadly deficient in all that relates to trees and shrubs. And yet I am convinced in the near future this branch of gardening will occupy a much more prominent position than it does at the present day. The natural requirement of the various subjects must be considered, both as to position, soil, and pruning. And one of the most important points to observe is to avoid overcrowding. Plant thick and thin early is an old adage, and perfectly true; the transplanting and re-arranging of the shrubberies, especially in their early stages, is both practical and extremely interesting, and leaves a mark on the garden for many years. I trust the good advice given by Mr. Gordon will be taken up, not only by many who had the pleasure of listening to him, but many others in various parts of the country.

Edwin Beckett, V.M.H.

THE BEST DAHLIAS.

As our annual exhibition is always held early in September, it is very important for its complete success that during the growing period of the dahlia the weather should be at all events moderately warm and wet. Last year, it need scarcely be said, the conditions were the reverse of favourable, for throughout the whole of the summer the temperature remained low and the rainfall deficient. The National Dahlia Society's show in 1907, which took place on September 5, although, as usual, a very interesting and attractive one, proved less extensive than usual. Mr. E. Mawley, in his "Dahlia Analysis," published in the schedule of the National Dahlia Society, says it will be at once seen by a glance down the short statement given below that the number of shows and fancies was even smaller than in any of the four previous years, except 1906. The pompons were, however, well represented, and also the singles. But in the cactus section, which is always the most popular and attractive in the show, there was a great falling off, as compared with the display of these beautiful flowers we expect to see at an exhibition of average extent.

	1903	1904	1905	1906	1907
Cactus, No. of bunches ...	344	351	369	362	296
Cactus, shown singly	660	708	606	744	624
Shows, No. of blooms	527	512	533	337	478
Fancies, No. of blooms......	181	225	235	161	181
Pompons, No. of bunches	192	155	189	163	210
Singles, No. of bunches...	156	90	93	145	147

Cactus Dahlias.

In the following lists all the best varieties will be found arranged according to the average number of times they were staged at the society's last two exhibitions.

1, J. B. Riding, 1905; 1, J. H. Jackson, 1902; 3, Pearl, 1905; 4, Mrs. Edward Mawley, 1902; 5, Florence M. Stredwick, 1904; 6, Nelson, 1906; 7, Rainbow, 1904; 8, Harbour Light, 1905; 9, Crepuscule, 1905; 10, Mrs. Macmillan, 1906; 11, H. F. Robertson, 1903; 12, Conrad, 1904; 13, Thomas Parkin, 1905; 13, William Marshall, 1906; 15, H. W. Sillem, 1904; 16, Fairy, 1905; 16, Mrs. F. Grinsted, 1906; 18, George Gordon, 1904; 19, Phineas, 1903; 20, Cockatoo, 1905; 21, Ianthe, 1903; 21, Sirius, 1904; 23, Mrs. H. L. Brousson, 1904; 24, H. Shoesmith, 1906; 25, Ella Kræmar, 1905; 25, Victorian, 1906; 27, J. W. Wilkinson, 1901; 28, White Lady, 1906; 29, Ivanhoe, 1906; 30, Mrs. J. J. Crowe, 1900; 31, Alight, 1906; 31, Mrs. S. Gaskill, 1906; 33, Alexander, 1905; 33, Faunus, 1906; 33, Kathleen Bryant, 1907; 33, Mrs. George Stevenson, 1906; 33, Mrs. Winstanley, 1902; 33, Raymond Parks, 1903; 33, Ruby Grinsted, 1907; 40, Mrs. Carter Page, 1900; 40, The Pilot, 1906; 42, H. J. Jones, 1903; 42, Lady C. Campbell, 1904; 42, Mrs. W. H. Raby, 1907; 45, Star, 1906; 46, Antelope, 1905; 46, Lustre, 1907; 46, W. E. Dickson, 1905; 49, Violetta, 1904; 50, Flag of Truce, 1907; 50, Iris, 1906; 50, Primrose, 1906; 50, Premier, 1904.

Now that this section appears to be quieting down a little, it has been thought that better and more comparable results would be obtained by adopting a two years' average, instead of arranging the varieties according to their records at the last exhibition of the society alone. In comparing the positions of certain sorts with the places they occupied last year, it must be borne in mind that a special analysis on the same two years' plan has been drawn up for this purpose, and that these comparisons have no reference to the one year's analysis of 1906.

J. B. Riding and J. H. Jackson now share the premier position in the list, the former having risen since last year from No. 6 and J. H. Jackson from No. 2. Pearl still remains at No. 3, and Florence M. Stredwick at No. 5. Mrs. Edward Mawley has, on the other hand, fallen from No. 1 to No. 4. So that we have here among the first five varieties, what may be regarded from the ordinary amateur exhibitors' point of view, the best dark cactus dahlia, the best white, and the best yellow, which only shows how greatly first-class self-coloured sorts are required in these three colours. In the shaded varieties we have in a variety of tints the perfection of form now looked for in an exhibition cactus dahlia, but not so as yet it would seem in the self-coloured kinds. So that it is pretty certain in the near future that the varieties referred to will be superseded by superior kinds in the same colours.

The most noteworthy changes since last year have been as follows: Nelson has risen from No. 11 to No. 6, Harbour Light from No. 16 to No. 8, Crepuscule from No. 14 to No. 9, Mrs. Macmillan from No. 18 to No. 10; Thomas Parkin from No. 19 to No. 13, William Marshall from No. 23 to No. 13, Fairy from No. 28 to No. 16, Mrs. F. Grinsted from No. 21 to No. 16, H. Shoesmith from No. 43 to No. 24, Ella Kræmar from No. 31 to No. 25, and White Lady from No. 39 to No. 28. On the other hand Rainbow has fallen from No. 4 to No. 7, H. F. Robertson from No. 9 to No. 11, Conrad from No. 8 to No. 12, George Gordon from No. 10 to No. 18, Phineas from No. 12 to No. 19, and Ianthe from No. 7 to No. 21.

Of the older varieties—for so they may be regarded in this progressive section—Phineas, sent out in 1903, falls from No. 12 to No. 19, Ianthe of the same year from No. 7 to No. 21, and H. J. Jones from No. 15 to No. 42, while Raymond Parks remains in its previous place at No. 33. Two of the 1902 sorts still hold splendid positions (I refer to J. H. Jackson at No. 1 and Mrs. Edward Mawley at No. 4), while the remaining variety, Mrs. Winstanley, descends from No. 22 to No. 33. There is only one representative of 1901 on the list, J. W. Wilkinson, the hero of a hundred fights, which has fallen from No. 13 to No. 27. The two oldest cactus dahlias in the analysis are Mrs. J. J. Crowe and Mrs. Carter Page, the former having fallen from No. 24 to No. 30, and the latter from No. 35 to No. 40. Both of these varieties were sent out in 1900.

Show Dahlias.

It should be explained that in the following lists the positions of the shows and fancies are dependent on the average number of times each variety was staged at the last eight exhibitions of the National Dahlia Society, in all instances where their records will allow of this being done. In the case of the small number of newer sorts, their average records for a necessarily shorter number of years have been utilised.

The show dahlias, arranged according to their respective records, came out as follows: 1, R. T. Rawlings; 2, Mrs. Gladstone; 3, John Walker; 4, Duchess of York; 5, Arthur Rawlings; 6, William Rawlings; 7, Florence Tranter; 8, William Powell; 9, Mrs. Langtry; 10, Chieftain; 11, J. T. West; 12, Shotesham Hero; 13, T. J. Saltmarsh; 14, Colonist; 14, James Cocker; 16, Dr. Keynes; 17, Harry Keith; 18, Miss Cannell; 19, Gracchus; 20, Duke of Fife; 20, Mrs. W. Slack; 22, Perfection; 23, Maud Fellowes; 24, Goldfinder; 25, George Rawlings; 26, Prince of Denmark; 27, Mrs. D. Saunders; 28, David Johnson; 29, John Hickling; 30, Shirley Hibberd; 31, Daniel Cornish; 32, Victor; 33, Harrison Weir; 33, Henry Walton; 35, Virginale; 36, Ethel Britton; 37, Marjorie; 38, Henry Clark; 39, Willie Garratt; 40, Diadem; 41, Hon. Mrs. P. Wyndham; 42, Majestic; 43, Warrior; 44, John Standish; 45, Mabel Stanton; 46, Norma; 47, Earl of Ravensworth.

The first six varieties on the list occupy precisely the same positions as in the previous analysis. R. T. Rawlings still takes the lead, followed closely by Mrs. Gladstone and John Walker. In fact, there are no other sorts which can compete with them as reliable exhibition show dahlias, the only other kinds with average records of twenty or more being Duchess of York and Arthur Rawlings. Of the comparatively new dahlias in this section Gracchus, sent out in 1901 (No. 19), has risen four places: while Henry Clark, distributed in 1903 (No. 38), remains virtually at the same position as in the last analysis.

Fancy Dahlias.

The fancy dahlias arrange themselves in the following order: 1, Rev. J. B. M. Camm; 2, Mrs. Saunders; 3, Mrs. John Downie; 4, Emin Pasha; 5, Matthew Campbell; 6, Duchess of Albany; 7, Mabel; 8, Dorothy; 9, S. Mortimer; 10, T. W. Girdlestone; 11, Frank Pearce; 12, Goldsmith; 13, Dandy; 13, Watchman; 15, Buffalo Bill; 15, Peacock; 17, Prince Henry; 18, Rebecca; 19, Sunset; 20, Comte de la Saux; 21, Distinction.

They as a rule occupy practically the same places as in the analysis issued last year. Mabel, an 1897 variety, has still further improved the position it gained last year by rising from No. 9 to No. 7. Emin Pasha has also risen from No. 6 to No. 4, Frank Pearce from No. 14 to No. 11, and Dandy from No. 15 to No. 13.

New shows and fancies appear from time to time, but few secure sufficient popularity with exhibitors to displace their older brethren, some of which, like James Cocker, date back as far as 1871, Mrs. Saunders as far back as 1872, while James Walton and Rev. J. B. M. Camm were sent out in 1873.

Pompon Dahlias.

I append a list of varieties arranged according to their average records at the last four exhibitions of the society, in all cases where this is practicable. Those kinds which at the time of the last show of the National Dahlia Society were three or fewer years old are indicated by an asterisk.

1, Bacchus; 1, Nerissa; 3, Tommy Keith; 4, Darkest of All; 5, Douglas; 6, Emily Hopper; 7, Adelaide; 8, Jessica; 9, Daisy; 10, Ganymede; 10, Nellie Broomhead; 12, Little Bugler; 12, Rosebud; 14, Ideal*; 14, Queen of Whites*; 16, Dr. Jim; 16, Violet; 18, San Toy*; 19, Little Mary*; 20, Cyril; 20, Ernest Harper; 22, Edith Bryant; 22, Midget*; 22, Phœbe; 22, Sunny Daybreak.

The changes also in this section are mostly very slight. Little Bugler has, however, risen seven places since last year. On the other hand Dr. Jim has lost three places, and Cyril and Ernest Harper six places. Of the pompons sent out in 1904 Queen of Whites remains as before, while San Toy has gained one place. Ideal, distributed in 1905, on its first appearance secures a position at No. 14, while Little Mary has risen two places. The only 1906 Pompon on the list, Midget, will be found at No. 22.

Single Dahlias.

Arranged according to their average records for the last three exhibitions, the leading varieties come out as follows: 1, Leslie Seale; 2, Mikado*; 3, Stromboli*; 4, Mavourneen*; 5, Royal Sovereign; 6, Eclipse*; 6, Liberty*; 8, Princess of Wales; 8, William Parrott; 10, Victoria; 11, Beauty's Eye; 11, Darkness; 11, Formosa; 11, General Kuroki*; 11, Miss Roberts; 11, Snowdrop; 11, Veronique*; 18, Polly Eccles. The varieties marked with an asterisk are new sorts—those sent out in 1905 or subsequently.

The changes in the singles, for many years almost as conservative a race as the shows and fancies, display considerably vitality in this section, and are therefore to be welcomed. Care must, however, be taken that in the desire for novelty some of the best of the older varieties are not displaced by kinds which do not comply as completely with the characteristics given as a guide for the raisers at page 81 of our "Official Catalogue," viz., "Flowers perfectly circular, consisting of a single ring of eight florets surrounding the central yellow disc, the florets broad and flat, overlapping each other, rounded and slightly recurving at the tips."

Leslie Seale deservedly heads the list, as there are few other varieties which have as many good qualities. Among other changes in the established varieties the following may be noted. Victoria has gained three places, Beauty's Eye five places, and Miss Roberts two places. On the other hand, William Parrott has fallen four places, Darkness six places, Formosa three places, Snowdrop two places, and Polly Eccles eight places; while that perfect model of what a single dahlia should be as regards form, Columbine, which was last year at No. 10, has now disappeared altogether from the list.

THE RAMONDIA IN THE GARDEN.

There are many who think that the ramondia is a modern garden plant, but it must be remembered that the one which is best known in our gardens, Ramondia pyrenaica, was cultivated in this country very long ago. It certainly was grown by Miller in 1731, and most probably by Parkinson, who figured and described it in his "Paradisus." An excellent plate of this species also appeared in the "Botanical Magazine," Vol. III., 1794 (t. 236), which is before me as I write, and is a wonderfully good representation of the species, which was then known as Verbascum Myconi, or the borage-leaved mullein. It is thus difficult to account for its comparative scarcity in gardens until within the last few years, except it was due to the lack of appreciation of hardy flowers caused by the craze for bedding being carried to undue length.

Nowadays, however, the ramondias are appreciated in all good gardens where rock plants are cultivated, and where the few requirements can be complied with, while the introduction of R. serbica Nathaliæ has caused them to receive more notice than for some time. As rock garden plants all of these are of great importance.

Their Proper Position.

It is thus desirable that the requirements of these good rosette mulleins should be studied, so that there may be as few failures with them as possible, and a long experience and observation enables one to say with confidence that there is not any good reason why almost any garden may not become a happy home for them.

In the first place, it may be said that they are shade lovers, and that nothing is more detrimental to them than planting them in sunny places, where their foliage soon shrivels up, and the plant falls a victim to the want of knowledge or of thought which condemns a denizen of the shady ravines of the high mountains to the arid and sunny rockeries on which we have seen them planted. This remark is not a whit too severe; and the ramondia will soon vanish in such a situation, unless shielded from the sun by some contrivance, such as a large stone by which it is screened from the solar rays, or some shading material placed over it during the summer months. But such arrangements are really unnecessary, and are only alleviations of an evil which should never have existed.

It is an easy matter to so arrange a rockery or rock garden, or even a little bit of rough walling, that the ramondias may luxuriate in the shade they love. Nowhere can they be better grown than on a wall facing north, especially if it supports a bank of soil, so that the plants may derive plenty of moisture from behind. Such a wall, with only a slight "batter," or lean inwards, is an ideal home for these flowers. On a rockery, with almost perpendicular rocks, facing north, they will also flourish if well planted between the crevices, and with stones jammed close about them to keep them firm. Even on a low bank of soil facing north they will do well, and the late Rev. C. Wolley Dod, in his famous garden at Edge Hall, in Cheshire, had a colony of healthy plants in such a position, but screened from the sun from behind by a low fence of iron. This was more artificial than one would choose, but it served its purpose, and the plants it shaded were in perfect health.

Given conditions such as these, with moisture at the roots and shelter from the sun, the ramondias will thrive, but they are wonderfully accommodating if shelter from sun is secured. At Trinity College Botanic Gardens there used to be a colony of seedlings on a dryish, but shaded wall, apparently self-sown from some other plants there. The wall was an ordinary built one, and the seedlings had only what nutriment was in the joints of the stones and what they derived from the air to sustain them. There are nurseries and private gardens where there are hundreds of these ramondias established in rough walls with earth behind, and where, in their flowering time, they present a fine sight indeed.

How to Raise the Ramondias.

A stock of ramondias can be raised from seeds sown in fine soil composed of loam, leaf-soil, and sharp sand, the surface being made level and the seeds sown and just covered on the top with some of the finest of the earth. They should always be sown in well-drained pots, and the latter placed under glass, with a sheet of glass covered with brown paper over them. When the seedlings appear the glass and paper should be removed and air given. When the seedlings are large enough to handle they must be pricked out an inch apart, and planted out when of fair size. I prefer planting them out in spring, as then they are not so liable to be forced out by frost.

Soil.

Soil presents little difficulty, as the ramondias are accommodating in their needs regarding this. Loam, leaf-soil, or peat, and sand make an excellent compost, but it should be made firm, and the plants, which have short roots when young, fixed firmly into the soil by pieces of stone. None of the ramondias, except R. serbica Nathaliæ, object to lime.

Species and Varieties.

R. pyrenaica, the best known, is a pretty plant, with its rough and wrinkled leaves, and its bluish-purple flowers on stems not more than six inches high. There is a very beautiful white variety, and some seedlings from this show considerable variety in tone of white. A rose-coloured variety is in existence, but is scarce and expensive.

R. serbica is a charming ramondia, with pale blue or mauve flowers, and rather dwarfer in its growth, while its variety Nathaliæ has its flowers of a darker colour, and its anthers of a bright orange. Some plants, not yet well known, have been introduced, as R. quercifolia, R. leucantha, and R. peregrina, and these appear to be varieties only of R. pyrenaica. These thrive with me under the same conditions as the others.

It will be seen from these notes, which, lengthy as they are, do not exhaust all that could be said about these lovely rock plants, that the genus Ramondia is one worthy of the appreciation of the admirer and student of the flora of the mountains of Europe, with all its variety, interest, and charm. S. ARNOTT.

Azalea mollis after Flowering.—Mollis azaleas all too rarely bloom so freely after their first season in England as one would like; in fact, many of them never bloom at all. Beginners in their culture are told that the plants are hardy, and consequently think they may be turned out of the house as soon as they become shabby. But hardy plants under glass for the nonce become tender plants, and should be always treated as such. Thus, mollis azaleas, instead of being turned out after flowering, should go into a warmer corner, either of the greenhouse or vinery, where they can be well looked after until they have quite finished making their new growth.—E. J. K.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

CYPRIPEDIUMS.—The summer-flowering kinds of cypripediums will now be producing their flower scapes, and will need careful attention and the necessary encouragement to induce them to expand their flowers in a satisfactory manner. C. Lawrenceanum, in its varied dark forms, is one of the most useful we have among the tessellated foliage section for cut flower purposes, as with their great length of stem the flowers can be readily arranged with other flowers. I regard this and C. barbatum as two of the most serviceable of the cypripediums for the supply of cut flowers, as their lasting qualities leave nothing to be desired. C. Lawrenceanum Hyeanum, the albino of the species, which for many years was scarce and valuable, has now become plentiful in collections. It is supposed to have a delicate constitution, but I find when grown in a temperature about 65 degrees normal through the year it is even less difficult to grow than the typical forms. Its allied albino, C. callosum Sanderæ, is one of the most vigorous growers, and is free in flowering, and one of the most beautiful of the cypripediums. It can now be purchased at practically the same rate as the typical coloured varieties, and should have a place in every collection. The whole of these should be placed in a position where they can obtain the full benefit of light, and be shaded only when there is a danger of the foliage becoming discoloured or scorched. Spraying overhead is beneficial at this season, as it assists in keeping insect pests in check.

Where thrips make their appearance among these cypripediums they are extremely difficult to dislodge. I would, therefore, advise that the plants be sprayed overhead at regular intervals with some safe insecticide. Select a bright day for the purpose, and spray between nine and ten a.m. This will give ample time for the leaves to become dry before night. Shade carefully after spraying. Where thrips have become established on any plants the only possible way of banishing these pests is to persevere with frequent dippings. I would advise dipping such plants twice a week for at least a month, then weekly for an equal period, and so on until satisfied that the pests have been wholly destroyed. We have made a practice for some years past of spraying the plants in all the divisions of our orchid houses fortnightly during the summer months, and find it a good remedy for keeping insects in check.

In dealing with the summer-flowering cypripediums, where they are grown as large specimens for exhibition purposes, I would point out that considerable advantage may be obtained in the production of colour if the plants are grown for a few weeks previously to their flowers becoming expanded under cooler conditions, as, for an example, in an intermediate house, where the temperature is maintained at about 55 degrees at night. C. Lawrenceanum is much benefited thereby, while the substance and colour of the flowers of C. Curtisi are greatly improved. The potting requirements of this class are best attended to after the flowering season is past. I hope to refer to this matter again at the proper season.—H. J. CHAPMAN, Oakwood Gardens, Wylam-on-Tyne.

STOVE PLANTS.

MEDINILLAS. — The remarkably handsome foliage and flowers of these free-growing stove shrubs command the attention of everyone under whose notice they come. The flowers appear in graceful, drooping panicles, and produce a charming effect. It is essential that the medinillas should be placed in a light position, and be allowed sufficient space to admit of the natural development of growth. They are undoubtedly the most attractive when grown as large specimens. Cuttings root freely at this season of the year, or as soon as the growths have attained about three inches in length. They should be removed with a heel, put singly into small 60's filled with a sandy compost, and the pots plunged in a brisk bottom heat. Established plants require plenty of root room during their early stages of growth, and attention must be given to the specimens. As the pots become filled with roots give liberal applications of weak liquid manure, with an occasional top-dressing of some approved artificial fertiliser. Medinillas succeed best in a porous compost of lumpy fibrous loam and peat, with charcoal, lime rubble, and a sprinkling of well-decayed sheep manure thoroughly incorporated. Pot very firmly.

MARANTAS.—Where fine foliage plants are appreciated marantas will prove useful and interesting. They afford a great diversity both in the markings of the leaves and the sizes to which they attain. Experience has proved to me that these plants succeed best when propagated by division of the roots at the time when the plants show signs of making new growth. They succeed best in the intermediate stove, shaded from the hot sun, and given a moderately moist atmosphere, otherwise the beautiful velvety appearance of the foliage is not so evident. During their growing season the free use of the syringe is necessary.

CLIMBERS.—Attention should be given to climbing plants by training the shoots into the desired position, and the thinning out of weak undesirable growths. Climbers ought not to be allowed to ramble at will, or they will eventually prove detrimental to the other occupants of the stove.

CROTONS.—Those who desire to secure highly-coloured examples for exhibition or other purposes must be careful to expose them to full sunlight, and to grow them as near the glass as is possible without injury to the foliage. They colour much more freely when the pots are well filled with roots and regular attention given by way of feeding with chemical fertilisers.

REARRANGEMENT of the plants in the stove from time to time always proves interesting, and is sure to be appreciated. In carrying out this work remove any unsightly plants into a less conspicuous position.

SHADING.—Blinds ought to be fixed in their position ready for use when required. I have found the Parisian lath blinds admirably adapted for shading of stove plants. The Japanese split bamboo blinds are less expensive, and are readily adapted for fixing into position.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

MELONS.—These will now be growing freely, and, owing to the sunless weather, a liberal amount of fire-heat will be necessary. If bottom heat is derived from the hot-water apparatus, watering must have close attention, as the roots of these soon penetrate to where it is warm, and if sudden bursts of sunshine occur when the roots are dry the plants will suffer, and red spider put in an appearance. If a few early fruits are required the leading shoots may be stopped before they reach the top of the trellis. Side shoots will soon be produced, and if these have the point nipped out at the first leaf the next shoot should throw fruit. As soon as the fruits are set the bed may be top-dressed occasionally, as appears necessary, with some good loam. The plants will take an abundance of water providing the drainage is in good condition. To keep up a succession for a full supply much room is required, and another sowing should be made. Seeds will germinate more quickly and better now than earlier in the year, and, as in the case of the previous crop, they should be sown in three-inch pots.

COOL ORCHARD HOUSE.—Trees have come on very steadily and satisfactorily, plenty of bloom was produced, and all the trees have set their fruit well. Cherries should, as soon as the fruits are set and the leaves are unfolding, have a fumigation for a night or two, as black fly is very troublesome if it becomes established. The fruits may be thinned, a few being taken off at each thinning. Plums should also have close attention. If they are making very strong growth a few extra may be left on, and may be thinned out later and used for culinary purposes. Pears and apples should be left still longer before thinning, as they generally throw off a good few as growth proceeds. When all can be seen swelling off the pots may be plunged, if not previously done. The bed where they are plunged should be well drained, and there is nothing better than a bed with chalk bottom, with drains to take away superfluous water. If the weather keeps dull and cold syringing must be judiciously done. Avoid cold draughts in ventilating the house. Figs also planted in a cool house such as this are very useful, as the fruit is available just before the outside crop is ripening. They may be planted out or be grown in pots, but pot trees are preferable as they can be moved about when required.

LATE VINERIES.—By this date vines in the late houses will be making new growths, and must be treated accordingly. Having a good season of rest, they should break strong, and in disbudding select the lower shoot on the spur to be left, providing it is strong, and in a good position to tie down. Water the inside border if necessary. If the roots are in an outside border these should be seen to. If they have been covered up with old garden lights, as previously advised, these may be removed.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

TOMATOES.—Plants raised from seeds that were sown last month for furnishing the crops out of doors will now require attention as regards keeping them near the glass. Shift them on from the three-inch pots into others one size larger, using a compost of turfy loam and a little wood ashes. With this method good strong plants can be had for planting out at the latter end of May. Those plants raised from autumn-sown seeds, and grown on, will now be giving a few ripe fruits, which will be much appreciated. Continue to give them a little stimulant, such as bone meal, to assist the other fruits to swell freely. The successional crops will now want a little top-dressing of loam and some approved artificial manure, giving them plenty of water whenever they seem at all dry.

CARROTS.—The seeds of main crop varieties should be sown without delay, and if the soil be light, and of a good depth, so much the better for the crop. Very good results can be obtained from heavy land, provided the soil is trenched to a good depth. Afterwards make holes with a bar, and fill them up with fine soil, then sow two or three seeds in each hole. The rows should be from twelve to fifteen inches apart, and about the same distance from each hole. But on all suitable soils the lines should be drawn at twelve inches apart, so that a Dutch hoe may be worked between the rows with ease. Young carrots are always in demand, and seeds of Early Nantes should be sown at short intervals throughout the season to keep up a regular supply.

POTATOES.—The planting of the main crop varieties should be pushed on without delay, but choose dry weather if possible. Wood ashes and London manure forms a useful fertiliser, and improves the quality of the crop. Plenty of room should be given between the sets, and in the rows, to ensure strong, firm growth. The Factor, Scotch Triumph, and Up-to-Date do well on our heavy land, and yield good crops.

PARSLEY.—Another sowing of parsley should now be made, so as to keep up a supply during the summer months. This useful herb delights in strong loam, made fairly firm; some prefer to sow in boxes in heat, and when ready transplant it into permanent beds. By this method strong plants are soon obtained.

ONIONS.—Plants that have been pricked off into boxes should be gradually hardened, with a view to their being finally planted in beds about the middle of the present month. When planted out they must be carefully attended to until they become established.

PEAS.—Continue to sow only the best varieties on well-trenched ground, giving them plenty of room between the rows. If the seed can be placed about two inches apart from seed to seed better filled pods will be the result. Allow about the same distance from each row as the height of the peas that are sown.

RED CABBAGE.—Plants raised from seeds sown in the autumn should now be finally planted, selecting the thickest-stemmed ones at the basin, and making them firm as the work proceeds.

LETTUCE.—Plants that were raised from seeds sown early, and pricked off into boxes or frames, will now be ready for planting out on sheltered borders, where protection may be given if necessary. More seeds should be sown for succession.

BEET.—Small sowings of seeds on a warm south border of the turnip-rooted variety will prove most useful for the salad bowl early in the autumn.

CELERY.—The first batch of plants that was pricked off into boxes last month for planting out early should be kept growing without the slightest check, closing the frame early in the afternoons, and damping the plants over through a rose. Plants from seed sown later for the main crop should now be pricked out in a frame, using nice rich soil, and giving them the same treatment as recommended for the above.

SALSAFY AND SCORZONERA.—Seeds of these two vegetables may be sown now in drills, fifteen inches apart, and about one inch deep. It is not often they are wanted in quantity, so therefore a few rows will be sufficient.—T. W. Birkinshaw, Hatley Park, Sandy.

A NOVEL APPLE TREE.

Herewith I send you a photograph of a French Crab apple tree, taken on New Year's Day, 1908. The crop, one bushel, was gathered on the same day, after having withstood severe gales and frosts, and not losing a single fruit. Wind has no effect on it, and it was very hard to separate the stems from the tree on the date named. French Crab is a fine cooking apple from April to June, and as fresh and brisk in the latter month as our best apples are in December.

I note that your correspondent, Mr. H. Markham, on page 227, makes this apple synonymous with Northern Greening, but there is really no comparison between the two. The Messrs. Seabrook and Sons, of Chelmsford, are the only trade firm that I know who bracket these two kinds together.

Straffan.

[We much regret that the photograph sent was not suitable for reproduction. We may point out that French Crab is, according to Dr. Hogg, synonymous with Winter Greening rather than with Northern Greening, although Dr. Hogg himself gives John Apple as a synonym of both Winter Greening and Northern Greening. Winter Greening or French Crab, is notable for the length of time it will keep fresh under suitable conditions. We have seen fruits kept sound for nearly two years, and at the late Mr. Smee's garden at Wallington, Surrey, we have many times seen sound fruits kept well over twelve months.—Ed.]

Raspberry Canes.—Newly-planted canes should be cut down to within a few inches of the ground level, and especially those planted late. If allowed to remain the crop will not be much, and the next year's fruit canes will be weakened. Those varieties intended to fruit in autumn should also be cut down, and in some seasons a very nice crop of fruit can be gathered from them. Keep the ground clean and free from weeds, and mulch well if the land is light and porous.—H. Markham.

DEVON DAFFODIL AND SPRING FLOWER SOCIETY.—FIFTH ANNUAL SHOW will be held at PLYMOUTH GUILDHALL, on TUESDAY and WEDNESDAY, 21st and 22nd April, 1908.
Entries close 15th April.
Tradesmen wishing to exhibit (not for competition) must give at least 10 days' notice.
Schedules, and all information, from CAPTAIN PARLBY, Hon. Sec., Manadon, Crown Hill, S.O., Devon.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five shilllings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Brighton Horticultural Society.

The Brighton Society was fortunate in choosing a very beautiful spring day for the opening of its spring flower show in the famous Dome and Corn Exchange. The sun shone gloriously all day, and, though there was a keen edge on the wind on April 7, the Queen of Watering-places wore a gay and festive look that becomes the spring time.

From Haywards Heath to Brighton the railway banks and the fields gave tokens of spring in the golden stamened flowers of the willows, the innumerable primroses, the coltsfoot, and other early blooms.

A very wide range of subjects is covered by the spring schedule of the Brighton Society, so that the show is an interesting one. Daffodils do not monopolise the attention, but they are provided for, as are hyacinths, azaleas, arums, genistas, orchids, pelargoniums, etc., etc. The exhibition was a good one, and both the Exchange and the Dome were well filled with bright flowers.

GROUPS AND TABLES.

The only exhibitor in the class for a large group of flowering and foliage plants was Mr. E. Jones, gardener to W. H. Young, Esq., Withdean Grange, Brighton, who had masses of forced flowering shrubs, such as prunuses, spiræas, lilacs, wistarias, and Clematis indivisa lobata, with arums, ferns, palms, lily of the valley, and Erica carnea. He was awarded first prize. In the amateurs' division Mr. T. Wells led for a semicircular group with a bold display of daffodils, arums, etc.; Mr. G. Turrell came second; and Mr. J. Martin, Lewes, third. In another class Mr. A. J. Blake was the leading prize-winner, followed by Mr. G. H. Bennett; both showed cytisuses, Azalea mollis, daffodils, and other early flowers.

Mr. J. Backshall was placed first for a mantelpiece and hearth decoration, with a simple design in zonal pelargoniums and dielytras; Mr. H. Goldsmith second with daffodils, cinerarias, cut zonal pelargoniums, and forsythia sprays. In the ladies' class, Miss Mabel Howell led with marguerites and arums; Mr. H. J. Brill, Southdawn Avenue, Brighton, second, with daffodils; Mrs. Garnet third with arums, daffodils, and genista sprays.

Mr. H. Goldsmith was the only exhibitor of a large table of plants, arranged for effect; he used schizanthuses, dielytras, Primula obconica, and carnations, but not very effectively. Mr. F. Collis, gardener to Mrs. Hughes, Boston Park Avenue, Brighton, was awarded first place for a table of plants arranged for effect, and used stellate cinerarias, daffodils, and anthuriums; Mr. G. Chandler was placed second with a pretty table of Celsia arcturus, hyacinths, and cinerarias. Mr. A. J. Blake was the only exhibitor of a table of orchids, and he was worthily awarded first prize for a gay display of Cœlogyne cristata, Dendrobium Wardianum, D. densiflorum, Lælia flava, and some cattleyas.

There were nine florally decorated dinner tables, and the competition was a good one; premier position was allotted to Mrs. H. J. Brill, 78, Southdown Avenue, Brighton, for white daffodils and rose-pink tulips—a pretty combination; Mrs. Rafley, The Lodge, Warblington House, Havant, second, with golden daffodils and croton leaves; Miss Mabel Howell, Tower Lodge, Queen's Park, Brighton, third, with pink begonias and lily of the valley; and Miss Cheesman, Islingwood Road, Brighton, fourth.

PLANTS AND FLOWERS.

In the class for lachenalias, premier place was accorded Mr. G. Mann, gardener to W. Dadney, Esq., East Hill House, Portslade, for six pots of well-grown plants; Mr. E. Jones, gardener to H. Young, Esq., Withdean Grange, Brighton, second; and Mr. F. Collis, gardener to Mrs. Hughes, Preston Park Avenue, Brighton, third. Freesias were well shown, the best six pots of these fragrant flowers coming from Mr. G. Chandler, gardener to S. C. Witting, Esq., Hollingbury Copse, Brighton; Mr. Maskell, gardener to E. Curwen, Esq., Withdean Court, Brighton, second; and Mr. E. Jones third. Spiræas were good, and Mr. E. Jones was a good first for a dozen pots; the Brighton Florists' Company, Western Road, Brighton, coming second with plants not yet fully opened. Polyanthuses made a pretty display, Mr. G. Chandler leading with a dozen pots of large-flowered, richly-coloured forms; Mr. S. A. Holman, Lewes Road, Brighton, second; and Mr. G. H. Bennett, gardener to P. H. Bayer, Esq., Hatch Beauchamp, Withdean, third.

For double primulas, six pots, Mr. G. Chandler was far and away the best exhibitor, staging half a dozen of the finest plants we have seen for a very long time; they were smothered with large double white flowers; Mr. E. Jones second. Mr. A. E. Golding, gardener to H. St. George Voulls, Esq., Uplands, Dyke Road, Brighton, led for six Dielytra spectabilis, showing large specimens; Mr. G. H. Bennett second; and Mr. C. Moffett, gardener to A. Corey, Esq., Downside, Roedean, third. The best cyclamens came from Mr. E. Jones, who had freely-flowered plants of a good strain; Mr. Maskell second; and Mr. G. Chandler third.

In the dome, in front of the platform, the genistas, arums, and azaleas made a very pleasing display. For nine azaleas, Mr. G. Chandler scored with somewhat small but very finely-flowered plants; Mr. E. Jones a good second. Mr. E. Collins showed the best half-dozen azaleas, but these were scarcely yet at their best; Mr. W. Maskell second. The best six pots of arum lilies came from Mr. H. Goldsmith, gardener to Daniel Hack, Esq., J.P., Fir Croft, Withdean, who had big plants carrying splendid spathes; Mr. G. Chandler second. For four pots of arums the honours fell in order to Mr. A. J. Blake and Mr. W. Maskell. The genistas were very bright, and the best dozen pots came from Mr. H. Goldsmith, who was a good first; Mr. E. Jones was second; and Mr. W. Maskell third.

Hyacinths were poor. Mr. A. E. Golding scored for a dozen plants, and Mr. C. Moffett came second. Lily of the valley was also very poorly shown for Brighton; there were three competitors, the Brighton Florists' Stores coming first, Mr. A. E. Golding second, and Mr. E. Jones third. The Brighton Florists' Stores led for half a dozen pots of stocks, showing very good plants; Mr. E. Jones second. Mr. Chandler led for six pots of tulips with a very well grown set; Mr. Bennett second. Mr. E. Jones led for nine and Mr. Bennett for six table plants. In a special class for six pots of tulips, prizes provided by Messrs. Tilley Brothers, Mr. T. Wells was a good first with excellent flowers of Keizer Kroon, etc.; Mr. G. Chandler second; and Mr. H. Goldsmith third; five competitors. For six hyacinths, special prize, Mr. T. Wells was again first with well-grown spikes; Mr. Moffett second.

Mr. J. Martin led for eight varieties of daffodils, with Victoria, Madame Plemp, Golden Spur, Empress, Sir Watkin, Barri conspicuus, and C. J. Backhouse; Mr. M. Tourle, gardener to Captain J. R. Smiley, Horsted Place, Uckfield, second. Mr. E. W. Haywood, gardener to the Right Hon. Lord Denman, Balcombe Place, Sussex, was awarded first prize for twelve kinds of cut flowers; he had the new Queen Alexandra spiræa, fair roses, and good cyclamens and violets; Mr. E. Jones was placed second; he had some good carnations, excellent roses, and good liliums and lilacs. Mr. S. Mortimer, Swiss Nursery, Farnham, led for three vases of carnations with Robert Craig, Enchantress, and Rose Pink Enchantress in fine condition. For a dozen roses, Mr. G. Mann, gardener to W. Dudney, Esq., East Hill House, Portslade, scored with big blooms of Niphetos; Mr. Haywood second.

Mignonette was finely shown. The best six pots came from Mr. A. H. Seall, gardener to Miss Smith, Miramahi, Withdean, but he was disqualified because his pots were more than six inches in diameter. Mr. G. Chandler won first prize; Mr. E. Jones second; and Mr. H. Goldsmith third. The latter led for six amaryllis, and was an excellent first; Mr. E. Jones second. Mr. Chandler showed a fine set of six Chinese primulas, and worthily won first prize; Mr. Moffett second, and Mr. E. Jones third. Mr. J. Martin, Mount Pleasant, Lewes, led for twelve pots of primroses; he had four very poor plants and eight good ones, the latter including some fine blue varieties; Miss Alice Smith, The Bungalow, Barnham, Bognor, second; and Mr. E. Jones third. Auriculas were not especially good; for six pots, Mr. J. C. Reeves, gardener to Captain H. Acton Blake, Pucks Croft, Rusper, led with freely-flowered alpine varieties; Mr. S. A. Holman second; and Mr. A. J. Blake, gardener to Dr. E. J. Tulke-Hart, Totteridge, Dyke Road, Hove, third.

Mr. E. Jones showed the best half dozen show pelargoniums, the best six clematises, and the best six liliums. Mr. J. Backshall, gardener to J. Lawson, Esq., Highlands, Hassocks, was a good first for zonal pelargoniums, showing double and semi-double varieties. Messrs. Sutton and Sons' prizes for cyclamens were won by Mr. E. Jones and Mr. Chandler, with good plants finely flowered. Mr. J. Burstow, Ravenswood, Bulkington Avenue, Worthing, had the best three orchids —Cypripedium insigne, C. villosum, and Sophronitis grandiflora.

In the open class for a dozen cinerarias, Mr. Chandler led with dwarf, large-flowered, broad-headed plants, mostly of a deep purple-blue shade; Mr. F. Collis second; and Mr. E. Jones third. Mr. Jones scored for six hydrangeas with blue-flowered plants that were very effective; Mr. Tourle second with fine dwarf heads. Mr. Chandler scored for a dozen Stellata cinerarias, showing a very pretty set; Mr. G. Bennett second; and Mr. J. C. Reeves, gardener to Captain Acton Blake, Puck's Croft, Rusper, third. Messrs. Sutton and Sons provided the prizes in this class.

Mr. R. J. Blackman, Albion Nursery, Hayward's Heath, won first prize for six pots of forced strawberries, and also for a dish of picked fruits; Mr. E. Jones was second in each case. Mr. G. H. Bennett was placed first for six pots of narcissi, and he had contrived to get a quantity of bulbs into each pot, but his flowers were small, though abundant; Mr. C. Moffett second, with far larger flowers, though his Barri flowers were rather past their best; Mr. A. E. Golding third.

NON-COMPETITIVE.

A handsome group of beautiful carnations was set up by Mr. S. Mortimer, Farnham, Surrey, in which there were big vases of fine blooms of Enchantress, The Belle, Lady Bountiful, Robert Craig, Flamingo, Fair Maid, and Harry Fenn; Mr. Mortimer had also numerous good bunches of All-the-Year-Round stocks. Mr. C. F. Waters, Deanland Nursery, Balcombe, also had a fine exhibit of carnation blooms, his Rose Pink Enchantress, White Perfection, Lady Bountiful, Enchantress, Lady Carlisle, Prosperity, Beacon, and Elliott's Queen being very good.

Messrs. J. Cheal and Son, Lowfield Nursery, Crawley, contributed a collection of alpine plants, making up a pleasing exhibit; the same firm showed cut roses, daffodils, and flowering plants of azaleas. Mr. J. Williams, Oxford Road, Ealing, submitted his rustic table decoration stands, variously filled with seasonable flowers. Miss A. Smith, The Bungalow, Barnham, sent a pretty exhibit of Munstead Polyanthuses, double and single primroses, double daisies, etc.; and Messrs.

W. Meeds and Son, Burgess Hill, had an attractive display of artistic garden pottery.

Messrs. W. Balchin and Sons, Brighton and Hove, again had a fine exhibit; they grouped hyacinths and azaleas under an alcove, and surrounded these with dainty ferns; fine crotons flanked the flowers, and the whole exhibit was embowered in fine palms. Mr. F. Herbert Chapman, Rye, contributed a bright and interesting display of daffodils, his best flowers being those of Virgil, Horace, Weardale Perfection, Duke of Bedford, Golden Bell, King Alfred, and Seagull; the same exhibitor set up a vase of the pretty yellow Freesia Chapmani.

Winter-flowering Carnation Society.

After a very successful exhibition on April 1, at the Royal Horticultural Hall, and a gate of £18 5s., the members of the above society met at seven o'clock at the Hotel Windsor, and dined together, under the presidency of Mr. J. S. Brunton. The tables were prettily decorated with carnations brought over from the show.

After dinner the usual loyal toasts were honoured. Mr. Hawes proposed "The Judges." He referred to the difficulties attending a close competition, and also to the fact that they had been well served that day, for not a single complaint against the judgments recorded had been made. Mr. Wallace, of Eaton Bray, responded to the toast. Mr. J. H. Witty proposed "The Exhibitors," remarking that the judges would be unnecessary if there were no exhibitors. They had seen numerous fine displays at the hall, both competitive and non-competitive. Mr. L. J. Cook (H. Low and Co.) responded.

The Chairman then proposed "The Committee and Officers," and he spoke at some length of the valuable services rendered by Mr. S. Mortimer, who was not only vice-chairman, but was the most successful recruiting member they had. He referred to the enthusiasm of Mr. Hayward Mathias, the hon. secretary, who was a very hard worker, kept the committee well together, and looked carefully after financial matters. He eulogised the services of Mr. E. F. Hawes, who acted as exhibition secretary, and thus lightened the hon. secretary's burden. The auditors, Messrs. A. Dean and C. H. Curtis, received their meed of praise. Mr. Hayward Mathias responded, and expressed his own thanks to those who had rendered so much aid in the management of the show, particularly to Messrs. E. F. Hawes, S. Brookes, and A. Smith, who had relieved him of so many details that he had been able to clear up all accounts that afternoon, including the payment of all prize monies. They were a young society, and last year the membership was 159, now it was 180, and he hoped it would be 200 before they met again. After paying the show expenses of the day, the exhibition had yielded a clear profit of £13 5s. 2d.

Mr. P. Smith, of Medhurst, proposed "The Press," and, like each other speaker, in turn he considered this the most important toast of the evening. He paid a high tribute to the kindness of the horticultural Press in giving the society every possible publicity, and thus making the present flourishing condition of the society possible. Mr. C. H. Curtis (Gardeners' Magazine) responded, and pointed out the proposed registration of new varieties was an excellent idea, but if the society was to live up to its privileges and secure the assistance of the Press, it must go beyond this, and beyond the exhibitions. He urged the compilation of a complete list of winter, or perpetual-flowering carnations, with the names of the raisers or distributors, and also of a list of too-much-alike varieties.

Mr. S. Mortimer proposed "The Chairman," a toast that found ready and enthusiastic acceptance. Mr. Brunton briefly replied.

ANNUAL MEETING.

After a few minutes interval the annual meeting commenced with the reading and passing of the minutes. The balance-sheet was then placed before the members, and, on the motion of Messrs. A. Hemsley and E. F. Hawes, it was adopted. The adoption of the annual report was moved by the Chairman, and seconded by Mr. Mortimer. The Chairman touched upon the chief features of the report, and several members spoke to the motion, chiefly in connection with the expense of a die for a medal, Mr. Pinches eventually undertaking to obtain further particulars as to cost. This discussion was opportune, and it gave rise to a shower of promises towards the needful medal die, eight and a-half guineas being subscribed round the table. The following is an abstract of the report and balance-sheet:

REPORT FOR YEAR 1907.

Your committee beg to report that during the year 1907 two successful exhibitions of winter-flowering carnations were held at the Royal Botanic Gardens, Regent's Park. To the council and executive of the Royal Botanic Society this society is deeply indebted for the admirable arrangements made for the comfort and convenience of visitors and exhibitors, and for the liberal treatment the society has received at its hands.

Your committee note with satisfaction that at the show held on December 11, 1907, the classes set apart for amateurs were considerably better filled than formerly.

Your committee is pleased to be in a position to show a credit balance in the accounts for 1907, and to report that at December 31, 1907, the total membership was 159. Your committee beg to call the attention of members to the necessity of paying their subscriptions promptly.

The committee has had under consideration the compilation and printing of a pamphlet—with articles contributed by the principal growers—on subjects pertaining to the cultivation, etc., of winter-flowering carnations. In view, however, of the initial expense of such a publication, it is, in consequence of the financial position of the society, not considered that this work can at present be taken in hand.

Your committee desire to acknowledge the very valuable assistance given to the society by the horticultural Press, by whose co-operation the aims of the society have been brought to the notice of growers of carnations.

Your committee also take this opportunity of thanking the judges for their valuable services gratuitously rendered at the two exhibitions held in 1907, and they also desire to acknowledge with thanks the kindness of the donors of special prizes—and contributions to the funds of the society by various members during the past year.

The shows held on March 13 and December 11 created much interest in the carnation world, and many of the leading amateurs and growers were present. The attendance of the general public also was very large on the occasion of both shows.

BALANCE-SHEET FOR 1907.

RECEIPTS.

To Balance in hand at December 31, 1906		£17 16 1
Members' Subscriptions and Donations in 1907		62 12 6
Advertisements in March Schedule		2 4 0
Advertisements in December Schedule		2 5 0
Special Prizes presented for December Show		5 16 0
Gate Money at the March Show		6 14 0
Gate Money at the December Show		10 0 0
Sale of Dinner Tickets		5 1 6
		£112 9 1

EXPENDITURE.

By Prize Money at the March Show		£25 10 0
Prize Money and Specials at December Show	£42 11 6	
Less—Returned by Mr. H. Burnett	1 5 0	
		41 6 6
Miscellaneous Expenses at the March Show		1 1 6
Judges' Expenses at the March Show		3 14 6
Miscellaneous Expenses at the December Show		1 9 1
Judges' Expenses at the December Show		2 19 0
Expenses of Dinner on March 13		5 5 0
Printing		17 17 3
Hon. Secretary's and Chairman's Postages		5 9 1
Hon. Secretary's Petty Expenditure		0 11 0
Hire of Room for Committee Meetings		1 2 6
Badges		0 4 0
Advertisements of December Show		1 15 0
Cheque Book		0 2 1
Charges on Guernsey Cheques		0 1 0
Balance in Hand		4 1 7
		£112 9 1

The revision of the rules was then proceeded with, and the most important matter was the alteration of the title of the society to that of Perpetual-flowering Carnation Society. This was adopted unanimously, but it was very clearly understood that the winter-flowering carnations would be those to receive the greatest encouragement. The question of the show date caused some little discussion; it was agreed that "one or more" shows be held; and that a show be held between December 1 and December 15, if the committee could possibly arrange for it during that period. On the motion of Messrs. Hawes and Witty the rules, as amended, were adopted.

A draft of rules for the registration of names of new carnations was then submitted. The rules, fifteen in number, appear to provide for everything necessary. The need for registration to prevent duplication was obvious. The registration fee is 10s. 6d. No variety will be considered for an award unless registered. Any registered variety, if exhibited under another name, will disqualify its exhibitor. If a raiser registers a name, and fails to submit a new variety under that name to the committee within twelve months, he forfeits his fee, and loses all claim to the name. These regulations, with very slight alterations, were adopted—a very necessary piece of useful work.

The meeting then proceeded to the election of officers. Mr. J. S. Brunton was unanimously re-elected chairman, and Mr. S. Mortimer as vice-chairman. Mr. Hayward Mathias was re-elected hon. secretary and treasurer, and Mr. E. F. Hawes was appointed exhibition secretary. Mr. C. H. Curtis was re-elected auditor, and Mr. R. Pinches was elected as his colleague in place of Mr. A. Dean, who retires. There were six retiring members of committee, all eligible for re-election, but it was necessary to elect eight members to bring up the total of the committee to eighteen, as per the new rules. There were fifteen nominations, those duly elected being Messrs. E. F. Hawes, A. F. Dutton, C. Englemann, C. Walters, A. Smith, W. E. Wallace, M. Allwood, and Dr. G. Kyffin.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, March 31.

Present: Mr. E. A. Bowles, M.A., F.E.S. (in the chair); Rev. W. Wilks, M.A.; Messrs. H. T. Gussöw, G. S. Saunders, E. M. Holmes, A. Worsley, J. T. Bennett-Poë, H. J. Elwes, L. de B. Crawshay, G. Gordon, G. Massee, A. R. Rolfe, and F. J. Chittenden (secretary).

INHERITANCE OF ALBINISM IN ORCHIDS.—Mr. C. C. Hurst, F.L.S., sent the following notes in relation to this subject, which has been brought up at several meetings recently. "Since my last communication, I have had an opportunity of examining some plants of Paphiopedilum insigne Sanderæ. Much to my surprise, I found distinct traces of purple sap in the basal margins of both the old and young leaves. The plants were not in flower, but I am told on good authority that some minute spots are also to be found on the dorsal sepal. In view of this it would appear that P. insigne Sanderæ, so long regarded as an albino, is in reality a coloured form in which the purple sap is present in minute quantities. In accordance with the provisional scheme suggested in my last note, P. insigne Sanderæ will therefore be carrying both the colour factors C and P, and when mated with albinos may be expected to give coloured hybrids, as it has done in the case quoted by Mr. Rolfe. It would be interesting to know if the two other yellow forms P. insigne Sanderianum and P. insigne Macfarlanei, recorded as unspotted, are true albinos, and what they produce when crossed.

"If P. insigne Sanderæ is not an albino it must be deleted from my tables of albino crossings, which will now read as follows:

Table A.

1, P. callosum Sanderæ (P) x P. callosum Sanderæ (P) gives albinos (PP).

2, P. Lawrenceanum Hyeanum (P) x P. Lawrenceanum Hyeanum (P) gives albinos (PP).
3, P. Lawrenceanum Hyeanum (P) x P. callosum Sanderæ (P) gives albinos (PP).
4, P. bellatulum album (C) x P. callosum Sanderæ (P) gives coloured hybrids (CP).
5, P. bellatulum album (C) x P. Lawrenceanum Hyeanum (P) gives coloured hybrids (C P).

Table B.

1, P. bellatulum album (C) x P. bellatulum album (C) should give albinos (C C).

Mr. Rolfe's theory that the colour reversions are due to the fact that the albinos crossed belong to diverse species, fails to account for the cases in sweet peas, stocks, and other plants where two albino individuals of the same species, variety, and race, may revert to coloured forms when crossed. On the other hand, the conception of complementary colour factors satisfactorily explains all the known phenomena of colour reversions in plants and animals, so far as they have been critically and experimentally studied."

PSOCIDEÆ INJURING PLANTS.—Some time since Mr. Stanton Brown, A.R.H.S., of The Cedars, Breadsall, Derby, sent a number of insects from oleander, etc., which were identified as Cæcilius Dali, an insect belonging to the Psocideæ, and known only to feed upon spores of fungi and similar things. Mr. Brown now sent some pieces of recently struck cuttings of Salvia splendens, upon which the insects occurred in great numbers. These cuttings were injured by insects, and Mr. Brown said that the injury was solely due to the work of these insects, which did not appear at all particular with regard to the plants upon which they feed. This adds another to the already long list of insect pests in plant houses. Mr. Saunders took the plants for further examination.

LARCH WITH GALL-LIKE GROWTHS.—Mr. H. J. Elwes showed a one-year-old shoot of larch taken from a young tree in his nursery having several gall-like growths along several inches of its growth. The shoot was referred to Mr. Massee, who undertook to obtain some information upon it if possible.

ORCHID HYBRIDS.—Mr. R. A. Rolfe, on behalf of M. E. Cappe, Vésinet, France, exhibited two very diverse hybrids raised from the same seed pod of Lælio-cattleya Cappei (a hybrid from L. cinnabarina x C. Warscewiczi), the result of fertilising a flower with mixed pollen from Lælia flava and Cattleya Mendeli. One flower appeared to be a true hybrid between L.-c. Cappei and C. Mendeli, whose characters were well blended, but the other closely resembled Lælia Cowani (a supposed hybrid between L. flava and L. cinnabarina) in size. It was suggested as a case of dissociation of the "mixed character" whereby an ovule of L.-c. Cappei, from which the character of C. Warscewiczi had been eliminated, had been fertilised by a pollen tube from Lælia flava.

FRUIT OF EUONYMUS JAPONICUS.—Thomas Peed, Esq., of High Cliff, Ventnor, I.W., sent fruits of Euonymus japonicus. This plant not uncommonly produces ripe fruits in this country, and Mr. Chittenden said he had on one occasion found a seedling on the town rubbish heap at Chelmsford.

SCALE INSECT ON HOLLY.—Mr. Saunders reported that the insect attacking holly shown at the last meeting from Ipswich, was the very local scale insect, Aspidiotus britannicus. He recommended that the holly hedge should be thoroughly sprayed with paraffin emulsion, taking care that both surfaces of the leaves received the spray; or the hedge might be fumigated with hydrocyanic acid gas, if some means of enclosing it could be devised.

YUCCA AND AGAVE DISEASE.—Mr. H. T. Gussöw reported that he had examined the leaves of yucca and agave shown at the last meeting by Mr. Saunders, and found they were attacked by the fungus Coniothyrium concentricum, a common fungus in America, and previously recorded in this country. He recommended that to stop its spread the leaves should be dipped in a one per cent. solution of copper sulphate.

Orchid Show at Manchester.

APRIL 1 and 2.

The Manchester and North of England Orchid Society held, at St. James's Hall, an exhibition of orchids that surpassed all previous northern efforts, and the display should be the means of enlisting further sympathy with this important sphere of floriculture. The society has been doing good work for some years past, having frequent displays at the Coal Exchange. The success that attended them has induced the society to extend its operations, and this show was one of the results. Undoubtedly the magnificent array of plants staged should be the means of popularising both the society and the charming flowers that it fosters. The charming collection from Messrs. Armstrong and Brown, Tunbridge Wells, proved a theme of general commendation, and there was a remarkable consensus of opinion that their group was the finest yet staged at Manchester. The table space was sixty feet by eight feet, and in the group were 600 plants of high quality. These included about 150 plants of Dendrobium nobile virginale, and in the centre was an imposing display of choice odontoglossums, dendrobiums, etc. The premier award, consisting of a gold medal and an illuminated vote of thanks, was made in favour of the firm. The firm was also awarded class certificates for Brasso-cattleya Boydæ var. Thompsonii, and Dendrobium nobile magnificum; and an award of merit for Dendrobium George Woodhams.

Messrs. Charlesworth and Co., Heaton, Bradford, staged a smaller number of plants, but their group contained many rare varieties, and was therefore of special interest. A gold medal was deservedly awarded to the collection, and Messrs. Charlesworth were granted first-class certificates for Brasso-cattleya Bradshawæ superba, Cymbidium Holfordianum, Phalænopsis Sanderiana Wigan's var., and Odontoglossum His Majesty.

Messrs. Cypher, Cheltenham, were awarded

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a gold medal for a highly meritorious display; they also received a first-class certificate for Lælio-cattleya callistoglossa Sultan, and an award of merit for Brasso-cattleya Thornton's gigantea. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, were awarded a gold medal for a pleasing display of orchids, and a charming contribution of cut carnations of well-known varieties, with miniature roses and palms.

Messrs. W. Cutbush and Son, Highgate, were exhibitors of hardy forced plants, and were awarded a gold medal. Their arrangement of finely-flowered lilacs, laburnums, azaleas, pyrus, and rhododendrons was most attractive, and came in for a full share of praise.

Messrs. Sander, St. Albans, contributed a smart collection of orchids, Lælio-cattleya Empress of Russia being especially noteworthy; this firm also staged some excellent anthuriums; silver-gilt medal. Mr. F. A. Ward, Northenden, contributed a good array of odontoglossums in variety; silver-gilt medal. Mr. John Robson, Altrincham, staged orchids in variety, interspersed with cut roses, and was awarded a silver-gilt medal. Mr. W. Thompson, Stone, staged a well-grown group of odontoglossums, and received the distinction of a silver-gilt medal; he was also granted a first-class certificate for Odontoglossum exultans. Messrs. McBean, Cooksbridge, who were strong in odontoglossums, also received the award of a silver-gilt medal.

Silver medals were awarded to the under-mentioned exhibitors: To Mr. E. Ashworth, who contributed cypripediums and odontoglossums in his usual excellent manner; to Mrs. Hodgkins, for a pleasing table decoration and skeleton leaves; to Messrs. Frank Dick and Co., Manchester, for cinerarias and cut flowers; to Messrs. Moore and Co., Leeds, for an excellent group of orchids; to Messrs. A. J. Keeling and Sons, Bradford, for orchids, including Dendrobium Chessingtonense, which received an award of merit; to Mr. R. Ashworth, Newchurch, who staged good odontoglossums, and received a first-class certificate for O. ardentissimum album, and awards of merit for O. æthiopica, O. Aug-Harrio crispum, and O. Atalanta Aug crispum; to Mr. J. Bromilow Rainhill, for cypripediums, representing good types, especially noteworthy being C. concolor var. Emperor, and C. microchilum, which received first-class certificates, and C. Wootoni, C. Euryades superba, C. Dowlingiana, C. Boadicea magnifica, which had awards of merit made in their favour; to Mr. J. E. Williamson, Stretford, for a small but telling collection of orchids; to Mr. A. Warburton, for a general collection; and to Messrs. Dickson, Brown, and Tait, Manchester, for an effective arrangement of daffodils, Primula Kewensis, and chionodoxas, and other seasonable subjects. Bronze medals were awarded to Messrs. A. Warburton, R. Jenson, Hayward's Heath, and J. Edwards, Sherwood. Mr. Norman C. Cookson received a first-class certificate for Phaius Clive, of which an illustration is given in this issue; and an award of merit for Calanthe delicata. The attendance on the opening day was small in comparison with the merits of the exhibition.

The Horticultural Club.

THE TULIP.

After the usual monthly dinner of this club, held at the Hotel Windsor on Tuesday, the 31st ult., under the chairmanship of Mr. W. A. Bilney, the Rev. Joseph Jacob gave an extremely interesting lecture on "The Tulip and its History." The cult, as he pointed out, was one of considerable antiquity, since even as far back as 1554 their beauty was appreciated and recorded by noted botanists of the time, and both Clusius and Gerard refer to them in 1573 and 1597. By 1634, indeed, the tulip had attracted so much attention, and had produced so many varieties in evidence of its peculiar sportive character that the tulip mania commenced, new forms fetching fabulous prices far and away exceeding even those realised by the rarest orchids of to-day, one bulb of an unnamed form actually being sold for £5,000. Speculation, indeed, reached the verge of insanity, and it is recorded that two bulbs only of a rarity existing, the owner of one paid a small fortune for the other, which he at once destroyed to render the remaining one "unique." Madness could hardly go further, and it is therefore not a matter of surprise that a reaction followed, so that in 1637 tulip fanciers of the speculating kind tried to realise, with the result that a "slump" followed. The States-General of Holland stepped in and instituted regulations, and by 1638 common-sense had reasserted itself. Eventually in 1730-40 popular taste turned to American plants and tulip cultivation fell into the background, but the varieties by this time ran into thousands. The first double tulip, T. lutea centifolia, is recorded in 1665, and Parrot tulips came to the fore in 1690. The origin of these appears to be somewhat mysterious, since they agree, when in form, with no known species. France appears to be the locality where they are first recorded. The curious fact was stated by the lecturer that in a catalogue issued at the end of the eighteenth century the quoted varieties of ranunculus far exceeded those of the tulip, two bulbs of each of 500 kinds being offered for £30.

From 1820 to 1840 there was waged the war between the florist tulip connoisseurs of the north and south, the former considering the character of the marking to be the first essential, and the latter the purity of the flower. The precise shape of the flower was also a vexed question, Glenny fixing it as a cup embracing one-third of a sphere; Groom, another authority, at one-half; and Slater, a third expert, at nine-sixteenths. In 1849 the National Tulip Society was founded, and tulip cultivation was greatly in favour. In tracing the history of the flower up to the present date, the lecturer interpolated with the data above cited a number of very interesting facts relating to the introduction of new varieties and species. There is no doubt that we owe the majority to the East, but it appears to be somewhat an open question how far the native tulips of Italy, France, and elsewhere, may not have played their part, while curiously enough the wonderfully distinct section of the May-flowering tulips appears to be due to survivals in old cottage gardens from an unrecorded source.

The subsequent discussion was rendered more interesting by the presence of Mr. Krelage, of Haarlem, and Messrs. Barr, Ware, Wallace, and Jenkins, all experts in this particular line. Mr. Druery mentioned a colony of T. undulatifolia, a fine scarlet form which he met with in the vicinity of Smyrna, the bulbs being massed in hard, bare, stony ground, the heat of which at midday was so great that the hand could hardly bear it, a point indicating the need of bright sunshine for perfecting the bulbs. Some interesting remarks were made concerning that unique peculiarity of the tulip, namely the "breaking," as it is called, of the flower into coloured forms, which are preceded in the seedling, for it may be six or seven years, by altogether different and uniform tints, so that the breeder's patience is often sorely taxed before he can know what is the result of his sowing. A hearty vote of thanks was accorded to the lecturer, and also to Mr. Krelage and the other experts who had contributed to the subsequent discussion.

The Nurserymen, Market Gardeners' and General Hailstorm Insurance Corporation, Lim.

The 13th annual general meeting of this company was held at 41 and 42, King Street, Covent Garden, on Friday, 3rd inst. The accounts showed an increase in the year both as regards premium income and interest. The year had been peculiarly free from hailstorms, but two further claims had been settled since the accounts were closed. During the 13 years the premium income had increased from £681 1s. 9d. to £2,476 13s. 10d., which showed that the company was meeting a distinct need and becoming better known. A dividend of 7½ per cent., and bonus of 2½ per cent., making £1,000 in all, was declared, and £1,500 added to the reserve fund, making the reserve £13,500. The invested funds at the end of the year amounted to £23,969 0s. 7d. The company were not paying big dividends, but were building up their reserve fund against heavy claims which might come in at any moment. The area insured now amounted to over 35,500,000 square feet of glass.

Sandhurst Gardeners' Association.

The usual fortnightly meeting was held in the Church Schools, Sandhurst, on March 31, when Mr. J. Evans presided over a good attendance of members. The subject for the evening was "Carnation Culture," and this was introduced by Mr. Dennison, of The Gardens, Easthampstead Park, in a very able and practical paper. A short history of the carnation was given, and this was followed by full details for the cultivation of the several sections. A good discussion followed, among the speakers being Messrs. Evans, Cooper, Chapman, Dupond, Townsend, and M. Goddard. A hearty vote of thanks was accorded Mr. Dennison for his most useful paper.

Mr. Townsend, Sandhurst Lodge Gardens, staged odontoglossums and dendrobiums; Mr. Dupond, Crowthorne Nurseries, contributed oranges in pots; and Mr. M. Goddard, Ambarrow Gardens, exhibited excellent examples of Cyperus alternifolius variegatus.

Beckenham Horticultural Society.

On Friday, the 27th ult., with Mr. Sherley-Price (one of the vice-presidents) in the chair, Mr. R. B. Leech, F.R.H.S., of Wood Hall Gardens, Dulwich, gave a lecture on "Syringing and Damping Down Fruit and Plant Houses." The lecturer is of opinion that these operations are too often done indiscriminately, and to excess; and considers it detrimental to the occupants of glasshouses, and not conducive to the best results. Mr. Leech spoke some time on the "respiration" of plants, and suggested much that is worthy of thought, and specially recommended the young members to study this function from "Kerner's Natural History of Plants." At a future date the lecturer will deal with the subject from a practical standpoint. Hearty votes of thanks were accorded both lecturer and chairman. A vase of splendid spathes of Anthurium Scherzerianum varieties, exhibited by the lecturer, was awarded the society's special certificate.

Redhill Gardeners' Association.

This association held its fortnightly meeting at St. Matthew's Parish Rooms on March 31, with Mr. W. P. Bound in the chair. Five new members were enrolled. Mr. Harrison Dick gave a most interesting and instructive lecture entitled "Famous Old-time Gardeners," which was illustrated by lantern slides. Mr. Dick spoke on the lives of several famous horticulturists, and gave a description of the remarkable results achieved with the crude utensils they had at their command. At the close of the lecture a hearty vote of thanks was accorded the lecturer on the motion of Mr. Bound, seconded by Mr. Herbert.

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

TUESDAY, April 14.—Royal Horticultural Society; Fruit, Floral, and Orchid Committees meet at 12 o'clock; Narcissus Committee at 11.30 a.m.; lecture at 3 p.m. on "Hardy Cacti and Other Hardy Succulents," by Mr. E. A. Bowles, M.A., F.L.S.; Scientific Committee at 4 o'clock.
WEDNESDAY, April 15.—Royal Society of Arts.
Royal Caledonian Horticultural Society's Spring Show; two days.
Tunbridge Wells Daffodil Show.
British Gardeners' Association, meeting at Eccles Rooms, Blackburn, 7.30 p.m.
THURSDAY, April 16.—Brighton Horticultural Society Meeting; lecture on "Botany for Gardeners," by Mr. E. F. Hawes.
MONDAY, April 20.—Easter Monday.

Greenhouses, 37 6

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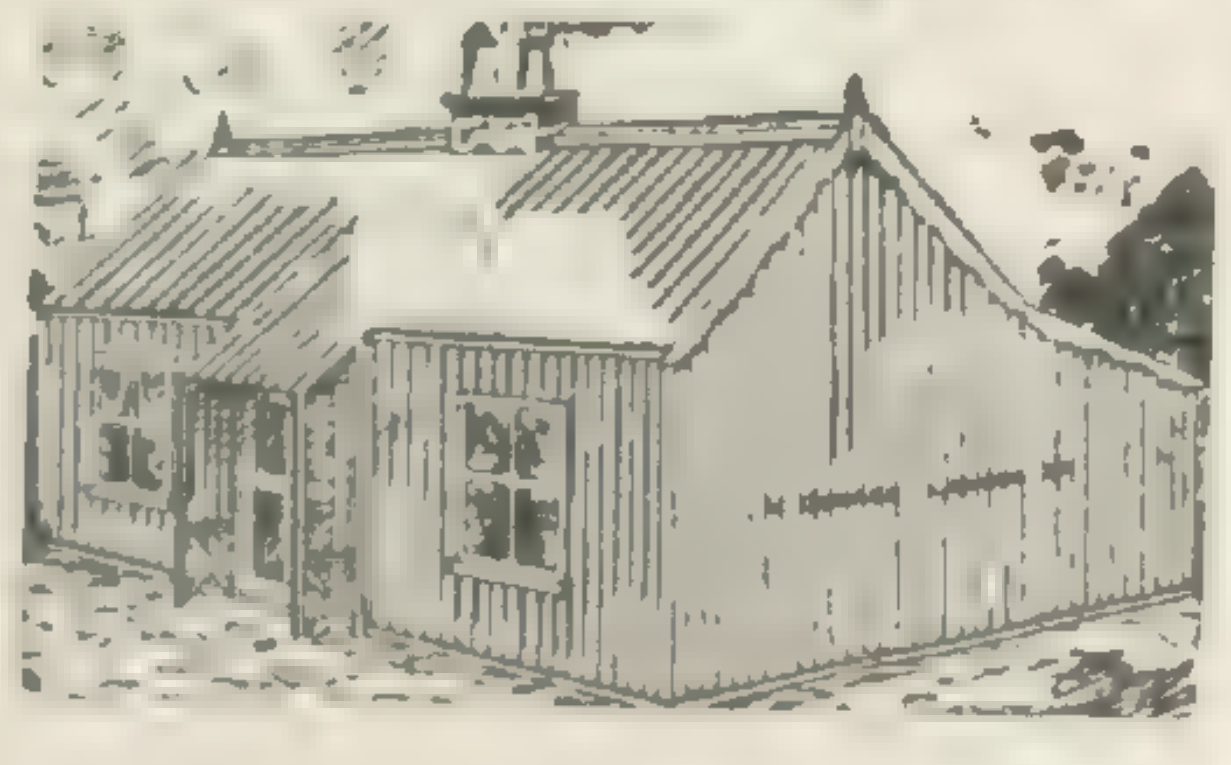

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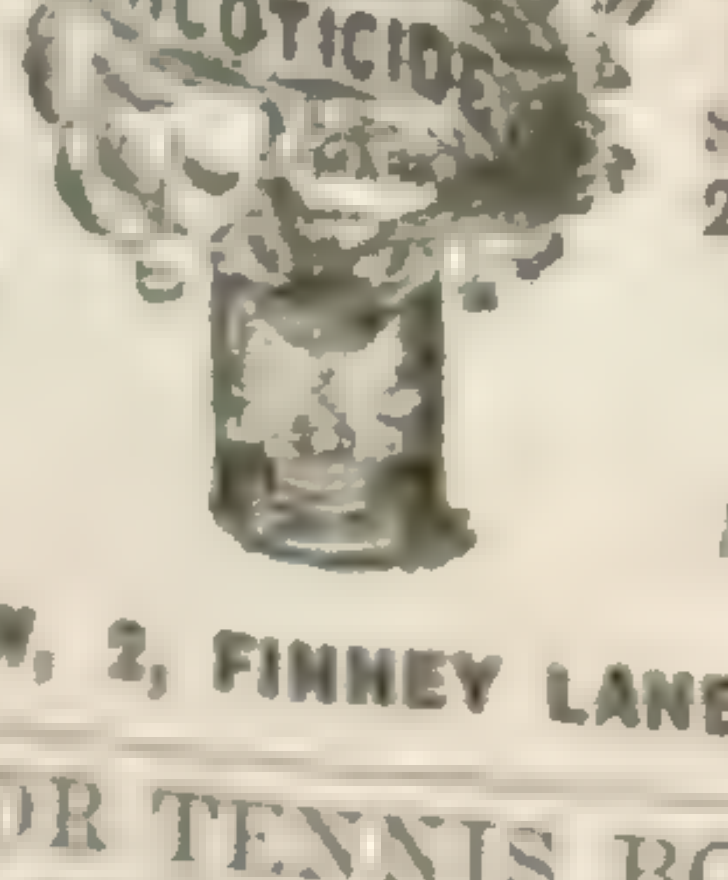

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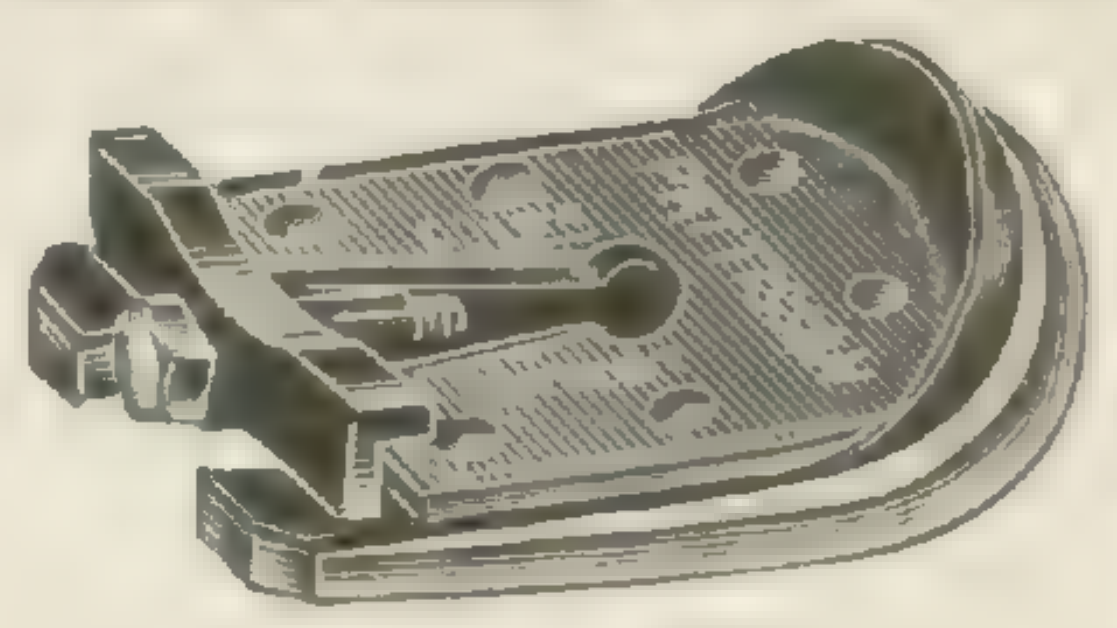

Fig. 1.

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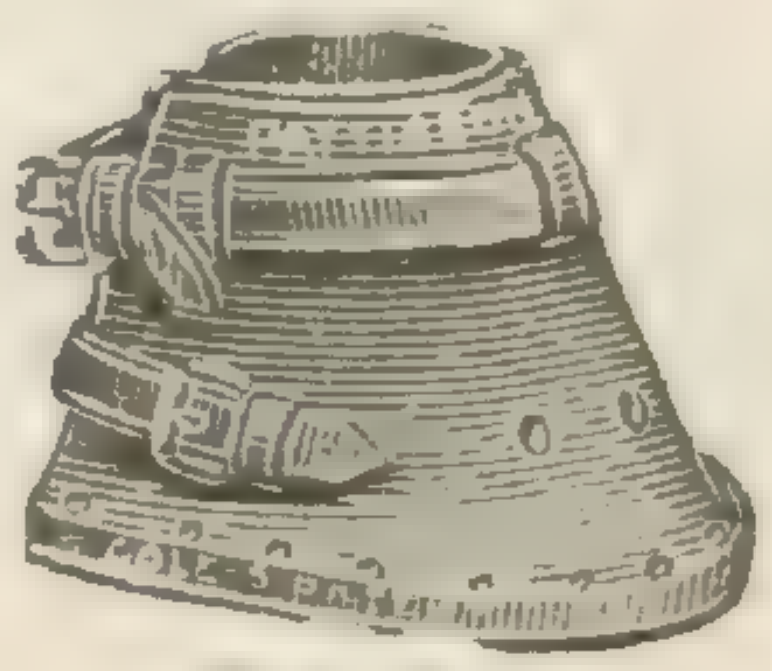

Fig. 2.

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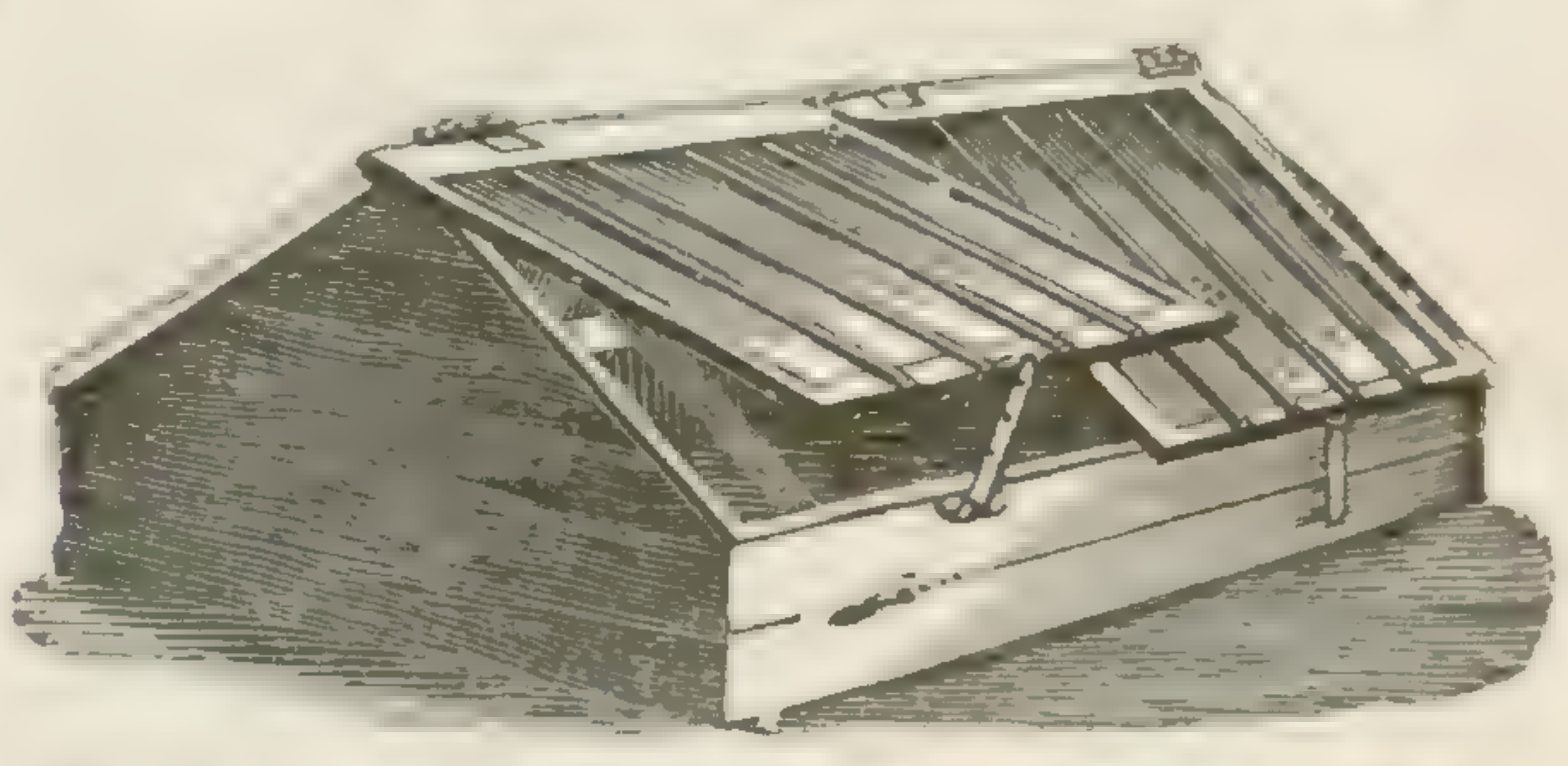

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ANSWERS TO CORRESPONDENTS.

YOUNG GARDENERS AT KEW.—C. H. N., Woodford Green: It is necessary tha candidates for admission to the Royal Gardens, Kew, should have had some years' training in private gardens or commercial establishments. You will be able to obtain the official regulations from the Curator, Mr. W. Watson, Royal Gardens, Kew.

TRAPPING EARWIGS.—H. H. A., Northwick: With perseverance there should be no great difficulty in exterminating the earwigs that have invaded your cucumber house, and are doing much damage to the occupants. We suggest that you should take advantage of the habit of these pests of resorting to some dry hiding place during the day, and proceed as follows: Take a certain number of 5-inch pots that are quite clean, and fill them lightly to about one-half their depth with dry hay. Lay the pots on their sides in convenient positions about the house, and, following their usual bent, the earwigs will, early in the morning, hide themselves in the hay. In the course of the forenoon take a pail of water as near the boiling point as practicable, and with one hand take up the pots one by one, hold them over the pail, and with the other hand withdraw the hay and shake the earwigs that are congregated in the pot and hay into the pail of water. Strong brine would serve the same purpose. It is important the interior of the pots and hay should be quite dry, and therefore should the latter become damp, renew it with fresh. There will be less likelihood of the hay becoming damp if you insert short stakes in the bed and invert the pots containing the hay on them. It will suffice if the stakes stand fifteen inches or so above the surface of the bed. It will, perhaps, be well to lay one-half of the pots on their sides and place the other half on stakes. You will, of course, continue the trapping until the earwigs have all been caught. We shall be glad to hear the results.

UNHEALTHY PELARGONIUMS.—R. M. W., Surrey: The plant you have sent us suggests that the soil in the boxes in which the zonal pelargoniums are growing has become sour. We would advise you to at once turn them out of the boxes, shake the soil from about the roots, and put them singly in three-inch pots. If the space at your command will not admit of their being potted separately, put them in other boxes that are efficiently drained, and use a moderately rich turfy compost.

VARIOUS.—Young Gardener, Southampton: The premature falling of the flower buds of the young peach trees is probably due to their excessive vigour, and we suggest that they be root pruned in the autumn. If the trees have their roots moderately shortened early in October their exuberant vigour will be checked, and they will in due course be brought into a fruitful condition. You must be careful not to give them additional manurial matter during the season of growth, either in the form of top-dressings or liquids. It is not unusual for plants of Azalea mollis that are potted up in the autumn to shed their flowers as soon as they open, when they are forced early in the following year: more especially are they liable to do this when obtained from a distance and allowed to remain some time before they are put in the pots. The best results are obtained from plants that are grown for a year in pots; but those lifted from beds and borders with a good ball of soil, and put at once in pots, should flower satisfactorily. Sometimes these shrubs fail to give good results in consequence of the soil being kept too dry during the winter.

PALMS FOR THE DRAWING-ROOM.—Miss M.: Some of the best of the palms for growing in the drawing-room are Kentia Belmoreana, an elegant species of medium growth, with pinnate leaves; Chamærops humilis, a small growing fan palm; C. Fortunei, a fan palm of medium growth; and Phœnix rupicola, an extremely elegant species with pinnate leaves, and especially suitable for medium-sized and ornamental pots when from eighteen to thirty inches high. If you require two kinds only, we would advise you to grow Kentia Belmoreana and Phœnix rupicola. We have successfully grown the elegant Cocos Weddelliana in the drawing-room, but in houses within the range of the fogs of London and other populous towns, the plants are liable to lose their leaves during the winter months.

TRANSPLANTING HOLLIES.—F. B. H.: This is a most suitable time for transplanting specimen hollies and small hollies for hedges. Plants that have been recently transplanted, as in the case of nursery stock, may be moved with but little if any risk, provided the work is smartly done. In the case of large specimens that have occupied the same position for several years, it will be better to wait until next year, and in the meantime prepare them for their removal. In preparing the large hollies for removal, open out a trench round them at a distance of about two feet. The trench should be rather deeper than the roots, and the spade be worked underneath the ball to sever any roots that may have descended perpendicularly into the subsoil. In moving hollies at this season of the year, it is important to avoid exposing the roots to atmospheric influences longer than is necessary, and to well water them in. Syringing them overhead in the evening after a fine, dry day will also materially assist them in recovering from the check received.

ADDRESS.—W. T., Walsall: We are sorry we are unable to give the address about which you inquire.

PEAS.—Y. G., Southampton: The following is a good selection of established varieties: Dorothy Eckford, King Edward, John Ingham, Mrs. Collier, Lord Nelson, Mrs. Hardcastle Sykes, Helen Lewis, Lady Grisel Hamilton, Duke of Wellington, Dainty, Sybil Eckford, Black Knight, Jessie Cuthbertson, Jeannie Gordon, and Helen Pierce. We suggest that you sow the seed at once in deeply dug and liberally enriched soil, and that you remove the flower buds as they appear until the beginning of July. Three excellent culinary peas for your purpose are Peerless Marrowfat, Quite Content, and Talisman.

WILLOW-LEAVED IXORA.—W. Smith, Sussex: The Willow-leaved Ixora (I. salicifolia) is less robust in growth, and not so free in blooming as such hybrids as I. Fraseri and I. Williamsi, but it is so elegant in habit and effective in colour as to be well worthy of the additional care it requires. It is usually more vigorous on foster roots than on its roots, and we would suggest that you graft it on I. javanica or one of the strong-growing hybrids.

CARNATIONS.—W. B. M., Leicestershire: So far as we are able to determine from the shoots sent, your plants have been injured by sparrows, which are in some districts very troublesome to these flowers early in the year. Some manurial assistance to the plants at the present time will be highly beneficial, and we would suggest that you give the beds a top dressing of an approved artificial fertiliser, such as you will find in our advertisement pages, or bone meal. Apply the fertiliser or bone meal at the rate of 2oz. to the square rod, lightly bury it with hoe and rake, and then tread the soil lightly about the plants to give them a firm root run.

DAHLIAS FOR THE GARDEN.—R. M., Dorset: So much depends upon personal taste that it might prove disappointing were we to suggest that one of the sections is the "best" for the garden. Some owners of gardens prefer the formality characteristic of the flowers of the show and pompon varieties, while others have a preference for the light, elegant blooms of the cactus and single varieties. We would advise you to grow a small selection each of the cactus and pompon and single varieties, as you will then have a greater variety in your garden, and a wider range for selection in cutting flowers for indoor decorations. Each selection should consist of varieties of compact habit, and having flowers with comparatively long, stiff stems, as they are more effective in gardens, and the flowers can be more readily arranged when in a cut state. If you will inform us as to the sections that you prefer we will give you selections specially adapted to garden culture. We would advise you to make your arrangements early and purchase the plants not later than the end of the present month. If you do this, and at once shift them into six-inch pots and keep them for a fortnight or so in frame or pit without fire-heat, you will have by the end of May strong plants that will at once commence to make new growth and become established. By taking this course there will be a gain of at least a fortnight as compared with plants that remain in three-inch pots until bedded out, and this is a point of no small importance. In preparing the beds and borders for dahlias that are intended for garden decoration, the soil should be deeply dug, and if the soil is rather poor, should be enriched with a moderate application of well-rotted manure from the farmyard or stable. The liberal dressings of manure that are sometimes applied are undesirable, because of their promoting an excessive luxuriance of growth, so inimical to an early and abundant production of flowers; more especially as a luxuriant growth should be guarded against in the case of the cactus varieties.

NAMES OF PLANTS.

W. S.—1, Forsythia suspensa; 2, F. intermedia; 3, Daphne Mezereum album.

G., Herts.—We will give you the names of the specimens you send in our next issue.

B. Robson.—1, Angræcum falcatum; 2, Brassia verrucosa; 3, a fine form of Phalænopsis Rimestadiana.

T. T.—1, Bouvardia Triomphe de Nancy; 2, Sang Lorraine; 3, Dendrobium Wardianum, a poor form, hardly worth growing.

K. H., Hants.—It is not possible to name a shrub from a leafless shoot. If you will send a specimen when the shrub is in leaf we will do our best to assist you.

F. H. S., Dorset.—1, Acacia cultriformis, plant it in the conservatory border, and train the growths up one of the pillars; 2, A. longifolia; 3, Citrus decumana; 4, Posoqueria longifolia.

R. B., Yorks.—1, Davallia elegans polydactyla; 2, send a more developed frond, and one bearing spores; 3, Adiantum capillus-veneris imbricatum; 4, A. rhodophyllum; 5, Acrostichum drynarioides; 6, Cyrtomium anomophyllum.

The Rat Crusade in the Country.—The recommendation of the Board of Agriculture that farmers should combine and exterminate the rats which cause such incalculable damage around the farms and in the fields, seems likely to bear fruit. The Rev. Canon R. Abbay, rector of Earl Soham, Framlingham, has lately been successful in inducing the residents of that important agricultural Suffolk district to apply several hundred tubes of Danysz Virus simultaneously over the whole parish. These tubes were sent for the occasion from the Pasteur Institute, Paris, and laid down under the supervision of a scientific staff from London early this month. The villagers, who themselves subscribed the necessary funds, evinced the most lively interest in the proceedings, and it was amusing to watch the care with which they handled the delicate glass tubes containing the virus, evidently preferring their novel occupation to spending laborious days behind the plough. The virus was applied over an area of 2,000 acres, each farm and homestead being systematically treated in turn by small parties of labourers familiar with the runs and the peculiar habits of the rats of the locality. It is obvious that better results are likely to be obtained by such organised efforts than by spasmodic applications of the virus, and it is to be hoped that the example set at Earl Soham last week will be widely followed throughout the Kingdom.

MARKETS.

◆

COVENT GARDEN.

Flowers.

With brighter weather supplies continue to increase, daffodils being very abundant. The demand is fairly satisfactory.

		s.	d.		s.	d.
Acacia	per doz. bun.	6	0	to	10	0
Adiantum cuneatum	per doz. bun.	5	0		9	0
Anemones	per doz. bun.	1	0		3	0
Arums	per doz.	1	6		3	0
Asparagus	per doz. bun.	1	6		6	0
Azalea	per doz. bun.	3	0		5	0
„ mollis	per bun.	1	0		1	6
Berberis	per doz. bun.	1	6		2	6
Camellias	per doz.	1	6		2	0
Carnations	per doz. blms.	1	6		2	6
„	per doz. bun.	8	0		12	0
„ Malmaison	per doz. blms.	8	0		10	0
Cattleyas	per doz.	8	0		12	0
Cœlogynes	per doz. blms.	1	0		1	6
Croton leaves	per bun.	1	0		1	6
Cyclamens	per doz. bun.	6	0		7	6
Cypripediums	per doz. blms.	2	0		3	0
Daffodils	per doz. bun.	0	9		3	0
Eucharis	per doz.	3	0		4	0
Forget-me-not	per doz. bun.	2	0		3	0
French fern	per doz. bun.	1	0		3	0
Freesias	per doz. bun.	2	0		3	0
Gardenias	per doz.	2	0		3	0
Hyacinths, Roman	per doz. bun.	4	0		6	0
Lapagerias	per doz.	1	0		2	6
Lilac	per bun.	3	0		4	0
Lilium auratum	per bun.	2	0		3	0
„ speciosum	per bun.	2	0		3	0
„ longiflorum	per bun	2	6		4	0
Lily of the Valley	per doz.	6	0		8	0
Marguerites, white	per doz. bun.	3	0		5	0
„ yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	3	0		6	0
Narcissus	per doz. bun.	1	6		4	0
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	5	0		8	0
Ranunculus	per doz. bun.	5	0		8	0
Roses	per doz.	2	0		8	0
Smilax	per doz. trails	2	0		3	0
Spiræa	per doz. bun.	5	0		7	6
Stocks	per doz. bun.	3	0		4	0
Sweet Peas	per doz. bun.	3	0		5	0
Tuberoses	per doz. blms.	0	4		0	6
Tulips	per doz. bun.	5	0		12	0
Violets	per doz. bun.	2	0		3	0
Wallflowers	per doz. bun.	1	6		2	0

Fruits.

The supplies are good and trade active.

		s.	d.		s.	d.
Apples, Australian	per case	10	0	to	17	0
„ Canadian	per barrel	10	0		18	0
„ Californian	per box	8	0		11	0
Bananas	per bun	3	0		10	0
Cranberries	per case	8	6			6
Cob Nuts	per doz. lb.	4	0		5	0
Grapes, English	per lb.	2	0		3	0
„ Belgian	per lb.	1	9		2	9
„ Almeria	per 12lb.	4	0		6	0
„ Cape	per box	3	0		10	0
Lemons	per case	8	0		12	6
Nectarines, Cape	per box	6	0		10	0
Oranges	per case	7	0		30	0
Peaches, Cape	per box	5	0		10	0
Pears, Cape	per box	3	0		5	0
Pineapples	each	1	6		4	0
Plums, Cape	per box	4	0		8	0
Strawberries	per lb.	2	0		6	0
Walnuts	per bag	7	0		8	6

Vegetables.

The demand continues brisk for green vegetables, lettuces, and rhubarb.

		s.	d.		s.	d.
Artichokes	per doz.	2	0	to	3	0
Asparagus, Paris green	per bun.	3	6		5	6
„ English	per bun.	6	0		7	0
„ Spanish	per bun.	2	0		2	6
„ Sprue	per bun.	0	6		1	6
Beans, French	per lb.	0	8		1	0
„ Madeira	per bskt	2	0		3	0
Beet	per bush.	1	6		2	0
Cabbage	per tally	3	0		8	0
Carrots	per doz. bun.	1	0		1	6
„	per bag	2	6		3	0
„ French, new	per doz. bun.	6	0		7	6
Cauliflowers, Cornish	per crate	6	0		7	0
Celery	per bundle	0	9		1	3
Celeriac	per doz.	1	6		2	0
Chicory	per lb.	0	3		0	4
Cucumbers	per doz.	3	0		6	0
Endive	per doz.	1	9		2	6
Greens	per bag	1	0		2	6
Horseradish	per doz. bun.	10	0		12	0
Leeks	per doz. bun.	1	0		1	6
Lettuce, cabbage	per doz.	1	0		1	6
„ Cos	per doz.	4	0		5	0
Mint	per doz. bun.	2	0		3	0
Mushrooms	per doz. lb.	8	0		12	0
Onions, English	per cwt.	4	0		4	6
„ Spanish	per case	5	0		6	0
Parsnips	per bag	1	6		2	0
Parsley	per doz.	1	6		2	0
Rhubarb	per doz. bun.	1	0		1	6
Savoys	per tally	3	0		4	6
Seakale	per doz. pun.	9	0		12	0
Tomatoes, Teneriffe	per package	12	0		16	0
Turnips, French, new	per doz. bun.	6	0		10	6
Watercress	per doz. bun.	0	4		0	6

LONDON POTATO MARKETS.

Large supplies are on hand and the demand is dull.

		s.	d.		s.	d.
British Queen	per ton	90	0	to	100	0
Blacklands	per ton	80	0		90	0
Dunbar Maincrops	per ton	110	0		120	0
Dunbar Up-to-Date	per ton	110	0		115	0
Kent Up-to-Date	per ton	106	0		110	0
Langworthy	per ton	90	0		105	0
Lincoln Maincrop	per ton	95	0		100	0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. MARCH 29 TO APRIL 4.	SUNSHINE.	TEMPERATURE OF THE AIR.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Mar. 29—Sunday	5 35	45	43	51	37
„ 30—Monday	7 5	45	42	53	37
„ 31—Tuesday	6 30	45	40	48	38
April 1—Wednesday	3 55	44	40	51	35
„ 2—Thursday	0 30	50	49	56	43
„ 3—Friday	6 30	47	43	53	42
„ 4—Saturday	3 30	44	40	50	38
Means	4 48	46	42	52	39

DATE. 1908. MARCH 29 TO APRIL 4.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg
Mar. 29—Sunday	0.12	42	44	43	28
„ 30—Monday	0.49	43	44	43	31
„ 31—Tuesday	—	44	44	43	35
April 1—Wednesday	—	42	44	44	28
„ 2—Thursday	0.01	44	44	44	37
„ 3—Friday	0.05	45	45	44	36
„ 4—Saturday	0.15	44	45	44	33
Means	(total) 0.82	43	44	44	33

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„ Page	9	0	0

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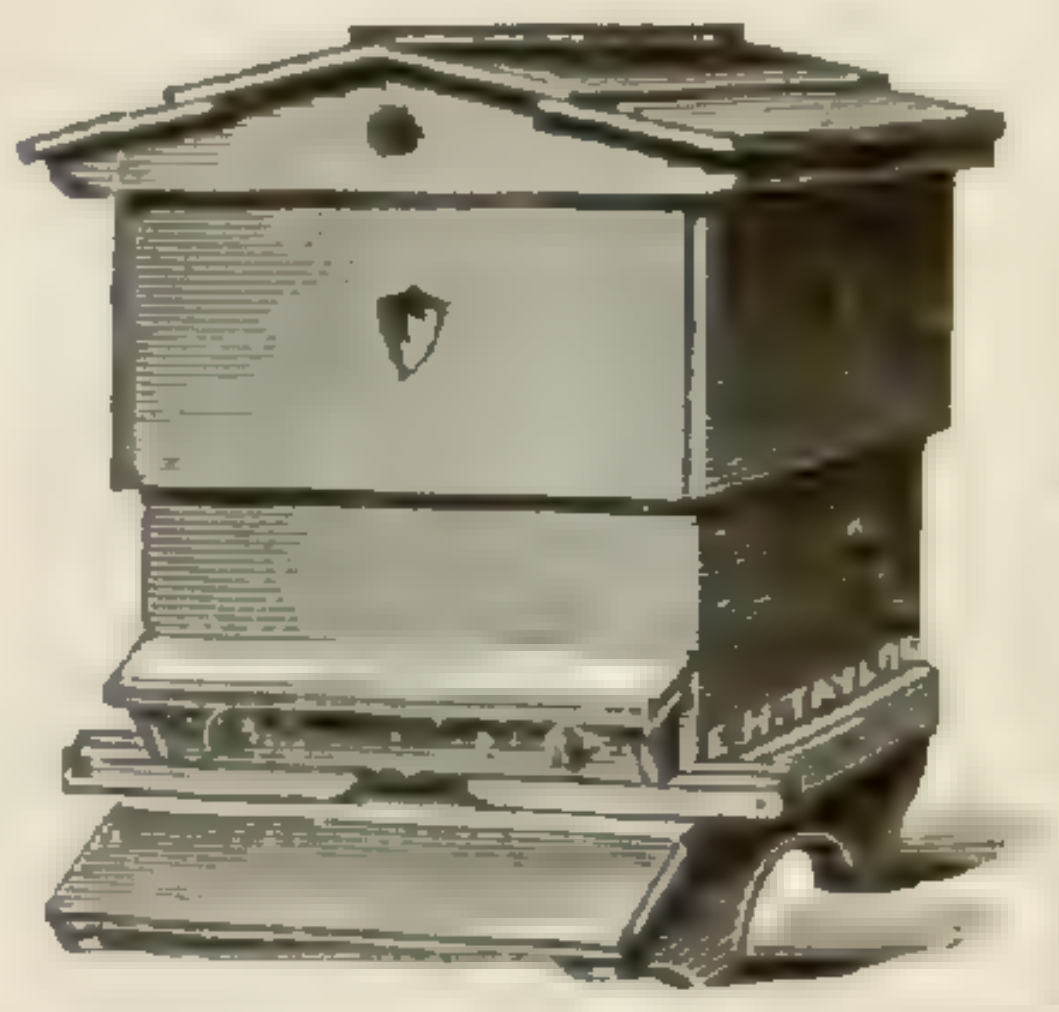

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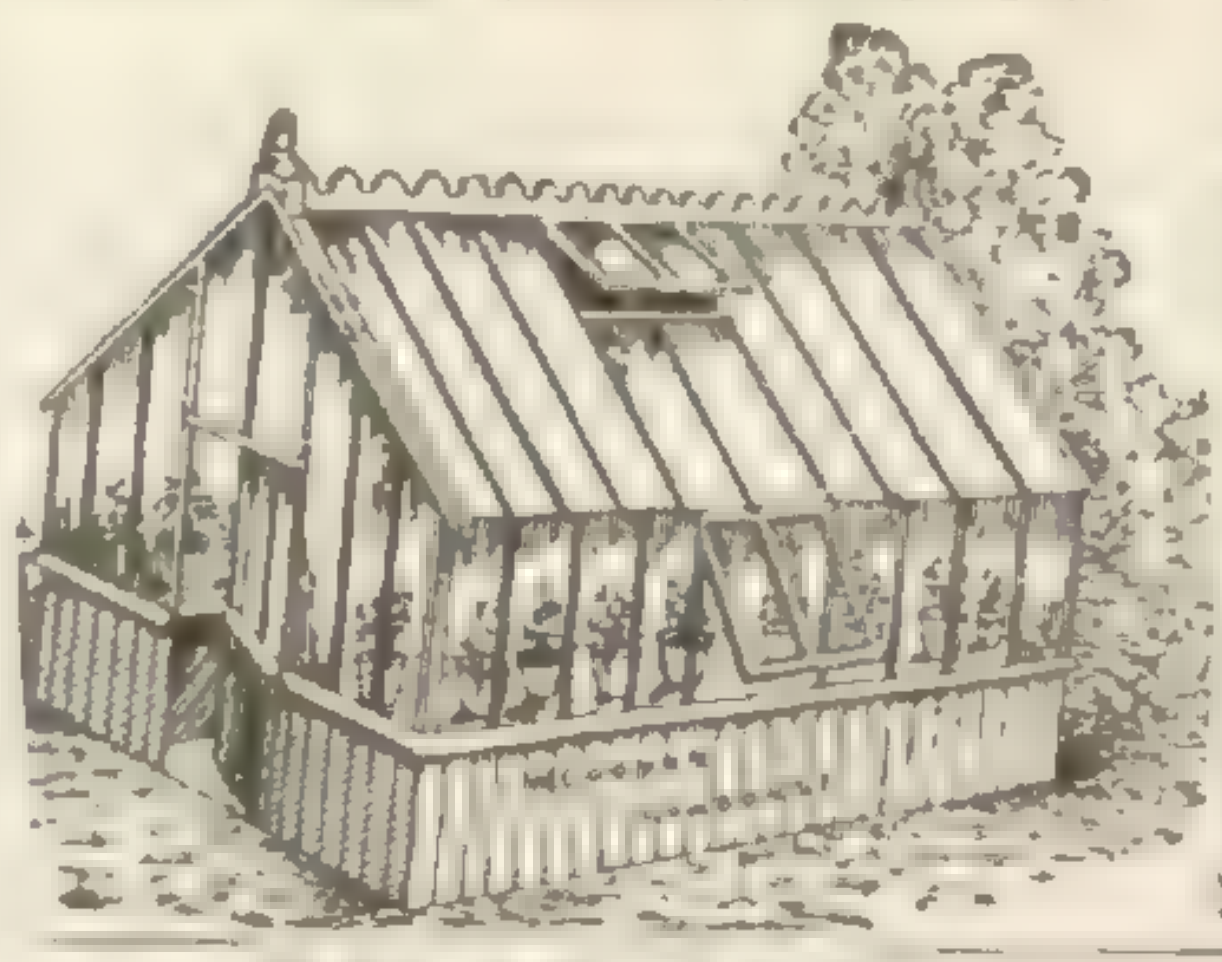

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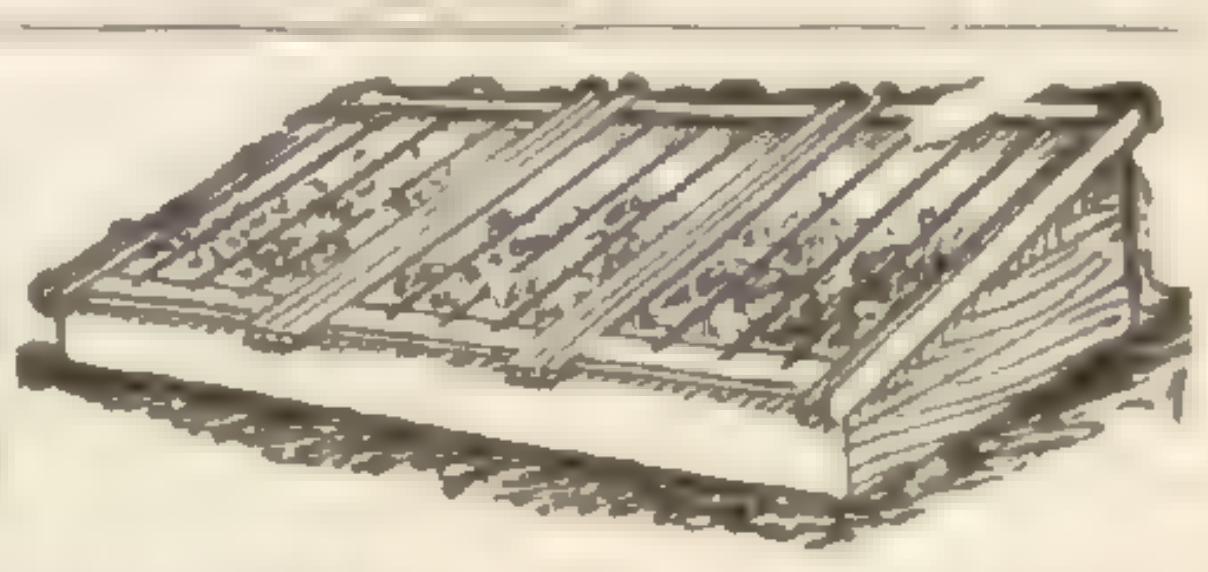

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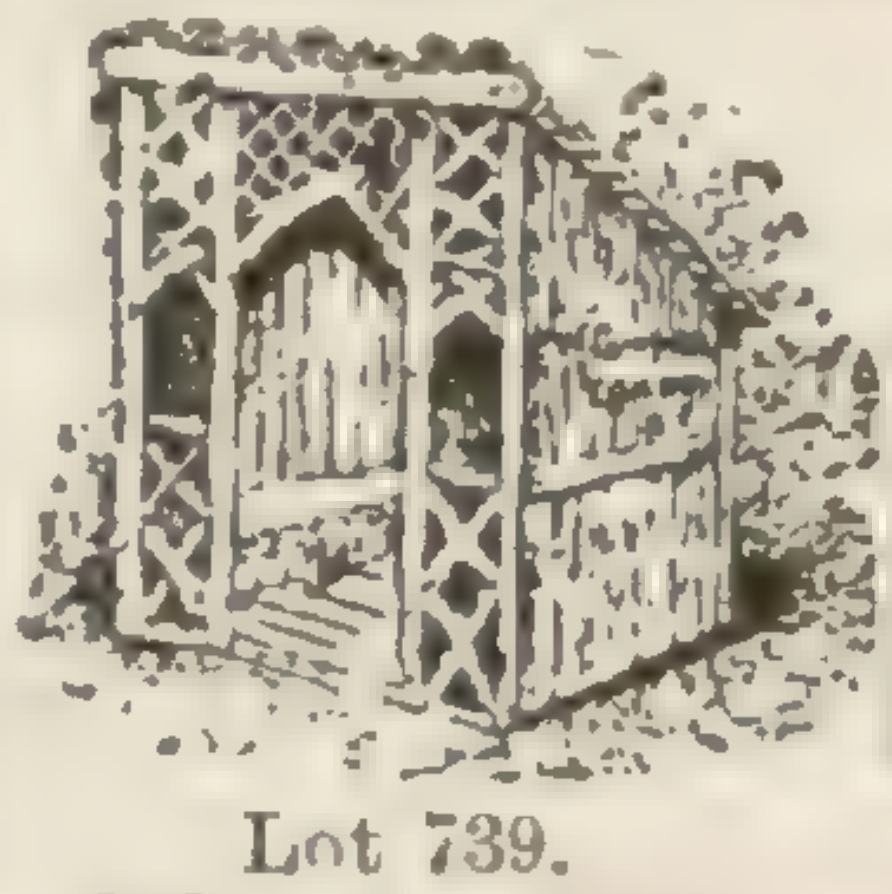

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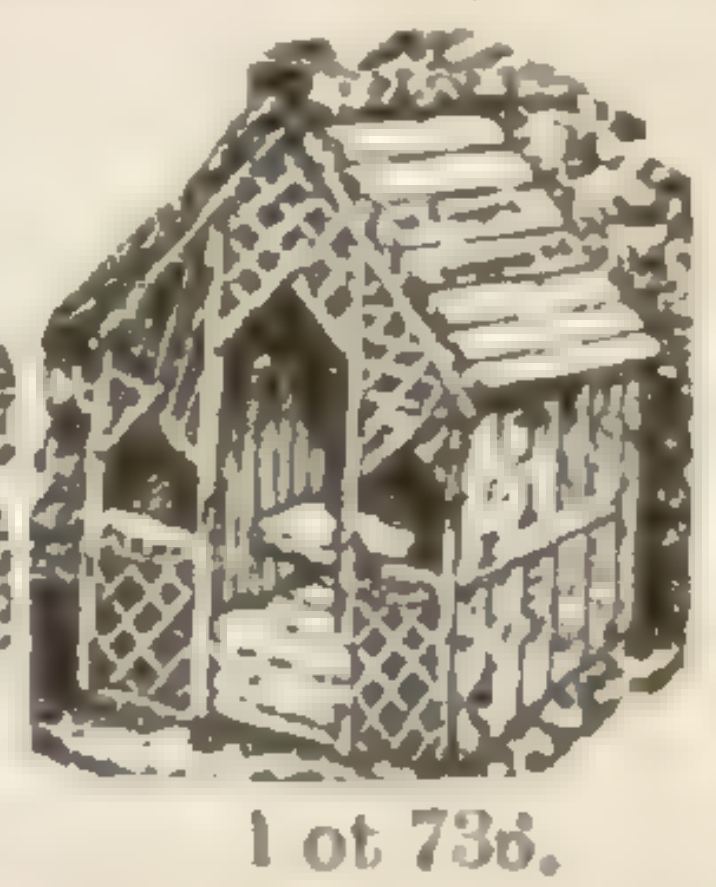

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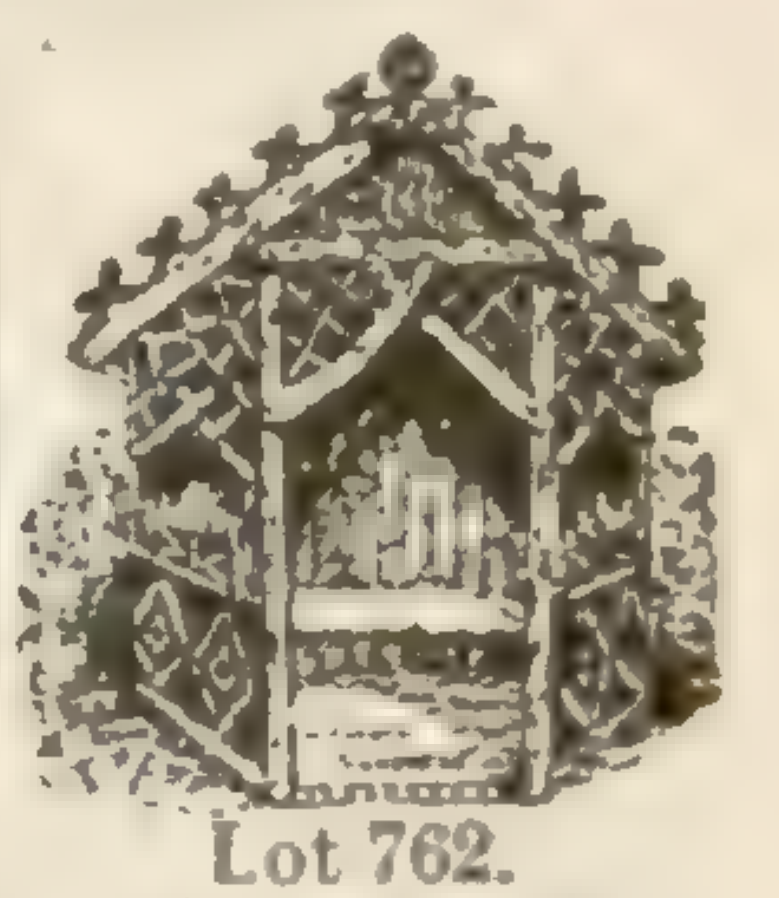

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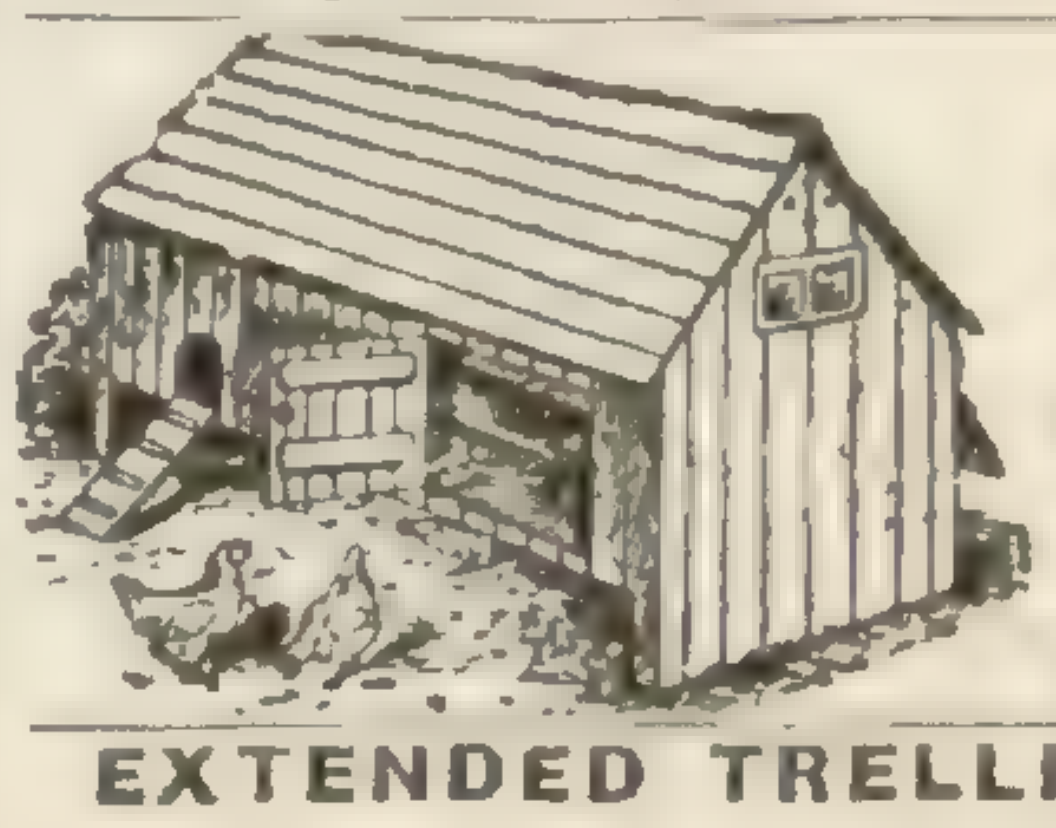

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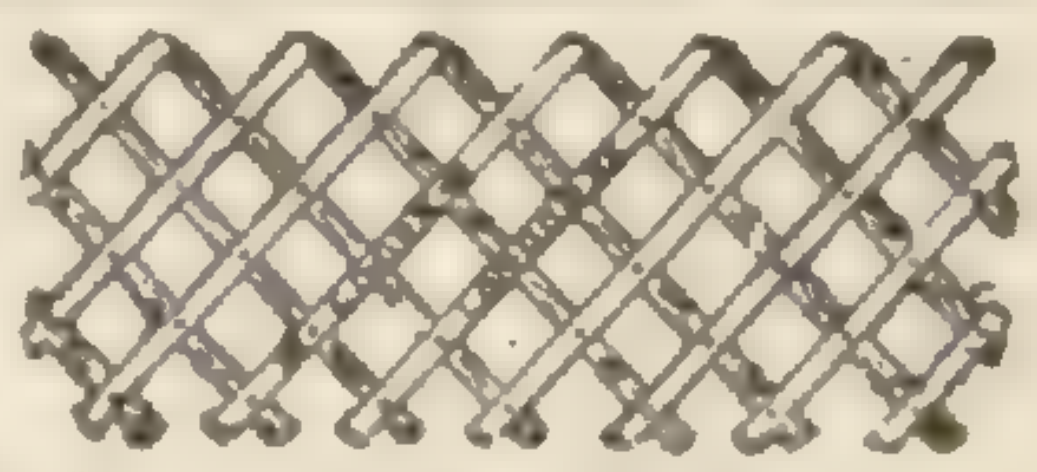

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A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head).—W. A. STEARNS, Esq., wishes to highly recommend T. J. WHEELER to any lady or gentleman requiring the services of a thoroughly experienced man; leaving through breaking up the establishment; seven years present place; married; age 37; land and stock if required. The Lodge, Englefield Green, Surrey.

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GARDENER (Head Working); life experience Inside and Out, in good places; 9½ years present, leaving no fault, good references; age 39; single. J. GREENLEES, Ravenstonedale, Westmorland.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up, good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head Working); married; age 39, thorough knowledge of fruit, flowers, and vegetables, life experience; highly recommended; sixteen years' head, economical manager. PENFOLD, 15, Helvetia Street, Catford.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches, thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30, married when suited; good ref., 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working). — Mrs. VENESS having sold her property, heartily recommends her excellent Gardener, with her four years, experienced in all branches; 38, married, two girls 11 and two. GARDENER, 3, Claremont Road, Sidley, Bexhill.

GARDENER (Head Working). F. SMITH seeks SITUATION with any Lady or Gentleman requiring a thorough all round Gardener; first class references, life experience; age 45; married, no family. Address Rose Cottage, Mellis, Suffolk.

GARDENER (Head Working). S. PRAGNELL, past 23 years head gardener to H. C. Wells, Esq., D.L., Broomfield Lodge, Chelmsford, seeks RE-ENGAGEMENT, highly recommended for character and competence to manage extensive gardens, etc. Address above.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40, married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head of three or more). R. BARCLAY, Esq., High Leigh, Hoddesdon, with every confidence recommends his late Gardener, CHARLES SEDEN, to anyone requiring a trustworthy man; twenty years' experience in all branches Inside and Out; abstainer; no young children. SEDEN, 33, Prospect Road, Cheshunt, Herts.

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GARDENER (Head Working). Mr. F. STRONG would be pleased to highly recommend H. DOWELL as a thorough practical Man to any lady or gentleman requiring such; life experience, abstainer; age 27. High Grove, Pinner.

GARDENER (Head Working), where five or six are kept; 16 years good experience; 5 years as Foreman in present place; age 32. W. LONGLEY, The Gardens, Swaylands, Penshurst, Kent.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working), life experience, Inside and Out; excellent references; age 30; married, no family. STUBBINGS, 25, Ruskin Walk, Herne Hill, S.E.

GARDENER (Head Working where others are kept); life experience; widower; 13 years present situation. W. PULLEN, Wick, near Pershore, Worcestershire.

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HON. H. WILLOUGHBY wishes to Recommend R. STEWARD as GARDENER, with one or two under. The Wood House, Epping.

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GARDENER (Single-handed or otherwise), life experience Inside and Out in the general management of a good garden; highly recommended by present employer; age 25. H. GOODSHIP, Tempsford, near Sandy, Beds.

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GARDENER (good Single-handed, or where another is kept), life experience, Inside and Out; age 31; married; good references. E. AUSTIN, 2, Crescent Cottages, Sth. Bersted, Bognor, Sussex.

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GARDENER (Single-handed), life experience; four years in last place; good references; age 31. W. HILL, Burton Cottage, East Common, Harpenden, Herts.

GENTLEMAN highly recommends GARDENER; single-handed, or with help; 5½ years' good character; age 28; single. ASKEW, 4, Mountfield Road, Ealing.

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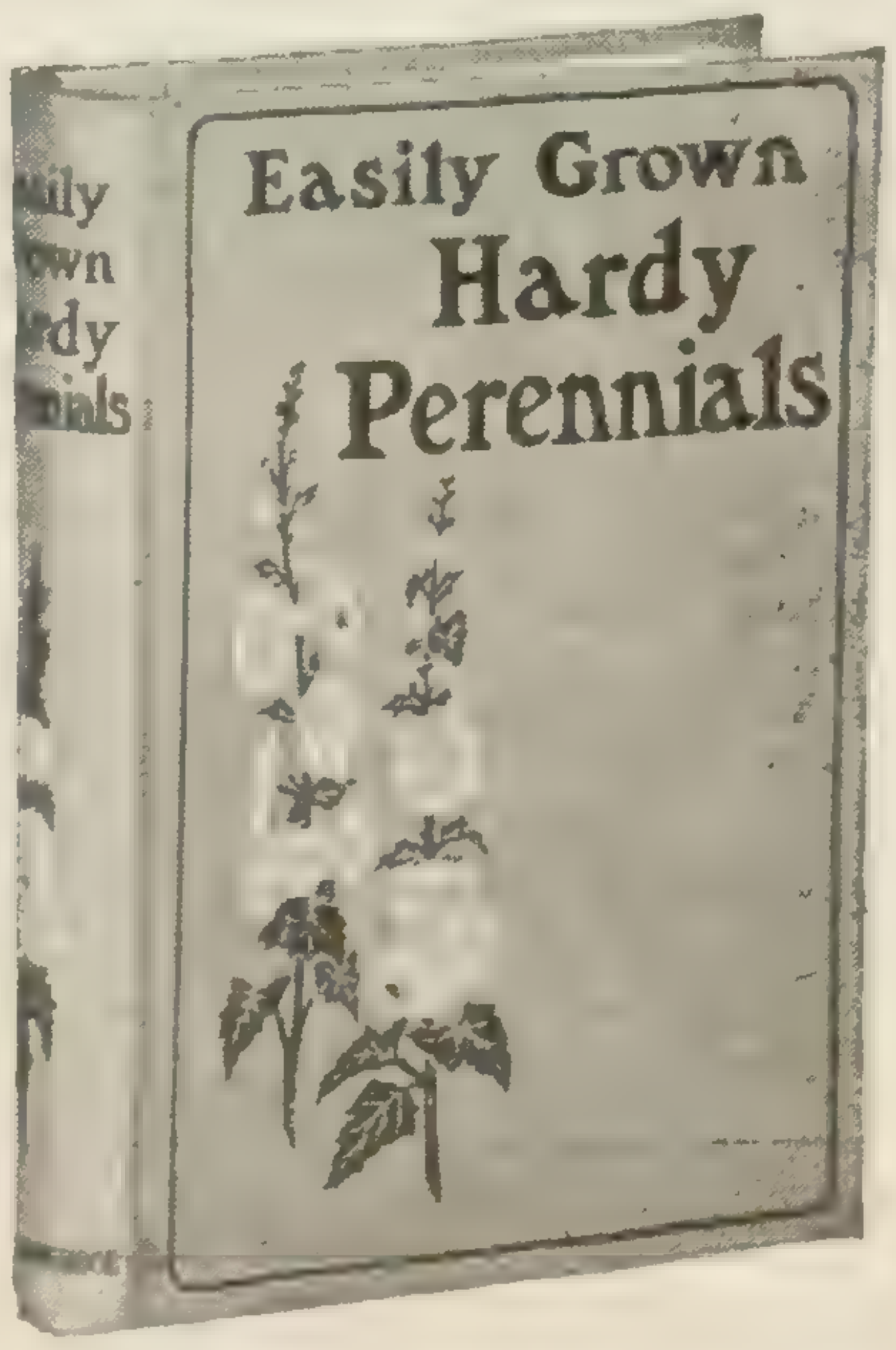

Botanical Name.— Gives the botanical or generic name of each genus of plants described in the book.

Common or Popular Names.—Supplies the common or popular English names of all the plants described.

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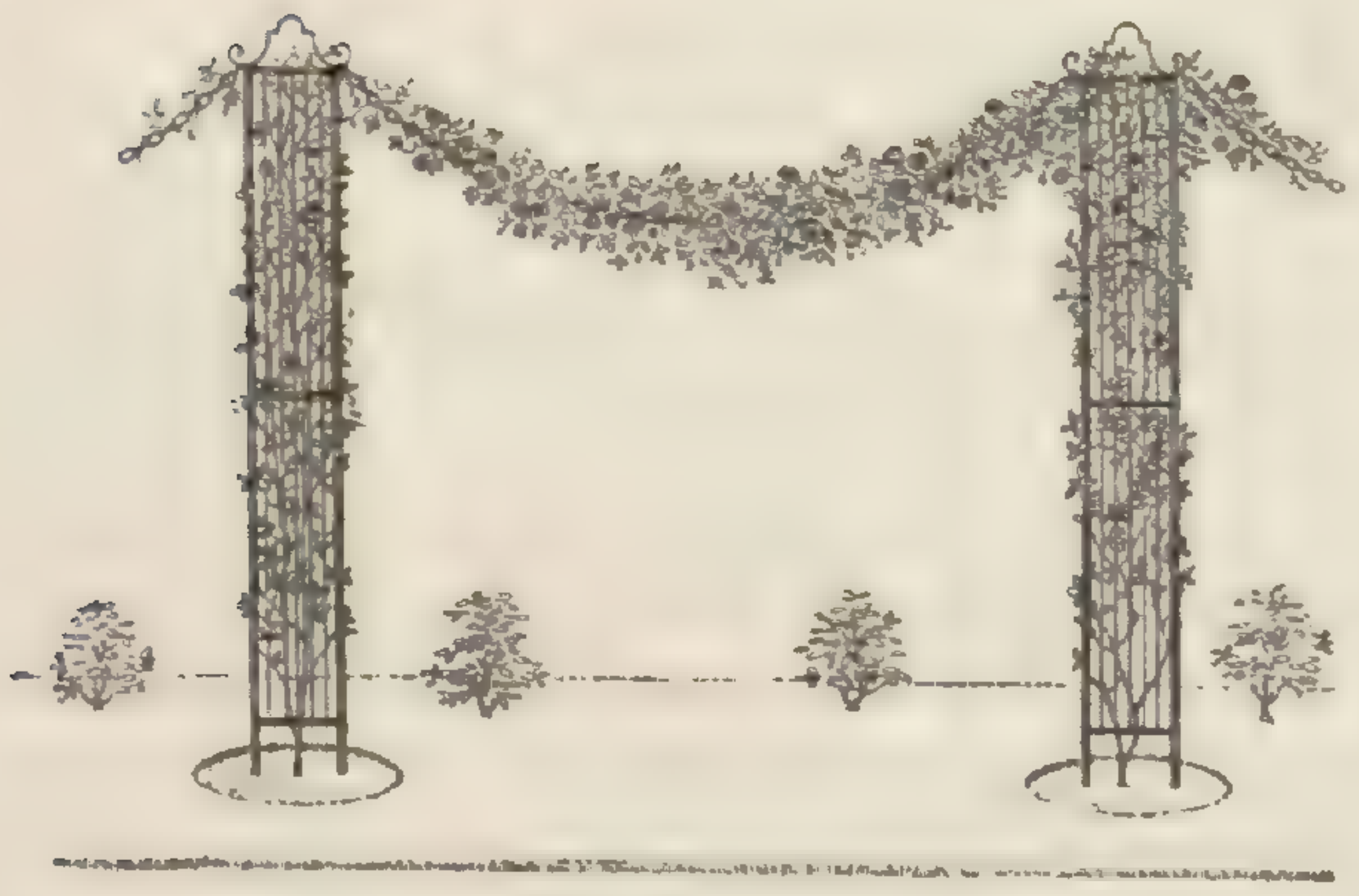

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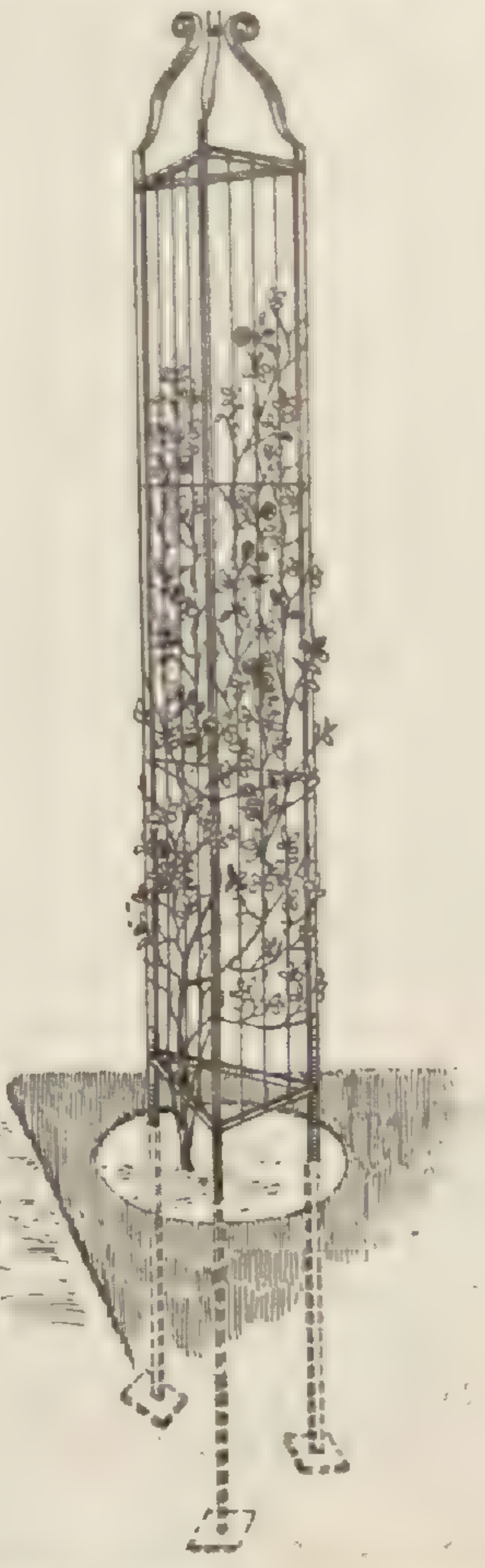

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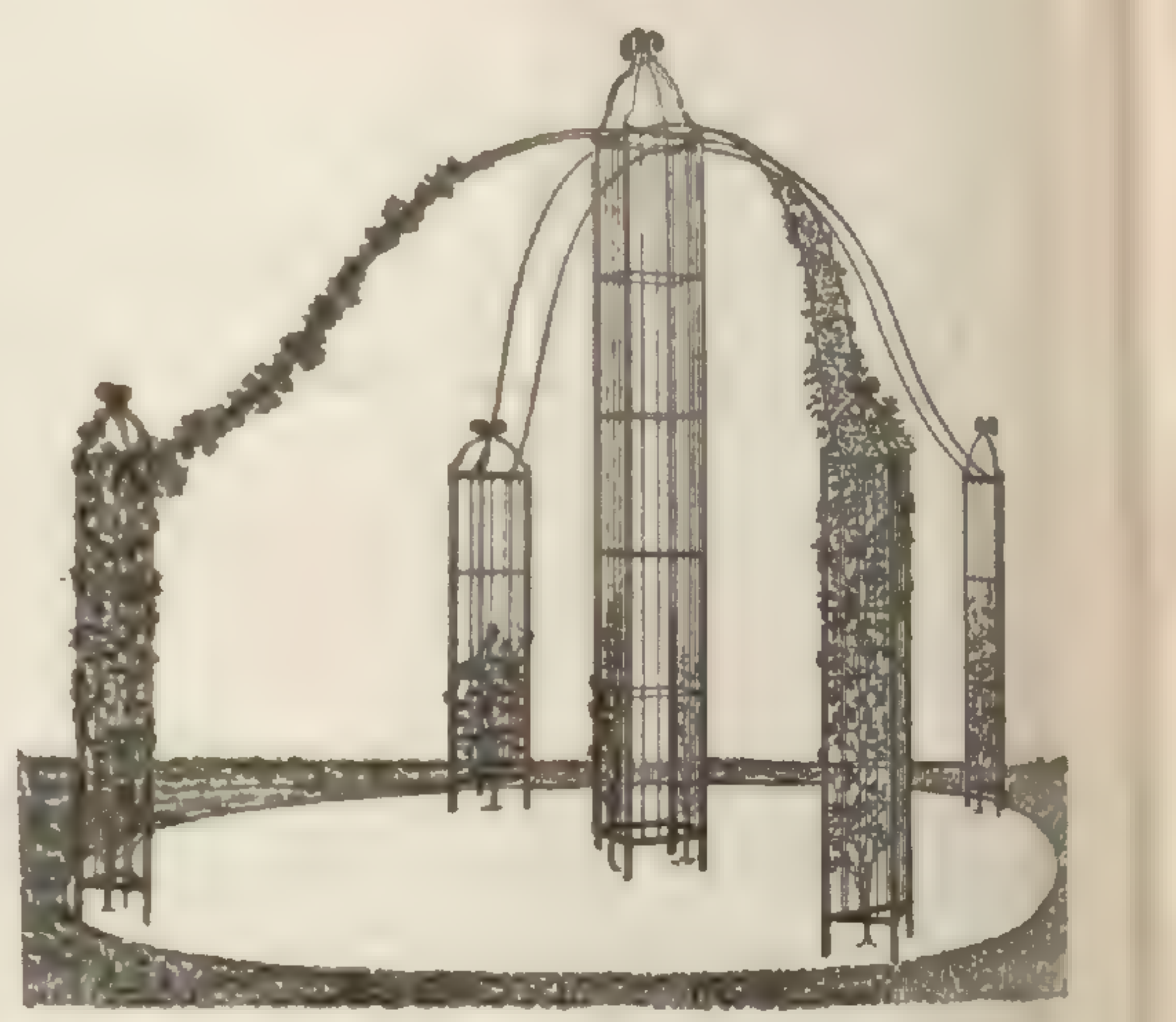

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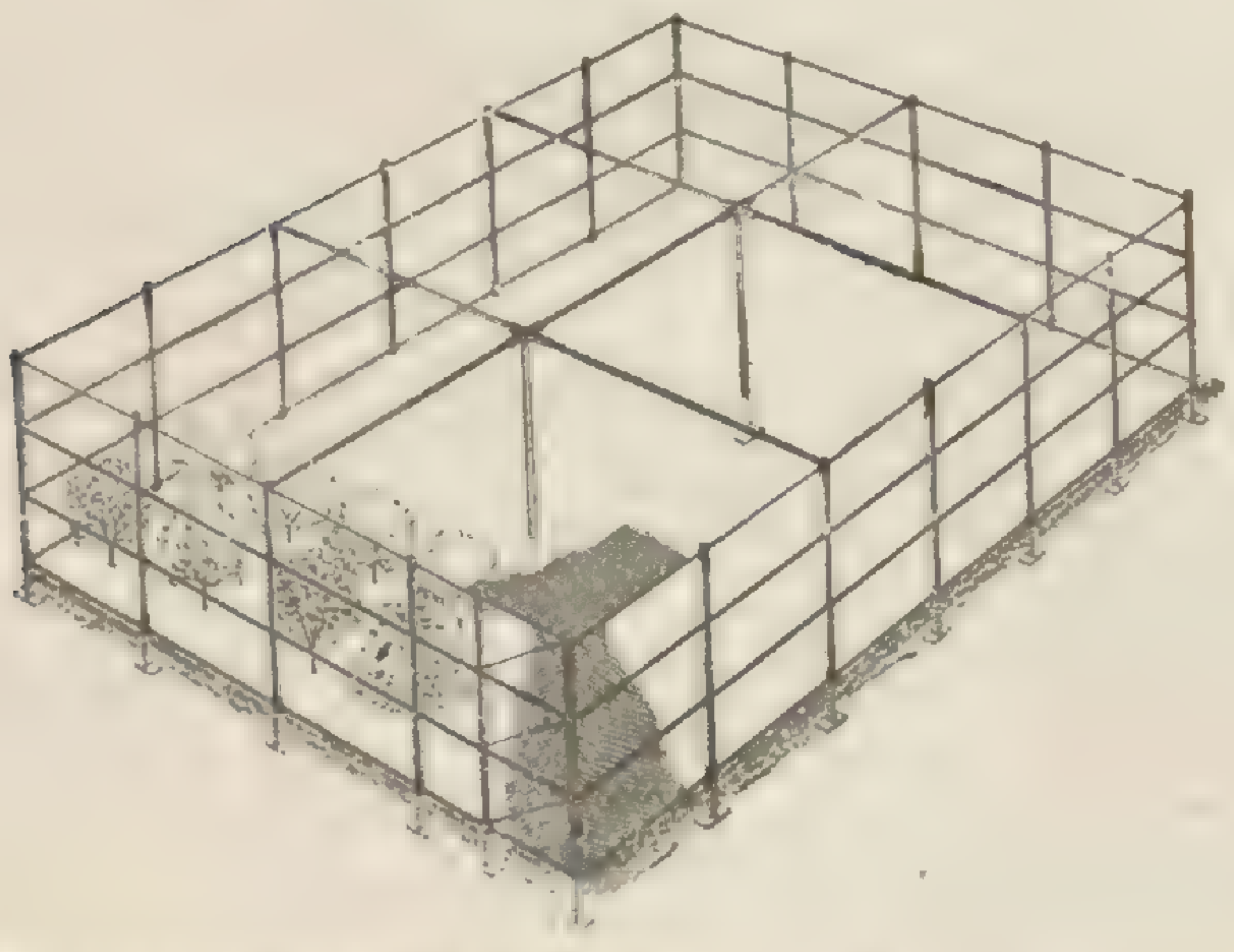

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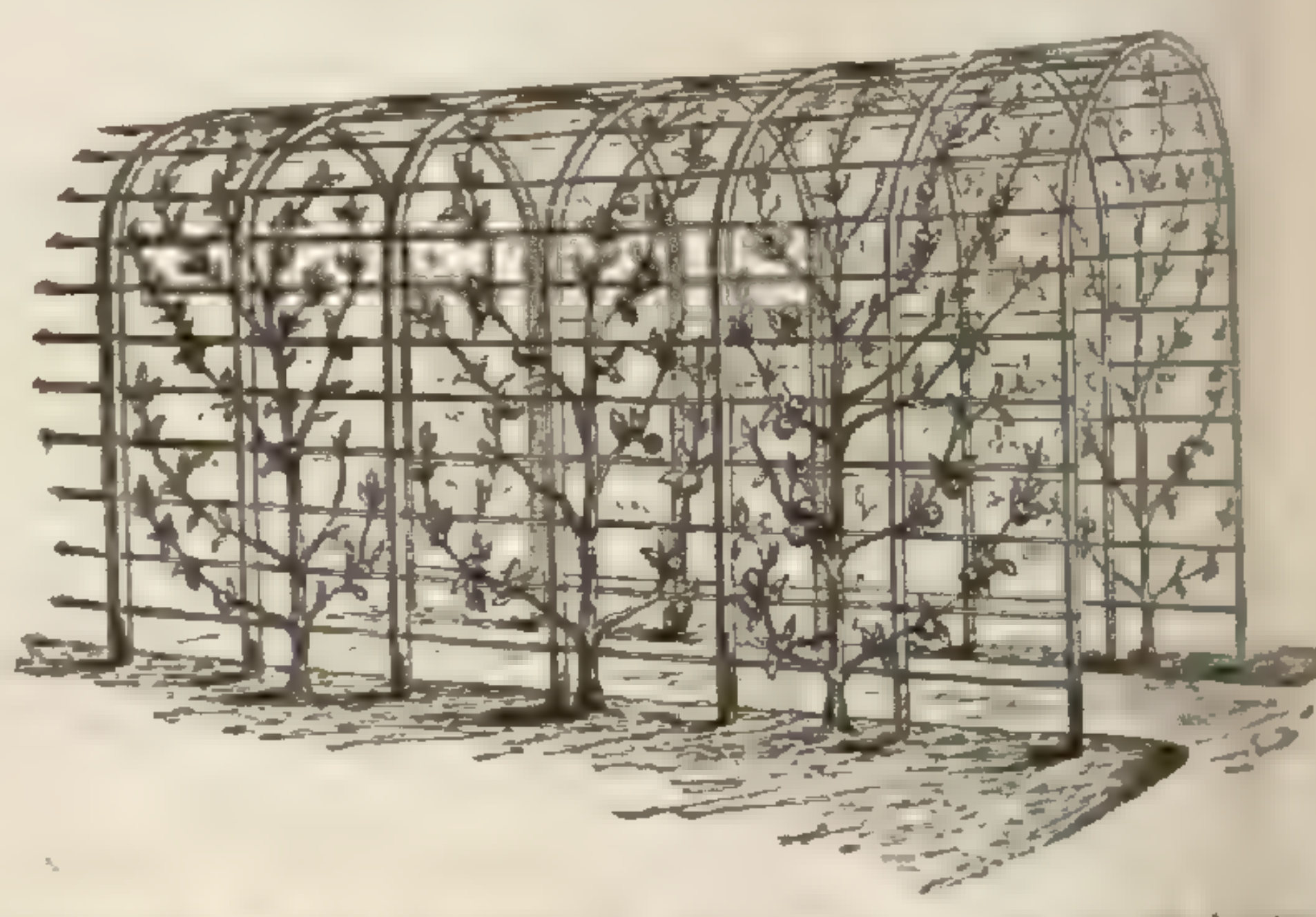

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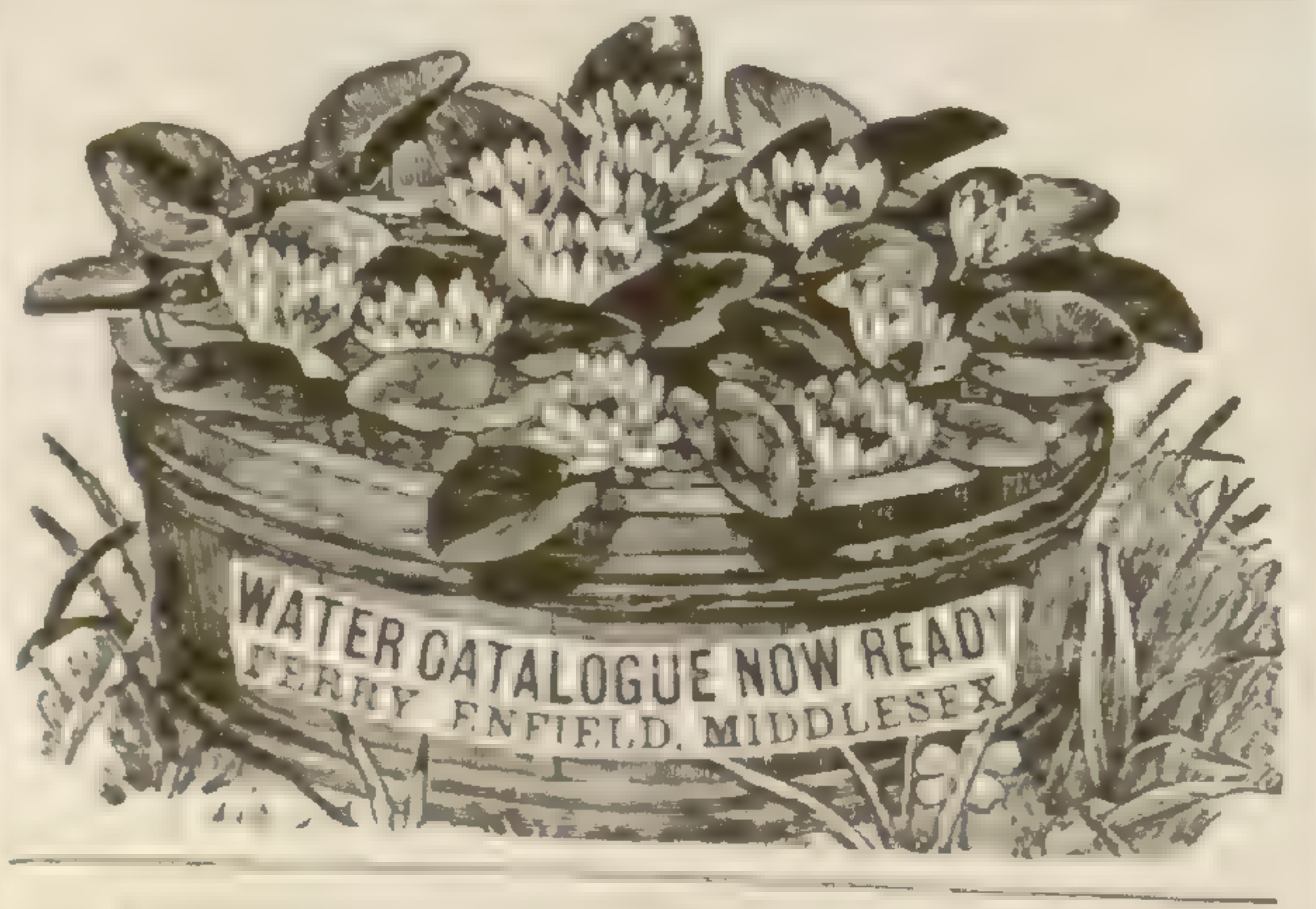

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VOL. LI.—No. 2,842. SATURDAY, APRIL 18, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

National Rose Society.

The receipt of a parcel of literature from the National Rose Society is of much interest as evidence of the committee fully appreciating the fact that a society which is national in name, and in its aims, should do something more than hold one or more exhibitions annually, and that they have given practical expression to their appreciation by the provision for the members of additional books relating to the rose. We are especially gratified by this evidence because of the proof it gives of a continuance of the wise policy which was initiated a few years since, and has contributed in no small degree to the almost phenomenal extension of membership and to the increase in the influence and usefulness of the society, which now occupies a commanding position among the organisations that are devoted to special classes of flowers. It would have been well had the committees of two or three other of the special societies adopted a policy akin to that which has been so immensely successful in the case of the National Rose Society. Not only is it probable that they would have now been in a more flourishing condition, but they would have accomplished much more in the extension and improvement of the flowers that justify their existence. In directing attention to the value of supplying the members with literature relating to the respective classes of flowers, we must not be understood as suggesting that competitive gatherings should not occupy the most important position in the year's work. All that we are desirous of doing is to suggest the desirability of societies adopting a policy by which all classes of members will be brought into touch with each other, and that those who do not exhibit or are unable to visit the shows should have a useful souvenir of the year's work. Exhibitions, we need hardly point out, provide a healthy stimulus for cultivators in their endeavour to bring the flowers and other objects in which they are interested to the highest state of development, and give them an apportunity of meeting together in friendly rivalry. Not only do competitive gatherings provide an admirable meeting place for the leading cultivators, but they provide abundant entertainment for those who love and grow the flowers simply for the enjoyment of themselves and their friends, and give them an opportunity of becoming acquainted with the novelties within a short period of their being introduced to cultivation. The publications we have received from the National Rose Society are the "Rose Annual" and "The Enemies of the Rose," two works of much value to those interested in roses, although of unequal merit, that fully justify the congratulations which Mr. E. Mawley, V.M.H., received from Mr. C. E. Shea, who presided at the meeting of the General Committee on Tuesday afternoon. The first of the two publications, although a considerable advance upon last year's "Annual," falls somewhat short of what such work should be. The contents are of great practical value, but just a trifle heavy, and we would suggest that an endeavour be made to make the pages of future issues a trifle brighter. It is, of course, easier to make such suggestions than to give practical effect to them, for there are but few rosarians who can write of their flower in language that so well befits it. The weakest part is the mixing up of the advertisements with the literary matter, and we have a strong objection to having to search among the advertisement pages for the portrait of the president of the society. Of the contents and production of "The Enemies of the Rose" we have nothing but praise, and after a close examination of its pages we have no doubt as to the rather heavy cost being fully justified. It is no ephemeral publication requiring frequent revision, but one that will long remain the text book of the fungoid diseases to which the rose is liable, and of the numerous insect pests that prey upon its various parts. The section of the book devoted to diseases caused by fungi has been written by Mr. George Massee, V.M.H., an authority of the highest eminence; and insect pests have been dealt with by Mr. F. V. Theobald, M.A., who has long been recognised as one of the leading authorities on economic entomology. There are eight coloured plates, in which all the principal insect pests and plant diseases are admirably represented.

MR. EDWIN BECKETT, V.M.H.

Mr. Edwin Beckett, V.M.H., of Aldenham House Gardens, Elstree, Herts, is unquestionably one of the most widely-known gardeners in the United Kingdom. Mr. Beckett was born at Henley-on-Thames, and as his father was a gardener and successful exhibitor, our friend was born into the profession. He was apprenticed under Mr. J. Neville, who is still living at Marsh

Mills, and subsequently he went to the famous Greenlands Gardens, at Henley, Mr. W. H. Good being then head gardener there. Extensive alterations were being carried out at Greenlands, and the gardens had a high reputation for specimen hard-wooded plants. As foreman under Mr. G. King, then gardener to the late Robt. Few, Esq., Wolsey Grange, Esher, Mr. Beckett had considerable experience of exhibiting, the garden being specially notable in those days for its specimen pelargoniums and other soft-wooded subjects. After four years at Wolsey Grange Mr. Beckett became head gardener and bailiff to the late J. McConnell, Esq., of Moor Place, a prominent position for so young a man. On the death of his employer Mr. Beckett took up similar duties at Sandown House, Esher, the residence of J. P. Currie, Esq., and from both these gardens he exhibited largely and successfully. It was in 1885 that Mr. Beckett obtained his great chance of success, as he was then appointed head gardener to the late Lord Aldenham, at Elstree, a position he has filled to everyone's satisfaction. Under the generous encouragement given him by the Hon. Vicary Gibbs, and the late Lord Aldenham, Mr. Beckett has made the fine gardens and pleasure grounds that are the pride of Hertfordshire. As a grower of high-class vegetables, and as the most successful exhibitor of them, Mr. Beckett has gained much fame, but it must not be forgotten that he has been eminently successful with chrysanthemums, and with stove and greenhouse plants, and with hardy fruits, while his knowledge of choice trees and shrubs is a very wide one, and his taste and skill as a landscape gardener are of the highest class. Mr. Beckett has also found time to improve some kinds of flowers and vegetables; he has raised numerous beautiful new Michaelmas daisies and pentstemons, and he has produced unusually fine varieties of culinary peas, celery, and beet. A few years ago Mr. Beckett produced "Vegetables for Exhibition and Home Consumption"; the text first passed through our pages, to which Mr. Beckett is a valued contributor. In local politics Mr. Beckett takes his part, and he is very proud of having been chairman of the parish council at Elstree during the past four years, and a member of the body since its institution.

The Nickerson Prizes for Roses.—Last year Mr. W. E. Nickerson, of Cambridge, Massachusetts, U.S.A., presented to the National Rose Society three silver cups, of the value of five guineas each, for the raisers of the best hybrid perpetual, the best hybrid tea, and the best tea for general cultivation sent out in 1900 or subsequently. The cups were awarded by a vote of the committee to the raisers of Frau Karl Druschki, Dean Hole, and Madame Jules Gravereaux respectively. This year Mr. Nickerson offers twelve cups for the same number of roses, four for (A) climbing roses producing their flowers in clusters, four for (B) climbing roses producing their flowers singly, and four for (C) dwarf roses for beds. The relative merits of the varieties were determined by the vote of the committee, and a number of other rosarians, and the result of the ballot was reported at the meeting of the General Committee of the National Rose Society, held on Tuesday. This was as follows: A, Crimson or red, Crimson Rambler, Grus an Teplitz, Hiawatha. Pink shades, Dorothy Perkins, Blush Rambler, Lady Gay. White, Aimée Vibert, Félicité Perpetué, Bennett's Seedling. Yellow shades, Allister Stella Gray, Claire Jacquier, Aglaia. B, Crimson and red, Ards Rover, Reine Olga de Wurtemberg, Longworth Rambler. Pink shades, Climbing Mrs. W. J. Grant, Climbing Caroline Testout. White, Madame A. Carrier, Una, Macrantha. Yellow shades, W. A. Richardson, Gloire de Dijon, and Madame Jules Gravereaux. C, Crimson and red, Hugh Dickson, Ulrich Brunner, Richmond. Pink shades, Caroline Testout, Madame Abel Chatenay, and La France. White, Frau Karl Druschki, White Maman Cochet, and Viscount Folkestone. Yellow shades, Madame Ravary, Marie Van Houtte, and Souv. de Pierre Notting. The first of each triplet is the cup rose, and the names of varieties that were second and third in the ballot were given for the information of the cultivators.

Foreign Fruits were plentiful in British markets during March, and the aggregate value represents a substantial increase upon that of the corresponding month of last year. Apples were imported in much larger quantities, the total having been 357,484 cwt., of the value of £208,401, or an increase in quantity of 79,151 cwt., of the value of £31,828. Apricots and peaches on the other hand show a relatively large decrease, the aggregate imports having been 62 cwts., of the value of £184. Bananas, as in the case of apples, were more plentiful than in the two preceding years, the total having been 530,107 bunches, of the value of £341,984, or an increase in numbers of 140,241 bunches, and in value of £32,612. In the imports of grapes also there was a large increase, the total having been 5,584 cwt. of the value of £24,138, these figures representing an increase in quantity of 3,783 cwt., and in value of £16,952. In the imports of lemons there was an increase, but nuts and oranges were received in considerably reduced quantities. Pear imports show an increase in quantity of 347 cwt., and in value of £410, the total having been 1,834 cwt. of the value of £4,945. Plums, on the other hand, were received in smaller quantities, the total having been 198 cwt., of the value of £429, as compared with 538 cwt. of the value of £2,851 in March, 1907. The value of the strawberry imports is returned at £2, and of unenumerated fruits the imports were 3,828 cwt. of the value of £6,419, these figures representing substantial decreases. The total value of the fruits for March was £866,248, or a gain of £30,287 as compared with the corresponding month of last year.

The Gardeners' Company.—In the year 1605 King James I. granted by Letters Patent to the gardeners carrying on their business in the City, or within six miles of its boundaries, incorporation as a Guild, and the bye-laws and ordinances of the company were confirmed in the following year. Notwithstanding these letters patents the members of the company had a difficulty in selling their products, owing to the opposition of unqualified persons. The Recorder (Sir E. Littleton), who subsequently became Lord Chancellor, issued in 1632 a warrant for the apprehension of persons using the trade of gardening in contempt of the company's charter, and this warrant continued in force until 1645, and is regarded as having contributed materially to the usefulness of the Guild. The Master, Wardens, Assistants, and Commonalty of the Gardeners' Company have sent a memorial to the Lord Mayor asking permission to present to the Lord Mayor annually a basket containing flowers, vegetables, and herbs, in remembrance of the Recorder's warrant. The Lord Mayor has assented to the request, and fixed Wednesday, July 1, for the first presentation.

Commons and Footpaths Preservation Society.—At the monthly meeting of this society, held a few days since, the proposal of the War Office to conduct manœuvres on a large scale in the New Forest during the coming summer was considered, and it was decided to co-operate with the verderers, commoners, and others interested in taking such action as might be necessary to secure that due regard should be had to the protection of public interests under the Military Manœuvres Act. It was also decided to urge the President of the Local Government Board to amend Section 7 of the Housing and Town Planning Bill now before Parliament. As drawn the Bill would give local authorities power to alienate open spaces committed to their care for the purpose of providing sites for dwellings for the working classes, and it was resolved to press that common land, or land dedicated to the recreation of the public, should be exempted from the operation of the clause. It was reported that the Board of Agriculture had now issued draft schemes for the regulation under the Commons Act, of Towyn Trewan Common, Anglesey, 1,300 acres in extent, and Maidenhead Thicket and Cookham Commons. Also that the litigation with regard to a large and valuable driftway crossing Marsden Moor, Yorkshire, had terminated in favour of the public, and that up to the present subscriptions and guarantees amounting to £1,552 had been received towards £1,800 needed to secure the purchase of Ludshott Common and a strip of land adjoining Waggoners Wells, near Haslemere.

New Daffodils.—A few remarkable new daffodils were shown by Mrs. Backhouse, of The Court, Sutton, Hereford, at the recent meeting of the Royal Horticultural Society, but as they came late, and were placed at the end of a trade group, they received little attention from any but a few experts. A huge finely formed trumpet daffodil, named Harvest, a sort of refined Glory of Leiden; a beautiful white trumpet variety that Mr. Engleheart promptly annexed for a pollen parent; and a flower with an enormous trumpet, and named Jumbo, were three of the most startling varieties in a small set of very fine seedlings. It was a pity the flowers were brought so late, as this permitted the display in only an unimportant position.

Mr. Joseph Mallender, who for the long period of forty years was head gardener at Hodsock Priory, Notts, the residence of Lieut.-Colonel Mellish, has recently retired from the position he has so worthily occupied. Throughout the period he had charge of the Hodsock Priory gardens he associated himself with all the movements that had for their object the advancement of horticulture in the district, and thereby gained the respect of all classes. On it becoming known that Mr. Mallender was relinquishing his charge, his many friends decided to present him with some memento of their esteem, and a few evenings since a meeting was held at the Blyth schoolroom for the purpose of giving practical effect to this decision. There was a large gathering, in which the principal gardeners in the district were prominent, and Mr. Mallender was presented with a marble clock, bearing a suitable inscription, an armchair, and a purse of gold. Mr. Elliott, who presided, and other speakers referred in appreciative terms to the splendid services Mr. Mallender had rendered to the district, and testified to the respect in which he is held.

Grove Hall Park.—Not so long since the Grove Hall Park estate extended over an area of twelve acres, and was so attractively planted with trees as to form one of the few beauty spots of Bow. Now only about three and a-half acres remain, the other portion having been cut up for building purposes. A committee, with Mr. Kitcat, the rector of Bow, as chairman, have been making strenuous efforts to secure the three and a-half acres for a public park and children's playground. Some £200 is still required to enable them to accomplish their laudable object, and as such an open space is an absolute necessity for a populous centre like Bow, we trust this comparatively small amount will be forthcoming. The London County Council, in addition to promising a liberal contribution, will take over and maintain the property acquired.

Hardy Fruit Prospects.—From Rolleston Hall Gardens, Burton-on-Trent, Mr. G. Woodgate writes: The absence of sun during the summer and autumn of 1907, with the exception of the month of September, did not augur well for the ripening of the wood or fruit buds of hardy fruits, that one is very agreeably surprised to find now such healthy wood and prominent fruit buds, on such kinds of trees as are sufficiently advanced in growth for the buds to be readily discerned. Apple and plum trees are thickly studded with fruit buds, and also sweet and Morello cherries. Pears will not be quite so floriferous as they were last year, but are amply furnished with buds, which are fast expanding, and which will, in a short time, providing we do not experience any frosts, make the gardens gay with their blossoms. Strawberries look promising, and all varieties of bush fruits are showing well. Birds, such species as bullfinches and tom-tits, have not been so much in evidence this year as in some past seasons, but those which have been seen have been frightened away with the noise of the gun, so we are not anticipating any great loss of fruit through their depredations this season.

Spraying: Its Needs and Principles.—In America the greatest possible interest is being taken in preventive measures against insect and fungus pests. From State departments and experimental stations a vast amount of literature on the subject of spraying is being sent out regularly, and it is, therefore, not surprising to find "The National Nurseryman" devoting almost the whole of its March issue to the same subject. Spraying formulæ abound, and there are numerous illustrations of spraying machines and kits, while the advertising pages form a general lesson on "Sprayography."

Forestry at Newcastle.—Owing to the success achieved at Lincoln in connection with the forestry section, the Royal Agricultural Society has decided to enlarge the arboricultural features of its exhibition to be held at Newcastle-on-Tyne during the ensuing summer. Silver and bronze medals will be offered in numerous classes, and among other objects invited are boards of various kinds of timber showing the effects of good and bad pruning, the influence of soils on the quality of wood, the damage done by insect infestations, and the ages at which the several kinds of timber reach a marketable size. Plots of ground in the open contiguous to the exhibition buildings will be allotted to nursery firms for the display of both useful and ornamental trees and shrubs, and owners of forests and woodlands are invited to send specimens, photographs, etc., for exhibition only.

NOTES FROM KEW.

◆

Varieties of Begonia semperflorens.

In the greenhouse No. 4, with its wealth of flowering plants, a variety of Begonia semperflorens, from its richness of colouring, stands out very conspicuous. The name is Lumineux, and it was, I believe, distributed by M. M. Vilmorin. It is of a freely branching habit of growth, and naturally forms a neat bushy specimen about a foot high. The flowers are of a bright, glowing, crimson colour, a tint but little represented among fibrous-rooted begonias. There is undoubtedly a future before this variety, as apart from its value for greenhouse decoration at this season, it may prove of great use for summer bedding. In stature greatly exceeding the last-named comes B. semperflorens gigantea rosea, raised many years ago by M. Lemoine, the parents being B. semperflorens and the Mexican B. Lynchiana, which was first distributed as B. Roezli. The variety gigantea rosea may be grown into a quite large plant, but it will also flower freely in pots five or six inches in diameter. The flowers, borne in large panicles, are of a deep rosy hue.

Coreopsis Granti.

One effect of the opening up within recent years of Tropical Africa has been the introduction of many plants therefrom. One of them—Coleus thyrsoideus—has already become popular for winter blooming, and this coreopsis bids fair to be much sought after for the same reason. It is a plant of a half-woody nature, clothed with pretty bipinnate leaves, and the star-like flowers, made up of eight points, are of a bright yellow colour, and about a couple of inches in diameter. For the decoration of the greenhouse during the early months of the year it is likely to become popular. It would appear to be already in commerce, as it has been among the various plants exhibited by Messrs. Veitch at a recent meeting of the Royal Horticultural Society.

Lopezia miniata.

A native of Mexico, and a plant whose introduction dates back to the early years of the last century. It would appear to have been only recently taken in hand, as its name does not occur in the Kew Hand List of Dicotyledons. Botanically, it is a near relative of the fuchsia, belonging, like that, to the natural order Onagraceæ. It is a soft-growing subject, of a half-shrubby character, and naturally forms a dense, bushy specimen. The leaves are ovate, an inch or more in length, and thin in texture. The flowers, borne singly on long, slender stalks from the axils of the leaves, are very curious in shape, the principal ornamental feature being two comparatively large petals, which stand out on either side like wings, thus giving to an expanded flower a good deal of resemblance to a flying insect. The whole bloom, however, is not more than half an inch across, but though individually small, they are borne in such profusion, and are so bright and cheerful, that a plant is, when at its best, a decidedly pretty object. At Kew it is grown in an intermediate temperature.

Hippeastrum pardinum superbum.

A fine group of this pretty and distinct hippeastrum is in flower in the T range. It is an old species, having been introduced by Richard Pearce, of tuberous begonia fame, while travelling in Peru. It first flowered in 1867, and was then distributed at a price of two and three guineas each. The flowers of this are shallow, of a bright cream colour, slightly tinged with green, and profusely dotted with crimson. This applies to the typical form, the variety superbum being so freely freckled with red that very little of the ground colour is to be seen. Hippeastrum pardinum has not been much used by the hybridist in the production of the garden forms of to-day, though occasionally traces of its shallow flower and numerous spots may be seen.

Manettia bicolor.

Once more this good old favourite has had its name changed, apparently without rhyme or reason. As Manettia bicolor it is known to most gardeners, and no one can deny but that name is a very appropriate one. Next, it was at Kew named Manettia luteo-rubra, and as such was figured in the "Botanical Magazine." Lastly, I was astonished to find the name of Manettia inflata, the synonyme on the label being M. bicolor. With all this changing it is small wonder that us poor gardeners, who have but a limited library, should often be in doubt as to the correct name a plant should bear.

Burchellia capensis.

A specimen of this South African shrub in the warmest portion of the Temperate House well serves to show how attractive it is when in full flower. The individual blooms are a little over an inch long, tubular in shape, and of a deep orange-scarlet colour. As the leaves are of a dark green the bright-coloured flowers show up in a marked manner, especially during a dull day, as when I saw it. K.

SEDUM KAMTSCHATICUM FOL. VAR.

The stonecrops of easternmost Asia are generally better garden plants than the European ones, as they thrive apace in the ordinary soil of borders, and give a display in late summer and autumn when most species have passed their best. Typical S. kamtschaticum has been with us a long time, but has not made very great headway, though the variegated form, a more recent introduction, leaped into popularity at once, and is now regarded as a model rock plant, ever presentable, and in summer and autumn capable of forming the prettiest group in the rock garden. Like most stonecrops, it possesses a strong, almost unkillable constitution, and in a light free soil it quickly grows into patches two or three square feet in area, the leaves and flowers combining in a colour scheme of white, green, and gold that cannot fail to please the most exacting.

The lengthy trails are thickly studded with oval leaves, minutely toothed, and whose colouring varies from grey-green to white and yellow, the growths terminating in a flattened cluster of bronze-gold buds that in this stage are superlatively attractive. The transition from buds to flowers, and from flowers to seed capsules is slow, and scarcely noticeable, but all retain the bronze-gold colouring, though there is more yellow than bronze when the flowers are fully open. A plant of this description deserves a prominent place in the rock garden, and one can suggest further uses —that of furnishing the bases of sun-dials. pillars, vases, and other ornaments of stone as a carpeter for plants in vases, etc. It has received the Royal Horticultural Sosociety's Award of Merit, but the surest guarantee of its attractiveness lies in the fact that everyone who sees it in good condition invariably wants it.

G. B. Mallett.

AMONG THE ALPINE FLOWERS.

"Come, gentle spring! ethereal mildness! come!
O, Thomson! void of rhyme as well as reason;
How could'st thou thus poor human reason hum?
There's no such season!"
—Hood, "Spring," A New Version.

It is to be feared that many of us will be inclined as this is written to repeat with consenting note the lines of Hood, as quoted above, for the times are not propitious for singing of the "ethereal mildness" of the season. Cold winds, heavy showers of rain and sleet, and the sight of snow upon the distant and higher hills, all proclaim how unwilling is winter to depart, and how loth is the real spring to drive him from his strongholds.

Yet the spring flowers tell us another tale, and we may well take heart of grace at the promises of the future these give us; true warrants that the warmer days and the sunnier skies are on the way, and that in due course we shall be rejoicing in all our wonted treasures.

Daphne Blagayana.

The daphnes, as a rule, are beautiful things, and we cannot wonder at the myth which made the original of the race the embodiment of Daphne, the daughter of Sileno and Mysis, who was changed into a plant to escape the too ardent advances of Apollo. Nor can we well think of the name and the flower as representing Daphne, the proud wife of Chrysos, the patron of art, as shown in "Pygmalion and Galatea." Perhaps least of all can we do so in the case of one of the prettiest of all the daphnes—D. Blagayana, now in bloom. There is no trace of pride in this plant, whose humility teaches it to trail prostrate along the ground, and whose modesty is typified by its simple white flowers. It is, however, the embodiment of hidden as well as of modest and simply beauty, as its flowers are sweetly fragrant, while the whole aspect of the plant marks it out as one of the prettiest and most desirable of our rock garden shrubs. Then it is one of the shrubs that flourish under affliction, seeing that it only thrives if its shoots are well kept under by the weight of stones. Annually, these pliant branches should have plenty of stones laid on them to weight them down, and only then will this lovely plant flourish as it should.

Mr. Reginald Farrer, in "My Rock Garden," suggests more heroic treatment, although I fear he has allowed his enthusiasm to run away with him. He says: "Daphne Blagayana has been quite good with me ever since I realised that all the plant really wants is to be perpetually stoned with stones like the tomb of Absalom. Plant this lovely Tyrolese daphne in rough peat, and then, every time you pass, hurl a mighty rock on top of him, and pin down all his branches under boulders." I fancy there are few who will "hurl a mighty rock" at this beauty, and it is better to be more considerate, and lay the stone gently, but firmly, upon it. Nay, I think the true lover of alpines and good grower of them whom I have quoted will be found even more considerate than his own words would suggest. But it is not even necessary to use rough peat, as this charming trailing shrub will flourish in rough and stony soil, and will give plenty of its creamy-white flowers from March onwards.

The Pyrola-leaved Alpine Moonwort.

The peculiar treatment required by the daphne reminds one that while we have been, and still are, enjoying the beauties of the charming Soldanella alpina, variety pyrolaefolia, which bears the above popular name, we are really reaping the benefits of a little consideration and artificial methods. These have furnished us with a satisfactory crop of beautiful flowers as are shown by this good soldanella, which nestles so cosily at the base of a rockery, and is well shielded from the coldest winds by having its back to the north wind. Very beautiful is this alpine, with its thick and leathery foliage (pardon, fair Moonwort, the adjective "leathery," as applied to these pretty leaves!), and its little stems well raised above the leaves, and bearing a number of these winsome little, drooping, charmingly toothed, bell-like flowers of a fine purple-blue

It is, it is true, perhaps the most floriferous of all the alpine moonworts, but it would not flower with me so freely were it not that it has been snugly reposing all winter under a sheet of glass, which has to serve instead of its natural covering of snow, which keeps it warm, snug, and dry on the alpine mountains, but which this winter of ours cannot supply. With this put over it in October, and retained until the blossoms show colour, this adorable little flower will give many days of pure delight to the lover of these gentle plants, which are among the most lovely of all alpine flowers. A sandy soil, with plenty of well-rotted turf, leaf-soil, or peat among it, will be a diet which will prove acceptable feeding to these alpine beauties.

The Red Twin-leaved Squill.

To the lover of bulbs there is a wealth of material among the scillas, or squills, and I rejoice in the possession of some delightful varieties, raised originally by the late Mr. James Allen, and sent me by that lamented lover of such flowers. Among these are two or three pink varieties of Scilla bifolia, and these are flowers of considerable beauty. Yet, after all, I question if there is one of these which is superior to the true pink or red-flowered variety of Scilla bifolia, which should be termed rubra, and which must not be confounded with the flesh-coloured one, often sold as rosea or rubra, but which ought really to be called carnea, as it is more flesh-coloured than pink, rose, or red. This deep-hued variety is now very scarce, and, as I had lost it in the dreadful upheaval of transferring my collection of flowers from my old to my present garden, I was indebted for its restoration to a very good friend, to whom I owe many good things. It is again in flower, and my few bulbs are among the most prized of all my flowers of their kind. I do not think the average private grower of bulbs is aware how many varieties of Scilla bifolia are in existence—a want of knowledge to which he owes much of loss.

Crocus aerius majus.

Another good friend, Mr. T. Smith, of Newry, has given one much pleasure by distributing some good things in the way of bulbous and other flowers, and among my enjoyments of the season, not yet passed away for the year, has been the pleasure yielded by a few corms of the fine variety of Crocus aerius, which he has distributed as majus or major. The lovely blue-flowered Crocus aerius is a variable thing, and Mr. E. A. Bowles, our "Crocus King," has raised or selected some very beautiful varieties, which in time to come will be boons to the bulb lover. Mr. Smith's variety is, however, a very beautiful one, and he will perhaps excuse me for remarking upon its size; the deep colour of its blue flowers, made still more exquisite by the lighter hue of the interior, which reminds one of the exquisite colouring of some ancient glass; and the general air of refinement and beauty presented by this fine little flower. Any crocus lover who does not appreciate C. aerius in any of its forms may be banned from the cult and classed no longer as under the banner of the flower of the youth who was the unhappy lover of Smilax.

Other Flowers.

But the pen speeds on, and the sheets before one remind even the most devoted worshipper of the alpine flowers, keen to tell the beauties of his charmers, that he must bring his rhapsodies to a close. But how many things has he omitted.

Here are the first-fruits of the coming of the aubrietias, the snowy masses of arabises; the chionodoxas in blue, sapphire, lavender, white, and pink; the Siberian scillas in blue and white; crocuses in colours almost interminable; the daffodils, all in silver and gold; the last of the snowdrops, lingering in the cooler corners; primroses, white and yellow, and blue and red, and in various hues between; some of the saxifrages, such as Boydi, apiculata, and a few more, harbingers of the host which will shortly follow; the earliest of the muscaris, holding out a hand to the allied hyacinths of the type of lingulatus and azureus.

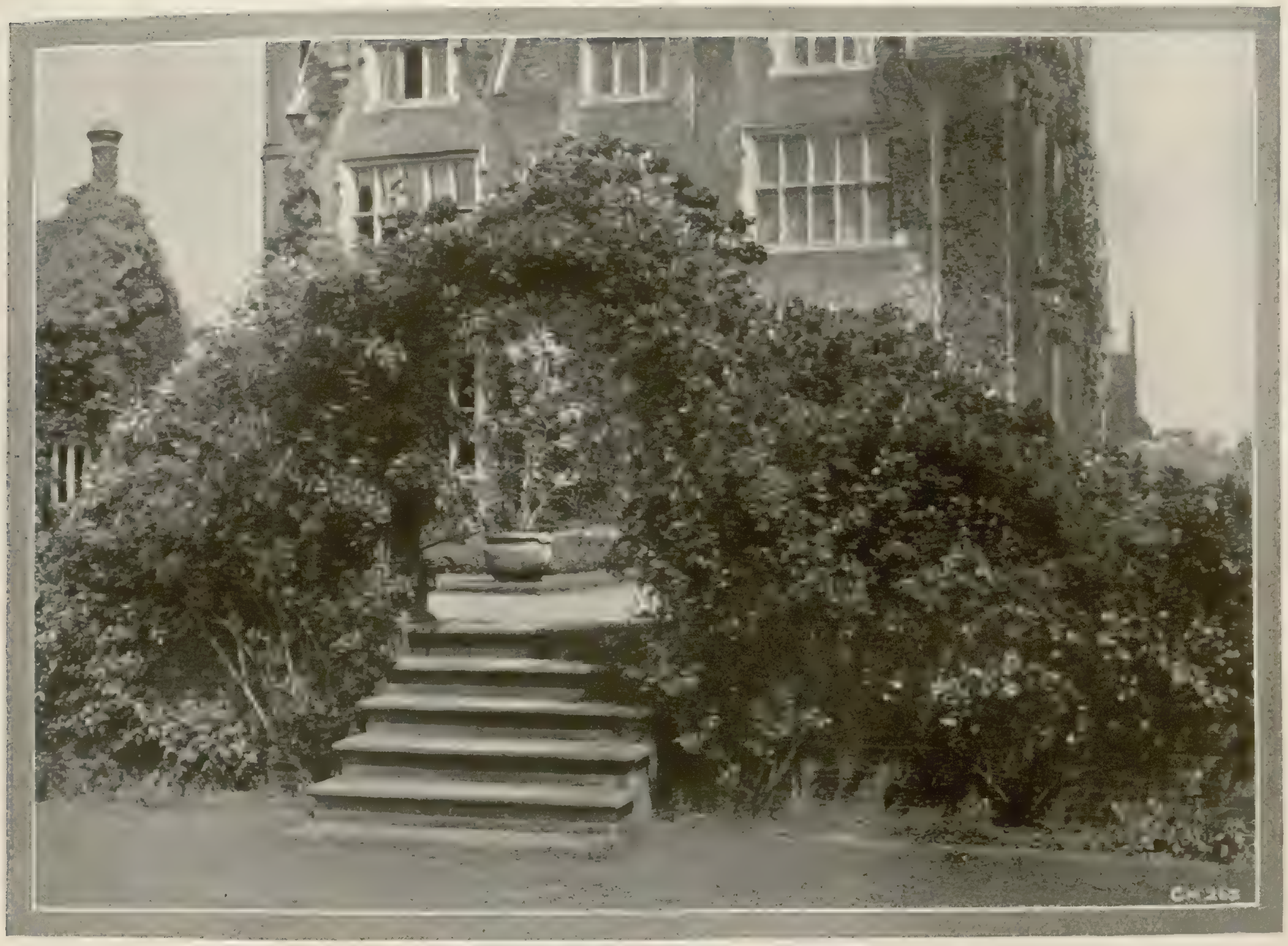
There are many more, and all around us buds of flower and leaf bring that message which is ever full of joy to the gardener's heart.

"Summer is cumen in,
Loud sing cuckoo;
Groweth seed,
And bloweth mead,
And springeth the weed anew—
Sing cuckoo!"

S. ARNOTT.

Forced Bulbs and Cold Frames.—Where many bulbs are forced and then are saved for beautifying the wild garden, they are apt to be a bit of a nuisance just now when frame room is precious; and yet one cannot turn them out direct into the cold world after pampering them up in the greenhouse. An excellent way of economising space in the frames is to turn all the bulbs out of their pots, and, starting at one end of a frame, pack them in as closely as possible giving the soil a good squeeze to fill up chinks. In this way they are quite safe till planting out time arrives, and can be easily watered with a rosed three-gallon can to enable them to finish their growth.—E. J. K.

Galanthus nivalis poculiformis.—A delightful little snowdrop bears this long name, and it must be said that it is worthy of a more attractive one, so beautiful is it in its own simple way. It comes from Galanthus nivalis, the common snowdrop, and has been found in more than one place among other snowdrops. The first one recorded was from that home of snowdrops, Dunrobin Castle, Sutherlandshire, where Mr. D. Melville found it growing. It has also been discovered in a garden near Ayr, and in one or two other places this attractive little flower has been noticed. It is a beautiful snowdrop, owing much of its charm to the fact that the inner segments are of about the same length as the outer, while the green markings are generally absent, giving the blossom a greater purity of appearance. Combined with the formation of the inner petals the effect is charming indeed. Seedlings do not often come true, and, as the plant does not appear to have a very strong constitution, it is not likely to become plentiful.—S. A.



MAGNIFICENT ARCH OF CRIMSON RAMBLER ROSE, DUNSTON HALL.

SOME NORWICH GARDENS.—II.

Dunston Hall.

Some three or four miles to the south of Norwich is Dunston Hall, the charming seat of G. F. Buxton, Esq., which is equally remarkable for its splendid position and attractive gardens. The route from Norwich is much the same as that for Shotesham Park, for some part of the distance, and is, therefore, remarkable for its sylvan beauty. The handsome modern mansion is happily placed on the higher part of the park, and from the broad terrace on which it stands views wide in extent and of great beauty are obtained.

The mansion is approached by a drive flanked by a rather large selection of the finest conifers, which constitute a feature at once interesting and beautiful. The trees, while possessing much of the vigour of youth, are sufficiently advanced to show their distinctive characteristics, and afford the visitor a foretaste of the many charms the gardens possess. There are other fine coniferous trees in other parts of the extensive pleasure ground, and one of the most interesting is the remarkably handsome pine which forms a conspicuous object on the lawn, and is illustrated herewith. Of much interest also are the many beautiful deciduous trees and shrubs that have a place in these gardens, and show by their thriving appearance that the conditions that obtain are most conducive to their welfare.

One of the most charming features of the Dunston Hall gardens is that formed by the roses, which are evidently highly appreciated by Mr. and Mrs. Buxton, and skilfully cultivated by Mr. E. Hewer, the head gardener. The magnificent arch of Crimson Rambler, which spans the entrance to the terrace from the south, was aglow with colour when the photograph was taken, but as the tone values of flowers and foliage is much the same in monochrome it is impossible to differentiate the blossoms from the leaves in the reproduction, excellent as it unquestionably is. The garden tea house, with its clustering roses, is another example of the successful use of rambling varieties, and the structure is an object of considerable beauty in the general scheme, while affording cool, refreshing shade to those who take advantage of the shelter it affords from the summer sun. Contiguous to the kitchen garden is an admirably constructed pergola, of considerable length, clothed exclusively with white roses and clematis, and the beds and borders near thereto are also devoted to white flowers. Within the kitchen garden are many roses, and conspicuous among them was a tall pillar of Helene, one of the finest of the pink ramblers, being strong in growth and free in blooming. Fortune's Yellow rose is also grown with much success. In the kitchen garden also are spacious borders devoted to herbaceous plants, and in these the finest of the kinds are represented, and in such manner as to show their respective characteristics, and to produce a rich and beautiful display of colour.

The glass department is remarkable for its extent and the skill with which the several subjects are grown, and in the interest of our readers should receive a fuller notice than it is now possible to give it. Especially interesting was the big orchard house, in which was a fine crop of The Czar plum and other fruits, and having regard to the aggregate quantity of fruit that is obtained from it there is no difficulty in recognising the great value of such structures in gardens where a large demand for fruit has to be met. In the peach houses were fine crops of peaches and nectarines, and in the vineries there were crops of both mid-season and late grapes, that, by reason of their weight and finish, testified in no uncertain manner to the skill that had been brought to bear upon them.

Crown Point.

This is another of the many good gardens in the neighbourhood of Norwich, and is the largest garden near the City, adjoining the village of Trowse. But a stranger in the garden or park at Crown Point would scarcely imagine the proximity of a great town, as only here and there between the trees can glimpses be seen of the cathedral and the church spires beyond. The place is finely situated on the highest point about Norwich, and from Trowse one sees it as a beautifully wooded hill, with the great mansion embowered in leafage. The estate extends about two miles in an easterly direction on the plateau, but citywards the park descends in a sharp slope to the river Yare, the whole estate being of the characteristic Norfolk scenery, with woods and arable land, where the partridge and pheasant are as important as the chief industry of farming.

Crown Point itself must always have been an important residential place, as one may gather from the extent of ornamental park land, with an abundance of tree growth of several generations. The house itself is a comparatively modern building of some forty or fifty years. It is a stately mansion of red brick and stone of an undecided style of architecture, but with a distinct feeling of Jacobean treatment in its gables and general features. After the house was built it became derelict for many years, and a few years ago it was acquired by Mr. Russell Colman, who made extensive alterations to the house under the direction of Mr. Boardman, the well-known Norwich architect, and is now one of the finest and most up-to-date mansion houses in the country. The grounds also have undergone considerable change, and are still in the transition stage of being remodelled under the direction of Mr. W. Goldring, of Kew. As the place is not finished we shall defer a fuller account of this remarkable garden until a later date, when we are able to show illustrations of the noteworthy features.

So far as the completed work extends, there are stately terraces enclosed by walls ornamented by the beautiful "lacework" pattern of open brickwork peculiar to the neighbourhood of Norwich, as these bricks are made in the famous Costessey brickfields. The same style of ornamental walls are in many Norfolk gardens, such as Blickling, Costessey, and also at Hatfield House, in Hertfordshire and other old places.

GARDEN TEA HOUSE, WITH RAMBLING ROSES, DUNSTON HALL.

Within the terrace walls is a large sunk formal garden, planted with roses chiefly, and the fine examples of Dutch topiary work give character to the enclosure.

Beyond the terrace is a broad grass avenue lined with horse chestnuts, and on each side are the spacious playing lawns for croquet and tennis, which, owing to the nature of the original surface, are in sunk square panels, the surrounding banks being about eighteen inches high, conveniently high for sitting. This unusual feature harmonises well with the scheme of the straight lines leading from the terrace. Beyond these playing lawns formality ceases, and all is irregular, following the natural contour of the ground. The planting is arranged in bold masses of one or only a few kinds of plants, and this style of bold grouping is seen particularly in The Dell, a natural depression, with the steep sloping banks planted with masses of rhododendrons, azaleas, tree pæonies, and other flowering shrubs. This dell has been just planted, but we can imagine the beautiful future effect of this part of the grounds, and even now there is an absence of newness, because of the many fine ornamental trees of forty years' growth surrounding it.

Beyond the dell is an unusual feature, this being an open-air theatre for pastoral plays, a replica, we understand, of one in a famous Italian garden. The stage, and the sloping auditorium, are symmetrically treated, and the whole is surrounded with evergreen clipped hedges. Around the theatre is an open part studded with trees, where Mrs. Colman has her broad effects of spring colour from bulbs, primroses, anemones, and other early spring things, and this is carried out in the same spacious way as the other parts. Then comes the park, in which the picturesque herd of Highland cattle range as happy as in their Scottish home.

On the east side of the house is a huge conservatory, one of the finest we have seen adjoining a residence. Its great height affords opportunity for draping the columns and roof with the finest greenhouse climbers, and such as Solanum jasminoides, tacsonias, and variegated cobæas are twenty or thirty feet in height. The back wall is covered with maidenhair ferns and Asparagus plumosus, among which intertwine in summer the lovely turquoise-blue of the Ipomæa purpureo-cærulea. The floor space, of marble, is unencumbered by beds or stages, as the place is used as a lounge, but here and there are large groups of pot plants, changed as they go out of bloom, surrounding tall palms and tree ferns.

Beyond the conservatory is the spring garden, enclosed on one side by yew hedges and ivy-clad wall, a pergola, and rocky bank. This garden is chiefly planted with early-flowering shrubs of the choicer kinds that come into bloom early. Masses of cydonias will now soon give a brightness, followed by azaleas and heaths.

A walk leading from the spring garden, past a spacious water pool, and through a newly-constructed pergola, with massive brick piers, brings us to the kitchen garden, in area of about two acres, enclosed by fruit-tree walls on two sides, on another side by an open ornamental creeper-clad fence, with piers. The other side will eventually be taken up by the glass houses, half of which are completed. The whole range will be about eighty yards long, and throughout the length there will be a wide corridor connecting the structures, which comprise the usual vineries, peach houses, and plant houses. These latter are span-roofed structures, and stand at right angles to the back wall, so as to command the maximum of sun and air, and are, moreover, not too large or high, being just the kind of house a gardener can grow any kind of stove or greenhouse plants so as to do him justice.

Outside the kitchen garden is a broad herbaceous plant border a hundred yards long, with masses of roses and irises, and rose hedges dividing it from the orchard.

The peculiar feature about Crown Point is that the garden is planted chiefly for spring and early summer effects, for after these are over there is the annual migration to Mr. Colman's beautiful place, Corton, on the coast, which is planted for late summer and autumn effects.

The thorough way that everything in connection with the garden has been carried out, the consideration given to the garden buildings, the gardener's house, the comfortable bothy, and other matters mark this as one of the best-appointed gardens we have seen, and Mr. Watson, the gardener, has reason to appreciate, as he does, the satisfaction of having to deal with up-to-date appliances for cultivation.

Town Close House.

As Town Close House, the residence of E. T. Boardman, Esq., is within a very short distance of the city boundary, the visitor will not expect to find gardens and pleasure grounds with so large an area as those of big seats in country districts. He may err on the other side in supposing that the gardens would be considerably smaller than is really the case, and he must certainly possess remarkable powers of imagination who is able to fully anticipate the many charms they possess. What the area is we are unable to say, but there is a wide expanse of finely-kept turf, a delightful rose garden, an extensive flower garden, and many fine trees.

If the gardens are less than those of some of the big country seats, less than those of Mr. Boardman's residence in the country, at How Hill, they are so distinct in their several features, so surpassingly beautiful, and, moreover, so high in their keeping, that it would be impossible to find gardens from which a greater amount of interest and enjoyment could be obtained. The wide-spreading lawn extends round three sides of the mansion, and, as will be seen from a glance at the illustrations, contains a considerable number of splendidly developed trees. The green and purple-leaved beeches are particularly fine, but the most notable example of arborescent vegetation is the magnificent Snowdrop Tree (Halesia tetraptera), of Virginia, which is exquisitely beautiful when bearing its precious burden of pure white snow-drop-like flowers. This halesia is historic, as it is said to be, and no doubt is, the finest tree of the species in Europe. At three feet from the ground it has a girth of six feet seven inches; the total spread of branches in one direction is sixty-six feet, and in another sixty-one feet. There is no doubt the spread would have been a uniform distance of from thirty to thirty-three feet from the trunk had not a tulip tree overshadowed one side. The age of the tree is not exactly known, but the following note about it is an extract from Grigor's book called "The Eastern Arboretum," published in 1840. Grigor states that "This Snowdrop Tree is twenty-nine feet high, with a trunk four feet in circumference, and the diameter of its spread of branches is thirty-three feet. I think it is the largest specimen of Snowdrop Tree in England. It stands in the grounds of a villa called the Town Close. Beside it stands a Tulip Tree six and a-half feet in circumference and fifty-feet high." To show that Town Close was remarkable at the date of Grigor's account of it, we would mention that he goes on to say in florid language, "The great charm of this heavenly retreat, is a shaded walk of beech, a verdant arcade ninety yards in length, forming a promenade almost unequalled except in fiction, and looks like a relic of fairy land." Crocuses and other spring-flowering subjects thrive in the grass, and as they were in the first place planted in large numbers, the effect produced when the lawn is bedecked with their flowers is surpassingly beautiful.

On the far side of the lawn is a geometric flower garden, of which an illustration is herewith given, and the group of beds has for a centre-piece the finely developed weeping rose illustrated in the GARDENERS' MAGAZINE of March 7. Some distance to the left is the rose garden, which is enclosed with shrubs of low growth to prevent undue prominence when the roses are not in bloom, and in the centre is an elegant sun-dial. The beds are filled with dwarf bushes of the several sections, and round the boundary are some of the finest of the rambling varieties that have attained to a high degree of development. The border of hardy herbaceous plants contributes its attractions to the garden, and affords plentiful supplies of flowers throughout the season. One of the most charming features of the garden is perhaps the terrace, supported by a low wall, herewith illustrated. The face of the wall is clothed with cotoneasters and other shrubs of low growth; at the foot is a narrow border, which last summer was filled with ivy-leaf pelargoniums bearing rose-pink flowers; along the garden side of the terrace is a narrow border filled with dwarf roses, and over the wall on the other side rambling roses fling their flower-laden branches in great profusion. A more charming effect than is produced by this happy combination it would be difficult to imagine.

AUSTRIAN PINE (PINUS LARICIO) IN TERRACE GARDEN, DUNSTON HALL.

On the other side of the wall is the kitchen garden, which, it would be superfluous to say, is admirably managed, but it may be said that there are some charming arches of roses, one of the most attractive at the time when we had the pleasure of visiting the gardens being that over which ~~the Crimson and Dundee Ramblers~~ were striving for mastery in flower production.

Ashwellthorpe Hall.

Ashwellthorpe Hall, the country residence of the Baroness Berners, is an Elizabethan mansion that has been somewhat modernised, and is situate in a retired situation some nine miles to the south-west of Norwich. Partly surrounded by a moat, and embosomed in many stately trees, this ancient seat of the Thorpe, Bourchier, Knyvett, and Berners families takes us back many centuries, indeed to the times when statements as to miraculous occurrences were accepted without question by the popular mind. In this case, according to the legendary ballad which is given at length by Blomfield in his history of Norfolk, the hall was the scene of a remarkable occurrence during the life of Sir Thomas Knyvett, who was "much beloved for his hospitality and good nature, and died in 1616." A stranger, according to tradition, presented himself at Ashwellthorpe at Christmas, and after showing the company an acorn, set it down in the middle of the hall. Immediately an oak tree sprung up, and grew so rapidly that the hall was soon filled by its branches. A crop of acorns quickly followed, and these having fell on the floor, two men, "stout and strong," came in and cut it down. The felled tree could not be moved until a pair of goslings appeared, and drew it away without leaving a trace of even acorns or chips behind. It has been suggested by some of the authorities that the tradition originated from a magic lantern display, but this could hardly have been the case, as the magic lantern was not invented until the seventeenth century was well advanced. It could, of course, have been due to an optical illusion, for lenses and prisms were made in the fourteenth century, there is room for doubt upon this point.

The gardens of Ashwellthorpe Hall, although having a considerable area, are remarkable more for their beauty and interest than for their extent. To visit them once is to wish to see them again, and the impression that remains after a walk round them in company with Mr. T. B. Field is the possibility of obtaining abiding and delightful effects by comparatively simple means when good taste and judgment are allowed to pursue their proper course. There is no straining after startling effect, but a quiet order and beauty has been established, telling its own story of refined taste for what is best in English gardening.

The grounds are entered by a sheltered drive, where in spring a wealth of woodland flowers have their home. The place is a veritable paradise for birds, and many of the most interesting of feathered songsters have their home within the grounds. To the right is a retired rose garden, in which may be found some of the most beautiful of the species and many of the finest varieties in the best possible condition, and yielding a wealth of bloom during the summer months. Passing to the rear of the house, and crossing the moat, the visitor enters the spacious walled gardens, and it is here that many characteristic features of Ashwellthorpe are in evidence. In addition to the usual crops of vegetables, which bear the impress of the skilled cultivator, are many interesting plants that have been gathered by Mr. Field from various quarters. The colonies of hardy cypripediums and Christmas roses are especially remarkble for their size and the vigour of the plants, and constitute features that appeal strongly to those who derive additional enjoyment from successfully cultivated examples of plants not commonly met with.

The rose, however, has pride of place at Ashwellthorpe, and very liberally does it contribute to its many attractions. The soil and climatic conditions are, as in other gardens round Norwich, favourable to the growth of roses, and under the skilful management of Mr. Field they attain to a high degree of development. Magnificent specimens of Fortune's Yellow, Crimson Rambler, Gardenia, and other climbers may be seen on the walls, arches, and other forms of support, while in beds and borders are dwarfs and standards in so rude a state of health as to enable them to produce an abundance of flowers. Narcissi contribute materially to the attractions of the gardens in spring, for in addition to those which have a place in formal beds and borders, hosts have a place in the home meadows stretching out beyond the immediate garden. Violets in the finer varieties are largely and especially well grown, and yield a wealth of their fragrant blossoms throughout the season.

To reach the front of the mansion one passes along a grass walk of generous width, bounded on the far side by a hedge of purple beech, so remarkable as to suggest that it is the finest hedge of its kind in the country. The length is 130 yards, the height seven feet, and the keeping of the best. Hereabouts are borders of choice flowering trees and shrubs, and fine specimens of many of the best of the ornamental trees, and borders filled to repletion with the best of the hardy herbaceous plants, in which are groups of stately irises, pæonies, etc., while lilies and foxgloves make a fine feature on the fringe of the woods from the bold simplicity of their grouping.

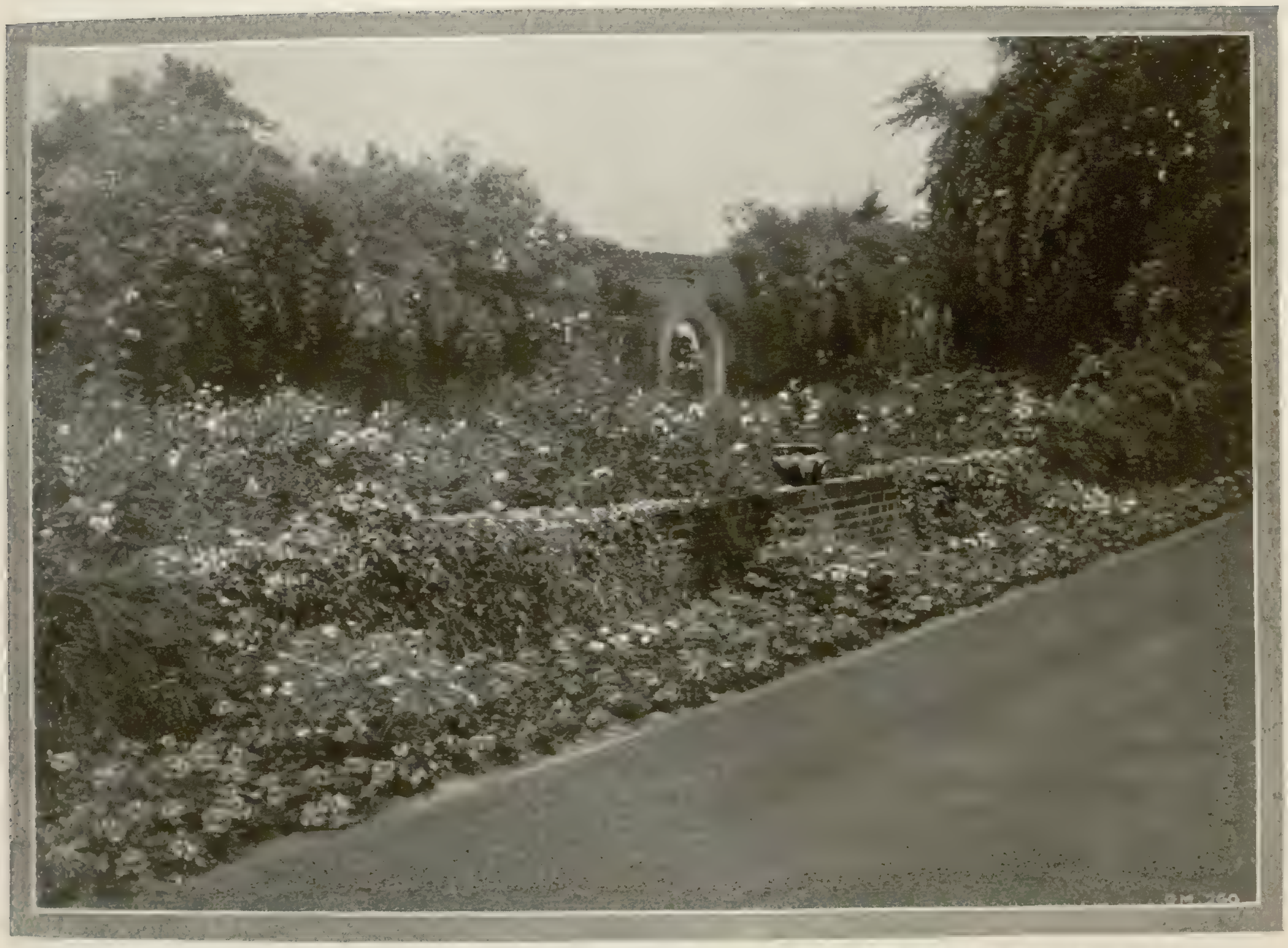
It should be added that, apart from the splendid work he has accomplished in the beautiful gardens under his charge, Mr. Field has rendered service of immense value in the district by his sympathy with and advice on horticultural education. He is acting vice-president of the East Anglian Horticultural Club, and a member of the committee of the Norwich Museum Association, which is doing useful work in connection with the extension of a knowledge of economic entomolgy.

Oakland House, Cringleford.

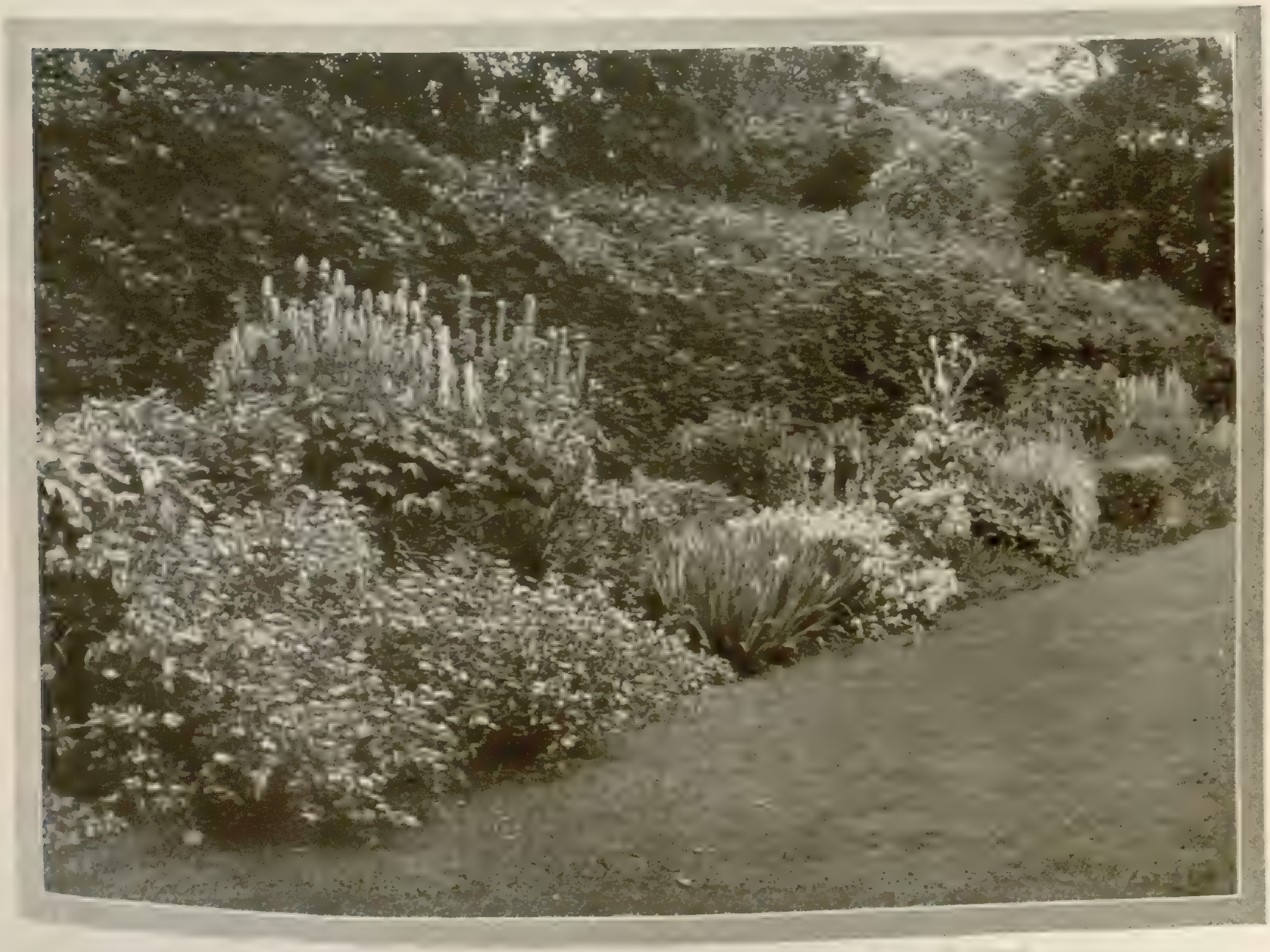
Within a short distance of the quaint village of Cringleford, and some three miles distant from Norwich, is Oakland House, the residence of F. H. Harmer, Esq., who a few years since was president of the Norfolk and Norwich Horticultural Society, and has in various other ways given practical proof of his great interest in all that relates to the advancement of horticulture. The house occupies a well-chosen position on high ground, and commands views of great beauty over the valley of the river Yare, which flows through the estate and along the southern boundary of the pleasure grounds, and contributes its quota to the manifold charms which the garden possesses.

The grounds are extensive, pleasantly undulating, richly furnished with trees and shrubs, and freely embellished with hardy and other flowering plants and roses, all of which grow in a manner that proves proper provisions were made for them previous to planting, and that they have had skilled attention since they became established. On the walk that proceeds from the house and through the grounds in a southerly direction there is, on one side, a long border of considerable breadth devoted to China roses, and on the other a border of herbaceous plants, which here, as elsewhere, are regarded as essential to the proper furnishing of the garden. The roses show by their ample foliage and abundance of flowers that the conditions under which they have been placed are favourable to their full development, and when we had the pleasure of visiting Oakland House they suggested they might with advantage be more freely

GEOMETRIC FLOWER GARDEN, TOWN CLOSE HOUSE.



TERRACE WITH DWARF AND RAMBLING ROSES, AND IVY-LEAF PELARGONIUMS, TOWN CLOSE HOUSE.



BORDER OF HARDY PERENNIALS, TOWN CLOSE HOUSE.

utilised in furnishing pleasure grounds than as yet has been the case. From early in the summer until late in the autumn they bloom freely and continuously, and if the selection is carefully made they afford a considerable range of colour. At the back of the roses is a long belt of shrubs, comprising many of the finest kinds available for the planter, and this, while contributing materially to the general effect, possesses much that is of interest, and affords many useful object lessons.

The dressed grounds, with their beds and borders of roses and flowering plants, their fine groups of shrubs and splendidly developed choice trees, are spacious and rich in interest and beauty; but they are by no means the only attractions the gardens possess. Mr. Harmer, who takes a keen interest in his charming gardens, and is well acquainted with the many and diverse forms of vegetation they contain, has devoted considerable attention to both rock and water gardening. In developing these features he has shown a full appreciation of environment, and as the result the rockery and the water garden are both placed amid suitable surroundings. To reach the alpine garden one has to cross the meadow to the right of the herbaceous border to a large enclosure bordering on a wood, and on passing the gateway, and having a glance at the plants that clothe the ledges and slopes, it might be readily imagined that the garden had been designed and planted by Nature, instead of being the work of man. Naturally, the area had an irregular surface, with sloping banks, and in its conversion into a home for alpines an endeavour was evidently made, and with much success, to conceal the work that had been done in providing suitable sites for the plants. It would be interesting to give the names of the noteworthy kinds that are flourishing on the slopes and ledges, and in the hollows, but they would, by reason of their numbers, require too much space to admit of this being done.

The wild garden is not less interesting and attractive in its way than is that devoted to rock or alpine plants, and is noteworthy for the judgment shown in taking advantage of a site specially adapted to the requirements of the plants of most value for this form of gardening. Some distance from the rock garden, and so low as to be nearly on a level with the river, is a large wood, in which are numerous canals that are at all times filled with water. There are also numerous green drives in the wood, and in the open spaces that existed, or have been made alongside the drives and elsewhere, moisture-loving plants of various kinds have been planted. The canals are fringed with ferns and flowering plants in delightful profusion, and alongside the green glades are bold and handsome groups of various kinds. Especially noteworthy are those in which the gaily-coloured swamp lily is conspicuous and the great masses of the ostrich fern which is seldom seen in so luxuriant a condition.

Contiguous to the wood, but quite beyond the influence of the shade of the trees, is the water lily canal, which is quite unique in its way. This is simply a backwater from the river, and in threading its way across the open meadow it affords the best possible opportunity for the cultivation of a collection of the finest of the nymphæas, and this has been taken full advantage of by Mr. Harmer and his highly skilful gardener, Mr. Shoesmith.

Boyland Hall.

Boyland Hall, the charming residence of Colonel Irby, is a large and handsome mansion, which, with its extensive pleasure grounds, is situate in a wide-spreading park, and is about one and a-half miles north-west of the village of Morningthorpe, and about ten miles south of Norwich. The mansion is in the Elizabethan style, and was built in the year 1551, and is surrounded by extensive pleasure grounds, remarkable for the width of turf and for the well-planned and richly-furnished borders and groups of shrubs. From the garden front of the mansion the wide expanse of close-shaven turf stretches away into the distance, and to the eye suggests space well-nigh illimitable. To the right and left of this magnificent lawn are fine belts of trees, in which are oaks and beeches of exceptional magnitude, and in suitable positions are groups of rhododendrons in the best of health that give, in their season of flowering, a wealth of colour, and at all times contribute liberally to the charm of the scenery of which they form part. Here also are numerous flower beds of large size, and invariably furnished with much taste.

The dominant feature of the flower garden is unquestionably formed by the admirably stocked borders of hardy herbaceous plants, and the profusion of garden roses. These latter have been planted in large numbers, and, having their cultural requirements attended to with exceptional skill, they grow with great vigour and produce finely developed blooms in the most profuse manner. A border that extends from the gardener's cottage to the kitchen garden, about one-third of a mile distant, is wholly devoted to hardy perennials of the choicest description and rambling roses, and when it is said that both classes of subjects are grown to a high degree of perfection it will not be difficult for the reader to realise the delightful effects that are produced in the course of the summer as the various subjects yield of their wealth of floral beauty.

In the fine old kitchen garden of Boyland Hall there is much to interest, for

BORDERS OF CHINA ROSES AND HARDY HERBACEOUS PLANTS, OAKLAND HOUSE.

Mr. Andrew, the head gardener, is fully acquainted with all that tends to good results in the cultivation of both fruits and vegetables. Here we find large breadths of vegetables in general use in the finest possible condition, and the enclosing walls clothed with finely-grown fruit trees of all the most useful kinds. The kitchen garden is not wholly given up to vegetables, for on either side of the main walk, by which the garden is intersected, are broad borders of hardy herbaceous plants that are not less flourishing than are those in the ornamental grounds. Some of the side borders also are devoted to hardy flowers, and in the kitchen garden also carnations are grown extensively, and with much success. The plant and fruit houses are numerous and well equipped, and, as is the case in other departments, afford unmistakable evidence of cultural skill and high keeping.

It can hardly fail to be of interest to mention that on a plot of land adjoining the kitchen garden potatoes for the use of the house have been grown without intermission for forty years, and with the best results. Indeed, Mr. Andrew states that the crop lifted last year was quite equal to the first crop taken up forty years ago. As the continuous cultivation of potatoes on the same ground for any length of time is opposed to the views that obtain amongst the most successful cultivators, the principal points in Mr. Andrew's practice can hardly fail to be of interest. The ground is deeply trenched every second year, and the refuse from the lawn and garden is burnt, and the ashes and charred material scattered over the surface previous to digging or trenching.

Both Colonel and Mrs. Irby are very fond of their delightful gardens, and the splendid success in their management is largely due to the encouragement received by Mr. Andrew from his employers.

George Gordon.

THE VALUE OF MULCHING TO VEGETABLE CROPS.

During the summer months, in the majority of private gardens, when growth is very active, there is a great strain upon the gardener, and his too often inadequate staff. The question has to be considered by him as to how he can use his men to the best possible advantage. If anything can be done to reduce labour and allay anxiety it is of the utmost importance, as each hour saved can be given to pressing matters that present themselves each day.

In the matter of mulching growing crops, as in most things, common sense has to be called in by taking into consideration the position of the garden and the nature of its soil. Where it stands high, and the soil is of a light character, much time can be saved in watering by giving a timely mulching to many plants, such as the moisture-loving crops of peas, celery, dwarf beans, spinach, lettuce, etc., as it conserves the moisture in the soil, and creates a healthy surface root action that is of the fullest value in promoting a vigorous natural growth. In this class of land, should the weather become hot and dry, it has a steadying effect upon the plants, and to a great extent prevents premature maturity. When watering is resorted to it should be thorough and the water reach well down in the soil. The mulch will then check evaporation, and retain the moisture over as long a time as possible.

The material used should also depend upon the nature of the ground. If light, a dressing of about two inches of well-decayed manure would be of the greatest benefit. I have been particularly struck with the value of peat moss litter as a top-dressing to crops; it seems to absorb and retain manurial properties to a great degree, and where applied it has a marked effect; the only objection is that if used to any great extent on light soil, it has a tendency to lighten it more. On heavy ground it is a first-class material for mulching, as well as being a valuable fertiliser without the above drawback. Grass from the lawn mowings acts beneficially as a surface dressing during dry weather, but, of course, has little manurial value. The short grass is quickly applied, and quite worth using.

With low-lying and adhesive soils there is not the need for such an early application of mulching. This kind of ground will be of lower temperature, and more retentive of moisture, so that frequent surface movement by lightly hoeing or forking will be of more advantage until the sun has stronger power, when a mulch should be applied as in the case of the lighter soils. The labour it will entail will be abundantly repaid if the rainfall is light, and the growth of the crop will be of a more satisfactory nature. Strawy manure as it is received from the stables is suitable for the larger and rougher kinds of vegetables if there is a scarcity of other materials, but too much of this does not add to the good appearance of the garden, and on this account it should be used with judgment in the most frequented parts.

For most soils my experience is that nothing surpasses a top-dressing of good cow and horse manure that has been well rotted down and not allowed to heat unduly. Where horses are bedded down with either bracken fern or sawdust I always avoid using the manure for kitchen garden purposes, as I find the roots, in many cases, where they come into contact with the fern and sawdust in the soil, die back, and in others they show an unhealthy colour. I cannot give the reason for this effect, but the facts are as they have appeared.

C. Flack.

Cholmondely Castle Gardens.

HORTICULTURE AND SMALL HOLDINGS.

What effect will the establishment of small holdings have on the horticulture of the country? To this question time alone can supply the answer, and at the present moment opinions are varied regarding the success of the movement. Some people say that it is all a mere fad of a Cabinet Minister, and is sure to fail, while others can see, or think they can see, in small holdings a means of getting the people back to the land, and keeping them there. With these opposite opinions this article has nothing to do, but the future of small holdings is a fitting subject for discussion in the Gardeners' Magazine, considering that horticulture must in many districts be closely associated with them. If I may be allowed to digress for a moment, I fail to see why such a line of distinction should exist between the sister crafts of agriculture and horticulture. The interests of gardener and farmer are in many ways identical, and though their methods differ they are governed by the same principles. To say which was the hardest craft to master might lead to discussion, but the fact

WATER LILY CANAL, OAKLAND HOUSE.

remains that there are numerous cases of gardeners developing into and making good farmers, but the instances in which farmers are also good gardeners are by no means common. Be this as it may, however, it is well within the bounds of probability that small holdings will be a means of knitting the occupations of gardener and farmer more closely together than they have ever been before.

There can be no two opinions about one thing, i.e., the demand for small holdings, and County Council committees are now busy arranging meetings and making inquiries into the applications of would-be small holders. A year or more must necessarily elapse before successful applicants can be put on the land, because there are many preliminaries to be settled, but, in the meantime, the task of the authorities who have to administer the Act is not altogether an enviable one for various reasons. In the first place, would-be small holders are composed of all sorts and conditions of men, and the thing is to select the right ones. There is no question of back to the land at present, because there are more applicants for small holdings already on the land than will get their needs supplied, and in some cases the kindest thing that the authorities can do is to refuse.

Most of us remember the establishment of Parish and District Councils, when power was given to these bodies to acquire land for allotments. The demand for allotments then was something like that for small holdings now, but allotments did not keep people on the land. And in a few villages, alas! they are now veritable white elephants, being derelict and uncultivated, or merged again into the farm from whence they came. Why this failure? In many cases because, in the first place, the stability and qualifications of would-be allotment holders were not looked into; plots were let to any Tom, Dick, or Harry who cared to apply for them, and, after starting with a big flourish of trumpets, they found that allotment culture meant hard work, back-aching any sweat-losing, and they fainted by the way when the novelty of the thing had worn off.

With small holdings the situation is more serious, there is a great deal more at stake, and the responsibility of weeding out the applicants, selecting the right men, and rejecting the undesirables is great. Some would-be small holders have peculiar ideas about the acquirement of land, and have set their hearts on the best bits in the occupation of someone else, without considering the matter from the point of view of the present occupier, while one enthusiast told me the other day that he wished the authorities would hurry up, or he would be too late to put in the crops he intended to grow this season. Yes, indeed, there is a good deal of human nature to be observed amongst the applicants for small holdings.

Market gardening, vegetable and flower culture, naturally suggest themselves as one of the branches that the future small holder will take up, but market gardening is not going to answer everywhere. It is a business that has to be learnt, the competition in it is already keen, there are the products of the foreigner to contend with, and, lastly, to make it pay one must grow the best produce. There are districts in which market gardening presents possibilities for the small holder, and in those districts small holders already exist in fairly large numbers. Take that favoured locality known as the Evesham Vale. It is already a land of small holders, who work their little tenements and have built up within recent years an industry of size and importance. In short, Nature must be allowed to indicate the districts in which horticulture can be successfully included in the arrangements of the small holder, and there must also be considered the proximity to market, and means of disposing of produce. To state a case—I know a village near to a big town where strawberries grow like the proverbial willow. They are a standing crop in the cottage gardens and allotments, and the working people do well out of them. There is a big demand for small holdings in this parish, and more than one who craves for a few acres of land has strawberries in his mind. Quite right. It has been proved that this fruit will grow here as it does in few places, there is a demand, and a market but a few miles away, and it will surprise me if the establishment of small holdings does not lead to a development of strawberry culture in this particular district.

In Kent, I am told, there is a big demand for small holdings, and this is a county in which agriculture and horticulture are already closely allied in farming. We hear of seasons of glut and low prices, but still official figures show that fruit culture is increasing, and it will increase more when small holdings become an accomplished fact. There can be no doubt, I think, that the new Act will have a marked effect on the horticulture of the country, and it is an open question whether this branch does not offer greater possibilities than agriculture

The thing is to have the right men. There are plenty of them, if they want to be small holders, for every village possesses sturdy fellows, who are the backbone of the country, men who are gardeners because Nature fashioned them that way, and they demonstrate their skill by the manner in which they manage their gardens and allotments, and the produce they get from the above. They are real workers, these men, and one never sees them loafing about or supporting street corners. They have other things to do, are supporters of local horticultural societies, and one sees them staging produce of which they have reason to be justly proud at the village flower show. Many men of this stamp are doubtless contented with their lot, and do not aspire to be small holders, but others crave for a bit more land, and see themselves in the future small independent proprietors. It is men of this type who should be encouraged, for in their hands, and given reasonable opportunities, small holdings will succeed. In fact, if men like the above do not, and cannot, make small holdings pay, and become a blessing to the country, the case is hopeless.

G. H. H.

Primula Forbesi. — This pretty little primula is a native of China. It is a charming greenhouse plant, and one deserving of wider cultivation. From seedlings raised in September and pricked off into pans of loam, leaf-mould, sand, and a little well-rotted cow manure, and kept cool, the plants will soon begin to show their lilac flowers, which are borne on long stems, rising fifteen or twenty inches above the little plant. These spikes may be arranged in vases, with some of the lighter grasses, and they then look very pleasing. Some prefer pot culture, but if plants are placed three or four inches apart in pans the effect is more pleasing, and the plants continue to bloom for a long period. Primula Forbesi is best treated as an annual. —W. D. P.

PROFITABLE FRUIT GROWING for Cottagers and Small Holders of Land.—By John Wright, V.M.H. A Gold Medal Essay, written for the Worshipful Company of Fruiterers. Fully illustrated. Price 1s., by post 1s. 3d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NATURAL GUANO DEPOSITS

It is a matter of general knowledge that many of the deposits of natural guano are being rapidly depleted, and others which still supply considerable quantities of this useful stimulant and plant food, are producing supplies that fall far short of what really good guano should be, with the result that such samples have to be augmented with ammonia salts, etc., in order to bring it up to a saleable quality.

The value of guano is so well known to most readers that I need not dwell upon its utility for garden and greenhouse crops; suffice it to say, that as a summer stimulant and plant food a good sample of natural guano will always be a first-rate gardener's help.

In view of the extreme shortage of guano, the last few years have seen an immense quantity of artificial products placed upon the market as a substitute for it. These manures are of varied quality, but it may be said that the substitutes have filled the breach well, and have provided cultivators with excellent fertilising compounds.

A New Source.

Welcome, indeed, is the news that a new source is to be opened up, to give its wealth of natural guano to a waiting world. The islands in the South Atlantic, known as Gough Island Nightingale Island, and Inaccessible Island, belonging to the Tristan da Cunha group, have been licensed by the Government to a company formed expressly for working the guano deposits.

But it is the question of guano which claims our interest. The deposits were noted by the famous "Challenger Expedition," and the naturalists who accompanied the expedition estimated that the "penguin rookery" of Nightingale Island comprised at least four hundred thousand birds, and recent expert observers have stated that this estimate probably falls far short of the mark. The wealth on this island alone is apparent from the statement that the guano varies from four to eight feet in thickness, and runs almost down to the water's edge. A moderate computation places this stretch of guano at one million tons.

The deposits on Inaccessible Island are not so deep, varying from one to three feet in thickness, but the total will come up to a high figure. The same may be said of Gough Island, which is by far the largest of the three.

The Penguins.

It is to be hoped that (notwithstanding the immense quantities of the guano) the penguins will be interefered with as little as possible, for the future supplies depend upon the presence of large colonies of these stolid, but useful sea birds, and the Government, when receiving their "royalties" upon the guano, should remember the birds which are the "bringers of wealth," and ensure their protection as far as possible.

The gardener working among his fruits and flowers, assisting Nature in the production of high-class specimens with this natural guano, will surely feel somewhat grateful to the penguins for providing such a concentrated, effective manure. The uses to which it can be put are innumerable, the "catch crops" of the kitchen garden are especially benefited by its presence. Greenhouse fruits, such as tomatoes, forced strawberries, etc., etc., will give good results from occasional dressings, while its merits as a developer of floral beauty is known to all.

P. S. Hayward.

BULBS FOR SPRING PLANTING.

Gardens can be quickly improved by planting such bulbs as are suitable for dealing with in spring; any deficiencies in beds, for example, may be made up for without any risk of injury to permanent plants; any gaps in herbaceous borders that are not to be perennial-supplied until autumn, can be given up now to bold masses of gladioli. The rosery ground will take no harm if dotted over with ranunculus tubers, in the rich soil of which they will revel, and the shrubbery clearings will become glades of scarlet, blue, purple, pink, mauve, or white, if a few hundred Giant French anemone tubers are inserted.

Few gardeners seem to take advantage of the fact that these anemones can be finely cultivated in turf. They do not flourish under trees, so are not fit for woodlands, but the effect of a grassy bank liberally planted with the white and scarlet varieties is gorgeous indeed. Slopes of turf against front entrance steps, or the longer stretches forming terraces, are admirable places for anemone culture. If desired, the more costly St. Brigid anemones can be used in preference to the French, while rougher spots can be chosen for massing the cheap single anemones, of which "The Bride," with its satiny white petals and centre cushion of pale green velvet, is a lovely and familiar representative.

Dutch anemones can be bought in twenty-five different named varieties, and the double chrysanthemum-flowered anemones are of very distinct beauty. Anemones are obliging plants, for so long as their tubers are kept dry they can be planted at any time of year, and especially if soaked for twelve hours in tepid water previous to use, will soon provide beautiful flowers and foliage. I am assured that the early Scarlet Anemone fulgens may be had in blossom in June from a March planting of tubers that have had their attempts at earlier sprouting frustrated, but cannot report on this from experience.

Persian ranunculuses make an especially good show at the feet of standard rose trees, and they will not harm dwarf teas if planted among them. They are admirable, too, as a covering for bank sides and summits wherever a vivid summer show is desired, and the lifting of their tubers after the season is an easy piece of work. In rockery chinks I have known Turban and French ranunculuses thrive and flower year after year without removal. Beds of self-coloured ranunculuses prove eminently attractive upon lawns, violas being the best carpet and edging companions. The Rose Turban ranunculuses are grand rising above the cream rayless viola Sylvia, and when out of bloom they can be raised, replanted in good reserve ground to finish growth, and their places be filled by pink double zonal pelargoniums turned out of pots.

Gladioli, bought by the hundred, are fit to fill up spaces in any sunny borders of rich soil, as their sword leaves rise well above perennials of average height, and do not overcrowd. The hybrid Lemoinei class is so hardy that in most gardens the bulbs can safely be left out permanently, thus saving a great deal of autumn labour. For massing they should be placed only nine inches apart, a heavy mulch, given when leaves are well up, will afford all needed nourishment.

Gladioli should not be planted on raised banks or in draughty alleys, otherwise gales will lay them low; on the inner slopes of ground leading down to rockery dells or pools they give an exquisite effect, however, and obtain welcome shelter.

These three kinds of bulbous plants should be largely cultivated by gardeners who have to supply cut flowers in quantity, the anemones and ranunculuses being best for table decoration, and the gladioli for furnishing bowls or giant standing vases for halls and corridors. Gladioli in pots are of immense service also, whether in the house, grouped round by ferns and foliage subjects, or to give colour and elegance in the conservatory. M. H.

RONDELETIA CORDATA.

This evergreen flowering shrub, usually treated as a stove or intermediate house plant, will succeed in an ordinary greenhouse temperature, under which conditions it is rarely attacked by thrips, that, in a warmer structure, are often troublesome. When growing freely it forms a bold shrub, clothed with stout leaves, the largest being about six inches in length, and half as much in width. They are cordate at the base, hence the specific name. The flowers, which are borne in terminal clusters, suggest those of the laurustinus, but they are larger and different in colour. In the bud state they are deep pink, but when expanded the interior of the flower is blush, with yellow hairs in the centre. Cuttings root readily, and neat little bushy plants may be grown in six-inch pots. These will bear a cluster of flowers on every shoot, and that, too, at this season of the year.

There is a nearly allied species, R. amœna, which differs from the preceding in its flowers being somewhat lighter in colour, while the leaves are thinner in texture and more hairy. Of the two I prefer R. cordata. Both these species are natives of Guatemala.

They were formerly known by the generic name of Rogiera, as also was another species, R. gratissima. This, a native of Mexico, may be grown in the greenhouse, and it forms a very pretty feature there when in flower, which is generally in the late autumn and winter months. The flowers are, as in R. cordata, a good deal after the manner of a laurustinus, and they are borne in rounded clusters, as in that well-known shrub. The individual blooms consist of a narrow tube nearly an inch long, with an expanded mouth in the form of a five-pointed star, with rounded lobes, the whole flower being about one-third of an inch across. It is of a pretty blush tint, the unopened buds being of a deeper hue.

Rondeletia speciosa, with clusters of bright vermilion-coloured flowers, was very popular as a specimen plant in days long gone, when it used to be looked upon as requiring the temperature of a stove. It may, however, be grown in a greenhouse the same as the others.

Botanically, the rondeletias are nearly related to the bouvardias; indeed, one species, the rare Rondeletia strigosa, used to be known as Bouvardia Roezli. Between this and the garden varieties of bouvardia some hybrids were raised many years ago in Messrs. Henderson's nursery at St. John's Wood. W. T.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in Easily Grown Hardy Perennials, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CALANTHES.—So many instructive and interesting notes have recently appeared in the Gardeners' Magazine on the best methods of cultivation that it is scarcely necessary for me to refer to them again in this column, but I might mention that as the new growths are now so far advanced that the young roots are making their appearance, repotting should be attended to without delay. As we have perhaps one of the most complete collections of varieties in cultivation, I might perhaps be permitted to draw attention to some of the desirable kinds that do not appear to be in general cultivation, judging from the kinds that have been enumerated. C. Brynn seems to be a general favourite, and is undoubtedly one of the most useful for the purpose of supplying cut sprays, but it is rather strange that C. W. Murray is overlooked. Here we have a variety equal in vigour to the last-named, with a more decorative flower scape, and in every way worthy of being cultivated as extensively as C. Veitchi. C. Burfordiense completely puts C. Veitchi into the shade, being superior in colour and finer in flower. We have had scapes carrying between forty and fifty flowers during the past season. C. Victoria Regina, a pale rose-pink, is charming, and a later flowering variety, with larger flowers of the same type, but deeper in colour, C. Phœbe, is deserving of attention; these two last-named are quite distinct and are most effective for general decoration. The absolutely pure white C. Sibyl, producing scapes of the C. Veitchi type, should be in every collection; it is not easy to flower, but is most effective when mixed with the others of darker tints. C. rubro-oculata (not C. vestita) is a very fine addition, much darker in colour than C. Veitchi, and having a rich purple eye. It is not a vigorous grower, and is produced from the round class of pseudo-bulb. C. Clive is a vigorous grower and a grand addition to the dark section: one of the best for decorative purposes when the plants are strong. C. Oakwood Ruby and C. Chapmani are the two darkest calanthes in cultivation, but as the stock of each of these is very limited indeed it will be some time before they will pass into general cultivation.

PHAIO-CALANTHES.—These bigeneric hybrids, derived from the intercrossing of calanthes and phaius, as the name implies, are most useful for decorative purposes. We find the varieties of these hybrids do best when grown in an intermediate house temperature; in fact, we grow these and the phaius hybrids under the same conditions as that given to the winter-flowering cypripediums. They commence flowering in February and March, and last a long time in perfection. The potting requirements are the same as that afforded to calanthes and phaius. The phaius hybrids that have been derived from the influence of C. Humbloti, are now rapidly advancing their flower scapes. The plants should be placed in a position, within reasonable distance of the roof glass, which will prevent the scapes becoming unduly drawn, and a more symmetrical scape will be produced when the flowers expand.—H. J. Chapman, Oakwood Gardens, Wylam-on-Tyne.

CONSERVATORY AND GREENHOUSE.

THE SUN will now afford sufficient heat for plants in the conservatory, and sometimes even shading will be necessary. Abundance of air must be given, and, in proportion to its heat and dryness, an increased supply of water will be necessary. But this must not be given indiscriminately, for plants that are making but little growth will require a much less supply than those that are vigorous.

RHODODENDRONS. — There are few plants better adapted than these for decorative work at this season of the year. Some of them are now beginning to lose their beauty; as their flowers commence to fall it will be necessary to tie down the shoots, so that when the new growth is completed the plants will assume a more or less regular form. Syringe them twice daily as well, and moisten the stages, and this is a very important detail in helping the plants to make a good growth, and to flower well afterwards. Repotting will be necessary only in a few instances, as they do equally well in rather small than large pots.

AZALEAS.—Many of these will be going out of bloom. Care should be taken that the seed vessels are not allowed to remain and ripen, as they are to some extent prejudicial to growth. Place the plants in a genial temperature for a few weeks, where they can be syringed twice a day or so until growth is completed, when they will need hardening in a cooler, drier position, in readiness for their summer quarters.

CHRYSANTHEMUMS. — The treatment chrysanthemums receive in the early stages of their existence has undoubtedly much influence on the quality of the bloom they produce. At this time of the year I have frequently seen young plants standing on greenhouse stages far from the glass and crowded together. The chrysanthemum has an accommodating nature, and will recover from a check much more easily than many things, but if really good blooms are desired the plants should not be subjected to treatment which can exercise a weakening influence on them. Good growers make a point of removing the young plants to cold frames as soon as they are sufficiently rooted to allow of putting them in small pots. From the time they begin their career they should have the benefit of the full light, with a free exposure to the air. These advantages they cannot enjoy in any other way.

ROSES UNDER GLASS.—There will soon be the need for a shift in the case of very young plants. My own, that were rooted from cuttings a little later than this last year, were put into three-inch pots early in January, and are now being shifted into six-inch pots. Own root roses enjoy a more porous soil than those worked upon the briar stock. A slight shade will soon be necessary for the rose house, not so dense as darkens the house in any way, but just sufficient to break the fiercest of the sun's rays. Under these conditions, and not otherwise, we can maintain a moist atmosphere, and an occasional syringing during the prevalence of very bright weather. Air that is alternating between extremes of dryness and moisture, with wide changes of atmosphere, will not suit roses. Liquid manure may be sprinkled about when damping down, as well as freely afforded to all plants well established. It is impossible to obtain high colour and quality in the flowers without having the same in the foliage. A little more sulphur should be added to the syringing solution during this trying time as regards mildew. It is best to keep both this and liquid manures far weaker than many use, preferring to use them more frequently than run the risk of overdoing in strength. —T. B. Field, Ashwellthorpe Gardens, Norwich.

THE FLOWER GARDEN.

LAWNS.—Mowing the lawns will now need constant attention. If previous instructions have been carried out, viz., levelling and rolling, continuing the latter as often as circumstances will permit, they should now be in good condition. Do not allow grass to become too long before mowing, and do not put the knives or cutters too close to the ground the first time of mowing. It is better to cut closer the second time, and after that the grass will be clean and vigorous, and the close cutting can be continued. Should the grass be in a weakly condition, and the soil be of a rather hot and poor sort, it may be advisable after the second or third mowing, if grass has not been allowed to grow too long, to cut without the grass-box on the machine. The cut grass will be of some assistance and help to induce growth, though in a general way it is best to use the grass boxes on, and collect the grass as mown. Slopes and places where the machine cannot be used must be cut with a scythe, and we find the riveted scythes much better for short grass than the solid-back ones, and those of medium length, say, three feet, better for general use than the long ones. Do not allow heaps of mown grass to remain on lawns or fermentation will rapidly ensue, causing quite a strong heat that will damage the turf underneath.

THE ROCK GARDEN must be closely watched. Many of the primulas, anemones, irises, hepaticas, primroses, miniature narcissi, muscarias, aubrietias, fritillarias, chionodoxas, cardamine, iberis, alyssum. erythroniums, and others, are revealing more and more of their beauties. Make note of the positions in which they appear to thrive best, and where the best effects are obtained, as generally some annual rearranging can be practised of the least permanent ones and those most readily transplanted. The early-flowering rhododendrons and sedums are also opening, and if the rockery is of any pretensions at all, there will generally be a few places where such as these, and some members of the erica family can be established.

SUCCESSIONAL SOWINGS of sweet peas, poppies, mignonette, and other annuals should be made in the flowering quarters.

DAHLIA ROOTS that are still in their winter quarters should at once be attended to. Tuberous-rooted begonias should also be kept growing, but avoid coddling or drawing them up. Close attention should now be paid to the hardening off and preparation of all summer bedding plants. If any have not yet made sufficient growth, encourage them to do so as much as possible without unduly weakening them.

FLOWERING PLANTS in beds should have close attention. Support flower spikes that need it to prevent damage from wind or rain. Should severe frosts appear probable give temporary protection to such plants as require it. As plants pass out of bloom clear the beds, and prepare them for summer occupants. Bulbous plants may be carefully lifted and heeled in in a sunny position to about their previous depth, where the bulbs will ripen off, and in autumn can be planted in wild garden or pleasure grounds. Beds may be liberally dressed with thoroughly decayed manure or leaf-soil, wood ashes, burnt refuse, old mortar, or old potting soil, especially if the soil is naturally of a cold, wet, or adhesive texture.

WALL PLANTS.—Evergreens in pots that are suitable for walls may still be planted, such, for example, as the ceanothus, Cratægus pyracantha, ivies, Garrya elliptica, Choisya ternata, etc. Attend to young growths of clematis and other things, tying-in and securing them before any damage occurs. The early pruned roses on sunny positions will now be making growths; secure and protect these; also prevent aphis or greenfly becoming established on them.—E. F. Hazeltcn, Knowsley Gardens, Prescot.

HARDY FRUITS.

FRUIT PROSPECTS.—The cold weather we have experienced has greatly retarded the growth of fruit trees generally. Notwithstanding this, there is a good promise of bloom of both apples and pears. Peaches and nectarines are not so plentiful, owing, no doubt, to the wood not properly maturing last year. On trees growing on south walls there are ample blooms, but on those growing on a less favourable site the buds are somewhat short.

DISBUDDING. — As soon as the young growths are forward enough disbudding should be commenced, and continued at intervals until sufficient have been removed. If properly attended to there should be little pruning left to be done next winter. Remove all out-growing shoots, and those at the back, and a few along the leading growths, taking great care to preserve those which will be wanted for filling-up space, and for fruiting the following year. Do not remove too many at the first time, only sufficient to keep a balance between the fruit and growth. Disbudding is one of the most important details of fruit culture, and should not be left to an inexperienced hand, for the formation of a well-trained fruitful tree depends almost entirely on the removal of ill-placed shoots, and the preservation of those required to build up a well-balanced head. It is a good practice, when disbudding, to make sure of one good shoot at the base of last year's growth, on the upper side, if possible; train up the leaders if there is room for extension; it not, pinch out the point at the fourth leaf. Avoid at all times wholesale thinning, which frequently leads to the loss of fruit when about the size of peas.

YOUNG TREES that were planted late need not be disbudded for at least some time yet. Every care, however, should be taken when the shoots are long enough to secure the right ones for filling up space and the formation of a neatly-trained tree. Keep a sharp lookout for aphis, and as soon as they put in an appearance give the trees a syringing with quassia extract. In the case of fruiting trees, syringing with insecticides is best deferred till the fruits are safe; dusting with tobacco powder will keep the insects in check till the fruits are sufficiently advanced.

ORCHARDS. — The trees need to be watched during the time the flowers are expanding. I have known sparrows destroy many of the buds at this period, and if not checked, in some instances they will damage the lot. A good syringing overhead with soapsuds, followed with a dusting of soot, wood-ashes, etc., will, in a great measure, keep them in check. It will be well to examine all late-planted trees, and give the soil about the roots a good treading; then lighten the surface, and if the land is light and porous, a mulching of short manure will be very helpful should the weather prove dry.

HORIZONTALLY TRAINED TREES.—If any of these were root-lifted, and somewhat severely pruned late, see that during fine weather the branches are well syringed two or three times daily, and kept as moist as possible, otherwise very little growth or foliage will be produced this year.

FRUIT ROOM.—As soon as the room is clear of fruit see that the walls and shelves are thoroughly washed and made clean; full ventilation should be afforded when convenient. If fruit rooms are to be built they should be made of suitable thickness to exclude frost, and a good one should be viewed before attempting to build. Without a suitable store-room for apples and pears, it is of very little use attempting to preserve the fruit for a reasonable length of time in a good sound condition, and the loss of good fruit in a season is considerable.—H. Markham, Wrotham Park, Barnet.

Freesias.—These form a most delightful addition to the early-blooming plants in the greenhouse. Their profuse flowering, their quaint construction, and delicately sweet perfume, all combine to render them most attractive, and they are of very easy culture. The main point to be aimed at in their cultivation is the thorough drying off of the bulbs, even to the point of roasting. The soil most suitable to grow them in is well-rotted leaf-mould, light loam, a small quantity of well-decayed manure, and sand. It is best to put them in as cool a place as possible when they are starting into growth, and as soon as they show above ground place them out where they are fully exposed to the air, but sheltered overhead. I usually plant about half a dozen bulbs in a 4½-inch pot, and as the flower stems are very heavy for the size of the bulbs, I put a very thin support to each. this keeps them erect. and prevents them from sprawling over the pot. After the plants have flowered, and have been well dried off, lay the pots on their sides, there to remain until the time for potting comes round again.—T. B. Field.

AN INTERESTING REMINISCENCE.

I should indeed be lacking in courtesy, as well as gratitude, did I not tender you very sincere thanks for the kind references made to me and my horticultural career in a recent issue of the GARDENERS' MAGAZINE. The old saying, "Nothing is so likely to happen as the unexpected," certainly applies in this case, for I looked for nothing so little as the publicity you have been pleased to give me. In saying so much kindly—at least my innate modesty was overlooked, and because of that I have hardly yet recovered from my surprise and blushes on thus, unlooked for, finding myself so famous. Obliged to withdraw through advancing age from some of my old literary work, I have seen with pleasure, not only how admirably, and indeed beautifully, the GARDENERS' MAGAZINE is now presented to its numerous readers, but also note that some old friends still remain your esteemed contributors.

My first association with the GARDENERS' MAGAZINE must have been about 1870 or 1871, as I have a highly-prized memento of such association in your predecessor's (Mr. Shirley Hibberd) "Beautiful Leaved Plants," in which his valued autograph is inscribed, dated 1871, or 37 years ago. That is not the only such memento from him I also possess. How long since that great GARDENERS' MAGAZINE dinner was held in Aldersgate Street I cannot remember—[1872, ED.]—but I was one of the guests, a great honour indeed, and, oh! how many of our old great men have since passed away. When I think of all I have known in horticulture who have, having done their part so nobly in life, gone before, I sometimes feel as if I were rather stranded on the shores of time, left a sort of human derelict, soon to break up and be forgotten. Having entered my 77th year I marvel that in spite of such age I can still be so active, and do so much. My earnest hope is I may be able so to work and be active to the last. Then I shall pass away happy.

You have kindly referred to my elder brothers, William and Richard, both most earnest and devoted horticulturists. What, wonder they were so, for each of us might be said to have drunk in gardening with our mother's milk. My father, a gardener, was, during our boyish days, foreman for many years at the then great nursery of Messrs. W. Page and Son, at Southampton, a nursery not, as so many are now, a specialistic place, but one in which every section of horticulture as then known was fully represented. No wonder we boys grew up intense lovers of all that pertained to gardening, an intensity that ceased with those who have gone, as it will exist with me, only to end in death.

I often think how greatly we who have devoted our lives to gardening are favoured in our vocation. We have but to think of the worker in the coal or iron mine, of the weaver in the mill, the toilers amidst the heat and grime of iron and steel manufactures, of the worker in wood, stone, or brick, of any indeed whose lives have to be spent in the dull monotony of the office, the store, the factory, or even in the composing room. How different with the gardener, whose work is in the open, tilling the sweet responsive soil, cropping it with produce that shall return to him good wholesome food or beautiful flowers, sweet to smell, and full of lovely colour to the eye; or perhaps in the form of noble trees, the finest production of mother earth; or of shrubs or other things, all of which gladden the eye and make the earth beautiful. Such is, or has been, our work, really creating from out of swamps, or woods, or wilds, or wildernesses, veritable paradises of beauty, of purity, and of sweetness. We may have to work hard, or have done so, but at least in gardening we have found many glorious solutions.

ALEX DEAN, V.M.H.

FORESTRY EXHIBITION IN ABERDEEN.

Elaborate preparations are being made for the forestry exhibition to be held under the auspices of the Royal Scottish Arboricultural Society, in the showyard of the Highland and Agricultural Society, at Aberdeen, on July 21 to 24. The large, interesting, and educational display made of British forestry at Lincoln last June under the auspices of the Royal Agricultural Society of England was duly noted by all Scotsmen interested, and the committee in charge of the Aberdeen arrangements are leaving no stone unturned to produce a similar, if not better, display. The Royal Scottish Arboricultural Society has already conducted seven progressively successful exhibitions, which have done much for the development of forestry in the country. To make assurance doubly sure for the success of the eighth exhibition, a strong and very influential committee has been chosen to take charge of the arrangements. They are Mr. Sydney J. Gammell, of Drumtochty and Countesswells; Mr. John Crozier, forester, Durris; Mr. John Clark, forester, Haddo House; Mr. Charles France, Aberdeen; Mr. G. U. Macdonald, Peebles; and Mr. Adam Spiers, Warriston, Edinburgh.

The committee have issued a schedule inviting members and others interested to offer exhibits for approval, mentioning that it is desired to encourage exhibitors in various classes, and in the event of an exhibit of special merit being brought forward the judges may recommend the society's medals or other award. Various exhibits are suggested as suitable, but the committee will welcome offers of other objects relating to forestry in any of its branches. As indicating how anxious the committee is to make the display an unqualified success, it may be mentioned that valuable prizes are offered in eighteen classes.

In addition to the prizes for timber, etc., one or more medals may be awarded by the judges for specimens of the fruits of trees, together with drawings or photographs showing the morphological structure of fructification in each particular species, each specimen of an individual species to be mounted on a separate card.

For an approved report on the damage done by insect pests injurious to forest trees, and the measures that have been successfully adopted for their extermination, the report to be accompanied by specimens of the insects and damage done.

For a collection of fungi injurious to forest trees and shrubs. Fragile specimens may be illustrated by photographs.

Examples or photographs of the damage caused by squirrels, moles, etc., to various kinds of trees or of any abnormal growth.

Entries for the exhibition must be made to the secretary, Mr. Robert Scott, 75, Union Street, Aberdeen, not later than May 30.

Cotoneaster Simonsi.—The reference to this climber (p. 238) is opportune. In this neighbourhood it is commonly employed as a wall plant, and the front of one cottage, facing east, is entirely covered with it, 16ft. high, and at the present moment, March 28, the whole crop of berries remains and presents a handsome appearance. The only fault one can find with it is the want of contrast when growing against a red-brick wall, owing to the loss of leaves. This can be remedied by planting a small-leaved ivy as a base, against which to display the bright-coloured berries. One of the small ivies, as palmata, or a form of the ordinary English ivy, would not interfere with the growth of the cotoneaster, but would much emphasise the effect of the berries in winter. — E. MOLYNEUX, Swanmore Park.

EELWORMS IN HOLLOW POTATOES.

An interesting note in the current "Kew Bulletin" shows that during the autumn of 1907 some diseased potatoes were submitted to Kew for investigation. The potatoes were well grown and externally showed no trace of injury or disease, but when cut open were found to be hollow, an external shell, varying from a quarter to half an inch in thickness, remaining intact.

In some examples the cavity was quite empty, dry, and lined with a shrivelled mass, suggesting the previous presence of some semifluid substance that had contracted and dried up. In other cases the cavity was more or less filled with a glairy, unpleasant smelling pulp, which on microscopic examination was found to be teeming with nematodes or eelworms.

A series of sections revealed the fact that the nematodes effected an entrance into the tuber through the original point of attachment to its branch. Having once gained an entrance the nematodes gradually used up the substance of the tuber, working from the centre outwards until their progress was checked by the vascular zone which lies at some distance within the periphery.

This zone appeared in every instance to have acted as a perfect barrier to the further extension of the eelworms, hence the tissue lying between the vascular ring and the periphery of the tuber remained uninjured.

The nematode appeared to be Aphelenchus pyri, Bastian, a species originally found in decaying pears. Its presence in potato tubers, notwithstanding the amount of injury effected, does not necessarily prove the nematode to be a true parasite; it is at most a wound-parasite, gaining an entrance into the tuber through the minute opening formed by the decay of the tissue enclosed by the vascular ring at the point of its entrance into the tuber.

Two tubers infected at the point indicated above, by covering the scar with slime containing eelworms obtained from a diseased tuber, were placed under a bell-jar, and kept in the dark at an average temperature of 65° F. After ten days one of the tubers was cut open and revealed a cavity about one inch in diameter filled with slime containing myriads of eelworms. The second tuber was allowed to remain for a month when the internal cavity was found to have reached the limit of its extension, that is up to the vascular ring.

In a second experiment the "eyes" of two tubers were covered with nematode-bearing slime, and afterwards placed under conditions similar to those described in the previous experiment. After remaining for a month the nematodes had not effected an entry into the tuber, although in some instances small "sprouts" had pushed from the "eyes" through the slime. This experiment may be taken to prove that the nematodes cannot effect an entry through an unwounded surface, even when the tissue is quite young.

No trace of bacteria or fungi was found in the slime.

The potatoes were purchased at the Brentford market, hence their source of origin is unknown, as is also the nature of the soil in which they were grown, or the kind of manure used, etc. Judging from the large percentage of hollow tubers present in the small quantity purchased, it would appear that a local epidemic, caused by nematodes, had existed where the potatoes were grown.

The above account is not intended to convey the impression that all hollow potatoes are due to eelworms. Potatoes are often more or less completely hollowed out by centipedes, more especially by Julus pulchellus. In such instances, however, an entrance is effected by commencing at the surface and eating their way into the interior of the tuber.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

APRIL 14.

Although spring is late, there was little evidence of its dilatoriness at the Royal Horticultural Hall on the above date. Once more the hall was filled with beautiful and interesting plants and flowers that delighted a large attendance of Fellows and their friends.

FLORAL COMMITTEE.

A brilliant exhibit of well-grown hippeastrums, consisting of about a couple of hundred plants was contributed by Mr. Sanders, gardener to Alfred de Rothschild, Esq., Halton Hall, Bucks. It was a pity that in every case the anthers had been removed from the blooms. Rich crimson and orange-scarlet varieties predominated, but there were a few good light varieties. The arrangement of the group, with asparagus and ferns, was good, and everything was well grown. Miss A. Smith, Barnham, Bognor, contributed coloured primroses and polyanthuses and other early flowers. The Misses Hopkins, Mere Gardens, Shepperton, set up a very pretty miniature rock garden, with a goodly set of anemones, primroses, primula species, and alpine shrubs.

Blue hydrangeas were the great attraction in Messrs. James Veitch and Sons' group, and they were particularly fine and rich. With these were Boronia megastigma, Xanthoceras sorbifolia, Rhododendron Forsterianum, Kalanchoe Felthamensis, and the very showy Erica propendens, and a large specimen of the handsome Medinilla magnifica. In another very large group facing the entrance this firm had white, pink, and blue hydrangeas, some fine forced lilacs, the beautiful Azalea rosæflora, the new Clematis montana rubra, and the very handsome Rhododendron Handsworth Early Red, a very handsome variety.

Perpetual carnations were well displayed by Messrs. Hugh Low and Co., whose big vases of Harlowarden, Mrs. T. W. Lawson, Oriflamme, Red Lawson, Lady Bountiful, and Helen Gould were great attractions, as also were their plants of Metrosideros floribunda, acacias, weeping standard roses, and the handsome Lotus peliorhynchus.

A selection of small caladiums, richly coloured and representing the best varieties, was set up by Mr. Charles Turner, Slough. Rhododendron Forsterianum and R. Aucklandi hybrida were grandly shown by Mr. W. A. Cook, gardener to Sir E. Loder, Bart., Leonardslee, Horsham; these are beautiful, large-flowered white varieties. Rockery and alpine plants were extensively displayed by Messrs. J. Peed and Son, West Norwood, whose coloured primroses were a feature. Messrs. Wallace and Co., Colchester, exhibited Primula denticulata finely, with Iris persica, Gerbera Jamesoni, aubrietias, the pretty Viola gracilis and a few tulips; the pots were rather too prominent in this exhibit.

A grand lot of perpetual carnations and beautiful bunches of Lilium longiflorum were set up finely over maidenhair fern by Mr. W. H. Page, Tangley Nursery, Hampton. Mr. Page showed some remarkably fine flowers of Fair Maid, White Lawson, Harlowarden, Enchantress, and Mrs. T. W. Lawson carnations.

The carnations set up by Mr. A. F. Dutton, Iver, Bucks, were, as usual, excellent; Mabelle, Rose Pink Enchantress, Britannia, and Aristocrat being very fine. Mr. H. C. Pulham, Elsenham, Essex, staged a small rock garden, filled with a selection of choice early flowers.

Stove foliage plants in variety, notably palms and big-leaved anthuriums, came from Messrs. Wm. Bull and Sons, Chelsea. Mr. J. R. Russell, Richmond had an exhibit of lilacs, Azalea mollis, cytisus, clematises, Prunus triloba, weigelas, etc. An early exhibit of Japanese maples in considerable variety was made by Messrs. Thomas Cripps and Son, Tunbridge Wells, a firm that makes a speciality of these graceful plants. This firm had a fine new white clematis, with finely-formed flowers; this is C. lanuginosa Crippsi. Mr. H. D. Broughton, Birch House, Andover, brought up a small group of a fine strain of herbaceous calceolarias. The Misses Kipping, Hulton, Essex, had a very bright display of alpines and early flowers, primulas, and aubrietias predominating. From the Guildford Hardy Plant Nursery Company, Guildford, came a selection of alpines and early hardy border flowers.

Roses in pots, from Messrs. Wm. Paul and Son, Waltham Cross, were greatly admired; the leading varieties were Lady Ashtown, Isabella, Tausendshon, Margaret, a beautiful pink variety raised at Waltham Cross, Waltham Bride. Messrs. G. and A. Clark, Lim., Dover, submitted a brave show of primroses and polyanthuses, aubrietias, iris, deutzias, etc. The brilliant exhibit of cut zonal pelargoniums from Messrs. H. Cannell and Sons, Swanley, was a great attraction, as the flowers, trusses, and bunches were very large, and the colours especially rich.

Messrs. W. Cutbush and Son, Highgate, N., filled a whole table with good things. Along one side they had lilacs, Azalea mollis, the dwarf and useful Mrs. W. H. Cutbush rose, forsythias, laburnums, heaths, and the very beautiful and brilliant new coleus named Cordelia, a variety that gained an A.M. last year. On the other side of the table they had a rock garden arrangement filled with flowering alpine shrubs, Phlox canadensis, Stylophorum diphyllum, Primula rosea, Cypripedium pubescens, Trillium erectum, T. stylosum, and Mertensia virginica; with the other things came a fine exhibit of perpetual carnations in popular varieties. A beautiful lot of perpetual carnations came from Mr. C. F. Waters, Deanland Nursery, Balcombe, whose Malmaisons and vases of Enchantress, Rose Pink Enchantress, White Enchantress, Winsor, Marmion, Autocrat, and Beacon attracted a great deal of attention. Messrs. G. Jackman and Son, Woking, showed alpine and herbaceous plants and flowers in variety.

Messrs. H. B. May and Sons, Upper Edmonton, showed an interesting exhibit that contained well-grown cinerarias, Clorinda pelargoniums, Princess Ena, and Mdme. Levavasseur, and White Pet roses, the dwarf and brilliant Pride of Zurich salvia, and the new Cyrtomium falcatum Mayi (A.M.), a crested form of this useful fern. Messrs. J. Cheal and Sons, Crawley, exhibited a collection of alpine flowers and shrubs. Mr. J. Crook, The Avenue, Camberley, Surrey, set up a small group of a very bright and useful strain of polyanthuses, showing a large variety of colouring.

Mr. Maurice Prichard, Christchurch, Hants, had a particularly fine lot of coloured double and single primroses, good aubrietias, irises, and other choice early flowers. Messrs. T. S. Ware, Lim., Feltham, sent a group of early flowers that contained Orobus Gibberi, white-flowered; Saxifraga Rhei, Dendromecon rigidum, double primroses, Primula mollis and P. Sieboldi. Very beautiful and interesting was Viburnum Carlesi, a sweetly fragrant, compact, white-flowered hardy shrub, shown by Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Dorking.

A wonderful display of beautifully-grown and admirably shown roses was made by that famous grower, Mr. George Mount, of Canterbury. This was the most attractive exhibit in the show, and one could hardly get past it during the earlier part of the afternoon. The varieties so freely set up in vases and stands and boxes were Richmond, Mdme. C. Ramey, Mdme. Abel Chatenay, Mdme. Pernet Ducher, Lady Ashtown, Catherine Mermet, Joseph Lowe, Frau Lilla Rautenstrauch, Mrs. J. Laing, Captain Hayward, La France, Souv. de Pres. Carnot, Prince de Bulgarie, Killarney, Senateur Belle, Ulrich Brunner, and Kaiserin Augusta Victoria.

Choice shrubs were submitted by Messrs. Paul and Son, Cheshunt, who had Prunus Pissardi fl.-pl., Cornus sanguinea Moseri, brightly variegated; Vitis Henryana, V. Thomsoni, Lonicera Maacki, Viburnum tomentosum Mariesi, and a few roses. Rhododendron grande was well shown by Mr. W. G. Vivien, Clyne Park, Blackpyl, South Wales.

Messrs. Carter Page and Co., London Wall, set up a small, but very pleasing and particularly bright group of fresh violas.

ORCHID COMMITTEE.

Mr. G. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney, had a very handsome exhibit of orchids, the leading kinds being Cymbidium eburneum Goodsonianum (A.M.), Odontoglossum Lambeauianum Harry Goodson—very richly marked, Cattleya intermedia carnea, and Brasso-cattleya Digbyano-Mossiæ Wagneri. Mr. A. Jensen, Lindfield, Hayward's Heath, brought up some finely-formed Pacho varieties of Odontoglossum crispum, O. triumphans, and Cattleya Mendeli, all well-grown and representing excellent forms. A few choice orchids were shown by Messrs. Jas. Veitch and Sons, Chelsea; their group containing some beautiful Odontoglossum crispums, Cattleya Schroderæ, Renanthera Imschootiana, and Ada aurantiaca.

The contribution of orchids made by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, contained odontoglossums in variety, Dendrobium Wardianum, D. Pierardi, D barbatulum, Cypripedium Maudiæ, C. Venus, and some cattleyas. Mr. Davis, gardener to J. E. Fowler, Esq., Southgate, set up a finely-flowered specimen of Masdevallia Schroderiana. From the Burford Lodge collection Mr. W. H. White brought up a large specimen of Dendrobium fimbriatum oculatum, carrying just over forty racemes of its golden, maroon-blotched flowers; a cultural commendation was deservedly granted.

DAFFODIL COMMITTEE.

Mr. Chas. Dawsõn, Gulval, Penzance, had a vastly interesting group of choice new daffodils, arranged on a high stand. Where all were so good it is difficult to particularise, but the rich yellow Buttercup (A.M.), White Slave, Pearl Diver—pure white in cup and perianth—Apache, Groff, Pilgrim, Ibis, Dorothy Kingsmill, Cygnet, Stara, and Ptarmigan attracted our attention. Messrs. Wm. Bull and Sons, Chelsea, showed daffodils, popular varieties, put up in rather close bunches. Messrs. R. and G. Cuthbert, Southgate, sent a few gently-forced tulips.

From Messrs. Cartwright and Goodwin, Blakebrook, Kidderminster, came a very pretty stand of beautiful daffodils, such as Rising Sun, Duke of Bedford, Aureole, Bullfinch, Gold Cup, Yellow Hammer, Marigold—an early rich incomparabilis, Mdme. de Graaff, Beauty, and Alice Knights. Mr. T. H. Chapman, Rye, Sussex, staged a small collection of daffodils, showing good blooms of King Alfred, Weardale Perfection, Mdme. de Graaff, Duke of Bedford, White Queen, and Glory of Nordwijk

Messrs. Barr and Sons, Covent Garden, displayed a collection of daffodils, in which Fireflame, Loveliness, Bedouin, Peter Barr, and King Alfred were good. The Messrs. Barr also had some good early Darwin tulips, and a collection of polyanthuses, squills, etc. Messrs. Pope and Son, King's Norton, Birmingham, exhibited a small set of daffodils, their flowers of King's Norton, Lady Margaret Boscawen, Lucius, and Boniface being particularly good. Sir Josslyn Gore Booth, Bart., Lissadel, Sligo, Ireland, set up a fine lot of daffodils in large bunches, conspicuous varieties being White Queen, Lady Margaret Boscawen, Sir Watkin, Glory of Leiden, Mrs. Robert Sydenham, and Victoria.

Miss T. W. Currey, The Warren, Lismore, Ireland, contributed a very attractive exhibit of Irish-grown daffodils. This was a large and bright display, and its chief features were Lady Margaret Boscawen, Mrs. Robert Sydenham, Goldfinch, Avalanche, The Warrior, Queen Sophia, White Queen, Scarletta, White Slave, Torch, Mdme. de Graaff, Lucifer, and King Alfred. Messrs. Jas. Carter and Co., High Holborn, were very large exhibitors; they had a display of florists' and stellate cinerarias, and a remarkable lot of blooms of the very fine King Alfred daffodil, set up in a very tasteful manner.

Messrs. Hogg and Robertson brought over a large exhibit of daffodils and tulips from Ireland. Their flowers were a little too stiffly bunched, but there were good blooms of Madame Plemp, Lady Margaret Boscawen, King Alfred, Glory of Nordwijk, Sir Watkin, Apricot, Lucifer, and Duke of Bedford daffodils. Tulips in pots, and cut flowers, as well as a modest display of daffodils, were arranged by Messrs. R. H. Bath, Lim., Wisbech; Duke of Bedford, Silver Spur, and Princess Mary were very good daffodils shown, while the scillas and chionodoxas were very fine.

FRUIT AND VEGETABLE COMMITTEE.

Dawes Challenge Rhubarb, a very strong-growing, brightly-coloured variety, was shown by Mr. T. E. Dawes, The Nurseries, Syderstone, Norfolk. A cultural commendation was worthily awarded. Mr. W. A. Cook, Leonardslee Gardens, Horsham, showed fairly well preserved fruits of Catillac pears and Profit, Winter Greening, Scarlet Pearmain, and Mere de Menage apples.

AWARDS.

Award of Merit.—Viburnum Carlesi, from Sir Trevor Lawrence, Bart., Burford Lodge, Dorking; Cyrtomium falcatum Mayi, from Messrs. H. B. May and Sons, Edmonton; Narcissus Buttercup, from Mr. Chas. Dawson, Gulval, Penzance; Cymbidium eburneum Goodsonianum, from Mr. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney.

MEDALS.

Gold.—Mr. G. Mount, Canterbury; Mr. Chas. Dawson, Gulval, Penzance.

Silver-gilt Flora.—Messrs. W. Cutbush and Son, Highgate; Miss F. W. Currey, Lismore, Ireland; Mr. Sanders, gardener to Alfred de Rothschild, Esq., Halton, Bucks.

Silver-gilt Banksian.—Mr. W. H. Page, Hampton, Messrs. Hugh Low and Co., Bush Hill Park, Enfield; Messrs. James Veitch and Sons, Chelsea; Messrs. Cartwright and Goodwin, Kidderminster; Sir J. Gore Booth, Lissadel, Ireland.

Silver Flora.—Messrs. H. Cannell and Son, Swanley; Messrs. H. B. May and Sons, Edmonton; Messrs. Wm. Paul and Son, Waltham Cross; Mr. J. R. Russell, Richmond; Messrs. Barr and Sons, Covent Garden; Messrs. Hogg and Robertson, Dublin; Mr. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney.

Silver Banksian.—Messrs. Paul and Son, Cheshunt; Mr. M. Prichard, Christchurch; Mr. W. A. Cook, gardener to Sir E. Loder, Bart., Leonardslee, Horsham; Messrs. James Veitch and Sons, Chelsea (orchids); Messrs. Hugh Low and Co., Enfield (orchids).

Bronze Flora.—Messrs. T. Cripps and Son, Tunbridge Wells; Mr. A. F. Dutton, Iver, Bucks; Mr. G. Reuthe, Keston, Kent; Mr. Charles Turner, Slough; Messrs. R. Wallace and Co., Colchester; Messrs. T. S. Ware, Lim., Feltham; Mr. C. F. Waters, Deanland Nursery, Balcombe, Sussex.

Messrs. W. H. and L. Collingridge, printers and publishers, of 148 and 149, Aldersgate Street, showed examples of the reproduction of water-colour drawings of flowers by the three-colour process. This formed a very interesting exhibit, as the original water-colour drawings were framed with impressions of the several printings employed to produce the finished results.

British Gardeners' Association (London Branch).

An interesting and exhaustive address was delivered by Mr. E. F. Hawes, of the Royal Botanic Gardens, Regent's Park, at the recent opening meeting of the newly-formed London Branch of the B.G.A., on the "Present Opportunities of Improving the Gardeners' Education in London." There was a large attendance at Carr's, and Mr. Frogbrook presided.

The lecturer dealt briefly with the circumstances leading up to the formation of the branch, and read over the objects of the association. Special attention was called to object (f): "The encouragement of a higher standard of education, and of greater professional efficiency amongst its members." He pointed out to those who desired to improve themselves the various means at command, and the advantages those resident in and around London possessed over the less fortunate workers in country districts. In the first instance he urged that the public parks and gardens in London are maintained at such a high standard of excellence, and provide fine examples of spring, summer, and autumn bedding, and are within reach of everyone's time and pocket to visit, such as are to be found in no other part of the world.

NARCISSUS BUTTERCUP.

Exhibited at the R.H.S. meeting, held on the 14th inst., when it received an Award of Merit. Flowers of medium size, and a rich golden colour.

The National Garden at Kew was not overlooked, and visits to it should be paid whenever possible, as there was always something of interest to be found in bloom, and no matter what season the visit took place there was much to learn there. The lecturer also pointed out that London gardeners are fortunately placed in the centre of great horticultural exhibitions, where one may keep in touch with the newer species and varieties of plants and flowers. Then there are the cheap and easily-reached evening classes at the various Polytechnics and evening schools throughout London, horticultural classes being carried out for the past two years at West Norwood Technical Institute, and during the past year specially at Lavender Hill for employees in the public parks. Besides gardening classes allied subjects were also mentioned, including botany, chemistry, and physics, geology, entomology, freehand drawing, etc.; and last, but not least, the necessity for clear caligraphy, a working knowledge of English composition, and simple arithmetic was enforced by the lecturer.

Mr. Hawes, recently elected chairman of the London Branch, also pointed out the advantages to be derived from visits to the various museums, and from a study of suitable books of reference on horticultural subjects, together with the weekly gardening periodicals.

At the close of the lecture some useful comments were made by members present, and it is hoped that similar meetings, held regularly, will prove of material assistance to members of the gardening profession in London.

Birmingham Gardeners' Association.

The last fortnightly meeting but one of the spring session was held on April 6. Mr. Walter Jones presided, and there was a goodly number of members present to hear a dissertation on "Alpine Plants and their Culture," by Mr. James Webb, gardener to William Byng Kenrick, Esq., Metchley House, Edgbaston. The Chairman, in introducing the essayist to the audience, testified to his energy and perseverance, and also his love for alpine plants, as evidenced when a foreman in the gardens at Maplebank House, Edgbaston, the residence of Mrs. Kenrick's parents, Alderman and Mrs. C. G. Beale, about two years ago.

Mr. Webb prefaced his subject matter with the remark that he had elected to treat upon those varieties of alpines he had had practical experience with. The subject was enhanced by the collection of plants he had brought to illustrate it, and amongst which there were several of a choice or rare character. He had also a small plant of a seedling arabis raised by himself, and named A. alpina variegata aurea compacta: its foliage is deeply incised, and it should make an excellent edging plant. The committee unanimously awarded it a Certificate of Merit.

Mr. Webb dealt with his subject in a thoroughly practical and lucid manner, and this was all the more creditable considering that it was the first lecture he had ever essayed to deliver publicly. An interesting discussion was evoked, and several of the speakers expressed their high appreciation of the way in which the subject had been treated.

Mr. C. R. Bick, The Bickenill Nursery, Olton, near Birmingham, brought an interesting collection of alpines in flower, and to which a Certificate of Merit was duly awarded. It should also be added that Mr. Webb brought photographs of the alpine rockery at Metchley House, which he designed and constructed himself.

Royal Horticultural Society of Ireland.

SPRING SHOW.

The annual show of the above society was held in the Royal University Buildings, Dublin, on April 8 and 9. For a second year in succession the committee laboured under the adverse influence of a late spring, and, as a consequence, the entries were again below the average, although the general excellence of the exhibits was equal to the usual high standard which is associated with the exhibition.

There is no doubt that daffodils are the backbone of the show, and that if they were not there it would lose one of its greatest attractions. Roses, both in pots and cut, were also very prominent features, and deutzias, azaleas, anemones, cinerarias, tulips, arum lilies, hyacinths, and hardy spring flowers were not forgotten.

An interesting feature of the two days' show was the lectures, which were given in the evenings. This year Mr. F. W. Moore lectured on Wednesday on "Plants and Points in their Culture," while on Thursday Professor Carpenter spoke about "Animal Life in the Garden."

On entering the building the visitor found himself in a large central hall, which was filled with plants of the starry cineraria, arum lilies, table decorations, foliage and flowering plant groups; while in the middle there was a large island of interesting things sent from the Royal Botanical Gardens at Glasnevin. Here were Adenandra speciosa, a hard-wooded plant with a flower which reminded me of a white cistus; Templetonia retusa, a clianthus-looking flower of a dull copper-red; Polygala gracilis, a shrubby plant of the milkwort order, with large purple flowers; three old-fashioned things that are not very commonly seen nowadays.

The cup for nine pot roses went to Mrs. H. P. Goodbody, of Blackrock, the second and third prizes of this class being taken respectively by Mr. Henry Dudgeon and Mr. H. Guinness. Mr. Edmund D'Olier's stand in the twenty-four class of cut roses was a fine exhibit, and Mr. Ernest Bewley was not far behind.

Lord Ardilaun, the president of the society, has again given a cup for the best collection of fifty varieties of narcissi. Mr. C. M. Doyne, of Wells, Gorey, who has taken this prize for the last six years, was once more successful. His flowers were in splendid condition, and nicely arranged, and included such varieties as Lady Margaret Boscawen, Duke of Bedford, Ariadne, White Lady, Seagull, Agnes Harvey (an especially charming Leedsi), Weardale Perfection, and Vesuvius. Mr. R. T. Harris was awarded the second prize for a nice clean lot of blooms, Sir Roger Palmer, Bart., being placed third.

Tulips made a bright bit of colour in the large room to the right of the central hall. Mrs. Goodbody was first in both the single and double tulips (pots) classes, Mr. D. Drimmie being second in the latter, and Mr. J. K. Laidlow second in the former. Lady Annaly, Miss Pim, Sir E. C. Cochrane, Bart., Captain Riall, R.N., Sir John Franks, Lord Plunket, Messrs. H. Dudgeon, E. A. Millar, and S. Cochrane are among the prizewinners in other sections.

The gallery round the central hall was largely taken up with the trade exhibits. Sir Josslyn Gore-Booth, Bart. (large gold medal), had a fine lot of daffodils from his Lissadell bulb farm. It is only four or five years since Sir Josslyn commenced bulb growing, but the flowers on his stand would have done an old grower great credit. Incognita was splendid, so were Oriflamme, C. J. Backhouse, Citron, Torch, Katherine Spurrell, Cassandra, and Golden Bell. The attendant in charge of the stand said that all the authorities at Lissadell thought this last would be one of the market flowers of the future. It is certainly very floriferous, and its handsome trumpet always takes one's eye. Incognita is a coming flower; it is terribly dear now, but time will rectify that, and then everybody will want to have it; it has a reddish-orange, much-flattened cup, which, on the light starry perianth, is exceedingly taking.

Messrs. Hogg and Robertson, Lim. (gold medal), had a good fresh lot of flowers. Their collection included Duke of Bedford (bicolor), King Alfred, Queen Bess (very good), Ariadne, Flambeau, Lady Doneraile (yellow self Magni), Autocrat, Orphee, Cernuus Plenus, Mrs. J. Thorley, and Golden Orb. It was interesting to compare these two groups, one from the East and one from the West of Ireland, and notice how much earlier the latter district is.

Messrs. William Watson and Sons had some beautiful floral designs; one novelty that created considerable interest was a wreath composed of dyed grevillea leaves. Messrs. Heath and Sons, of Cheltenham (gold medal), had a large and varied exhibit, consisting of winter-flowering carnations, orchids, rock plants in pots, and a good collection of the now popular scented geraniums.

Messrs. E. Browett and Sons (silver medal) had a rather stiffly arranged bank of palms, ferns, and foliage plants, with a few azaleas to brighten it up. Messrs. Charles Ramsay and Son (gold medal) had a group of roses, carnations, and flowering and foliage pot plants, backed with palms. Anemones were shown by Messrs. Orr White (medal), and cut roses by Mr. E. Bewley (gold medal).

Bristol Gardeners' Association.

A well-attended meeting was held at St. John's Parish Rooms, with Mr. C. H. Cave in the chair. The meeting was of exceptional interest, being the official visit of the Bristol amateurs. The subject for the evening was "Chrysanthemums," by Mr. Harris, a well-known and successful grower of these autumn-flowering plants. He gave his own practical experience, and explained that chrysanthemums should be well grown from the cutting stage to the time of flowering. Mr. Harris gave instructions as to potting, compost, pinching, and taking the bud, and recommended that to grow chrysanthemums well they should at their final shift be put into twelve-inch pots. Mr. Lee opened the discussion, and followed by Messrs. Curtis, Binfield, Garnish, Morse, Clark, Harford, and House. Mr. Hayball proposed, and Mr. Shelton seconded a vote of thanks to the lecturer. For six varieties of daffodils (prizes given by C. H. Cave, Esq.), Mr. Binfield was first, Mr. Scott second, and Mr. Clark third. Special certificates were awarded to Mr. Spry for three pots of mignonette; to Mr. Hunking for Lælio-cattleya Felicity; and Mr. Curtis received an ordinary certificate for Dendrobium nobile nobilis.

East Anglian Horticultural Club.

In spite of the fact that April is a busy month in the garden, there was a large gathering at the April meeting of this club, held at the Boar's Head Hotel, Norwich, on the 8th inst. Several new members were proposed, and Mr. W. L. Wallis (secretary) announced that over 30 new members had been enrolled this year. A fair display of flowers, fruits, and vegetables were placed upon the exhibition tables, and created much interest. Messrs. Hobbies, Lim., Dereham, sent some choice pot roses; Mr. T. B. Field brought up some grand flower heads of clivias; Mr. S. Hunt, gardener to Mrs. Willis, staged a profusely-flowered specimen of the mauve soldanella; Mr. C. Burtenshaw showed how to keep apples, his Cox's Orange Pippin being very firm; strawberries of exceptional colour and flavour were staged by Mr. W. Palmer, Thorpe; and Mr. F. Williams, gardener to Louis Tillett, Esq., M.P.; orchids had a good champion in Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., and there were, besides these, many others.

A paper written by Mr. H. B. Dobbie, Ditchingham, was read by Mr. H. Perry, Mr. Dobbie's health not permitting him to attend. The subject of the essay, "The Earth's Vegetation," seemed a most stupendous one to attack. However, the essayist tackled it in a very understandable way. He went back far into remote periods, relying upon geological information for support of his theories. The rapidity of the multiplication of one-celled organisms, to show how vegetation grew, was well put. The subject seemed, however, to be somewhat beyond the debating powers of the general members. Messrs. T. B. Field, J. Powley, E. Peake, H. Goude, H. Perry, T. G. Bishop, and J. C. Abel were the chief speakers.

NOTES OF OBSERVATION.

Solomon's Seal.—In winter time, when anything in the way of greenery for mixing with cut flowers for room decoration is most acceptable, I know of nothing so useful or more pleasing than Solomon's seal. Its cultivation is simple in the extreme, as it needs but little care and attention, compared with some other less useful plants. Planted in the open, on deeply worked beds, with a liberal addition of well-decayed manure, or, if the soil is heavy, lightened with leaf-mould, etc., they quickly grow into strong forcing plants. If a goodly number are wanted now that the young growths are shooting above the ground, they may be lifted, divided, and at once planted. A good plan, too, to increase these plants, is by way of reserving the basal portions of the rhizomes when lifting for forcing. Healthily grown plants, when forced gently, and which have been potted into six-inch pots, will be found very useful for intermixing with plants in stands, or in the conservatory. The delicate pale hue of the leaves, and the graceful habit of growth makes the plant admirable for such purposes.—H. Markham, Wrotham Park Gardens.

Early-Flowering Chrysanthemums, if sufficiently advanced, and well hardened off, may now be planted, and old plants that have survived in their winter quarters may be lifted, divided, and re-planted, insuring a good supply of roots to each piece. Old pot-grown plants that have been kept through the winter may be treated in same way. There are now so many good varieties of these, and they are so very useful and helpful for furnishing summer and autumn displays, that no garden should be without them. A few good varieties are Mychett White, Lady Fitzwygram, White Quintus, White Masse, King of the Earlies, Roi des Blancs, Market White, Mrs. A. Willis (yellow), Mychett Beauty, Orange Masse, Maggie, Horace Martin, Glow, Goacher's Crimson, Jeanie, Beacon, Roi des Precoces, Ruddigore, Kuroki, Pearlie, Mdlle. Marie Masse, Mabel, Gertie, Goacher's Pink, James Bateman, Harvest Home, Cactus, Beauty, Betty, H. H. Crane, and Rabbie Burns. The list might be greatly extended, and each year sees further acquisitions arrive. These may be planted either in beds or masses, or at intervals in the borders and beds. If grown entirely for cutting purposes they may be planted where the floral display has not to be considered; well dress the ground with thoroughly decayed manure, and deeply dig it in, then make the ground firm before planting, and plant about two feet apart each way, except for the dwarfer-growing [illegible] which may be eighteen inches apart.—[illegible] Hazelton, Knowsley Gardens, Prescot.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

RED SPIDER ON GOOSEBERRY BUSHES. — W. C., Loughton: Spray the bushes with a quassia or nicotine solution, adding a little soft soap to make the insecticide slightly adhesive. As soon as the berries begin to swell rapidly, cease the use of insecticide, but continue to syringe the bushes frequently with clear water if there are still evidences of red spider. Directly warm weather sets in mulch over the root area of the bushes with half-decayed manure.

DAMAGED ROSES.—W. T., Walsall: We believe the damage done to the protected roses is due to the use of fresh strawy litter as protective material. Straw saturated with urine would, if at all closely packed, ferment, and this fermentation would certainly harm the growths, especially those made by rank-growing varieties, and which would not be well ripened last autumn owing to the absence of sunshine and warmth. In future use only old clean straw or bracken for proprotecting your roses. You could not have done better than cut the damaged plants hard back.

DISEASED CHRYSANTHEMUMS. — W. B., Clewer: The leaves show traces of the common Chrysanthemum Rust, but there is a state of collapse about them that is not due entirely to this fungus. An over-rich soil, excess of water, or even too warm a position followed by a sudden fall of temperature, would in some measure be answerable for such a collapse, and the latter would be very likely to be the cause if the plants were newly potted; there is mildew present, and this lends further evidence to the supposition. Remove the affected leafage, and spray with weak sulphide of potassium solution. Isolate the diseased plants as far as possible.

HORTICULTURAL EXAMINATIONS.—M. F., London: An examination is held annually by the Royal Horticultural Society for gardeners employed in the London and other public parks and gardens, and the examination is partly written and partly viva voce. A certificate gained at these examinations gives the owners thereof a considerable advantage in the case of the parks and gardens administered by the London County Council. If you decide to sit for the examination next year we would advise you to commence the work of preparation at once. By commencing thus early and working systematically, you will be able to thoroughly ground yourself in the several subjects without unduly taxing yourself. Candidates are expected to have a knowledge of: 1. Trenching, digging, and draining; and the purpose of each. 2. Variety of soils and manures; their effect and suitability to various purposes. 3. Grass land: renovation, turfing, relaying; grass edges; grass under trees. 4. Various methods of propagating trees and shrubs, herbaceous, greenhouse, and sub-tropical plants. 5. Trees, plants, and shrubs specially suitable for town growth, and their correct nomenclature. 6. The general structure of plants. 7. Such elementary drawing as will assist in the formation of beds and their laying out. 8. Works and estimated expenditure on roads, paths, stonework, rockwork, fences, lakes, bridges, seats, etc. 9. Candidates will also be expected to display evidence of general knowledge and observation, and to be able to write an intelligent report on any subject connected with their work. In preparing for the examination, thoroughly ground yourself in the several subjects to ensure the knowledge being of service to you in your work. It would be an advantage were you to obtain from the society a copy of the questions set at the last examination, and from time to time answer two or three without the aid of book or notes. This will be excellent practice, and the training you have undergone will be of great assistance to you in the examination room, where so many candidates fail owing to their inability to answer the questions clearly and concisely.

NAMES OF PLANTS.

J. D. C., Cobham.—1, Pinus Pinaster; 2, a variety of Picea excelsa.

G. D. R., Durham.—1, Anemone apennina; 2, Berberis aquifolia; 3, Ada aurantiaca.

C. H. W., Derby.—1, Orobus vernus; 2, Clematis indivisa lobata; 3, Davallia pentaphylla.

S. E. B., Woking.—1, Libocedrus decurrens; 2, Abies Nordmanniana; 3, Cupressus macrocarpa; 4, Retinospora squarrosa.

P. J., Gloucester.—1, Olearia Haasti; 2, Kerria japonica fl.-pl.; 3, Saxifraga apiculata; 4, S. cæspitosa rubra; 5, Sedum acre aurea.

A. G. G., Gaddesdon.—1, Pelargonium glaucifolium; 2, P. fragrans; 3, P. heraclifolium; 4, P. crispum; 5, P. radula; 6, not recognised; 7, P. quercifolium; 8, Gesnera cardinalis; 9, not recognised, please send a bit of growth with a flower; 10, Acacia armata.

CARE OF GARDEN TOOLS.

The notes written on this subject by Mr. H. C. Prinsep have been of much interest to me, and I should like to say that if the gardener's position is to be improved it seems very evident to me that the care of tools and the general tidiness of the garden are matters that must receive careful and strict attention. However good a cultivator a man may be, if he is untidy or slovenly in his methods he cannot expect to gain the approval of his employer. I am aware of the great difficulty that one has to contend with in the matter owing to the scarcity of labour in many gardens, the number of hands in many cases being wholly inadequate to maintain the gardens in the high state of excellence in which many hard-working, conscientious head gardeners would delight in keeping them.

There is, however, no excuse for leaving tools about the garden, or in the greenhouses or other glass structures. The conservatory may be filled with beautiful plants, artistically arranged, but if a sponge, scrubbing-brush, or water-pot has been carelessly left in view, this is sure to give annoyance, and the whole effect is marred. The same thing holds good throughout the whole of the garden and grounds. There is a tendency in these days for young gardeners to feel "above" doing certain work, such as sweeping out a shed, washing, or even crocking a few pots, preferring to wait until the "garden boy" is at liberty, or else leaving the work undone. If these young gardeners ever fill the position of head gardeners, they will find few operations at which they will not have to "lend a hand." I will not close this note without a word of praise to the many hardworking and thoughtful young men one meets with in the profession. These men, who give their minds to the work in which they are engaged, and are ever ready to do whatever is required of them, will not fail to obtain a good position. In the position to which they attain they will not fail to do their best, and thereby assist materially in raising the "status of the gardener."

C. R.

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MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand promises to be a large one for Eastertide, and, as in many cases stocks are being held back for Saturday, prices are firm.

		s.	d.		s.	d.
Acacia	per doz. bun.	6	0	to	12	0
Adiantum cuneatum	per doz. bun.	5	0		9	0
Anemones	per doz. bun.	1	0		3	0
Arums	per doz.	1	6		3	6
Asparagus	per doz. bun.	1	6		6	0
Azalea, white	per doz. bun.	3	0		5	0
,, mollis	per bun.	1	0		1	6
Berberis	per doz. bun.	1	6		2	6
Camellias	per doz.	1	6		2	0
Carnations	per doz. blms.	1	6		2	6
,,	per doz bun.	8	0		12	0
,, Malmaison	per doz. blms.	8	0		10	0
Cattleyas	per doz.	8	0		12	0
Cœlogynes	per doz. blms.	1	0		1	6
Croton leaves	per bun.	1	0		1	6
Cyclamens	per doz. bun.	6	0		7	6
Cypripediums	per doz. blms.	2	0		3	0
Daffodils	per doz. bun.	1	0		4	0
Eucharis	per doz.	3	0		4	0
Forget-me-not	per doz. bun.	2	0		3	0
French fern	per doz. bun.	1	0		3	0
Freesias	per doz. bun.	2	0		3	0
Gardenias	per doz.	2	0		4	0
Hyacinths, Roman	per doz. bun.	4	0		6	0
Lapagerias	per doz.	1	0		2	6
Lilac	per bun.	3	0		4	0
Lilium auratum	per bun.	2	0		3	0
,, speciosum	per bun.	2	0		3	0
,, longiflorum	per bun	2	6		4	0
Lily of the Valley	per doz.	6	0		8	0
Marguerites, white	per doz. bun.	3	0		5	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	3	6		6	0
Narcissus	per doz. bun.	1	6		4	0
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	5	0		8	0
Ranunculus	per doz. bun.	5	0		8	0
Roses	per doz.	2	0		8	0
Smilax	per doz. trails	2	0		3	0
Spiræa	per doz. bun.	5	0		7	6
Stocks	per doz. bun.	3	0		4	0
Sweet Peas	per doz. bun.	3	0		5	0
Tuberoses	per doz. blms.	0	4		0	6
Tulips	per doz. bun.	5	0		12	0
Violets	per doz. bun.	2	0		3	0
Wallflowers	per doz. bun.	1	6		2	0

Fruits.

Business is steady, and prices are fair for the season.

		s.	d.		s.	d.
Apples, Australian	per case	10	0	to	20	0
,, Canadian	per barrel	12	0		20	0
,, Californian	per box	10	0		16	0
Bananas	per bun	3	0		10	0
Cranberries	per case	8	6		10	6
Grapes, English	per lb.	2	0		4	0
,, Belgian	per lb.	1	9		3	0
,, Almeria	per 12lb.	4	0		6	0
,, Cape	per box	2	6		4	0
Lemons	per case	8	0		12	6
Nectarines, Cape	per box	6	0		10	0
Oranges	per case	7	0		30	0
Pears, Cape	per box	5	0		8	0
Pineapples	each	1	6		4	0
Plums, Cape	per box	4	0		8	0
Strawberries	per lb.	1	6		4	0
Walnuts	per bag	7	0		8	6

Vegetables.

Fairly good supplies arrive and meet a regular demand.

		s.	d.		s.	d.
Artichokes	per doz.	2	0	to	3	0
Asparagus, Paris green	per bun.	3	6		5	6
,, English	per bun.	4	0		5	6
,, Spanish	per bun.	2	0		2	6
,, sprue	per bun.	0	6		1	6
Beans, French	per lb.	0	8		1	0
,, Madeira	per bskt	2	0		3	0
Beet	per bush.	1	3		2	0
Cabbage	per tally	3	0		5	0
Carrots	per doz. bun.	1	0		1	6
,,	per bag	2	6		3	0
,, French, new	per doz. bun.	6	0		7	6
Cauliflowers	per doz.	2	0		3	0
Celery	per bundle	0	9		1	3
Celeriac	per doz.	1	6		2	0
Chicory	per lb.	0	2		0	4
Cucumbers	per doz.	2	6		6	0
Endive	per doz.	1	9		3	0
Greens	per bag	1	0		2	6
Horseradish	per doz. bun.	10	0		12	0
Leeks	per doz. bun.	1	0		1	6
Lettuce, cabbage	per doz.	1	0		1	0
,, Cos	per doz.	3	6		5	0
Mint	per doz. bun.	2	0		3	0
Mushrooms	per doz. lb.	8	0		12	0
Onions, English	per cwt.	4	0		4	6
,, Spanish	per case	5	0		6	6
Parsnips	per bag	1	6		2	0
Parsley	per doz.	2	0		3	0
Rhubarb	per doz. bun.	1	0		1	6
Savoys	per tally	3	0		4	6
Seakale	per doz. pun.	9	0		12	0
Tomatoes, Teneriffe	per package	8	0		16	0
Turnips, French, new	per doz. bun.	6	0		10	6
Watercress	per doz. bun.	0	4		0	6

LONDON POTATO MARKETS.

The demand for old potatoes continues to be quiet. New stocks come in slowly, but the recent Teneriffe importations are good.

		s.	d.		s.	d.
British Queen	per ton	90	0	to	100	0
Blacklands	per ton	80	0		90	0
Dunbar Maincrops	per ton	110	0		120	0
Dunbar Up-to-Date	per ton	110	0		115	0
Kent Up-to-Date	per ton	106	0		110	0
Langworthy	per ton	90	0		105	0
Lincoln Maincrop	per ton	95	0		100	0
Guernsey, new	per lb.	0	4		0	5
Teneriffe, new	per cwt.	10	0		13	0
Algerian, new	per cwt.	12	0		13	0

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

MONDAY, April 20.—Easter Monday.

TUESDAY, April 21. — Ipswich Spring Show; two days.
Huntingdon Daffodil Society.
Plymouth Daffodil Society.
Croydon Gardeners' Association; lecture on "Ventilation," by Mr. Harris, of Ealing.

WEDNESDAY, April 22.—Royal Botanic Society's Exhibition.
Royal Society of Arts.
Brecon Spring Show.

THURSDAY, April 23.—Midland Daffodil Show at Birmingham; two days.

FRIDAY, April 24. — Ghent International Horticultural Exhibition; judging day.

SATURDAY, April 25.—Ghent International Horticultural Exhibition; opening day; nine days.
Norfolk and Norwich Horticultural Society—Spring Show, St. Andrew's Hall.
Presteign Daffodil Show.
North Lonsdale Spring Show.

TUESDAY, April 28.—Royal Horticultural Society; Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees, at 12 o'clock; lecture at 3 p.m. on "The Profession of Landscape Gardening," by Mr. Edward White; Scientific Committee at 4 o'clock.
National Primula and Auricula Society at the Royal Horticultural Hall.

WEDNESDAY, April 29.—Royal Society of Arts.
School Teachers' Examination in Horticulture at the Royal Horticultural Hall.

Raising Choice Sweet Peas.—Some of the novelties have been so extremely difficult to obtain this season that it becomes the lucky possessors of them to be more than usually careful in the sowing. Personally, I believe there is no system to beat that of sowing one seed in a small pot, and keeping the pots in a greenhouse until germination is well assured. The sweet pea is, of course, hardy, and germinates as well in the open garden as in the greenhouse, but in the latter place one has the plants or seeds under such absolute control, and is able to snap the fingers at insect pests. I do not believe in keeping the young plants under glass too long, and would advise shifting them to a cold frame as soon as their existence is clearly demonstrated by the appearance of the first pair of true leaves.—E. J. K.

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METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. April 5 to April 11.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 5—Sunday	2 20	41	39	46	38
,, 6—Monday	5 50	43	40	49	38
,, 7—Tuesday	11 50	42	39	53	37
,, 8—Wednesday	10 50	41	39	56	30
,, 9—Thursday	10 20	42	39	59	27
,, 10—Friday	1 0	47	43	48	42
,, 11—Saturday	—	44	42	47	41
Means	6 0	43	40	51	36

Date. 1908. April 5 to April 11.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	Temperature of the Soil. At 9 a.m. At 2 ft. deep.	Temperature of the Soil. At 9 a.m. At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
April 5—Sunday	0.07	44	45	44	31
,, 6—Monday	—	43	45	44	35
,, 7—Tuesday	—	43	45	44	31
,, 8—Wednesday	—	43	45	44	30
,, 9 Thursday	0.06	43	45	44	37
,, 10 Friday	—	46	45	44	31
,, 11—Saturday	—	46	46	45	40
Means	(total) 0.13	44	45	44	[illegible]

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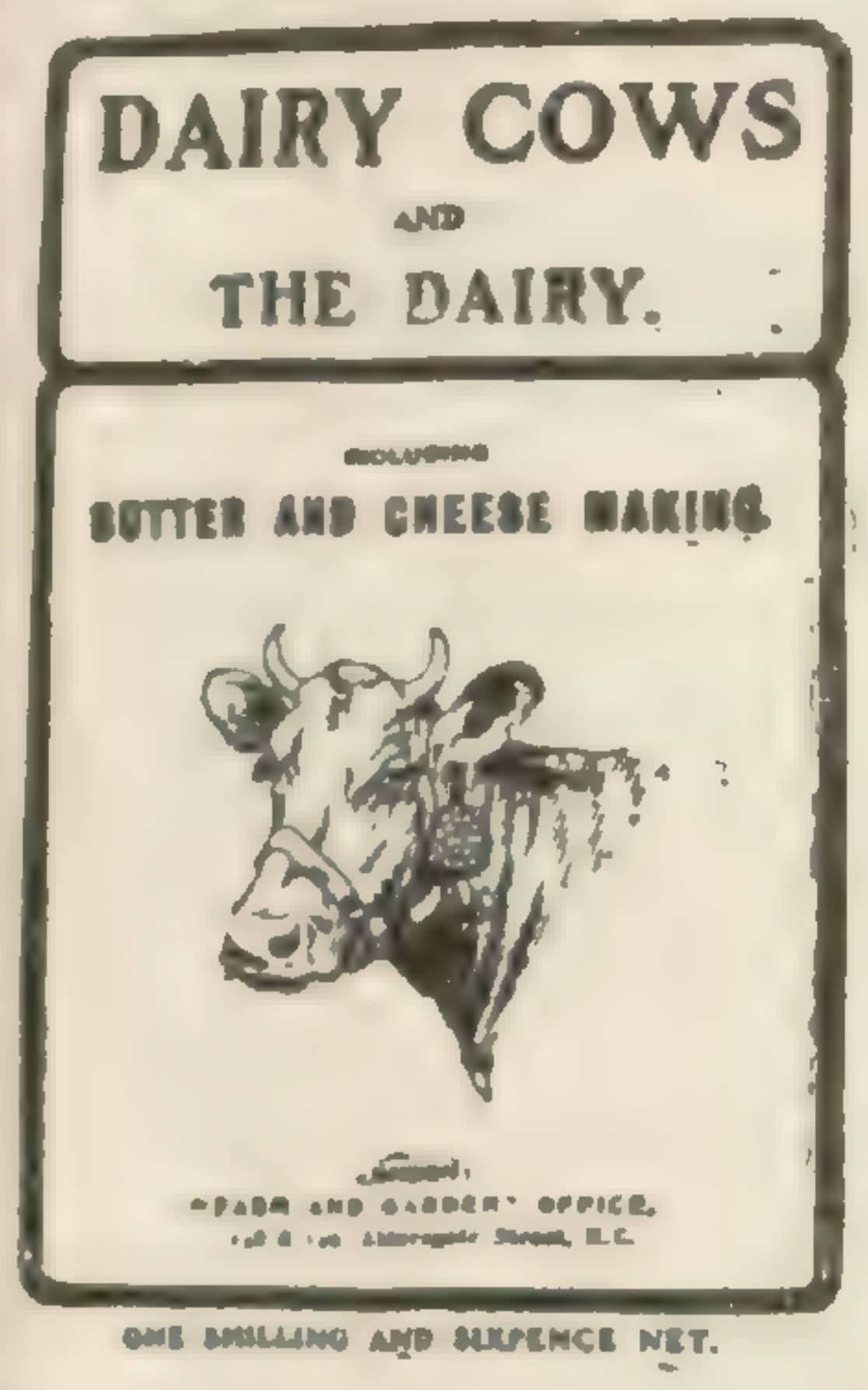
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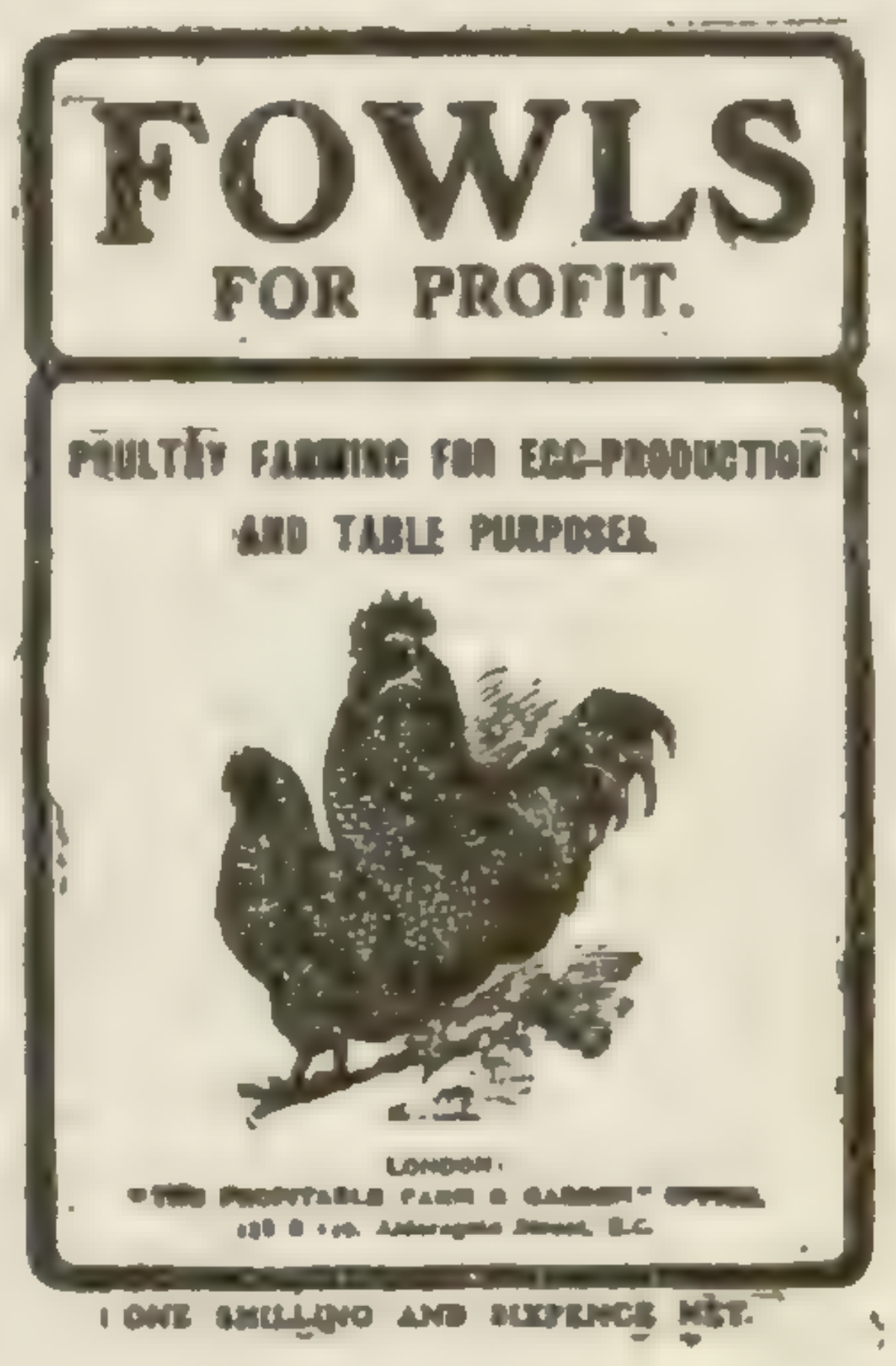
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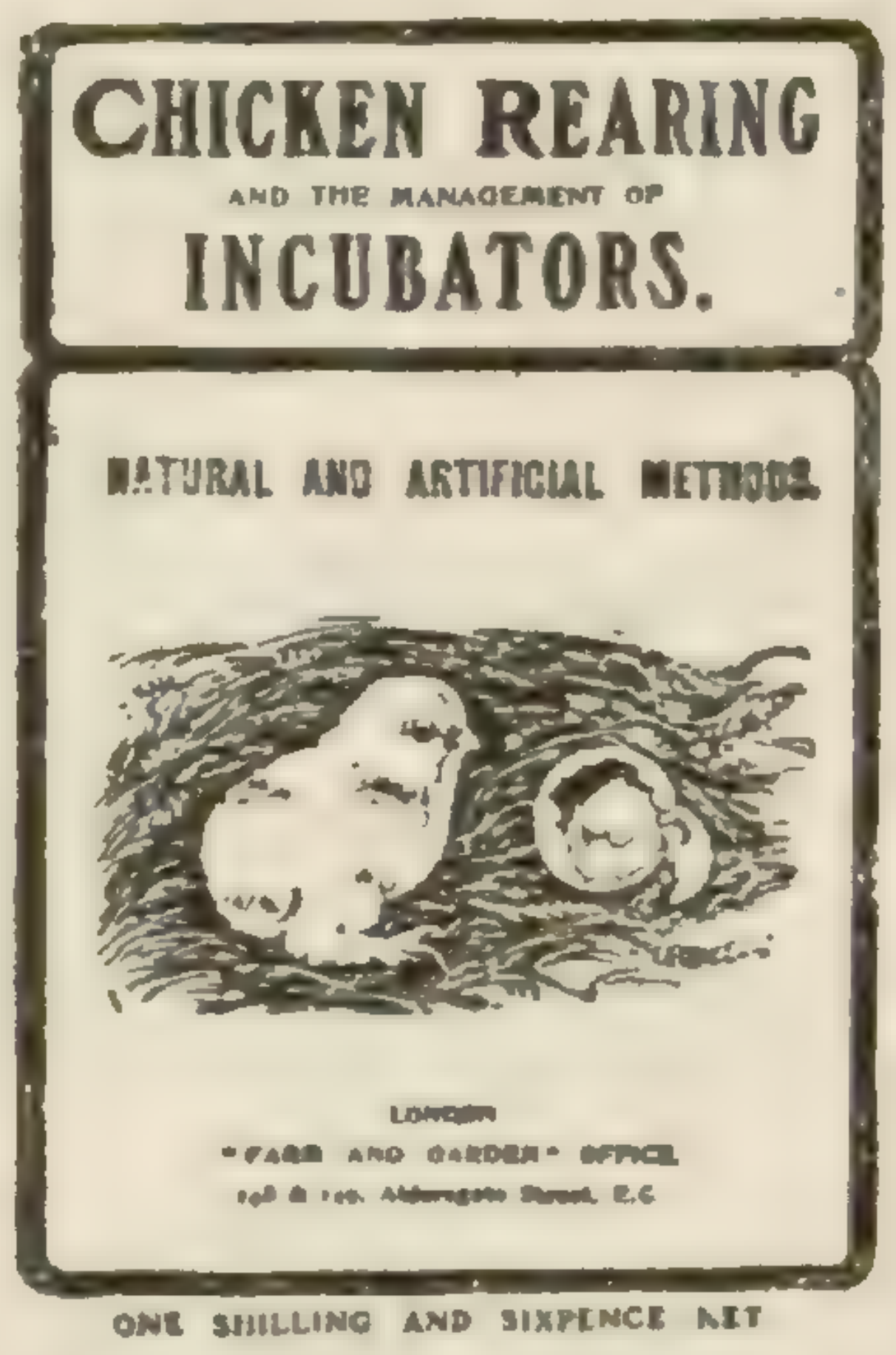
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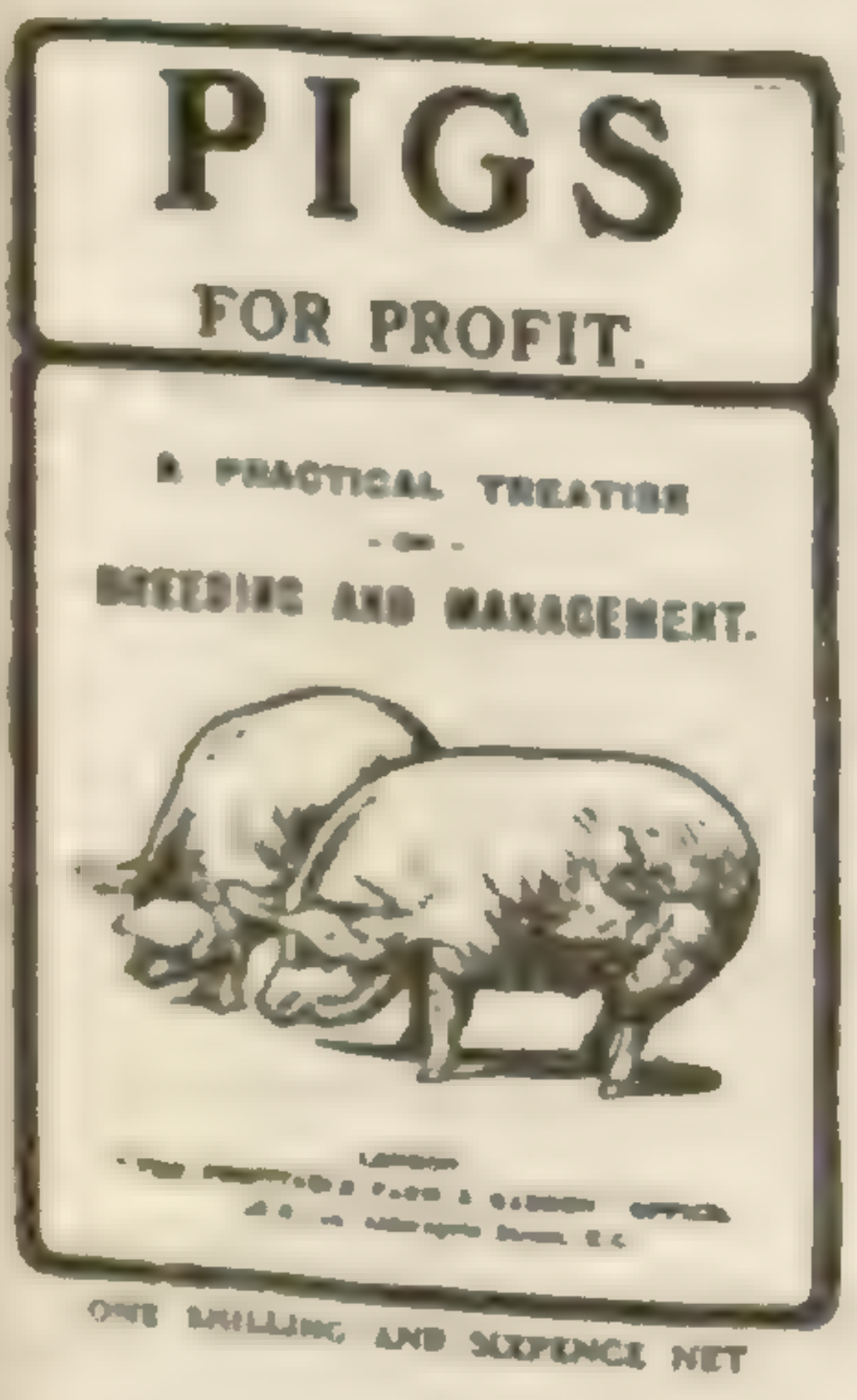
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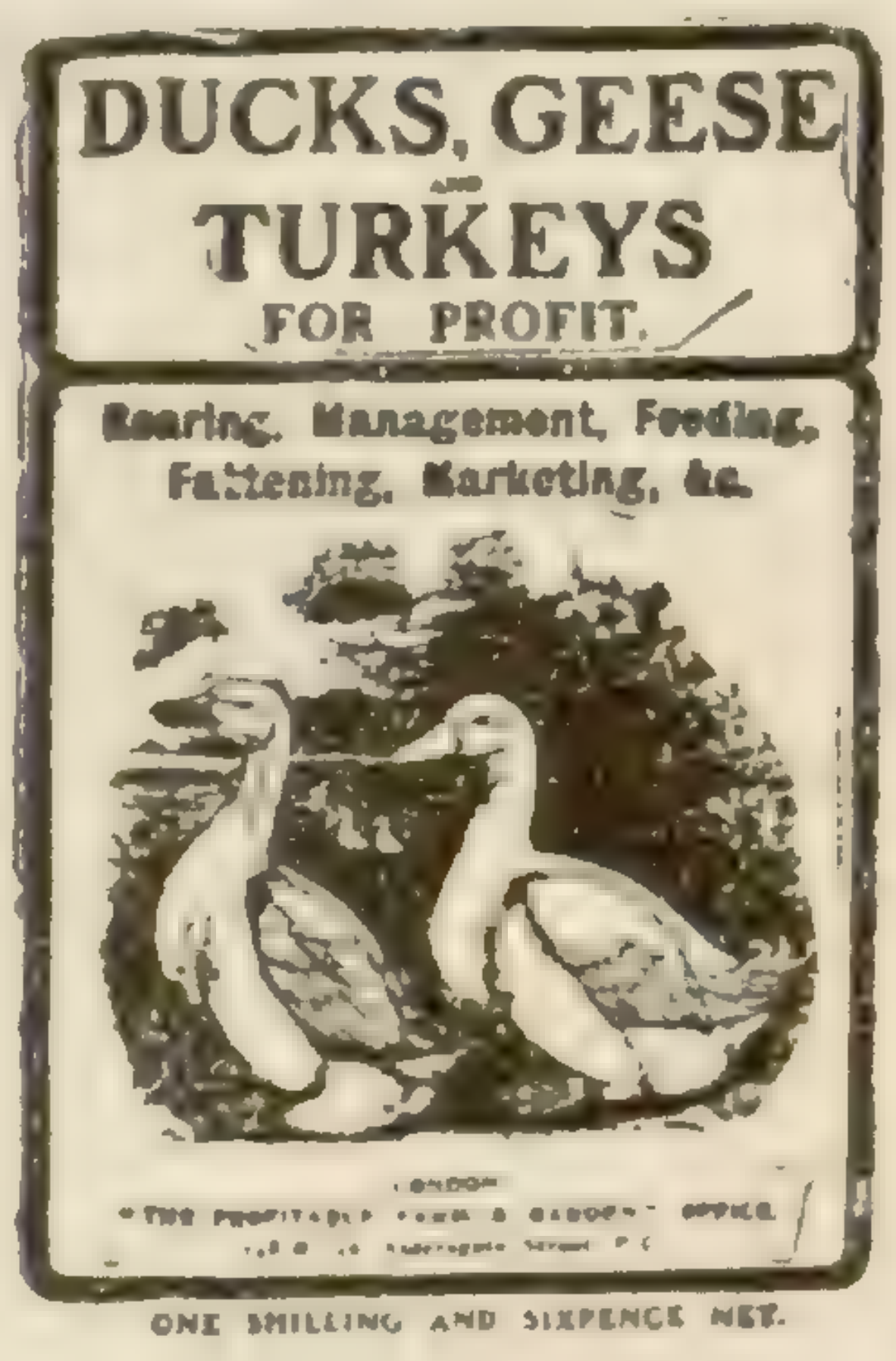
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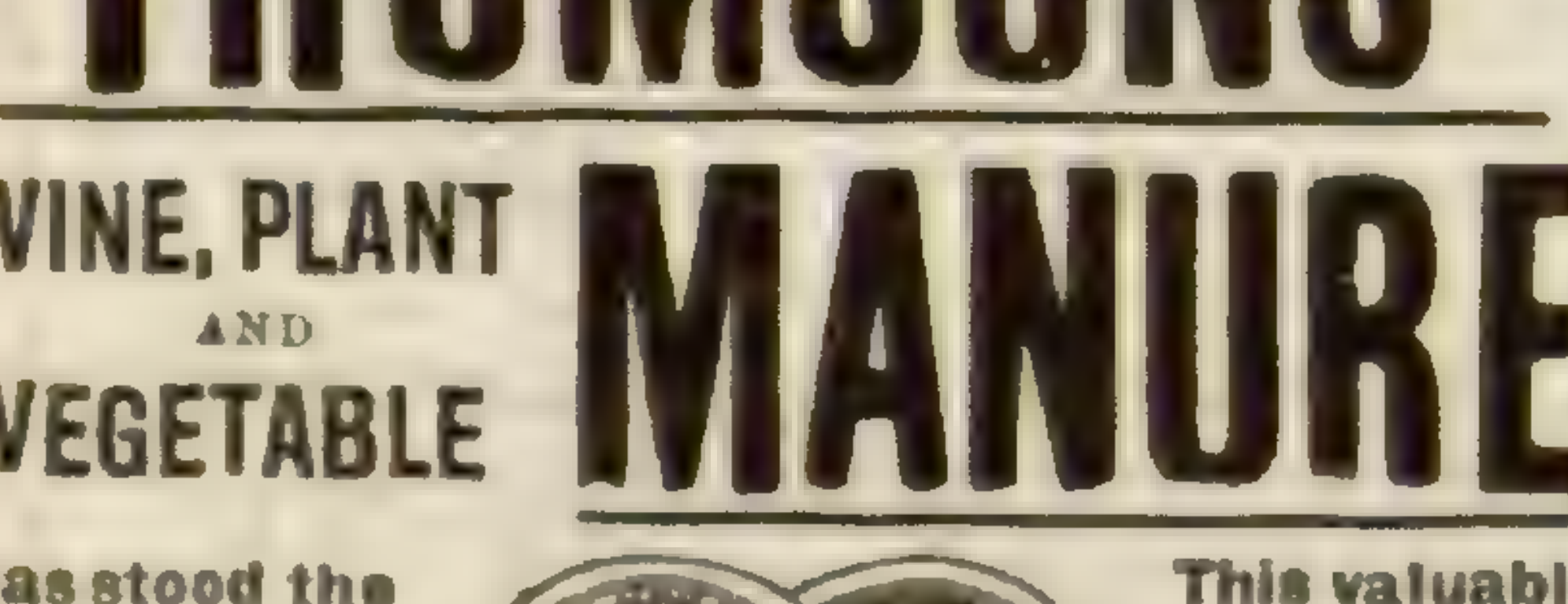

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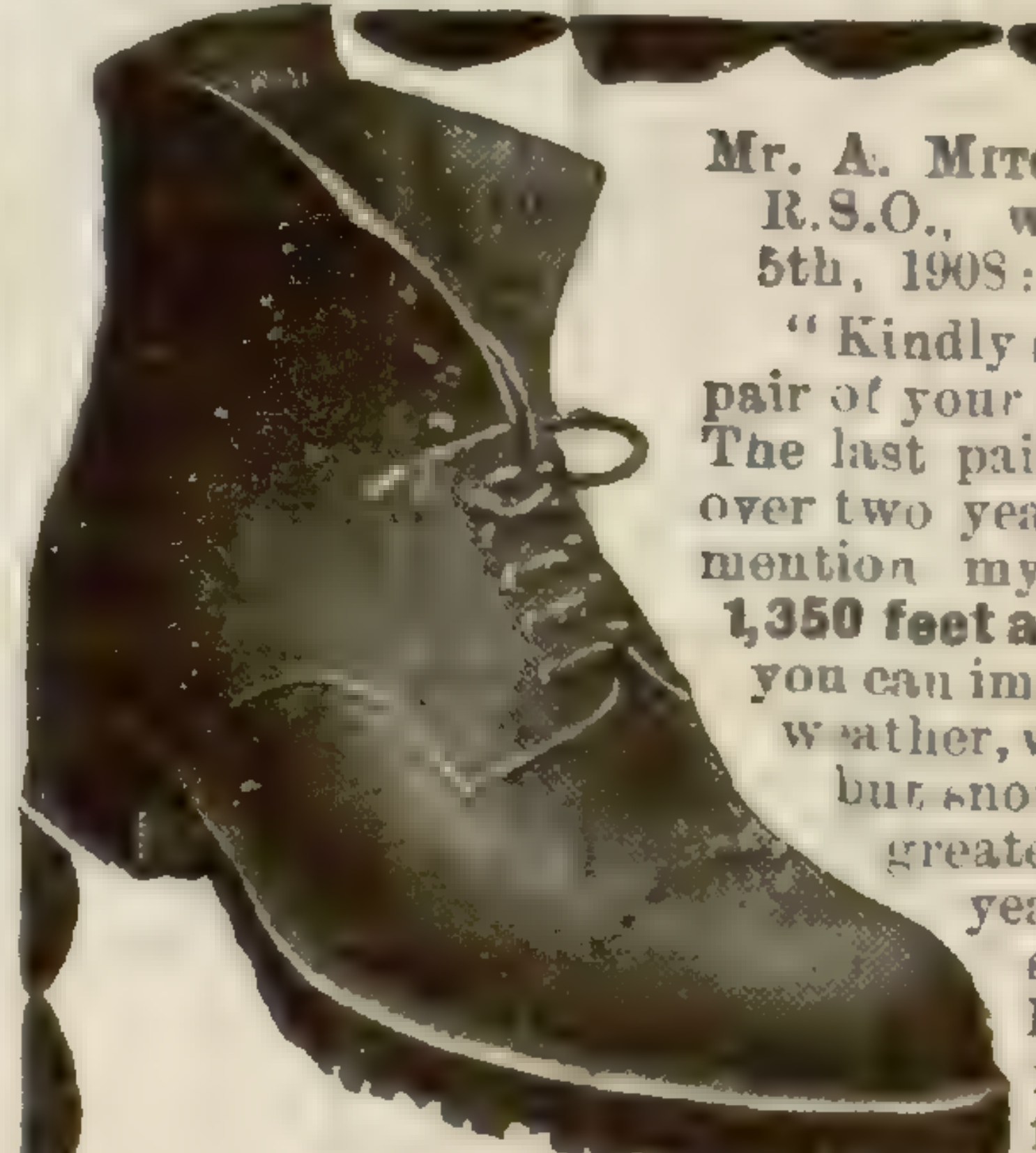

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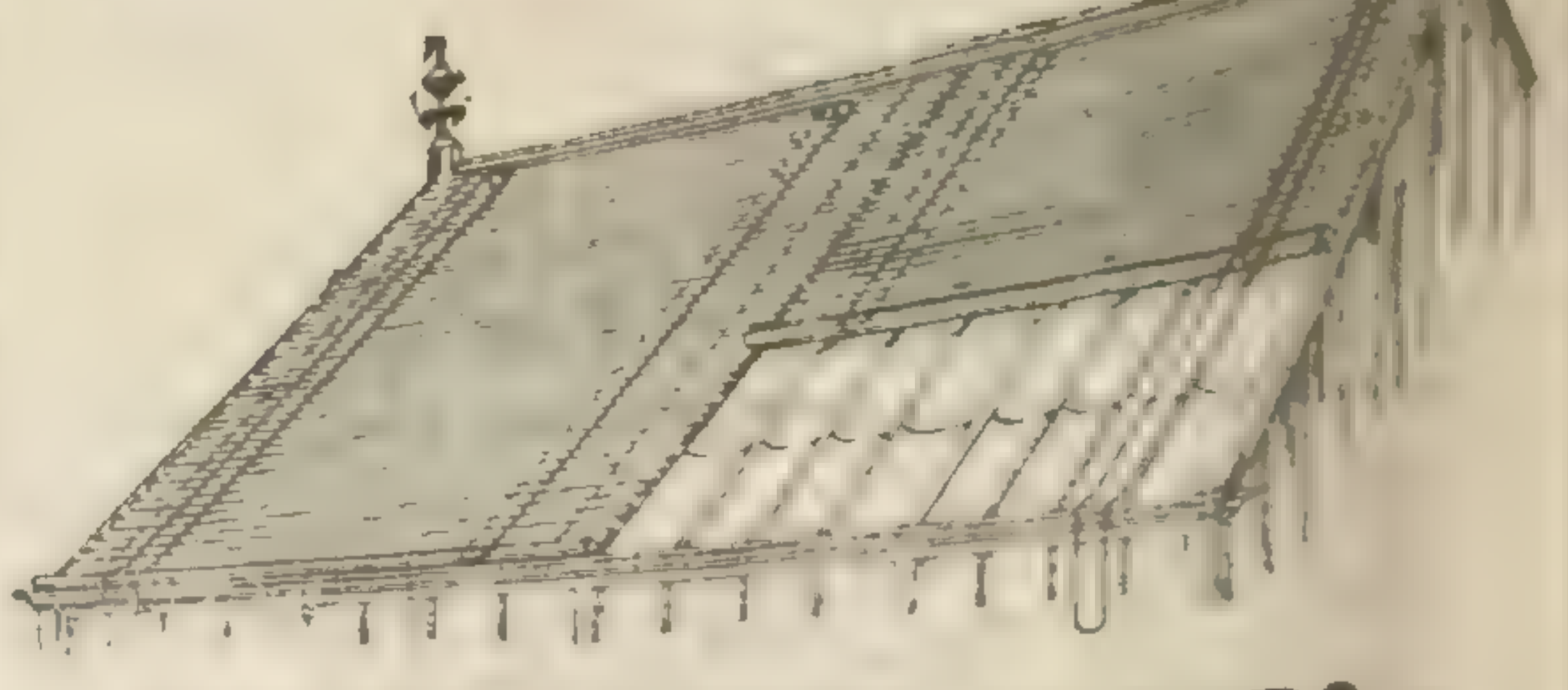

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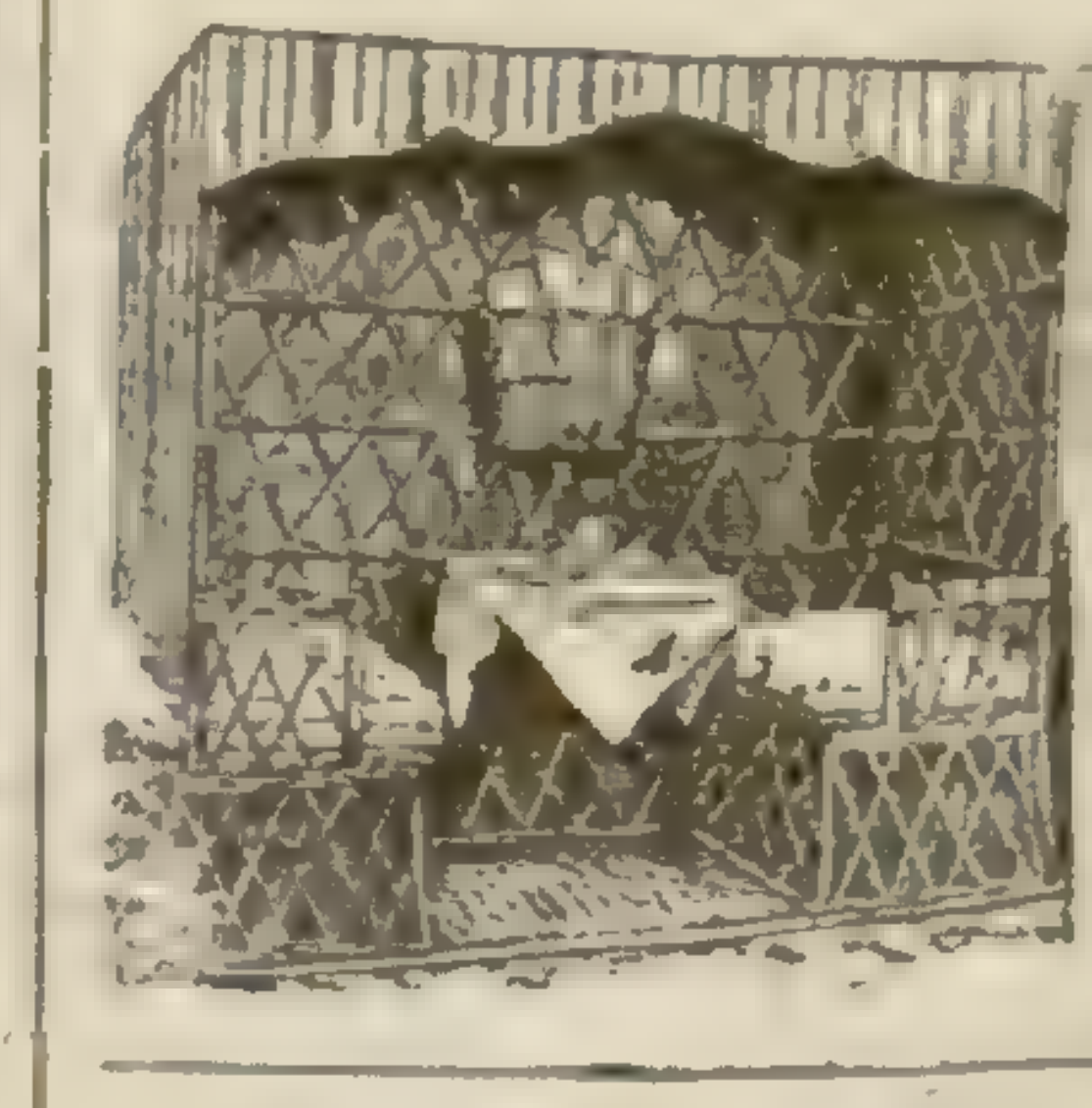

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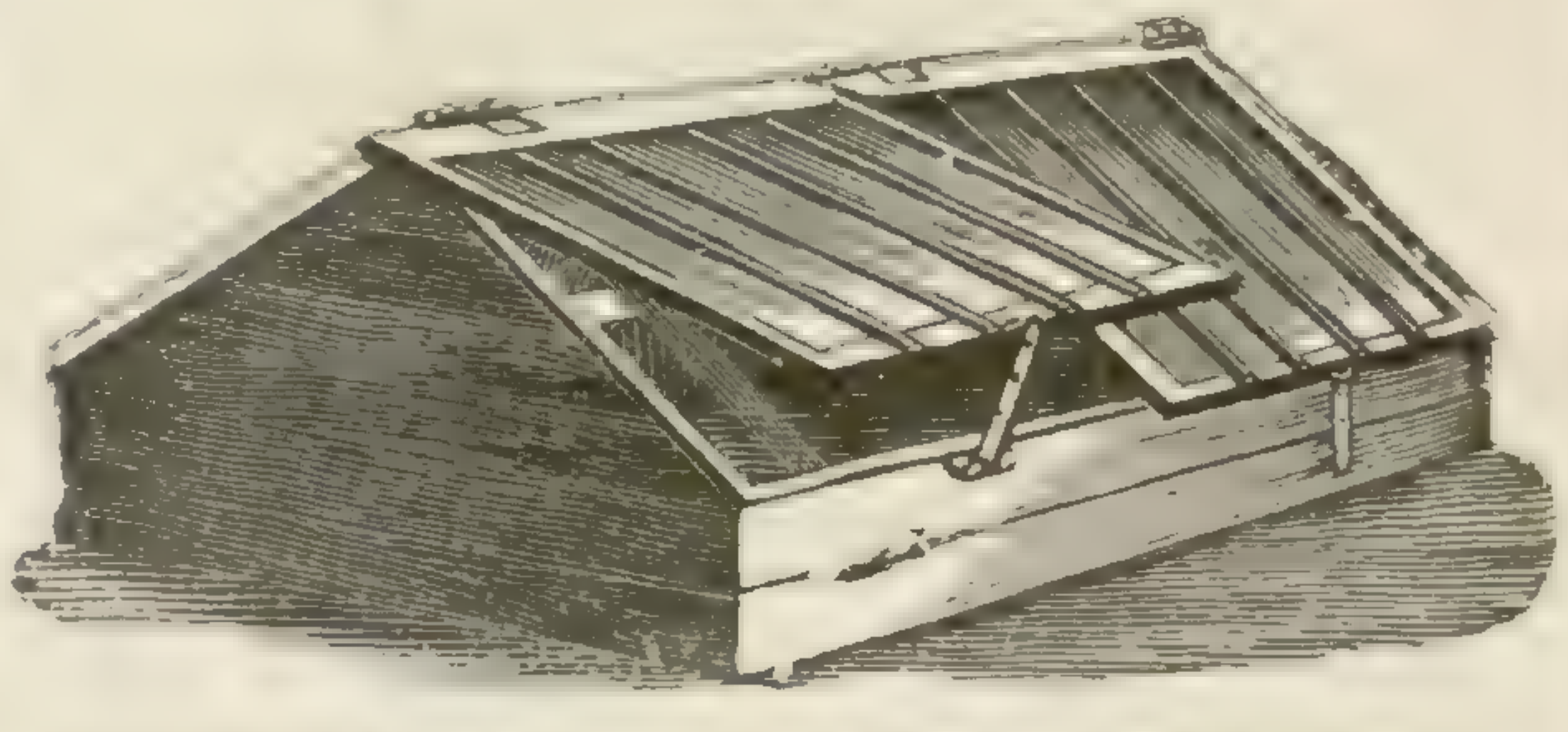

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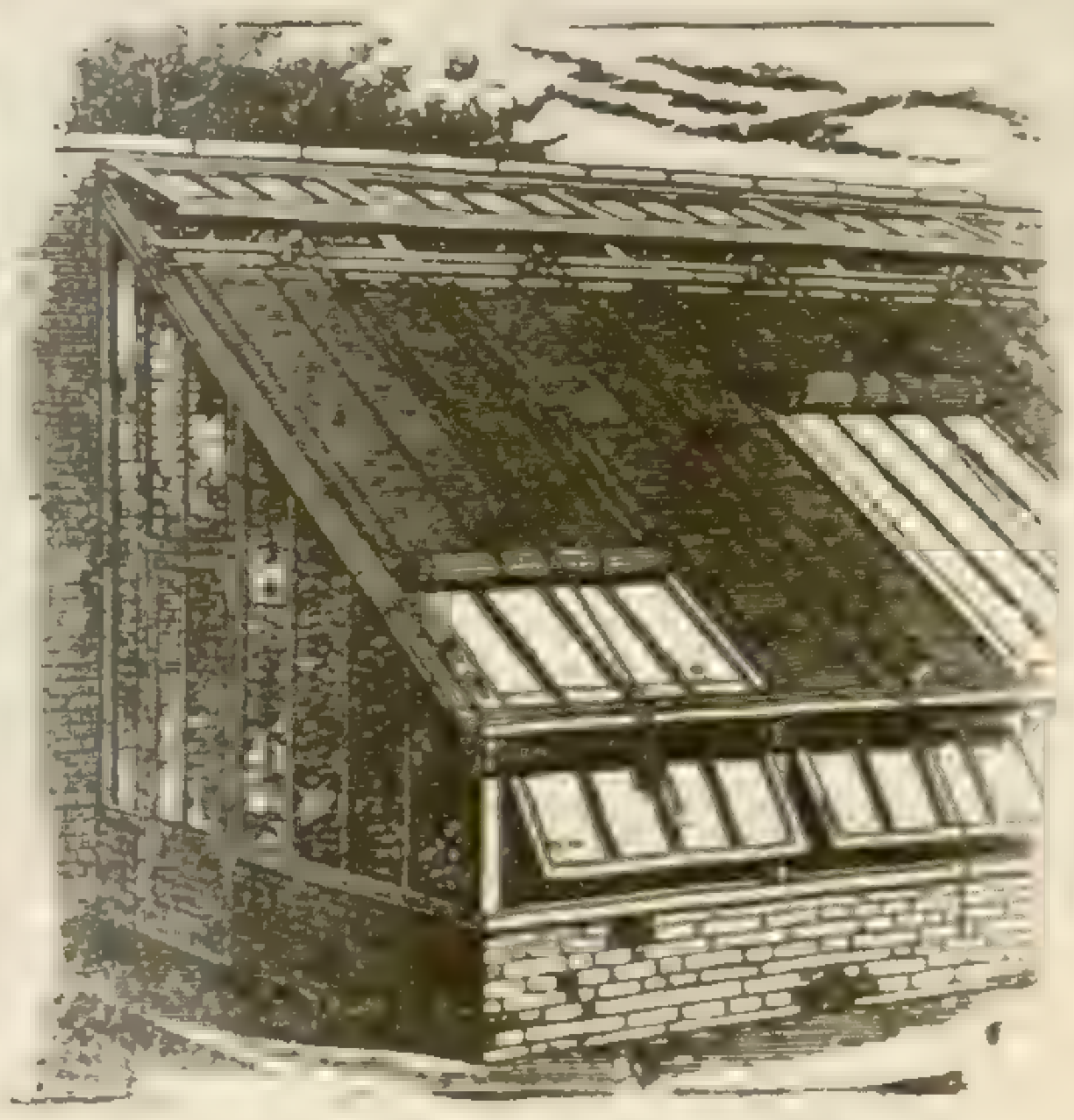

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AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references, age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (good Single-handed or one or two under); life experience in all branches; age 30; married, no family. E. TAYLOR, Stilstead Cottage, East Peckham, near Tonbridge.

GARDENER (Single-handed or otherwise), life experience Inside and Out in the general management of a good garden; highly recommended by present employer; age 25. H. GOODSHIP, Tempsford, near Sandy, Beds.

GARDENER.—B. M. ST. AUBYN, Esq., wishes to highly recommend his Gardener as good singlehanded or with help. Experienced Inside and Out. Good references. Age 35. Married; three children. F. JAMES, Whitchall Cottage, Codmore Hill, Pulborough.

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GARDENER desires Single-handed SITUATION, or as UNDER in good establishment; 1 years' experience; age 30; married. GARDENER, 5 Eden Road, Elmers End, Kent.

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GENTLEMAN highly recommends his GARDENER; experienced in all branches Inside and Out; understands Management of Cattle age 47; total abstainer. R. MONTAGUE, The [illegible] Repley.

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JOURNEYMAN (Third).—Mr. WHITE wishes to highly recommend W. TUCKER [illegible] years present; Inside or Inside and Out; Bothy preferred. The Gardens, Grange, Kingston, Taunton.

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YOUNG MAN, age 22, seeks SITUATION as Under Gardener; 8½ years' experience [illegible] herbaceous hand; good references. Abstainer. [illegible] preferred. G. PASSMORE, The Gardens, [illegible] Stratford-on-Avon.

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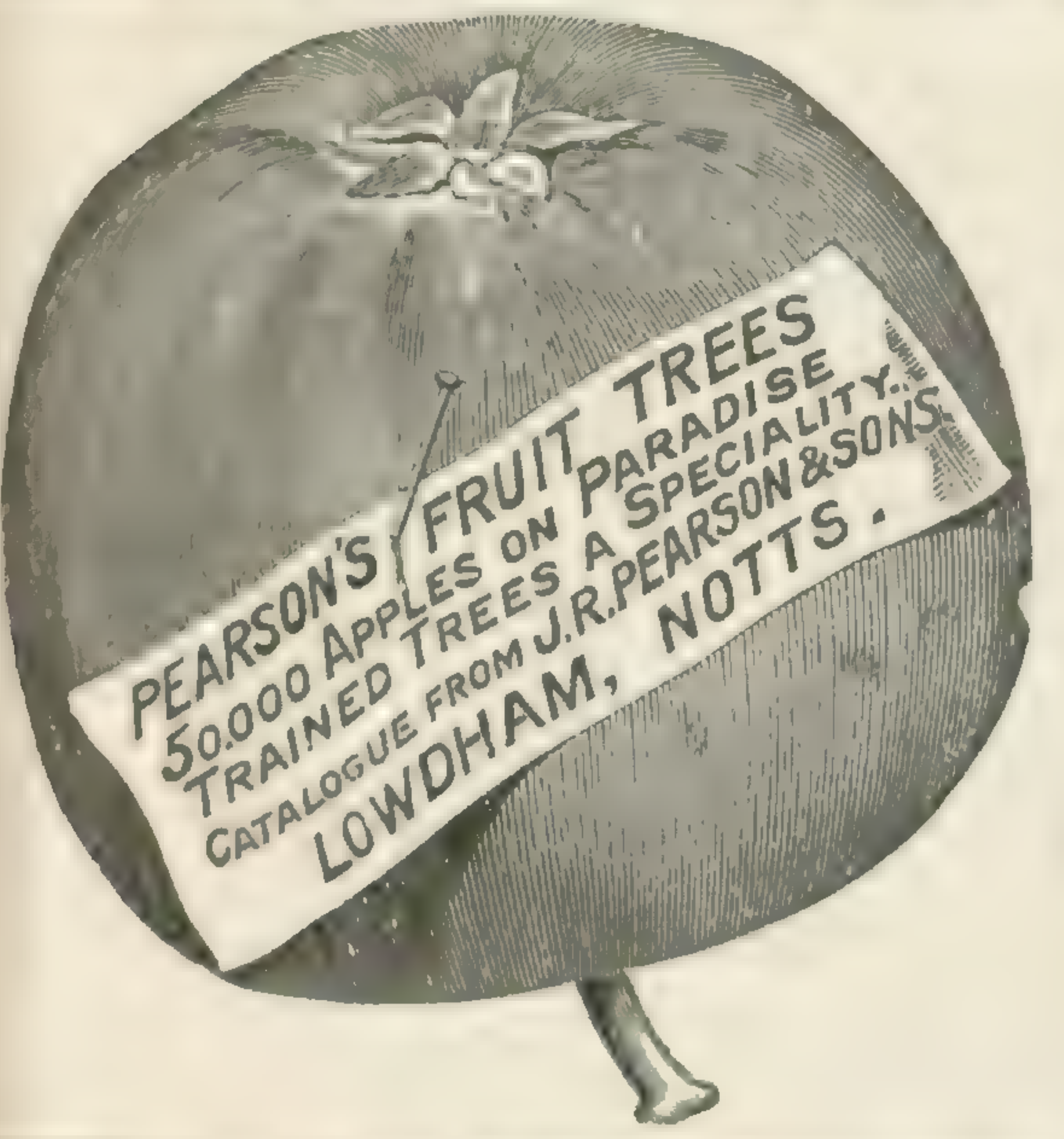
WANTED, YOUNG MAN, to help Inside and Out, where four others are kept; must have had some experience; wages seventeen shillings per week. Apply Mr. F. HUGHES, Head Gardener, [illegible] Priory, Andover, Hants.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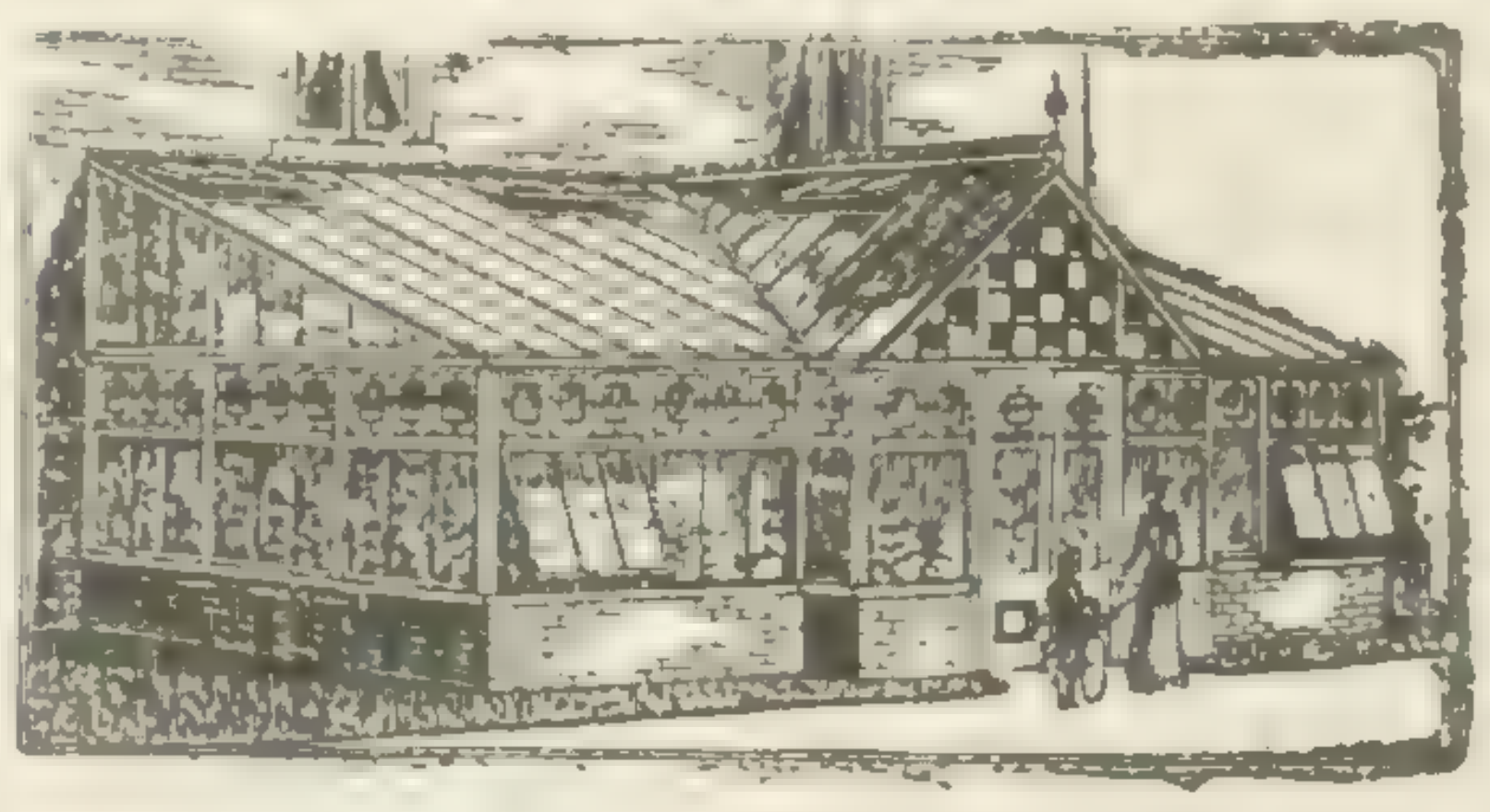

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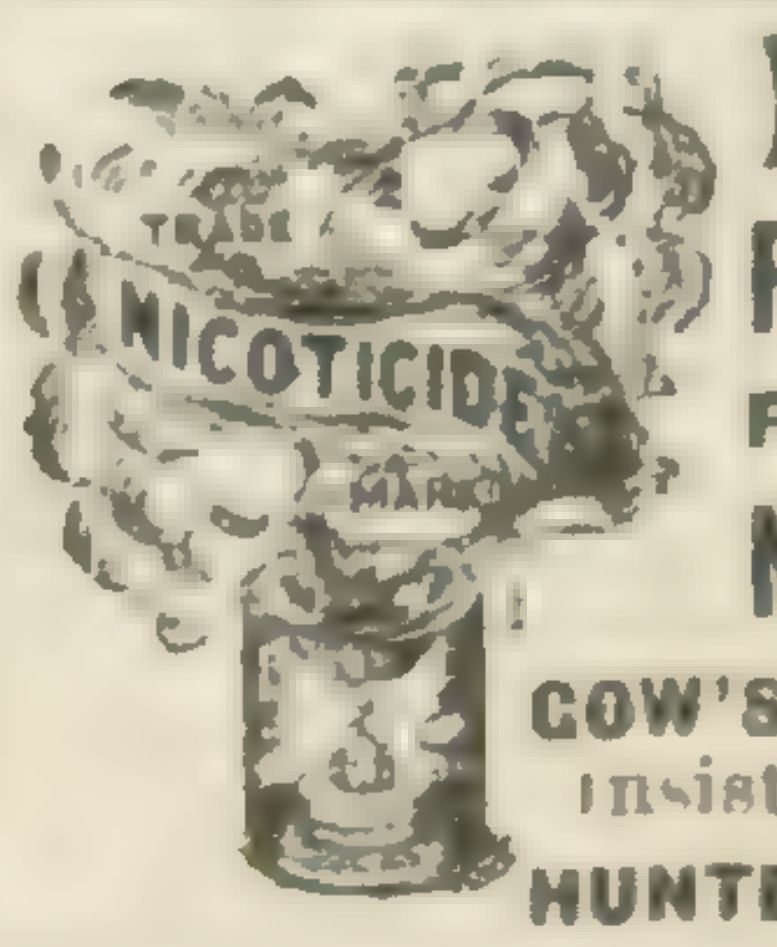

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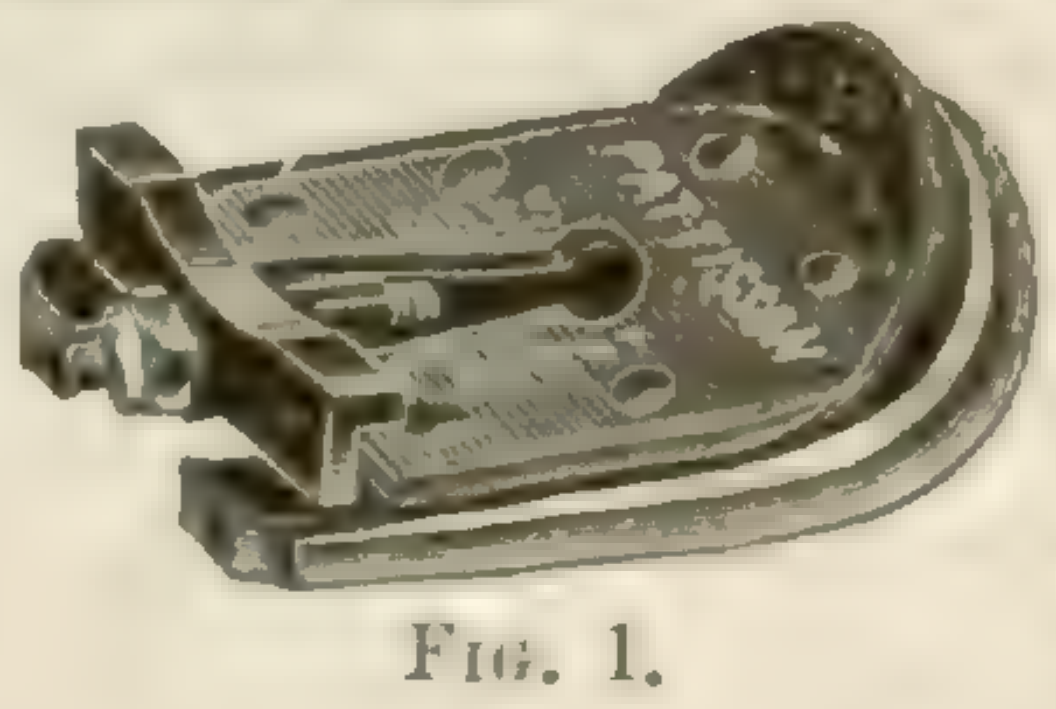

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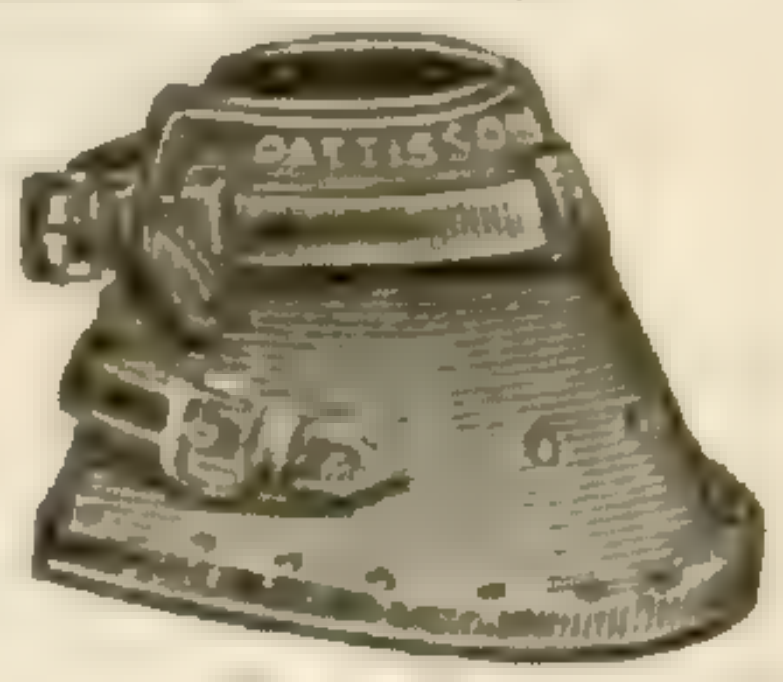

FIG. 2.

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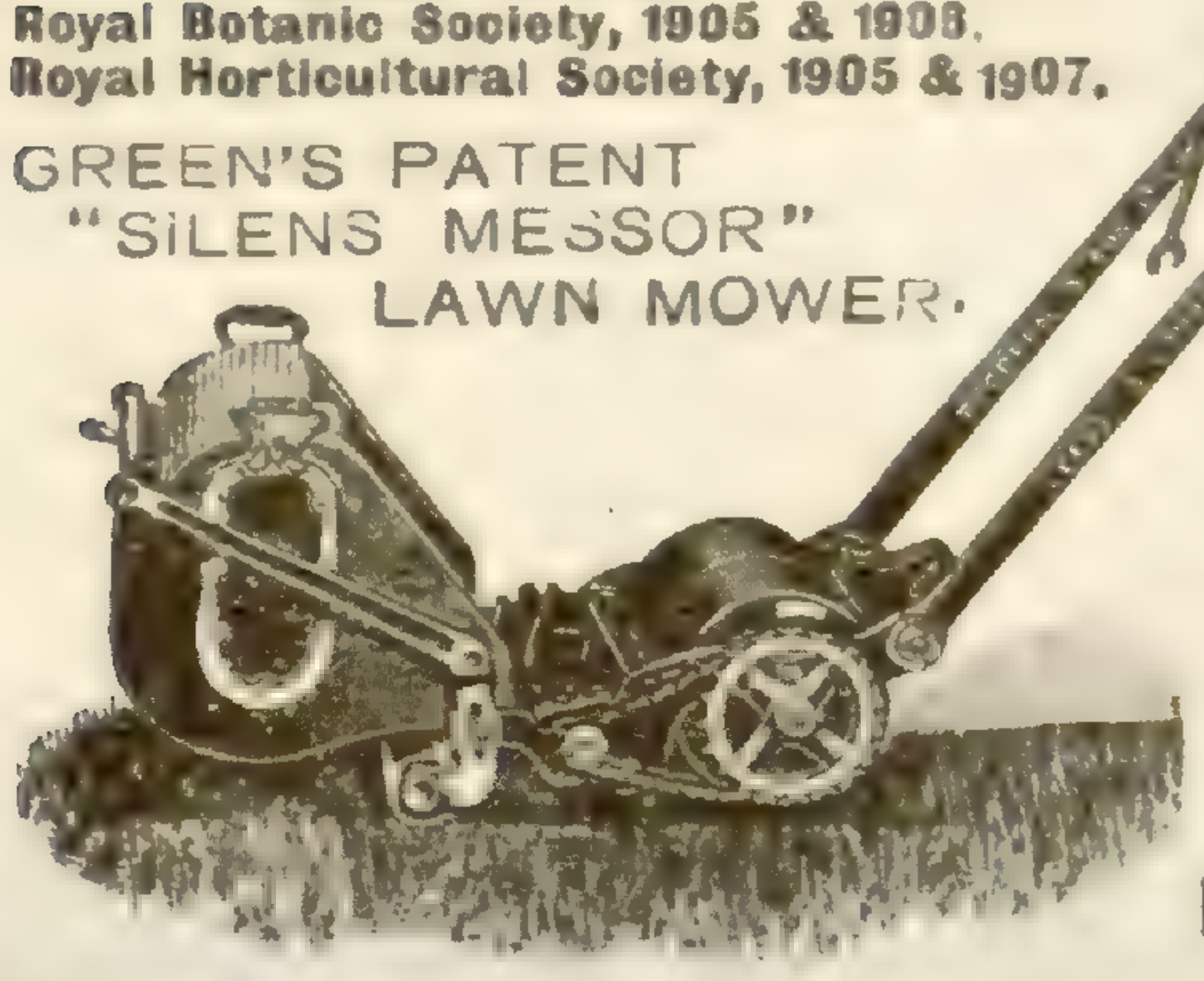

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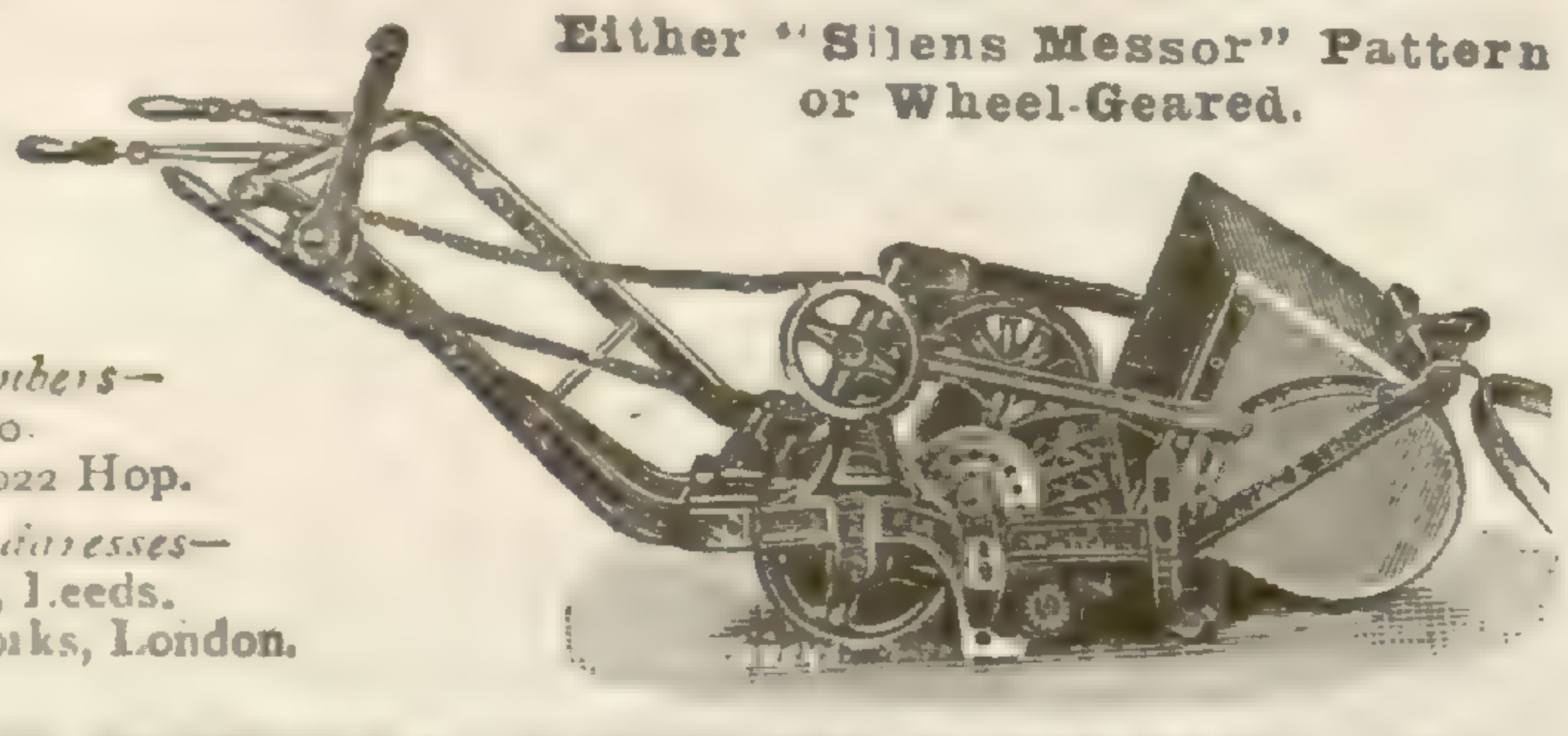

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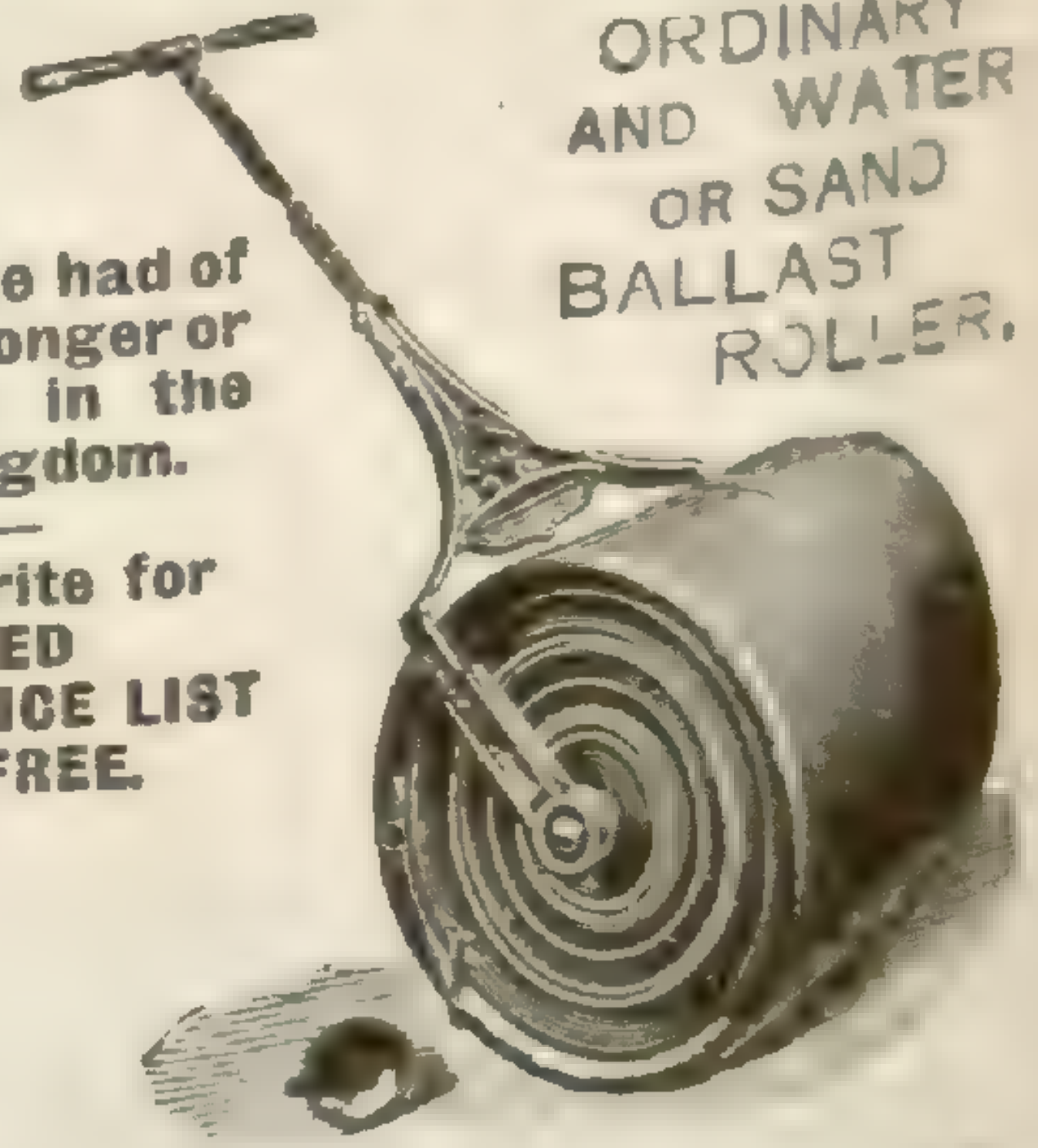

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VOL. LI.—No. 2,843. SATURDAY, APRIL 25, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Nature's Vagaries.

Although it may be presumed that the term "vagaries" is open to challenge by the strict evolutionist, on the ground that all natural phenomena are due to definite laws, and that the apparent exceptions are only so by reason of our ignorance, yet certain phenomena present themselves in such eccentric and unaccountable forms as humanly to justify the expression. In the first rank of such vagaries we must, of course, put all marked sports, whether animal or vegetable. So far as evidence is concerned, the specific form has been adhered to from time immemorial. Generation has followed generation with nothing appearing in the way of variation beyond those small individual peculiarities common to all complex organisms, and then quite suddenly, and without any previous indication or gradation, an individual appears with quite, and it may be, very distinct, characteristics of its own, which it is impossible to attribute to reversion or any other known cause. As a rule, the alteration is persistent, and is inherited by future offspring. The change may present no advantage at all in the struggle for existence, it may even be a handicap, unless, indeed, it prove attractive to man, and becomes, therefore, artificially fostered, propagated, and preserved. Left to Nature, she is just as likely as not to destroy it eventually by the agency of its better-fitted neighbours of its own or other kindred. In Nature there is no favouritism accorded to novelty unless the novelty in itself is armed to fight its own battle. With man's aid it is otherwise; since he came in as a selective factor, a vast number of variations have been preserved and protected when they have appealed to his taste or contributed to his needs. Few, indeed, of the food plants, cereals, fruits or vegetables, are wild unsophisticated forms. With flowers, although many wild species are under culture, the great bulk of those which enrich our floral exhibitions are the results of selective culture from the "vagaries" which form our text. In the animal kingdom it is the same, cattle, sheep, horses, dogs, pigeons, etc., may all be cited as affording examples, the last-named two, pigeons and dogs, presenting perhaps the greatest dissimilarity between individuals, and appealing to the idea of "vagaries" most eloquently of all. It may be argued that most of the types have been arrived at by selecting and accumulating minor variations in definite directions; but when we see such a type as the turnspit dog, and know that a precisely similar elongation of body and shortening of legs has occurred in both cattle and sheep by sudden sports, we appreciate at once that the most distinct forms may occur without any gradation at all, on the "vagary" principle. To the biologist, indeed, any distinctly marked departure, however small, from parental or ancestral form, is as interesting as the extreme cases. It is purely a question of degree. Something must have occurred to upset the normal equilibrium of the cells which build up the parents, and continue the chain of existence by forming the seed, which is part and parcel of the parental body, and is only differentiated when cross-fertilisation occurs, and there is a consequent combination of two parental forces. Given, however, that both parents are of the same species and normal, there is nothing here to induce departure from the long-established routine of true inheritance of type. With hybrids, of course, we have nothing to do in this connection; if man steps in and manages to form bizarre alliances which Nature abhors, the bizarre results cannot be laid to her charge, except in so far as by some occult means she has aided and abetted the hybridiser by contriving the compromise between the conflicting reproductive forces, which results in the composite offspring. Here, however, she usually draws the line by barring the succession. The laws which underlie and determine the results of simpler combinations, i.e., between differently characterised varieties of one and the same species, or between closely allied species, are gradually becoming clear, thanks to Mendel's experiments and those of his disciples, but those which determine asexual sports or seeming vagaries belong to another category, of which we have so far not the slightest knowledge, none of the theories so far advanced having stood the test of experience or been supported by substantial evidence.

MR. H. B. WITTY.
Superintendent of the Public Parks, Cemeteries, and Recreation Grounds, Kingston-on-Hull.

Mr. H. B. Witty has accomplished so much by his taste and skill in beautifying the parks, cemeteries, and other open spaces within the city and county of Kingston-on-Hull, that it gives us much pleasure to present our readers with his portrait and make some reference to his work. As in the case of other practical horticulturists who have been successful in obtaining a foremost position, Mr. Witty had a thorough training in his earlier days, and since passing through the preparatory stage of his career has been assiduous in the utilisation of the knowledge gained therein and subsequently acquired. Commencing his career in a well-organised nursery, he remained in the establishment four years, and passed through both the indoor and outdoor departments. Deciding to pursue public service, Mr. Witty went to Kew, where he quietly and diligently made the most of the opportunities the Royal Gardens offer for the acquisition of knowledge, and on leaving received a certificate of the most satisfactory character. Within a comparatively short period of leaving Kew he was appointed to the post of superintendent of the New Western Cemetery at Hull. Here Mr. Witty soon gave evidence of his ability, and among other things he initiated an extensive system of floral embellishment which gave the cemetery a park-like appearance and rendered it far more attractive than such spaces usually are. This exemplification of good taste coupled with business capacity was evidently much appreciated by the city council, for when the post of superintendent of the parks became vacant some years ago Mr. Witty was unanimously appointed thereto, and also placed in charge of the cemeteries, the grounds of the hospitals, and, indeed, of all the horticultural work of the city, these duties involving the management of many thousands of trees in the streets. Under his charge the floral arrangements of the parks and other open spaces have been extended and improved and stimulated by the liberal encouragement given him by the Parks Committee. Mr. Witty has succeeded in making the parks and cemeteries of Hull models of what such open spaces should be. Not only are tender plants remarkable for the beauty of their flowers or foliage fully utilised, but large collections of alpines and herbaceous plants have been formed, and the rockeries devoted to the former and the borders occupied by the latter constitute features at once remarkable for their interest and beauty.

Daffodils at Eaton Hall.—On Wednesday and Thursday last the gardens of Eaton Hall, Chester, were, by the kindness of the Duke of Westminster, opened to the public to enable them to see the beautiful display of daffodils.

Gardens Round about Bristol.—In our issues of May 16 and 23, we propose to describe and illustrate a number of the beautiful gardens that abound in and around the famous western city of Bristol.

Improvements at Sandringham.—During the terrific gale that swept over the greater part of England some weeks since, much damage was done to the trees growing in the park and grounds at Sandringham. The fine avenue of elms and limes leading from the beautiful Norwich gates to the principal entrance to the house was practically annihilated, for so large a proportion of the trees were blown down that it was decided to fell those that had escaped injury. The destruction of the avenue exposed the mansion to public view from the main road, and it was originally decided to remove the Norwich gates from the site they have so long occupied to a position near the kitchen gardens. The plans, that had been provisionally approved by the King, included the replanting of the avenue that had been swept away, the formation of a new avenue, and the continuation of the tall wall over the present site of the Norwich gates. The King having bestowed Sandringham on the Queen, His Majesty deferred his final decision until the Queen had had an opportunity of giving the plans full consideration. This Her Majesty did when she paid a short visit to Sandringham a fortnight since. After an examination of the plans and of the ground, which had been carefully staked out, the Queen made several important suggestions which necessitated a complete change in the proposed alterations and the preparation of more comprehensive plans. On the 18th inst. the King, accompanied by Lord Redesdale, and attended by General Sir Dighton Probyn and Major G. Holford, visited Sandringham for the purpose of examining the revised plans on the ground before finally approving of them. These plans are a great improvement on those originally prepared, and will give a much better approach to Sandringham than would have been obtained had the latter been carried out, excellent as they unquestionably were. The Norwich gates will be removed from the position they now occupy, but instead of being re-erected contiguous to the kitchen garden they will be transferred to the centre of the Dersingham avenue, some three or four hundred yards to the north of where they now stand. In carrying out this alteration a part of the Dersingham woods, which are now outside the Sandringham grounds, will have to be brought within their boundaries, and the main road that now passes the Norwich gates will have to be diverted for a few hundred yards.

The Ghent Centenary Exhibition.—The great international exhibition with which the Société Royale d'Agriculture et de Botanique de Gand will celebrate its centenary, has the promise of proving in every respect a magnificent success. The entries are so numerous as to be nearly double those of the most successful of the Ghent quinquennial exhibitions held under the auspices of the society, and the number of exhibitors are 400, as compared with 300 at the quinquennial held in 1903. The jury includes nearly 250 members, comprising the leading horticulturists and botanists in Europe and America, and the honorary president-general is Lord Redesdale, and the president-general is M. A. Viger. The vice-presidents-general of the jury are Major Holford, Baron de Grancy, Dr. Wittmack, and Messrs. H. J. Veitch, N. Bernard, A. Truffaut, R. de Beerenbroeck, Max Kolb, C. Radaelli, E. Rovelli, F. Lambeau, and Cartuyvelo. The secretaries-general of the jury are Messrs. Phillip de Vilmorin, Abel Chatenay, Victor Lemoine, Siebert, R. Seidel, R. W. Ker, and Correvon. The exhibition will be opened by the King of the Belgians to-day (Saturday), at 9.30 a.m. The railway station will be decorated with plants and flowers during the continuance of the exhibition, and the tram cars will be decorated with natural flowers and foliage. In the decoration of the cars upwards of 6,000 feet of garlands will be used. The exhibition will be opened to the public at 11 a.m. to-day (Saturday), and will continue to May 3. The comprehensive character of the exhibition will be sufficiently indicated by mention of the fact that the schedule contains 760 classes arranged in 28 groups. We shall give a full report, with illustration, of this great exhibition and the functions associated therewith in our issue for May 2.

Mr. Joseph Cheal, of the Lowfield Nurseries, Crawley, has recently returned from a short visit to Morocco, and his impressions of the country through which he passed and of the points at which he touched on his voyage would form most interesting reading. When at Casa Blanca Mr. Cheal was within sound of the guns that were being fired during an engagement between the Moors and the French troops, and he also had an opportunity of seeing several good gardens, where dates, figs, almonds, and other fruits were growing in abundance, but much of the land thereabouts is covered with broom and other scrub. Mr. Cheal had an opportunity of landing at Santa Cruz, and was much impressed by the extent and success with which potatoes and tomatoes are cultivated for the British and other European markets in the Island of Teneriffe. He was not less interested in banana culture in the Canary Islands, and the skill displayed in the irrigation of the plantations, and in the wealth of flowers and foliage at Funkel. At the last-named place he found palms and tree ferns in abundance, pelargoniums in variety spreading over the rocks, and producing a brilliant display of colour, and verandahs and pergolas clothed with allamandas, bougainvilleas, passifloras, and tacsonias.

New and Rare Orchids for Kew.—We learn with pleasure that Kew is indebted to the Honourable Walter Rothschild, F.L.S., of Tring Park, Tring, for a valuable donation of orchids, including a number of species not previously represented in the national collection. The donor has been an enthusiastic collector and grower of orchids for many years, and his interest was extended to species of purely botanical importance as well as to those possessed of attractions of a popular character. Consequently the Tring collection was reputed for the number of rarities it contained. Among those presented to Kew are the following: Bulbophyllum Binnendijkii, B. Ericssoni, B. Reinwardtii, B. virescens, B. parvimentatum, Cirrhopetalum Rothschildianum, C. biflorum, Ancistrochilus Rothschildianus, Angræcum Rothschildianum, Lissochilus giganteus, L. Horsfalliae, Eulophiella Peetersiana, Mormodes badium, Masdevallia sororcula, and M. deorsa. In addition to orchids various other plants were presented, including large masses of several species of Doryanthes, specially imported from Queensland, and some interesting aroids.

Vegetables of Foreign Growth were, in March, less plentiful than in the corresponding month of the past two years, and were it not for the big increase in the imports of potatoes our indebtedness to growers beyond the boundaries of the United Kingdom would have shown a substantial reduction. The imports of potatoes amounted to 606,727 cwt., against 160,647 cwt. in March, 1907, and 51.878 cwt. in the corresponding month of 1906. Of this quantity 83,425 cwt. were received from Germany, 283,692 cwt. from France, 1,431 cwt. from Channel Islands, and 238,179 cwt. from other countries. The value of the potato imports was £129.675, or an increase of £88.581. The imports of onions dropped from 703,724 bushels in March, 1907, to 559,325 bushels last month, the value of the latter being £63.919. The imports of tomatoes were considerably less in March than in the corresponding month of the two previous years, the total having been £86,928 cwt. of the value of £69.722. In the imports of unenumerated vegetables there was a material decrease, the value being £37,730, or £11,724 less than in the corresponding month of 1907.

Primrose Day was on Sunday last observed in accordance with the custom that has obtained since its institution. Primroses were generally worn in London, and the late Lord Beaconsfield's statue at Westminster was profusely and tastefully decorated with them, and with other flowers.

CLEMATIS MONTANA AS A STANDARD.

Within recent years we have given several illustrations of the elegant Clematis montana for the purpose of showing its suitability for clothing wall spaces, trailing over rustic trellises and arbours, draping fences, and running riot over the trunks and branches of dead or dying trees of moderate size, and we have good reason to believe that they have proved useful to our readers. We have now the pleasure of illustrating another way in which this charming climber may be utilised in beautifying gardens, whether small or of large size. The illustration of a specimen growing in a southern garden indicates the distinctive characteristics of a well-grown standard specimen, and it is not difficult to see that when such specimens are in bloom they add greatly to the charm of that portion of the garden in which they have a place.

There would be no great difficulty in producing well-developed specimens with the aid of a stout stake and a few rods of less diameter; but as wood is liable to decay somewhat rapidly within a short distance of the surface of the soil, and durability is a matter of considerable importance, iron should, as a rule, be used as a support for the growths. Two or three years are necessary for the production of well-furnished specimens, and it is very disappointing to have them blown over as soon as they have reached a really effective stage. Specimens ranging from 7ft. to 8ft. in height are preferable, and the most simple method of providing supports will be to obtain stout iron stakes with strong prongs, and when fixed firmly in the ground fit them with heads about 3ft. or so in diameter. The head may be formed with a ring of iron of the desired diameter and two cross-pieces, these latter being so fixed to the stake as to prevent any shifting of the head when the growths are trained over it.

It would be more advantageous to use for each specimen one of the tall iron supports with umbrella head, such as are manufactured for the training of rambling roses as single specimens. Supports of this description are so far superior to ready-made contrivances as to more than balance the additional cost. With such aid the formation of good specimens will be a comparatively easy matter, and provided the trainers are of sufficient strength to resist the effects of the strongest gale, they may be maintained in the best possible condition for a long period. As a matter of course, it will be necessary to enrich the soil as may be found necessary by means of a dressing of some good artificial fertiliser. This may be sprinkled over the surface as far as the roots are likely to have extended, and be well watered in, or a liberal supply of liquid manure of moderate strength may be given. The latter may be applied two or three times during the spring and summer with advantage. Excessive luxuriance is not desirable, and therefore no manurial matter will be required as long as the plants continue to make a vigorous growth and bloom satisfactorily.

Everyone interested in a garden should obtain a copy of the Alphabet of Gardening, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price 1s. 6d. net, by post 1s. 9d.; cloth, 2s., by post 2s. 3d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

LACHENALIAS.

Lachenalis are beautiful easily grown Cape bulbs, which succeed under conditions similar to that accorded the majority of greenhouse plants, a fact which brings them within practical reach of every amateur. The flowers, which are bell-like, are borne in racemes upon erect spikes some nine or twelve inches in height. In a general way they are not unlike our native wood hyacinth, except in colour, which, in the majority of species is bright orange or yellow, while one or two have reddish-coloured flowers. The foliage is bright green and strap-like, often spotted, and occasionally tinted with purple.

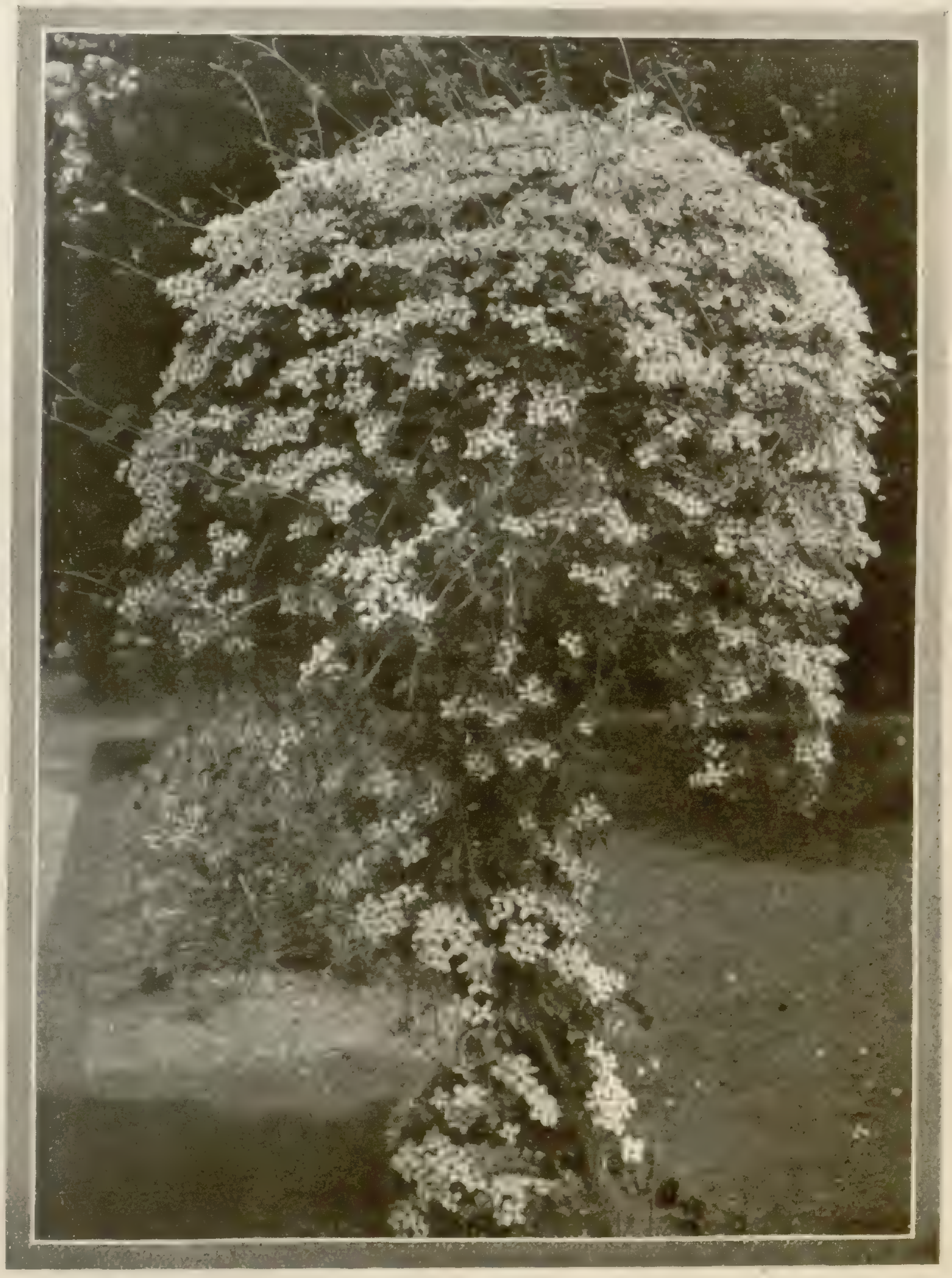
Lachenalias may be grown either in pots, pans, or hanging baskets, the latter method yielding most effective specimens. A suitable compost consists of loam, leaf-soil, and thoroughly decayed manure, employing sufficient sand to keep the whole open; free drainage must be provided, and the bulbs are potted during August and September, thereby admitting of batches to flower in succession. Six or eight bulbs in 5½in. pots, with a corresponding increase when employing pans or baskets, will form suitable specimens; after potting the pots are stood on a coal-ash bottom in cold frames, or plunged in cocoanut fibre refuse until growth commences.

Throughout the winter they are grown in any frost-proof structure, with full exposure to sun, and as the days lengthen choose an open position in the greenhouse, where they will come naturally into flower by the sun's agency alone. As soon as the spikes have developed and the flowers show signs of colour they can be transferred to living rooms, which they effectively brighten, lasting in flower for a considerable time.

After flowering the plants must be thoroughly ripened by full exposure to sun, water being gradually withheld as the foliage begins to ripen, and when all evidence of leaves has gone the soil may be allowed to bake dry in a cold frame until potting-up time comes round again.

Amateurs who are successful in growing freesias may embark in the culture of lachenalias with every confidence of success, their wants being similar.

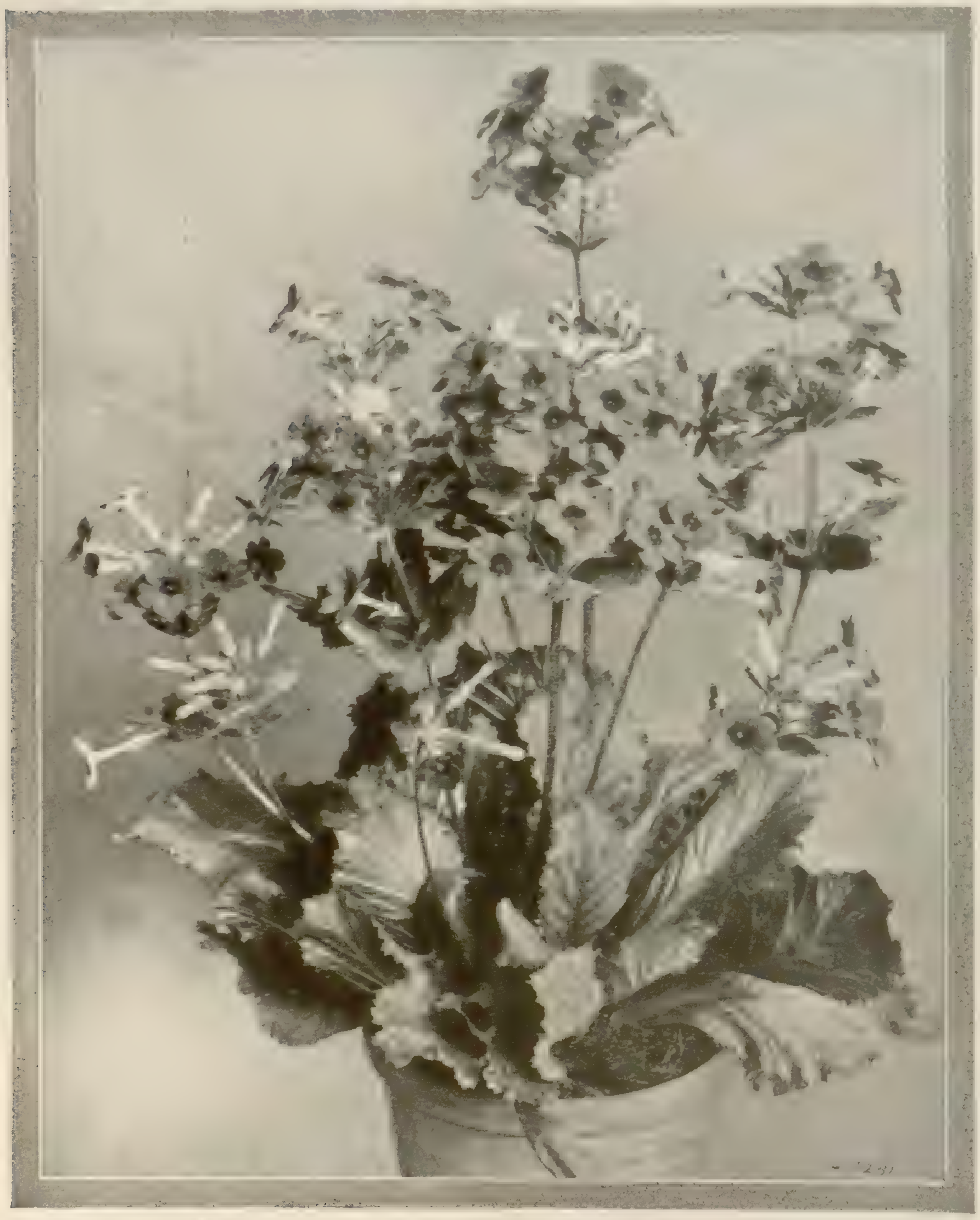
The best kinds in general commerce are: L. aurea, perianth self-coloured yellow; L. Nelsoni, hybrid from aurea, stronger grower, colour bright orange-yellow; L. pendula, purple-red and yellow, strong grower; and L. tricolor, green, red, and yellow; this latter is probably the best known species. Thomas Smith.



CLEMATIS MONTANA GROWN AS A STANDARD IN A SOUTHERN GARDEN.

PRIMULAS.

Not only have the primulas suitable for decorations under glass and indoors increased considerably in varieties, colours, and size, but there are several very interesting species and hybrids of recent introduction that are of much value. The old P. sinensis was at one time indispensable for flowering in winter under glass, but of late years, though many improved forms have been introduced, this has somewhat lost favour owing to the flowers not standing well when cut. The stellata varieties, however, still hold their own, and are very popular.



PRIMULA KEWENSE.
A fine plant, exhibited by Messrs. J. Veitch and Sons. Flowers, rich yellow.

Seeds may be sown at almost any time between January and June, but, as a rule, that sown in March or April will produce plants that will be found most useful for flowering during the dull winter months. Shallow, well-drained pans are preferable for sowing the seeds in, and these should be filled with fine, light sandy soil. The seeds only need a light covering, and if the soil was made thoroughly moist previously to sowing, it will not be necessary to water afterwards, provided the pans are covered with brown paper to prevent evaporation. Should the seeds be allowed to become dry after germination has commenced the majority will in all probability die. There are more failures from this cause than any other, therefore both an even temperature and an equable degree of moisture are essential. There are some superb varieties of P. sinensis, and those who have much conservatory decoration would do well to grow a good batch of them in various colours.

When the seedlings are large enough to handle they should be pricked out into pans or boxes, but they should not be allowed to remain too long in these, as they resent having their roots disturbed much when of some size. They should, therefore, be transferred to small pots as soon as large enough. When these are filled with roots give them a shift into those a couple of sizes larger, growing them on through the summer in pits or frames near the glass. If facing south shading from the bright sun will be necessary, as the plants resent bright sunlight during the summer. Air, however, must be freely admitted on all favourable occasions, otherwise the foliage will not be of that dark healthy hue one so much desires. As the plants come into bloom they may be taken into the greenhouse.

The double white variety, known as P. sinensis fl.-pl., does not seed, and must therefore be increased by cuttings, or, what is better still, by earthing up the old plants with light sandy soil; when this has been done they should be placed in a close pit until fresh roots have formed on the old stems; then divide and pot up, and afterwards treat them in the same way as recommended for the seedlings. There is a form of this named robustum giganteum, which is a much stronger grower than the old type, producing flower stems as thick as a cedar pencil and from nine to twelve inches in length, and bearing flowers about the size of a florin. This is a very useful form, free in flowering, and bearing flowers of good substance that remain in perfection for a considerable time both on the plant and in a cut state. The flowers are pure white, and very useful for a variety of purposes.

Primula obconica.

This species is pretty and interesting, producing flowers of various shades, and blooming continuously through the spring and summer. It may be employed in the greenhouse and the rock garden with equal advantage. The flowers are borne on long slender stalks that carry them well above the foliage. Though not quite hardy, the plants will withstand several degrees of frost, but those grown in a pit or frame where a gentle heat can be provided will bloom through the winter, and when all danger of severe frost is past they may be transferred to the open ground, where they will continue to bloom for some time. Seeds sown in April in a gentle warmth, such as a cold frame or greenhouse, will make nice plants by the autumn if well looked after. We have usually found this species and its varieties grow best when planted out in a cold frame, and if kept from the frost the plants will bloom freely during the summer. If allowed to seed where they grow the young plants will come up in abundance all round the old ones, and if these are pricked off when large enough a good stock may be readily worked up with but little trouble. These seedlings could, in due time, be potted up for flowering in the greenhouse.

Primula verticillata.

This is a peculiar species producing sweet-scented flowers that are borne on long slender stalks. The foliage, which is tomentose, somewhat resembles that of P. cashmeriana, but is longer and not quite so wide. A batch of this planted out in a shaded border in spring, continued to bloom most profusely through the summer. It is not quite hardy, but it is most valuable for the greenhouse or a shaded place in the garden. This is said to be a native of Abyssinia. The flowers are tubular, and of a clear canary colour, not by any means showy, but their fragrance reminds one of the common primrose.

Primula Kewensis.

This superb hybrid originated from the last-named, but differs from it considerably, the flowers being larger and of a brighter colour. This is a charming plant for the greenhouse, as its free flowering habit makes it most useful and effective. The long tubular flowers, borne on stout stems, are carried well above the foliage. Treated in the same way as P. verticillata the plants will grow strongly and bloom most profusely, giving a wealth of flowers that is sure to please the most fastidious.

H. C. Prinsep.

Buxted Park Gardens.

The National Auricula Society (Northern Section) will hold its thirty-fifth annual show in the Corn Exchange, Market Place, Manchester, from 1 to 6 p.m. on Saturday, May 2. Besides the show and alpine auriculas the gold-laced polyanthuses are expected to be very fine.

THE BARBERTON DAISY.

Although many years have elapsed since Gerbera Jamesoni, the Barberton daisy, was introduced to English gardens, and some thousands of plants have been distributed in the meantime, there is still as little evidence of their becoming permanent inhabitants of English gardens as at the first. At Edinburgh, at Cambridge, and a few other noted gardens, there are thriving colonies which seem quite capable of living indefinitely, and there is, in recent seedling races a greater vigour and floral yield than in imported plants once commonly distributed. The gerbera that will stand the rigours of an English climate unaided has yet to be reared, and the few plants that survive in the gardens noted are kept alive by the advantages of skilfully chosen sites on the one hand, and by care in the maintenance of a moisture limit by the use of hand-lights on the other.

One therefore still feels impelled to regard Gerbera Jamesoni as a greenhouse plant that will, under peculiarly fortuitous conditions, occasionally thrive in the open air, there is no possibility, however, of ever "using" them in gardens for grouping in the warmest borders with a view to permanent effect, and in the warmest parts of the West there is just as little hope. Studied purely as a greenhouse plant, and liberally treated the while, there is much in gerberas to admire. Plants grow readily in rather roomy receptacles, preferably six to eight in a deep pan partly filled with limestone chippings and turfy loam in equal parts, raising the plants slightly above the rim of the pot or pan, and finally surface over with finer loam and silver sand.

One gathers from expert observers a good deal of information as to the manner gerberas grow in the Barberton district. There, a distinct resting season is enforced by climatic conditions; this, however, is not the case under cultivation, the plants growing little or much throughout the whole of the seasons. Their permanent roots are deserving of study. They penetrate to incredible depths, and are apparently always slightly active. Old plants under cultivation have very thick fleshy store roots that are readily injured by excess of wet. A roomy pan filled with turf and limestone or grit-stone chips, provides ideal conditions for such roots, and with due care as to watering, erring on the side of giving too little rather than too much, there should be no trouble in managing gerberas well. Their magnificent orange-scarlet flowers are superlatively attractive always, and with the aid of a little rational treatment should be always forthcoming in quantity. A buoyant atmosphere and a temperature ranging from 35 degrees minimum to 80 degrees maximum, as the two possible extremes, will keep the plants thrifty.

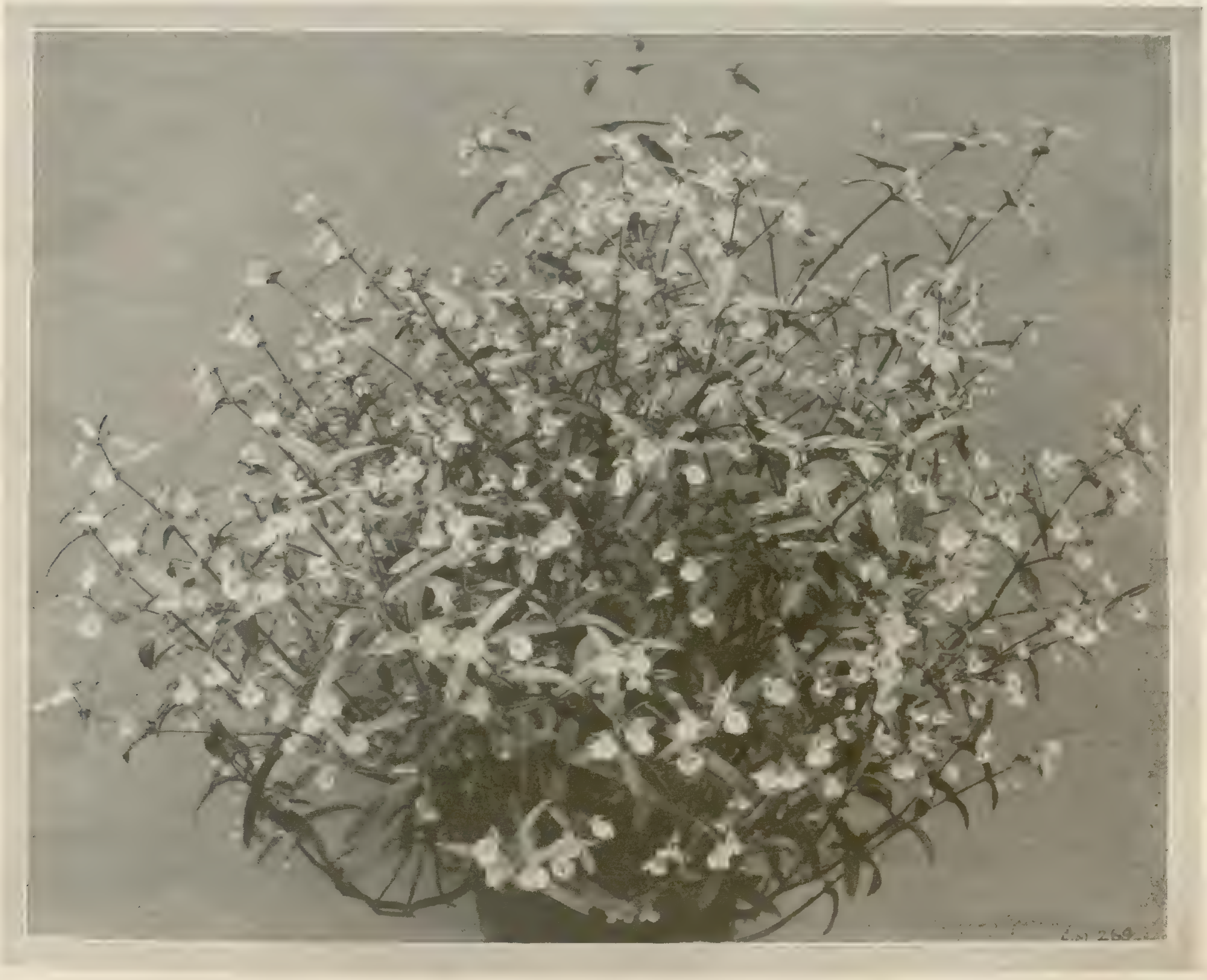
G. B. Mallett.

The Value of Flower Imports was considerably less in March last than in the corresponding month of the two previous years, but for the first quarter of the year it was about £8,000 more than in 1907, and about £21,000 less than in 1906. The total value for the quarters was £94,906. For last month the value was £35,185, against £42,611 in March, 1907, and £50,232 in March, 1906.

IMPATIENS OPPOSITIFOLIA.

Seeds of this pretty annual balsam were received at Kew early in 1906 from Mr. W. A. Talbot, of Mahabeleshwar, India, under the name of Impatiens Dalzelli. These germinated freely, and the plants were grown in a warm greenhouse, under which treatment they flowered profusely during the months of September and October. Specimens were then sent to Sir Joseph Hooker, the acknowledged authority on the genus, who determined it to be I. oppositifolia, a plant known to botanists for many years, but not previously in cultivation in this country.

The species is of very easy culture, and readily forms a large spreading bush, followed by quantities of flowers in late autumn, which are in turn succeeded by abundance of seeds. The plant illustrated was eight months old from seed sowing, and at the time the photograph was taken was carrying many hundreds of flowers. The flowers are an inch in diameter, and vary in colour considerably in the different seedlings, from pink to rosy-red or rosy-purple, and are borne in clusters in the axils of all the upper leaves. The leaves are opposite and decussate, three to five inches long, lanceolate or elliptic-lanceolate, and of a rich dark green colour.



IMPATIENS OPPOSITIFOLIA.
Flowers varying in colour from pink to rose-red.

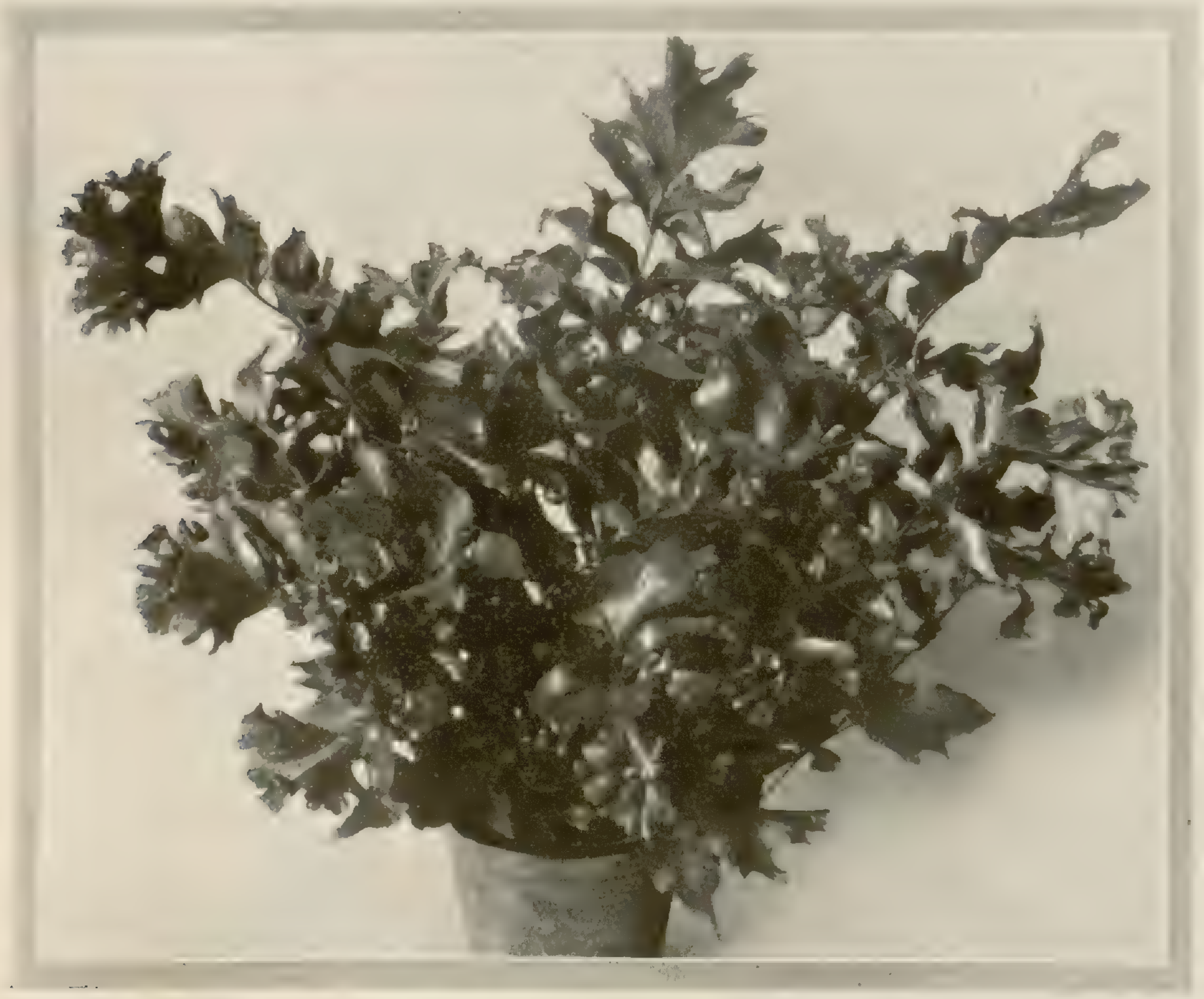
Impatiens oppositifolia is a common plant throughout the island of Ceylon, from the sea level to 7,000 feet altitude, and also on the mountains of Malabar, Canara, and the Concan, at altitudes of 3,000 to 5,000 feet.

Kew. C. P. Raffill.

NEW PLANTS, ETC.

VIBURNUM CARLESI.

This is a beautiful new hardy shrub that promises to become very useful and popular. It is a species from the Corea, and it has rounded flower heads of white or pale pink flowers that remind one in some degree of Luculia gratissima, and also of a rondeletia. These flower heads are about four or six inches across, compact, and borne at the ends of stiff, sturdy branches. In addition to their beauty the flowers possess a remarkably sweet fragrance. The plant exhibited had been grown under glass, and consequently the flowers were white, but the flowers expanded out of doors are blush-pink. A.M., R.H.S., April 14. Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.



CYRTOMIUM FALCATUM MAYI.
A finely-crested form of one of the most useful of the ferns for the conservatory, and for indoor apartments, exhibited by Mr. H. B. May.

CYRTOMIUM FALCATUM MAYI.

A handsome and useful variety of an old favourite fern. The type is well known for its value in the cool greenhouse and in the home, but this new variety will be far and away more elegant than the type and just as useful. The fronds of C. f. Mayi are rather more stiff than those of the type, and less arching, but they spread gently and are prettily crested. A.M., R.H.S., April 14. Messrs. H. B. May and Sons, Edmonton.

CYMBIDIUM EBURNEUM GOODSONIANUM.

This differs from the type in having a broad, bright rosy-purple band down the centre of the labellum, but in all other particulars it is identical. A very interesting variation. A.M., R.H.S., April 14. Mr. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney.

CYPRIPEDIUM BERKLEYANUM.

This is a hybrid between Cypripedium Boxalli and C. bellatulum, and it has a white dorsal sepal freely marked with purple dots, except at the margins. The petals are dark dull purple-red, as also is the lip. The flowers are of medium size and the foliage is mottled with two shades of green. A.M., R.H.S., March 31. Mr. J. Forster Alcock, Northchurch, Berkhamsted.

CATTLEYA SCHRODERÆ THE BARON.

A very beautiful orchid, and, no doubt, the most beautiful variety of C. Schroderæ known. It has large white sepals and petals, and a very handsome, shapely lip, coloured deep yellow, pale rose, and bright purple. F.C.C., R.H.S., April 14. Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

CYPRIPEDIUM BELLATULUM EXHIM'S VAR.

A very distinct and handsome variety, in which the greater part of the flower is densely sprinkled with dark red-purple spots. F.C.C., R.H.S., April 14. Mr. J. Forster Alcock, Northchurch, Berkhamsted.

DENDROBIUM BRYMERIANUM GATTON PARK VAR.

This is a glorified form of the beautiful old D. Brymerianum; it has big flowers, bright golden-yellow, with a wonderfully fringed lip. A.M., R.H.S., April 14. Mr. W. P. Bound, gardener to Sir J. Colman, Bart., Gatton Park, Reigate.

NARCISSUS BUTTERCUP.

This very beautiful daffodil is wholly of a delightful golden buttercup-yellow colour. It is regarded as a member of the incomparabilis section, but it has a trumpet rather longer than is usually associated with that group. The trumpet is clean cut at the mouth and is set in the midst of a regular and finely-proportioned perianth. The flower is sweetly scented, giving evidence of one of its parents—i.e., the Campernelle Jonquil. A.M., R.H.S., April 14. Mr. Chas. Dawson, Gulval, Penzance.

TREES AND FRUIT.

Fruit Prospects.

Considering the cold, wet, sunless weather of last summer, it is rather surprising to see fruit trees giving such a promise of an abundant yield this year. The bright, dry September we had has no doubt contributed largely towards this desirable result, and it is to be hoped, with the late season in its favour, that neither frosts nor cold winds will come to mar the present prospects. I find this promise of a fruit year evident in various parts of the country, on different kinds of soils, and on trees of all ages and vitality, and also under various methods of culture, but more especially those which have been well cared for in the provision of food, and allowed freedom of growth in root and branch.

The other day I came across a fine lot of young trees of Cox's Orange Pippin apple, on the paradise stock, which had been planted a little over 12 months, with almost every bud a fruit-producing one. These plants were about four feet high, pyramidal trained, and no pruning had been practised upon them since they were received from the nursery. The soil in which they are growing has been well cultivated for years, and is rich in the plant foods required by a fruit-producing crop, so that the trees had everything in their favour. In their immediate neighbourhood there were pruned and naturally-grown trees of both apples and pears, and, although all were alike in showing plenty of fruit buds, yet it was those which had been left to shape and develop themselves in their own way, and had not been subjected to the knife, that exhibited the greatest profusion of flower buds. For ornamental purposes, such trees would be most effective.

With a favourable flowering period it will be necessary to severely thin the fruit to prevent the energy of the trees being over-taxed. Much can evidently be done by a selection of stocks to foster the production of fruit, as testified by some Jargonelle pears on the quince stock in the same orchard. These were single cordons, about 7ft. long, and wreathed in expanding blossoms from top to bottom. This variety generally does best when it is left free and has some protection from inclement weather; but, in the case of these cordons there is ample proof that it can be made amenable to the restriction of its growth, and yet its fruitfulness not be impaired. This stock is undoubtedly the right one for the Jargonelle for wall and espalier-trained trees, and is is questionable if the quince is not the right stock for all trained pears.

The only fruit trees I have seen over a wide area this spring that may be said to be sparsely covered wth flower buds have been growing in kitchen gardens worked on crab and pear stocks, and are annually operated upon with the knife. In some positions, and for certain purposes, pruning is an absolute necessity, but where the branch growth has to be restricted there is ample proof at the present time that the dwarfing stock is the right one for all such trees.

Pedestrian.

ANNUALS FOR GARDEN ADORNMENT.

"Nature is ever old, ever mature, ever young," wrote an essayist, "for her work is to be seen in apparent decay, in perfection, and in bud every day." It is true, indeed, that when flowers are absent from a tree or shrub it but means that either fruit, seed, leaf, sap, root, or branch are in fullest excellence, but probably the writer meant rather that the season when one floral beauty is no more is also the time for the utter magnificence of some other. When we make a lavish use of summer and autumn blooming annuals we show our appreciation of Nature's methods. No matter their fleeting character, let us value the charm while it lasts, confident that there will come the harvest of other splendours.

Again, human sympathies are quickly claimed by new beauties, and, though the annuals we employ may not be all novelties, some, no doubt having gratified flower-lovers for centuries past, the individual representatives are new, and the effects are new that we have created with them. All, then, that is necessary for us is to see that those effects are worthy both of the blossoms and of our love for the gentle craft of gardening.

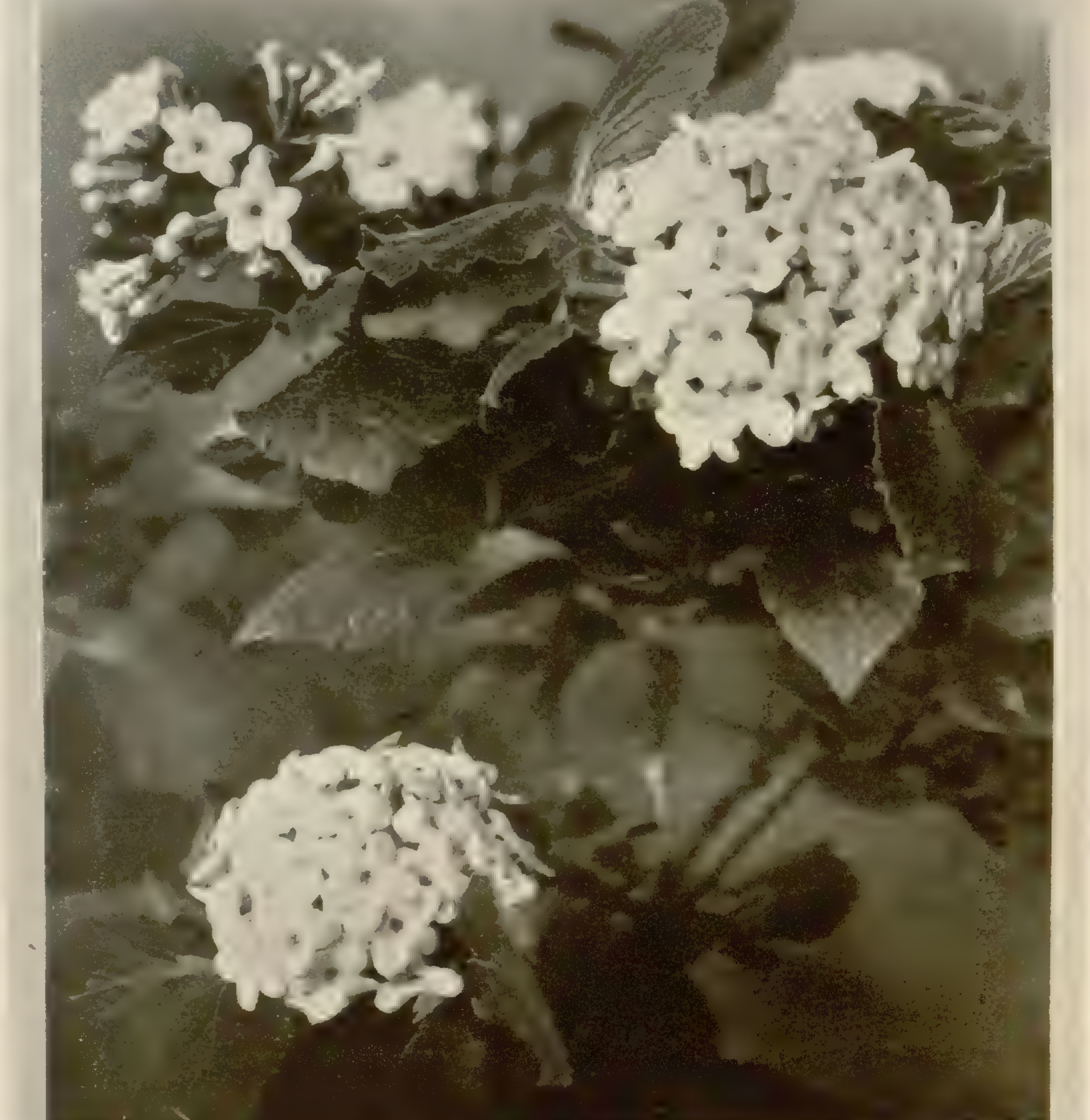
Annuals are fit for adorning all parts of the pleasure-grounds; they are not weedy, straggling, untidy, unless ill-grown. Take, for example, the giant double poppy; we may have it in white as pure as freshly-fallen snow, in cerise-scarlet flecked with white, in a quaint dull brick-rose, in rose and cream-yellow (Harlequin), in white and orange-vermilion (American Flag), or in an exquisite peach mauve. One of the easiest of all flowers to grow, a scattering of seed after a shower and a subsequent thinning out will produce it in perfection; on ordinary soil it flourishes, in poor land it does not refuse to thrive; yet a mass of any variety in the foreground of a shrubbery transforms that spot into a place to be often visited and lovingly remembered, while a similarly shrubbed border, with groups of the different poppies at intervals will prove one of the garden's fairest features.

Then is not the annual sunflower a much-abused flower? The monstrous varieties are cultivated in order that speculative growers may apply the tape measure to the blooms and the foot-rule to the stems; the six and seven-feet kinds, so vastly superior in grace and loveliness are now neglected, so seedsmen say. Many an old English manor house, farm-homestead, or cottage needs but a plentiful enough surrounding of sunflowers and hollyhocks to become fit subjects for the artist's pencil. Helianthus citrinus, the five-feet pale yellow, Helianthus Golden Nigger, four feet, deep gold, with velvety purple-black centre, are two excellent varieties to grow as companions to the ordinary taller Helianthus annuus, but the "Russian Giant" possesses few merits for garden beautification.

There are grounds in which long hedges of fragrant sweet peas are annually looked-for delights, yet other gardens in which the homely flower on its faggot supports seems out of place; the white stone mansion should keep to the stately flowers, the gabled manor or modern villa can afford to show a more catholic taste. Cosmea bipinnata is an example of the annual of absolutely refined or choice appearance; beds of this on a wide lawn are invariably pleasing, borders filled by it have all the merits and none of the heavy over-foliaged appearance of dahlia masses.

Hardy annuals are rarely grown to perfection; that is one reason why gardeners turn to the class of half-hardy subjects, known as bedding plants, when planting the most important spaces. The beds of Lord Windsor's garden, Hogan Castle, Cardiff, used to be remarkable—[and still are —Ed.]—for the careful displays of the simplest sorts of annuals, eschscholtzias, linarias, godetias, etc., and each year proved the true worth of these blooms. Perhaps no bloom, except that of one species of broom, can equal the colour combination of Eschscholtzia Mandarin when grown in soil rich in humus; the orange of Erysimum Perofskianum has a tone not achieved by costly begonias; Nigella Miss Jekyll, is of greatest value for the azure tint that one could wish, nevertheless, were unveiled by the quaint greenery; coreopsis or calliopsis, Crimson King, offers a glowing terra-cotta crimson of unique splendour, and will carpet a stretch of ground so as to show from afar, though but a nine-inch plant.

One of the finest ornaments we can set up each summer in an open place in the garden is a collection of annual sunflowers surrounded by tall purple-violet jacobæa, single and double; the sun on this bed will make it a blaze of satisfying colour. A second grand show will result from tall blue larkspurs widely bordered by the royal blue Phacelia campanularia. The scarlet of the tulip poppy will produce a bed gayer than can be achieved with pelargoniums or verbenas; its petals glisten like satin, its cup-shaped, thick-petalled flowers seem literally to retain the sunshine. M. H.



VIBURNUM CARLESI.

A beautiful hardy shrub, exhibited by Mr. Bain, the flowers white, tinted pink when produced in the open, and white when developed under glass.

THE QUALITY OF POTATOES

The food value of potatoes is almost entirely dependent upon their starch content. From extensive chemical analyses which have been made of the tubers grown under different soil, manurial, and variety conditions, it has been found that the starch content may be as low as 8 per cent., and as high as 29 per cent.

These investigations have stimulated cultural efforts to improve the potato plants to the end that more abundant crops may be produced, and that these crops shall give a more acceptable product for human food. Among other conditions, in regard to quality, it is found that potatoes that are grown in a depth of soil ranging from two to four inches are generally richer in starch than those grown either shallower or deeper. Those grown deeper than four inches are oftentimes watery, and seem to be immature both in regard to starch development and cellular structure.

When the content of starch falls much below 17 per cent. the indications are that the tubers have not developed properly, that is they have not ripened, or they have grown under adverse climatic or soil conditions, and such potatoes, if cooked for human food, will not meet the standard set for table potatoes in this country.

At the same time we have to remember that the culinary value of potatoes varies with the tastes and estimation of different persons. For example, a potato of a starchy flavour, white and floury, and mealy when cooked, is by some persons considered more desirable than a potato which is strong flavoured or soggy after boiling This mealy condition is usually found in potatoes with a starch content ranging from 18 to 24 per cent. On the other hand, there are persons who prefer tubers which retain their form when cooked, are yellow in colour, and are soggy after boiling. This condition is usually found in potatoes low in starch content and high in protein. These low qualities may be due to unripeness or to unfavourable conditions for growth and development.

Then there are market estimates of quality in potatoes, which have no direct relation to the culinary or structural considerations. These may be classed as size, surface or skin aspects, and shapeliness, and sometimes variety considerations. Excepting the potatoes put on the market as earlies, those having a more or less netted skin, or those whose skin has a corky appearance, are usually preferred to the smooth and clear-skinned varieties. This appearance or touch is, in some instances, a variety characteristic, but in general it indicates a degree of maturity or development which promises good cooking quality. On the other hand, the potatoes of smooth and clear skin are oftentimes excessively watery or immature.

Quality of potatoes, from both the trade and culinary points of view, varies to a limited extent in different varieties; but, as a general rule, a knowledge of variety characteristics is possessed only by those who have given the question some study. However, it is a matter of common observation that some varieties resist disease in storage better than others, and some deteriorate in cooking quality after going into storage. Undesirable flavours or colours are developed, and sometimes the tendency to break down into a mealy condition upon boiling diminishes. In spite of all these distinguishing features, it is very difficult to separate individual tubers or varieties of poor quality from those of good quality upon a superficial examination. It is very seldom that a person can go into the storage room and select the varieties of desirable quality from the undesirable with any great degree of certainty.

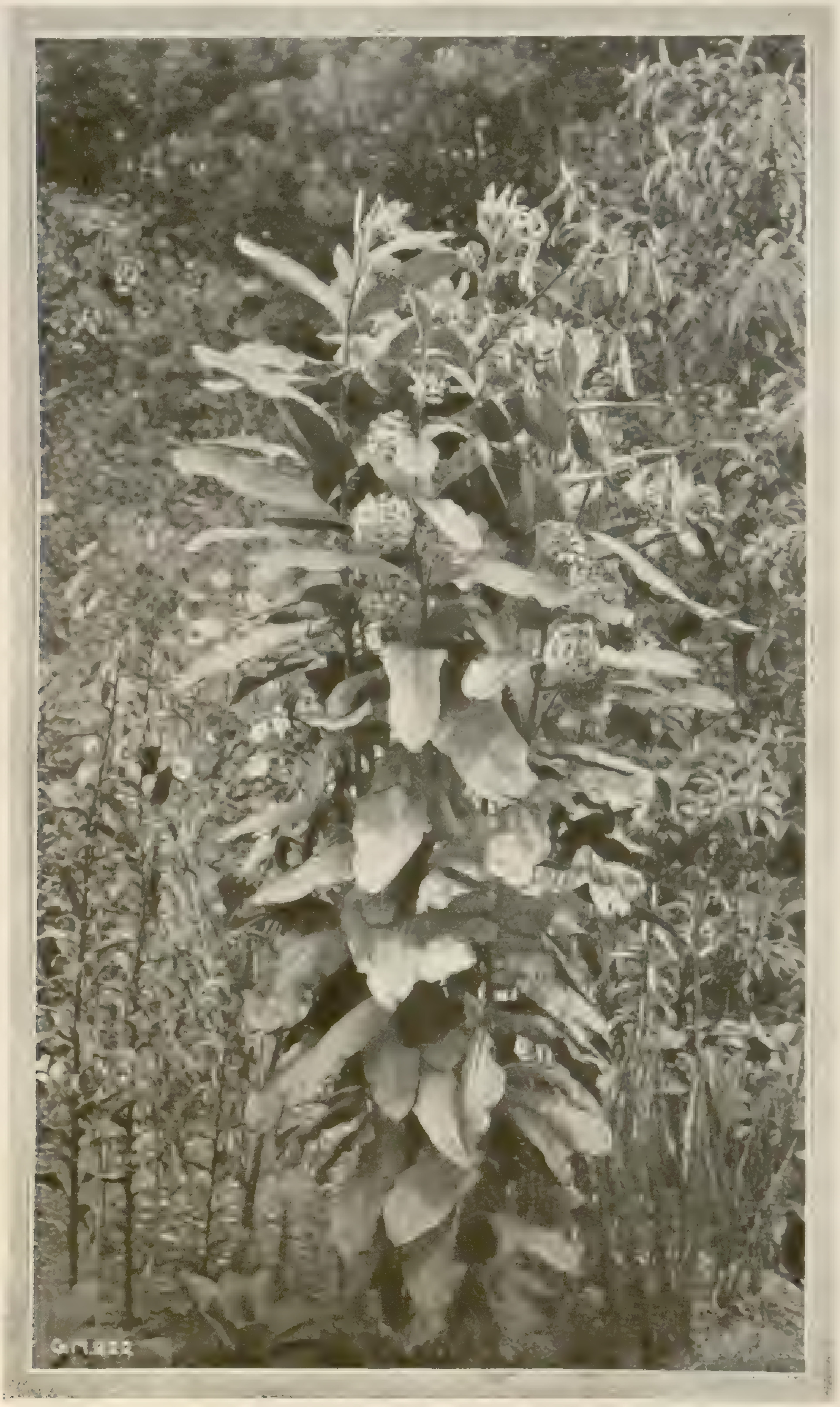
From an extensive inquiry into the subject of the quality of potatoes made by Mr. John W. Gilmore, of the College of Agriculture, Cornell, U.S., it seems that the culinary and dietetic quality of potatoes is not dependent upon chemical composition so much as it is upon the anatomical, and perhaps physiological, characteristics of the tubers and the arrangement and distribution of starch and water areas in the structure of the tubers.

The structural characteristic of the potato is influenced by the condition of the soil, and of the soil and atmospheric climate in which the potatoes grow.

As a result of these investigations we are led to believe that the quality and mealiness of a potato when boiled, and to a considerable extent the flavour also, is influenced in the main by the following considerations:

1. The daily range of soil and atmospheric temperature during the growing period.
2. The degree of ripeness of the tubers when the plant dies down.
3. The physical condition and type of soil.
4. The description of manure applied.

Harpenden. J. J. Willis.



ASCLEPIAS DOUGLASI.
Flowers dull red and yellow.

ASCLEPIAS DOUGLASI.

This plant is seldom seen in gardens, yet its noble appearance certainly renders it a valuable subject for introduction into the herbaceous border, it being well worthy of culture for its foliage alone. It will often exceed six feet in height, and its entire leaves are, in strong plants, a foot in length and four and a-half inches in breadth. A well-grown specimen is an extremely handsome object. Its flowers are not to be compared for effectiveness to those of Asclepias tuberosa, whose flat heads of brilliant orange-scarlet blossoms form glowing spots of colour in the border, but they have a quiet charm of their own.

It blooms in the month of August, bearing numerous rounded heads of small blossoms, some of the flower clusters having a circumference of close on twelve inches. The corollas, which are less than half an inch across, are of a yellowish tint, and the reflexed petals are of a dull reddish hue, the flower heads appearing at a little distance to be flesh-pink in colour. About two hundred blooms are contained in a single flower head. The blossoms are perfumed, and attract innumerable humble-bees and other insects, which soon become stupefied by the nectar and remain inert on the heads of bloom. It is a native of Western America, and is hardy. It is very tenacious of life, and if a plant is lifted shoots will be continually springing up from portions of the roots that were left behind when the specimen was shifted.

S. W. Fitzherbert.

Francoa ramosa.—Anyone who has a greenhouse should not be without a stock of the bridal wreath. The long racemes of white flowers are now just appearing; they have a very pleasing effect. It is also very useful for cutting, and lends itself readily to all kinds of decoration. I find it most satisfactory if raised from seed, which should be sown now in a light compost, and placed in a warm house. A great deal of care and attention is necessary during germination. When the seedlings are large enough to handle they should be pricked out into pans and kept in the same temperature till they require another move. If propagation from seed fails, and cuttings are available, these will readily strike in the propagating pit.—T. B. Field.

GATHERING DAFFODILS.

At this season of the year we are charmed by the beauty and variety of daffodils and amazed at the low price at which good blooms are sold in shop and street. We are entranced by the great drifts of trumpet, incomparabilis, Leedsi, and other kinds of daffodils as we see them in the grass or the woodland at Kew, Regent's Park, Totley Hall, Wilton Court, and other large places, and we greatly wonder at the huge breadths of glowing colour that daffodils provide for the traveller as he passes through or by some large nursery at this spring time of the year. But do we always remember what a large amount of labour the daffodil employs? There are planting, lifting, cleaning, storing, packing, and distribution to be considered with reference to the bulbs alone, while hundreds of women and children find employment in Guernsey, the Scilly Isles, Cornwall, Kent, Surrey, Worcester, and Lincolnshire, to go no farther north, during the season of flowers. Everybody knows that hosts of daffodils are picked when the buds show colour, and are expanded under glass, carefully packed, and despatched to the large centres of population, and also that as the days grow longer and the sun brighter the pickers gather direct from the fields and pack up the blooms in a cool shed. In the accompanying illustration a great field of trumpet daffodils, one of many at the floral farms of Messrs. R. H. Bath, Lim., Wisbech, is well shown. Such fields of finely flowered daffodils as the one herewith depicted are a glorious sight and worth the time and trouble of a long journey to Wisbech to see, because the Messrs. Bath do everything well and on a surprisingly large scale.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

SEASONABLE NOTES. — The weather in the north-east of England has been anything but favourable to the development of plant growth up to the time of writing. The almost total absence of sunlight, the cool winds, and the frosty nights are factors altogether detrimental to the cultivation of any class of orchids, for even the cool house kinds suffer when so much artificial heat is required over such a prolonged period as has been the case during the past few months. I do not trouble much about the retarding of growth, but where plants are carrying flower scapes, the strain thrown on the resources of the plants is heavy, owing to the great length of time they are taking to develop their flowers. We may find the ill effects more pronounced in our strongest plants, especially where these are flowering well. With such prospects, flower spikes should not be permitted to remain on the plants longer than is absolutely necessary after they have become expanded. Moisture, which under ordinary circumstances is decreased after the flowers have been removed, should be more liberally afforded, so that the plants may be afforded every encouragement to regain their normal plump state, especially where the strain of flowering has caused the pseudo-bulbs to become more or less shrivelled.

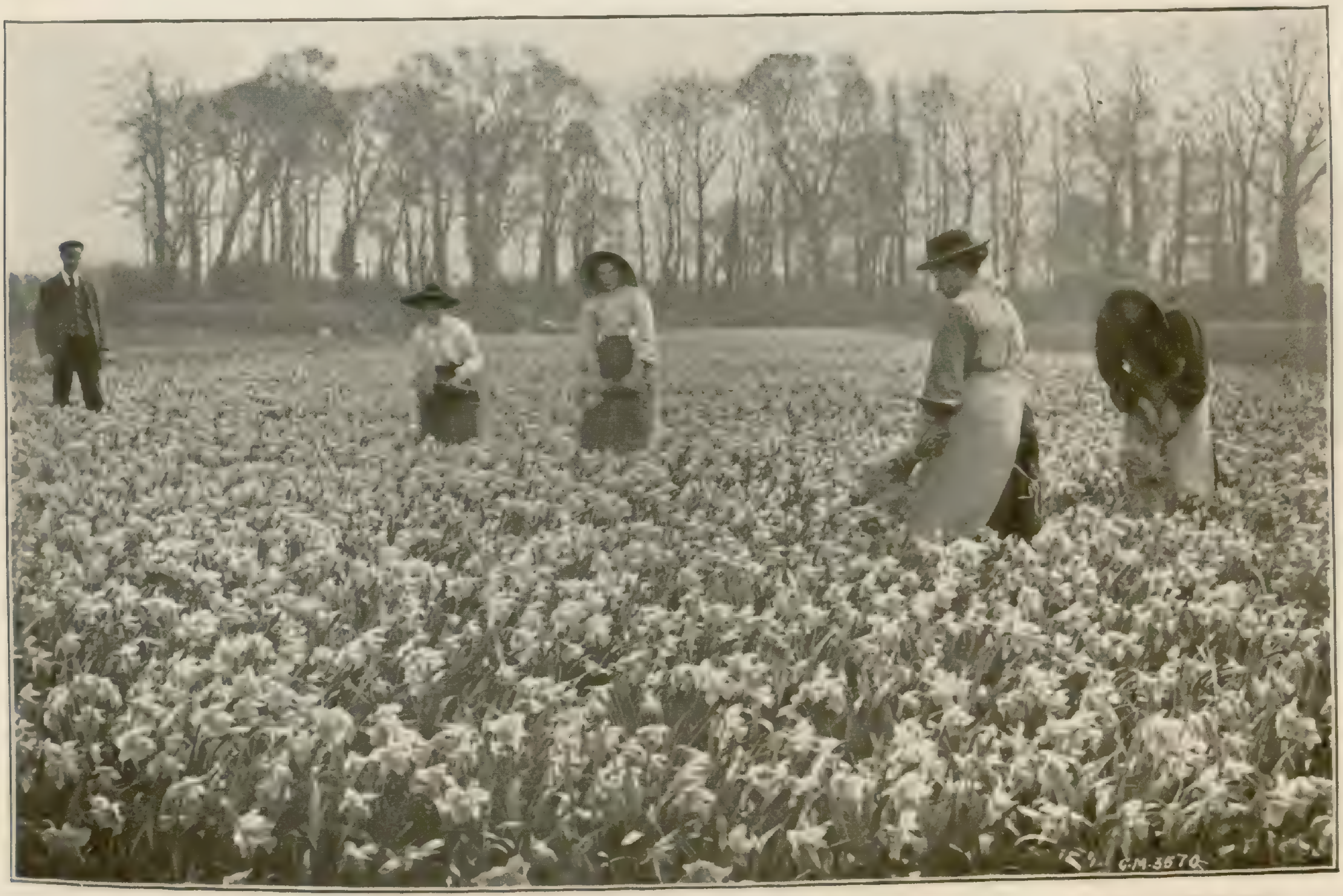
SHADING.—We shall all be glad to avail ourselves of every facility that may be derived from the benefit of light, but in a season like the present one cannot be too cautious. Having been so long without sunlight, strong light will now have the effect of rapidly ripening the leaves, and especially will this be so in the case of odontoglossums and other cool-house subjects. It is the aim of the successful grower of to-day to endeavour to retain as much foliage as he possibly can on the back growths of his plants; the effect of glaring light is to produce a bronzy, reddish-green colour in the foliage, and this is desirable so far as it goes, but it is easy to over-step the line, with the result that, after a few months, we find the leaves ripen off, and the back bulbs are left for ever leafless. Where leaves are sappy and green, as is bound to be the case in a season like the present, the blinds must be used with every discretion.

VENTILATION.—I have advocated for many years the use of the lower ventilators, in preference to the use of those on the roof. I consider there is less risk from cold draughts when air is admitted through the low leeward ventilators than is the case where the roof ventilators are used. Coming through the lower ventilators, the air is more or less warmed by passing over the hot-water pipes before reaching the plants, and in cases where houses are naturally dry, the opening of the roof ventilators only adds to the difficulty, for it permits the moisture in the atmosphere to escape. Where houses are naturally very damp, and excessive moisture becomes detrimental, then the conditions are altered, and the opening of the roof ventilators would be advantageous. In no case should both the roof and side ventilators be used at the same time.

DAMPING.—As the days grow longer, and with a prospect of better conditions prevailing outside, more moisture may be afforded. The floors, staging, and pots may be damped and syringed as often as the surfaces tend to become dry.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

IXORAS.—Plants raised from cuttings in the spring form useful decorative stock for the autumn, and for this purpose they are allowed to remain in five-inch or six-inch pots, and given regular applications of weak liquid manure and an occasional top-dressing of artificial manure. During their growing season ixoras require to be kept in a brisk temperature and moist atmosphere. As soon as they are growing freely pinch out the tips of the shoots to induce a bushy habit. Gradually inure them to the light as soon as they become well-established, and then give them as much light as possible, and grow them at the warmest end of the stove. Continue this



GATHERING TRUMPET DAFFODILS AT MESSRS. R. H. BATH'S FLORAL FARMS, WISBECH.

treatment, with the liberal use of the syringe, until the plants show signs of flowering. If, however, larger specimens are desired pinch out the tips of growth, and grow the plants steadily throughout the winter.

CYPERUS ALTERNIFOLIUS.—Where cut foliage and green-foliaged plants are in demand, this easily-grown cyperus will prove serviceable. When cut, the foliage remains in good condition for a considerable time, with an occasional change of water. Plants with numerous crowns may now be divided and put singly in small pots. They succeed well in ordinary loam, with a little sand added, and if regular attention is given to watering they will quickly develop into useful specimens. They are almost aquatic, and will succeed equally well if planted in a water-tank. There is also a variegated form of C. alternifolius, which, if well-grown, forms a handsome foliage plant, but if treated too liberally, it will quickly lose its variegation.

DIEFFENBACHIAS.—These are both useful and interesting, comparatively easy to grow, of pleasing habit, and ornamental leafage. Various methods are adopted for their propagation, and all with success. Cuttings may be placed singly in small pots, and plunged in bottom heat; or unsightly plants can be notched and mossed up, as the stems quickly form roots, and plants may also be raised by cutting the stems into lengths and placing them in a close case, as the eyes will soon produce growths. I much prefer to raise a batch of young plants annually, as they soon develop into a useful size for decorating. With the assistance of regular artificial feeding, large, single-stem specimens may be grown in five-inch and six-inch pots.

CALADIUMS. — Another batch of caladiums may now be started into growth, and those which are growing freely will require to be shifted into larger pots. For this purpose, which is generally the final potting, it is advisable to add a small quantity of well-decayed manure, which ought to be dried and passed through a fine sieve, and thoroughly incorporated with the potting compost.

GENERAL REMARKS.—Further attention must be paid to cleaning the stove plants, for if this work is neglected now it involves a very great amount of labour later on. The stove should be fumigated occasionally to check attacks of aphis or other insect pests. The floors and stages may be damped down each evening with liquid manure, which serves as a preventive to attacks of red-spider, and also proves beneficial to the occupants of the house.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER CLASS.

EARLY VINERY.—Where the grapes are just commencing to colour, the vines should have a good watering, the state of the crop and border being first taken into consideration. If the vines are a few years old little manurial assistance is required. The house should not be quite closed after this period. The bunches should be examined for bad or centre berries. If the berries have not swelled to their proper size at this stage remove a few bunches. Red-spider should be sponged off if it appears on the leaves. Ties should be examined, in case they are cutting into the wood, especially in the case of rods tied up with tar string. Damping down should be continued on fine days, and a night temperature of 65 deg. with 70 deg. by day with air on, may be maintained.

PEACHES AND NECTARINES. — Under good condition these will be swelling fast, and assistance may be given, if necessary, with liquid manure. Weather permitting, syringe night and morning, closing the house early. Fumigate occasionally to ward off fly. The crop retained should not be more than the tree can finish off satisfactorily; fruits near a wire or underneath the trellis should be removed. Tying in of the shoots should be done, and all useless branches may be cut out to allow light to reach the growths required for next season's fruiting. If the borders are full of roots, they may be top-dressed with some stable manure, but this should be first thrown into a heap to heat and be turned a few times.

STRAWBERRIES. — Supplies will not be difficult to obtain now, providing the room for plants can be found as they ripen. If in a cucumber or melon house they should be put in a cooler structure to finish off, and this entails a lot of work, hence the need of having a good number now in cooler houses, and letting them remain till the fruit can be gathered. Thin the fruit out as soon as they have set, allowing each plant to carry six good fruits; liquid manure should be given frequently, and plants must not on any account become at all dry. Keep back a batch of plants for supply just before the crop ripens outside, as there is generally a gap, especially if the weather is cold and unfavourable.

TOMATOES.—Early plants in pots are now swelling their fruits, which will soon commence to colour. If a few are required at the earliest possible date, the plants may be stopped before they reach their limit; top-dress these with some good loam and bone-meal, and keep all side-shoots pinched off. In dull weather do not let the water stand about in the house, under the stages, from watering. Later plants will be ready for pots or planting out; they will probably be in seven-inch pots, and their first lot of flowers may be allowed to set. If the house is not ready to receive them, or other work is more pressing, maintain a night temperature of 60 degs., with ventilation. If the weather continues dull, it will be well to distribute the pollen with a brush, keeping this dry. Fumigate regularly to keep down white-fly.

BANANAS.—These in tubs are now throwing up their fruits, and copious supplies of both liquid manure and clean water will be necessary to feed them up. Blood manure is one of the best materials to give them for a change. Fruiting plants that have not been top-dressed with good loam and manure should be attended to without delay. Plants that were potted into 12-inch or larger pots should be given plenty of clear water. Any suckers that can be removed from the old plants before they become well rooted should be potted up. Keep the atmosphere well charged with moisture, and maintain a night temperature of 70 degs., rising to 75 or 80 degs. by day.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

PEAS that were planted out from pots and turves, as advised early in the month, should now have the permanent sticks placed to them, and if a mulching of decayed manure could be given, they would derive much benefit from it later on. These mulchings are most serviceable, and they save a considerable amount of labour in watering should the weather become hot, especially on light soils.

PEAS UNDER GLASS.—Batches that were sown early in the New Year in pots, and also planted in cool structures, will now be setting their pods, while those that are to follow in succession will be in bloom. Keep them in an upright position by staking them early. Those that are in pod may have a night temperature of 55 degs., and be syringed twice daily, giving them weak liquid manure three times a week, until they are nearly ready for gathering. It is astonishing how well peas do in cold frames, providing these are of a fair depth, and a dwarf variety is selected, such as Carter's Eight Weeks or Little Marvel.

CELERY AND LEEKS.—These two useful vegetables, if required early, should be well hardened off, and be ready for transplanting early in the month in the open ground. The best method is to plant them about a foot apart, in single lines, in well-manured trenches, giving them a little shelter if cold winds prevail. Attend well to spraying the plants on fine warm days until they become established.

RUNNER BEANS.—In a few more days the first sowing of these may be made out of doors on deeply-trenched ground that has had a liberal dressing of cow manure. Sow the seeds in a double row, and thin the seedlings out to about a foot apart. There are many improvements in varieties of this vegetable. I have tested many of them, and have found Scarlet Emperor the best. Some growers prefer to sow seeds in boxes or 3½ in. pots, harden them off, and plant out in the open when they are five or six inches high. This system answers very well, especially on cold, heavy soil, and in uncongenial climates.

TURNIPS.—A good sowing of these should now be made on a well-tilled quarter of the garden, and, as the ground is so very moist, the seeds will soon germinate. When the first rough leaf appears, a good dusting of wood ashes should be given, which will have a beneficial effect on the crop. Snowball is a good variety to grow, but where yellow kinds are preferred, Orange Jelly or Golden Ball should be sown.

VEGETABLE MARROWS. — The main crop for planting in the open ground should be sown at once, placing the seeds singly in 3-in. pots, and putting them in gentle heat. When the seedlings are up, they should then have a position well up to the glass to prevent them from becoming drawn. Make preparations for planting them out at the latter end of May. Pen-y-Byd, Moore's Cream, and the Custard Marrow are three good varieties to grow; they are not large, but of good flavour.

GHERKINS.—Where this small cucumber is required, it should have exactly the same treatment as advised for marrows, both as regards sowing the seeds and planting.

BROCCOLI.—A sowing of some of the earlier varieties of winter broccoli, such as Osborn's and Snow's Winter White, should be made now. Sow also a late batch of Brussels sprouts, Self-Protecting broccoli, more Walcheren cauliflowers, and cabbages. I rely on Early Heartwell and Ellam's Dwarf cabbages for summer use.

GENERAL REMARKS.—The Dutch hoe should be kept well at work, as it not only benefits the crops but checks weeds. Keep a sharp look-out for slugs, especially early in the morning. Peas that have just come through the soil should have three or four strands of cotton strung over them to keep the birds from eating the young growths.—T. W. BIRKINSHAW, Hatley Park Gardens.

Bog and Aquatic Gardens. — Where these are established, or planting of such is contemplated, now is the best time to attend to them. Avoid planting in too deep water, or (with very few exceptions) where a strong current is running. The course generally taken is to fix established plants in open wicker baskets, and sink in a suitable depth of water. If there is a good depth of mud or sediment in the bottom, not much else will be required. But with an artificial or hard, clean bottom, it is desirable to bank soil all around the baskets for the roots to ramify in. If the water can be lowered while working at aquatics, this should be done. Failing this, the operator should have a pair of fisherman's waders, as they will enable him to walk in the water and attend to the plants. The baskets should be carefully lowered into the water, and in their proper position. Tubs of aquatics also make pleasing objects, if sunk in the ground just below the rim of the tub, and in suitable positions in either nooks and recesses or on lawns. Old petroleum barrels, sawn in two, answer well for this purpose, and can be easily refilled as water is absorbed or evaporated. Tubs of Typha, Acorus calamus, Iris pseudo-acorus, etc., associate admirably with large plants of the old agapanthus. Bog and sub-tropical gardens seem so much allied to each other, or at least so many pleasing combinations may be made, that it seems difficult to say where one should end and the other begin, though this is largely determined by the formation of the ground. For some of the sub-tropicals, partially-shaded and well-sheltered spots are very helpful. They should not be put in an exposed or bleak position, but for the aquatics full sunshine is more desirable.—E. F. H[illegible]TON, Knowsley Gardens.

TREE FERNS.

The various species of tree ferns under cultivation are, with one or two exceptions, natives of New Zealand, and, consequently, succeed admirably in the ordinary greenhouse or conservatory.

Considerable numbers of the naked stems or boles are imported into this country every year, the majority being sold by public auction in London and the great provincial towns. They do not appeal to amateurs in this uninviting condition simply because many people are ignorant of their capabilities, and seeing what an object of great beauty results, provided correct treatment is given, the purchase of stems may be said to be a first-rate investment. No attempt should be made to force the boles into growth, and all that is required is to cover the thick end or basal part with moss, when it should be placed in the cool greenhouse and syringed twice daily.

In the course of a month or five weeks a quantity of roots will have formed, and have taken possession of the moss covering. It is important that they should then be put in small tubs or other receptacles, and as the presence of a large body of soil is inimical to their well being two inches of space between the boles and the sides of the tubs will be ample for the first potting.

Good fibrous peat and loam, in equal quantities, with sufficient sand and charcoal to ensure porosity and sweetness, represents the correct medium; the syringing of the stems must continue throughout, being regulated by the season and the plants' condition. Twice each day from spring to early autumn, and once during the winter is not far wide of the mark.

In their native habitats tree ferns are found in moist and shady spots, and although they are subjected to a considerable amount of strong light oftentimes under glass, the direct rays of the sun are positively harmful to them, therefore a thin tiffany shading must be provided, and in order to induce strong and vigorous growth atmospheric moisture is essential from the time the boles reawaken into activity in spring. It may be added that the root climbers often afford sufficient shade, when artificial shading may be dispensed with, and, further, that tree fern roots are of a stay-at-home nature, and it is neither necessary or advisable to afford them more than very limited accommodation.

As regards the application of stimulants, clear soot water is decidedly beneficial, and should be given when the plants are in active growth. It promotes growth and deepens the colour of the fronds. Minute quantities of sulphate of ammonia, about a teaspoonful in three gallons of water, is also to be recommended. Touching upon insect pests, scale is usually troublesome, and care and pains must be taken to dislodge it without inflicting injury upon the fronds, while thrips must be treated with an approved insecticide.

The species that succeed under ordinary greenhouse treatment include Dicksonia Youngi, D. squarrosa, D. cicutaria, D. antarctica, etc. Others that call for rather warmer conditions, or a temperate house, include Cibotium spectabilis, C. Schiedei, and C. princeps, also Cyathea medullaris and C. dealbata. Almost without exception these handsome subjects are benefited by living an out of door life from the beginning of July to the middle of September, but due attention must be paid to watering, syringing the stems, and, equally important, a very sheltered and shady spot should be selected, not forgetting to secure the tubs by means of stout wire. They can be utilised to play an important part in the sub-tropical garden and display.

WALTER H. AGGETT.

AMERICAN GOOSEBEREY MILDEW.

Recently Lord Carrington received at the Board of Agriculture a deputation composed of the following delegates from farmers' clubs in Kent: Mr. J. D. Maxted (chairman), and Messrs. G. Mount, W. W. Berry, and E. S. Salmon (mycologist to the S. E. Agricultural College, Wye), of the Canterbury Farmers' Club; Messrs. G. E. Champion, B. Champion, and T. Edmunds, of the Maidstone Farmers' Club; and Messrs. H. Chapman and S. Lee, of the West Kent Farmers' Club.

Mr. Maxted, in introducing the deputation, remarked on the seriousness of the possible introduction of the American gooseberry mildew into Kent, and on the large financial interests at stake in the county.

Mr. E. S. Salmon made the following statement, in representing the views and objects of the deputation:

Since the appearance in England of the American gooseberry mildew the outlook for owners of gooseberry plantations in Kent has been one of considerable anxiety. The heavy losses incurred in Kent through the ravages of the pest of black currants, known as the "big bud" mite, has made fruit-growers most anxious that every possible step should be taken to save the gooseberry crop from any similar damage.

The American gooseberry mildew is a pest, which, to quote the Board of Agriculture's own words, "has rendered the cultivation of gooseberries unprofitable wherever it has appeared, and in some cases impossible."

Kent is at present free from the disease, the single outbreak which was discovered in a nursery in November, 1906, having been stamped out at once by the owner, on the advice of Wye College, destroying the entire stock of affected bushes.

We feel strongly that, considering the annual value of the gooseberry crop to nearly all classes in the county, it would be a suicidal policy not to take every possible step to stamp out the disease at once if it should appear in the gooseberry plantations in Kent. We strongly desire that any outbreak in Kent should be dealt with at once by the compulsory destruction of all diseased bushes.

At the last meeting of the Kent County Council a resolution was passed unanimously that an application should be made to the Board of Agriculture for an order (to be issued now) to empower the Council, in the event of any outbreak, to order the grower to destroy immediately the diseased bushes, and not to allow the grower the alternative of pruning, as at present permitted by the Board's orders, issued to affected counties.

The Kent County Council passed a further resolution that, in all cases of compulsory destruction of diseased bushes, the grower shall receive some compensation, this compensation to be paid out of the rates only if it cannot be obtained from the Board of Agriculture.

We strongly support the action taken by the Kent County Council, and earnestly ask for such an order, so that every step may be taken beforehand in order to be able to deal summarily with the mildew if it makes its appearance. We urge especially that the burden of compensation should not be laid on the rates, and would point out that the proposal to do so (in the case of any outbreak) is already meeting with considerable opposition. We respectfully urge the justice of the claim put forward by Lord Harris at the meeting of the Kent County Council, that, as the Board of Agriculture pays compensation to the stock-owner for the slaughter of stock suffering from certain diseases, it is only right that the fruit-grower should be compensated from the same source. We point out that, under the "Destructive Insects Act" of 1877, compensation has in the past been paid by the Treasury in cases of the compulsory destruction of potatoes affected with the Colorado beetle.

Secondly, we recognise the importance of the fact that, if this mildew is not completely stamped out in the various counties already affected, it will only be a matter of time before the pest finds its way to Kent (and to the other counties at present free) in increasing quantity.

We regard it as a matter of paramount importance for all counties at present free from the mildew that the most drastic measures should be employed in all affected areas to stamp out the disease. We look upon the question as one of national importance, as the interests of every county are concerned. We submit that there is no scientific evidence that the measures of pruning and spraying at present permitted by the Board's orders are sufficient to stamp out such an infectious and epidemic disease as the American gooseberry mildew has proved itself to be in the United States, and since 1900, in Ireland, and on the Continent. We would call attention to the following statement published in the "Journal of the Board of Agriculture" for November last: "Not only have bushes previously affected been attacked again, in spite of all precautions, but bushes which last winter were believed to be free from disease have become affected, in spite of careful pruning, followed by regular spraying. It is clear that even pruning and spraying will not ensure immunity from disease." We urge, therefore, the employment of the drastic measures, involving the immediate destruction of all diseased bushes, which were embodied in the first order issued by the Board, but which, in the absence of any compulsory scheme of compensation, were found to be impossible to be carried out. But, while asking for more drastic measures to be taken in the affected counties, we are most anxious to state that we do not consider it equitable, or, indeed, possible, for such measures to be carried out without the payment of compensation. We are of the opinion that it is not equitable either that the compensation should be paid out of the rates, and we are convinced that, taking the counties of England as a whole, the drastic measures necessary for the stamping out of the mildew can be enforced uniformly only if compensation is given by the Board of Agriculture.

We earnestly ask, therefore, for an assurance that, if the American gooseberry mildew shows itself to any considerable extent this summer in the affected plantations in the various counties, in spite of the compulsory pruning and spraying which have been carried out under the Board's present order, the Board of Agriculture will substitute the original order, the destruction of all diseased bushes, the necessary compensation to be paid by the Board, and not out of the rates.

Mr. W. W. Berry laid stress on the importance of the matter from the labour aspect. Taking the acreage of gooseberries in Kent as 6,000 acres, he pointed out that the wages bill would be not less than £60,000 annually; and asked whether it was not worth while to spend a little in compensation in order to preserve so important a crop to the county.

Other members of the deputation spoke of the importance of gooseberry-growing to the small grower, whose plantation often represented a considerable part of his capital, and which could not be destroyed, if it became diseased, without the payment of some compensation.

Lord Carrington received the deputation sympathetically, and expressed the desire to do all he could to keep Kent free from the disease. The payment of compensation from Treasury funds was not at present possible, but the whole matter was under consideration. If the means adopted should prove during the course of the summer to have been ineffectual to stop the disease from spreading in the various affected counties, the Board would be prepared to take more drastic steps.

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EXHIBITIONS AND MEETINGS.

Ipswich Spring Show.

APRIL 21 and 22.

The Ipswich and East of England Horticultural Society chose, unfortunately, a very late and bad season for the resuscitation of its spring show, but in spite of distinctly unfavourable conditions the exhibition, held on the above dates in the Public Hall, was a very attractive one. The competition in the daffodil classes suffered considerably, as a consequence of the untoward season, but the exhibits staged were alike a testimony to the keenness and ingenuity of the exhibitors and to the beauty and magnetism of our spring flowers. We imagine that very few of the daffodils shown were expanded out of doors; indeed, there was ample evidence that not a few of the flowers had been opened under glass under the influence of considerable warmth. However, the exhibition, as a whole, was a very bright and interesting one, and we sincerely hope that Mr. W. F. Paul, the president, and Mr. Harold Smith, the new secretary, will have other and larger spring shows to conduct in the coming years.

CUT BLOOMS.

There were no entries whatever in the trade class for fifty varieties of daffodils, and only one entry in the class for five-and-twenty varieties, and here a first prize was awarded to Mr. A. Sparke, gardener to F. L. Bland, Esq., Copdock, near Ipswich, who had a fairly good set, that included Madame Plemp, Glory of Leiden, Gwyther, Lucifer, Emperor, Princess Mary, Lulworth, and albicans. The same exhibitor was placed first for twelve bunches of daffodils, four blooms to a bunch, though he had a less attractive display than that set up by Mr. H. G. Strutt, gardener to W. P. Burton, Esq., Edge Hill, Ipswich, who was second, and confined his attention almost exclusively to trumpet varieties. Mr. Sparke had good flowers of Stella superba, J. B. M. Camm, Madame Plemp, Lulworth, Mrs. W. Ware, and Minnie Hume. Mr. Strutt's best examples were Glory of Leiden, Emperor, Empress, J. B. M. Camm, and Golden Spur. Three competitors entered in the class for six bunches of trumpet daffodils; here Mr. D. Jamin, gardener to Captain W. O. Cautley, Bury St. Edmunds, was a good first with very clean, well developed blooms of Victoria, King Alfred, Madame Plemp, M. J. Berkeley, Glory of Leiden, and Duke of Bedford; Mr. H. G. Strutt came second, and Mr. A. Sparke third. First prize for three bunches of trumpet daffodils likewise fell to Mr. D. Jamin, who set up his flowers of Horsfieldi, Glory of Leiden, and Madame Plemp in tall green metal vases that made them the more attractive. The best three bunches of bicolor daffodils were also from Mr. D. Jamin, who had rather smaller flowers here of Horsfieldi, Victoria, and Madame Plemp; Mr. H. G. Strutt second, and Mr. A. Sparke, third.

In the incomparabilis section Mr. D. Jamin scored for six bunches with moderate blooms of Sir Watkin, Duchess of Westminster, Princess Mary, Retainer, Vesuvius, and Stella superba; Mr. H. G. Strutt came second, and Mr. A. Sparke third. For six bunches (amateurs employing one gardener only), Mr. G. H. Saville was placed first with a rather weak set that included White Lady.

For three bunches of flat-cupped daffodils Mr. Saville led with Chaucer, Cassandra, and the Poet's narciss; Mr. A. Sparke was second. For a vase of twelve blooms of a Leedsi daffodil Mr. A. Sparke scored with Minnie Hume, and Mr. G. H. Saville came second with Duchess of Westminster, Captain Cautley coming third. The best vase of twelve blooms of Sir Watkin was the one shown by Mrs. Donald Warnes, Bramford, near Ipswich, Mr. G. H. Saville coming second, and Mr. A. Dunnett, gardener to G. Dow, Esq., Hasketon, third, in a good competition. Barri daffodils were poorly shown, Mrs. Warnes and Mr. Sparke coming first and second respectively for a vase of Barri conspicuus.

Twelve distinct narcissi, one bloom of each (amateurs), made an interesting class, and here Mr. A. Sparke was a good first with Glory of Leiden, Albatross, Weardale Perfection, Lady Godiva, Lucifer, Blood Orange, Gloria Mundi, Seagull, Cardinal, Fusilier, Apricot, and Peach. Mr. D. Jamin was second, and Mr. G. H. Saville third. In a small class for six varieties Mr. Saville was first and Mr. W. Bradbury second.

Mr. Dunnett, gardener to R. Dow, Esq., Hasketon, scored for six bunches of spring flowers, with daffodils, tulips, hyacinths, Megasea Stracheyi, and pansies; Mr. W. C. Moores, gardener to W. F. Paul, Esq., second.

PLANTS AND GROUPS.

Herbaceous calceolarias were fairy good though some of the plants were rather drawn up; Mr. W. C. Moores was easily first for six pots, and Mr. J. S. Clarke, gardener to W. Pipe, Esq., The Lodge, Rushmere, Ipswich, second. Mr. Moores led for stellate cinerarias, but he must have been very little in front of Mr. J. S. Clarke. Mr. J. S. Clarke led for six azaleas with small, but very beautiful, examples; Mr. W. C. Moores second, and Mr. C. Chastney, gardener to V. D. Colchester, Esq., Ipswich, third. Spiræas were a strong feature, Mr. Strutt scoring in two classes for these elegant plants. Mr. J. S. Clarke had the best half-dozen cinerarias, Mr. Dunnett taking second place. Mignonette was good, Mr. J. S. Clarke again leading, and showing sturdy plants carrying fine heads of fragrant bloom; Mr. Dunnett second, and Mr. H. G. Strutt third.

Mr. Dunnett led for tulips in pots, but both Mr. Chastney and Mr. Moores showed well in this class, the latter showing six pots of Goldfinch. Mr. Saville gained first place for three pots of daffodils, Mr. E. Dunnett coming second. Mr. W. Dunnett had the best four pots of daffodils, and set up a fine exhibit of trumpet varieties; Mr. E. Dunnett was second.

Three groups of miscellaneous plants were arranged in front of the stage, and the one set up by Mr. H. G. Strutt was accorded the first prize; this produced by far the best colour effect, cinerarias and mollis azaleas being its prominent features; Mr. J. S. Clarke came second with arum lilies, cinerarias, calceolarias, etc.; Mr. H. J. Southgate gained the third award. All three groups lacked something in elegance and artistic arrangement.

Floral arrangements of daffodils were numerous. Mrs. Hill had the best vase of blooms—Sir Watkin. Mrs. Saville, using this popular variety, had the best basket of daffodils, and Miss M. Snell showed the best bowl of blooms.

NON-COMPETITIVE.

The leading non-competitive display was a large group artistically arranged in the centre of the hall by Mr. R. C. Notcutt, The Nursery, Woodbridge. This consisted of standards of Prunus triloba, viburnums, lilacs, laburnums, Cytisus Andreanus, and various roses. Under these were groups of magnolias, various hydrangeas, Primula obconica, mollis azaleas, lilacs, Spiræa confusa, genistas, and White Pet and Madame Levavasseur roses. Mr. Notcutt had also other displays of daffodils and alpines.

A group of well-grown cyclamens, Japanese maples, crotons, and herbaceous calceolarias, set up by Mr. W. E. Moores, gardener to W. F. Paul, Esq., Orwell Lodge, Ipswich, was very highly commended. Messrs. Barr and Sons, Covent Garden, arranged a small group of cut daffodils that included Blackwell, Duke of Bedford, Apricot, Ariadne, and Ray Smith. From Messrs. R. Wallace and Co., Colchester, came a collection of fritillarias, tulip species, muscaris, primulas, and cut daffodils. Messrs. F. Cant and Co., Colchester, set up a very fine exhibit of pillar and other roses, the freely-flowered examples of Dorothy Perkins, Crimson Rambler, Minnehaha, Tausendschon, Leuchtstern, and Hiawatha being greatly admired. Mr. C. H. Buck, Tresco Nurseries, Ipswich, contributed a group of carnations, pelargoniums, forced shrubs, etc.

Royal Caledonian Horticultural Society.

APRIL 15 and 16.

The Council arranged to hold its spring show some four weeks earlier than usual this year, but, perhaps, unfortunately, chose dates too near to Easter to ensure a financial success, though, as regards the material exhibited, there was only a slight falling off.

The chief class was for a group of plants, and Mr. Knight, gardener to Sir Wilfrid Lawson, Brayton, was successful with a nice arrangement of the usual class of plants, the second prize going to Mr. Wood, gardener to James Buchanan, Esq., Canaan Lane. Table groups of orchids made a pretty display, though there was nothing outstanding among the plants. Mr. Sharp, Freelands, Forgandenny, was easily first, and Mr. D. Mackay, Viewbank, Lasswade, second. Mr. Sharp was first also with four plants and a single orchid, these being also well shown by Messrs. Finlay, Wood, and Honeyman.

Roses in pots, though not large, were nicely bloomed, Messrs. Thom, Parlane, Young, Davidson, and Calder being the chief contributors. Among other things were many gay cinerarias, Mr. Galloway, of Gosford, being the most successful prizewinner. Amaryllis, astilbes, palms, stove and greenhouse plants, cyclamens, zonal pelargoniums, gloxinias, alpines, auriculas, etc., were all staged, but none of them were such as to necessitate special notice, and some were unworthy of the show.

Cut flowers formed a small portion of the exhibition, but there were some good roses, the twenty-four blooms and twelve blooms from Mr. W. Parlane Row, being fine. Mr. Knight was first for twelve Gloire de Dijon, and Mr. Pearson, Beechwood, for twelve Marechal Niels. Mr. Pirie, gardener to C. Cowan, Esq., Dalhousie Castle, set up twelve bunches of narcissi, finer than usual. In this section were also carnations, tulips, bouquets, and stove and greenhouse flowers. For a decorative dinner-table there were five entries, the first prize being awarded to Mr. Davis, Ballathie, for a mixed arrangement; Mr. Kidd, Carbery Tower, came second with a pretty arrangement of Madame Falcot roses, and Mr. Davidson, Kinloch, third, with Madame A. Chatenay roses, fresh and lovely. There was the usual criticism regarding the judging of these tables, but each exhibit had its weak point, which made the arrival at a decision pleasing to everybody an impossibility.

Mr. Galloway, Gosford, was the sole exhibitor of fruit, and he showed two dishes of strawberries, to which first prize was awarded. Of vegetables there was not a large quantity shown. Mr. Stuart, Thirlestane, Lauder, was first for a collection of six kinds, in which were good peas, kidney beans, and new potatoes.

The prizes for a plan of a garden, open to young gardeners, went to Mr. J. W. Forsyth, Dunis House Park; Mr. D. T. M'Kinlay, Dalkeith; and Mr. J. M. Webster, Bothwell Castle, in order of mention.

The trade exhibits included a nice lot of daffodil blooms from Messrs. Barr and Sons, Covent Garden, to which a gold medal was awarded. Outstanding varieties were Lady of the Snows, Maggie May, Charm, Apricot (F.C.C.), Bedouin, Peter Barr, Duke of Bedford, Fire Flame, and many others. Other exhibits of daffodils were from Messrs. Hogg and Robertson, Dublin (silver-gilt medal), and the Lissadel Bulb Farm, Sligo (silver-gilt medal). Messrs. Cunninghame, Fraser, and Co., Comely Bank, for a grand display of rhododendrons and alpines received a gold medal. Messrs. W. Cutbush and Sons, Highgate, gained a similar recognition for an extensive group of flowering plants, roses, carnations, etc., and Messrs. R. B. Laird and Sons, Pinkhill, gained a gold medal for an artistically-arranged group of flowering and foliage plants. Mr. John Forbes, Hawick, staged delphiniums, pæonies, phloxes, etc., and was awarded a silver medal. Mr. Downie, Beechhill, having the like award for a very large group of spiræas. Bronze medals were awarded to Messrs. Storrie and Storrie, Glencarse, for a fine collection of Primula obconica; to Messrs. Dobbie and Co. Rothesay, for pansies, primulas, etc.; and to Mr. Gerald Roche, Gowran Castle Gardens, Kilkenny, for anemones. Messrs. Wood and Co., London, showed horticultural sundries. A nice collection of new orchids was staged by Mr. McLeod, Chorlton-cum-Hardy, and a few from Messrs. Keeling and Son, Bradford. Messrs. Shanks and Co., lawn mowers. An Award of Merit was bestowed on Primula Angusi, from Mr. Angus, Penicuick.

Sydenham and District Gardeners' Guild.

A very interesting and instructive lecture on the "Small Holdings and Allotments Act, 1907," was given at the fortnightly meeting on Friday evening, at the Parish Hall, Wells Road, Sydenham, to the members of the above association by Mr. J. W. Owsley, I.S.O., barrister-at-law.

The chair was taken by one of the vice-presidents, Mr. H. J. Luff, who was supported by Mr. T. W. Stevens (the chairman of the Guild), Mr. F. C. Squire, Mr. Robert Wells, Mr. E. D. Ede, Mr. H. Hedges, Mr. Willoughby, Mr. Baker, Mr. W. H. Walker, Mr. W. H. Brown (secretary), and others.

The lecturer drew attention to the various advantages likely to accrue from the passing of this Act. He believed that a genuine attempt was being made, irrespective of political party, to give the Act a fair trial. One of its main objects was to induce the labouring man to remain on the land, and to encourage those who had migrated into the towns to return to the land. It was admitted on all hands that a depopulation of the rural districts had, to the detriment of the manhood of the country, been going on for many years from various causes. The problem before them was, whether the provisions of the Act could reasonably be expected to remedy this unfortunate state of affairs.

The machinery of the Small Holdings Act, 1892, was permissive only, whereas the new Act introduced the element of compulsion, in cases where the County Councils, or the Parish Councils, declined to put the Act into operation. The Board of Agriculture constituted the Central Authority, with whom rested the preliminary inquiries and the duty of approving schemes or establishing them where the County Councils made default.

Under the Act, a small holding was defined as "land which exceeded one acre and did not exceed fifty acres." A small holding was procurable as an allotment from the Parish Council. Power was also given to erect buildings on a small holding or to adopt existing buildings. The lecturer also mentioned that Parliament had voted a sum of £100,000 for the purpose of facilitating the carrying out of this important measure, and as during the next twelve months probably half a milion of money, or thereabouts, will be voted. considerable financial assistance will be able to be given to Councils which show a genuine desire to create small holdings and allotments. The lecturer read extracts from the model rules which had been drawn up by the Board of Agriculture for the guidance of the Councils.

Reference was also made to the French peasantry, who were the backbone of their country, and to their system of intensive cultivation, and also to the "Daily Mail" experiment in stocking a farm of fourteen acres and placing in it a tenant who had been a clerk all his life. The lecturer considered success assured in the case of allotments up to five acres, which would be taken up as an adjunct by those in the country who had other employment to rely upon. Even around London the movement was going strong. In West Norwood there were 108 cultivators on twelve acres, 201 on 21 acres in Plumstead, and similar allotments in East and West Ham. But as to larger holdings taken up as a sole means of livelihood, the lecturer expressed himself as doubtful, and invited the views of the members present on the feasibility of the working of the Act.

Mr. Robert Wells, in a spirited address, said he anticipated failure, on the ground that there would be too much superintendence, and that there would be a difficulty in disposing of the produce, and advocated the formation of central markets with easy access. Mr. H. Hedges took a contrary view, believing that the holders should trust each other, and adopt co-operation, and select one of themselves to act as agent for the others in disposing of the produce.

Mr. W. H. Walker gave an interesting account of his experiences in South America, and instanced an example of intensive culture by a Chinaman there. He also gave statistics showing that there was a great demand for land.

Mr. T. W. Stevens, Mr. Baker, and others spoke, giving general support to the Act.

At the close of the lecture an animated discussion ensued amongst the members, the majority of whom expressed their opinion more or less favourably as to the Act. In proposing a vote of thanks to the lecturer Mr. F. C. Squire stated that he considered the society owed Mr. Owsley a very heavy debt of gratitude for the pains he had taken in dealing with the subject on such an exhaustive scale, and for the very interesting and valuable lecture he had given them. He observed that our French neighbours had long since discovered the benefit of petit culture, which had always been a great success, and it had seemed curious to him that we had been so slow in following the example of that country, as he thought it must be obvious that when a person concentrated attention on a small area of land, as compared with a large area, the small area was likely to yield relatively larger and better results.

The vote of thanks was seconded by Mr. E. D. Ede, in a few well-chosen remarks, and was carried unanimously. It was acknowledged in suitable terms by Mr. Owsley, who stated that he had learnt much from the discussion. A vote of thanks to the chairman, moved by Mr. Robert Wells, and seconded by Mr. Willoughby, concluded the proceedings. The next meeting of the guild will be held on Friday, May 1, when Mr. Baker will read a paper on "Fruits under Glass."

British Gardeners' Association.

At the Executive Council meeting, held on April 14, twenty-four new members were elected, bringing the total up to 1,211. The secretary was deputed to address a meeting at Blackburn on the 15th inst. The draft report of the annual meeting was considered and amended, as was also the report of the Sub-committee on Examinations. A reference to the conditions of employment at Kew was made, and will be considered by the Executive Council when the alleged grievances are submitted in writing.

On Wednesday, April 15, a meeting of gardeners was held at the Eccles Rooms, Blackburn, under the chairmanship of Mr. Stradford, superintendent of the Corporation parks. He was supported by Mr. Batty, head gardener at the Corporation Cemetery; Mr. Hudson, superintendent of Queen's Park; Messrs. Boyd, Pimlott, Marshall, Winter, Bradburn, Murray, and about sixty other gardeners. Mr. J. Weathers, general secretary of the B.G.A., delivered an address upon the work, aims, and objects of the association, and was listened to with marked attention. He pointed out that although gardening was the oldest profession in the world, those who exercised it were amongst the most disorganised and indifferently paid class of workers in the kingdom, and this, notwithstanding that horticulture had reached a degree of success and affluence never before excelled. It was being continually stated that "gardening was a luxury," as if the intention was to hint to gardeners that unless they put up with existing conditions they would be dispensed with altogether. To show the absurdity of the statement, Mr. Weathers asked what would happen to all the public and private gardens and parks, the nurseries and market gardens, and the flower shows, if all the gardeners in the kingdom were to cease work for only a month or two. It would mean a loss that could only be reckoned in hundreds of thousands of pounds. Gardeners, however, were reasonable men, and all they required were fair conditions of employment, and payment in accordance with their ability and the experience it had taken them years to acquire.

The British Gardeners Association was established, said Mr. Weathers,to help the professional gardener to secure better recognition, and also to be a help to employers in selecting men who understood what gardening meant. At the present time many excellent positions in the horticultural world were held by unqualified men, and there was no reason why gardeners who were competent should not aspire to these positions. For, after all, no horticultural society, organisation, or anything else connected with gardening could succeed without the help and co-operation of the practical man. The lecturer hoped that Blackburn that evening would set an example, not only to Lancashire, but to the rest of the country, and establish a strong branch of the British Gardeners' Association, so that gardeners and employers of gardeners would be brought into closer and more friendly relations.

After numerous questions had been put and answered it was decided to form the Blackburn branch of the B.G.A., and about sixty gave in their names for membership. Mr. Stratford was elected chairman, and Mr. Batty secretary, and the committee will be appointed at the next meeting, after all forms have been submitted to and passed by the Executive Council in London.

Croydon Gardeners' Society.

One of the benefits of the union of gardeners' societies is the interchanging of lecturers, and in return for a visit paid by a lecturer from the Croydon society to Chelmsford, Mr. W. Seabrook, a delegate from that association, visited the Croydon gardeners on Tuesday last, and was accorded a most hearty welcome.

Mr. Seabrook gave a lecture on "Growing Peaches and Nectarines." These popular fruits are, to Mr. Seabrook's idea, very easily grown, providing one pays attention to detail. Shallow planting he advocated strongly, and the subsoil must be well drained to take the soakings of water which they require. For young trees he does not recommend a rich soil, but good fibrous loam with the addition of a little bone-meal is all that is required. Planting firmly is very essential. The growths should be trained four to six inches from each other, which will allow light and air to pass around the fruit. Disbudding when growth is about an inch long he had found to be serviceable. Just before the flowers open he advised spraying with quassia and soft soap, and this remedy may be adopted at intervals to keep down aphis and other insect pests. As soon as the leaf-buds commence to expand, soak the roots well with water. Thinning the fruit should be done on two occasions, finally leaving one fruit to each square foot of tree area. Manuring should be moderate till stoning is completed, then ample feeding may be gradually given. A remedy he practises for the leaf-curl is pinching out the parts affected on its first appearance. Some of the varieties he recommended were: Waterloo, Early

Rivers, Hale's Early, Crimson Galande, Dymond Barrington, and Walburton Admirable.

A short discussion followed his discourse, and to all questions asked he gave adequate replies.

Some good exhibits came from the members, Mr. A. Edwards staging three pots each of double cinerarias and Rubra maxima tulips; Mr. F. Oxtoby, two pots of schizanthus and two well-grown azaleas, and a choice collection of orchids, including some well-flowered dendrobiums from Mr. M. E. Mills.

Birmingham Gardeners' Association.

The terminal fortnightly meeting of the spring session was held on the 13th inst., when Mr. W. L. Deedman (the secretary) essayed "A Chat about Ferns." Mr. Walter Jones presiding. Mr. Deedman, who, by virtue of his many years as foreman in the Botanical Gardens, Edgbaston, was specially qualified to deal with the subject, did so in an interesting and practical manner. The discourse led to a very interesting discussion that was much appreciated by Mr. Deedman. The lecture was illustrated by a series of dried fern fronds, brought by Mr. Wm. Gardiner. These were chiefly of hardy kinds, and proved very interesting.

The Chairman, in referring to the relative value of ferns staged for exhibition purposes, deplored the fact that they had for several years past gradually lost public favour, likewise by some judges at shows; also a similar pronouncement applied to other specimen plants. Unfortunately, meritorious plants that were difficult to cultivate, and required several years to grow into specimens, were often ignored for something new and rare by certain judges, and who had a prejudice in favour, possibly, of some kind of easily-grown and showy flowering plant. This was endorsed by Mr. A. Cryer, who remarked that of late years he had noticed a growing disposition on the part of some judges to ignore the merits of certain plants of a rare or of a difficult nature to cultivate, in favour of those more showy, but easy to cultivate. Votes of thanks were respectively accorded Mr. Deedman and Mr. Gardiner.

United Horticultural Benefit and Provident Society.

The quarterly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, on Monday evening last, Mr. Charles H. Curtis in the chair. Five new members were elected, making a total of 30 during the quarter. Sickness has been heavy, but rather less than during the first three months of 1907. Several cheques were passed, being payments to members over 70 years of age, and others, including a payment of 2s. to a member who lapsed thirty years ago. Members over sixty years of age are now allowed to withdraw the interest on their deposit account, and several avail themselves of this privilege, as it enables them to pay their subscriptions more easily. The committee trust that many young gardeners will join the society during the year. Rules may be had from Mr. W. Collins, 9, Martindale Road, Balham, S.W.

Redhill and Reigate Gardeners' Association.

The Redhill and Reigate Gardeners' Association held its fortnightly meeting at St. Matthew's Parish Room, Redhill, on Tuesday, Mr. Seaman presiding; one new member was enrolled.

Mr. R. S. Ragg, B.A., head master of the Reigate Grammar School, gave a very instructive lecture on "The Pear Midge," with a view to the mitigation of that pest. He had found that spraying with paraffin emulsion was of little or no use, because after immersion in pure paraffin for over twelve hours they, the larvæ, were none the worse. Quicklime will not prevent them from penetrating the soil, even if half an inch is applied. The best method he knew was hand picking, which should be done from the third week in May to the second week in June.

A good discussion followed, one member remarking that the period named was an especially busy time of the year, and employers should employ their men overtime so as not to interfere with the regular order of work.

On the motion of the Chairman, seconded by Mr. Herbert, a very hearty vote of thanks was accorded the lecturer.

Woodford Horticultural Society.

A most interesting and instructive lecture on "Carnations" was given at the Memorial Hall recently by Mr. Montagu C. Allwood, carnation specialist to Messrs. Hugh Low and Co., Enfield. He dealt with his subject in a most practical manner, showing the remarkable strides that had been made in the improvement of the flower. He gave due credit to the Continental raisers, also to the Americans, but showed that England was now taking her part in making the flower popular. The lecturer described the culture of the three sections into which the various germs are divided, viz., the border carnation, the Malmaison, and the perpetual-flowering, and displayed some very fine blooms of the latter on stiff stems, which he had brought with him, and with the aid of growth showed the method of layering and propagation by cuttings. Mr. Allwood strongly advised growers to take up the raising of seedlings, and explained the art of fertilisation of the flower.

A very hearty vote of thanks was accorded the lecturer, and the Chairman, Mr. W. A. Hudson, very kindly promised to arrange for prizes to be offered for carnations at the next exhibition of the society.

South - Eastern Agricultural College, Wye.—A meeting of the governors of the South-Eastern Agricultural College was held at Wye on the 13th inst., Lord Ashcombe presiding. The resignation of the vice-chairman, Mr. George Marsham, was accepted with sincere regret, and Mr. F. S. W. Cornwallis was appointed in his stead. The Principal (Mr. J. R. Dunstan) reported an attendance of 122 students for the spring term, and that 123 had already entered for the summer term, commencing on June 1. The establishment of professorships of agriculture and agricultural zoology in connection with the London University is under consideration. Members of the college staff are actively engaged in research work in mycology, soil bacteriology, animal digestion, frost protection of orchards, and other problems of agricultural and horticultural importance.

Burchellia capensis.—Just now a bush of this burchellia, freely laden with blossoms, in the Mexican portion of the temperate house at Kew, shows its value for the embellishment of the warm greenhouse at this season of the year. Its flowering period, though, is by no means limited to the early spring for I have often seen it in bloom at other times. This burchellia forms a freely branched shrub, clothed with oppositely arranged ovate leaves, about four inches long and of a rich green tint. The flowers, which are borne in clusters on the points of the preceding year's shoots, are of a somewhat inflated tubular shape, a little over an inch long, and of a deep orange-scarlet colour, a very effective tint when viewed against a dark background, or during the dull weather of which we have had so much of late. It is not at all a difficult subject to strike from cuttings of the half-ripened shoots, and the young plants grow away freely in a mixture of loam, peat, and sand. This species was introduced during the early years of the last century, so that, though seldom seen, it is by no means a novelty. It is also known as Burchellia bubalina (buffalo), as its wood has been compared with buffalo horn for hardness.—W. T.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention correspondents are requested to distinctly mark the paragraph.

EARLY-FLOWERING TULIP SPECIES.—S. E. B., Abergavenny: Two of the earliest of tulips to come into flower are Tulipa violacea and T. biflora. The former is usually rather the earlier of the two, and it has magenta-red flowers, with a faint suggestion of violet in the colouring. T. biflora is a Russian species, introduced over a hundred years ago; it has yellowish flowers, produced two or more on a scape.

PLANTING SWEET PEAS.—W. H. L., Lincoln: Keep the plants as hardy as possible in the cold frame, only covering them if very cold weather is imminent, and then not closing the frame. Plant them out at the earliest favourable opportunity. The season is late, and if the ground is very cold nothing will be gained by planting unless the plants are starving for want of food and root room. We saw several rows of fine plants set out on Good Friday, and on Easter Monday morning they experienced two sharp and heavy snowstorms. Keep the plants well supplied with water, and give weak liquid manure if root-bound, and plant out the first week in May.

HARDY EXOTIC FERNS.—O. S., Hartland: There are, as you surmise, a number of beautiful hardy ferns not natives of the British Isles, but which succeed admirably in our wild or semi-wild gardens. The chief of these are Osmunda cinnamomea, O. Claytoniana, O. spectabilis (or gracilis), Nephrodium Goldieanum, N. intermedium, N. marginale, Athyrium Michauxi, Aspidium acrostichoides, Cystopteris bulbifera, Woodsia obtusa, Onoclea sensibilis, Adiantum pedatum, Polypodium hexagonopterum, and Struthiopteris pennsylvanica. There are some others of rather doubtful hardiness, and it is hardly fair to cite Woodwardia radicans, Dicksonia antarctica, and Lomaria magellanica as hardy because they thrive out of doors in Falmouth and the Cornish Riviera.

PROPAGATING THE TREE LUPIN.—B. A., Oswestry: The tree lupin (Lupinus arboreus) is readily propagated from seeds, and as these ripen in most gardens seedlings are not difficult to obtain, many coming up around an old specimen. Another method is to take cuttings of side growths, with a heel of old wood attached, in summer, and insert them in sandy soil in a cold frame.

VIOLAS.—N. D., Huntingdon: The plants should have been lifted and divided in autumn, and then they would have been strong specimens by this time, ready to burst into flower during genial weather. Lift the old plants at once and pull them to pieces, then plant the divisions where they are to remain, placing them in some gritty soil, to which leaf-mould and old decayed manure has been added. Attend to watering, and, next month, give a surface mulching of decayed manure and leaf-mould.

DAPHNES.—A. H., Reigate: Daphne indica can be obtained from any of the nurserymen who make a speciality of greenhouse plants. The names of the firms and their addresses will be found in our advertising columns. The price per plant will depend entirely upon the size and strength of the plants, but should range from 3s. 6d. upwards.

TREATMENT OF NEWLY-PLANTED RHUBARB.—S. J. C., Chesterfield: Use the hoe freely over the plantation, and give a light dressing of superphosphate. Towards the end of May, if warm weather sets in, give the plot a mulch of rich manure, first watering the plants if this should be necessary. Remove flower spikes directly they appear, and on no account allow any leaf-stems to be pulled. The superphosphate will assist the plants very materially when they make their second growth, and we have found it very beneficial on old plantations also.

CHRISTMAS ROSES.—T. B., Hertford: Treat the plants liberally from now onward, giving them good soakings of liquid manure occasionally as the season advances, and a mulching of half-decayed manure if necessary. Lift, divide, and replant next August, and give a light shading for a while afterwards. Pot up a few plants at the same time, as these will be useful for the conservatory during winter.

MARKET CULTURE HANDBOOKS. — A. C., Liverpool: We recommend the following works: "Mushrooms, Cucumbers, Tomatoes, and Salads" (1s.); "Carnations, Picotees, and Pinks" (2s. 6d.); and "Chrysanthemums for Garden and Greenhouse" (2s. 6d.). So far as we are aware, there is no book dealing solely with chrysanthemums for market culture, but you will find the work recommended a useful one. All the foregoing books can be obtained from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C. The other subjects are not dealt with from a market point of view in any book we are acquainted with.

LATHRÆA CLANDESTINA.—M. E., Wisbech: This beautiful root parasite will not grow any and everywhere, and considerable difficulty is often experienced by those who wish to possess it in obtaining a colony. The seeds that follow the violet-purple crocus-like flowers should be sown freely in damp soil, overlying the roots of a strong tree. Kerner, in his "Natural History of Plants," writes: The seed of Lathræa germinates on damp earth. The young root of the seedling grows at first at the expense of the reserve material stored in the seed, penetrates vertically into the earth, and sends out lateral branches, which, like the main root, follow a serpentine course, and search in the loose, damp earth for a suitable nutrient substratum. If one of these meets with a living root belonging to an ash, poplar, hornbeam, hazel, or other angiospermous tree, it fastens on to it at once, and develops suckers at the point of contact.

BEGONIA SEMPERFLORENS GIGANTEA.—P. T. H., Birmingham: This begonia differs so widely from the true B. semperflorens varieties, that no doubt many, like yourself, have wondered whether it was not of hybrid origin. Writing from memory, we believe M. Lemoine was the raiser of B. semperflorens gigantea, and that it was the result of crossing B. semperflorens with B. Lynchiana. It is a fine plant for winter flowering, though it does not branch very freely. It is rather largely grown at Kew for conservatory decoration.

DAMAGE TO FUCHSIA TIPS.—G. T., St. John's Wood: There are no signs of thrips upon any of the specimens sent, but there are ample signs that the buds and tender tips of the growths have been bitten or otherwise damaged by some strong pests, such as earwigs, weevils, and the like. Set traps of dry moss in dirty pots among the plants, and also examine the plants at night by means of a bright light. We believe weevils have done the mischief. Stand the plants over a white cloth in late afternoon, and then at night suddenly flash a bright light upon them, and the weevils will drop on the cloth, where they can be seen and captured.

SINGLE DAHLIAS.—E. C. W., Harpenden: The recognised authorities regard Beauty's Eye, Columbine, Darkness, Eclipse, Kitty, Leslie Seale, Madonna, Mikado, Miss Morland, Miss Roberts, Princess of Wales, and Snowdrop, as the best dozen single dahlias for exhibition purposes. A fine dozen for garden purposes are: Beauty's Eye, Columbine, Demon, Formosa, Kitty, Leslie Seale, Mikado, Miss Roberts, Polly Eccles, Snowdrop, Stromboli, and Victoria. The new varieties distributed for the first time this season are Brilliant, Elmira, Glencoe, Iroquois, Sincoe, Peggy, Enid, Fabian, Sevenoaks White, and Mrs. J. Tait.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

J. J., Croydon.—Iris stylosa grandiflora—very fine.

E. J. B., Bedford.—1, Shortia galacifolia; 2, Epigæa repens; 3, Phillyrea Vilmoriniana.

M. B. R., Oxford.—1, Pteris semipinnata; 2, Davallia Mooreana; 3, Adiantum Birkenheadi.

S. E. J., Leek.—1, Forsythia suspensa; 2, Tulipa biflora; 3, Saxifraga apiculata; 4, S. scardica; 5, S. cæspitosa.

A. J. G., Burwash.—The specimens were very poor ones. We believe No. 1 to be Cestrum elegans, and No. 2 Oxalis rosea.

D. J., Cirencester.—1, Epidendrum cochleatum; 2, Cypripedium Lawrenceanum; 3, Narcissus Johnstoni Queen of Spain; 4, Pelargonium quercifolium.

S. A., Chelmsford. — 1, Odontoglossum nævium; 2, O. Rossi majus; 3, Pulmonaria officinalis; 4, Ribes sanguinea; 5, Prunus Pissardi.

A. S. G., Wrexham.—1, Muscari conicum; 2, Tulipa biflora; 3, Saxifraga Rhei; 4, S. cæspitosa; 5, Anemone Pulsatilla; 6, Primula marginata.

RATING CASE.

A case of considerable importance was heard at the Herts Quarter Sessions a few days ago. It was an appeal by Mr. G. Beckwith, of Hoddesdon, against the assessment of his nurseries by the Ware Assessment Committee. Mr. A. Macmorran, K.C., and Mr. Naldrett, instructed by Mr. C. G. Scott, of 35, New Broad Street, appeared for the appellant, and Mr. W. Ryde and Mr. E. N. Konstam, instructed by Mr. G. H. Girby, appeared for the respondents.

Mr. Macmorran said that in 1896 the values of the property were fixed at £240 gross and £180 rateable; in 1898, after some small additions to the property, the figures were raised to £252 and £189 respectively; in 1904 a new valuation was made, and the figures were then placed at £338 gross and £225 rateable. These figures were not appealed against, though considered too high, but in 1907 the Assessment Committee again raised the assessment, and this time to £740 gross and £370 rateable, and against these figures Mr. Beckwith appealed. There were 46 houses, 33 of them built of iron by the late Mr. Beckwith, and now out of date. Counsel argued that £740 a year rent, as suggested by the assessment, was a ridiculously high sum, and the highest value of the premises was £316 gross and £169 rateable.

Mr. J. B. Slade, F.S.I., of Messrs. Protheroe and Morris, Cheapside, said he had carefully valued the property, and estimated it at £4,881 4s., which worked out at an assessment of £316 16s. gross, and £169 8s. rateable. Mr. Edmund Rochford, Mr. Charles Kinnell, and Mr. A. L. Rogers (W. Duncan Tucker and Co.), also gave evidence in support of the appeal.

After hearing the case for the respondents, whose various witnesses assessed the property between £500 and £600, the Court found for the appellant, with costs, and the assessment figures were reduced to £350 gross and £234 rateable.

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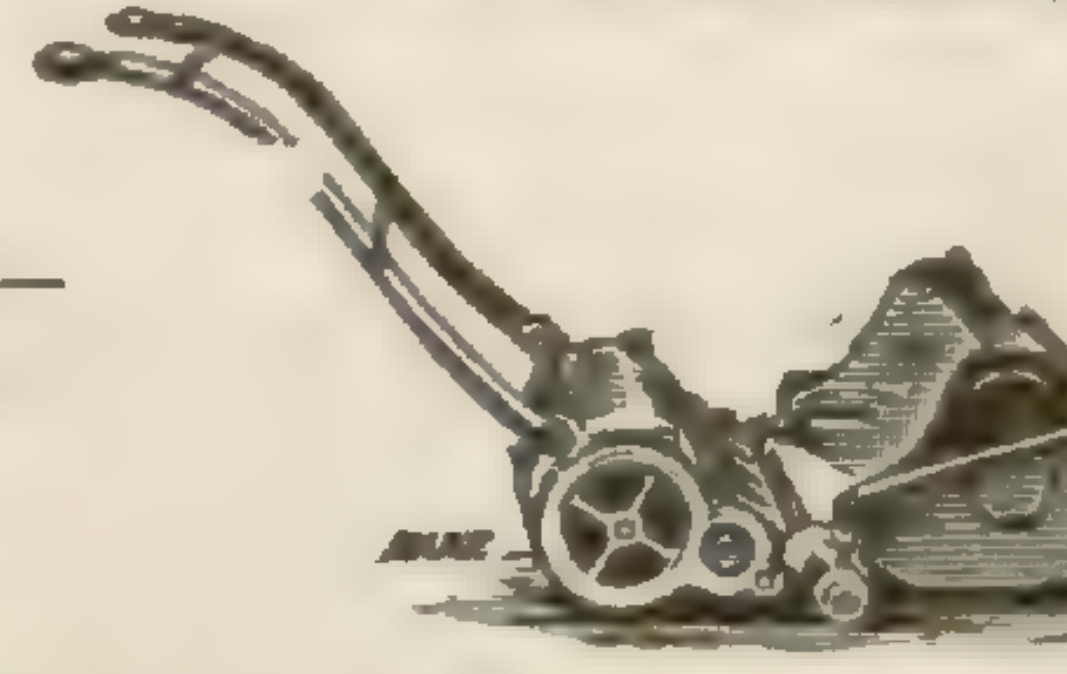

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NOTES OF OBSERVATION.

◆

Annual Climbers for Arches.—The many climbing annuals which may now be bought cheaply in seed packets do not receive half the attention they deserve at the garden beautifier's hands. Many an arch which is bare at the base would be greatly improved for its summer display by a flowering annual planted near it; many a pergola with half-clothed sides would be the better furnished. Such places are not ideal spots for raising annuals, but the latter can always be sown elsewhere, grown to a good size, and then transplanted with plenty of soil about their roots. Sweet peas, nasturtiums, canary creeper, variegated Japanese hops, and the beautiful Cobæa scandens are a few eminently suitable subjects.—E. J. K.

Strawberry, Kentish Favourite.—This variety has been spoken of as a likely rival to Royal Sovereign for forcing, but our experience of it does not bear out this contention. We have tried it side by side with Royal Sovereign, under the same conditions of temperature and treatment. I am, of course, writing of it as an early forcer to form the first batch of ripe strawberries; but it may be that for mid-season and late forcing it will be more satisfactory. Kentish Favourite is of very compact growth, inclined to produce several crowns, which, of course, can easily be reduced in number. My experience of these compact growing strawberries is that the flower scapes are not thrown up sufficiently high above the leaves to be altogether satisfactory for early forcing. Plants of Royal Sovereign reduced to one crown generally produce a good strong flower scape, carried well above the foliage, which is what is required in early forcing, as flowers so borne generally set well. Two other varieties that promise well as forcers are The Bedford, and Bedford Champion. As an early, or good all-round forcer, it will require a fine strawberry to displace Royal Sovereign.—T. H. Slade, Poltimore Gardens.

Compost for Seedlings.—The compost used by very many novices for pricking out seedlings in is so badly concocted that it soon resolves itself into a pasty, closely compacted mass, and one which is no stranger to the green vegetable covering which betokens stagnant moisture. The fault is largely one of sifting the compost too finely, but it is also due to the use of improper sand or too little of what is proper. The proper sand for mixing with such compost is almost as coarse as fine rice, and I always use one-third of this, one-third of leaf-mould sifted through a half-inch square meshed sieve, and one-third of loam shaken out of turves but not sifted. This gives splendid results, and the green on my seed pans is no more plentiful than the green in my eye.—E. J. K.

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MARKETS.

◆

COVENT GARDEN.

Flowers.

Supplies have been fairly good, but trade has been rather slow since the holidays.

		s. d.		s. d.
Acacia	per doz. bun.	6 0	to	10 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 0		3 0
Arums	per doz.	1 6		3 0
Asparagus	per doz. bun.	1 6		6 0
Azalea, white	per doz. bun.	3 0		5 0
,, mollis	per bun.	1 0		1 6
Berberis	per doz. bun.	1 6		2 6
Carnations	per doz. blms.	1 6		2 6
,,	per doz bun.	8 0		12 0
,, Malmaison	per doz. blms.	8 0		10 0
Cattleyas	per doz.	8 0		12 0
Cœlogynes	per doz. blms.	1 0		1 6
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	6 0		7 6
Cypripediums	per doz. blms.	2 0		3 0
Daffodils	per doz. bun.	0 9		3 0
Eucharis	per doz.	3 0		4 0
Forget-me-not	per doz. bun.	2 0		3 0
French fern	per doz. bun.	1 0		3 0
Freesias	per doz. bun.	2 0		3 0
Gardenias	per doz.	2 0		4 0
Hyacinths, Roman	per doz. bun.	4 0		6 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	3 0		4 0
Lilium auratum	per bun.	2 0		3 0
,, speciosum	per bun.	2 0		3 0
,, longiflorum	per bun	2 6		4 0
Lily of the Valley	per doz.	6 0		8 0
Marguerites, white	per doz. bun.	3 0		5 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	3 6		6 0
Narcissus	per doz. bun.	1 0		3 0
Odontoglossums	per doz. blms.	2 0		3 0
Pelargoniums	per doz. bun.	5 0		8 0
Ranunculus	per doz. bun.	5 0		8 0
Roses	per doz.	2 0		8 0
Smilax	per doz. trails	2 0		3 0
Spiræa	per doz. bun.	5 0		7 6
Stocks	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	3 0		5 0
Tuberoses	per doz. blms.	0 4		0 6
Tulips	per doz. bun.	5 0		10 0
Violets	per doz. bun.	2 0		3 0
Wallflowers	per doz. bun.	1 6		2 0

Fruits.

Business continues steady, and prices are well maintained.

		s. d.		s. d.
Apples, Australian	per case	10 0	to	20 0
,, Canadian	per barrel	12 0		20 0
,, Californian	per box	10 0		16 0
Bananas	per bun	3 0		10 0
Cranberries	per case	10 6		12 0
Grapes, English	per lb.	2 0		4 0
,, Belgian	per lb.	1 9		3 0
,, Almeria	per 12lb.	4 0		6 0
,, Cape	per box	2 6		4 0
Lemons	per case	8 0		12 6
Melons, Guernsey	each	2 0		3 0
Nectarines, Cape	per box	6 0		10 0
Oranges	per case	7 0		30 0
Pears, Cape	per box	5 0		8 0
Pineapples	each	2 0		4 0
Plums, Cape	per box	4 0		8 0
Strawberries	per lb.	2 0		4 0
Walnuts	per bag	7 0		8 6

Vegetables.

Fairly good supplies arrive and meet a regular demand.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	3 0
Asparagus, Paris green	per bun.	3 6		5 6
,, English	per bun.	4 0		5 6
,, Spanish	per bun.	1 6		2 6
,, sprue	per bun.	0 6		1 6
Beans, French	per lb.	0 8		1 0
,, Madeira	per bskt	2 0		3 0
Beet	per bush.	1 3		2 0
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
,,	per bag	2 6		3 0
,, French, new	per doz. bun.	6 0		7 6
Cauliflowers	per doz.	2 0		3 0
Celery	per bundle	0 9		1 3
Celeriac	per doz.	1 6		2 0
Chicory	per lb.	0 2		0 4
Cucumbers	per doz.	2 6		6 0
Endive	per doz.	1 9		3 0
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	12 0		15 0
Leeks	per doz. bun.	1 0		1 6
Lettuce, cabbage	per doz.	1 0		1 6
,, Cos	per doz.	3 6		5 0
Mint	per doz. bun.	2 0		3 0
Mushrooms	per doz. lb.	8 0		10 6
Onions, English	per cwt.	4 0		4 6
,, Spanish	per case	5 0		6 6
Parsnips	per bag	1 6		2 0
Parsley	per doz.	2 0		3 0
Rhubarb	per doz. bun.	1 0		1 6
Savoys	per tally	3 0		4 6
Seakale	per doz. pun.	9 0		12 0
Tomatoes, Teneriffe	per package	8 0		16 0
Turnips, French, new	per doz. bun.	6 0		16 6
Watercress	per doz. bun.	0 4		0 6

LONDON POTATO MARKETS.

The supplies of old potatoes are coming forward on a liberal scale, and continue in good demand at late rates.

		s. d.		s. d.
British Queen	per ton	95 0	to	100 0
Blacklands	per ton	80 0		85 0
Dunbar Maincrops	per ton	110 0		120 0
Dunbar Up-to-Date	per ton	110 0		115 0
Evergoods	per ton	90 0		95 0
Kent Up-to-Dates	per ton	105 0		110 0
Langworthy	per ton	95 0		110 0
Lincoln Maincrop	per ton	95 0		100 0
Guernsey, new	per lb.	0 4		0 5
Teneriffe, new	per cwt.	10 0		12 0
Algerian, new	per cwt.	10 0		12 0
Scottish Triumphs	per ton	100 0		110 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. April 12 to April 18.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 12 Sunday	—	43	41	50	40
,, 13—Monday	4 5	43	39	47	32
,, 14—Tuesday	2 10	44	39	47	32
,, 15—Wednesday	5 10	42	39	55	35
,, 16—Thursday	9 50	51	46	59	42
,, 17—Friday	11 50	46	41	56	37
,, 18—Saturday	5 45	44	39	50	33
Means	5 35	45	40	52	36

Date. 1908. April 12 to April 18.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
April 12—Sunday	—	45	46	45	36
,, 13—Monday	—	43	45	45	22
,, 14—Tuesday	—	42	45	45	22
,, 15—Wednesday	—	42	44	45	26
,, 16—Thursday	—	44	45	45	37
,, 17—Friday	—	44	45	45	32
,, 18—Saturday	—	45	46	45	24
Means	(total) —	44	45	45	28

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

TUESDAY, April 28.—Royal Horticultural Society. Daffodil Committee meets at 11.30; Fruit, Floral, and Orchid Committees, at 12 o'clock; lecture at 3 p.m. on "The Profession of Landscape Gardening," by Mr. Edward White; Scientific Committee at 4 o'clock.

National Primula and Auricula Society at the Royal Horticultural Hall.

WEDNESDAY, April 29.—Royal Society of Arts. School Teachers' Examination in Horticulture at the Royal Horticultural Hall.

FRIDAY, May 1.—Hayward's Heath Gardeners' Association's Children's Garland Show.

SATURDAY, May 2.—National Auricula Society. Northern Section.

WEDNESDAY, May 6.—Royal Society of Arts. Croydon Gardeners' Spring Show.

THURSDAY, May 7.—Linnean Society Meeting.

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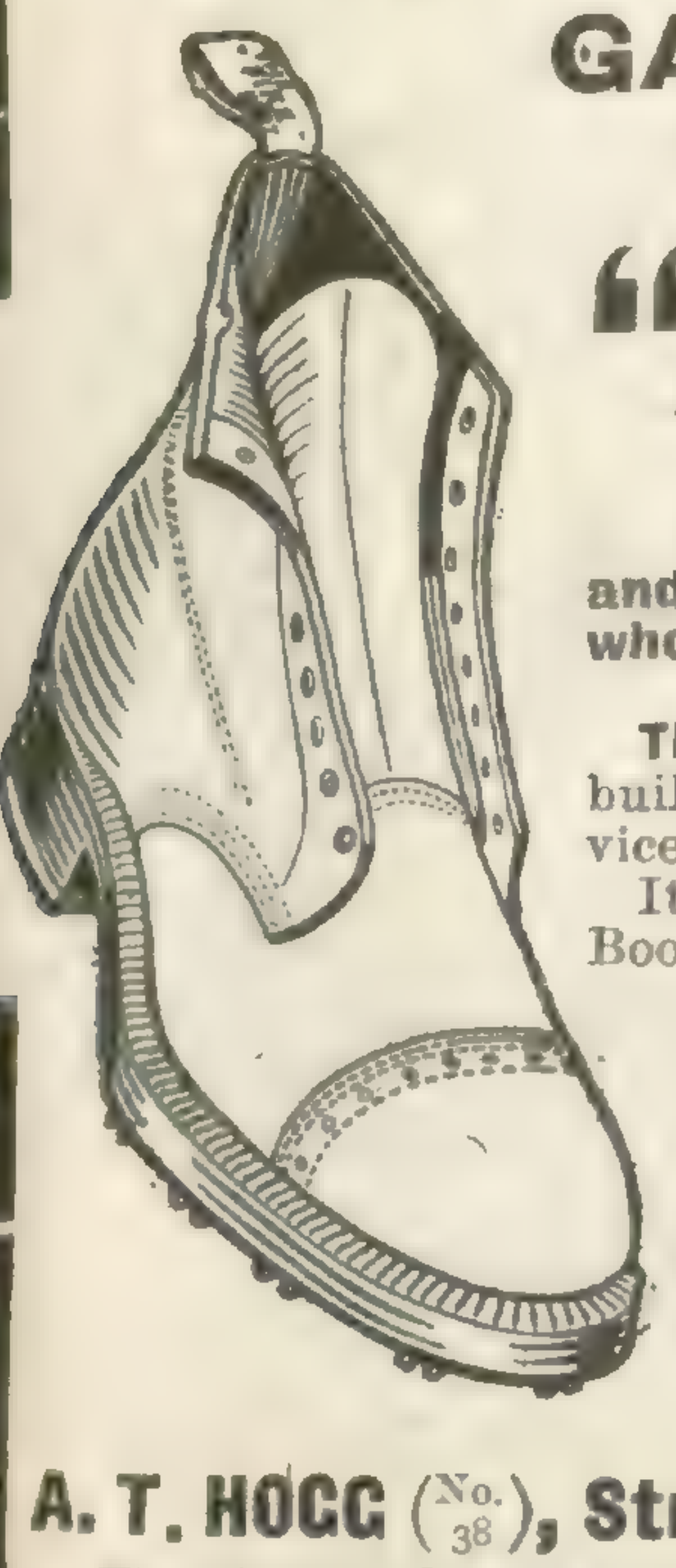

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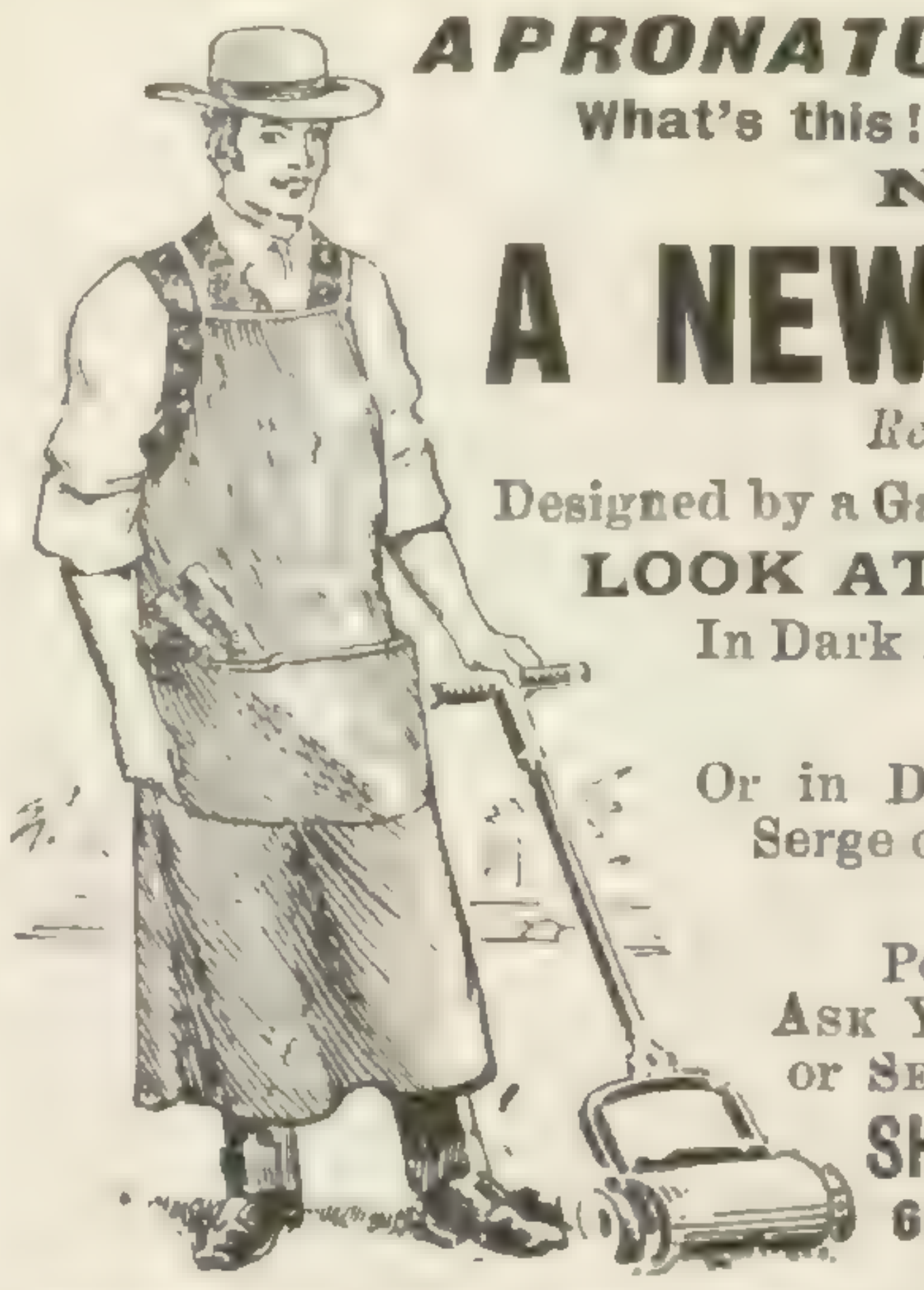

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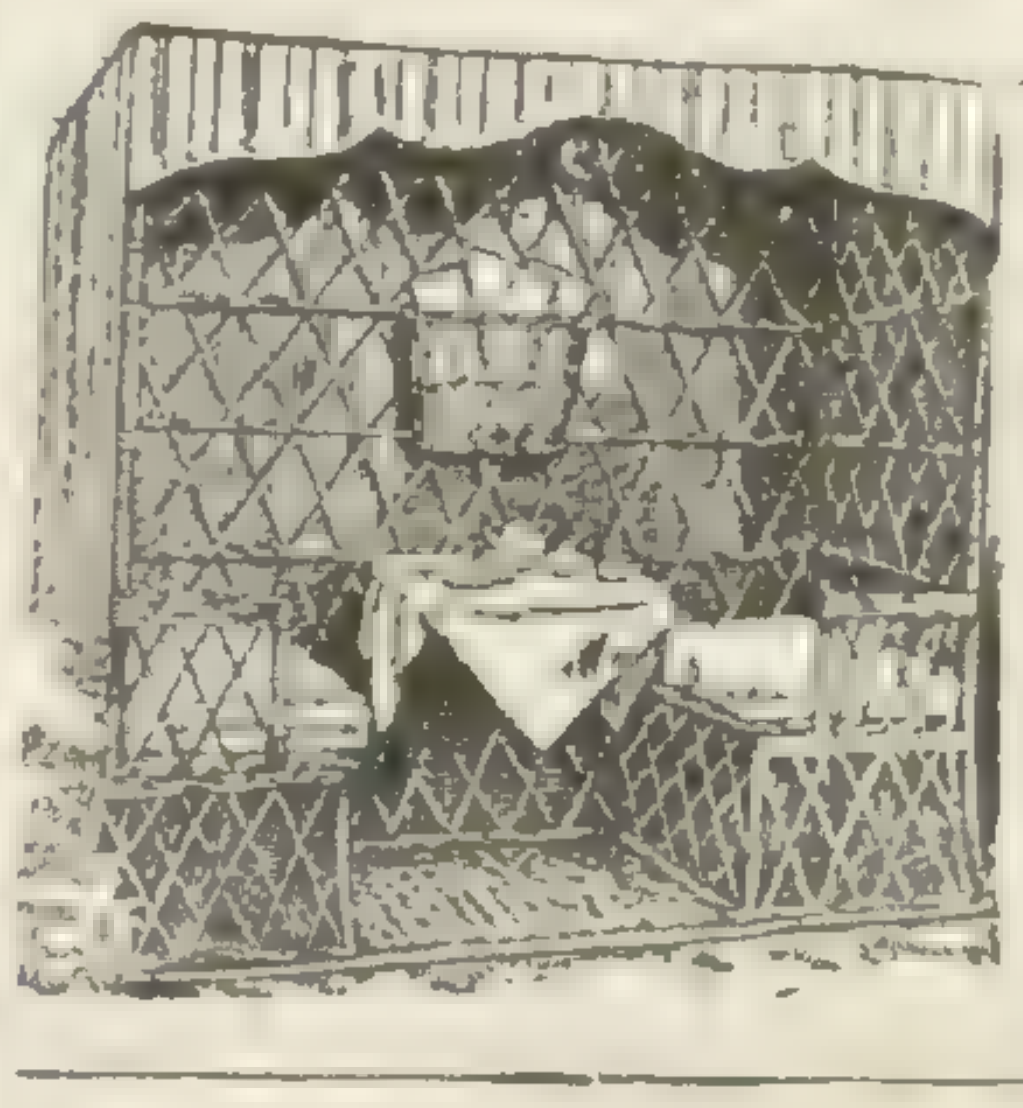

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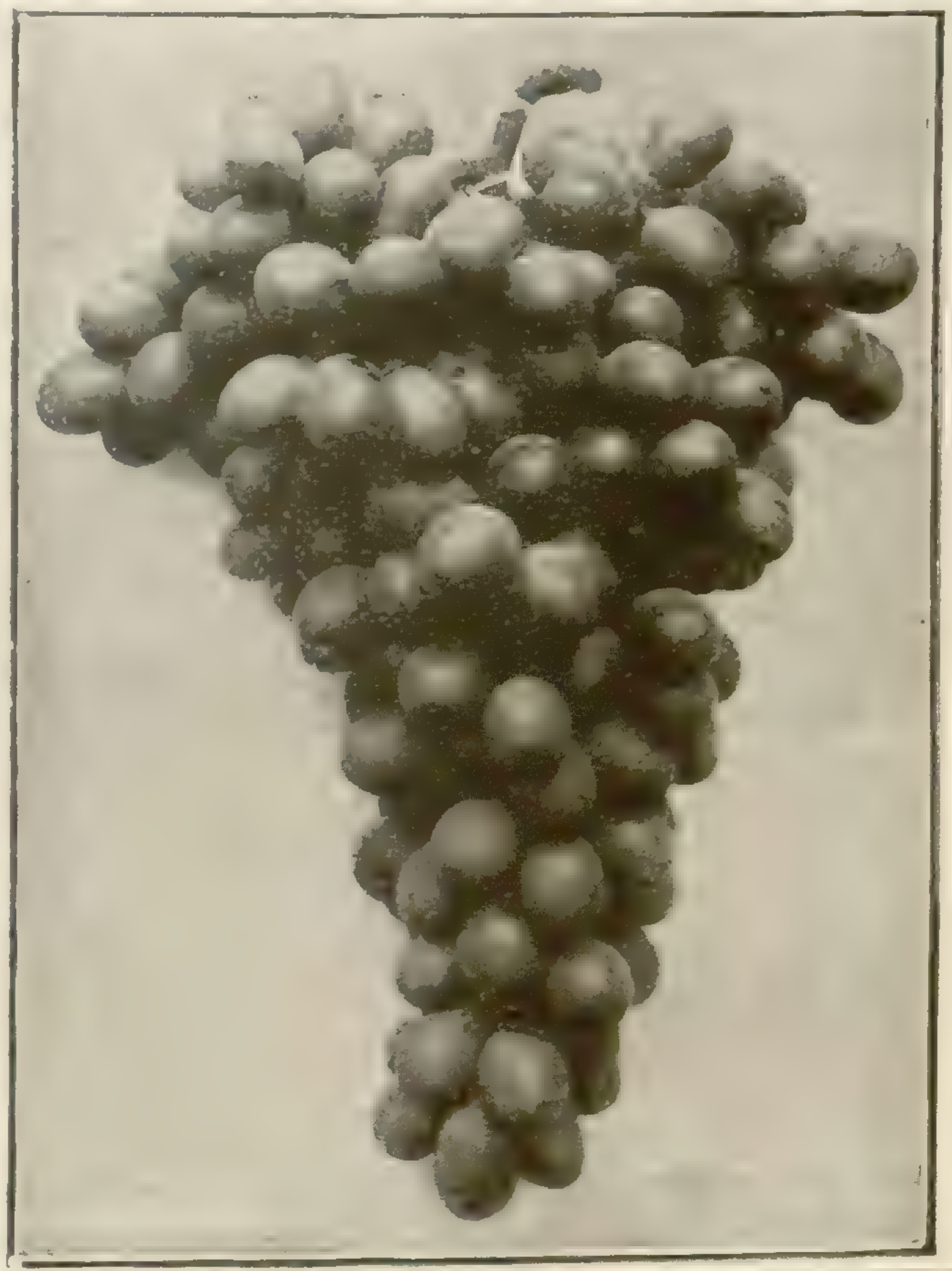

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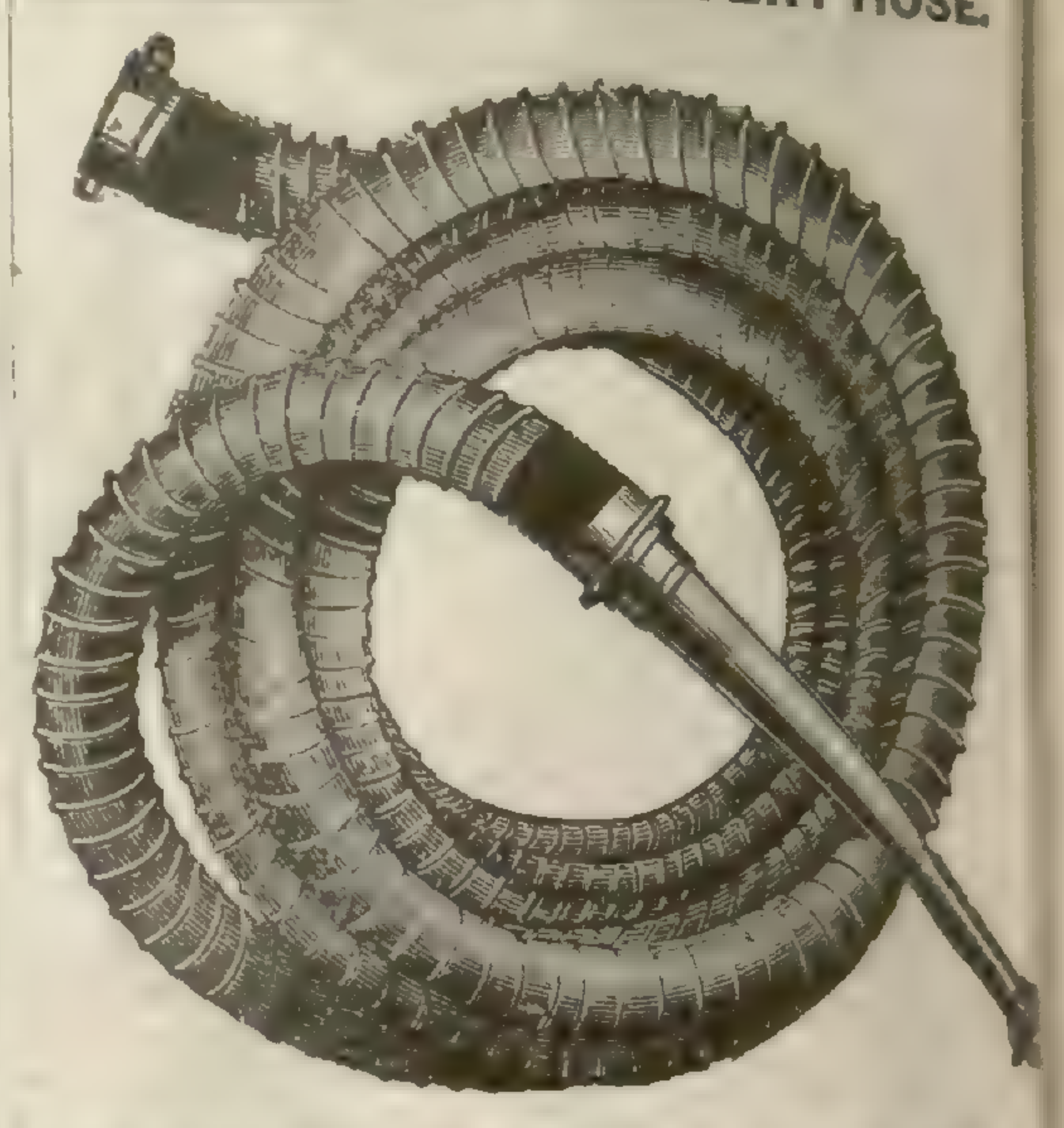

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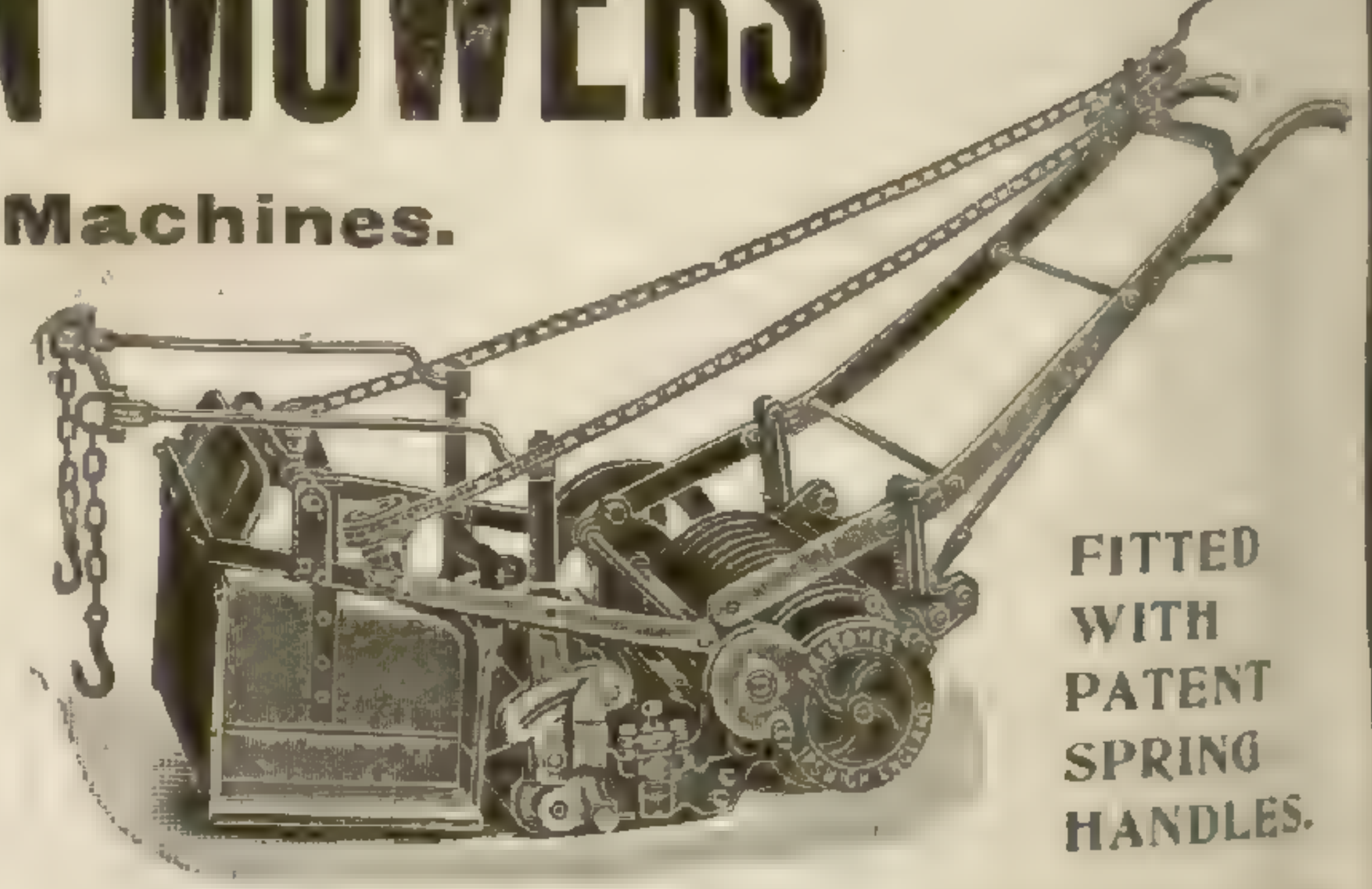

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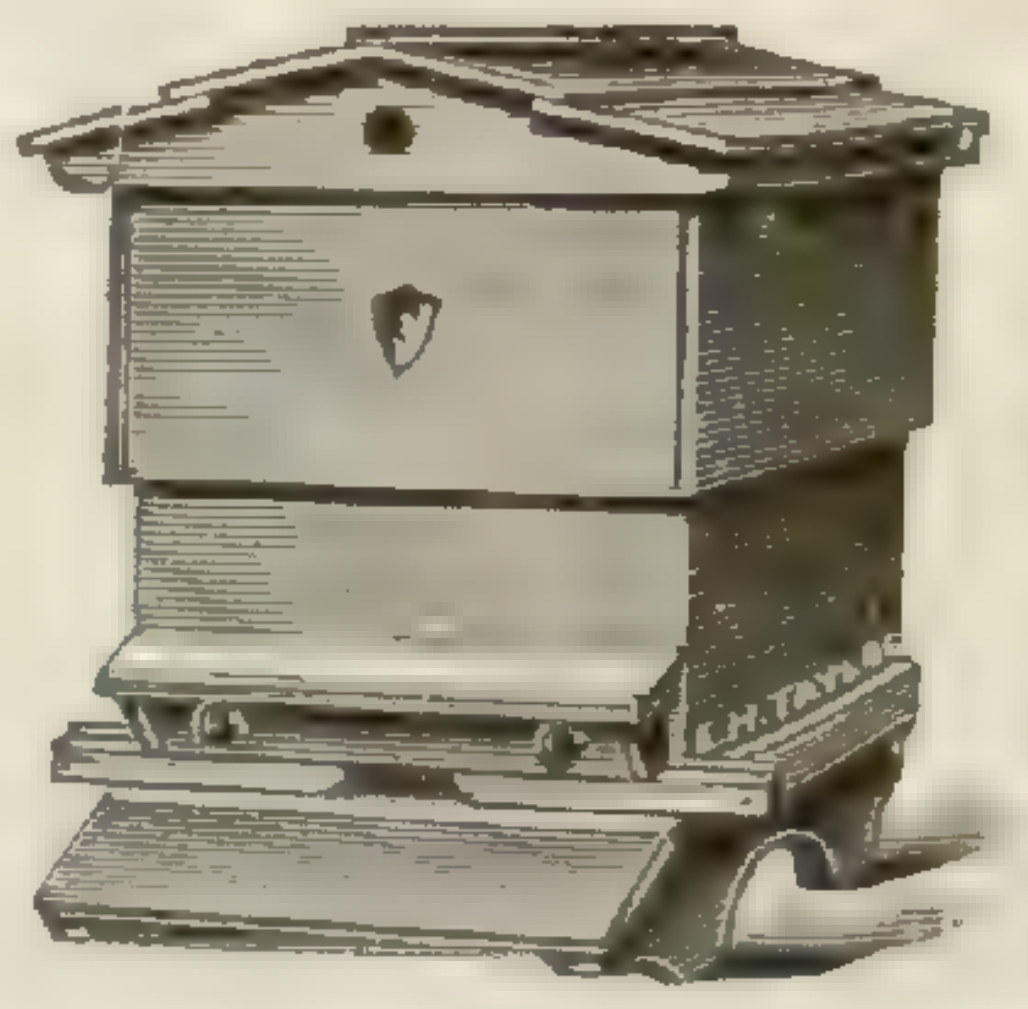

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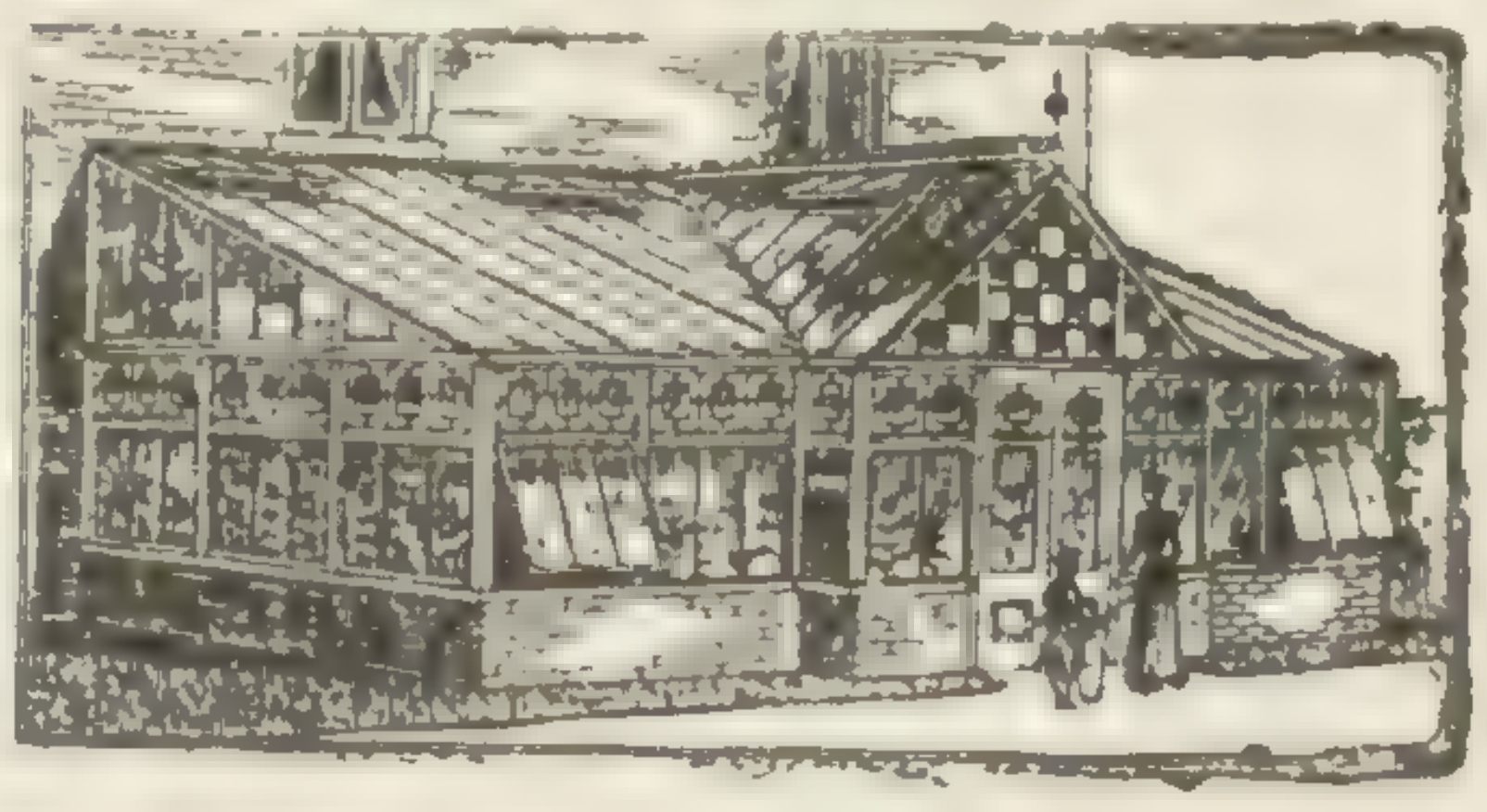

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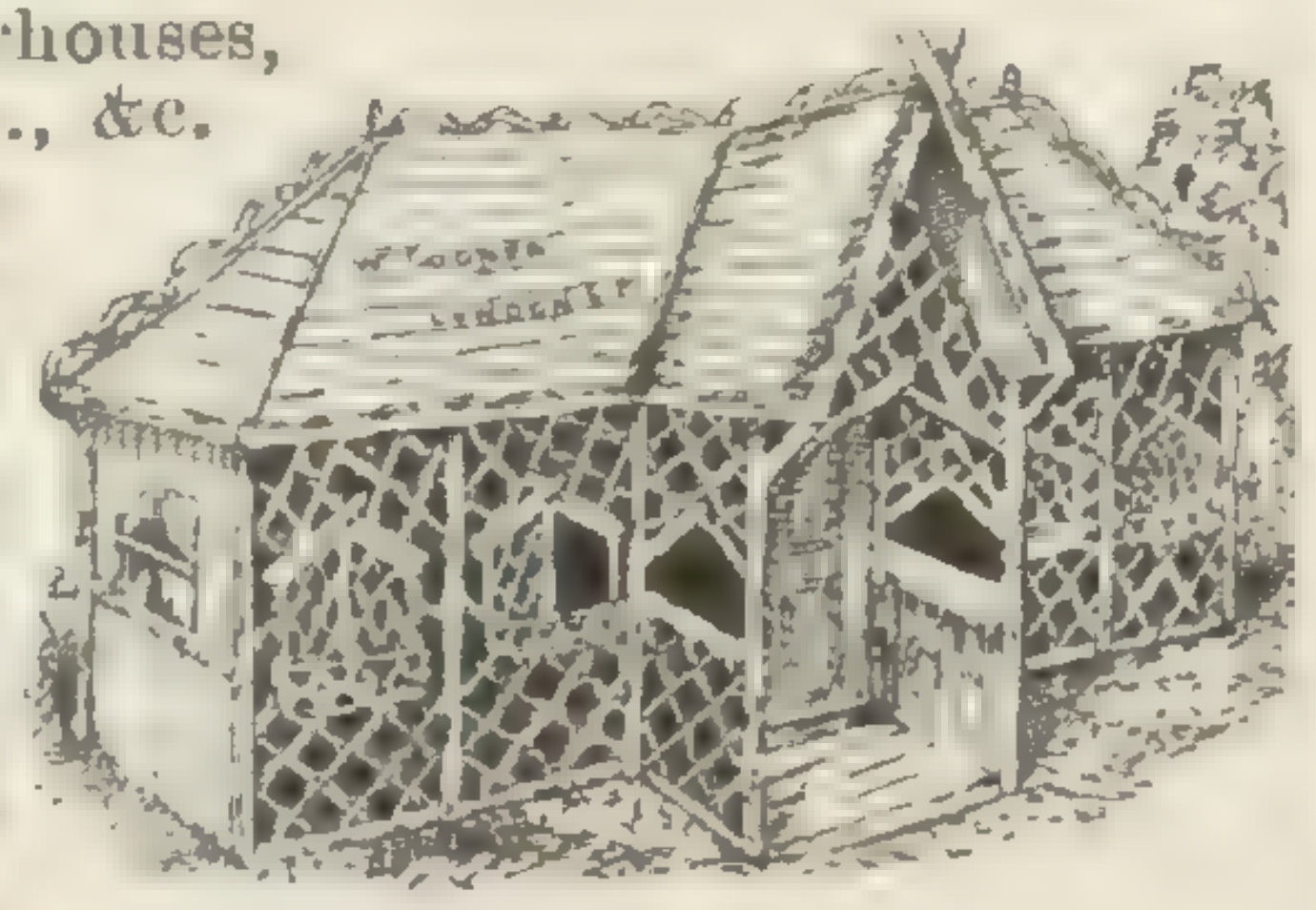

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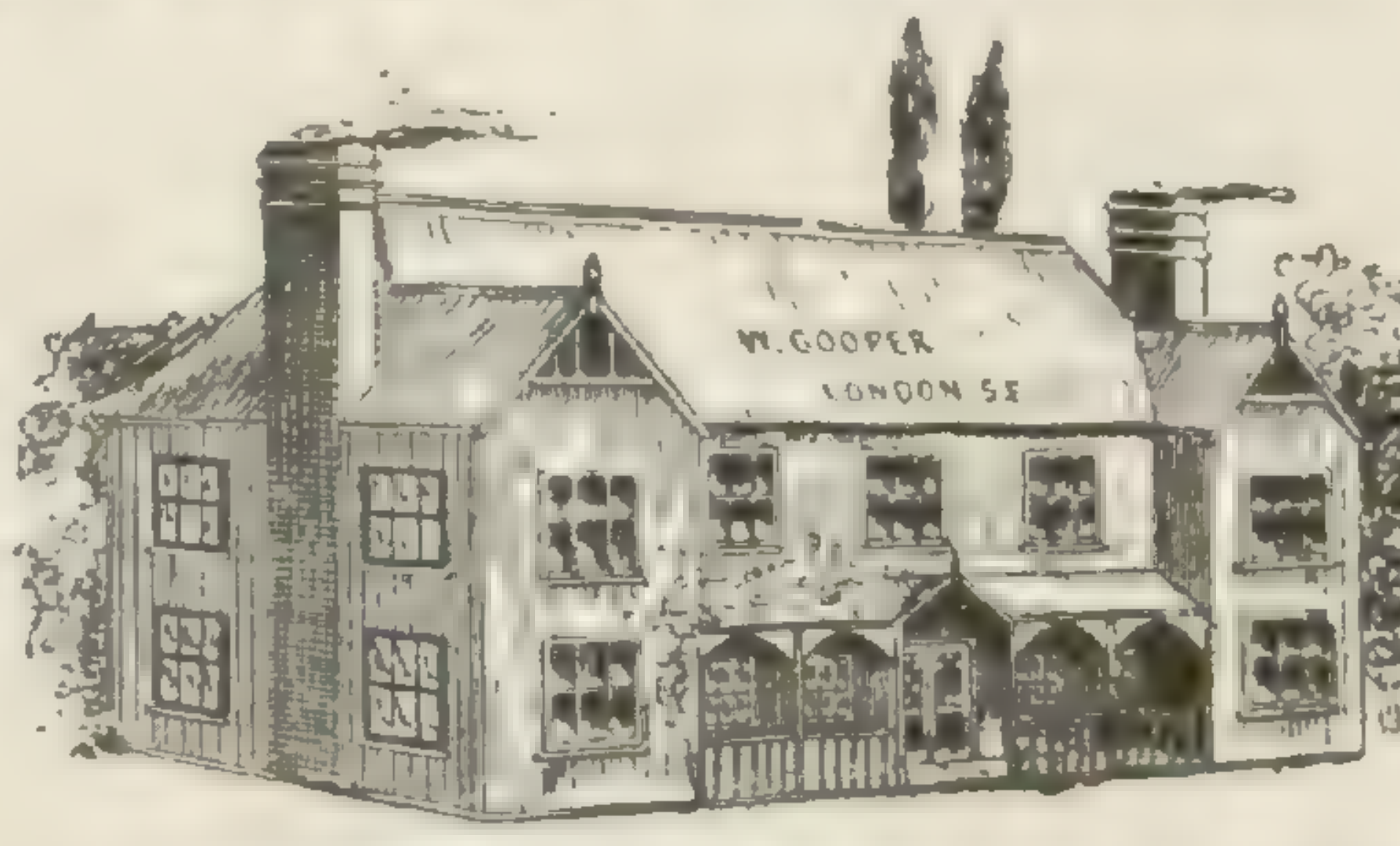

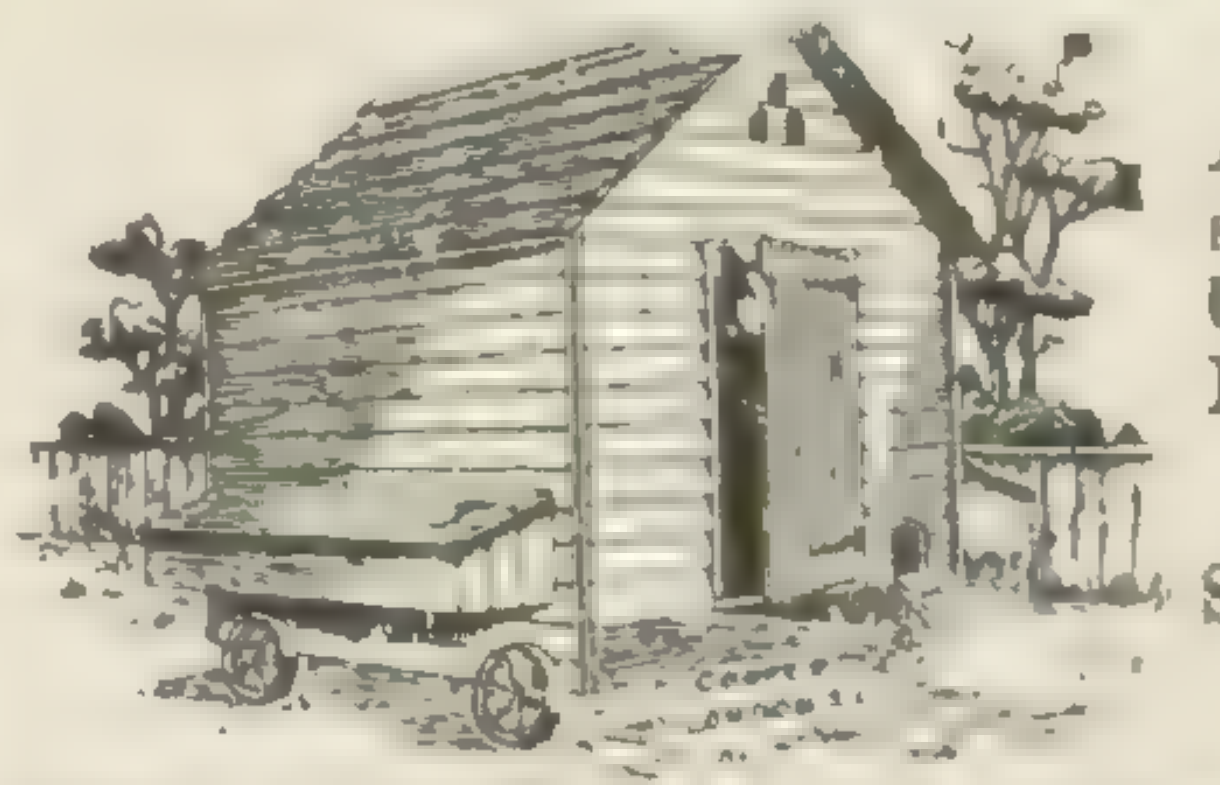

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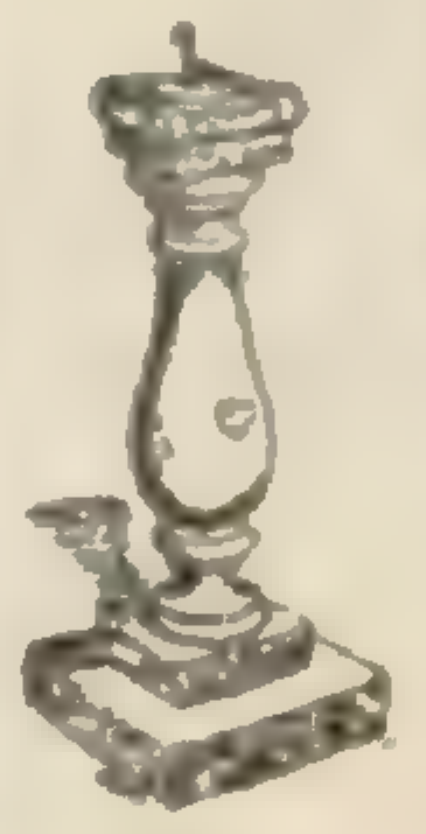

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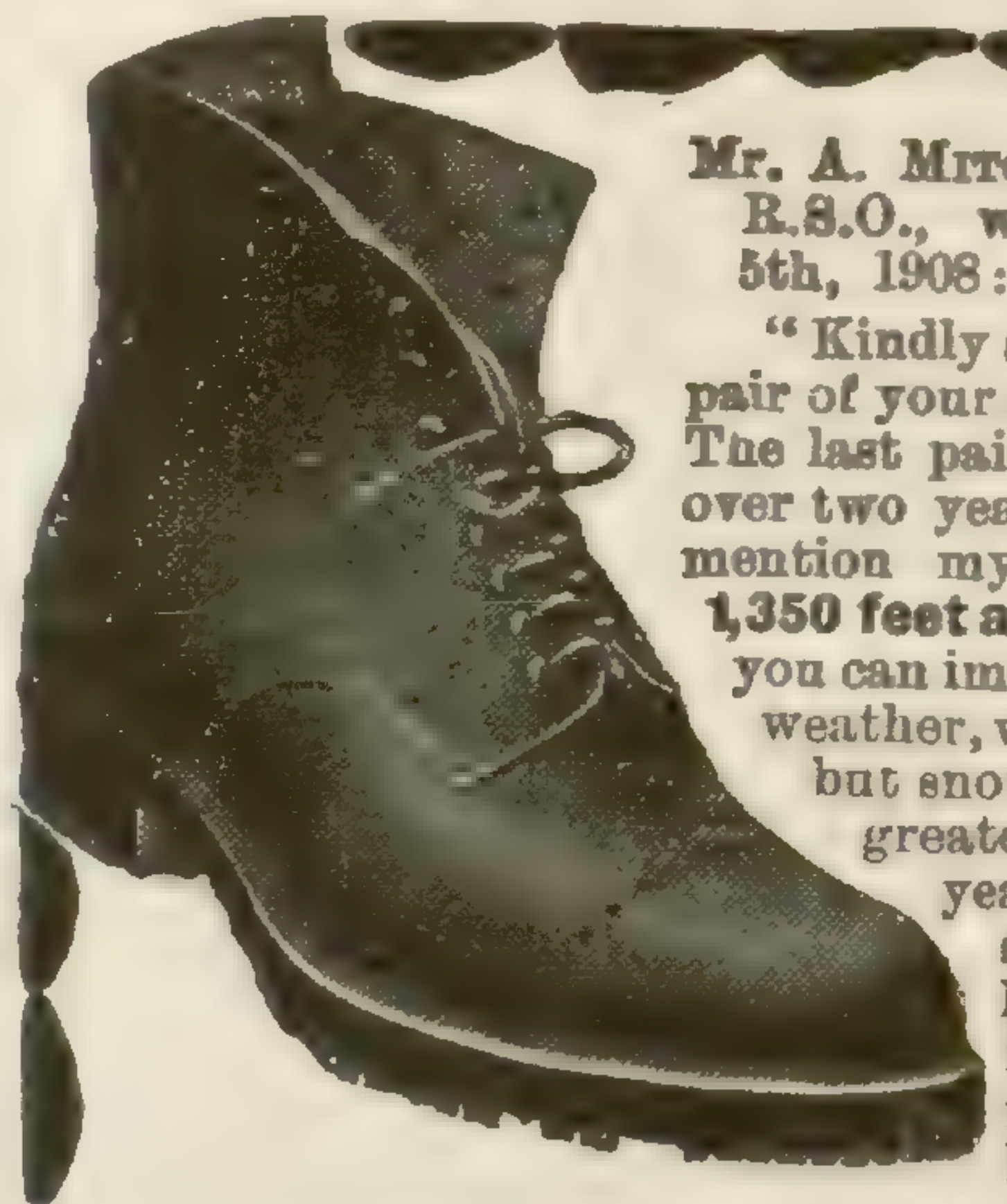

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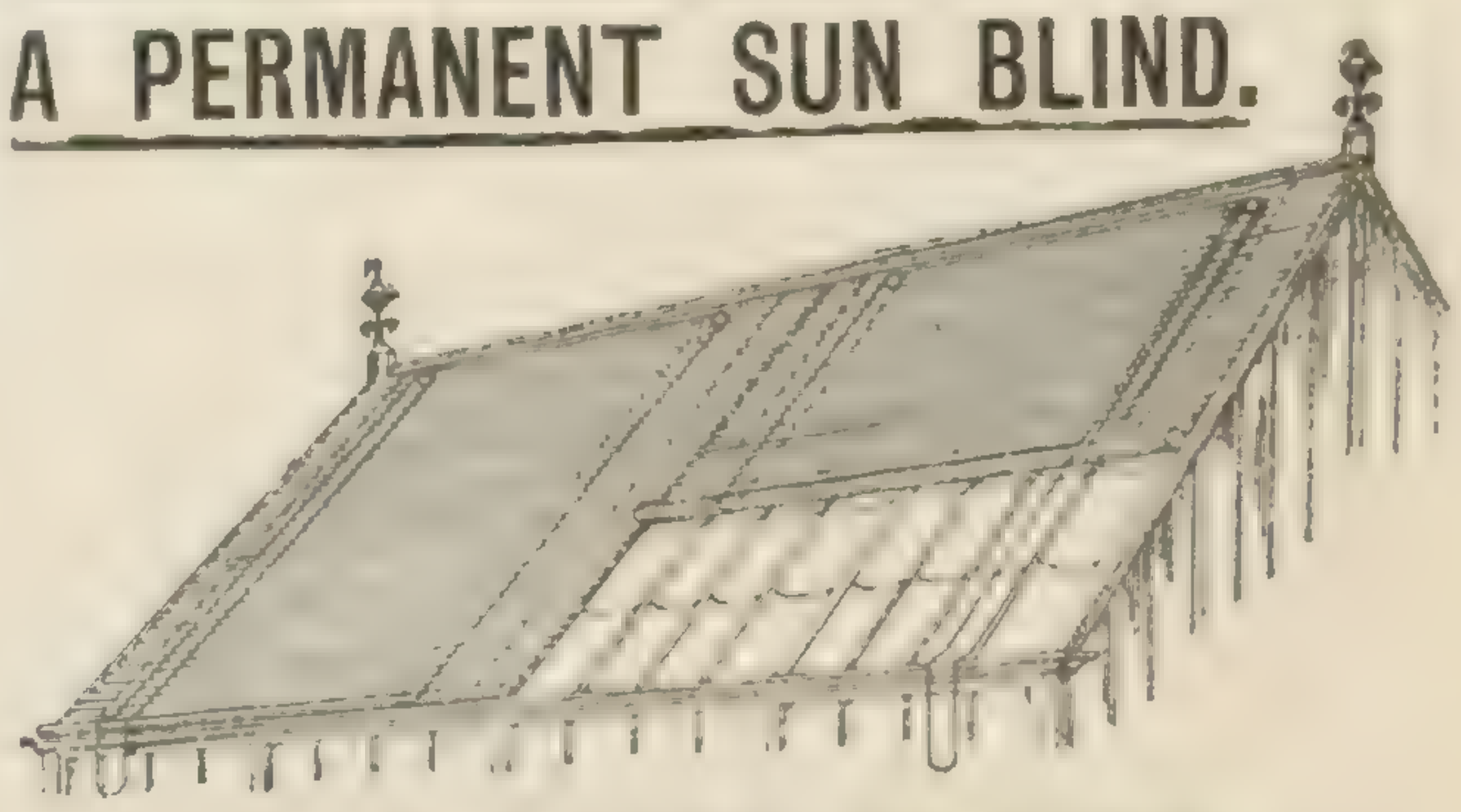

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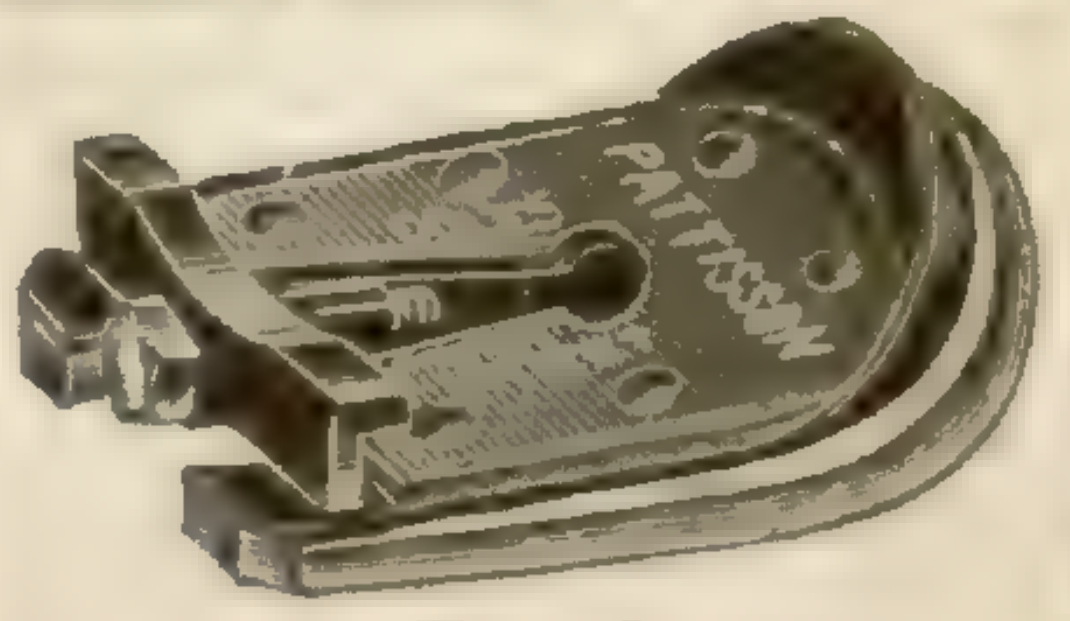

Fig. 1.

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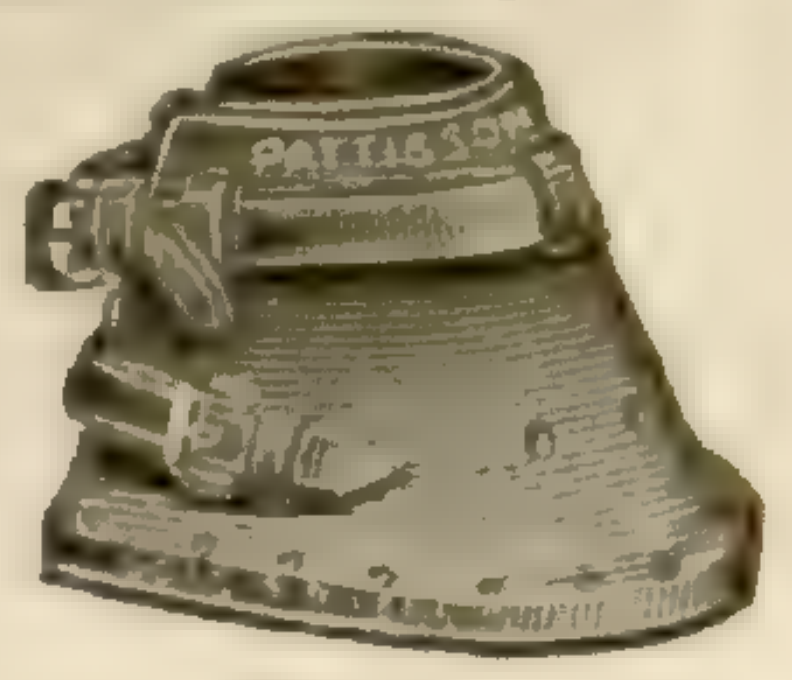

Fig. 2.

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A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

TO Noblemen and Gentlemen requiring HEAD GARDENER.—G. GRUBB offers himself as above; life experience in good gardens; highly recommended from present situation; disengaged when suited; married, age 32; at present general foreman at Somerhill Gardens, Tonbridge.

A GENTLEMAN wishes to strongly recommend his HEAD GARDENER; leaving through place being sold; experienced in all branches; age 39; married, two in family; excellent references. JACKSON, Town Road, Rotherfield, Sussex.

A LADY highly recommends a strong, active, middle-aged Man as HEAD WORKING GARDENER, who has had the entire management of an estate of 70 acres, gardens included; married family grown up; 20 years' personal character; leaving through death. F. W., Triangle House, Taplow Common, Taplow, Bucks.

GROWER or as HEAD GARDENER.—A. G. WILLIAMS, for the last 7 years and 3 months Foreman Grower of Lane and Sons' famous Vines and Figs, is open to a Re-engagement, or Head Gardener where five or more are kept; of large and varied experience in all Horticultural matters. WILLIAMS, Park Street, Berkhamsted, Herts.

GARDENER (Head Working), where two or more are kept; middle-aged; life experience Inside and Out; hard working; good references from last and previous employers. G. BURGESS, 17, Eversleigh Road, Lavender Hill, London, S.W.

GARDENER (Head Working), age 31, married; life experience in good places, including Syon House, Mereworth Castle, and Old Warden Park; 3½ years as Head; highest references. F. FRENCH, Covent Garden, Barming, Kent.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working).—F. SMITH seeks SITUATION with any Lady or Gentleman requiring a thorough all-round Gardener; first-class references; life experience; age 45; married, no family. Address Rose Cottage, Mellis, Suffolk.

GARDENER (Head Working).—S. PRAGNELL, past 23 years head gardener to H. C. Wells, Esq., D.L., Broomfield Lodge, Chelmsford, seeks RE-ENGAGEMENT; highly recommended for character and competence to manage extensive gardens, etc. Address above.

GARDENER (Head Working), life experience with glass, flowers, kitchen garden, and orchids; good character; married. W., 32, Eleanor Road, Bowes Park, N.

GARDENER (Head Working), thoroughly experienced in all branches. Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working).—A thoroughly practical and reliable Man seeks Engagement as above, where four or five are kept; highest references as to abilities in all branches of the profession; 16 years' character; Wife could undertake Dairy. HANCOCK, Shrublands Avenue, Berkhamsted.

GARDENER (Head Working).—I shall be pleased to recommend T. L. IRELAND, where several are employed; 5 years as second here; age 34; married, no family. B. T. KINGSLEY, Head Gardener, Holmwood Park Gardens, Dorking, Surrey.

GARDENER (Head Working).—Mr. F. STRONG would be pleased to highly recommend H. DOWELL, as a thorough practical Man, to any lady or gentleman requiring such; life experience; abstainer; age 27. High Grove, Pinner.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head Working), life experience, Inside and Out; excellent references; age 30; married, no family. STUBBINGS, 25, Ruskin Walk, Herne Hill, S.E.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working); married; age 39; thorough knowledge of fruit, flowers, and vegetables; life experience; highly recommended; sixteen years' head; economical manager. PENFOLD, 15, Helvetia Street, Catford.

GENTLEMAN strongly recommends his HEAD WORKING GARDENER where more are kept; experienced in all branches; age 39; married; two in family, youngest 8; leaving through place being sold; excellent testimonials. JACKMAN, Town Road, Rotherfield, Sussex.

MR. J. ALLEN, Gardener to Honble. R. STANHOPE, Revesby Abbey, Boston, Lincs, can strongly recommend W. EDWORTHY, who has been Foreman here for the past six years, to any lady or gentleman requiring practical, reliable Man as HEAD WORKING GARDENER; age 32; married when suited. Address W. EDWORTHY, as above.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER.—B. M. ST. AUBYN, Esq., wishes to highly recommend his Gardener as good singlehanded or with help Experienced Inside and Out. Good references. Age 35. Married; three children. F. JAMES, Whitehall Cottage, Codmore Hill, Pulborough.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER.—Single-handed, with help; age 35; married, one child, 4½ years; last situation as single (5½ years); disengaged; willing to be useful. C. H. SMITH, 26, Bishop Road, Croydon.

GARDENER (Single-handed, or Kitchen Garden, Lawns, etc.), no objection to cows or poultry; married, no family; age 31; 2 years reference. H. L., Ivy House, Edgware, Middx.

GARDENER (Single-handed or with help, or Second), Inside and Out; good references; age 25; married when suited; near London preferred. T. CLARKE, Eastcourt Gardens, Malmesbury, Wilts.

MARRIED MAN as KITCHEN GARDENER or SINGLE-HANDED; life experience; 7 years in present situation; good references.—S. GEORGE, Woodside Gardens, Maidenhead, Berks.

GARDENER, age 36; life experience all branches Inside and Out; 5 years last situation as Head of three; good character; abstainer. GROVES, 20, Rosebery Terrace, Sandown, Isle of Wight.

FOREMAN (Inside) seeks re-engagement; practical experience all branches of a well-kept establishment; excellent character as to capabilities; age 24. Apply HEAD GARDENER, Netley Castle, Southampton, Hants.

MANAGER or FOREMAN; qualified to take entire responsibility; well up in all branches of the Trade; good Manager of Men; good references from London and Provincial Nurseries. A. LAURENCE, 106, Mulliner Street, Coventry.

GARDENER (Single) seeks a SITUATION as Under, Inside and Out; age 23; good reference; Bothy preferred. H. GODDARD, Caryll's Cottage, Fay Gate, Horsham.

COL. FEARON, Birdhurst, Reigate, highly recommends his Second Gardener to anyone requiring a good all-round GARDENER; age 30; life experience; 4 years present place; excellent references. ISTED, Birdhurst Gardens, Reigate, Surrey

JOURNEYMAN (Inside or Inside and Out).—Mr. SHORT, Freeland, Woodstock, highly recommends C. WEBB; fruit and plant houses, carnations, and chrys; age 23. 20, Franklin Street, Vastry Road, Tottenham.

JOURNEYMAN (26) requires SITUATION; good knowledge of Bedding, Stove, and Greenhouse Plants; Inside and Out preferable.—Address E. H., 18, Aberdeen Road, Angel Road, Edmonton.

JOURNEYMAN (Inside), Fruit and Plant Houses.—Mr. BIRKINSHAW will recommend F. Chapman as above; 8 years' experience; age 23. Hatley Park Gardens, Sandy, Beds.

FLORENCE LADY BRAYBROOKE strongly recommends FREDERICK KING, aged 18, who wishes for a Situation in the Garden to learn the work. Little Hadham Place, Herts.

A. MARTIN, The Gardens, Fifehead Magdalen, Gillingham, Dorset, thoroughly recommends F. GRINTER to any Gardener requiring a good SECOND MAN; well up in Plants and House Decoration; present situation 4 years. Address as above.

RICHARD SMITH and CO., LTD., beg to announce that they are constantly receiving applications from Gardeners seeking Situations, and that they will be able to supply any Lady or Gentleman with particulars, etc. St. John's Nurseries, Worcester.

SITUATION required by a middle-aged Scotsman who has had a life experience in all branches of horticulture; has held important positions in Scotland, England, and Ireland, and can be highly recommended for a post as supervisor of private or public gardens. Apply, J. M., Office of this Paper.

WANTED, SITUATION as IMPROVER, Inside, or Inside and Out; Bothy preferred; age 17 years. Apply GEORGE SIZMUR, Chobham Road, Ottershaw, Surrey.

IMPROVER, in good Private Garden; age 19; can be well recommended. H. SMITH, The Gardens, Abbey Manor, Evesham.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For MAY 9, 1908.

Please Repeat my Advertisement.

Name..

Address..

....

Date..............................

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Situations Wanted—*continued.*

YOUNG MAN as UNDER GARDENER; age 22; on pleasure grounds, or Inside and Out; 5 years' present place; 4 years' previous references.—G. H. GIRLING, Starston, nr. Harleston, Norfolk.

YOUNG MAN, age 22, seeks SITUATION as Under Gardener; 8½ years' experience; good herbaceous hand; good references. Abstainer. Bothy preferred. G. PASSMORE, The Gardens, Goldicote, Stratford-on-Avon.

YOUNG MAN seeks SITUATION in Herbaceous Flower and Kitchen Garden, where he could gain good knowledge; for past 9 years under Glass; age 27; excellent references; abstainer. J. COMPTON, Lypiatt Park Gardens, Stroud, Gloucestershire.

YOUNG MAN (25) wishes experience; fruit and flower growing; board, lodging, and wage; view to partnership; 10 years' business experience. DALE, 95, Walterton Road, Paddington, London.

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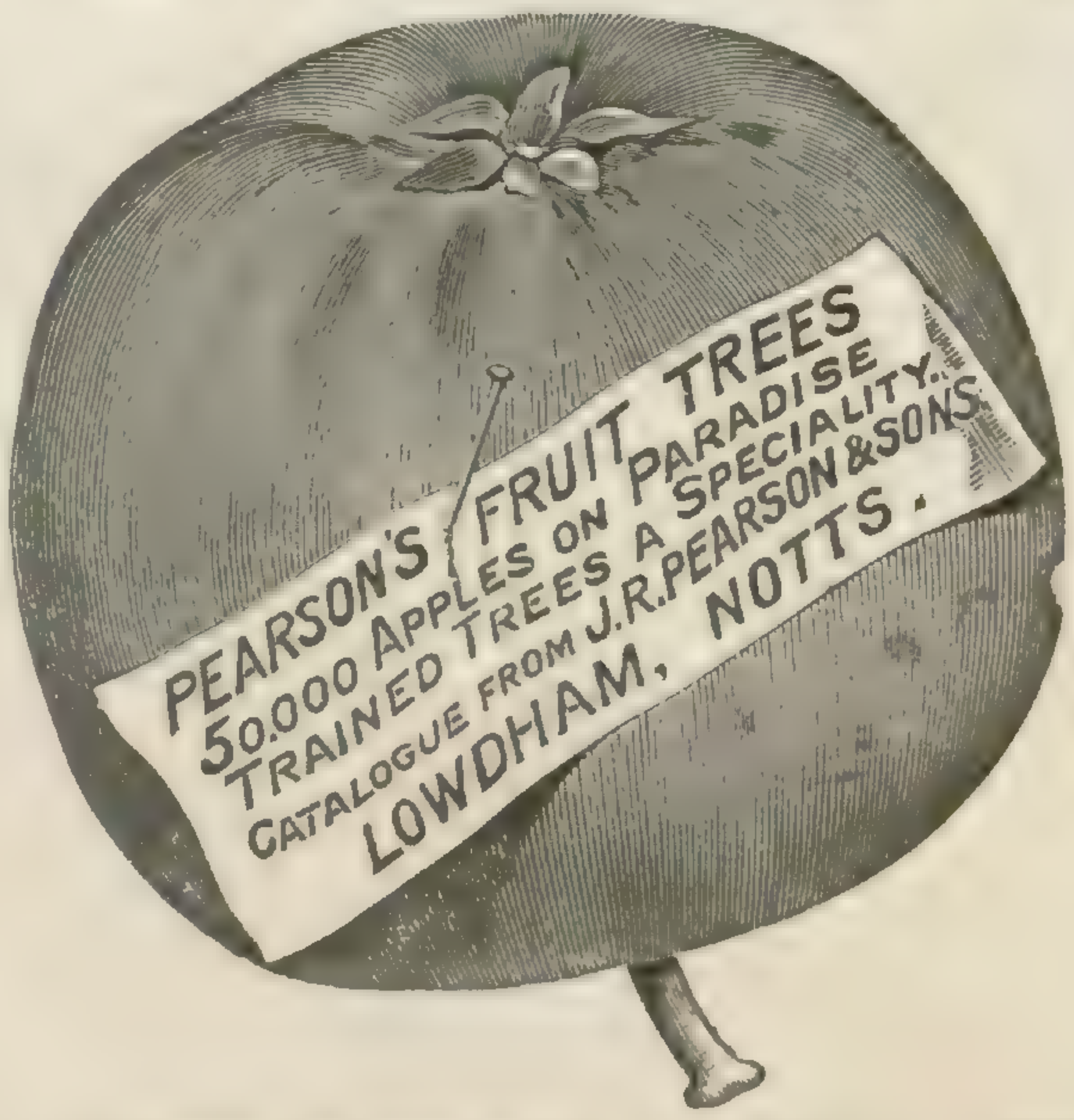

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VOL. LI.—No. 2,844. SATURDAY, MAY 2, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Green Leaves.

When we consider the infinite diversity which is displayed in the plant world in size, habit of growth, shape of foliage, and in short, in every character which goes to form the distinguishing mark of a genus, a species, or a variety, and when in addition we note the marvellous range of colour assumed by the flowers, it seems strange that green should be all but universally the tint of the foliage. Even indeed, where the foliage presents other tints, it is always found that green is present, and is only masked by the other colours exhibited. The reason of this, the botanist will tell us, is the vitally important one that it is really the green colouring matter, the so-called chlorophyll, which is capable of performing those functions which are essential to the plant's growth, and we have a familiar exemplification of this fact in the weak constitutions of plants variegated with white, and the inevitable perishing of pure white foliage unless associated with attached green growths. It not infrequently happens that variegated pelargoniums produce pure white suckers or offsets, which grow healthily enough until an attempt be made to isolate them by severance. So long as they are connected with the root system of the green parent they derive vigour from the adjacent green leaves through the roots, but directly they are deprived of this support they languish and perish. The seeds of variegated plants often yield pure white seedlings, but they do not progress beyond the seedling stage, and die so soon as they have exhausted the store of nourishment contained in the seed which the parental green leaves had supplied. Examined microscopically this chlorophyll is found to consist of innumerable tiny grains, which are generated within the cells which build up the leafy structures, and the green colour is visible owing to the transparency of the cell walls. In some subtle fashion, these grains, under the influence of light are able to absorb the carbonic acid gas which is drawn in through the leaf pores or stomata from the surrounding air, and this gas they break up, and combine the solid carbon which forms an ingredient with the salts which the roots collect and supply in solution in the form of sap. Sugar, starch, and many other substances consist mainly of carbon, in conjunction with other elements, their differences being often entirely due to difference in the proportions of precisely the same elements. These marvellous little green grains are able to build up an immense number of such diverse combinations, some being deadly poisons and others forming nutritious foods, while the solid carbon itself is largely used to form the woody structures which support the foliage, and even strengthen the foliar structure itself in the shape of veins and veinlets. All our edible vegetables and fruits are thus created by chlorophyll, and pursuing this line of thought we are brought face to face with the wonderful fact that were chlorophyll non-existent the whole world would be a lifeless desert. Man himself could not exist, for it would not be merely a question of the compulsory conversion of the vegetarian to a meat-eater, since meat is merely a secondary product of vegetable food. Thus when we view in the spring the budding verdure of the trees and shrubs and see the pastures vivid green and the nascent cornfields' deepening tint, we practically are looking at the production of a new supply of life, itself derived from the vitalising energy of the sun as the motive force, which the tiny and apparently insignificant grains of chlorophyll are alone capable of utilising in order to grant a fresh lease of life to all animate creation.

MR. H. G. ALEXANDER.

Mr. H. G. Alexander is well known in horticultural circles and particularly so among lovers of orchids, because he has for several years had charge of the splendid collection of these interesting and beautiful plants brought together by Major Holford, C.I.E., at Westonbirt, Tetbury, Gloucester. Mr. Alexander was born at Bath, and the first five years of his professional life were spent at a small general nursery on the outskirts of the city. From thence he went to the Royal Crescent, Bath, where the Rev. H. Handley had what was then regarded as a fine collection of orchids, and it was here that Mr. Alexander laid the foundation of that special knowledge which has enabled him to place the Westonbirt collection in first rank, if regarded only from a cultural point of view. Further experience was gained at Survey Hill, Llandudno, where the late Mr. Joseph Broom had a collection of orchids. Following a short stay here, Mr. Alexander spent three years in the orchid department at the late Captain G. W. Law Schofield's garden at New Hall Hey, Rawtenstall. Here he was in the midst of many orchid collections, and took advantage of his opportunities to extend his knowledge of plants and cultural requirements. From New Hall Hey, Mr. Alexander went as orchid foreman at Blenheim Palace, but here he stayed only a few months, as in May, 1899, he entered service with Major Holford, who was then beginning to reconstruct many of his glass-houses and make up a large collection of orchids. There are now twenty-one houses devoted to these plants, and Mr. Alexander has entire charge of the department. Seven years ago, encouraged by Major Holford, he commenced to raise seedling orchids, and how well he has succeeded the records of the Royal Horticultural Society amply prove. The enterprise and enthusiasm of Major Holford and the skill of Mr. Alexander are further shown by the fact that Westonbirt exhibits of orchids have gained no fewer than ten of the Royal Horticultural Society's gold medals, besides minor awards. The magnificent Veitchian Cup was also won at the Temple Show in 1907 with the first exhibit Mr. Alexander had ever staged at that exhibition. Mr. Alexander has received five Lindley medals for special culture and twenty-three cultural commendations; these are abundant proof of his high cultural ability, while as evidence of his artistic skill in grouping the plants he grows so well, the Council of the Royal Horticultural Society recently presented him with a handsome Queen Anne silver teapot, suitably inscribed. Much more might be written about Major Holford's able grower, but for the present we will only add that he arranged a 300 sq. ft. group of orchids at the great Ghent show during the past week, and covered himself with glory therewith, and added materially to the already high prestige of Major Holford's superb collection.

Gardens Round about Bristol.—Bristol has long been famous as a centre of horticultural activities, and our readers are aware that many beautiful gardens are to be found in and around the city. In our issues of May 16 and 23 we shall describe and illustrate several of these gardens, including those of Barrow Court, Ashton Court, Cote House, Old Sneyd Park, The Priory, and Downside.

The Wintry Weather experienced over the greater part of the United Kingdom at the end of last week was of a quite exceptional character, and can hardly have failed in many districts to have seriously affected tender vegetation. In the more southern districts where the plum trees were in full bloom, and gooseberries and currants in process of development, much damage must have been done to these fruits. In some gardens in the South of England and within a short distance of the Metropolis, the frosts were so destructive that the crops of currants and gooseberries are described by our correspondents as having been completely destroyed. It is a point of some interest that the frost was nearly as severe, and the snowfall nearly as heavy in the South and West of England and Wales as in the northern counties of England and in Scotland. From several districts in Kent and Surrey we have received records of temperatures ranging from 20 to 22 degrees (12 to 10 degrees of frost), and at Cardiff 12 degrees of frost were registered. The temperature throughout the week ending April 25 was very low, and on Friday the highest reading was 17 degrees below the normal.

Railway Rates for Fruits.—In the discussion on the question of preferential railway rates before the East Kent Chamber of Agriculture, attention was directed to the need of a reclassification of the rates for the carriage of fruit, the case of plums being mentioned as one in which the charges are much in excess of more valuable produce, the handling of which is attended with greater difficulty. It was decided to ask for the enactment of a regulation that the rates given for foreign produce should also be made available for English produce where a consignment of not less than one truck load is offered. It was stated that a vessel returned from the Azores with a cargo of 7,000 cases of pineapples, the endeavour was made, unsuccessfully, to obtain satisfactory rates to London from Plymouth and Dartmouth, and the importer was about to arrange for transit from Newhaven, when it was suggested to him that Dieppe would be better. The result was that the vessel was sent to Dieppe for unloading, and the railway company conveyed the 7,000 cases across the Channel and thence to London at a cheaper rate than they were prepared to do so from Newhaven.

Proposed Addition to Ruskin Park.—Adjoining the newly-made Ruskin Park on Denmark Hill there is a pleasant strip of land, twelve acres in extent, and it is believed to be the nearest piece of unoccupied ground to the heart of London, and is readily accessible from the crowded districts of South London. As this area would provide an excellent playing field for grown lads and young men, strenuous efforts are being made to obtain the necessary funds for its purchase, and thus secure its dedication to public use. The sum required for the purchase of the land is £24,000. The London County Council have promised half the sum, and £9,000 have been subscribed by other public bodies and by private donors, and a strong appeal is made for the remaining £5,000. The hon. secretary is Mr. Frank Trier, Uplands, Champion Hill, S.E.

Dendrobium fimbriatum oculatum.—A fine example of this handsome orchid has just flowered at Cowley House, Chertsey, where Mr. A. Sadler is gardener to Mrs. Tulk. Mr. Sadler kindly sent us a photograph, that unfortunately was not suitable for reproduction, showing a remarkably fine plant carrying numerous spikes of bloom, many of the latter being produced from the upper part of the 5ft. long pseudo-bulbs that are three and four years old.

Colonial Fruits occupy an important position in the home markets at the present time, for not only are they plentiful, but a large proportion of them are of high quality. From the Cape we are now receiving liberal supplies of melons and pears, the latter including Louise Bonne of Jersey and Doyenne du Comice of good quality. The Australasian colonies are sending plentiful supplies of apples, which range from 7s. 6d. per bushel box upwards. Cox's Orange Pippin from Tasmania are remarkably good, and many boxes have realised in Covent Garden from eighteen to twenty shillings a box. Supplies from Canada and Nova Scotia are abundant and comparatively cheap, and the imports of bananas have been so large as to admit of fruit of the highest class being retailed at a penny for two "fingers." The claret-coloured banana has been coming to market rather freely, and, notwithstanding the rich flavour of its fruits, is not popular because of its colour.

Hybrid Orchids.—With reference to the communications recently received by the R.H.S. Scientific Committee concerning the crossing of albino orchids, Mr. R. G. Thwaites, of Streatham Common, S.W., records his experience as follows: "The result of crossing Dendrobium Wiganianum album (in which the peduncle is only slightly coloured) with D. nobile virginale (which is white all through) has been, in every instance, a coloured flower of the ordinary D. nobile type; whilst D. nobile virginale self-fertilised has in every instance produced pure white flowers, appearing to prove that D. Wiganianum album is not a true albino. Again, when D. nobile virginale is crossed with D. aureum in every instance the same result is obtained as from crossing the ordinary D. nobile with D. aureum, namely, D. Ainsworthi, the flowers of which are full of colour."

Feeding Habits of British Birds.—At the annual meeting of the Association of Economic Biologists the desirability of a systematic inquiry into the feeding habits of British birds was discussed. Mr. C. Gordon Hewitt, who introduced the subject, said that all biologists who had given special attention to bird life must have been struck by the absence of precise information concerning actual feeding of birds. They had on record any number of observations of naturalists and foresters and others who had observed the feeding of birds in a general way. These were all well enough, but they were not purely and absolutely scientific. They wanted something definite, as had been done in the United States by the biological survey, which examined the stomachs and gizzards of birds at different times of the year and in different places. It was only by purely scientific investigation that they could arrive at the proper conclusions as to the feeding of birds. He moved a resolution as follows: "That, in the opinion of this association, it is desirable that a committee should be formed for the investigation of the feeding habits of British birds." This having been seconded was carried unanimously.

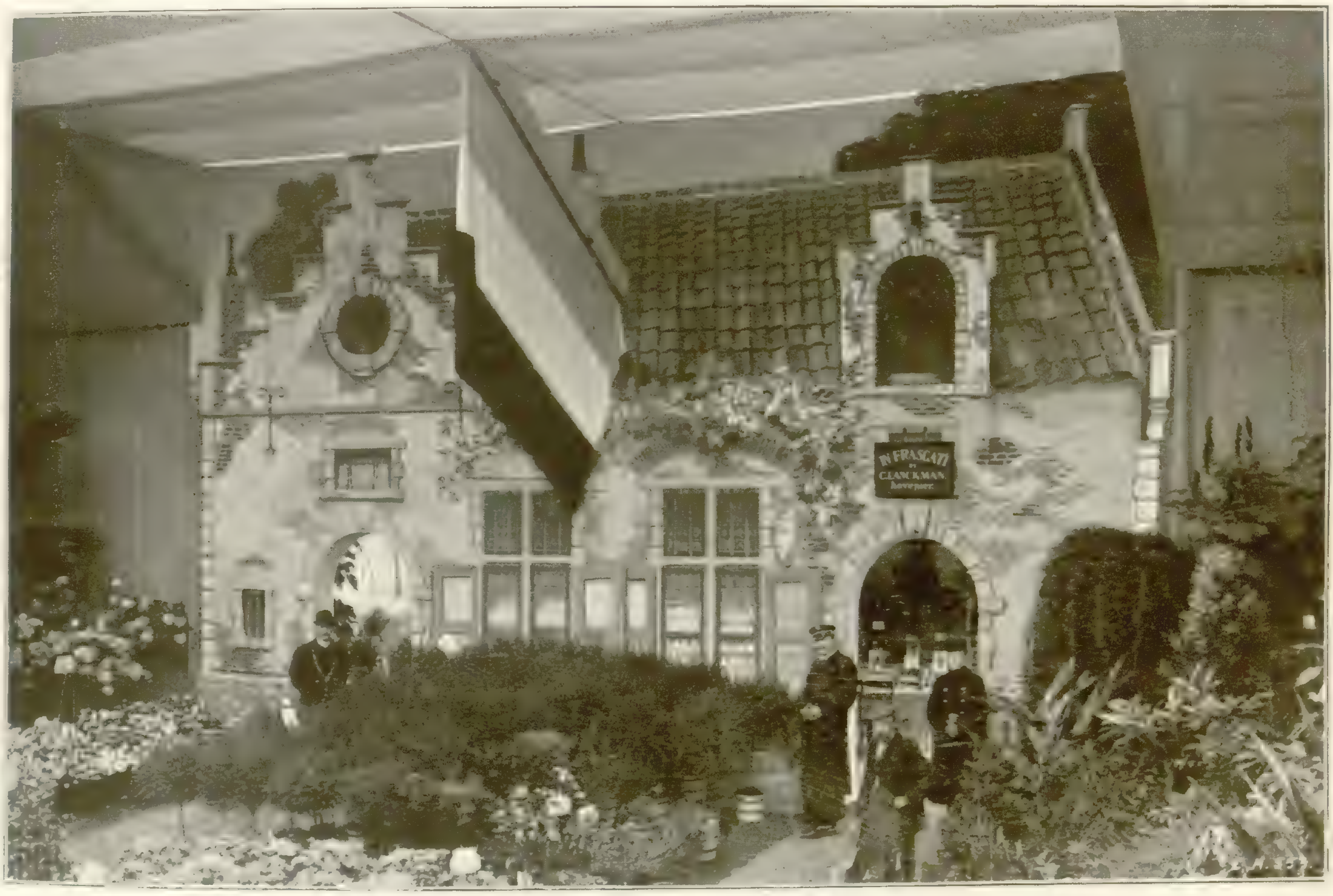
Nature Study for Women.—A course for helping women who are desirous of extending their knowledge of Nature study will be held at the Horticultural College, Swanley, from Saturday, August 1, to Saturday, August 15. Most of the instruction will be given out of doors, and under the guidance of experienced teachers there will be combined excursions for studying birds, pond life, insects, wild flowers, trees, grasses, etc., in their different evironments. Miss K. M. Hall will give the inaugural address on Saturday, August 1, at 8.30 p.m., the subject of which will be "Nature Study as a Preparation for Life." As far as possible the open-air studies will take place within easy distance of the college, but excursions will be arranged to districts with varying soils and climate, and the accompanying variety of natural objects.

Natal Tea.—Visitors to the recent exhibitions of Colonial Produce held at the Royal Horticultural Hall, Westminster, will have noticed numerous chests of tea grown in Natal. We now learn from the Imperial Institute authorities that this tea is intermediate in character between Indian and Chinese teas, and therefore likely to meet with a brisk demand.

St. George's Hills, Weybridge, one of the beauty spots of Surrey, and one that commands fine views, will in all probability soon be closed to the public, as Mr. W. F. Egerton finds that, notwithstanding the notices requesting visitors to keep to the paths and abstain from damaging the trees, shrubs, etc., considerable damage is done, and the notices are in many cases entirely disregarded. Many visitors to the Royal Horticultural Society's Gardens at Wisley, have, we feel sure, been to St. George's Hills, and they with many others will deeply regret that Mr. Egerton's generosity should have been imposed upon, and trust that he will not be compelled to close the grounds to the public.

THE GREAT CENTENARY FLOWER SHOW AT GHENT.

Replica of "In Frascati," where the First Ghent Flower Show was held in 1809.



[Photo: De Graeve, Ghent.

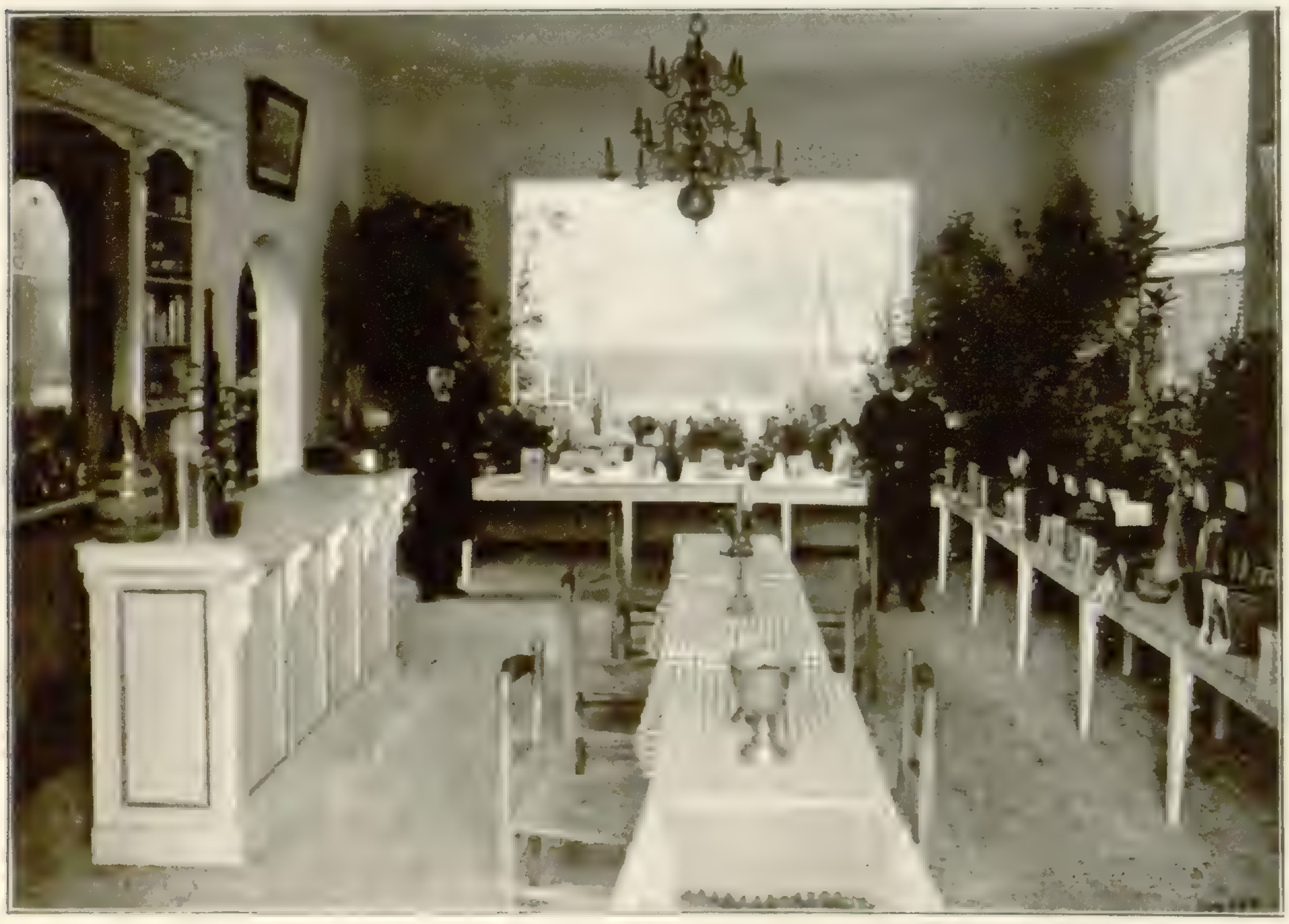
THE EXHIBITION with which the Société d'Agriculture et de Botanique de Gand has celebrated the hundredth anniversary of its foundation has, we are much gratified in stating, proved a splendid success, and been in every way worthy of so important an occasion. We have special satisfaction in placing this fact on record because of our knowledge of the great influence for good the society has so long exercised on European horticulture, and of the great and untiring efforts that have been made by the Council of Administration to ensure success. For several years past preparations have been in progress, and as the result, the council were able to prepare a schedule of a most comprehensive character, and to issue it to those interested more than twelve months since. They were also able to build well in advance an additional exhibition house in the grounds of the Casino, and thereby place themselves in a position to display to advantage the various plants contributed to the 700 classes. The Ghent quinquennials have long been famous for their magnitude, their distinctive character, and their immense attractiveness; but the centenary exhibition which we have now the pleasure of recording far surpassed in every respect the finest of the many magnificent flower shows that have been held in the ancient city of Ghent.

With the immense advances that have been made in all branches of horticulture, and the introduction of thousands of ornamental and useful plants during the past century, it is not surprising there should have been an immense difference between the first of the flower shows at Ghent and the one that has brought horticulturists from practically all parts of the civilised world to the city during the past week. Yet it was of much interest to take advantage of the opportunity the council had afforded visitors for instituting comparisons between them.

INCEPTION OF THE SOCIETY.

As stated in these pages a few weeks since, the foundation of the society was laid in a small inn on the left bank of the Coupure, and bearing the sign of "In Frascati." This inn was kept by a market gardener, and was frequented by the market growers who had their places of business in the neighbourhood, and also by the amateurs in the city and its vicinity. Here they discussed matters relating to fruits and flowers, and they appeared to be specially interested in the accounts that were given by those who had opportunities for visiting England of what was being done in the development of gardening in this country, which, at that time, was receiving new plants from all parts of the world. We are told that the return of a frequenter of the inn from a visit to England was anticipated with much interest, and that he usually had a good audience to listen to the account he had to give. The habitues of the inn would appear to have been especially interested in the recital of one Frans Von Cassel, who visited England early in the autumn of 1808. for at a gathering in October of that year they unanimously resolved to organise a flower show to be held early in the following year. The show was held on February 6, 1809, and proved most gratifying to the promoters, and the exhibitions were continued. It is of much interest that the records of the first exhibition are still available, and that we are able to ascertain from them the names of the plants that were exhibited. The "most rare and difficult to cultivate" of those shown were: Agave striata, Aletris capensis, Andromeda axilaris,

A. lucida, A. rosmarinifolia, Arbutus andrachne, A. unedo, Camellia japonica, C. japonica fl. rubro, Ceanothus discolor, Correa alba, Cineraria cruenta, Cyclamen coum, Cyclamen persicum, Daphne odora, D. purpurea, Dillenia scandens, Erica herbacea, E. triflora, Heliotropium peruvianum, Illicium floridanum, I. parviflorum, Jasminum glaucum, Jasmin de Valence, Justicia pulcherrima, Ledum angustifolium, L. latifolium, Lonicera tartarica, Magnolia ferruginea, M. grandiflora, M. nova species, Mimosa heterophylla, M. longifolia, Nerium oleander variegatum, Pancratium amboinese, Phylica ericoides, P. plumeda, P. spicata, Plumbago rosea, Portlandia rosea, Rhododendron ferrugineum, R. hirsutum, R. ponticum, Reseda arborescens, Rosa chinensis, R. Portlandica, Scilla maritima, Spielmannia africana, Viburnum lantana, and Citrus sinensis. The show was held in the principal room of the inn, which had at one end a large window that commanded a full view of the adjoining garden in which, during the summer months, the visitors sipped their beer, and other liquors. "In Frascati," with its large room and exhibition, has been exactly reproduced on the west side of the annexe or exhibition house. The façade of the inn forms the side of one of the bays, and on entering by the door one immediately passes into the exhibition room, with its bar, its long table at which the founders of the society sat and formulated their plans for displaying the products of their skill, and the stages, on which are placed representatives of the plants enumerated. The stages, it may be added, are arranged along one side and end of the room, and are of plain deal without covering. The length of the room is about thirty feet, and the width about fifteen feet. Anything more interesting to students of the history of gardening it would be difficult to conceive, and the council may be heartily congratulated on the success they have achieved in the reproduction of the inn and the exhibition that made it famous.



[Photo: De Graeve, Ghent.

LARGE ROOM OF "IN FRASCATI" WITH A REPLICA OF THE EXHIBITION HELD A HUNDRED YEARS AGO.

GENERAL SCHEME OF ARRANGEMENT.

The exhibition that is now being held at Ghent is arranged in the upper corridor which forms a series of halls that extend the whole length of the Casino buildings, the spacious winter garden contiguous thereto, in the fine exhibition house or annexe to which reference has already been made, and on the lawns. The corridor is devoted to orchids, floral decorations, new plants, bromeliads, and numerous plants of a miscellaneous character. In the winter garden are arranged tropical plants remarkable for the beauty of their foliage, and the various forms of Anthurium Andreanum and A. Scherzerianum. In the exhibition house are displayed the azaleas, hard and soft wooded greenhouse plants, hardy rhododendrons, araucarias, orange trees, forced shrubs, acacias, and New Holland plants. Our report will show that the corridor contained large numbers of orchids, and that two of the collections were of quite exceptional interest and value; that in the winter garden were large numbers of fine foliage plants that were remarkable for their splendid development; and that in the exhibition house was one of the finest displays of Indian azaleas the world has yet seen. We need not, therefore, do more than mention that in all the leading sections the Belgian growers have surpassed themselves, and that English exhibitors have fully maintained the traditions of this country, more especially noteworthy of the English contributions being Major Holford's collections of orchids and amaryllis, Messrs. R. P. Ker and Sons' amaryllis, and Messrs. H. Low and Sons' and Mr. Engleman's carnations.

NEW EXHIBITION HOUSE.

In the erection and furnishing of the exhibition house the council of the society have been especially successful, and English horticulturists were, without exception, filled with admiration of the taste and judgment displayed in the design of the building, and the beautiful effect produced in the arrangement of the plants therein. This building, which is of wood, has a roof in three spans, is several hundred yards in length, and has a width and height of admirable proportions. The roof, in three spans, is partly of glass and partly of wood, and the areas of glass and wood are so judiciously balanced that the building is well lighted without the light being so strong as to overpower, as it were, the varied hues of the flowers. To still further soften the light and heighten the general effect thin canvas, in broad alternate bands of white and pale green, is stretched lengthways under the roof on a level, or thereabouts, with the tops of the pillars that support the roof. The floor space of the central part of the building is, throughout the whole length, laid out as a vast flower garden, with the beds and borders on grass, intersected by walks, and these are filled with azaleas and other subjects. The beds and borders are arranged at different heights, and the turf has a gentle slope in various directions; but the walks are nearly level throughout. Under the side spans the ground is laid out in a more irregular manner, and the broad walks, with the more or less irregular sharply sloping banks and masses of rhododendrons and other flowering plants, and specimen palms, and tree ferns, present bold and beautiful features. At the far or north end of the building is an admirably painted canvas representing a beautiful park-like scene, and by a skilful arrangement of the foreground with rhododendrons and hydrangeas, the trees and the great breadth of grass blend as it were with the exhibition, and carry the eye far beyond its boundaries. Not less interesting and beautiful is the great painting representing Australian scenery, which forms a background to the groups of New Holland plants, which are well represented. In the association of the scene painter's art with that of the horticulturist, the council have been so especially successful as to merit our warmest congratulations, which we heartily accord them.

THE JURY.

The awards were made by a jury of nearly 250 members, with Lord Redesdale as the honorary president, and M. A. Viger as the president-general. The nations represented on the jury were Germany, America, Great Britain, Austria, Belgium, Belgium-Congo, Brazil, Denmark, Egypt, Spain, France, Holland, Grand Duchy of Luxembourg, Russia, Sweden, and Switzerland. The members of the jury mustered at the Casino at 8.30 a.m. on Friday for the purpose of being photographed, and at 9.30 a.m. they assembled in one of the halls in the Casino to receive the notification of the section in which they were to serve. Here they received a hearty welcome from M. Alexis Callier, the president of the society, who, in the course of a short address, spoke in feeling terms of the loss the society had sustained by the death of Comte de Kerchove since the quinquennial exhibition held in 1903. He also referred to the death of M. Fierens, the late secretary-general, and spoke of the important occasion on which they assembled, of the great work that is being done by the society in the advancement of horticulture, and of the pleasure it gave him in occupying the high position in which he had been placed. On the names being called, the following Britishers answered: Lord Redesdale, Major Holford, C.I.E., Lieut.-Colonel Prain, and Messrs. J. Backhouse, N. F. Barnes, T. Bevan, H. G. Cove, C. H. Curtis, H. Cutbush, De Barry Crawshay, J. Gurney Fowler, George Gordon, J. Guttridge, J. Heal, H. Ker, S. H. Low, W. H. Massie, J. Meekin, F. W. Moore, J. S. Moss, J. O'Brien, George Paul, C. E. Pearson, R. Hooper Pearson, H. T. Pitt, J. Robson, A. R. Rolte, F. Sander, Harry J. Veitch, W. Watson, J. Weathers, and Brian Wynne. After the thirty-two sections in which the jury was arranged had been formed, Mr. H. J. Veitch was elected president of the first section, Major Holford of the second, Mr. T. H. Pitt of the third, Mr. J. S. Moss of the fourth, Mr. G. Gordon of the fifth, Mr. J. Weathers of the seventeenth, and Mr. G. Paul of the twenty-third. The English secretaries elected were: Mr. J. O'Brien in the second section, Mr. S. H. Low in the fourth, and Mr. C. H. Curtis in the twentieth.

OPENING CEREMONY AND SOCIAL FUNCTIONS.

At 2 p.m. on Friday the members of the jury, with the council and officers of the society, had lunch in the Halle du Draps. There were about 300 guests. M. A. Callier presided, and was supported by Lord Redesdale, Major Holford, Mr. H. J. Veitch, M. A. Viger, and M. A. Ceuterick. The speakers were few, and included, in addition to the president, Lord Redesdale, M. A. Viger and M. A. Ceuterick. In the evening the members of the jury attended, by invitation, the festival performance by the Comedie Française at the Grand Theatre. The theatre was splendidly decorated with flowers, huge shields of natural foliage and flowers being arranged along the front of the four tiers of stalls and the gallery.

On Saturday, the 25th inst., the exhibition was opened by the King of the Belgians, who was accompanied by several members of the Royal Family. His Majesty was received by the President of the society, and on his arrival there were several speeches and numerous presentations. The King then made a tour of the exhibition, and was so greatly interested in the splendid display that had been produced that he did not leave until an hour and a-half after the time arranged. In the evening there was a reception by the City authorities at the Hotel de Ville, and this was attended by the greater number of the members of jury. The following day was rather a busy one for those who took part in the whole of the functions. In the forenoon the statue of Comte de Kerchove, which had been erected by subscription, was unveiled. This monument is erected in the Place du Comte de Flandres, and represents the late president of the society sitting and in a meditative mood. Standing on the steps on which the pedestal stands, are figures representative of horticulture. The ceremony of unveiling the monument was performed by the President of the society and the Burgomaster of Ghent, both of whom spoke in eloquent terms of the splendid work that had been accomplished by the late Count, and the great services he had rendered the society during the twenty years he occupied the position of president. The special flower market held in the Place d'Armes during the day was of an interesting and attractive character, but with a cold wind blowing one could have wished that the growers had had a covered market in which to sell their products. At one o'clock on the same day the members of the jury were entertained at raôut by the Horticole Syndicale, and as is customary on these occasions, were treated in a most hospitable manner.

[Photo: De Graeve. Ghent.

MEMBERS OF THE JURY, GHENT CENTENARY FLOWER SHOW.

The social functions associated with the centenary celebration were brought to a close on the evening of the 26th with a banquet to the jury, and at this there was, as usual, a large gathering. M. Callier presided, and was supported by several members of the Belgian Government, the Burgomaster, and Lord Redesdale, Major Holford, M. A. Viger, and other notabilities. The dinner was, as usual, splendidly served, the music was excellent, and the speeches, if somewhat long, were of a decidedly high order of merit. Lord Redesdale replied on the part of the British visitors with a speech that was much appreciated. Following the banquet there was a procession of illuminated symbolical cars and tramcars, and on the procession reaching the Place d'Arms, there was a display of fireworks, which was witnessed by some 10,000 persons.

During the exhibition two parties from England visited Ghent and spent several days in the city. One of these was organised by Mr. C. E. Pearson, and the other by Mr. J. Brunton, whose party had previously spent several days in visiting the principal bulb growing districts of Holland. The railway station was tastefully decorated with fine foliage and flowering plants, and the tramcars were liberally festooned with flowers and foliage.

The arrangements were carried out in a manner deserving of the highest praise, and M. Ceuterick, the secretary-general, M. L. de Cock, the assistant secretary, and M. Duquesnoy, the treasurer, may be heartily congratulated on the manner in which they dealt with the multifarious details.

MAJOR HOLFORD'S ORCHIDS.

Of the orchids it is very difficult to know what to say. In the matter of colour effect and extent of display the azaleas beat the orchids, but in beauty and intrinsic value the orchids far surpassed all the other subjects. there were many wonderful exhibits, but it gives us great pleasure to state that for extreme beauty of arrangement, combined with high culture and splendid variety, the one set up by Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Tetbury, was by far the best. The group was a semi-circular one, arranged at the end of a broad corridor, with a deep bay behind. At the extreme back was a fine Dicksonia, and in front of this were grouped grandly grown plants of Odontoglossum crispum and Lælia flava, with a few plants of Dendrobium Wardianum at the base of them. Then magnificent plants of O. Harryano-crispum and O. Edwardi, their splendid spikes arching over a grand specimen of Cypripedium eburneo-Lowianum, the centrepiece of the group, that carried eighteen beautiful spikes. Around this were staged such lovely orchids as Cattleya Dusseldorfi var. Undine, almost pure white, and represented by about a dozen plants; Brasso-cattleya Digbyano-Mossiæ, strongly represented; Cattleya Luddemanniana alba; the superb Lælio-cattleya callistoglossa excelsa, L.-c. Baroness Schroder Westonbirt variety, and in front, the big Cattleya Mendeli Holford's variety, with exceptionally broad petals and an exquisite lip.

Towards the right-hand point numbers of such lovely odontoglossums as O. crispum, O. Wilckeanum, O. Rolfæ, O. cirrhosum, O. Pescatorei, O. loochristiense var. Lord Howick, and O. Andersonianum; and with these were Cymbidium Lowianum Pitt's var., with one fine spike of eighteen big, shapely flowers. In the left-hand side of the group Cattleya Mendeli Westonbirt var. was conspicuously good, with ten lovely flowers, the vivid purple apex to the lip contrasting finely with the blush sepals and petals; here also were Brasso-cattleya Digbyano-Mendeli, L.-c Zoroaster var. Rex, L.-c. Cæsar, a host of grand odontoglossums, miltonias, etc. Lælio-cattleya Golden Glory was another delightful plant, carrying half a dozen spikes of golden, ruby-tipped flowers.

In the foreground there were a few cypripediums, and these, with Sophronitis grandiflora, Oncidium concolor, and Odontoglossum Rossi majus, were used to provide a finish to the front margin of the display. There was no crowding whatever, and light-hued maidenhair ferns were used, with soft moss as a groundwork, with a few palms and asparagus along the back of the flowers. The artistic display exhibited in the disposition of this group was of as high an order as the cultural skill shown by the plants themselves, and the wonderful richness of Captain Holford's famous collection. It was something more, this grand orchid display; it was evidence that British pluck is not declining, for to take three pantechnicon van loads of valuable orchids over to Belgium and keep them for sixteen days out of their quarters is no small accomplishment.

M. CHARLES VUYLSTEKE'S NEW ODONTOGLOSSUMS.

There is not the slightest doubt that Mons. Chas. Vuylsteke, of Loochristy, Ghent, greatly surprised everyone, no matter of what nationality, with his wonderful exhibit of odontoglossums. Indeed, that is a mild way of putting it, because those who saw the great glass case filled with one hundred and sixteen of the most exquisite odontoglossums it is possible to conceive, all felt like the Queen of Sheba, that there were no words left in them. Who can adequately describe the variety of markings, the richness of the colouring, the variation of form, the strength and grace of the spikes, and the beauty of the collection? We confess we cannot; but, if M. Vuylsteke has done so much, it will surely be possible, before many years are past, to find equally lovely flowers in almost every collection of cool orchids, for there are hundreds of people now raising odontoglossums. The great bulk of the plants were of O. ardentissimum character, and among the most characteristic of them we may note O. a. Mdme. Vuylsteke, with very big flowers heavily blotched with very dark rich chocolate-red; O. a. vividum, very shapely and bright; O. a. Gladys, O. a. Princess Marie José, intensely marked with blood-red, purple tinted, on a white ground; O. a. Mercury, almost wholly rose and red-brown; and O. a. Imperatrice Augusta Victoria, very distinctly marked with very deep crimson-brown. Among the O. crispum varieties we were struck with O. Aida, with violet-rose shading around the red blotches; O. c. Lucine, deep red blotches and spots on a blush ground; O. c. venificum, and O. c. Adonis, almost wholly rich deep red-brown.

The four most striking plants included the O. ardentissimum Mdme. Vuylsteke already noted: O. egregium Mdme. Jules Hye de Crom, a rounded flower of a rich clear crimson-brown, almost a blood colour, tipped and very narrowly margined with bright rose, the lip bright scarlet with white tip—a magnificent orchid; O. eximium Judith, a big flower in which red, rose, violet, and white are beautifully combined; and O. maculatissimum, a wonderful plant with flowers that betray the O. maculatum parentage; the sepals are rich intense coffee-brown with a suffusion of crimson running through it, and the petals are of similar colour edged and tipped with brown-tinted white, lip rounded, bright brown centre, and whitish apex.

Other good things were O. Lawrenceanum triumphale, with yellow tips to the rich brown sepals and petals; O. concinnum Ixion, pale yellow, spotted bright brown; O. gandavense cœruleum, with curiously coloured violet-shaded flowers; and O. gandavense azureum of darker hue; O. rutitum, bright brown; and the glorious O. Vuylstekiæ Exquisitum, with very large intense purple-brown flowers edged with white. But we must conclude, not because we finish the group, but because words fail to convey the beauty of the blooms, and, indeed, almost begin to confuse. We must hope that M. Vuylsteke will bring as fine a show over to the Temple Show, as we understand he has thousands of seedlings newly coming into bloom.

OTHER CONTRIBUTIONS OF ORCHIDS.

The gold medal for the best dozen seedling odontoglossums was won by M. Graire, of Amiens, France, whose set of plants was very beautiful; there were O. crispum Orange Queen, with orange-brown blotches; O. c. Illustration, deep red blotches on a rosy ground; O. ardentissimum La Gloire, big chocolate spots on a white ground; O. a. Pres. Callier, red, violet tinted blotches on a white ground; O. a. Empereur des Indes, a grand flower, with deep ruby blotches, shaded around with violet, on a white ground; O. a. Cavoir, freely marked with deepest blood-red; and O. Devossiana, the sweetly scented hybrid between O. Edwardi and Cochlioda Noetzliana, with a tall branching spike of small, intense dark crimson, purple-tinted flowers—altogether a very beautiful set. The best single seedling odontoglossum was O. crispum coloratum, a vivid red-brown flower edged with blush, from M. F. Lambeau.

M. Maurice Verdonck, Gentbrugge, Ghent, who won the chief prize for a collection of Brazilian orchids, was strong with Oncidium varicosum, O sarcodes, O. concolor, Lælia purpurata, Arpophyllum giganteum, and a few masdevallias. For Guatemalan and Colombian orchids, M. Verdoncke was again first, annexing the gold medal with a display of Odontoglossum crispum, O. luteo-purpureum, O. triumphans, the old Ada aurantiaca, Miltonia vexillaria, Cattleya Mendeli, Lycaste Skinneri, Epidendrum radicans, and numerous bright masdevallias. M. Verdonck was again successful in the class for Indian orchids, and here his chief subjects were Dendrobium Devonianum, D. Wardianum, D. Pierardi, D. nobile, D. Primulinum, D. barbatulum, Cœlogyne cristata alba, Cymbidium Lowianum, the brilliant Renanthera Imschootianum, and such old friends as Cypripedium niveum, C. callosum, and C. Curtisi, the latter of which is, strictly speaking, Bornean.

A well-arranged collection of fifty orchids, from M. Charles Dietrich, Anderghem, won for him the work of art offered as first prize in the amateurs' class for this number. The various plants were well grown and set out thinly over firm green moss; a few of the leading subjects were: Phalænopsis Schilleriana, Miltonia Bleuana, Zygopetalum Perrenoudi, Cattleya Mendeli, Phaius Norman, the lovely Phalænopsis Rimestadiana, Brasso-cattleya Mrs. Leemann, yellowish, fringed hybrid of this section; Oncidium Marshallianum, Odontoglossum crispum Mrs. Peeters, the beautiful Lælio-cattleya Cholletiana, a L. anceps hybrid with a spike of nine soft purple flowers; and L.-c. Captain Percy Scott.

Messrs. Charlesworth and Co., Heaton, Bradford, sent over nine plants, and these were Odontioda Bradshawiæ, O. Keighleyensis, O. Vuylstekiæ var. Albion, very bright and shapely; O. ardentissimum Ebor, a grandly spotted variety; O. sceptrum aureum, with a long spike of yellow flowers; O. crispum Prince George of Wales, richly marked with red-brown; O. Armainvilliersensis Xanthotes, white and yellow marked on the lip; Vanda lamellata var., and Miltonia Bleuiana var.

A gold medal fell to the lot of M. F. de Bievre for a very fine example of Cattleya Lawrenceana var. Royale de Laeken; this carried seventeen spikes, and an aggregate of over eighty brilliant purple flowers. The gold medal for the best odontoglossum hybrid was won by M. Firmin Lambeau, Brussels, for O. ardentissimum Memoria Lambeauiæ, a shapely flower with blush margins around the deep blood-red colouring that practically monopolises the sepals and petals, save for the white bases to the segments; the lip is white with a red-brown base and golden crest.

The grand gold medal offered by his Majesty the King of the Belgians for the best amateur's collection of orchids, was won by M. Firmin Lambeau, Brussels, with a very fine exhibit, which we in no way depreciate when we say that it fell far short of Major Holford's collection, which was not in competition. M. F. Lambeau occupied a large central table in the upper corridor, and here he disposed good examples of Miltonia Bleuiana, M. B. lati-maculata, Phalænopsis Schilleriana, Phaius Norman var. atro rubens, Odontoglossum crispum Madouxeanum, O. exultans-excellens type, O. Lambeauianum The Perle, O. L. Deputé Begerem, very beautiful; O. L. Hellepulianum, freely spotted with rosy-red, white lip; O. heatonense, O. Crispum eminatum; Cattleya nivea, C. Mendeli superba, C. intermedia alba with twenty lovely white flowers; a large Cochlioda Noetzliana, and a good Mexillaria luteo alba, Cypripedium Rothschildeanum with eight flowers, etc., etc.

M. Emile Praet, Mont St. Amand, showed a group of Cattleya Schroderæ, fifty plants, but there was nothing striking or distinct among them. The best lot of masdevallias came from M. Joseph de Hemptinne, St. Denis, Westrem, who had M. Pourbaixi with about fifty flowers; M. Veitchiana grandiflora, very fine; M. Chimæra, and M. Ephippium. M. de Hemptinne led in the class for one masdevallia with a splendid example of M. Pourbaixi that must have carried over a hundred of its vivid orange-yellow flowers. There were two collections of cypripediums, but in neither of these was there anything of special merit, either culturally or otherwise; M. Maes-Braechman, Mont St. Amand, and M. Pynaert Van Geert, Ghent, were the exhibitors. To us, by far the best collection of Cypripediums was the one for which Messrs. Jansens and Putzeys, Merxem, Antwerp, gained a gold medal. Here, in a glass case, there were fine flowers of C. insigne Sanderæ, C. aureum Hermodes, C. Lawrebel, C. Mandiæ, C. aureum Ali-Baba—nearly white, quite a pale green; and C. Euryades var. Lækenense.

In the trade class for fifty orchids M. Emile Praet, Mont St. Amand, won the first prize, a work of art, with a good set, that included Cattleya Schroderæ Golden Blot—the lip being almost all deep yellow; C. Lawrenceanum, with eighteen flowers; Lælio-cattleya Kerchovei, L.-c. callistoglossa, L. anceps cross, Phaius Norman, Odontoglossum Lambeaueanum, Miltonia vexillaria, etc. The best lot of fifty plants of Odontoglossum crispum, the one that gained the gold medal, was exhibited by M. A. Muesser, Brussels, but there was nothing of special value or interest in the collection, though it served, in some measure, to show the great variation of this species.

Particularly good, and also somewhat unusual, was the splendid group of Cattleya Lawrenceanum, for which M. Theodore Pauwels, Meirelbeke, near Ghent, gained a gold medal; the plants were well grown and flowered. M. Pauwels gained another gold medal for thirty orchids, and here he showed large specimen plants of Miltonia Bleuana aurea, Cattleya Mendeli with over fifty flowers, C. Trianæ with a dozen blooms, C. Schroderæ Perfection with ten flowers, C. Lawrenceanum with thirty flowers, C. Skinneri with seven spikes, Lælio-cattleya Domniana, Cypripedium caudatum with three of its big long-tailed flowers, Angræcum sesquipedale, etc. M. Pauwels had also the finest vanda, a fine example of V. suavis pallida with twenty large greenish-white flowers.

Mons. A. A. Peeters, St. Gilles, Brussels, had a case of choice odontoglossums, not for competition. There were some rare beauties, including a glorious O. Lambeauianum, O. crispum Madouxianum, O. ardentissimum Evansianum—very fine, O. a. Cooksonianum, O. crispum Lindeni, and O. Fascinator Souvenir de Centenaire, the latter finely spotted with deep crimson-brown. Mons. G. Vincke-Dujardin, Scheepsdaele, near Bruge, contributed a large collection of cattleyas and lælio-cattleyas, and among the good things were Brasso-lælia Helen, B.-c. Madame Maron, Cattleya Vulcan, C. intermedia alba, and C. Schilleriana.

The finest specimen cymbidium was one of C. Lowianum, carrying from twenty-five to thirty spikes of bloom, and measuring about eight feet across. M. Verdonck had a bold group of dendrobiums, chiefly D. Wardianum, and in the corresponding trade class M. Vincke-Dujardin secured the premier position.

Something of the extent and importance of the orchid section of the exhibition will be gathered from the fact that no fewer than seventy-three classes were provided for them. The non-competitive displays were awarded high honours, and first position was given to Major Holford, to whom was presented a fine "Œuvre d'Art." A work of art to the value of 500 francs was awarded to Mons. Chas. Vuylsteke for his superb odontoglossums, another to Mons. A. A. Peeters for his few beautiful odontoglossums, and one to M. Chas. Mees, of Brussels, for his orchid decorations.

NEW PLANTS.

One large table in the upper corridor was reserved for the new plants exhibited by Messrs. Sander and Sons, St. Albans and Bruges, who secured the premier award, a gold medal, in the class for a dozen new plants of merit, not yet in commerce. These plants were Anthurium Sanderi, with large leaves of the A. crystallinum order, and measuring about a yard long by two feet wide; Bromelia tricolor, a freely spined species with long drooping leaves of bright green, margined with creamy-white, and with pinkish lines on the young leaves; Ptychoraphis bertiana, an elegant Kentia-like palm from the Straits Settlements; Pinanga Micholitzi, a bold and handsome species with leaves mottled in two shades of green in such a fashion as to suggest that marmorata would have been a good specific title; Croton Fred Sander, with three-lobed leaves, the base vivid yellow, and the tips of the lobes dark green; Nephrodium gracillimum, a bold and elegant species from New South Wales; Pereskia Godseffiana, an ornamental species with pale green leaves marked with green and rose, and coloured with bright rose-red on the under surface; Anthurium Laucheanum, from the United States of Colombia; this has bright green leaves with the surface puckered up into numberless andulations between the variously sized veins and ribs; Caladium Sanders' Seedling, a large-leaved, brilliant red and rosy-hued variety; Encephalartos Woodi, a spreading and handsome species from South Africa, and one in which the leaf divisions are tough, larger than in most species, and lightly spined along the margins, the colour is deep green; Cocus nucifera aurea, a yellow-stemmed and yellow-leaved variety of the cocoanut palm; and Philodendron Ilsemanni, a very prettily silvery-variegated species with quite small leaves for a philodendron. The most striking and probably the most useful are Ptychoraphis Sieberti, Pinanga Micholitzi, Croton Fred. Sander, and Pereskia Godseffiana.

[Photo: De Graeve, Ghent.

MAJOR HOLFORD'S MAGNIFICENT COLLECTION OF ORCHIDS, GHENT CENTENARY FLOWER SHOW.

Mons. L. M. de Vilmorin, Paris, was awarded a silver-gilt medal for six plants not yet in commerce; these were not very attractive, but their value will be better determined later; they were Clematis species, Corylus thibetica, Potentilla species, Rhododendron chartophyllum, Sorbaria assurgens, and Trollium species. The best hardy plant not previously shown before the society was Dividia involucrata, staged by M. Maurice de Vilmorin.

We refer to other new things under their various headings, but we cannot refrain from alluding here to the extraordinarily beautiful Cineraria Scarlet Hybrid exhibited by Messrs. Vilmorin, Andrieux, and Co., Quai de la Megisserie, Paris; this is of good florists' form, and has fine heads of blooms, but its great distinction lies in the fact that the flowers are wholly of a rich deep scarlet colour, a dazzling shade. We have so long been used to white, and blue, and purple, and dull crimson shades in cinerarias, that we have regarded a scarlet variety as something to be hoped for, but scarcely obtainable. The Messrs. Vilmorin and Co. have, so to speak, accomplished the impossible, and when they send out seeds of this brilliant variety in 1909 there is not the slightest doubt that the demand will be at least equal to the supply.

M. L. de Smet Duvivier, Mont St. Amand, set up an exhibit of plants not in commerce before 1903; this included Croton gandavense, Heliconia illustris, Nephrolepis Amerpohli, Acanthus montanus, Selaginella Watsoniana, etc. For a new fern, M. de Smet Duvivier scored with Nephrolepis Amerpohli. There was nothing specially attractive among new crotons, and Messrs. Anatole Cordonnier, and Fils' display of ten seedlings, though awarded a gold medal, contained all broad-leaved varieties, and Mons. Eugene Florin, yellow and green, was the best.

The new Hedera dentata variegata that gained an Award of Merit at Holland House in 1907 was finely shown by Mr. L. Russell, Richmond; this is very handsomely variegated. Myosotis Ruth Fischer and M. Liebesstern, both dwarf, large-flowered varieties, of light blue colour, and evidently useful for spring flowering, were shown by M. Julius Fischer, of Stuttgart. The beautiful Tulipa Fosteriana, which we first drew attention to in connection with the quinquennial bulb show at Haarlem three years ago, was well shown by M. C. G. Van Tubergen, Swavenberg, Haarlem, Holland. This is a fine scarlet, yellow-based species, from Bokhara, introduced in 1905.

HIPPEASTRUMS.

Facing the entrance to the upper corridor, from the Casino, Mr. A. Chapman, gardener to Major Holford, C.I.E., C.V.O., Westonbirt, Tetbury, Gloucester, arranged a large crescent-shaped group of gorgeous hippeastrums. This display, one of the finest in the whole show, consisted of about three hundred finely-grown plants, all grandly flowered, and carrying blooms of fine size, form, and colour. The colours were well disposed, the vivid crimsons and orange-scarlets being distributed among lighter varieties in which white grounds were prominent. Considering the number of plants displayed, the fine form maintained throughout the group was especially wonderful. This group also assisted materially to enhance the reputation of British horticulture, and our Continental friends greatly admired it. Among white, or nearly white varieties we must note Harvest Moon, Mildred, Milton, Mayflower, Lyra, Columbine, Diana, and Bridesmaid, the latter very clear and beautiful. Of very fine form and rich colour were Laus Veneris, Chimborazo, The Doge (very dark crimson), Lord Boringdon, Charon, Etna, and Tintagel. A few of the best with bright markings on a white or light ground were St. Hubert, soft red and cream; Apollo, light soft orange and white; Cassandra, rosy red and white; and Harlequin, very round, vivid scarlet veins and shading on a pure white ground. With a few palms for background, and a thick bed of loose green moss as a bed and covering for the pots to make a finish to the exhibit, this display stood out as one of the best.

This was a non-competitive display, but the judges very rightly awarded Major Holford a large gold medal for it.

There were six competitive classes for hippeastrums, and the leading one was for seventy-five plants. There were two competitors, and the work of art offered as the chief award was won by the English firm of Messrs. R. P. Ker and Sons, Aigburth, Liverpool, with a fine lot of plants that showed a great variety of colouring, including several rosy and silvery-rose varieties, and some white grounds, almost all of good form; one or two plants, however, rather spoiled the general effect because the flowers were small or not opened, but these were only small defects. From the Establishment Labelliflos, Voorschoten, Holland, came the second prize set, in which orange-scarlet varieties prevailed—the group was badly set up. MM. L. Van Houtte Pere, Ghent, received a gold medal for a set of twenty-five amaryllis that showed several pretty pink and rosy varieties; this medal was presented by Mr. R. Wilson Ker. The same firm gained a small gold medal for forty amaryllis, but they were beaten by Messrs.

Ker and Sons, who had a very fine lot of flowers in many shades of colour.

There were five classes for hippeastrums open to them, and in each of these the Messrs. Ker won the premier award. They were first for six new varieties with very beautiful seedlings, and first for six white-flowered varieties with a beautiful set, consisting of Snow Queen, Silver King, White Lady, Albescens, Silver Queen, and Purity, and they had the best newly-introduced hippeastrum, this being the lovely Snow Queen.

CARNATIONS.

A particularly fine lot of carnation blooms was well displayed by Mr. Engelmann, Saffron Walden, Essex; this display was very greatly admired, and it contained fine examples of Jessica, The Cardinal, My Maryland, Mrs. T. W. Lawson, Melody, Helen Goddard, White Enchantress, Flamingo, Dorothy Witney, and Queen Carola. The latter, a new and very fine deep clove-scented, deep crimson perpetual variety not yet sent out. Mr. Engelmann gained a work of art with his group, and a gold medal for his new seedling.

Messrs. Hugh Low and Co., Enfield, Middlesex, contributed a display of carnations, showing tall and short vases of very fine flowers of leading perpetual varieties, such as Enchantress, Britannia, Floriana, Mikado, Oriflamme—the yellow fancy, Aristocrat, White Perfection, Mrs. H. Burnett, and Harlowarden. They also showed growing plants to show style of growth, and put Lotus peliorhynchus between the vases and plants.

We may be pardoned a little national pride in the fact that the only exhibits of these now deservedly popular flowers came from England.

PALMS AND CYCADS.

Palms were grandly shown in the Casino, huge groups being set up in the corners and other places, where they broke up the general display in a very effective manner.

The Comtesse de Kerchove de Denterghem presented a work of art as the premier prize for five-and-twenty fine palms, and this was keenly competed for.

The Ghent Horticultural Society won the fine work of art, with the felicitations of the judges, with a wonderful display of big, towering examples, grandly and boldly grouped opposite the Casino steps. This was the largest, boldest, and most attractive exhibit in all the winter garden, and every plant was clean and healthy. The chief subjects were Wallichia oblongifolia, a big Sabal species, Thrinax Choco, Kentia australis, Thrinax Martiana, Calamus cinammomeus, Didymosferma porphyrocarpa, Caryota elegantissima, Astrocaryum Arayi, Phœnix Roebelini, Cyrtostachys renda—the red-stemmed palm, Latania aurea, Ceroxylon audicola, Ravenea Hildebrandti, Livistonia rotundifolia, Drymophloeus Zippŏli, and the handsome Licuala grandis.

MM. de Smet Freres, Ghent, won the gold medal offered as second prize with another grand collection, in which there were many specimens 15ft. to 20ft. high, of Cocos maximiliana, Kentia Forsteriana, Phœnix senegalensis, Coryota plumosa, Washingtonia robusta, Cocos Bonneti, and smaller examples of Kentia Belmoreana, Geonoma pumila, a beautiful Cocos Weddelliana, C. Jatai, and a handsome Rhapis flabelliformis.

M. Spae van der Muller, Ghent, led for fifteen palms, and he filled a big corner of the Casino with enormous plants of Latania borbonica, Kentia Forsteriana, K. Belmoreana, Coryota Walilchi, Cocos plumosus, and a beautiful Cocos Roebelini.

Cycads are usually a fine feature, and on this occasion the gold medal for six specimens fell to MM. de Smet Freres, Ledeberg, for fine spreading examples of Macrozamia (Encephalartos) horrida, M. villosa, M. Denissoni, Zamia Altensteini, Ceratozamia mexicana, and Zamia Vroomi. Close by these cycads M. K. Y. Kuyk, Mont St. Amand, showed a pyramidal plant of a variegated Hoya carnosa.

M. de Ghellinck de Walle brought up a famous set of twelve cycads, from Wondelghem, gaining a work of art as a premier prize. One wonders at the amount of glass that some of our Continental amateur friends must have to house these giants. Mr. Walle's plants of Encephalartos horrida, Zamia Vroomi, Z. Altensteini, Z. Macleayi, Z. mexicana, and Z. funiculata are enormous, finely grown, and perfectly clean.

FERNS.

There were several very fine collections of ferns, and in the trade class for thirty specimens M. Jules de Cock, Villa des Lauriers, Meirelbeke, won the work of art offered as first prize with a huge display of big examples of Dicksonia antarctica, Platycerium Hilli, Nephrolepis Knighti elegans, Asplenium nobilis, Nephrolepis Fosteri, Angiopteris evacta, Davallia fijiensis plumosa, Platycerium stemmaria, Angiopteris Laucheana, and the graceful Cyathea regalis. The second prize in this class fell to M. Edward Pynaert van Geert, Ghent, who had, among other things, beautiful plants of Asplenium biforma, nearly 5ft. across, Microlepia platyphila, Asplenium nidus avis, Polypodium aureum, Nephrolepis Fosteri, N. todeaoides, Cibotium princeps, and Blechnum brasiliensis.

In the amateur's class for thirty ferns M. Maurice Duquesnoy, Ghent, was awarded first prize, and he had a very fine collection for an amateur; his best examples were Acrostichum aureum, Nephrolepis todeaoides, N. davallioides elegantissima, Lomaria [illegible]loides, Didymochlæna lunulata, Lito[illegible] vespertina—very fine, and Lomaria [illegible]dovensis. M. Ghellinck de Walle's second prize set of ferns was another grand display and of a character we do not find in private gardens at home nowadays: Nephrolepis Piersoni, Microlepia strigosa, Pteris W

[Photo: De Graeve, Ghent.

VIEW IN THE NEW EXHIBITION HOUSE FROM THE SOUTH END, WITH AZALEAS IN FOREGROUND, GHENT CENTENARY FLOWER SHOW.

setti, Davallia speluncæ, and the cyatheas and dicksonias were the leading plants, but a pan of the charming little Lomaria L'Herminieri was greatly admired.

M. Draps Dom's collection of nephrolepis was very interesting, now that there are so many beautiful forms; he showed N. Scotti, N. elegantissima, N. Westoni, N. Scotti compacta, N. Whitmani, N. Barrowsi, N. davallioides grandiceps, and the lovely N. todeaoides.

M. Maurice de Ghellinck de Walle, Wondelghem, had the finest collection of selaginellas, showing big pans, perfectly grown, of S. apoda, S. Watsoniana, S. Mertensi compacta, S. cæsia, S. Kraussiana aurea, S. Emiliana, S. Krassiana variegata, S. Poulteri—very pretty, S. Vœgli, etc.—A fine collection.

STOVE PLANTS.

These were marvellously well shown, and with the palms and cycads they filled the huge winter garden with bold and coloured and elegant leafage, the whole making up a display that is probably unique in Europe.

Just under the balcony and steps leading from the Casino up into the Salle was grouped a marvellous display of specimen stove plants, some of them of enormous size, and most of them remarkable for the foliage rather than for their flowers. Imagine an enormous group of plants the whole length of the R.H.S. hall, and in the centre, extending halfway across the hall, and in height reaching to the top of the wall, and you have some idea of the extent of this wonderful display. The whole was arranged by the Ghent Horticultural Society and MM. Van Houtte Pere, Lim., and the greater part of it was the premier entry in the class for forty stove plants. We cannot detail the whole group, but would add that there were remarkably fine specimens of Nephrolepis davallioides furcans, Caladium Mrs. Laing, Nephthytis picturata, Bowenia spectabilis, Spathiphyllum picturatum—gold and green, Anthurium crystallinum, giant crotons, Pandanus Sanderiana, Heliconia illustris, Dracæana Sanderiana, Anthurium Veitchi, and A. Hookeri.

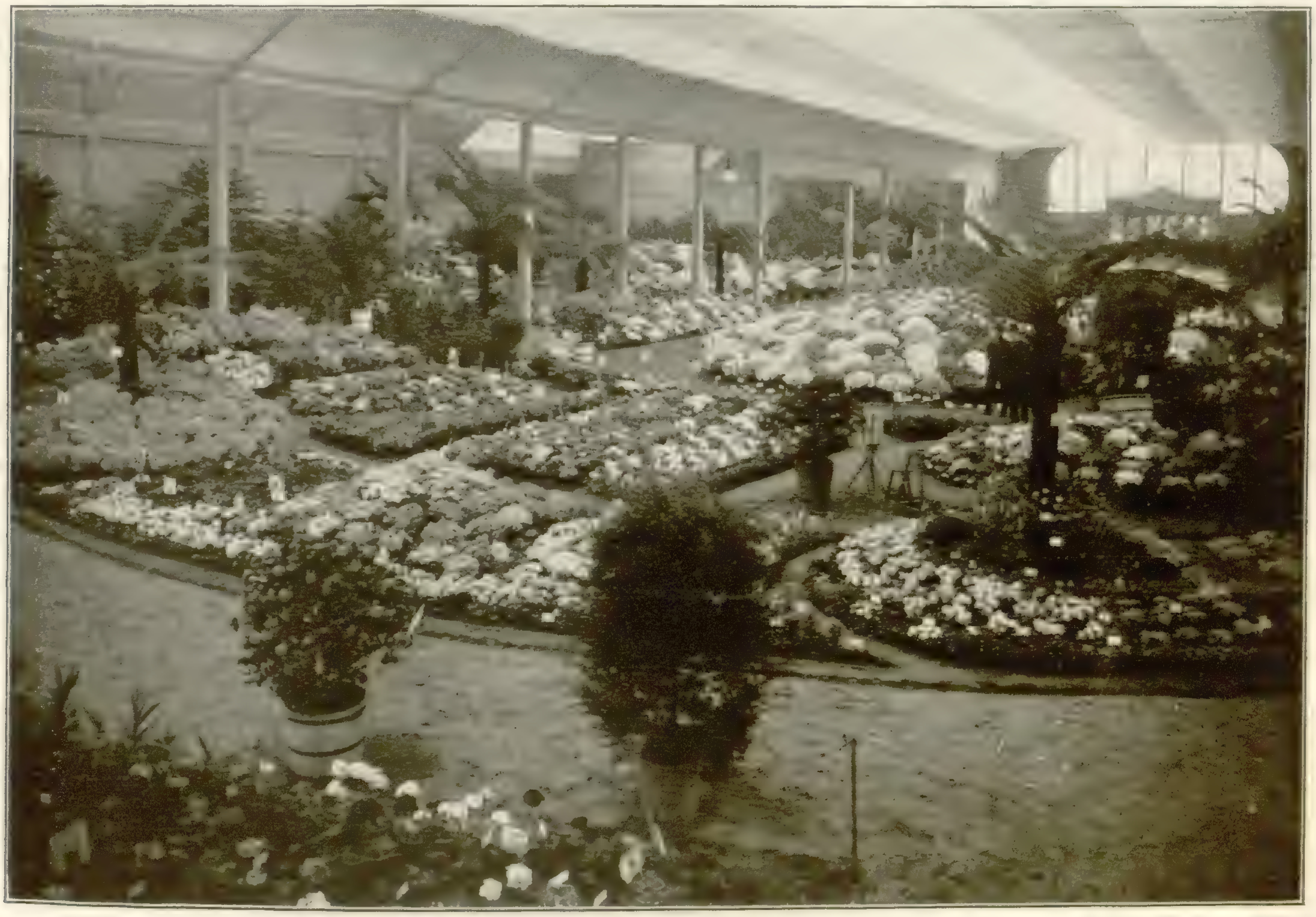
The second award fell to MM. Van Houtte Pere, Lim., for a smaller, but fine collection, in which we were struck with the cream and silvery Caladium Bahia, Dieffenbachia Jenmani, Nepenthes sanguinea, Dracæana Godseffiana, Adiantum Farleyense, a lovely Leea amabilis, and Licuala grandis.

A grand group of big specimen plants from the Ghent Horticultural Society, Chaussée de Courtrai, Ghent, won a work of art in the class for twenty flowering or non-flowering plants, the examples of Philodendron Sellowianum, Philodendron Mamei, Heliconia illustris, the beautiful and elegant Cocos Roebelini, Smilax argyrea, and the broad Alocasia Martin Cahuzac, were unusually fine, and the specimens of Nephrolepis davallioides furcans, 8ft. to 10ft. across was a wonder. In the second prize lot, from MM. Van Houtte Pere, Lim., Leea amabilis, a very fine Cœlogyne cristata alba, and the pretty Eugenia Glazioviana, very graceful, and with pale young green tips to the growths, were notable specimens.

The Ghent Horticultural Society (Société Horticole Gantoise) won the fine prize offered by M. Victor Hewsel de Meester for the best twenty-five striped or marbled stove foliage plants; this was a famous group, Heliconia illustris, Caladium Mrs. Laing, Croton Countess, Oaveltia borbonica, Dracæna Godseffiana, Spathaphyllum picturatum, the lovely red and cream Caladium Raymond Lemonnier, Maranta Sanderiana, and Pandanus Sanderiana, being the finest and brightest specimens. Some very fine plants were shown in this class by MM. Van Houtte Pere, Lim., who won second prize, their leading examples being of Heliconia illustris, Nephtytis picturata, Alpinia Sanderæ, the lovely Bertolonia Comte de Kerchove, Bougainvillea spectabilis aurea variegata, Leea amabilis—very beautiful, Asparagus Sprengeri variegata, and a huge broad-leaved green and gold Spathiphyllum picturatum.

In a smaller class for similar plants M. Alexis Dalliere, Ledeberg, led the way, and his most attractive plant was Vriesia splendens major.

The Ghent Horticultural Society had another magnificent display in the class for twenty fine foliage stove plants. A wonderful kentia surmounted the group that would have filled one end of the R.H.S. hall, and around and below it were grouped Anthurium Hookerianum, Cyanophyllum magnificum—grand foliage, Aralia souchifolia, Philodendron gloriosum, P. corsinianum, P. macrophyllum, Dieffenbachia magnifica, and Spathiphyllum picturatum, etc. The second prize in this class was won by MM. L. Van Houtte Pére, Lim., Ghent, with big specimens of Philodendron pertusum, Coccoloba pubescens, Dracæana indivisa variegata, Cyclanthus bipartitum, Araucaria compacta, Zamia verrucosa—very fine, Aralia souchifolia, a huge Alocasia Van Houttei, and several fine palms.



[Photo: De Graeve, Ghent.

LOOKING ACROSS THE NEW EXHIBITION HOUSE FROM NORTH END, WITH CINERARIAS, ETC., IN FOREGROUND, GHENT CENTENARY FLOWER SHOW.

MM. Duriez Freres, Wondelgem, Ghent, won the chief award for the best twelve stove plants with enormous examples of Corypha australis, Cibotium Scheidei, Areca lutescens, Rhapis flabelliformis, a beautiful Kentia Belmoreana, a perfect plant. There was nothing new or striking among the caladiums, though MM. Van Houtte Pére, Lim., had a very fair group of these handsome foliage plants, and won a premier award therewith.

Dracæana Massangeana, in a big group, was finely shown by M. J. E. Story, Ghent. M. Draps Dom, Laeken, showed new dracænas, of which Vulcan and Triomphe d'Horticulture were the most striking. MM. Penninch and Fils, Ghent, exhibited dracænas largely, and won several prizes; their bright red-hued Cantrelli, and such varieties as Marguerite Story, Milleti, De Smetiana, Souv. du Professeur Ed. Pynaert, and M. Jules Hye.

M. Delarnye-Cardon, Ledeberg, is a splendid cultivator of crotons, and he had a richly coloured set of plants that won several prizes, all in small tubs, and measuring about a yard through and 3ft. to 4ft. high; we may indicate a few of the most striking varieties; there were Marthe Cuhazac, Turnfordiensis, Isareus, Madame Duval, General Brissac, Madame de Smet Duvivier, Beauty, Mathilde Curt, Comte. Hugo, Maurice Bouvier, and Berthe Fournier.

[Photo: De Graeve, Ghent.

SPECIMEN FINE-FOLIAGE PLANTS IN WINTER GARDEN, GHENT CENTENARY FLOWER SHOW.

The Société Horticole Gantoise, Chaussee de Courtrai, Ghent, set up an enormous pyramid of huge crotons in the centre of the Salle-a-manger, in front of Major Holford's hippeastrums. It was a grand group, but something lighter would have been more in keeping with the situation. For this wonderful croton group the firm gained a big gold medal, with the felicitations of the judges. The finest specimens were C. Maurice Bouvier, Massangeana, M. Lucien Linden, M. Charon, Reidi, Thompsoni, Admiral Cuverville, Paul Garnot, Mdlle. Marie Van Houtte, Moorti, B. Comte, Jean de Smet, and Albert Truffaut. It will be seen from this list that the great majority were broad-leaved varieties, and when we say that some of the plants were 10ft. or 12ft. through, and the smallest probably not less than 5ft. across, some idea of this huge trophy of 25 plants can be obtained.

The bromeliads are always interesting, but one finds it difficult to grow enthusiastic over these stiff subjects, even when so finely staged as on this occasion. M. Firmin de Smet, Vinderhaute, had the finest collection of thirty plants, that included many varieties of hybrids from Vriesia Rex. M. L. Poelman, Mont St. Amand, had the finest single plant, but it was not named.

Among the stove foliage plants of great beauty mention must be made of the lovely bertolonias shown in a frame by MM. L. Van Houtte Peré, Ghent; there was an exquisite plant of B. Madame Bleu, like a piece of silver filigree over light green; one of B. Souv. de Gand, with brilliant purple-blue veins over a curious reddish ground; of B. Van Houttei, silvery-blue on soft red; and of B. Comte de Kerchove, dull silver on red-green. B. marmorata and B. Madame Leon Saye were also very beautiful; a silver-gilt medal was awarded this exhibit.

ANTHURIUMS.

These are very popular on the Continent. The best trade collection of anthuriums, Andreanum varieties, was staged by the Ghent Horticultural Society; the pink variety named Albert Ceuterick, and the white Centenaire, and another white, very large, named Edouard Pynaert, were the best. The Comte de Kerchove, Biervelde, had the best amateur's group of anthurium varieties, and he showed two fine Edouard Pynaert, the crimson Albert Truffaut, and the pink Le Progres.

The finest lot of anthuriums culturally was a remarkable group arranged by M. Arthur de Smet, Ledeberg, who had a score of large specimens, all grandly flowered, and making up a splendid mass of gay colouring. They were all Schertzerianum or Rothschildeanum varieties, and the red variety named Souvenir de Louis de Smet, with its big rounded spathes, was conspicuously good; Wardi and Perfectum superbum were other good forms. M. Arthur de Smet had another fine lot of anthuriums in the class for twenty-five plants, and here he had Wardi, Le Flambeau —deep crimson; Mdme. Dallieri bicolor, green and white; and Nigricans, very dark; these were all good varieties of the Schertzerianum group.

Anthuriums are always a great feature of the show, and the very slightest variation in shade and marking is considered sufficient to warrant a varietal name. Undoubtedly these anthuriums are very fine, and we scarcely make as much use of them at home as we should do. M. L. van Houtte Pére won a gold medal for a handsome group of twenty-five varieties of A. Schertzerianum, but M. Arthur de Smet, Ledeberg, secured the large gold medal for grand speckled varieties of the A. S. Rothschildeanum group, all bearing wonderfully fine rich-hued spathes.

AZALEAS.

Indian azaleas, which constitute so important a part of the Ghent cultures, were exhibited in immense numbers, and magnificent condition, and arranged in spacious beds and broad banks down the centre of the new exhibition house, they produced an effect which has certainly not been surpassed. The classes were numerous and the competition keen, and the various collections consisted of plants ranging from four to two feet in diameter, and remarkable for the splendid development in size and colour. There were two specimens about six feet in diameter, and although so freely flowered as to completely hide the foliage, they did not compare favourably with the more youthful examples. The first of the numerous classes for these attractive greenhouse shrubs was that for a group illustrative of the various forms of training that find favour, and arranged to produce a tasteful effect. The premier position was occupied by M. August Haerens, Somergem, Belgium, with a group remarkable for high culture and tasteful arrangement; the group included about two hundred and fifty splendidly flowered specimens, comprising the finest of the varieties in commerce, and so arranged as to produce a rich and harmonious effect. Especially noteworthy were Professor Wolters, a beautiful single variety with large, finely-formed flowers of a pleasing salmon colour with carmine blotch; Madame Vander Cruysen, a charming variety with semi-double flowers of a rich rose colour; Vervaeneana, an effective double variety, the colour delicate salmon-pink, with red blotch and spots on upper segments; Temperance, a distinct single form with mauve-coloured flower, a distinct shade among azaleas. Ernest Eeckhaut, very effective, the flowers double, and of a glowing rose-crimson hue; Anna Gundal, semi-double, pure white; Madame J. Vervaen, semi-double, the flowers very large, superb form, and a bright salmon-pink hue. The group consisted chiefly of round-head plants, ranging from one to four feet in diameter, with sufficient pyramids to remove any suggestion of flatness, and a considerable number of fan-trained plants. These latter are grown specially for the window and balcony, and are admirably adapted for placing on brackets in large rooms and in corridors. They were well-bloomed on both sides, and were very effective. We were not surprised to learn that fan-trained plants are becoming very popular in Belgium and France, and anticipate they will find favour in this country when they become better known.

An excellent class was that for forty specimens, and the several collections that were exhibited produced a wonderful display of colour, and proved to demonstration that the art of specimen culture is not lost in Belgium. In this class the Société Anonyme Horticole A. d'Haene, 111, Chaussée de Brussels, Ghent, were awarded a work of art with a magnificent collection. The specimens trained in the usual hemispherical form were quite solid with bloom, and the flowers were, in size and colour, far above the average that obtains in the case of such large examples. Conspicuous among others were Appolo, brilliant scarlet, semi-double; Vervaeneana, Roi d'Hollande, orange-scarlet; Madame Glover, single, pure white; Giant, double rose; Grandis, single, orange-red, very fine. Messrs. Sander and Sons, Bruges, were a close second with plants one or two sizes smaller than were those in the first-prize group, but they were densely bloomed, and the flowers were of the largest size, and superbly coloured. Mention may well be made of the following, for their great excellence, namely, Apollon, semi-double, white; Juillette, semi-double, carmine-red. Charmer, single, brilliant rose; Alba magnifica, a large, finely-formed single flower, but rather greenish in the centre, which detracts somewhat from its value; Baronne de V[illegible] single, pure white with frilled margins, one of the best of the whites; Simon Mar[illegible] bright rose, semi-double; Violacea multiflora, double, deep rich purple, valuable for its deep rich colour. In competition for the prizes in the class for twenty specimens, the Société Anonyme Horticole A. d'Haene, Chaussée de Brussels, Ghent, was first with splendidly flowered examples of medium size, and were awarded the object of art offered as the first prize; Messrs. Maenhout Brothers, Mont St. Amand, Ghent, were awarded the gold medal offered as the second prize.

One of the most noteworthy of the numerous classes for azaleas was that for a collection of fifty plants cultivated as [illegible] liers, and the premier award, consisting of a gold medal, was made, with the felicitations of the jury, to M. A. Haerens, who had finer examples of this style of training than those included in his group arranged for effect. The plants ranged from two to three feet across, and were finely flowered on both sides. These examples, by reason of their novelty, attracted much attention from those of the English visitors who are interested in greenhouse plants. The varieties were much the same as those represented in the round-headed plants of the usual type, and it would therefore appear that all the finest varieties are suitable for this style of training. MM. L. Van Houtte Pere, Ghent, were a good second with well developed plants, but with flowers on one side only.

There was a strong competition in the class for one hundred varieties, and in the result the gold medal offered as the first prize was awarded to the Société Anonyme Horticole A. d'Haene, Ghent, for a collection of quite exceptional merit. Chief among the many superb varieties represented were Mr. Hardy, semi-double, rich rose, Eugène Morel, bright salmon-scarlet, single; Sir John Llewelyn, double, pale pink, carmine centre, an old variety, but still one of the very best in its delightful shade of colour; Princess Victoria, double, bright pink, light pink at margin; Perle de Ledeburg, semi-double, pure white, flaked with scarlet; Ministre de Bruyne, double, brilliant orange-scarlet; Madame de Grivy, an exceptionally attractive single variety, the flowers light pink with brilliant carmine blotch; Unica, brilliant pink, semi-double, very beautiful; Edmond Vervaen, rich red-scarlet, double; Perle de Belgique, double, large, pure white, the flowers very fine for decorative purposes in a cut state; Memoire de Louis van Houtte, semi-double, large, rich rose; Jean Peeters, double, large, rich rose-red, one of the very finest in its colour; Camellia flore-pleno, double, rich orange, very distinct, the flowers large and the margin of the segments so smooth that they would have fully satisfied the requirements of the florists of the past generation; Purpurata, a distinct and beautiful single variety with flowers of a rose-mauve hue, reminding one of the best forms of Bougainvillea glabra. Gold medals were also awarded to the Société Anonyme Horticole, Mont St. Amand, and M. L. Van Houtte, Pere, who were second and third respectively with groups of finely-flowered plants.

Especially strong was the class for sixty plants with heads not exceeding twenty inches in diameter, and the work of art offered as the first prize was awarded to M. Auguste Vervaet, Meirelbeke, near Ghent, who exhibited plants as near perfection as we can hope to obtain in azaleas of the size required by the schedule. Every plant was practically solid with bloom, and so closely matched in size and finish as to suggest that they had been turned out of the same mould. Not the least point of merit was the size, substance, and colour of the flowers. Among other varieties that attracted our attention was Plutót, single, rich scarlet; Superba Leiheg, single, deep rich rose; Mammoth, single, the flowers large with elegantly undulating margin, and of a brilliant magenta-rose colour; Temperance, light mauve; Harlequin, double, bright, feathered with white at the margin, and splashed with purple; Baronne de Vriere, single, pure white, the flowers large with elegant frilled margin; R. Seidel, soft salmon, splashed and striped with vermilion; Souvenir de [illegible], semi-double, the flowers large and of a rich scarlet hue, one of the very finest in its colour. The gold medal offered as the second prize was awarded to Messrs. Sander and Sons for admirably-flowered plants, and the third prize, a small gold medal, was awarded to the Société Anonyme Horticole A. d'Haene. Pyramidal trained plants were of great excellence, and the class for twenty-five specimens was a remarkably strong one, and in the result Messrs. Sander and Sons won the work of art offered as the premier award. The plants were about three feet high, finely proportioned, and superbly flowered. M. Schepens-de-Baets, Saffelaere, followed closely, and was awarded a gold medal. In the class for 100 pyramids, M. Victor van de Weghe, Loochristy, was successful in obtaining premier honours, and the award of a gold medal was well merited. Of considerable excellence also were the fifty pyramids for which M. J. De Puysselyre was awarded a gold medal.

GREENHOUSE PLANTS.

Several large classes were provided for cool house plants, and as they were mostly well filled, and the specimens of large size and freely flowered, they constituted a feature of much interest. In the great class for twenty-five plants in bloom M. Firmin de Smet was awarded the work of art with acclamation, and no honour could well have been better deserved. The collection comprised large and superbly developed specimens of acacias, rhododendrons, azaleas, cytisus, bougainvilleas, and camellias. One of the most perfect of the specimens was an example of Genethyllis tulipifera, at least six feet in diameter, and bearing myriads of its attractively coloured flowers.

The bay of the exhibition house, with its admirable scene depicted on canvas of Australian scenery and characteristic vegetation, was a source of attraction to the general visitors, and of much interest to horticulturists by reason of the magnificent collections of acacias located therein. Especially noteworthy was the collection of these plants for which M. Fermin de Smet was awarded the gold medal, with the felicitations of the jury. This consisted wholly of specimens of immense proportions, and superbly flowered. A. verticillata was represented by a specimen at least twelve feet high and five feet in diameter, and loaded with flowers from the apex to the level of the tub in which it was growing. Equally noteworthy was a specimen of A. longifolia, although not so high by five feet. A. linearis, remarkable for its rich golden flowers, and A. parodoxa were also very fine. The same exhibitor also contributed a specimen of A. longifolia at least ten feet in diameter, and as much in height, and densely flowered.

[Photo: De Graeve, Ghent.

FACADE OF NEW EXHIBITION HOUSE, WITH AVENUE OF BAYS AND CORDYLINES, GHENT CENTENARY FLOWER SHOW.

Two fine collections of New Holland plants flanked the panorama of Australian scenery, and in both there were magnificent acacias. The foreground, arranged to represent a dry river bed, was formed with the medium-sized examples of eriostemons, correas, and other plants native of New South Wales. Of great excellence also was the collection of fifty specimens, for which Mr. Hearsell was awarded a work of art. Especially noteworthy were the examples of Sparmannia africana and Jacobinia magnifica. In addition there were numerous collections in the exhibition hall that were somewhat smaller, but of much merit.

Camellias are so seldom seen at exhibitions nowadays that it was of much interest to find two or three collections of large, admirably flowered specimens. M. E. de Cock contributed an exceptionally fine specimen of Erica conodes upwards of six feet high, finely proportioned, and literally smothered with flowers. The lovely Boronia heterophylla was well shown by several exhibitors, the plants about two feet in diameter, and profusely flowered.

In Messrs. Vilmorin Andrieux, and Co.'s large exhibit the strain of Primula japonica was notable for its compactness and its wide range of colouring; some of the fringed varieties were also very good. The cinerarias from this Parisian firm were the great attraction; we have already alluded to the wonderful Scarlet Hybrid, with big heads of good-sized, rich scarlet flowers—a most beautiful and distinct advance, and we now add that the firm has a pure white strain in Boule de Niege, a deep rose-coloured strain, and also a striped strain, as well as good selections of florists and stellate varieties as we know them at home. The Vilmorin calceolarias, polyanthuses, auriculas, and double cinerarias were other brilliant attractions.

Just in front of the beautiful valley scene in the Casino Mr. Chas. Mees, Rue Royale, Brussels, exhibited a magnificent lot of hydrangeas. The plants were unusually dwarf and covered with big heads of pink, rose, or bluish flowers. Mr. Mees' exhibits in several classes were all grouped together and formed a low extension to a great bank of rhododendrons, and adding greatly to the effectiveness of the whole scene. The plants were very fine indeed, showing that Mr. Mees is a past master in hydrangea culture.

M. F. de Laet, Contich, had two greenhouses filled with interesting succulents; he had a quantity of miniature plants, a batch of grafted mamillarias, some fine specimens of Echinocactus Grussoni, Cereus giganteus, and a batch of the scarlet-flowered Epiphyllum Gaertneri. An exhibit of chrysanthemum Mdme. Gustave Henry, composed of several dozen plants on single stems, in 48-sized pots, attracted a great deal of attention as the flowers were good, and so totally out of season, and they showed up well over a bed of maidenhair ferns.

Dracæna Bruanti var. Souv. de Francois Buysse, shown largely by M. Emile Vergauteren, Melle, is a very handsomely variegated and elegant plant, and one that ought to make a capital table and market plant for British cultivation. A splendid lot of a very large-flowered strain of Primula obconica, one of the finest strains we have seen, was placed in one of the greenhouses by Messrs. L. de Bock fils, Ghent. Such a lot would surprise some of our London friends.

A wonderfully fine set of fifteen araucarias won a gold medal for M. J. P. Hartmann, Ghent. The plants were beautifully furnished, and included Araucaria Bidwilli, and such varieties of A. excelsa as Napoleon Bonaparte, with very large spreading branches; A. Leopold II., soft grey green, very spreading; and A. e. glauca, as well as A. Rulei and A. R. glauca.

In early roses, in clivias, cyclamen, and in zonal pelargoniums we found nothing of special interest; the plants were well grown, but so far as we could see there were no new varieties; indeed, the pelargoniums were chiefly of English origin.

TULIPS.

The gold medal for a collection of five hundred Darwin tulips was awarded to Messrs. E. H. Krelage and Son, Haarlem, Holland, who had a very fine display, each variety being represented by a pan of ten bulbs, Wm. Pitt, Mr. Farncombe Saunders, Psyche, Mdme. Krelage, Oliphant, Faust, Mr. Jas. Douglas, Enterpe, Harry Veitch, La Tulipe Noir, and Sophrosyne were among the finest varieties. The Messrs. Krelage had the tulip section all to themselves, and secured a further gold medal for 250 Darwin tulips, showing varieties similar to those already mentioned. They also gained a gold medal for a collection of 250 Rembrandt tulips, which attracted considerable attention, by reason of their curiously-striped flowers.

FLORAL DECORATIONS.

M. Lachaume, the celebrated Parisian florist, arranged a pretty table with orchids and roses, and had a grand hall group of cut orchids, the receptacle being filled with phalænopsis, odontoglossums, and oncidiums. The vase of big carnations and one of liliums were fine, but the side table design of clematises did not seem quite harmonious. The firm gained ever so many gold medals. M. A. Dangotte, Ghent, kept himself to very dainty arrangements of light odontoglossums, phalænopsis, and Cattleya Mendeli; his brackets and mantel decorations were his best designs. There were a few other displays, but these were the best according to our own taste.

HARDY FLOWERING SHRUBS.

Very effective was the glorious display of mollis and Ghent azaleas, and the rich shades of yellow, rose, and orange which their flowers afford presented a striking contrast to the colours of the rhododendrons and other shrubs with which they were associated. One of the leading exhibitors of these was MM. Koster and Fils, Boskoop, Holland. The exquisitely beautiful Pink Pearl rhododendron was shown by several exhibitors, and its large trusses of beautiful pink flowers attracted much attention.

Hardy rhododendrons were arranged in large masses alongside the side walks, and produced an attractive display of colour. In some cases the groups were relieved by a few large palms, which, it is hardly necessary to say, materially enhanced the general effect.

A very beautiful display of lilacs was made in the new exhibition house by M. F. Stepman de Messemaeker, Rue des Quatre, Vents, Brussels. This exhibit was remarkable for its fine culture and also for the great variety of colours shown. The variety Lucie Baltet comes as near to a yellow as we have yet seen á lilac; it is deep cream colour; the large dark-flowered Leopold II. was grand, and Marie Micheli, double blush, Souv. de Leon Spathe, Marie Legraye, and the fine white Florent Stepman, were the most notable of a very interesting, beautiful, and fragrant set. M. P. de Vries, Aalsmeer, Holland, had a beautiful lot of lilacs, but we noted nothing new among the varieties.

EXHIBITS OUT OF DOORS.

Out of doors, between the Casino and the new exhibition house, also around the building, the effect was very typical of a Belgian nursery. Between the structures was an avenue of very fine pyramidal and standard bays in big tubs, arranged by M. H. Millet-Richard, Ledeberg. Between and below the bays were some big variegated phormiums from M. C. Ver Cauteren, Meirelbeke, and a set of remarkably handsome plants of the variegated Dracæna Doucetti, and D. indivisa Prince Albert, from M. Emile de Groot, Evergem, near Ghent. Dracæna lentiginosa, a purple green-leaved form of D. indivisa, was shown by M. Auguste Franck, Melle, near Ghent, close to the entrance; this was very fine.

The finest display of conifers, fifty plants, was made by the Horticultural Company of Calmpthont, who were awarded a special gold medal; they had handsome plants of Retinospora filifera, Thuiopsis dolobrata, Abies Pinsapo, Juniperus japonica, Cupressus Lawsonianum lutea, Abies concolor, A. canadensis, and A. excelsa aurea. M. Aug. Van Heden, Wetteren, near Ghent, gained second prize with another fine set of plants.

Very interesting and pretty was the alpine garden, arranged by M. Jules Buyssens, landscape gardener, of Brussels. Alpine shrubs occupied the upper positions, and water fell from stratified rocks into a small pool, and thence into other and lower pools, and finally down a little cascade to a miniature lake. Flowers were sparingly used, calthas and arabis predominating, though on a small outstanding bit of rockwork there were a few primulas, auriculas, violas, etc. M. Correvon, of the Jardin Alpin d'Acclimatation, Geneva, exhibited a small collection of alpines, such as the yellow Androsace Vitaliana, A. pyrenaica, Saxifraga Tombeauensis, the lovely little Gentiana verna, the vivid scarlet Silene virginica, and the quaint little Townsendia sericea, with blue daisy-like flowers, produced right down on the dwarf plants.

There were numerous greenhouses of varied construction, and quite an array of heating apparatus in the grounds, but of these we have not room to write. An extraordinary display was made by Messrs. Dutry-Colson, Rue des Champs, Ghent. This firm had mowing machines galore, water barrows, pumps, sprayers, ladders, tents, shelters, and garden seats, and an immense trophy-like exhibit of tools, arranged under a semi-circular open-fronted building. This was a really marvellous display, both for its extent and variety. Wirework, stakes, and the Foster and Pearson boilers, from Chilwell, Notts. (for which firm the Messrs. Dutry-Colson are agents) were included, and the whole was effective as well as interesting and educational.

Hardy Carpeting Plants.—Where the beds are vacant hardy carpeting plants, such as antennaria, cerastium, sedums, arenaria, etc., may now be planted, leaving proper spaces for the taller-growing subjects to be planted later on. By doing this work now the plants will have a good opportunity for becoming established early, and the work of bedding out later on will be lighter. —E. F. Hazelton.

MECONOPSIS WALLICHI.

The extent to which gardens have been enriched by the various members of the great natural order Papaveraceæ is not always apparent at a cursory glance. It embraces genera which are widely distributed upon mountain and plain, while the species are generally characterised by gorgeous and richly-coloured flowers. Few of the genera have been invested with so much interest in recent years as that of the meconopsis, which is chiefly owing to the newer species introduced from China. This interest has centred itself around the beautiful yellow-flowered M. integrifolia, and has reacted, to a certain degree, and thereby stimulated the cultivation of some of the older species. The only meconopsis indigenous to Britain is the little Welsh poppy, so named from its comparative local distribution; it is a pretty little plant, which soon makes itself at home, reproducing itself by seed in any, and often every, corner of the garden, but seemingly enjoying itself best when the roots are always cool and the foliage in full sun. To those acquainted only with this native plant it conveys but slight idea of the beauty of the exotic species which are found in the uplands of China and Thibet, while the good points of the genus is very clearly set forth in Meconopsis Wallichi, a species introduced from the Sikkim Himalayas as long ago as 1852, in which year it first flowered at Kew.

Meconopsis Wallichi is a plant of rare and striking beauty; from a rosette of delicate green leafage arises in summer a pyramidal spike bearing innumerable flower buds, which begin opening from the top downwards; the petals are close packed in the bud, which is densely clothed on the outside with felt-like hairs; the calyx splits at the apex in two halves, disclosing the crimpled petals, which, on expansion, are coloured a delightful shade of bright blue in the best forms, though a percentage of inferior forms are always present. The flowers are ephemeral in character, but they are produced in such rapid succession as enables the plants to retain their beauty for a considerable time; to this end they may be greatly assisted by removing all seed pods immediately the flowers fade.

Meconopsis Wallichi is a biennial, and the plants die after flowering. Seed ripens readily, and should be carefully preserved from the best-coloured flowers. It may either be sown immediately it is ripe or during the following spring. My practice is to sow seeds in pots of peaty soil during March, and place them in a late vinery to germinate. By the time the seedlings appear the vines furnish the necessary shade, and as they gain strength they are potted singly in three-inch pots, and returned to the same quarters, and grown in this position till June. Early in June the plants are hardened off and placed in a cool, shady position in the open air.

Where suitable ground is available the plants may be placed in their permanent positions about the end of June, though I prefer to shift them into five-inch or six-inch pots at this date, and plant out about the beginning of September, which allows sufficient time for them to become established in their positions before winter. Meconopsis Wallichi enjoys abundant moisture at all times, whether upon the [illegible] at the root, but in the last instance the soil must not become sour. It will grow in loam, but prefers a soil in which peat is freely used, while soils containing free lime are not likely to give good results. Planted among widely-set shrubs and lightly shaded overhead it m robust growth, while it presents a scorched and burnt-up appearance when grown in the open, or if anyway exposed to winds. It not infrequently happens that some plants fail to flower the second year, but they increase in size and beauty, and flower in the third or fourth year, when they are correspondingly finer. The appearance of these huge leaf tufts, with the elegant sub-divided leaves covered by orange-red hairs, upon which the collected raindrops stand reflecting the winter sun, enables them to claim a position of distinction as decorative plants quite apart from their beauty as flowering subjects.

Thomas Smith.

Walmsgate Gardens.

CAULIFLOWERS.

It is, I think, generally agreed that the cauliflower ranks amongst the most delicate and highly-valued of vegetables; especially is it esteemed during its early and late seasons, and considerable pains are usually taken in private gardens to secure a supply as early and as late as possible, relatively small and compact heads being preferred for the dining room. Fortunately, if the necessary means are available, and a good selection of varieties is made, there need be no great difficulty in securing a good supply of this vegetable, though it must at the same time be admitted that in order to do this a skilful system of management must be practised.

The first crop of the year can be obtained from seeds sown in the previous autumn, and as the condition of the locality as well the state of the weather during the plants' early stages of growth has a marked influence upon their size, their powers to withstand the trials of passing through the winter, and through the early spring without "buttoning," it is advisable to make two sowings of seeds, one about the middle of August, and the other at the end of this month; by neglecting to take this precaution, we have before now suffered disappointment.

The varieties that we grow for this purpose are Veitch's Early Forcing and Early London, and the latter affords succession to the former. The seeds should be thinly sown in the open upon rich, finely broken soil, which must be kept well watered if the weather is dry, and as soon as the plants are large enough they should be put into three-inch pots, sound loam and leaf-soil being employed as compost. During winter place the batch in cool pits, which should be freely ventilated in favourable weather so that the plants are kept perfectly hardy; but in order to prevent them receiving injury during spells of severe weather protect at such times with bracken or mats. In February a portion of the plants should be planted 15in. apart in rich soil placed in cool frames or pits, the remainder being shifted into pots 5in. in diameter, to be subsequently—about the end of March -planted out upon a rich, warm, and sheltered border 15in. apart in drills.

To succeed the autumn-sown plants, a sowing of Early Forcing, Early London, or similar early varieties should be made in a frame upon a bed of warm leaves, at the end of January or early in February. Prick the plants out 4in. or 5in. apart in a cool frame as soon as they are fit to handle, and keep them carefully supplied with tepid water. Should mildew appear, dust the plants with flowers of sulphur through a distributor. Further than having protection from frost, the plants should be grown as hardily as practicable, and with ordinary success they will be ready to plant out in May. Other successional crops raised upon similar lines should be sown early in March. At the end of March and the end of April, sowings of The Pearl may be made in open quarters, upon rich, well-pulverised soil. This variety is of excellent quality and is reliable for successional summer crops.

At the end of March, or early in April sowings should likewise be made for late use of such varieties as Early Giant, King of Cauliflowers, and Autumn Giant. The plants should be pricked out upon rich soil, and when large enough lifted with good balls of soil and planted with a trowel in open permanent quarters.

A deep loamy soil is the most suitable one for cauliflowers, and this should be trenched rather than dug, and in any case be heavily dressed with farmyard manure, and after the plants have become well rooted, periodical soakings with liquid manure are very beneficial, while at no time should the crops be allowed to suffer from want of water. While the plants are young the ground between them should be kept well hoed, and the plants be earthed before they become inconveniently large. Upon dry soils especially, mid-season crops may be benefited from being planted between the rows of peas that are wider apart than usually grown. Mulching with short litter or manure is also an excellent practice.

Slugs are very destructive to young plants in wet seasons and upon heavy soils; they may, however, be kept under by hand picking, or placing sawdust or ashes around each plant. T. Coomber.

The Hendre Gardens.

RHEUM PALMATUM AND ITS VARIETIES.

It is quite probable we should find far greater use made of the ornamental species of rheum in the best aspects of "free" garden landscape if the genus possessed no economic value in the garden rhubarb. There is in these days less observance of the line that defines the garden of pleasure and the garden of profit; the introduction of the pergola and the herbaceous border into the realm of the kitchen garden has been mainly responsible for this, and in several gardens recently planned there is a distinct trend towards blending the artistic and material values to the advantage of both.

In what I may term "free" garden landscape the rheums can play a very important part, and they have this advantage over many other plants so used: they are ornamental from the first, and they precede practically every other plant, ferulas excepted, in their season of effective display. Distinctly the best rheum to employ in garden landscape is the palmate species and its colour forms. These give us elegance of leafage and a greater rigidity of stem than any other, and if there is anything in the comparison to recommend them, they are less like the denizen of the kitchen garden than any other species I happen to know well.

In common with most strong herbs they enjoy a rich soil, the deep alluvium generally to be found at the margin of natural brooks and ponds is excellent for them, and in such material they attain to tropical luxuriance of flower and foliage that would be impossible to secure by any other means. Their quick growth is greatly in their favour. A tiny seedling will, in the course of two years' growth, develop into a plant twelve feet high and two yards across, and a grouping of several such plants so disposed that their individual outline is well maintained from a distant point of view is one of the best possible features of artistic landscape.

Wherever there is a sheltered recess among common trees and shrubs, a treeless area by waterside or a wild garden in its broadest sense, one can recommend rheums for their many stately and beautiful features. Typical R. palmatum is an old-time plant, but rarely met with in good condition. It forms a clump of handsome leafage two yards across, the petioles lengthy and more than usually strong for a rhubarb; the leaves are palmately cleft, green, with ruddy veining, and there are several minor lobes that add much to the elegant outline of the entire leaf cluster. The stems are greenish and minutely mottled red, the flowers are literally in rope-like culms, clustered in the free, bract-enclosed, verticils characteristic of the common rhubarb, and they persist for many weeks, gradually changing from the creamy-white tint of the perfect flower cluster to the pink tint of the seed cluster. The tall shafts, slender petioles, and elegantly lobed leafage convey no impression of the heavy, clubby character of the common rhubarb to my mind. One can, in fact, welcome them in the ideal wild garden where beauty of form and inflorescence, as distinct from that ornate and showy, should be a certificate for admission.

R. p. flore-roseo is a new form, whose flower clusters are pink-tinted. It is very beautiful in the early stages of its growth, the leafage being of a deep ruddy hue, and the flower stems are ruddy always. Another form that is probably a garden variation of flore-roseo is that named rubrifolium. This plant excels in its ruby-red colouring always. The first leaf is gloriously coloured and the last seed pod is crimson tinted. I have had a group of this plant for some years, and think it should find general favour. The leafage, stems, and flowers are those of palmatum, but ruddy tinted throughout. Var. tanghuticum is the Stag's-Horn-leaved rhubarb. It is simply R. palmatum with the leafage much depauperated, but in such a way that the plant gains in elegance thereby.

Seedlings vary a good deal in the colouring of their flowers, some are greenish, others cream-tinted, while many are pink. One or two seedlings may also show ruddy leaf colouring in the younger stages. The flower stems are comparatively slender, and are exceedingly tough, supporting verticils of erect-habited flower clusters that recall cimicifuga or astilbe. I have seen these rheums thriving in the coldest parts of Britain and in practically all kinds of soils. Provided they can have wind shelter and liberal feeding if the nature of the soil demands it, they will be found of great aid to the landscape gardener everywhere, for in them he will find plants that can take care of themselves, and which are ornamental throughout the growing season.

G. B. Mallett.

Camellias.—The best time to pot camellias is just after the young growths have ceased to lengthen and the new leaves are losing their softness, the roots being then active and full of vigour, so that they ramify the new soil at once without allowing time for it to get sour, as it sometimes will through an overdose of water when potting is done directly after flowering. Large old plants that occupy big pots or tubs rarely stand in need of being shifted, and the length of time that such can be successfully grown in a root-bound state, provided they are never allowed to go short of water, and get plenty of help from the manure tub, is astonishing.—T. B. Field.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

DECIDUOUS DENDROBIUMS.—The bulk of these dendrobiums having passed out of flower, and the new growths having advanced to the state when young roots make their appearance, any repotting necessary may be attended to without delay. It is not advisable to annually repot where there is ample root space and the compost in a good state of preservation, but the surface moss, which naturally dies after a season of prolonged drought, may be carefully removed and replaced with living moss. Any dead or decaying pseudo-bulbs should be cut away at this time, and the plants should be neatly staked and tied. Where repotting is necessary turn the plants carefully out of their pots or baskets, and after removing the decayed potting compost and cutting away all dead and useless back growths, careful examination should be made for scale or other insect pest that may be secreted about the base of the pseudo-bulbs. The pots selected should be just sufficiently large to contain the plants comfortably. Avoid too much material about the roots, drain to about two-thirds the depth of the receptacle, and fill in the remaining space with potting compost consisting of about equal proportions of fibrous peat and chopped sphagnum moss, pressing all moderately firm. The plants should at once be put under favourable conditions, and every encouragement given them to make satisfactory growth.

SECONDARY GROWTHS.—There is generally a difficulty with plants that are required for early flowering, in the fact that they make up their growth so early in the season that there is a great tendency on their part to produce secondary growths after completing the first growth in about the month of August. These secondary growths are undesirable, and every endeavour should be made at that season of the year to retard such growths by placing the plants under suitable conditions for the purpose. It is natural in the case of D. Wardianum to produce secondary growth, but the growth of this species starts again from its semi-dormant state into renewed vitality with the return of spring.

EVERGREEN DENDROBIUMS. — Although not so extensively grown in prominent orchid collections as at one time, the plants of this section are deserving of every consideration. D. thyrsiflorum, D. densiflorum, D. Farmeri, and the taller-growing kinds of the D. fimbriatum and D. Dalhouseanum sections are attractive, useful, and easily cultivated. They are found to succeed satisfactorily in the ordinary stove during the summer, with cooler and drier rooting conditions while in a dormant state. These are now producing their flower scapes, and as soon as the plants have passed out of flower any repotting necessary should be attended to. The compost recommended for the deciduous section is suitable also for these. The plants resent being disturbed, and repotting should only be done where more room is necessary or the compost is in a decayed state. Where plants of this section have been repotted, it is advisable to protect them by shading from strong sunlight until the new roots are established in the compost. The atmosphere should also be kept moist, and spraying the plants overhead once or twice a day will also assist in retaining the foliage and leaves in a plump state. Dendrobium Brymerianum does best in an intermediate house temperature, and is found to do satisfactorily under the same conditions as that usually afforded in the cattleya house.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

GENISTAS.—When flowering is over cut these back into shape, and fairly hard, better growths being made from firm wood than from the attenuated young shoots made under warmer conditions than the plants like. When the plants commence to break again into growth repot them, and grow them under cool conditions until it is safe to stand them outside in their summer quarters.

SOFT-WOODED PLANTS.—Fuchsias and many of the soft-wooded plants that have to be grown on quickly should never be allowed to become root-bound before they reach their final shift, so when the roots have reached the sides of the pots, and are in sufficient quantity to hold the soil together, they should be potted on.

BERRIED SOLANUMS should be well looked after just now, as the more bushy the plants can be made the better effect they will have, and it is well not to continue the stopping much longer, as the earlier this bushy habit is formed the better. Capsicums of the decorative type may now be sown. These are very ornamental plants in the late autumn and early winter. A very common mistake is to sow early in the year; the plants then come in at a time when they are not needed.

PLANTS AFTER FLOWERING.—Azaleas and rhododendrons should have the seed pods picked off directly the flowers have faded, taking care not to break away the young shoots which are forming immediately beneath the flower heads, as these will be the shoots to form the best buds for next year's flowering. Arums which have done flowering and are intended for early use next year may gradually have the water supply reduced, and be removed to a cold house for a time until they may be safely stood outdoors. Freesias should be stood on a shelf where they will be under the full influence of the sun, and no more water should be given to those which have lost their leaves from now until after they are again potted. —T. B. Field, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

BAMBOOS may now be planted with success. There are few gardens where space and positions cannot be found for at least some of the best, even if a bamboo garden cannot be made. Avoid, if possible, bleak, exposed, or windy positions, those sheltered and partially shaded being the most conducive to their well-being. Enrich the soil with well-decayed manure and deeply dig in before planting; plant deep enough to just bury the rhizomes, and guard against unduly disturbing or damaging the roots. Make the soil nicely firm about the roots, and give a watering; a mulching of either leaf-soil or well-decayed manure will be helpful. Bamboos are especially attractive in the vicinity of water, on the fringe of woods, and clumps in dells, or as specimens in sheltered parts of the grounds.

HERBACEOUS BORDERS.—As growth advances these will need constant attention. Where rearranging or transplanting has been done during the past season it will generally be found that portions of roots of some things have been unintentionally left in the ground. These will now be making growth, and should be carefully removed before they have time to establish themselves. Watch also for slugs, and take steps to protect new or choice small things. The most efficient remedy is to catch and destroy them. The beautiful Phlox Laphami seems to have quite succumbed with us during the past winter. Where it does thrive it is, with its beautiful plumbago-like flowers, a most desirable acquisition; one's hopes and fears are now being realised as to what will survive during winter. Give support to all advancing growth as it needs it, to prevent damage by winds and storms. If severe frosts seem imminent give protection where possible to any of the most tender plants likely to be injured by it.

DAHLIAS.—If ground for these has not yet been dug and prepared, no time should be lost in preparing it, as it is better to prepare it now than when planting. Heavily manure and double dig the ground, manure will then be incorporated with the soil, and the dahlias when planted out, will at once start off with great vigour.

WINDOW BOXES.—Where these are used they may soon be attended to, especially on the southern or warmest side of houses, as the warmth of buildings will ward off frosts. The space for soil being necessarily very limited, a good compost should be used. The loam should be enriched with bonemeal or other lasting manure. If immediate effect is required plants suitable must be used; where a later display is wished for use marguerites, zonal, scented, and ivy-leaved pelargoniums, fuchsias, petunias, lobelias, heliotropes, tropæolums, alyssums, hydrangeas, stocks, Aloysia citriodora, Coleus Verschafelti, ageratum, etc.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

STRAWBERRY PLANTS.—Plants which have been forced and been properly hardened may be planted on well-prepared land, deeply worked, with plenty of well-decayed manure thoroughly incorporated with the soil. If such plants are infested with red spider syringe the foliage with a suitable insecticide, and should their be any mildew visible dust with flowers of sulphur. Previous to turning them out of the pots give the plants a thorough soaking with clear water, so that every root is well moistened. If the ground has been prepared some time the soil will have settled and become somewhat firm; let the hoe be run through it, and rake the surface with a wooden rake; then set out the plants two feet apart, though some of the less robust varieties may be planted a trifle nearer in the rows. Shake the old soil away from the roots and plant firmly. The holes for the reception of the roots should be large enough to allow for spreading them out, and deep enough to allow for two or three inches of covering. afford sufficient water to soak the soil about the roots thoroughly, and after this slightly loosen the surface to prevent the soil from getting baked, and then mulch down with short manure. If these plants are kept free from weeds and runners during the summer months, they will develop into fine fruiting plants, and bear a heavy crop of fruit the following year. Any that are intended to fruit in autumn should be planted on a sunny border one foot apart, but none but good early varieties should be employed for autumn fruiting. To save labour in watering, etc., I prefer to get out forced plants as early as possible after they have been suitably hardened.

GRAFTING.—Any grafting which remains undone should be finished as early as possible; should the weather be dry, keep the butt ends of the scions in water until required. After placing them carefully and neatly on the stock bind moderately firm with wet, broad strips of raffia, and then clay them over. Those which have been done should be examined at intervals, and should the covering have cracked fill up the cracks with fresh puddle, and keep the wounds airtight. Late-grafted trees will be all the better if the clay is covered with moss, and, in dry weather, moistened daily. Pears, if espalier trained, may be worked on the upper side of the shortened back branches so long as the stocks are healthy and vigorous, but if old and practically worn out they should be replaced with fresh young trees at the proper time.

FRUIT PROSPECTS.—Although the fruit buds are plentiful, the weather, I fear, will prove too much for many things. Last Monday morning the gooseberries in flower and other fruit buds just opening, were covered with frozen snow, several inches of snow having fallen during the night. There has also been a long spell of cold, biting winds and frosty nights, and the foliage has a very yellow and sickly appearance. Nets have kept the peach blooms dry and free from snow, so that those who have taken some precautions will have no room for regret.—H. Markham, Wrotham Park Gardens.

PLANTING BEARDED IRISES.

The subject of the planting of the bearded irises, by which are meant those with the broad flag leaves, of which Iris germanica may be taken as the type, but which include quite a number of species and varieties, is often referred to in articles dealing with these flowers, but, despite this, there are few flowers with which more errors in planting are made than these noble irises, which have been aptly called the "Poor Man's Orchids." Despite the teachings of many writers, one finds these errors repeated day after day, even by good gardeners as well as by amateurs who are devoted lovers of flowers.

One thinks, therefore, that an article devoted to the subject of planting these flowers alone may not be without value for the assistance of those who see and admire good plants in bloom, and who either wish to begin to cultivate them, or have been baffled in attempting to flower these fine subjects. The time to plant is a consideration. Personally, I prefer about the month of August, and early in the month, but one has successfully shifted and broken up plants in spring, as soon after March as possible, choosing for the purpose rather showery weather.

This cannot always be managed, and it is wonderful how much drought these plants will stand without suffering. I moved all my collection one time late in April for the simple reason that my new garden was not ready till then, and planted them in the driest and almost the sunniest border I had. The succeeding summer was a very dry one, but the plants pulled through it splendidly, and flowered capitally the following season. Still, I should prefer early in August if I had my choice. Now this position was exactly one which many would have thought an improper one, seeing that it was both sunny and dry, and there are some who would have selected a shady or a moist position instead of this. Now that is exactly the error that so many fall into. People see the common British irises, I. pseudo-acorus, and I. fœtidissima flourishing in wet and moist places, and leap to the conclusion that that is the most suitable kind of place for the other flag irises. Others think they should do under the shade of trees, and in both cases they go wrong. There are a few exceptions, especially in dry parts where a little shade will not do much harm, and one sees the blue German iris flower fairly well under trees in the gardens on the Thames Embankment.

But many of the more southern irises are less accommodating in their ways, and want full sun and a somewhat dry position. They will, indeed, do much better on a roof or the top of a wall than in moisture or deep shade, and some lovely effects can be produced by planting these noble flowers in a few inches of soil on a wall or roof. I have grown them successfully on a roof with barely an inch of soil below them. In a very dry place a good addition of manure will induce more vigorous growth, but this is not necessary, and they can do with little or no manure.

In planting, the rhizomes, or root stocks, should not be buried, and I have frequently planted them with the soil just up to the base of these, the true roots, however, being in the soil, and the whole weighted with stones for a time until the roots had taken a firm hold. The larger plants may be broken up and divided when removing or when they grow too large, as they do not flower so freely when large as when they have only a few crowns. This may be done with a sharp knife, so as to injure the root stock as little as possible.

It must be remembered that these notes do not apply to the water-loving irises, such as the British species and Monnieri, Delavayi, and others, but only to the larger flag irises with crests or beards on the flowers. These are numerous enough to give a great variety of colour, and their success will render any garden much more delightful in the month of June and perhaps July, according to the climate, than if these irises were planted in unsuitable positions.

S. Arnott.

ACACIAS.

There are several species of acacia that are very useful for decorating both the conservatory and greenhouse, especially where the buildings are lofty and require tall plants. Some of the acacias may be grown as standards on stems of various heights. The species are by no means difficult to grow, and as they can be stood in the open after flowering, through the summer months, they make fine ornamental plants in tubs for decorating the terrace garden even when not in bloom.

Most of the acacias may be readily raised from seed, but there are some that grow well from suckers, which are produced in abundance from the roots. When raised from seed, and it is desired to make standards of them, the leading shoot should be allowed to grow the desired height before it is stopped, and all side shoots should be removed except about half-a-dozen or so at the top, and when these have grown about six inches long they should have their points taken out to induce them to make lateral growths, and this operation should be repeated until fine bushy heads are formed, after which the shoots ought to be allowed to extend, as it is along those made the previous year that the flowers are produced. Some species have deeply-cut, fern-like foliage, others have their leaves simply entire. The foliage of some is short and stubby, while in others it is long and narrow, making a fine contrast; even when the plants are not in bloom they are most interesting.

Acacia affinis is the best of the deeply-cut-leaved kinds, and flowers more freely than any others of its section, though A. lophantha and dealbata are useful where there is room to grow them; the former makes a fine sub-tropical plant for summer bedding. A. cordata, A. longifolia, and A. grandis are all worthy of a place; so also are A. coccinea and A. Drummondi. The old A. Armota is well known to our gardens, as it is one of our most common greenhouse plants. A. affinis grows freely enough from suckers, but it is difficult to get it true.

When plants have become old they may be pruned back to keep them within bounds; they will break freely from the old wood and make fine growths, which will bloom most profusely the following spring. The only pest that seems to trouble them is the scale, but when this is once allowed to get the upper hand it is difficult to get rid of. When the plants are grown in tubs, a light, rich, sandy soil should be used, and abundance of water will be needed during the summer when the weather is dry and the soil is filled with roots. The plants should be stood in a sunny position during the summer to enable them to ripen their wood, but they must be taken under cover before frost sets in, otherwise the young wood will, in all probability, be so injured that the flowers will not develop.

H. C. Prinsep.

Buxted Park Gardens.

CARNATION NOTES.

Mr. Hayward writes so pleasantly on carnations that his notes are always interesting. On page 246 he refers to the variety Victory. I have not mentioned it in my list, previously given, for the one reason that I have not grown it, and the other because it has generally been given as synonymous with St. Louis. I have, however, seen Victory growing and in bloom, and from what I have seen of it I much prefer St. Louis as a flower. As I have seen Victory it is of different growth, and apparently not such a tall grower as the St. Louis we have.

Pure yellows seem difficult to obtain. I have three almost pure yellow seedlings on trial, and from some later seedlings it will be interesting to see if "like produces like" as regards colour. I have a promising seedling, rose-madder in colour, with other shades; it has a sound calyx and is clove scented; the stems are long and give a good 3in. bloom. Its growth is of similar habit to Harlowarden, a type which Mr. Hayward loves, judging from his high opinion of that crimson variety. Are there two varieties of Harlowarden? Our stock appears to be of two different styles of growth, although the flowers appear the same.

Britannia is disappointing in that it does not appear free enough in flowering. Several other varieties have not been so satisfactory this winter as in previous seasons. Among whites, White Perfection has given us the best blooms. Of Lady Bountiful it is seldom that we have a pure white bloom, as the flowers are nearly always marked with pink. Winsor comes a more pleasing shade of pink in mid-winter than in the spring.

More novelties are offered this season, and one grows a bit shy of buying before seeing them in bloom, yet it is not always possible to do that the first season they are offered; descriptions must be taken cum grano salis, if one is to avoid disappointment. Mr. Hayward mentions a seedling from Duchess of Fife and Miss Joliffe, and from his description of the colour I judge I have one very similar on trial, a seedling, but of different parentage. I have not the pedigree just to hand, but I think it was from a pink and a scarlet. It will be interesting to see what a batch of seedlings now coming into bud will produce in the way of colour. They are the result of the cross fertilisation of last year's seedlings.

T. H. Slade.

Lapagerias.—To succeed well with the lapagerias one must give them some attention, especially when grown in pots. One sometimes meets with good specimens in large pots, but it is only when planted out that they are seen to perfection. The one great difficulty in growing lapagerias in pots is that they make such abundance of thick fleshy roots. The points of these are very tender, they soon find their way to the bottoms of the pots, and almost invariably begin to die off as soon as they have become matted together in the drainage. When planted out they should have a good depth of soil and plenty of drainage. They succeed best in good fibrous peat and leaf-mould. A little cow manure which has been thoroughly dried and sweetened may be added, and the more space that can be given for the roots the better. Lapagerias, when established, take a great quantity of water; the surface of the border may often appear moist, when, if examined lower down where the roots are, it will be found to be dry. The border should have a good watering periodically, as there will be no danger of overwatering where good drainage is given. —T. B. Field.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

APRIL 24.

The display on the above date was scarcely so interesting as usual, and not quite so large. Still, there was plenty to see and much to interest.

FLORAL COMMITTEE.

A wonderful blaze of zonal pelargoniums, made by Messrs. H. Cannell and Sons, Swanley, Kent, was greatly admired; of Caledonia, Blenheim, Ascott, Carmania, Saxonia, Arabic, and Mentmore there were very fine bunches. Messrs. William Bull and Sons, King's Road, Chelsea, submitted a small collection of stove foliage plants, and added a few examples of the bright blue-flowered Tradescantia fuscata.

Messrs. T. S. Ware, Lim., Feltham, had a distinct and interesting display, that consisted of blocks or masses of the lovely Aubrietia Pritchard's A1, A. Crimson King, A. Bridesmaid, A. Dr. Mules, A. græca, Primula Sieboldi, and Corydalis nobilis. The aubrietias were very fine. The Misses Hopkins, Mere Gardens, Shepperton, put up a quite attractive rock garden exhibit.

The white amaryllis shown by Mr. C. R. Fielder, gardener to Mrs. Burns, South Mymms Park, Hatfield, were very beautiful, and the new pure white variety, named Purity, was especially good, and worthy of the F.C.C. awarded; it has a very little green in the base, but otherwise there is no colour, and the variety has come true in 1906, 7, and 8. From Messrs. G. Jackman and Son, Woking, came an assortment of Primula Sieboldi varieties, and a selection of Japanese maples. Messrs. W. Cutbush and Son, Highgate, showed Indian azaleas, forced lilacs, wistarias, Choisya ternata, and other fine-flowering shrubs.

Messrs. H. B. May and Sons, Upper Edmonton, submitted a goodly exhibit of herbaceous calceolarias, petunias, pansies, clematises, dwarf and rambling roses, and Salvia Pride of Zurich. A pretty exhibit of violas was made in one corner of the hall by Messrs. Carter, Page, and Co., London Wall, E.C.

Perpetual carnations were beautifully shown by Mr. C. F. Waters, Balcomb, Sussex, and his vases of Britannia, Enchantress, White Perfection, Mrs. Lawson, and Elliott's Queen were especially good. In Messrs. G. Bunyard and Co.'s exhibit of cut daffodils and hardy flowers we were attracted by the double bluish primrose A. Dumollin, the monster double white daisies, double lilac, and the crimson Pompadour primroses, aubrietias, and the double Caltha palustris. The Chatham Island forget-me-not, Myosotidium nobile, was shown by Mr. James Douglas, Edenside, Great Bookham, but it was not in specially good form. A charming display of early flowers was made by Mr. Maurice Prichard, Christchurch, and here the new Aubrietia Lavender (A.M.) was very fine, while hardy cyclamens and the collection of double primroses were other attractions.

Saxifragas, aubrietias, and a few other alpines were shown by Mr. J. R. Box, West Wickham. Very beautiful were the big trusses of the lovely Rhododendron Aucklandi, R. A. hybrida, R. Dalhousiæ Victorianum, Cantua dependens, and the fragrant Posoqueria longifolia shown by Mr. Moody, gardener to F. Du Cane Godman, Esq., South Lodge, Horsham.

Roses were beautifully shown by Messrs. William Paul and Son, Waltham Cross, who had pillar plants of Kathleen, Tausendschon, Leuchtstern, etc., and dwarf plants of Albatross, Lyon Rose, Aennchen Muller, Madame Constant Soupert, and other good things. Messrs. Paul and Son, Cheshunt, sent the attractive Rosa sericea pteracantha, the fine Philadelphus Mer de Glace, and the pale Cytisus Daisy Hill. Messrs. Frank Cant and Co., Braiswick, Colchester, showed fine pillar plants of Hiawatha, Minnehaha, Dorothy Perkins, and other roses.

Mr. R. L. Russell, Richmond, had a very handsome group of mollis and Ghent azaleas, clematises, lilacs, cytisuses, and other lovely flowering shrubs. Azalea mollis formed the foundation of a brilliant display of forced flowering shrubs, put up well by Messrs. R. and G. Cuthbert, Southgate. Over these were standard azaleas, lilacs, wistarias, and Prunus triloba. The Misses E. and M. Kipping, Hutton, Essex; the Guildford Hardy Plant Nursery Company, and Messrs. J. Peed and Son, Norwood, all exhibited alpines in variety, and the latter firm had also some very beautiful gloxinias.

A very bright and attractive exhibit of violas was made by Messrs. Dobbie and Co., Rothesay, but, unfortunately, we have not room to detail the varieties; of equal value and effect were the splendid polyanthuses in varied and brilliant colours, the yellow, white, and crimson varieties being wonderfully fine. A bold, mound-like group of well-grown florist's and stellate cinerarias was put up by Messrs. James Carter and Co., High Holborn, right opposite the entrance; this was a fine display of a fine strain.

Some wondrously beautiful rose blooms of such varieties as Frau Karl Druschki, Richmond, Joseph Lowe, Mdme. Abel Chatenay, Catherine Mermet, Ulrich Brunner, Caroline Testout, and Mrs. Sharman Crawford were set up by Mr. George Mount, Canterbury. A bold and beautiful group of carnations and liliums was arranged by Mr. W. H. Page, Tangley Nursery, Hampton; his flowers of Mrs. T. W. Lawson, Governor Roosevelt, My Maryland, Winsor, Rose Pink Enchantress, White Lawson, and Nelson Fisher were very fine. Echium callithyrsum, with a few big spikes of blue flowers, was shown by Mrs. Bridget Talbot, of Berkhamsted.

Some very fine perpetual carnations were shown by Messrs. Cutbush and Son, Highgate, whose best varieties were Robert Craig, Victory, and Enchantress, with these were the new and beautiful Peach Blossom spiræa, the new and brilliant Coleus cordelia, and Rhododendron Smithi aureum. Messrs. Hugh Low and Co., Enfield, had Metrosideros floribundus in quantity, and its bottle-brush spikes were greatly admired. Messrs. J. Veitch and Sons, Chelsea, set up the interesting Clianthus puniceus magnificus, blue hydrangeas, the orange-coloured Primula Cockburniana, cinerarias in variety, and the brilliant Azalea Vuylstekeana. Daffodils, saxifragas, tulips, primulas, aubrietias, and other popular early spring flowers were sent by Messrs. G. and A. Clarke, Dover.

ORCHID COMMITTEE.

Extraordinarily beautiful were the big, grandly flowered plants of Oncidium Marshallianum exhibited by Mr. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford. The plants were on rafts, and we have never seen finer ones or better spikes. A cultural commendation was deservedly awarded. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, sent a very pretty group of the little white flowered Dendrobium barbatulum. Mr. Bevington, Murle Wood, Sevenoaks, showed Aerides Vandarum Kirke's variety (A.M.). Messrs. Heath and Son, Cheltenham, sent a few orchids, and Mr. De Barri Crawshay sent the richly blotched Odontoglossum Queen of the Earth (F.C.C.).

In Messrs. Cypher and Son's group of orchids the most conspicuous plants were Miltonia vexillaria, Oncidium intermedia nivea, L.-c. Dominiana magnifica, Brasso-cattleya, Digbyana-Mossiæ, and Oncidium concolor. Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Dorking, showed the curious Odontoglossum platyphyllum superbum (A.M.), Cirrhopetalum Wendlandianum, and the quaint Megaclinium cocoinum. Messrs. Armstrong and Brown, Tunbridge Wells, showed odontoglossums, masdevallias, a few dendrobiums, Lælia majalis, and Lælio-cattleya Mercia.

Mr. H. Little, Baronshalt, Twickenham, submitted a collection of orchids that contained varieties of Lælia purpurata, Cattleya Mendeli, odontoglossums, and cypripediums.

DAFFODIL COMMITTEE.

Messrs. Cartwright and Goodwin, Blakebrook, Kidderminster, contributed a charming exhibit of daffodils, the admirable flowers being thoroughly well shown. A few of the best were Circlet, White Slave, Juliet, Northern Light, Evangeline, Armeline, Rising Sun, Water Nymph, Seagull, Homespun, Mrs. Robert Sydenham, Weardale Perfection, Ethereal (a pure white flat-crowned variety from Hon. Mrs. Barton and Cassandra), and Glory of Leiden. Some choice daffodils and good polyanthuses were set up by Mr. Alex. Wilson, East Keal Manor, Wisbech, whose best daffodils were Cuckoo, Horace Grayling, Bullfinch, Green-eye, and Lady Margaret Boscawen.

Daffodils were extensively displayed by Messrs. Barr and Sons, Covent Garden, and among the new and seedling varieties shown by this firm there were many very beautiful things, notably Blazing Star, Royalist, Catriona, Honeydrop, Radiant, Stay Sail, Buttercup, Furnace—with a vivid orange cup—Iris, Citronea, Chancellor, and Pedestal. This was a most interesting exhibit. Daffodils were freely shown by Messrs. James Veitch and Sons, Chelsea, and the leading varieties staged over a groundwork of ferns were Goldfinch, Culinan, Lord Kelvin, Maximus, Victoria, Pres. Wentholt, Madame Plemp, and H. J. Veitch. With the daffodils were a few beautifully flowered plants of Veitch's grandiflora strain of schizanthuses.

The largest display of daffodils was an excellent one from Messrs. R. H. Bath, Lim., Wisbech, who had a fine lot of clean flowers well set up. A few of the finest varieties were Madame de Graaff, White Lady, Argent, Cornelia, Weardale Perfection, Lady Margaret Boscawen, Brilliancy, Madame Plemp, Mrs. J. B. M. Camm, and Glory of Leiden. This firm had also a fine bronze pansy, with immense flowers, on view. Mr. R. Sydenham, Tenby Street, Birmingham, showed daffodils, tulips, and lily of the valley growing in moss fibre without drainage. Some charming early tulips, cut flowers, were submitted by Messrs. R. and G. Cuthbert, Southgate, whose best blooms were of Gesneriana lutea, Gala Beauty, Flava, The Fawn, Orange King, and Scylla.

Messrs. Pope and Son, Kings Norton, Birmingham, showed a big lot of daffodils that contained a large number of seedlings, including several beautiful trumpet varieties. There were also good bunches of Glory of Leiden, Weardale Perfection, Lady M. Boscawen, Gloria Mundi, Olympus, Andromeus, Madame de Graaff, Mrs. Galton, Grandee, etc. Messrs. William Bull and Sons, Chelsea, also exhibited daffodils. Messrs. R. Wallace and Co., Colchester, had an exhibit that consisted largely of daffodils and tulips, but contained the fine Caltha polypetala, Daphne cneorum, Gerbera Jamesoni, and fritillarias. Mrs. Backhouse, Sutton Court, Hereford, showed a few choice daffodils, including several new ones.

FRUIT AND VEGETABLE COMMITTEE.

Thoroughly well preserved apples and a few pears were exhibited by Messrs. James Veitch and Sons, Chelsea; conspicuously good among the apples were the dishes of Bramley's Seedling, Gloria Mundi, Winter Peach, Lane's Prince Albert, Melon Apple, Claygate Pearmain, Duke of Beaufort, Annie Elizabeth, King of Tomkin's County, Calville des Femmes, Cox's Orange Pippin, Lord Derby, Newton Wonder, and Beauty of Kent. This firm had also some excellent lettuces, both Cos and cabbage, all grown under the French system; the cabbage varieties were Early Frame and Passion, and the Cos varieties Early Market and Early Green forcing, and all the plants were in splendid condition.

Some very fine strawberries, Royal Sovereign, were sent by Mr. A. R. Allan, gardener to Lord Hillingdon, Hillingdon Court, Uxbridge; the fruits were especially good.

CERTIFICATES AND AWARDS.

First Class Certificates.—Odontoglossum crispum Queen of the Earth, from Mr. de Barri Crawshay, Rosefield, Sevenoaks; Hippeastrum Purity, from Mr. C. R. Fielder, gardener to Mrs. Burns, South Mymms Park, Hatfield.

Award of Merit.—To Odontoglossum platychielum superbum, from Sir Trevor Lawrence, Bart., Dorking; Cirrhopetalum Wardlandianum, from Sir Trevor Lawrence, Bart.; Odontoglossum nævium, from Messrs. Armstrong and Brown, Tunbridge Wells; Aerides Vandarum Kirke's var., from Mrs. Bevington, Sevenoaks; Aubrietia Lavender, from Mr. M. Prichard, Christchurch; Auricula, Phyllis, from Mr. James Douglas,Great Bookham, Surrey.

MEDALS.

Silver-gilt Flora.—Messrs. Cutbush and Son, Highgate; Mr. G. Mount, Canterbury; Messrs. W. Paul and Son, Waltham Cross; Mr. L. R. Russell, Richmond; Messrs. Barr and Sons, Covent Garden.

Silver-gilt Banksian.—Messrs. Cartwright and Goodwin, Kidderminster; Messrs. R. H. Bath, Lim., Wisbech.

Silver Flora.—H. Little, Esq., Baronshalt, Twickenham; Mr. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford; Messrs. James Carter and Co., High Holborn; Messrs. R. and G. Cuthbert, Southgate; Mr. W. H. Page, Hampton; Messrs. H. B. May and Sons, Edmonton; Messrs. James Veitch and Sons, Chelsea; Messrs. Pope and Son, Kings Norton.

Silver Banksian.—Messrs. Cypher and Sons, Cheltenham; Messrs. H. Low and Co. (one for orchids and one for other plants); Messrs. Heath and Son, Cheltenham; Messrs. Armstrong and Brown, Tunbridge Wells; The Misses Hopkins, Shepperton; Messrs. F. Cant and Co., Braiswick, Colchester; Messrs. Carter, Page, and Co., London Wall; Messrs. Dobbie and Co., Rothesay; Messrs. J. Peed and Son, West Norwood; Mr. M. Prichard, Christchurch; Mr. G. Reuthe, Keston, Kent; Mr. C. F. Waters, Balcombe, Sussex; Messrs. R. Wallace and Co., Colchester; Messrs. R. and G. Cuthbert, Southgate (tulips).

SCIENTIFIC COMMITTEE.

Present: Mr. E. A. Bowles, M.A., F.L.S., F.E.S. (in the chair); Messrs. G. S. Saunders, W. Hales, E. M. Holmes, A. Worsley, W. C. Worsdell, G. Massee, J. T. Bennett-Poë, W. Cuthbertson, and F. J. Chittenden (secretary).

FUNNEL-SHAPED OUTGROWTH IN IVY.—Mr. W. C. Worsdell showed a leaf of ivy having a funnel-shaped growth proceeding from near the base, similar to that often seen in cabbages, but in this case it grew from the lower surface.

DOUBLE-SPATHED RICHARDIA. — G. Siggs, Esq., F.R.H.S., of Streatham Hill, sent an inflorescence of Richardia ethiopica with a second full-sized leaf proceeding from the flowering stem, about eight inches below the normal spathe, of a white colour, except at the tip. The phenomenon is common, but was particularly well marked in this specimen.

PROPAGATION OF DROSERA. — Mr. Hales showed plants of Drosera hilaris raised from root cuttings put in about five weeks ago. The plants had each developed a number of leaves.

GALL-LIKE GROWTHS OF LARCH.—Mr. Massee reported that the gall-like growths on the larch shoot shown by Mr. Holmes at a previous meeting were really the scales of a female cone, which had been separated from one another by the growth of internodes. They had apparently been early attacked by Thrips abietis. Seeds and seed scales were both to be found in their axils.

SEEDLING ELM.—Mr. Chittenden showed a seedling of Ulmus glabra from Terling, where they had occurred in abundance last season (see "Kew Bulletin," 10, 1907, p. 404). This elm is abundant in many parts of Essex, but only once before had he found a seedling, and that in his garden at Chelmsford in 1903. U. campestris, of which this is probably a form, is not known to seed in England, unless the seedlings recorded from the King's College "Backs" should prove to be really those of that tree.

DISEASED PLANTS, ETC. — Several diseased plants and insect pests were received and dealt with.

National Auricula and Primula Society.

SOUTHERN SECTION.

The thirty-second annual show of this society was held in the Royal Horticultural Hall, Vincent Square, on Tuesday last, in conjunction with the ordinary fortnightly meeting of the Royal Horticultural Society. It certainly was not a large show, but the wonder is there was a show at all, considering the weather these enthusiastic fanciers have had to assist or otherwise help them. However, Mr. James Douglas seemed to have timed his plants to a day, without any "hurrying up" at the last, which was all too apparent in some of the exhibits. Although the exhibits were less in number, the quality in the leading classes was quite up to the average. Unfortunately all the classes were not filled. Class 1 was for twenty-four plants, not less than twelve varieties. Five competitors faced the judges, but Mr. James Douglas proved an easy victor with a very even display. The varieties employed were Favourite, Marmion, Queen of Spain, Mrs. Henwood, Acme, Harrison Weir, Eucharis, Abercrombie, Vanguard, Prince Charming, Rachael Headley, Olympus, Othello, Abbe Liszt, George Lightbody, Greylag, Shirley Hibberd, and A. Baker.

The Rev. F. D. Horner, Burton-in-Lonsdale, was second, having good specimens of Black Pearl, Pink Pearl, Azure, and Minnie Horner. Mr. W. M. Shipman, Cleveley, Altrincham, Lancs., was third; while Messrs. Phillips and Taylor, Bracknell, were fourth.

For twelve varieties, distinct, there was a similar number of entrants, with Mr. James Douglas again leading easily. His varieties were Mikado, Marmion, Richard Headley, Charm, Eucharis, Favourite, Amy Robsart, Mrs. Phillips, Abbe Liszt, Harrison Weir, and George Lightbody; truly a strong team.

Mr. W. Smith, Bishops Stortford, was a capital second, and is to be congratulated in appearing so strongly. The best plants were Seaman, Mrs. Osmond, Stately, and Mikado. Mr. W. M. Shipman was third, and the Rev. F. D. Horner brought up the rear.

In a smaller class, for six distinct varieties, exhibited a falling away in competition, the first position falling to Mr. J. Bennett-Poe, Ashley Place, who staged six good plants comprising Rev. F. D. Horner, Miss Barnett(Miss Prim, Mrs. Henwood,Rachael, and George Lightbody.

Mr. Martin R. Smith, Hayes, Kent, followed with well-developed plants of Mabel, Miss Prim, and Gerald. The third prize fell to Mr. F. W. Price, Beckenham, for a creditable exhibit.

For four distinct varieties Mr. J. Bennett-Poe led off with Abbe Liszt, Acme, Mrs. Phillips, and Abraham Baker.

Mr. F. W. Price came next with good specimens of Dr. Hardy and Ruby, while Mr. M. R. Smith had to be content with third prize.

The classes for single plants of each section did not bring out the competition one is accustomed to see at this show. In the green-edged varieties Mr. James Douglas won first and second prizes with Abbe Liszt, while Mr. J. Bennett-Poe was third with Dr. Hardy.

The grey-edged varieties were not so well represented. Mr. J. Bennett-Poe came out first with a good specimen of George Lightbody, Mr. James Douglas winning second with Richard Headley, while Mr. Shipman was third with George Lightbody. In the white-edged varieties Mr. James Douglas was awarded first place with Conservative, Mr. J. Bennett-Poe being second with Vesta, and Mr. Charles Turner, Slough, third, with Acme.

The competition in the self section was decidedly better, Mr. James Douglas taking up his usual position in front for both first and second places with Harrison Weir and Victor in the order named.

Class 9 was for seedlings not exhibited before, the competition being confined to amateurs only, Mr. Martin R. Smith winning the green-edged section with The Sirdar, Mr. W. Smith taking second with an unnamed seedling. Surely this was an oversight on the part of the exhibiter.

In the grey-edged section Mr. W. Smith was first with Stately, a very promising variety; the Rev. F. D. Horner followed with Graylis.

For selfs the same exhibitor won first prize with Dulcie, while Mr. W. Smith was second with Sunrise.

The novices were conspicuous by their absence in the class allotted to them.

The alpine classes were, or appeared to be, most popular, not only with the exhibitors, but with the general public. In the class for twenty-four plants, not less than twelve varieties, there was a good entry, and competition keen, but there was no stopping Mr. James Douglas, who again scored premier position with a charming exhibit. The varieties employed were Jacoby, Claud Halcro, Argus, Olivia, Milkmaid, Rover, Richness, Mrs. James Douglas, General Buller, Thetis, Ettrick, Martin Smith, Flora McIvor, The Czar, Mrs. Martham, Teviotdale, Rosy Morn, and Lady of the Lake.

Messrs. Phillips and Taylor, Bracknell, came in for second prize, having good examples of Charmer, Orion, Argus, Mars, Her Grace, and Mrs. Gorton; while Mr. Martin R. Smith made a capital third.

In the smaller class for twelve distinct varieties there were five competitors. Mr. James Douglas again leading with a beautiful collection. The varieties were Argus, Thetis, Jacoby, Janet, Mrs. Markham, J. F. Kew, Bayonne, Rosy Morn, Teviotdale, Ettrick, Mrs. James Douglas, and Duke of York.

Mr. M. R. Smith came next with nice plants of Argus, Duke of York, Dainty, Lady, and Cherub. The third prize was awarded Messrs. Phillips and Taylor.

Class 14 was for smaller exhibitors, but only four contestants staged. The first prize being awarded Mr. J. J. Keen, Southampton, who staged Hampton, Horick, and Argus as his best plants. Mr. F. W. Price came second with good specimens of Argus, Urania, and Duke of York. Mr. J. Bennett-Poë was third. In the smaller class for four plants, Mr. J. J. Keen was easily first with Argus, Shirley, and Herod. Messrs. F. W. Price and T. Barefoot followed in the order named.

For a single alpine with a gold centre, the Rev. H. A. Soanes secured the first prize with Duke of York in a keen competition. Mr. J. Bennett-Poë was second, staging the same variety, while Mr. Charles Turner was third with General Buller.

For six alpine seedlings there were three exhibits, Mr. Martin R. Smith being placed first with Winsome, Madame Patti, and Ophelia. Mr. R. Staward, Panshanger, Hertford, was second.

The class for twelve fancy varieties, in not less than six sorts, secured three entries, Mr. James Douglas being well to the fore with a splendid collection. The varieties employed were Moonstone, Quakeress, Saffron, Rolls Red, Orient, Sybil, Innocence, Sunset, Moonbeam, and Old Gold. Mr. Martin R. Smith came next, with nice plants of Buttercup, Lucretia, Old Gold, and J. Hannaford; while Mr. Charles Turner was third.

The classes for primula species were poorly represented in all the classes, the only exhibitor being Mr. Martin R. Smith, who staged splendidly in each case.

For twelve species he staged excellent pans of P. pubescens alba, P. rosea, P. decora, P. Veitchi, P. Sieboldi, Ruby Queen, and P. viscosa. In each case many were unnamed, which was a great disappointment to the public, while the labels of others were quite hidden. This important item surely should not be overlooked in future.

The smaller class was not represented. For a group of any species or varieties of primulas or auriculas in a box or basket, not to exceed twelve superficial feet, Mr. Martin R. Smith made a really fine display, and caught the eye and admiration of everyone. The arrangement was excellent, every plant being clearly displayed. The varieties of Primula Sieboldi and P. japonica occupied the back, while P. denticulata, P. Cashmeriana, P. Cockburniana, among others, were conspicuous. The alpine auriculas were bright, and had a most pleasing effect.

The class for a group of primroses and polyanthus plants, arranged for effect, produced two competitors. Mr. S. Mortimer, Farnham, led with a splendid strain of well-grown plants, the trusses were large and the colours exceedingly bright. Mr. J. Crook, Camberley, was second with a good exhibit containing some novel colours.

The premier show variety was George Lightbody, staged by Mr. James Douglas.

The same exhibitor was also the happy possessor of the best alpine, appropriately with Mrs. James Douglas.

The Midland Daffodil Society.

This society held its annual show at Edgbaston Botanical Gardens on April 23 and 24 literally in a snowstorm, for on the opening day it snowed from early morning till late at night. This, as might be expected, had a disastrous result on the attendance, and, although there was an improvement in the weather on the Friday, there will be a serious fall in the total gate money. The show was opened by the Dowager Duchess of Sutherland, who briefly alluded to the humanising influence of floriculture. Gardening, she said, was one of the most fascinating things in the world. Advantage was taken of the occasion to make three interesting presentations, one to Mr. Robert Sydenham of a beautiful address in album form, in token of the work he has done as founder and treasurer and beneficent supporter of the society; a second to Mrs. Robert Sydenham, of silver candelabra, who was appropriately joined with her husband as hostess of the enjoyable dinners on the occasion of the Birmingham gathering; and a third to Mr. Herbert Smith, the courteous and indefatigable honorary secretary, of a silver tea service and purse, as an acknowledgment of services so quietly performed, yet so far reaching in their scope and effect, that the Rev. G. H. Engleheart, who made all the presentations on behalf of the subscribers, referred to him in his own felicitous and facetious manner as "the universal provider."

As regards the flowers, the exhibition was one of surpassing beauty and merit, notwithstanding the cold, trying winds of this wintry spring, and the extra lateness of the season. There were gaps, as might be expected, in the ranks of the Northern exhibitors, but on the other hand the South was well represented, and Mr. C. Dawson, of Penzance, for the first time in the history of the show, was able to bring one of the choice exhibits we know so well at Vincent Square. It is to be regretted that we had none of Mr. W. F. M. Copeland's fiery doubles, or Messrs. Pearson and Sons' new Leedsis and White Magnis, but another year the wheel of fortune may turn, and they may be, so to speak, the winning numbers. It is difficult to know how to convey to readers an adequate idea of the show in the space in which a report must necessarily be confined. There were so many new flowers of the highest quality that merit a more than passing notice. Mrs. Backhouse, of Hereford, Mr. Engleheart, and Mr. Dawson had stands of entirely new varieties. There were eight exhibits for the Bourne Cup class of "twelve new seedlings to be raised by the exhibitor," and one cannot say how many in the Magni, Medio, and Parvi classes, nor how many for the Cartwright Cup, and the other classes for varieties not in commerce, to say nothing of the choice new things dotted here and there in the beautiful trade exhibits of more ordinary varieties. The Midland schedule is, roughly speaking, divided into three parts—(1) Daffodil classes, open to all; (2) classes confined to amateurs; (3) classes for novices; (4) classes for seedlings and new varieties; (5) classes for other flowers and grown in pots or ornamentally arranged. In section one, the first prize in the collection of fifty varieties was won by Mr. E. M. Crosfield with a splendid lot of practically new varieties, many being seedlings of his own, Mrs E. Crosfield, Countess of Stamford, Lolah, and Uncle Robert among White Magnis, and Radiant, Firebrand, and Coeur-de-Lion among the red cups, were of much merit; Mr. Herbert Chapman, of Rye, was second, he had a nice fresh lot of the best standard varieties. In the other classes Messrs. Cartwright and Goodwin, and Messrs. Pope and Sons divided the prizes, with the exception of that for Poeticus, which was won by Mr. Chapman.

Among the amateurs the names of the Rev. T. Buncombe, Mr. W. A. Watts, Mr. H. B. Young, Rev. G. P. Haydon, and Mr. W. H. Parton were most frequently top or thereabouts. The Rev. G. P. Haydon's white and bicolor Magnis were particularly good, and deserve special notice, so, too, does Mr. Buncombe's setting up of the twenty-five collection. The novices' prizes nearly all went to Mr. N. V. Lower, who hails from Presteign. His blooms generally were small, but they were delightfully fresh. The chief interest of the show to "daffodil people" obviously centered in the seedling and new variety classes. The Bourne Daffodil Cup was offered for twelve new seedlings raised by the exhibitor. Ninety-six blooms were staged in competition, that is, there were eight entries. So close and keen was the tug of war that it took all but an hour for the judges to be able to say that Mr. P. D. Williams had won the first prize from Mr. E. M. Crosfield. The Cartwright Challenge Cup (given by that well-tried friend and supporter of the society, Mr. R. C. Cartwright, of King's Norton) was offered for new varieties that have not been in commerce four years. Here Mr. E. M. Crosfield was first, and the Rev. G. P. Haydon, of Canterbury, second. Mr. I. Batson, of Beasworthy, was first in the novice seedling class.

The last section calls for no special comment, beyond the fine examples of pot culture evidence in Mr. W. H. Parton's daffodils and tulips, and the somewhat mediocre display in decorative classes.

The numerous trade exhibits contributed greatly to the size and beauty of the show. The gold medal of the society was awarded to Messrs. Barr and Sons for an admirably arranged bank of daffodils, which included many new white trumpets and red cups. Corallina and Salmonetta were distinctive because of their pink-toned coronas. Miss Currey (silver-gilt medal) had Beacon, Vivid, Firebrand, and Scarletta among other red Medios; Mrs. R. Sydenham, Avalanche, and The Banshee among other white trumpets, and Epic, a grand, free-flowering Poeticus. The large silver medal was awarded to Sir Jocelyn Gore-Booth, Bart.; Mr. Charles Dawson, of Penzance; and Messrs. Hogg and Robertson, of Dublin; and silver medals to Mr. Wilson, Mr. Engleheart, Messrs. Wallace and Ware, and Messrs. R. H. Bath.

In trade exhibits other than daffodils, the following awards were made: Silver-gilt medal to Messrs. Gunn and Sons, of Olton, for beautifully arranged rock work; the large silver, to Messrs. Baker, of Wolverhampton, for a rock exhibit which contained several new or rare plants, such as Primula Cockburniana, Mertensia primuloides, and Saxifraga Fergusoni; to Mr. S. Mortimer, for American carnations; to Messrs. Hewitt and Co., for forced shrubs; to Mr. V. Slade, of Taunton, for zonal pelargoniums; and to Messrs. Sutton and Sons for a magnificent bank of Cineraria stellata of all shades of colour. The silver medal was given to the Misses Hopkins for a prettily arranged stand of alpines and different varieties of primulas; and to Mr. R. Sydenham for a collection of bulbs grown in fibre, and cut flowers.

We shall publish the notes on the new daffodils by the Rev. J. Jacob in our next issue.

Huntingdonshire Daffodil Society.

The third exhibition of the Huntingdonshire Daffodil Society was, we are pleased to state, most successful. A fine display was provided by the trade and amateur exhibitors. Fine stands were well shown by Messrs. J. E. Perkins, Barr and Sons, R. H. Bath, Lim., Sir Jocelyn Gore-Booth, Lord Sandwich, Messrs. Laxtons, Messrs. W. and J. Brown, Miss Currey, Lismore, Ireland and Messrs. Laxton. The quality of the amateurs' flowers was up to a very good standard considering the bitter weather experienced this spring. Among other successful exhibitors were Lady Lilford (winner of Messrs. Barr's Cup for the second time), A. R. Darlington, Esq., Mrs. Nowell Usticke, Miss L. L. Linton, and Lady De Ramsey.

R.G.O.F. AND YORKSHIRE GARDENERS.

This fund, and the special appeal which is being made at the present time on its behalf in connection with the coming of age festival on May 12, should, I think, be of especial interest to Yorkshire horticulturists, seeing that the inception of the fund was mainly due to a Yorkshire gardener, Mr. Clayton, late of Grimston Park, Tadcaster. But probably many, like myself, have hitherto never given the matter any very serious thought, or it may be that we are sometimes apt to think that such institutions, having their headquarters so far away as London, have not much claim upon us here in the north; a glance, however, through the annual report certainly shows that this is not the case.

I find that there are in Yorkshire two children in receipt of the benefits of the fund, viz., £13 per annum each, or £26 in all, but the whole of the subscriptions from Yorkshire are very much below this amount, and the proportion of it which comes from Yorkshire gardeners is very small indeed. I note that one town in the Midlands (not a large one) sends half as much as the whole of Yorkshire.

An appeal made during the past week to three small gatherings of gardeners in this locality had an immediate result of nearly fifty shillings being subscribed to the popular shilling collection, and several volunteered to take collecting sheets for their respective districts, so I hope this amount will be considerably increased before the coming of age festival on May 12.

May I suggest to gardeners in other parts of Yorkshire, that, if the matter has not already been taken in hand, some such plan should be adopted, as the result, I am sure, would be a birthday gift worthy of Yorkshire gardeners, and would probably arouse an interest which would also have the effect of increasing in future the number of annual subscribers to this worthy institution. Any living in a district where no collection is being made who would like to contribute, and so swell the amount from Yorkshire, are asked to send their subscriptions to Mr. [illegible]man, The Elms, Weetwood, Leeds; Mr. [illegible] Coates, Spring Bank, Headingly, Leeds; Mr. [illegible] Wellwood, Wyther House, Kirkstall, Leeds; Mr. Waltham, Sandy Wood, Horsforth, [illegible] Leeds; or to yours faithfully, [illegible] CARVER, Chapel Allerton, Leeds.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

GARDENERS' ORPHAN FUND.—Abies: The secretary of the Royal Gardeners' Orphan Fund is Mr. Brian Wynne, and his address is 30, Wellington Street, Covent Garden, W.C.

WISLEY STUDENTS.—M. E. B., Windsor: The Royal Horticultural Society admits a limited number of young men, not exceeding 22 years of age, to study gardening at Wisley, where the training has been recently further developed by the erection of the laboratory and research station. The curriculum now includes not only practical garden work in all the main branches of horticulture, but also lectures, demonstrations, and elementary horticultural science in the laboratory, whereby a practical knowledge of simple garden chemistry, biology, etc., may be obtained. The laboratory is equipped with the best apparatus procurable for students. The training extends over a period of two years, with a progressive course for each year. Students can only enter at the end of September and at the end of March. Selected students have also the advantage of attending certain of the society's shows and lectures in London. It is generally easy to find these young men employment on the completion of their training, in fact the council are quite unable to meet the demand for energetic, trustworthy young men, but they must all be workers.

PIGEON AND DOVE ORCHIDS.—L. N. D., Walsall: The pigeon orchid is Dendrobium crumenatum, and the dove orchid is Peristeria alata.

GARDEN CACTUS DAHLIAS.—N. S. G., Ipswich: We have previously drawn attention to this matter. As a result of trials and comparisons the committee of the National Dahlia Society has put forward the following as the best twenty varieties of cactus dahlias to make an especially effective display in the garden on account of their good habit of growth and stiff flower stems: A. D. Stoop, Amos Perry, Alexander, Beacon, Dainty, D. A. Dunbar, Eclair, Eve, Florence M. Stredwick, Glow, Lustre, Meteor, Mrs. F. Grinsted, Mrs. H. L. Brousson, Mrs. J. S. Brunton, Oscar, Pearl, Primrose, and Star.

SEEDLING WINTER-FLOWERING CARNATIONS.—F. T., Bristol: Raisers of seedling winter-flowering carnations should ever keep in view the winter-flowering habit of the plants. There is, no doubt, room for a race of perpetual summer-flowering varieties, and, indeed, the race may be said to have already come into existence, but one can hardly regard a variety that is at its best in July as worthy of inclusion as a winter-flowering one. Taking, for instance, a variety like Enchantress as a standard of perfection, the following scale of points should be applied to a new seedling to find how far it comes short of the standard: Colour, size, fragrance, substance, calyx, general appearance, length and substance of stem, and habit of plant; five points to each as a maximum. The Winter-flowering Carnation Society only grants a certificate to a variety gaining 30 points or upwards, and an Award of Merit to varieties gaining 25 to 29 points.

SWEET PEA CULTURE.—R. S., Stoke: We can heartily recommend "Sweet Peas and their Cultivation," 1s. 2d., or 1s. 8d. cloth bound (post free), from the GARDENERS' MAGAZINE Office, 148, 149, Aldersgate Street, E.C.

HYDRANGEA HORTENSIA.—F. G. C., Cheriton: The best known and most generally cultivated of the several species of hydrangea is Hydrangea Hortensia, which was introduced from China at the end of the eighteenth century. Fully half a century ago it was one of the most popular of flowering plants for decorative purposes; but at no time has it enjoyed so high a degree of popularity as now. It is grown in enormous quantities in the market gardens in the neighbourhood of London, and sent to Covent Garden during the spring and summer months. The plants are, for the most part, grown in five-inch pots, some occupy pots one size larger, but they are all grown with a single stem each, and bear immense heads of the charming pink flowers. In the open this hydrangea can only be successfully grown and flowered in kind climates, such as those of the southern and western counties of England, and in the warmer parts of Ireland. Where the climate is sufficiently mild to admit of it being cultivated with success in the open, it grows vigorously, and blooms profusely, and the flowers retain their freshness for a considerable period. H. paniculata grandiflora, which was introduced from Japan in the second half of the last century, is also largely grown in pots for indoor decoration, and is very effective in the conservatory. Being quite hardy, it can be successfully grown out of doors, and is extremely effective during its season of flowering.

HANDY GARDENING DICTIONARY.—W. C. R., Cheltenham: The handiest book of its kind we know is the "Encyclopædia of Gardening," and it gives all the information you require. It is 3s. 10d., post free, from W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.

THINNING PEACHES.—C. E. D., Matlock: The final thinning must not take place until the fruits have stoned, because some are sure to fall during this trying period. After stoning the fruits begin to swell fast, and as soon as the swelling commences reduce the crop so as to leave one fruit to each square foot of trellis covered by the tree. If there were signs of unduly strong growth last season then a slightly heavier crop may be allowed.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

C. H. D., Torrington.—Pittosporum crassifolium.

B. T., Lancaster.—1, Forsythia suspensa; 2, Iris stylosa.

F. R. T., Abingdon.—1, Galax aphylla; 2, Calceolaria Burbidgei; 3, Leschenaultia biloba major.

E. B., Grantham.—1, Azara microphylla; 2, Cotoneaster horizontalis; 3, Berberis stenophylla.

S. J. S., Everton.—1, Selaginella Emileana; 2, Nertera depressa; 3, Pteris longifolia; 4, Acacia Riceana.

P. S., Bideford. — 1, Odontoglossum Adrianæ; 2, O. crispum, a poor, starry form; 3, Ada aurantiaca; 4, Dendrobium Parishi.

C. W. L., Swindon.—1, Primula floribunda; 2, Begonia megastigma; 3, Sparmannia africana; 4, Semele androgyna; 5, Mertensia sibirica.

GARDENING ENGAGEMENT.

Mr. Basil Bolton, who during the past six years has been engaged in the public gardens in Bermondsey, and formerly at Oxford Botanic Gardens, has been appointed head gardener to the Borough of Bermondsey Council. There were upwards of 200 applicants.

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MARKETS.

COVENT GARDEN.

Flowers.

The supplies of flowers continue fully equal to the demand, with but few changes in the prices. Daffodils are abundant and cheap

		s.	d.		s.	d.
Acacia	per doz. bun.	6	0	to	8	0
Adiantum cuneatum	per doz. bun.	5	0		9	0
Anemones	per doz. bun.	1	0		2	6
Arums	per doz.	1	6		3	0
Asparagus	per doz. bun.	1	6		6	0
Azalea, white	per doz. bun.	3	0		4	0
„ mollis	per bun.	1	0		1	6
Berberis	per doz. bun.	1	6		2	6
Carnations	per doz. blms.	1	6		2	6
„	per doz bun.	8	0		12	0
„ Malmaison	per doz. blms.	8	0		10	0
Cattleyas	per doz.	8	0		12	0
Cœlogynes	per doz. blms.	1	0		1	6
Croton leaves	per bun.	1	0		1	6
Cyclamens	per doz. bun.	6	0		7	6
Cypripediums	per doz. blms.	2	0		3	0
Daffodils	per doz. bun.	0	6		2	0
Eucharis	per doz.	3	0		4	0
Forget-me-not	per doz. bun.	2	0		3	0
French fern	per doz. bun.	1	0		3	0
Freesias	per doz. bun.	2	0		3	0
Gardenias	per doz.	2	0		4	0
Lapagerias	per doz.	1	0		2	6
Lilac	per bun.	3	0		4	0
Lilium auratum	per bun.	2	0		3	0
„ speciosum	per bun.	2	0		3	0
„ longiflorum	per bun.	2	6		7	6
Lily of the Valley	per doz.	5	0		8	0
Marguerites, white	per doz. bun.	3	0		5	0
„ yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	3	6		6	0
Narcissus	per doz. bun.	1	0		2	6
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	5	0		8	0
Ranunculus	per doz. bun.	5	0		7	6
Roses	per doz.	2	0		8	0
Smilax	per doz. trails	2	0		3	0
Spiræa	per doz. bun.	5	0		7	6
Stocks	per doz. bun.	3	0		4	0
Sweet Peas	per doz. bun.	3	0		5	0
Tuberoses	per doz. blms.	0	4		0	6
Tulips	per doz. bun.	5	0		7	6
Violets	per doz. bun.	2	0		3	0
Wallflowers	per doz. bun.	1	6		2	6

Fruits.

The market is fairly well supplied and the demand is steady.

		s.	d.		s.	d.
Apples, Australian	per case	10	0	to	18	0
„ Canadian	per barrel	12	0		20	0
„ Californian	per box	10	0		15	0
Bananas	per bun	3	0		10	0
Cranberries	per case	10	6		12	6
Grapes, English	per lb.	2	0		4	0
„ Belgian	per lb.	1	9		3	0
„ Cape	per box	2	6		4	0
Lemons	per case	8	0		12	6
Melons, Guernsey	each	2	0		3	0
Nectarines, Cape	per box	6	0		10	0
Oranges	per case	7	0		30	0
Pears, Cape	per box	5	0		7	6
Pineapples	each	2	0		4	0
Plums, Cape	per box	4	0		7	0
Strawberries	per lb.	2	0		4	0
Walnuts	per bag	7	0		8	6

Vegetables.

Green vegetables are fairly plentiful, and other kinds are abundant.

		s.	d.		s.	d.
Artichokes	per doz.	2	0	to	3	0
Asparagus, Paris green	per bun.	3	6		5	0
„ English	per bun.	4	0		5	0
„ Spanish	per bun.	1	6		2	6
„ sprue	per bun.	0	6		1	6
Beans, French	per lb.	0	8		1	0
„ Madeira	per bskt.	2	0		2	6
Beet	per bush.	1	3		2	0
Cabbage	per tally	3	0		[illegible]	0
Carrots	per doz. bun.	1	0		1	6
„	per bag	2	6		3	0
„ French, new	per doz. bun.	6	0		7	0
Cauliflowers	per doz.	2	0		3	0
Celery	per bundle	0	9		1	3
Celeriac	per doz.	1	6		2	0
Chicory	per lb.	0	2		0	4
Cucumbers	per doz.	2	6		6	0
Endive	per doz.	1	9		3	0
Greens	per bag	1	0		2	6
Horseradish	per doz. bun.	12	0		15	0
Leeks	per doz. bun.	1	0		1	6
Lettuce, cabbage	per doz.	1	0		1	6
„ Cos	per doz.	3	0		4	0
Mint	per doz. bun.	2	0		3	0
Mushrooms	per doz. lb.	8	0		10	0
Onions, English	per cwt.	4	0		4	6
„ Spanish	per case	5	0		6	6
Parsnips	per bag	1	6		2	0
Parsley	per doz.	2	0		3	0
Rhubarb	per doz. bun.	1	6		2	0
Seakale	per doz. bun.	9	0		10	0
Tomatoes, Teneriffe	per package	8	0		16	0
Turnips, French, new	per doz. bun.	6	0		10	0
Watercress	per doz. bun.	0	4		0	6

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Kent Up-to-Dates	per ton	110	0		115	0
Langworthy	per ton	100	0		110	0
Scottish Triumphs	per ton	105	0		110	0
Guernsey, new	per lb.	0	4		0	5
Teneriffe, new	per cwt.	10	0		12	0
Algerian, new	per cwt.	10	0		12	0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. April 19 to April 25.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Temperature of the Air. Day Highest.	Temperature of the Air. Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 19 Sunday	5 30	41	36	47	35
„ 20—Monday	9 25	40	36	44	33
„ 21—Tuesday	0 20	42	39	50	31
„ 22—Wednesday	2 50	47	43	52	39
„ 23—Thursday	—	41	39	45	37
„ 24—Friday	9 30	34	31	42	30
„ 25—Saturday	0 5	33	32	42	32
Means	3 57	40	37	46	34

Date. 1908. April 19 to April 25.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	Temperature of the Soil. At 9 a.m. At 2 ft. deep.	Temperature of the Soil. At 9 a.m. At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
April 19—Sunday	—	44	46	45	28
„ 20—Monday	0·02	43	45	45	27
„ 21—Tuesday	0·01	43	45	45	25
„ 22—Wednesday	—	44	45	45	34
„ 23—Thursday	0·64	44	45	45	26
„ 24—Friday	0·06	43	45	45	32
„ 25—Saturday	0·65	42	45	45	27
Means	(total) 1·38	43	45	45	28

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, May 6.—Royal Society of Arts. Croydon Gardeners' Spring Show.

THURSDAY, May 7.—Linnean Society Meeting.

TUESDAY, May 12.—Royal Horticultural Society: Committee meet at 12 o'clock; lecture at 3 p.m. on "Gardening in the West Highlands," by Mr. Osgood H. Mackenzie; Scientific Committee at 1 o'clock.

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Work for the Week

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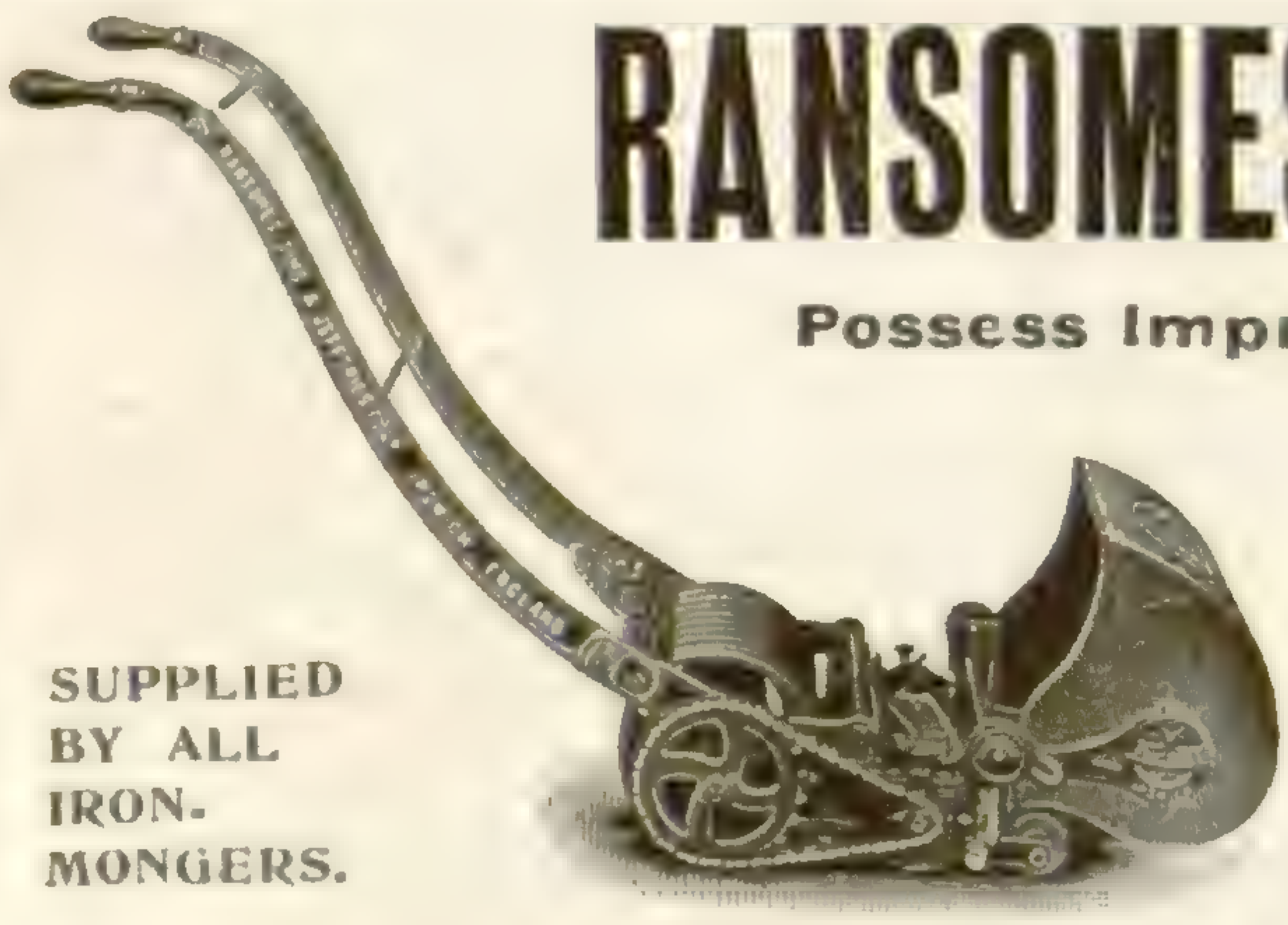

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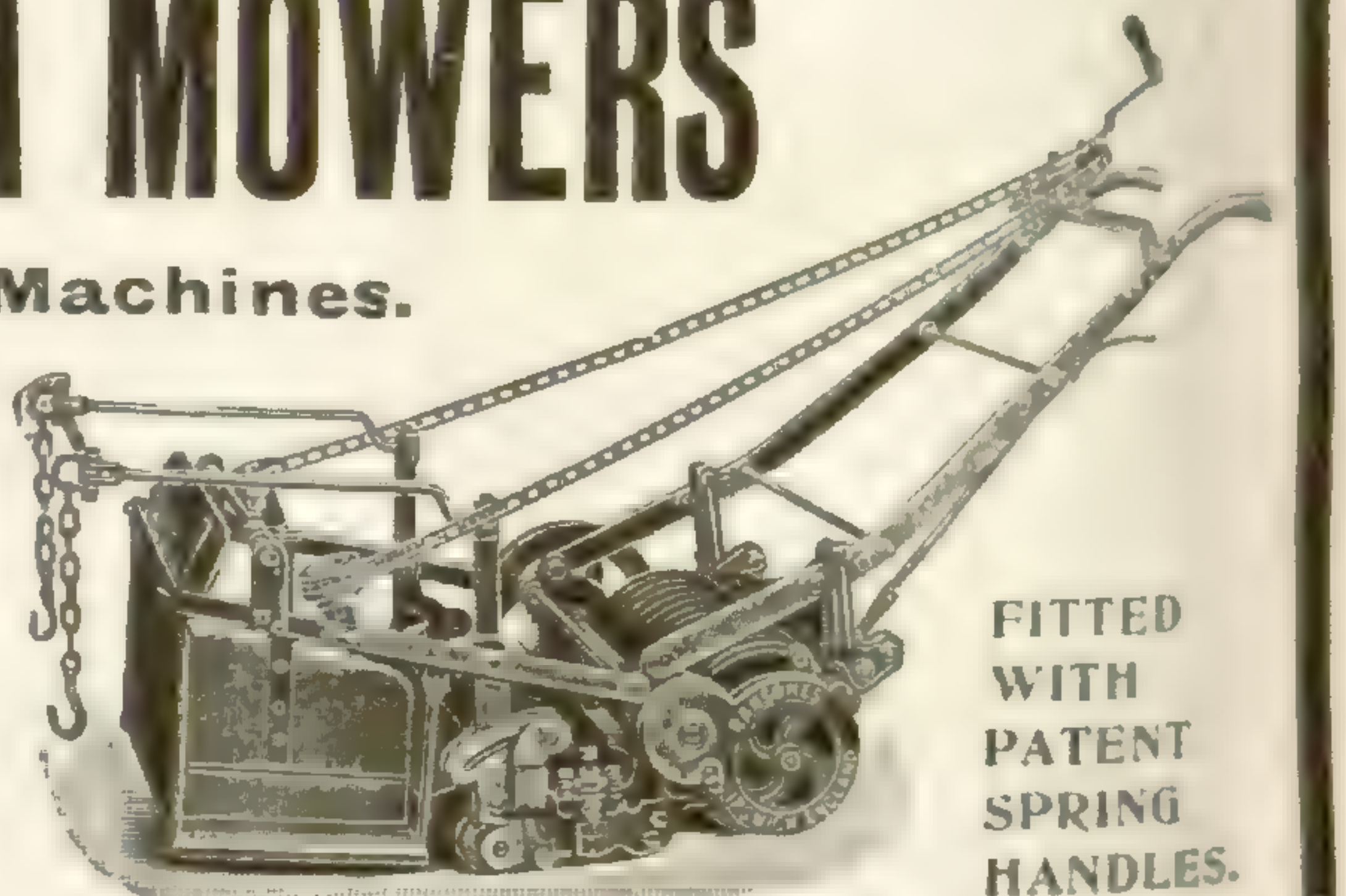

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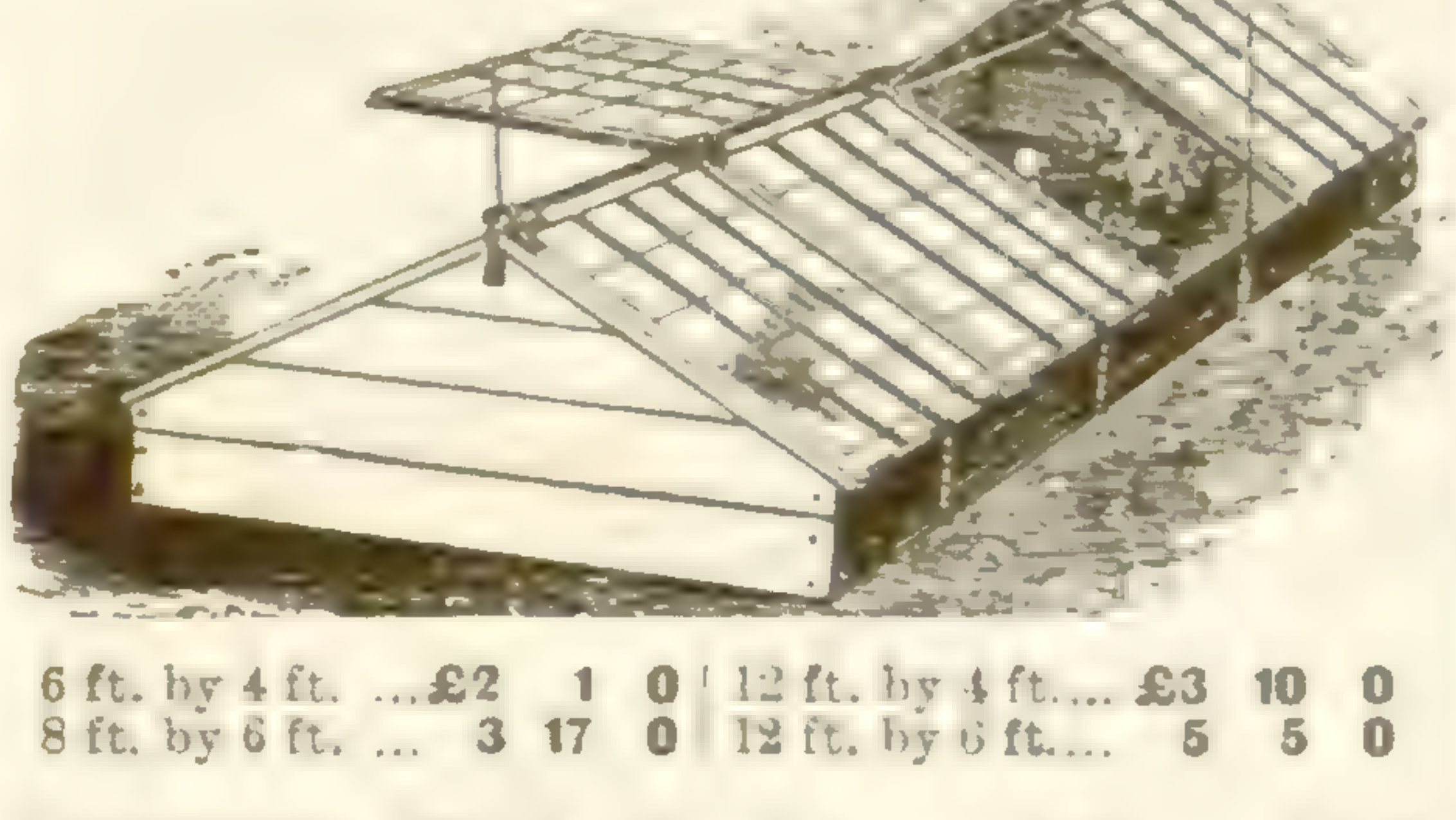

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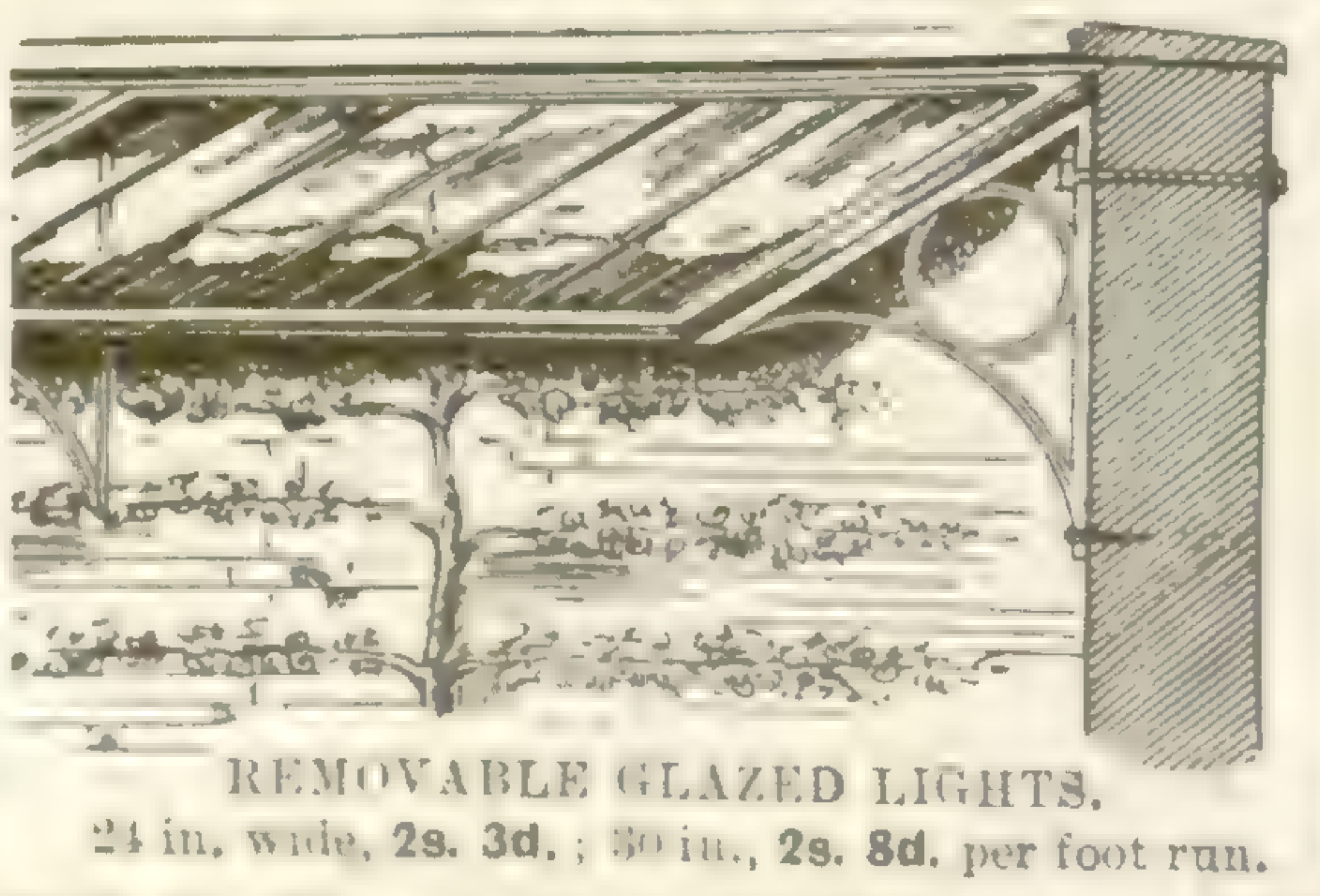

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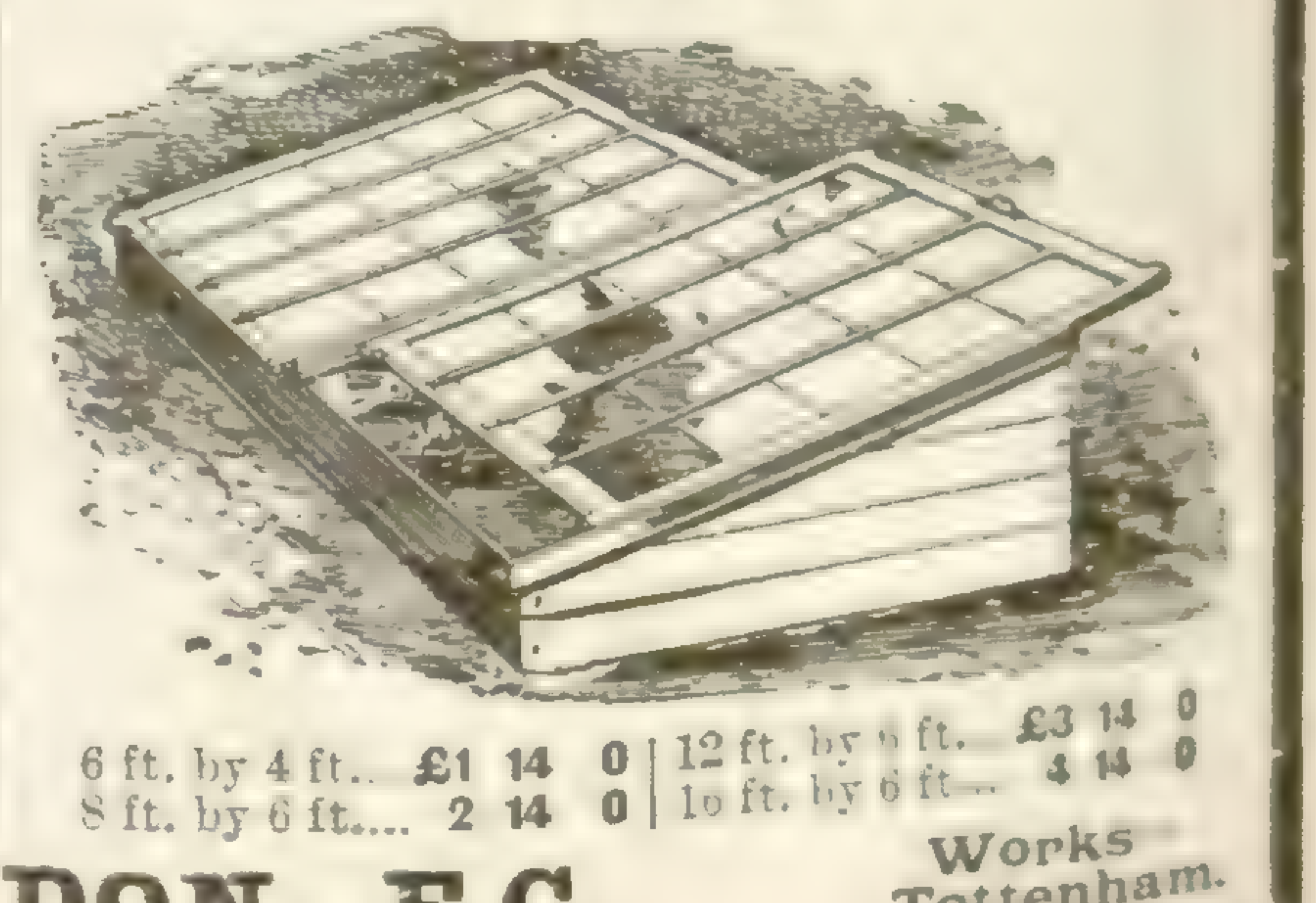

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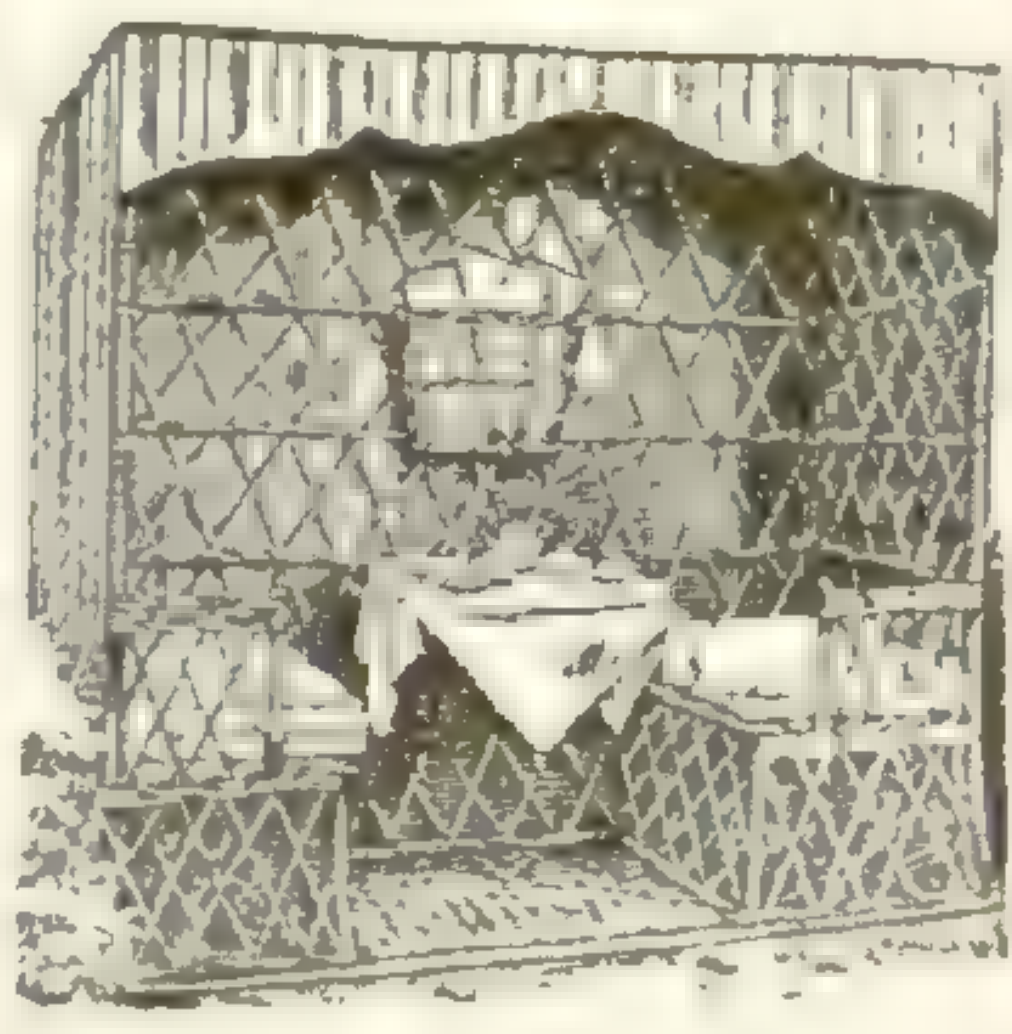

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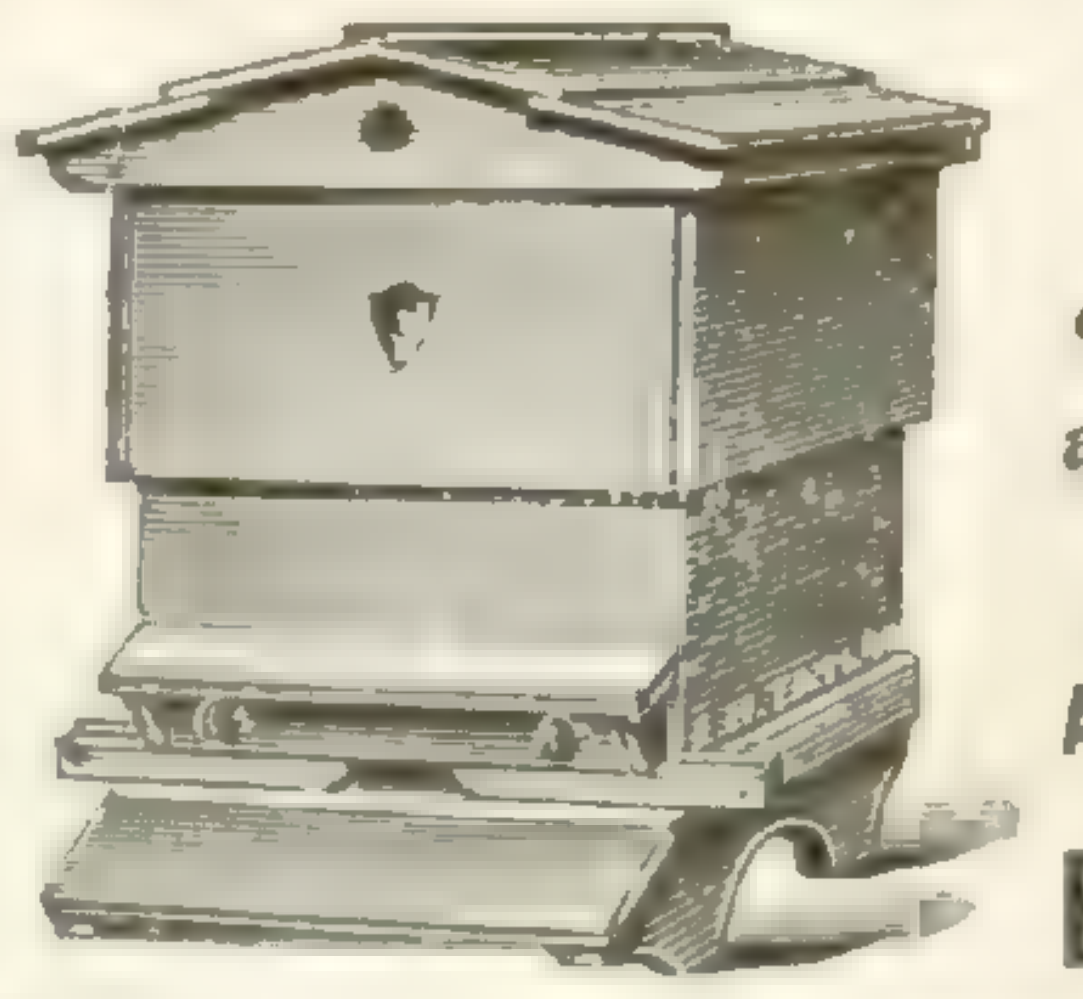

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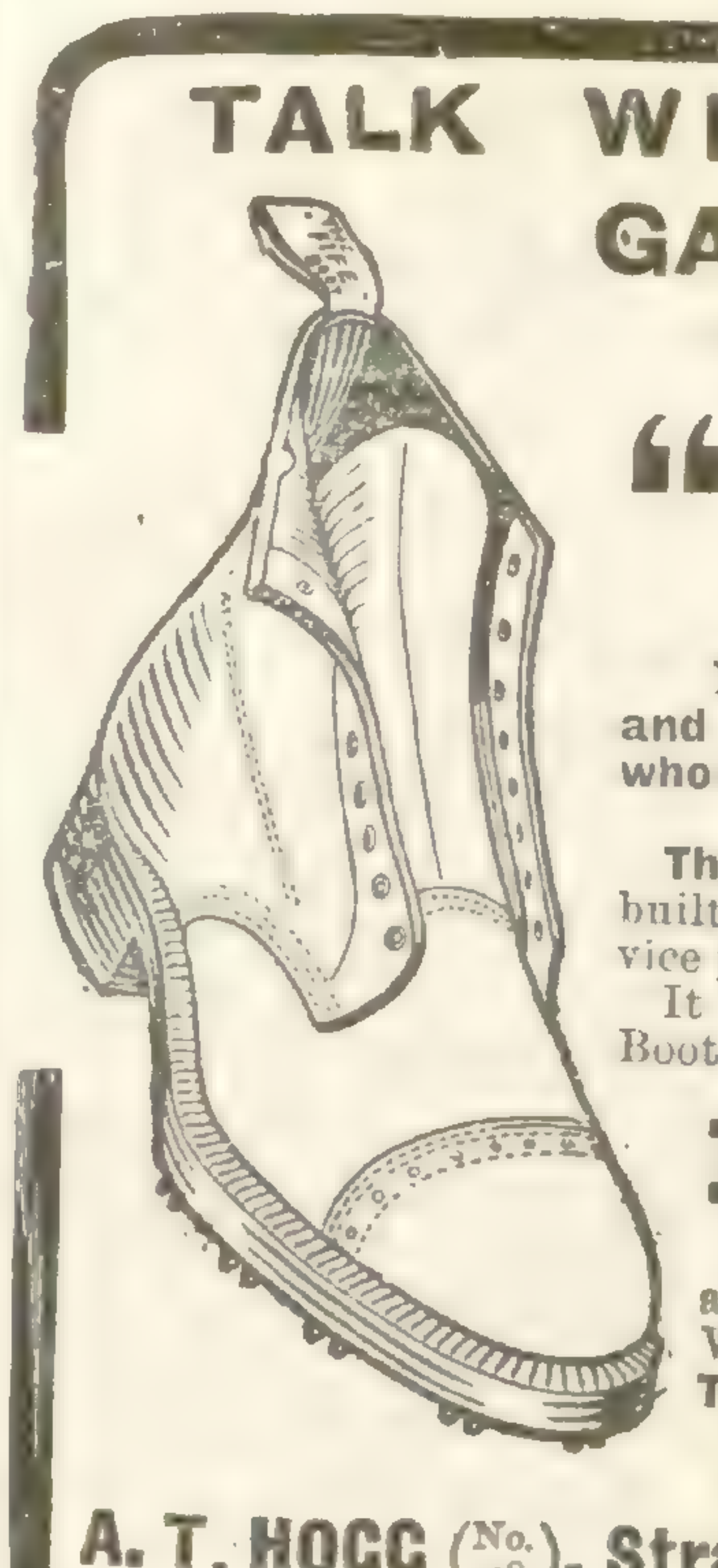

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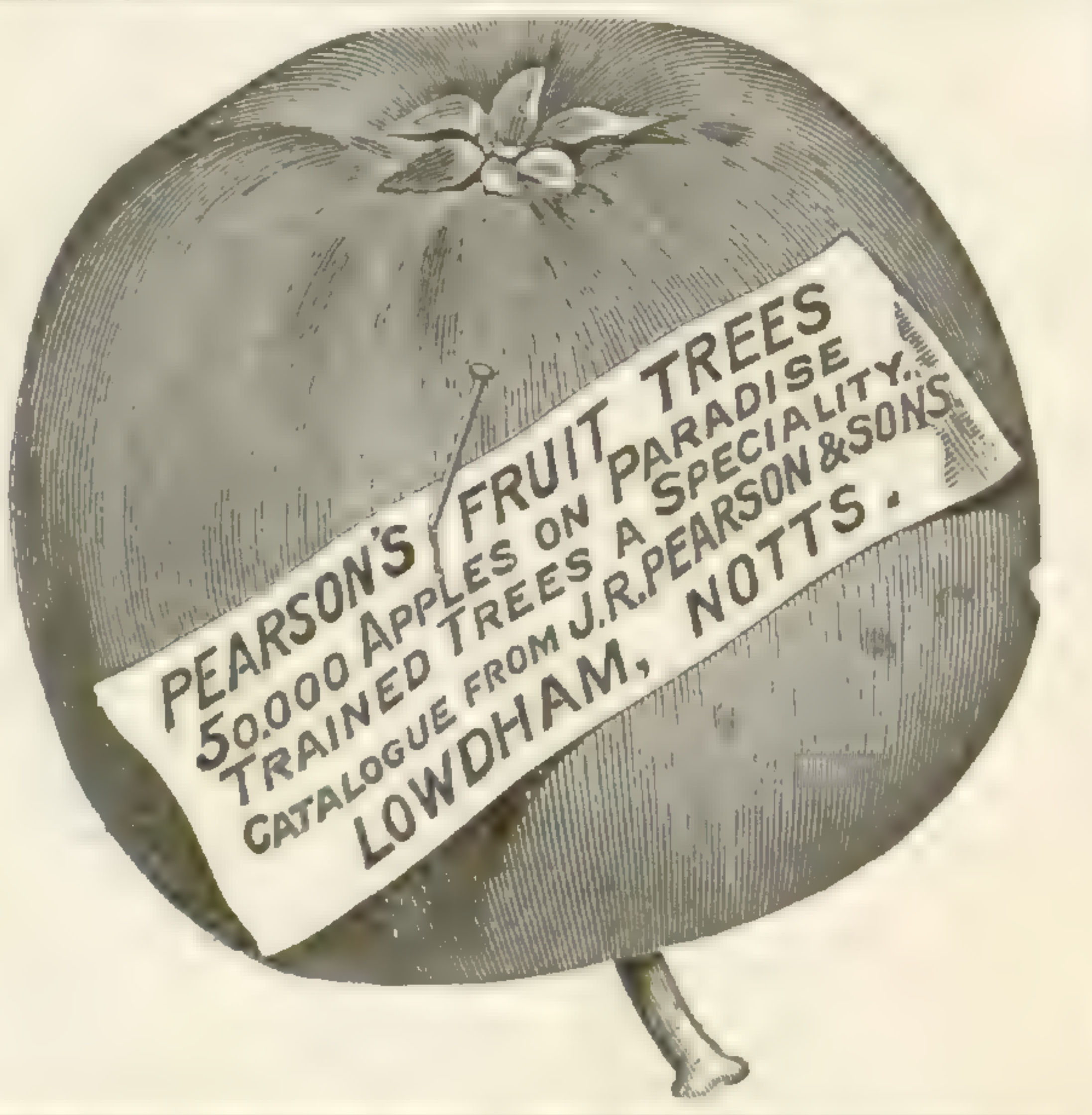
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VOL. LI.—No. 2,845. SATURDAY, MAY 9, 1908.

THE GARDENERS' MAGAZINE.

MR. S. T. WRIGHT.
Superintendent of R.H.S. Gardens and Exhibitions.

NOTES OF THE WEEK.

A Late Spring.

However pleasant it may be to pass at the earliest possible moment from the cold and dull weather characteristic of the season of winter, and to watch the bursting flower buds, and the development of the tender green leaves under the stimulative influence of sunlight and a genial southerly breeze, there should be no impatience if the change is delayed to a period later than usual. A great aid to the restraint of impatience when wintry weather passes beyond the boundary of the season to which it belongs, is a remembrance of the fact that a late spring has its advantages. We have had a striking proof of this within the past few weeks, and in connection therewith we need only point out that if this year the spring had been what is commonly known as early, such severe weather as was experienced on April 24 and 25 would have had a disastrous effect on tender vegetation, and more or less completely ruined the crop of hardy fruits. Under existing conditions much damage was done in many districts, and in orchards and gardens where the plum trees were in bloom the crops will at the best be very light. In some instances the currants and gooseberries also suffered so materially that the crop of these fruits cannot be otherwise than decidedly light. Had the trees been fully in bloom as they usually are on the dates of the heavy snowstorm, the plum crop would undoubtedly have been completely ruined, or so greatly reduced as to be hardly worth considering in an estimate of the fruit supply. Owing to the lateness of vegetation consequent on the low temperature that had prevailed until a much later period than usual, the plum trees were not, except in a comparatively few instances, so fully in bloom that all the flowers had expanded. Consequently large numbers of flowers on trees that were hard hit by the frost have attained development since, and as the conditions have been favourable thereto they present a promising appearance. The flowers of trees that were not in bloom have in like manner had the benefit of more favourable climatic conditions, and give promise of setting freely. Whether there will be a realisation of this promise depends upon the weather experienced during the next two weeks, but we suggest that anticipations with regard to the final result be imbued with a spirit of hopefulness. What has been said with regard to plums applies in some degree to pears also. These latter were not quite so far advanced as the plums when the wintry weather was experienced a fortnight ago, and they have produced a wealth of blossom that would appear to justify anticipations of a good yield of fruit. In any estimate, however, of the pear crop that we may base upon the great display of flowers that now so greatly enhances the attractions of the garden and orchard, we must not lose sight of the fact that the reproductive organs of the pear are especially susceptible to injury from cold weather. They would appear to suffer more from this cause before the flowers are fully expanded than do those of other fruits, and as so well known to the experienced fruit grower, they quickly succumb to the effect of a sharp frost or a low temperature continuing for any period. Cherries were at about the same stage as the pears, and, except in some specially warm districts, were not sufficiently advanced to have had any material damage done them. Apples, which form so great and important a part of the hardy fruit crop, are for the present quite safe, for snugly ensconced in the protective coverings which the buds provide, the reproductive organs were unaffected by the wintry conditions, and there is full justification for the hope that they will attain their full development, and perform their allotted functions under genial weather conditions, and be followed in due season by a liberal harvest of fruit; but with these, as with the other fruits, much depends upon the weather that will be experienced during the period of flowering. The value of protective materials judiciously applied has been brought into strong relief this spring, for in some cases that have come under our notice wall trees with a covering of tiffany or a double thickness of old fish netting wholly escaped injury, while others not far distant that were unprotected, have had their crops very considerably reduced. There is nothing new in this, nor is it by any means the first instance that we have brought under the notice of our readers of crops having been saved by a very simple means of protection. One of the most noteworthy examples was that which came under our notice a few years since in the gardens of Syon House. In these gardens a considerable area devoted to bush fruits is enclosed with wire netting of small mesh for the protection of the fruit from birds, and contiguous thereto there was a large breadth of bushes wholly unprotected. The season was much the same as the one through which we are now passing, and a very severe frost was experienced after the currants, gooseberries, and raspberries had made considerable progress. The result of the frost was that the crops outside the wire enclosure were practically destroyed, while those within passed through the ordeal without injury from the frost. Protective measures involve the expenditure of both money and labour, but having regard to the uncertainty of our climate they give an ample return.

Mr. S. T. Wright.—When, in 1885, Mr. S. T. Wright became head gardener to C. Lee Campbell, Esq., at Glewston Court, Ross, he took that step which was necessary to bring him eventually into the very prominent horticultural position he at present holds as superintendent of the Royal Horticultural Society's Gardens. Always showing a keen interest in fruit culture, and in entomology, Mr. Wright had splendid training in such famous gardens as those of Snelston Hall, Woodseat, and Alton Towers, and when he went to take charge at Glewston his opportunity came. Not only had he the gardens to manage, but also some of the finest fruit plantations ever laid down. Cultural ability he already had, and this was made very evident in the course of his ten years' stay at Glewston, because during that period he won about seven hundred prizes, chiefly with apples, pears, and grapes. But Mr. Wright developed business ability also, and based it on the principles of honest, straightforward dealing. At the conclusion of ten years' work he had the splendid record that no single customer among those who purchased the Glewston fruit had ever made a complaint. The skill and business capacity evinced at Glewston Court were prime factors in securing for Mr. S. T. Wright the position of garden superintendent to the Royal Horticultural Society in 1896, in succession to Mr. A. F. Barron. His genial disposition has made for him a host of friends, and though it cannot be an easy matter for him to find every exhibitor at the R.H.S. meetings the position and amount of space wished for, Mr. Wright manages to keep everyone in good humour. So highly are his efforts in this direction appreciated, that a couple of years ago the exhibitors at the Temple Show presented him with a very handsome testimonial. For many years Mr. Wright was a regular contributor to our pages, and he ever advocated the extension of hardy fruit culture on rational lines. He is a prize-essayist of the R.H.S. on the subject of "Commercial Aspects of Hardy Fruit Culture," and this essay won for him a silver medal from the late Dr. Hogg. Mr. Wright is also an author, and his "Fruit Culture for Amateurs" has done much to increase and improve fruit culture in small gardens. It is a great pleasure to us to pay this brief tribute to Mr. Wright's skill and amiability, and we feel quite sure that many thousands of our readers will appreciate the portrait we now present, for his name is now as a household word among horticulturists of every class.

Noteworthy Bristol Gardens.—In accordance with previous announcements we shall in our issues of May 16 and 23 describe and illustrate several of the more noteworthy gardens in and around the city of Bristol, which has long been famous as a great centre of horticultural activity. The gardens of which illustrated descriptions will be given, include Ashton Court, Barrow Court, Cote House, Down House, Downside, Elmfield, Old Sneyd Park, and The Priory.

At the British Association's meeting to be held at Dublin on September 2 to 8, the presidential address will be delivered by Mr. Francis Darwin, F.R.S., on the evening of the opening day. The presidents of the several sections in which our readers will be most interested are: Botany, Dr. F. F. Blackman, F.R.S.; Agriculture, Sir Horace Plunkett, K.C.V.O., F.R.S.; Geography, Major E. H. Hills, R.E.; and Geology, Professor J. Joly, F.R.S. Arrangements will be made for excursions during the week of the meeting to the Shannon Lakes, Powerscourt Waterfall, Boyne Valley, The Dargle, Glendalough, and the Devil's Glen in Co. Wicklow.

American Gooseberry Mildew.—In the course of the proceedings at the annual meeting of the Herefordshire Association of Fruit Growers and Horticulturists Mr. J. Ridley, the president, referred to the presence last year of the American gooseberry mildew in several gooseberry plantations in the county. He said that in his opinion the disease should not have been allowed to enter the plantations, for the Board of Agriculture might have prevented it doing so had they taken the necessary steps. It was well known that this mildew had become established in Ireland four years ago, and he had entered into a long correspondence with the Board with a view to induce them to take action in preventing the importation of bushes into England. He was told in reply to his letters that the Board had no power to act, but he pointed out that if they had not the power they should have taken the steps necessary to obtain it. The American gooseberry mildew was a very serious disease, and what, he felt, should have been done was to keep it in the quarters where it existed, and try some remedy likely to prove effective. Repressive measures had been adopted, and since the Evesham growers had interviewed the Board the diseased bushes were allowed to stand provided they were well pruned and thoroughly sprayed in the spring or early in the summer. In Mr. Riley's opinion compensation for bushes that are destroyed should be paid by the State.

Phenological Observations for 1907.—To a recent meeting of the Royal Meteorological Society Mr. E. Mawley, V.M.H., presented his report on the phenological observations for 1907. According to the report wild plants came into blossom behind their usual dates throughout the whole of the flowering season. Such early immigrants as the swallow, cuckoo, and nightingale were also behind their average dates in reaching these islands. The only deficient farm crop, taking the country as a whole, was that of potatoes, most of the other crops being much over average. On the other hand, the yield of apples and pears, and particularly that of the former, was below average. There was also a deficient crop of strawberries, whereas plums, raspberries, currants, and gooseberries were over average.

"**Public Gardens and Their Construction**" is the title of a lecture to be delivered by Mr. Thomas Winter, superintendent of the Marylebone Public Gardens, at a meeting of the London Branch of the British Gardeners' Association to be held at Carr's Restaurant, Strand, W.C., at eight p.m. on Thursday, May 14.

Primrose Phœnix Daffodil.—This beautiful new double daffodil is a fine flower in size, substance, and colour. The shade of colour is deep primrose-yellow, the form is that of a glorified gardenia, and the blooms are three and a-half inches across. This new variety has received an Award of Merit from the Royal Horticultural Society, and a First-Class Certificate from the Midland Daffodil Society, and the happy possessor of the stock is Mr. John Walker, of Thame, Oxon.

The National Tulip Society holds its fifteenth southern exhibition at the Royal Horticultural Hall, Vincent Square, on Tuesday, May 26; at least that is the intimation we have received in the form of a schedule of the proposed show, but as Tuesday, May 26, is the first day of the Temple Show we are wondering whether a mistake has been made. One thing seems quite certain, i.e., that if the Tulip Show is at Vincent Square on May 26, the tulip fanciers will have the hall and the flowers to themselves, as the horticultural public will be at the Temple Gardens.

Flower Shows at the Franco-British Exhibition.—The first of the flower shows that have a place in the programme of the Franco-British exhibition will be held on the 19th and 20th inst. There are twenty-one classes in the schedule, and of these the first four are for decorated dinner tables of a size suitable for twelve persons. In two classes any flowers, with the exception of orchids, may be used, and in the others orchids only are admissible. There are two classes for three vases of miscellaneous flowers arranged for the drawing-room, and one for three vases of orchids. There is also a class for bouquets, and one for twelve vases of sweet peas, but in the latter the prizes are inadequate for that number of vases so early in the year. The remaining classes are for collections of plants of various descriptions.

The Finest Herbarium in the World.—We understand that the trustees of the Shaw estate have commenced a scheme that is to cost half a million dollars. It includes the construction of seven new buildings on the Missouri Botanical Garden property, and the establishment of the finest herbarium in the world. Much good work has been done at the Missouri Botanic Gardens, and the new scheme, when completed, will tend to enhance the reputation and usefulness of the establishment.

A Beautiful Acacia is A. cultriformis, and this particularly fine species is splendidly grown by Mr. A. G. Gentle, gardener to Mrs. Denison, Little Gaddesden, Berkhamsted, who has sent us a few long, graceful growths smothered the whole length with pleasing yellow blossoms. Mr. Gentle grows this very fine specimen at Little Gaddesden in the conservatory, where, year by year, it is a beautiful sight each springtime. A. cultriformis was introduced from New South Wales in 18[illegible] but it is a species that, despite its great beauty and usefulness, is not very widely grown.

Helping the Chicago Market Growers.—Mr. J. J. Davis, the assistant State entomologist of Illinois, is to devote several months to the investigation of the insect pests that attack field and greenhouse crops in the Chicago district. Any grower who is troubled with insect pests has only to notify his trouble to the entomologist, and every effort will be made to help him.

Scab on Potatoes.—During the past two years experiments have been conducted by the Agricultural Department of the University of Leeds with a view to determine whether there is any connection between the development of the disease known as potato scab and the moisture holding capacity of the soil. For the purpose of the first experiment a field on a farm where potatoes are especially liable to attack was selected. To increase the moisture-holding capacities of the soil, the different plots were dressed with peat moss, rape meal, sawdust, and shoddy, and one plot received a dressing of salt and sawdust. The peat moss and sawdust were steeped in water and distributed along the rows, after the tubers had been planted, but the rape meal and shoddy were applied in a similar manner but in a dry state.

Sawdust appears to have been the only material that had any effect in checking the disease, and it was most effective when applied in conjunction with salt. Last year the experiments were conducted on the Gosforth experimental farm, where potatoes are usually much injured by scab. Here sawdust and peat moss, with and without an addition of salt, were used as applications to the soil. The sets for one plot were immersed for two hours in a solution of formalin formed by the addition of eight fluid ounces of commercial formalin to fifteen gallons of water. The potatoes lifted from the untreated plots were considerably affected by scab, and those from the plots dressed with peat moss were but little better. The crop from the plot planted with sets treated with formalin and also from those to which sawdust was applied were but slightly affected by the disease. It was found that while salt was useful in checking scab, it also had the effect of diminishing the yield. From the experiments conducted during the two years it is considered that the application of sawdust with or without salt checks the disease, and it is stated that no evidence has been obtained from the experiments in support of the theory that the result has been obtained by increasing the moisture in the soil.

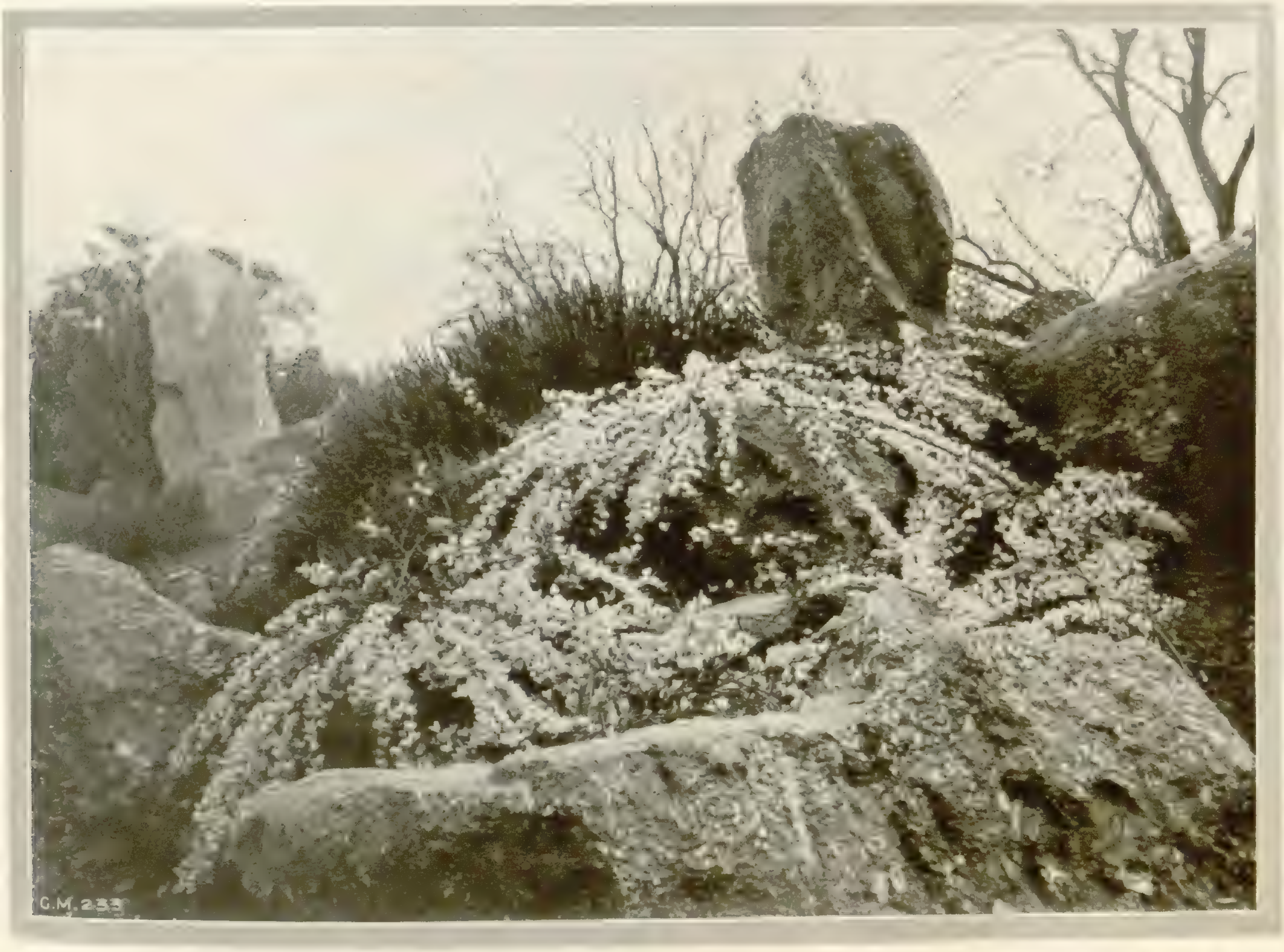
Tomato Culture at the Cape.—For some time past the possibilities of engaging in the cultivation of tomatoes on a large scale for commercial purposes has been much discussed at the Cape. The climate of South Africa is so well suited to their growth that it has been felt by those interested in the profitable utilisation of the land, that good returns would be obtained from their culture, provided a market could be opened up for the sale of the fruit. Owing to the home consumption being wholly inadequate, and most other countries either producing supplies equal to their requirements, or, having high tariffs, attention was directed to England as a possible outlet. Before materially extending the growth of tomatoes at the Cape, investigations were made as to the possibilities of the exportation of the produce to this country at a remunerative rate, and from the result of these it does not appear likely that Cape tomatoes will make their appearance in British markets. The Trades Commissioner, who has had the matter in hand, reports that in his opinion there is no prospect of a profitable trade in tomatoes with this country being developed. He points out that at the present time the markets of the United Kingdom are already fully supplied with tomatoes throughout the year, abundant supplies being sent from the Canary Islands and other countries.

THE KEW BROOM.

(Cytisus kewensis.)

Everyone admires the brooms in their varied forms, and there are few indeed of these charming shrubs which can well be rejected as unworthy of the garden. Even some of the forms of the common broom, Cytisus scoparius, are among the finest ornaments of our gardens in their season. This remark is not to be considered as in any way derogatory of the common broom itself, than which no other native plant is more delightful, but where it is plentiful in a wild state there is no need to introduce the typical form into our gardens.

There are many lovely brooms not well known to the majority of garden lovers, and among these one of the newest deserves still greater prominence given to its merits, although from time to time its beauties have already been spoken of in these columns. This is Cytisus kewensis, which originated in our great national collection in the Royal Gardens of Kew, and is in every way worthy of that great establishment and of the name it bears. It is a delightful plant, with prostrate habit and long branches of graceful growth, and bearing in early summer quite a multitude of its pale, cream-coloured flowers—a term of description which fails to give an indication of the exquisite beauty of the plant when in full bloom, trailing over a stone or bank, and giving one of the most delightful pictures of floral beauty one can conceive. It is said to be a hybrid between C. Ardoini and C. albus, and in its habit it possesses the style of the former, while in its colouring it comes midway between its parents. It is only within the last year or two that its price has been low enough to bring it within the



[Photo: D. S. Fish.

CYTISUS KEWENSIS.
A beautiful trailing broom, with large rich yellow flowers.

reach of the average amateur; although it is understood to have originated about twelve years ago. When better known it is certain to command a popularity few of the dwarfer cytisuses of hardy nature have achieved. Its newer companion, C. Beani, which has yellow flowers, is not likely to be in such favour as C. kewensis.

S. Arnott.

WINTER-FLOWERING STOVE PLANTS.

Though stove plants have, as a rule, gone out of favour, there are still some of them amongst the winter-flowering kinds that are grown on account of their bright coloured flowers, which are produced in great profusion through the dull months. Those enumerated below will be found some of the most serviceable whether for cutting or decorative purposes.

Roellia macrantha.

This produces very showy flowers up the shoots made during the preceding year, therefore, to have them of the best type cuttings should in spring be inserted in a light sandy soil and placed in a propagating case, where they will soon take root. When rooted they should be put singly in 4in. pots and returned to a slight hotbed until established, and when the pots are filled with roots they should be transferred into those of 6in. or 7in. in diameter. Early in June the plants will be established in these pots, when they may be transferred to cold pits or frames for the summer months. The plants should be grown in the full sunlight that the young growth may be ripened before autumn sets in.

Euphorbia jaquiniæflora.

The genus Euphorbia embraces a great number of species, but, with the exception of the above-named, and the old species having long spines known by the name of E. splendens, none of them are worth cultivation in our stoves. Euphorbia jaquiniæflora needs special treatment to grow it well. Like most other plants that are grown specially for the production of cut flowers, young plants give the greatest satisfaction. For this reason, those who are desirous of growing them well must make preparations beforehand. Unlike the poinsettia, to which it is closely allied, it needs a stove temperature through the summer, whereas the other may be grown in a cold frame until September, before it needs a heated structure. To work up a good stock of this, it would be well to procure some old plants early in spring, and if such have not already been cut back, their shoots should be shortened somewhat to induce them to make young growths. If these are placed in a brisk temperature, such as a melon house or pine stove, the buds up the old shoots will soon begin to push, and when they have made growths about an inch and a-half in length, these should be taken off with a heel attached and dipped at once into dry sand or powdered charcoal to prevent them bleeding. Having prepared the requisite number of small pots by filling them with a light compost consisting of about equal parts peat, loam, and sand, passed through a fine sieve, insert three cuttings round each pot, then plunge the pots in a close propagating case where there is a brisk bottom heat. In such a place the cuttings will not be long in making roots, and when they are well established they should be taken out of the case and accustomed to the temperature of the house. As other batches of cuttings become large enough, these should be taken off, and, after inserting them in small pots may be put in the propagating case as the others are removed. If this process is repeated a sufficient quantity will be rooted by the end of May. When the pots are filled with roots give the plants a shift into those of larger size, then stand them on a shelf near the glass in a melon house or pine stove where they can be trained up close to the roof. Here they should receive all the sunlight possible that the wood may be matured before the cold weather sets in. If they receive due attention in the way of watering, syringing, etc., during hot weather, by the autumn they should have made growths from two to three feet in length, which will bloom most profusely through the dull winter months, at which season their bright orange-scarlet flowers are most attractive.

This euphorbia will require a high temperature during the growing season, therefore those who do not possess a suitable structure would do well not to attempt its cultivation, for it being better to leave such plants alone than produce the miserable little unhealthy objects one sometimes sees where proper accommodation cannot be provided for them.

Poinsettias.

The large bright-coloured bracts of these are always attractive during the dull winter months, and as those plants carrying one head are the most useful for decorative purposes, it is such that should be grown. The old stools should be started into growth early in April, and as the shoots become large enough, they should be taken off with a heel and dipped in sand as recommended for the euphorbia cuttings. The cuttings should be inserted singly in small pots and placed in a close case until rooted, when they may be gradually hardened off to fit them for the temperature of the house or pit. When the pots are filled with roots they should be shifted into those of about 6in. in diameter, commonly known as 32's. After potting they can be stood on a slight hotbed for a few days until new roots are formed, they will grow away more rapidly. When established they may be stood in a cold pit or frame where they can have all the sunlight possible. Here close to the glass they will make sturdy short-jointed growth with large thick foliage. By September, when the nights are becoming cold, they should be taken to a warmer structure where fire-heat can be afforded them. Here a portion of them will soon commence to develop their bracts. There are several varieties of P. pulcherrima. One that flowers early has more purple in the bracts than the late form, which has longer bracts of a fine scarlet colour, and will remain in perfection until February. There is also the double form known by the name of plenissima, which, though very nice, is not so graceful as the single ones. The variety producing white bracts is of but little use, as there are other plants that give us white flowers that are far preferable. It may not be generally known that if the stems of these are dipped into hot water as soon as they are taken off they will remain fresh for a much longer period. They ought to always be stood in warm water when placed in vases, and kept away from draughts. If those that have flagged considerably are immersed in hot water for a time they will come round again and look quite fresh. This is one of the brightest and most useful winter-flowering plants we have.

Sericographis Gheisbreghtiana.

This old subject has almost gone out of cultivation, but it is one of those old things that are worthy of a place, for when well grown, like several species of the justicia it is very showy during the dull winter months. Cuttings of the young shoots will root readily enough in the spring, and if these are potted on, and given liberal treatment through the summer, their upright spikes of bright red flowers which are produced on the terminals of the young growths in winter are very attractive.

Coleus thyrsoideus.

The bright blue flowers of this species are produced on long upright spikes, and are of such an intense colour that they invariably attract the notice of all. This is a soft-wooded plant of easy culture, and may be propagated either from seed or by cuttings in spring. A light rich soil and liberal treatment will ensure a wealth of bright blue in the dull dark days of winter.

H. C. Princeps.

LITHOSPERMUM ROSMARINIFOLIUM.

Growers in particularly warm districts are loud in their praises of this lovely Grecian shrub, whose rich blue colouring rivals that of the better-known L. prostratum, but this time in bush form, and there is no stint of flowers on old plants in the early days of spring. One cannot recommend this plant to all who happen to possess a garden, as there is nothing more fatal to garden enthusiasm than to take it for granted a fine specimen in the Isles of Scilly is evidence that the plant is hardy in Britain. This lithospermum will thrive in many sheltered gardens along the South Coast, almost anywhere in the West, and in the few sheltered gardens of Western Scotland where rare plants are tested and grown.

The plant itself is a dwarf bushy rosemarylike shrub, thickly clothed with peculiarly glossy leaves, and the large blue flowers nestling among the polished leaves of frame-grown specimens are a revelation of rare beauty, and one wonders the while what large plants in the South of France, unseared by cold winds, must be like when in full blossom. It does not thrive in small pots, but can be grown into good specimen bushes if liberally treated in a cool house, and planted out under glass in a soil of peat and sharp grit rammed as hard as a roadway, it will make remarkable growth and flower better than it ever does under pot culture. Once established in the open it can be rejuvenated now and again by pegging down several side growths, tongueing and layering these, and allowing all to grow away together. Several fine patches I know in Cornwall are treated in this way with splendid results.

G. B. Mallett

Climbers.—Many plants used as climbers are rapid growers, and as these are now in full growth they will need frequent attention to keep them tied into position and to prevent them from getting into tangled masses, the liberation of which is sure to do much damage to the leaves and tips of the shoots. This especially applies to the myrsiphyllums, ipomaeas, thunbergias, and others which have a great tendency to twine round everything they can reach. For the useful myrsiphyllum there is no better plan than training each strong growth to a length of thin string in an upright direction, as the strings and growths may be cut together and the former then easily drawn out.—F. B. Field.

BORECOLES OR KALES.

During the spring months of the year there is a special value in the kale family, because it yields large supplies when other kinds of greenstuffs are generally scarce. The savoys are over, and the spring cabbages are not ready for cutting until the middle of April or beginning of May. Therefore, the kales should be rather extensively grown, or, at any rate, in sufficient quantity to meet the requirements of the season.

If broccolis prove disappointing because of winter frosts, the kales can be still relied upon to yield their crop in due course. Although they are not generally considered as being in the first rank as regards quality, yet, if properly cooked, they are by no means to be despised, and are worth a place, especially the improved type of Cottagers' or Sprouting kales that have been sent out in recent years.

I have been recommended to grow a variety called Chou de Russie, as it is said to be a first-class kale, being extremely hardy, and the flavour, I am told, is excellent, both as regards the larger leaves and the side shoots from the stems. If the latter are picked similarly to the usual manner of Brussels sprouts, by leaving the centre growth to remain to the last, it will largely prolong and increase the amount of produce from the plants.

Sutton's A1 is perfectly hardy, and very productive, giving quantities of side shoots from Christmas onwards; its flavour, too, is everything that could be desired. The Drumhead kale, although quite different in its character of growth, is invaluable, as it yields large quantities of most useful produce, which has a flavour quite its own. For the latest cutting the Hearting or Cabbaging variety is good, and a profitable crop. The Asparagus kale, too, has long been known, and grown as a prolific and useful vegetable for late spring cutting. When cooked the sprouts have a decided flavour of asparagus, which makes them favourites with many.

Seeds of the kales should be sown during April or early in May in prepared seed beds; only a few days will elapse before the young plants will show themselves above ground, and when large enough, and having formed their rough leaves, they should be pricked out into nursery beds at about six inches apart. With this crop, as with most others, the better the cultivation the better the results, yet it is a fairly accommodating crop, and the plants will stand without harm in the nursery beds for a considerable time. Being quite hardy against frost they go on growing later in the year than other greens, and thus it is not so necessary to make sure of early planting, consequently ground that has carried other crops may be filled up with kale.

Such quarters as have carried a crop of second early potatoes are excellent, and will require very little preparation. The lifting of the tubers will leave the ground in a capital condition for planting. Pea ground, too, is suitable, and only requires to be surface cleaned; it will have been liberally manured for the pea crop, and the firmer the soil the better for the kales, as they will then form solid growth to defend themselves against hard, wintery weather. It is well not to plant too closely together, but allow space for air and light to play round each plant. The stronger-growing varieties will require two feet six inches from row to row, and two feet from plant to plant in the row, the smaller growing and dwarf kinds need correspondingly less room, but all will require not less than two feet space from row to row.

Before the plants are removed from the nursery beds give them a thorough soaking with water to moisten all their roots, and then cut them out with balls of earth, carefully, so as to remove them to their permanent quarters without giving them a check. This attention is amply repaid by their starting straight away into growth, and thus saving time, whereas the checked plant will require a fortnight to recover, and possibly then will grow considerably less vigorously.

After planting, especially if the weather is dry, give the plants another soaking, with further attention for a few weeks should they require it, till thoroughly established, they will then take care of themselves. Should they through any cause not grow satisfactorily, give them a dressing of some quick-acting manure when the weather is damp. But for the whole of the Brassica family there is no better stimulant to growth than frequently stirring the surface of the soil, more especially during dry weather. When the plants have advanced in size, and on the approach of winter, it is of advantage to mould up their stems by forking the soil up to them each way between the rows; this acts as a protection against sharp frosts, as well as a steadying effect against wind.

Charles Flack.

Cholmondeley Castle Gardens.

[Photo: De Graeve. Ghent.

AN EXAMPLE OF SCENIC ART AT THE GHENT CENTENARY FLOWER SHOW.

This beautiful scene filled one end of the new exhibition house at the Ghent Centenary Exhibition. It was on canvas, and Mr. Burvenich had so arranged the groups of rhododendrons and hydrangeas, and the paths, that it was difficult to determine where the real plants and walks left off and the artist's work began. This was one of the great features of the exhibition, and fully merited the praise so liberally accorded it by the many horticulturists present.

Everyone interested in a garden should obtain a copy of the **Alphabet of Gardening**, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price 1s. 6d. net, by post 1s. 9d.; cloth, 2s., by post 2s. 3d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

A TREE.

In the two great branches of the biological tree, into which the potencies of the original life plasm have diverged, viz., the animal and the vegetable, we find in both numerous examples of relatively huge size as compared with their fellows, while in both, at the other end of the scale, we have extreme and microscopic minuteness, combined, nevertheless, with certain faculties common to all, viz., the power of assimilation of nutriment, and that of reproduction. In the animal kingdom in these days we may instance the whale and elephant as the largest forms extant, and in the vegetable the redwood or sequoia of one type, and the banyan of another. Fossil remains, however, demonstrate that there formerly existed gigantic creatures far exceedingly the elephant in size, while the largest whales now existent probably still hold their own as regards dimensions with any predecessor, though man is energetically doing his best to reduce the race both in size and numbers. The largest existing trees, on the other hand, far and away exceed in size any other forms of organised persistent life, and enjoy a longevity to match, since internal evidence afforded by those which have been felled indicates an undoubted existence extending over two or three thousand years.

Given a stable environment, there seems to be no reason why such a tree as the sequoia should perish, since it is built up on principles which give it practically unlimited scope for increased growth, unaccompanied by any weakening factor. If we could dissect such a tree longitudinally from its very base, we should find its trunk to have commenced by a slender tapering stalk, the product of the seed, and over this stalk, year by year, an enveloping sheath of fresh wood was formed on the same tapering lines, but of annually increasing height, lateral buds forming branches as growth proceeded. Obviously such an arrangement implies an annual strengthening to counteract the increasing strain, while the root system below the surface of the ground would be ramifying and increasing also in sympathy. As time went on the primary lateral branches would perish, possibly owing to the shade of adjacent growths, and of those subsequently formed by the tree itself, and a definite trunk becomes visible, within which now is a series of successive woody covers enveloping the original one, and now sheathed in a protective bark. So the tree progresses from year to year, from decade to decade, and eventually from age to age, until it becomes the monarch of the forest, remaining still as hale and hearty as ever. Such longevity, however, can only be attained under particular circumstances. No such mammoth tree could be developed in an exposed windy situation, and its particular habit of growth is immensely in its favour by not involving that spread of long, horizontal lateral branches, such as we see in the oak and other trees, which tend, sooner or later, to damage the tree by their own breakage owing to the ever-increasing leverage they exercise as they grow longer and heavier.

One of the oldest known trees, the banyan, corrects this tendency by sending down aerial roots from its spreading branches, which are subsequently supported by these as by so many columns. We have consequently in such a tree a practically immortal one, though on quite different lines to the sequoia. Such practically permanent vegetative growths we may, in some respects, liken to the animal ones of coral reefs, which are built up by the individual coral organisms, each one of which exists for a comparatively brief period, during which it adds its mite to the general structure. The leaf is really the individual builder in the tree system, it, too, lives a short life, during which it is busy adding its contribution to the general growth.

There is, however, one literally vital difference, the coral builder simply adds, as it were, a local dead brick to the edifice, the leaf contributes, in conjunction with its fellows, a quota of building material to the general structure, so that it is conceivable that a contribution from the topmost spray of the sequoia may swell the lowermost ring of wood at its very base, since every atom of this is built up by the leafage far away up in the air above. The coral builder is an individualist, he builds himself a house which, so far as he is concerned, is an accidental addition to the general fabric; the leaf is a beneficent, unselfish altruist, practically giving its life blood for the benefit of the community, present and future.

Chas. T. Druery, V.M.H., F.L.S.

AN APRIL WINTER.

"The first it sall be wind and weet,
The next it sall be snaw and sleet,
The third it sall be sic a freeze
Sall gar the birds stick to the trees."

Could not those old lines about the Borrowing Days of March be more truly applied to our recent spell of wintry weather? During the week ending April 25 we have had, in some districts, 24 degress of frost registered, the lowest reading we have had since the winter of 1906-1907. Snow in some places in the South of Scotland fell for twelve hours continuously, and lay in town and country to a depth of from six to twelve inches. Fortunately, in the far North of Scotland few of the trees have put forth their buds, but the flowers of the ribes have been nipped, and garden lovers look anxiously for other signs of damage wrought by this late return of winter. Rhubarb, monkshood, and other rapid-growing plants, which had reached a height of from twelve to eighteen inches, have been frosted down to the surface, and the growths now lie limp. Plants recently put into the ground have been completely ruined. The writer paid a visit the other day to Higher Deeside (Aberdeenshire), and there found in the glens and among the hills winter and spring fighting, as it were, for mastery. Victory, of course, will be with the last, but winter still has its grip fast upon the higher hills, and on the days of our visit it raged with a violence one could only expect in the month of December.

Lochnagar and Ben-a-Buird and Ben Avan, Cairntoul and Braeriach and Ben Muichdhui are as white as we write as they were in mid-winter. The river Dee beneath the Devil's Point is still buried in snow. The higher slopes have all been iced, and are now so hard and glazed that one needs an ice-axe to make a footing on them. Such aid is doubly necessary when the wind is raging, as it did on our visit, driving the snow showers before it and roaring like some fiend incarnate through the Larig Ghru, and past the shoulders of Cairntoul, so that the climber was fain at times to throw himself upon the snow and cling to the very body of the hill for safety. To pass from this tornado of the elements high on the hills down into the valley of the Quoich or the Lui was to pass into a haven of peace. Winter still rules on the hills, but in the glens his hold is going—fancy having to chronicle such a statement in the last week of April!—and everywhere in the low ground there are signs of spring. The mountain burns are full, and everywhere water pours from the slopes, flooding the paths and gurgling in every little hollow from the hills.

The heather is still brown and withered, but in some of the tips one can see the faintest flush of growth. There are birds, too, calling about the water's edge, which were not there a month ago. And most distinctive note of all is the wonderful misty purple of the birches. Every twig is touched with this purple or plum-like tint, and the effect of the masses of this upon the hillside is exceedingly beautiful. Everywhere there is the sense of awakening, but as we write it is hard to believe that the miracle of spring is being wrought again for us as the snow showers and the strong wind, with its bitter "stang," sweep down upon us, and the hills are blotted from our eyes by the whirling winter's curtain.

Aberdeen. W. Kelly.

THE GREAT GOLDEN KNAPWEED.

Although in some respects a somewhat coarse-growing plant, Centaurea macrocephala, the great golden knapweed, deserves a little more consideration than it has received for some years, as it is by far the most imposing and effective of the yellow knapweeds, and, when planted aright, will serve an excellent purpose in the majority of gardens. It has been, however, somewhat neglected, and in unsuitable conditions its boldness and vigour have not been fully displayed, so that its true worth has not had full scope for recognition.

To do the great golden knapweed full justice it ought to have a good and rich soil, in which it can develop its full stature of four or five feet, its massive leaves, and its great heads of golden-yellow, which, to the unobservant, remind it of some noble yellow thistle. The writer once sent a plant for exhibition to a small local show, and many admired this "yellow thistle," as they called it, as it stood at its full height in the hall.

In the garden its true position is in front of some dark shrubs, or far back in the border, but never crowded up, so that it may stand out in "splendid isolation" from other things, and have sufficient room to exhibit its characteristic features. It must also have good soil, and occasional waterings with weak manure water in dry seasons will improve its effect in every way. It can also be employed as a cut flower where bold blooms are required for large vases or other methods of hall decoration.

Centaurea macrocephala can either be increased by division or raised from seeds. The latter afford a simple means of securing a good group in the course of a year or so, and they may either be sown under glass in early spring or in the open in May. With the ordinary treatment of seedlings of hardy perennials young plants will flower the following year.

S. A.

Primroses and Polyanthuses.—Where seedlings of these are flowering for the first time make note of the best types or forms of them. As they pass out of bloom, or soon after, they should, if the ground is required for summer bedding, be lifted. Carefully divide them into single crowns, and replant in the reserve garden or border, where they will complete their growth. Moderately heavy soil suits them best if enriched with a dressing of well-decayed manure. An open position is not necessary; plant about nine inches apart each way and good vigorous growth will ensue. Any surplus crowns or clumps may be planted out in the wild garden or woodland.—E. F. Hazelton.

NEW PLANTS, ETC.

ODONTOGLOSSUM CRISPUM QUEEN OF THE EARTH.

A very handsome and beautiful variety, and one that is alike remarkable for its fine form and brilliant colouring. The margins show a little fringing; the ground colour is deep rosy blush, and on this are numerous heavy blotches of intense and vivid wine-red colouring. The plant exhibited carried a fine spike of flowers. F.C.C., R.H.S., April 28. De Barri Crawshay, Esq., Rosefield, Sevenoaks.

ODONTOGLOSSUM NÆVIUM.

An old species, but one not often seen nowadays. It is somewhat like a small edition of O. cirrhosum. Found in 1842 by M. Linden, it was introduced to cultivation by M. Funck, and sent out from M. Linden's establishment at Brussels, but it has always remained rather a rare plant. The sepals and petals are narrow and wavy, white, freely spotted with dark-red. Lip elongated, white, spotted crimson, and with a yellow disk. A.M., R.H.S., Messrs. Armstrong and Brown, Tunbridge Wells.

ODONTOGLOSSUM PLATYCHEILUM SUPERBUM.

An interesting and rare Guatemalan species, with rather small flowers in which the broad lip is the most conspicuous portion. In the type the lip is white with rose spots, but in the variety superbum the colour is soft pink with deep rose spottings. A.M., R.H.S., April 28. Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

CIRRHOPETALUM WENDLANDIANUM.

A pretty and interesting species, reminding one of C. picturatum. The flowers are about five inches long, produced in umbellate fashion from the apex of a slender spike; the colour is tawny yellow, heavily streaked and shaded with red. A.M., R.H.S., April 28. Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

ÆRIDE VANDARUM KIRKE'S VARIETY.

A blush-tinted variety of the old, pure white, terete-leaved ærides. The flowers are very pretty, and a couple of inches across. A.M., R.H.S., April 28. Mr. Huxley, gardener to Mrs. Bevington, Murle Wood, Sevenoaks.

HIPPEASTRUM PURITY.

With the exception of a little green in the throat, this variety is pure white, and it has remained pure during the past three years, whereas Snowdon, another beautiful white seedling, has developed some colour since it was first shown. Purity is of good shape and size, and marks a distinct advance in hippeastrums. F.C.C., R.H.S., April 28. Mr. C. R. Fielder, gardener to Mrs. Burns, North Mymms Park, Hatfield.

AURICULA PHYLLIS.

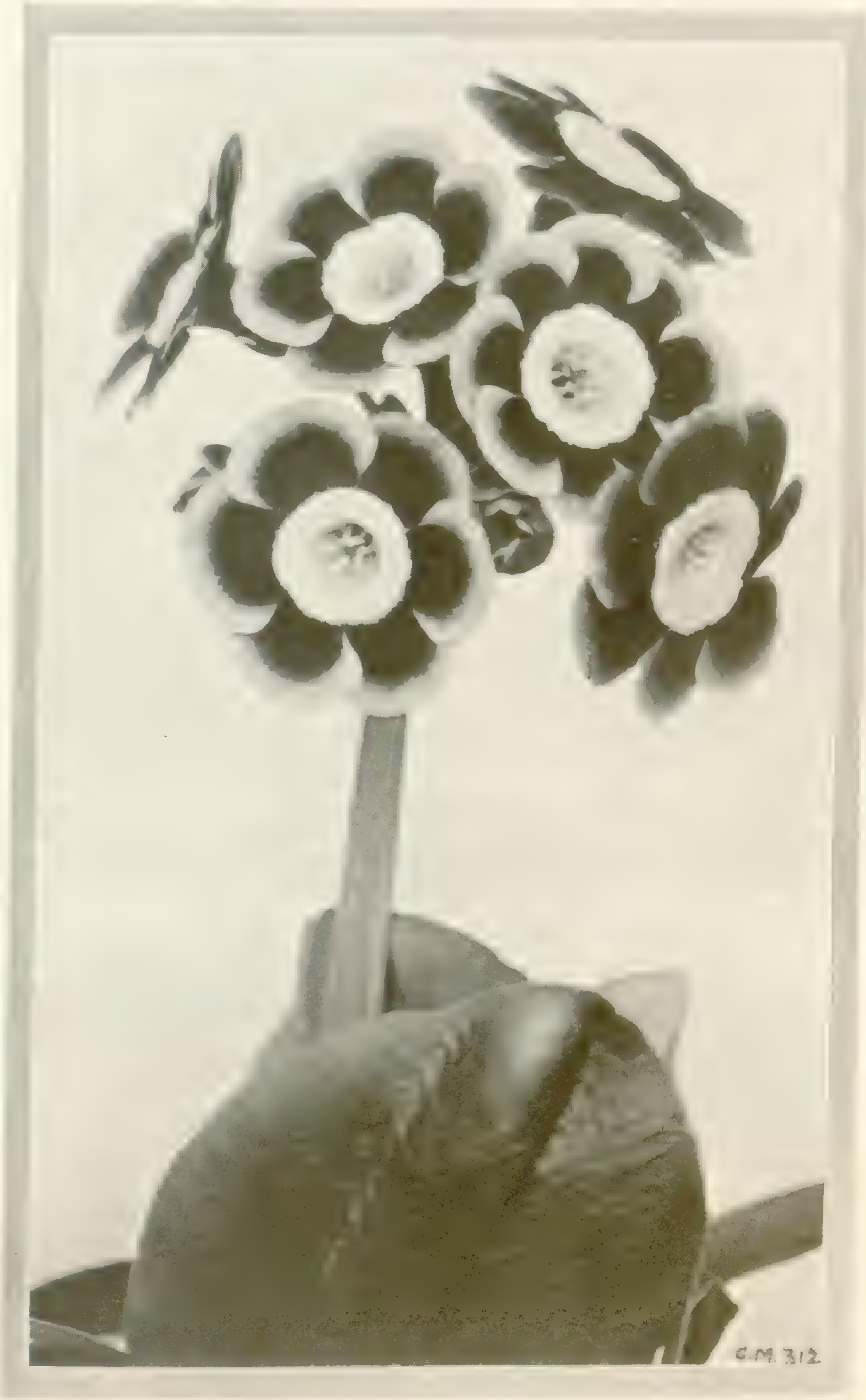
A very bold and beautiful alpine auricula with bright and deep rosy-purple colouring around a well-defined central cream-coloured area. The flowers are large, and the variety is evidently a strong-growing one. A.M., R.H.S., April 28. Mr. Jas. Douglas, V.M.H., Edenside, Great Bookham, Surrey.

AUBRIETIA LAVENDER.

An especially fine and useful variety that has particularly large flowers, borne in the greatest profusion. The colour is soft lavender, hence the name. The variety is also notable for its late flowering; the pans shown had been flowered in a cool house, and were then considerably in advance of their time of flowering out of doors. A.M., R.H.S., April 28. Mr. Maurice Prichard, Christchurch, Hants.

REHMANNIA ANGULATA.

The wonderful popularity of this Chinese greenhouse plant makes us almost forget that it is new. It was found in the provinces of Hupeh and Kweichau by Mr. E. H. Wilson, when collecting for Messrs. Jas. Veitch and Sons. It will grow from 4ft. to 6ft. high, but in pots it seldom exceeds 3ft. The large, campanulate, gloxinia-like flowers, with their bright rosy-pink colouring and yellow, brown-marked throat, are very beautiful. At Kew the seeds are sown in gentle heat in May, and the seedlings are grown in a frame until the following May, when they are planted out in an open, warm border; they grow away freely, and by July are in full bloom, and from four to six feet high. "Bot. Mag.," t. 8,177.



NEW ALPINE AURICULA, PHYLLIS.

Flowers rose purple and cream. A.M., R.H.S., April 28. Mr. J. Douglas, V.M.H., Great Bookham, Surrey.

CODONOPSIS CONVOLVULACEA.

A twining perennial, not quite hardy, bearing blue flowers sparingly. The plant might be designated a climbing campanula. The species comes from Eastern Asia, where it appears to be widely distributed. The flowers are 2½ inches across, bright blue, and with the segments cut down right to the base. As few flowers open at once, the species does not promise to be of much horticultural value. "Bot. Mag.," t. 8,178.

PYRUS TSCHONOSKI.

A rare and beautiful Japanese tree that has proved quite hardy at Kew. It has an erect, open, and rather formal habit, and flowers in spring, producing white, pink-tinted flowers in umbel-like racemes; these are followed by globose greenish-yellow fruits, very harsh and gritty. "Bot. Mag.," t. 8,179.

PYRUS ARIA MAJESTICA.

A very handsome and effective garden variety of the popular White Beam tree, and probably the very finest form of the species. It is perfectly hardy and flowers and fruits regularly, and ought to be extensively cultivated in gardens where there is ample room for its development. The flowers are deep cream-colour, and comparatively small, though freely produced; these are followed by loose, nodding corymbs of brilliant red fruits, each fruit being about half-an-inch in diameter. "Bot. Mag.," t. 8,184.

POTENTILLA CONCOLOR.

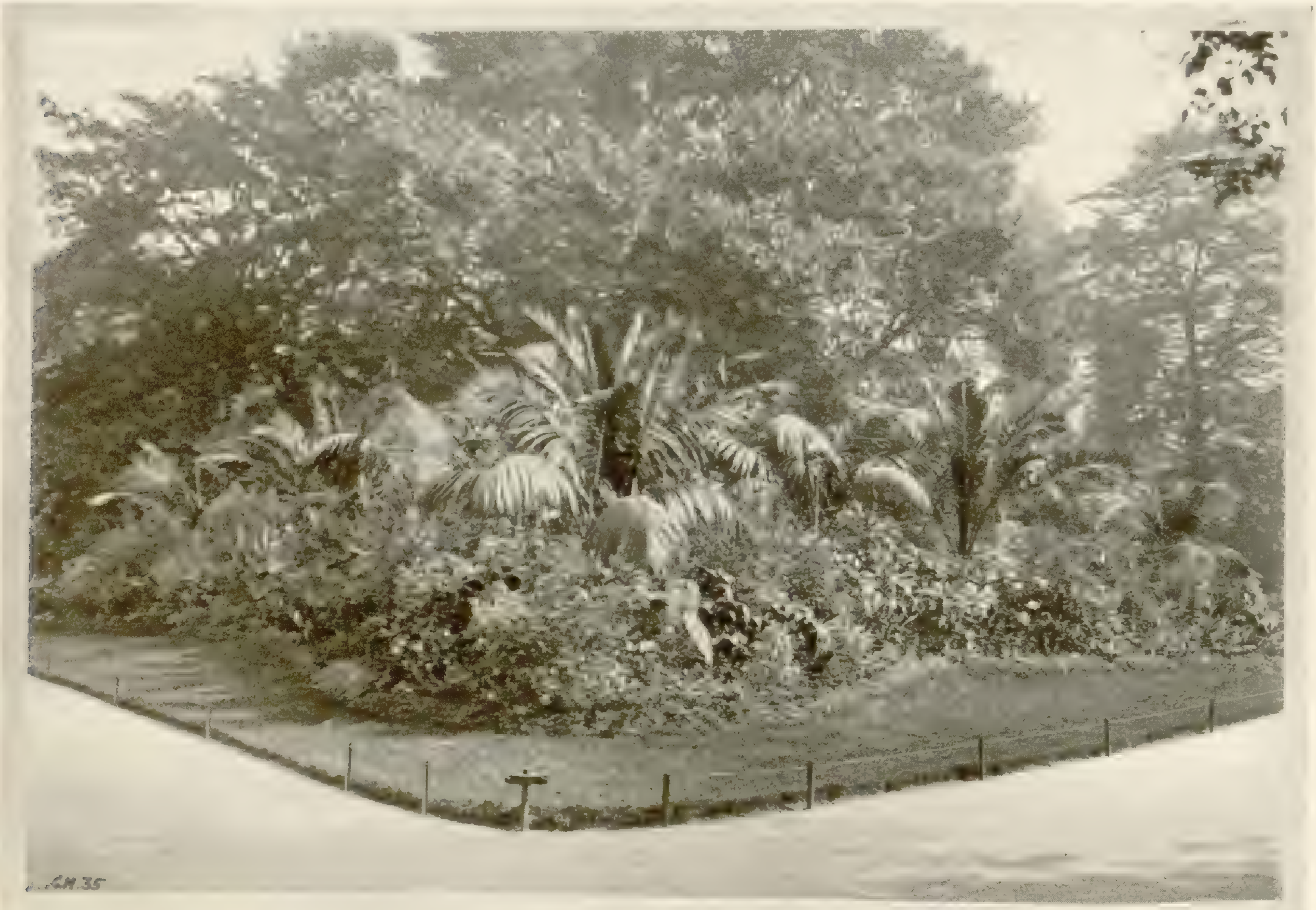
A handsome, useful, effective, and hardy species from South-Western China, and introduced to cultivation by the Messrs. Bees, Lim., Ness, Neston, Cheshire. It grows somewhat over a foot high, and bears bright golden-yellow flowers 1½ inches across. "Bot. Mag.," t. 8,180.

SUB-TROPICAL PLANTS IN THE GARDEN.

In the milder parts of the British Isles, and especially in well-sheltered positions, the use of sub-tropical plants in, or in connection with flower gardens and pleasure grounds, add an important feature to the attractions of the garden, in which they may be used in such a way as to form a pleasing contrast to the flowering plants. Beauty of form is at least equal to beauty of colour among plants; and as most of the foliage plants used are selected for their nobility, either of leafage or dimensions, or have some decided attraction in the way of contour and habit, from the elegant palms and massive musas down through the lesser subjects which form the group used in groups they should be the principal objects in such groups, and any plants used below them should be subordinate in every way. A little ingenuity in the treatment of the regulation "bedding plants" will give surfaces sufficiently broken in themselves and happier effects than when they are surmounted by plants of totally different character.

It will be seen from this that I favour particularly the grouping of our more massive plants by themselves quite away from the "bedding plants," and that they can be made very effective in this way is certain. In the case of fine individual specimens of palms and musas, these look well when springing as single specimens from the turf in a well-sheltered place, backed up by shrubs. Other things may be grouped very effectively, but the groups start, and require plenty of room from the time they are raised until the time when it is safe to plant them out, as each plant should be a perfect specimen, and be kept as such, which requires careful nursing and free root action from start to finish. In all but the huge public parks and gardens or the larger private gardens the accommodation for such things is generally very limited, and where this is the case the amount of sub-tropical gardening should be limited also.

For the various palms, of which Chamærops humilus, Livistonia australis, and L. chinensis, Phœnix dactylifera, Seaforthia elegans, Trachycarpus excelsa, and T. Fortunei, etc., winter storage of considerable capacity must be provided, and the same may be said of the various tree ferns, Alsophila australis and A. excelsa, Cyathea



A BOLD AND HANDSOME SUB-TROPICAL EFFECT PRODUCED IN REGENT'S PARK IN 1907.

known to us as sub-tropical plants, no apology is needed for their introduction into suitable positions where they are not incongruous, and where they may be shown in a more natural way than they are seen when cooped up in houses in which perforce the majority of perennial tender plants have to spend the greater portion of their time in this country.

Needless to say, the choice of suitable positions, or positions which seem suitable to individuals, vary largely even after making sure that the requisite shelter and warmth during the summer season has been secured. Personally, I must express the view that the method of using them as "dot" plants over groups of the usual run of dwarf-flowering subjects is to me quite distasteful. One reads of their value for "breaking up" the flatness of beds filled with dwarf-flowering plants, but to my mind the remedy here is worse than the disease, for the subjects do not mingle well. If massive foliage plants are to be should not be mixed in such a way as to destroy the individuality of the various species used. It is far better to use fewer species than it is to confuse the eye by planting too many species in the same group, and rather than do this I would go to the other extreme, forming each group of few species and confining these to plants that have much in common.

Of course, all this is a matter of individual taste, and it must be left to the grower to do his best under the circumstances presented to him, and to provide the cultural details and all that pertains to successful culture for, after all, good culture tells almost more than anything with the value of such things in the garden.

Sub-tropical plant culture for garden effect is not a thing to be lightly entered on, without thought. The accommodation under glass must be considerable for the perennials, and also, even for the annuals, such as the wigandias, ricinus, solanums, and others, for these must have a good dealbata, and Dicksonia antarctica, Musas ensete and M. superba, and the various cordylines used. Other subjects, such as tender bamboos, erythrines, aralias, ficus, cannas, phormiums, agaves, eucalyptus, etc., have also to be provided to have the various subjects well represented, so that it may be readily understood that sub-tropical gardening, when carried out to any extent, is a severe strain on the resources of the garden.

Some of the subjects which may be chosen are hardy, or nearly so, and few gardens need be without their specimens of gunnera, yucca, rheum (in variety), Crambe cordifolia, and, in fact, scores of other plants which are attractive from the foliage point of view, and well worthy of cultivation as such, but no method of planting that goes to destroy the individuality of the plant should be entertained by those who wish for the best results.

J. C. Tallack

Shipley Hall Gardens.

PANSIES.

There's rosemary, that's for remembrance, pray you, love, remember; and there is pansies, that's for thoughts.
Hamlet iv., 5.

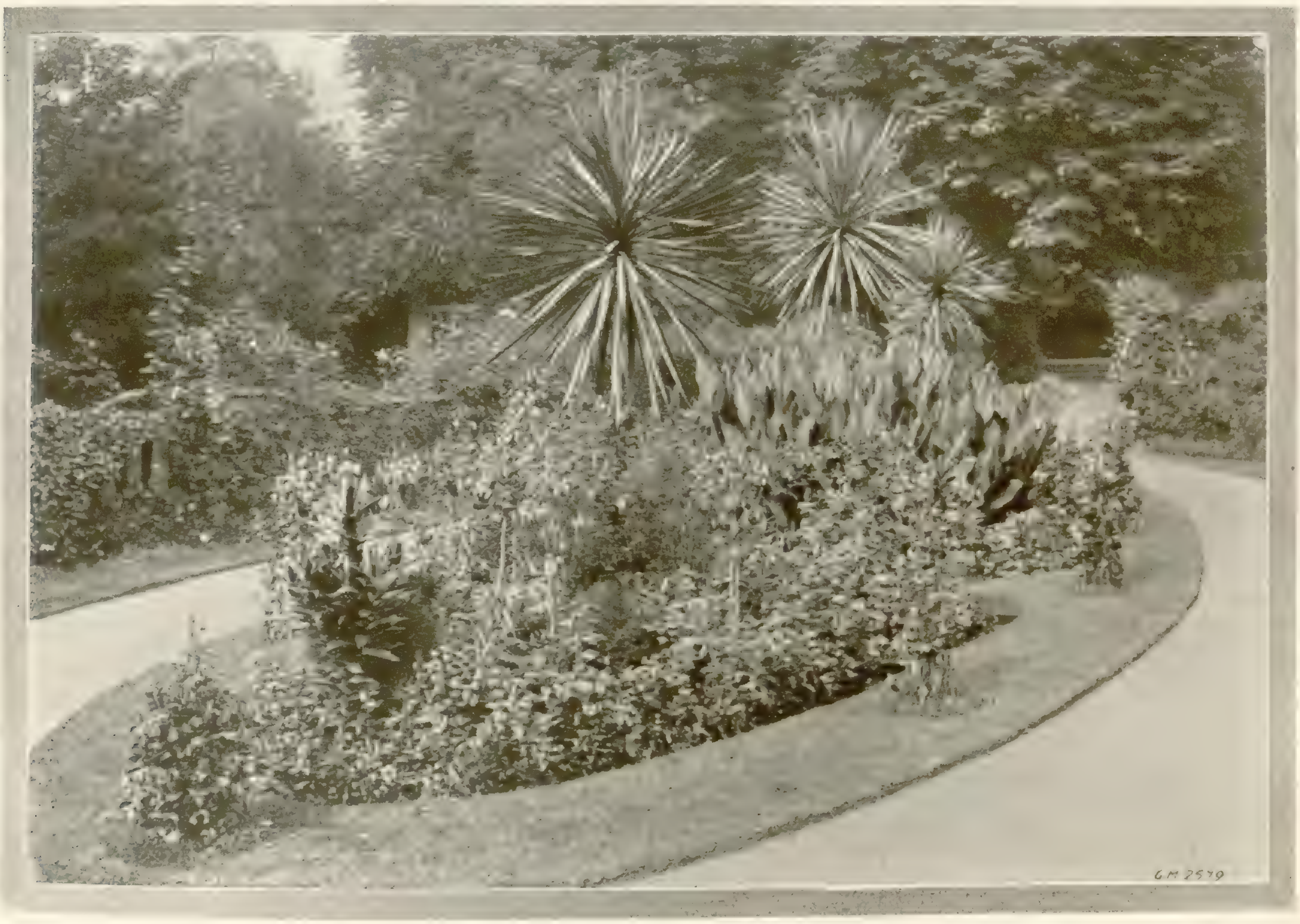
Pansies of a good strain are essentially florists' flowers, and the ability to pick out good blossoms from a crowd of common ones is the work of a true florist. The ordinary amateur regards all pansies as pretty, as they undoubtedly are; though to one who knows, the common types of the flower only serve as reminders of the finer forms, and make him regret that people should grow inferior varieties, and be content with them. The immense popularity in recent years of the tufted pansies (usually known as violas) has done not a little to lessen the growing of the older form of pansy, especially in the South of England, where dry, hot summers are so often unfavourable to success with it; but the latter will always have a place of its own in our gardens, though it is rash to prophesy at any time about fashions in flowers as in anything else.

The pansy is easy to grow, for we grew it in our little gardens in our childhood, and we see it in cottage gardens everywhere to-day. But to grow the best strains, and to grow these to perfection, requires liberal cultivation and certain conditions, namely, a deep rich moist soil, and, in the South of England, partial shade. I remember as a boy seeing my father having a flower bed dug out to a greater depth than I was high, and barrow loads of good soil put in to replace the yellow clay taken away, while the pansies which grew on that bed afterwards so impressed my boyish fancy that I remember them still. Whatever the natural character of the soil, the aim must be to give the pansy a soil which is deep, richly manured, and capable of retaining moisture, the latter condition, especially if the soil is a light one, being helped by the use of cow manure.

One cannot always depend upon getting a really fine strain of seed, partly because the pansy has a strong tendency to revert to its less highly-bred ancestors, and partly, perhaps, owing to a practice I have observed in some seed grounds of growing the finer sorts mixed with inferior ones, and presumably saving the seed from all alike. As the common sorts seed so much more freely than the choice ones, it is not to be wondered at that often such a very small minority of the seedlings are of much value. One indication of the character of the seed we buy is the quantity of it, a large quantity of seed of the best sorts never being given even in half-crown packets, as they are such shy seeders.

Seeds should be sown in early July, in light soil composed of leaf mould, rotted turf, and sand, and the pans set in a cool, shady place either in a house or cold frame, care being taken that the young seedlings do not get drawn up, as this is an awkward time of the year to raise choice seeds successfully. The seeds should be sown very thinly, even being put in separately if there is very little of it. When in the third or fourth leaf they should be pricked out into pans or boxes, making two operations of this, as some seedlings will be much in advance of the others, and it is from these latter that we may get the choicest sorts. An object to aim at is to get the plants well established before the winter sets in, and this in the beds in which they are to flower, when they are not likely to be injured by any ordinary winter. Should the winter be of exceptional severity an inverted flower pot over each plant will give all the shelter necessary. If the bed or border for them is not likely to be ready before late October it would be as well to plant them out from the pans or boxes in late August or early September, and then move them again with a good ball of earth. If the ground has been properly prepared they may be put out a foot apart, as the pansy is a greedy feeder and exhausts the soil of both food and moisture within a considerable radius.

The plants will grow right through the winter, except in severe weather, and good fat buds will be showing in March, producing some fine blooms in April. When planting in spring the results are not nearly so good, especially if the season is a dry one, the finest blossoms usually being produced in early May, which is before spring-planted pansies have had a chance to get well established. The quality of the blooms begins to deteriorate rapidly in the South of England when hot weather sets in, and as soon as this begins it is best to pick off all the blooms and buds and give a liberal top-dressing with rotted manure and turfy loam, followed by a thorough soaking. This may be followed after a week or so with liquid manure, when fine blossoms will again be produced. A repetition of the process when the plants again show signs of exhaustion may prolong the flowering season through the autumn, beautiful flowers sometimes being produced at Christmas in an open season. In the dampness of autumn, however, slugs must be guarded against, as they are very fond of the blossoms, and a single bite spoils the beauty of a bloom. The renovation of a bed of pansies may be arranged so that they are at their best just when we want them to be, it being convenient, for instance, to do it just before going away



ARRANGEMENT OF FLOWERS AND FOLIAGE AT GUNNERSBURY HOUSE.

from home for a time, so that they are in full beauty when we return.

The amateur making his first attempt at growing pansies of the finest strains from seed will be unfortunate indeed if he does not get a few which he will desire to propagate, and it is safer to rely upon cuttings than upon seed, even when the seed is saved by oneself. The best time for propagation by cuttings is July and August, the former by preference, and the best material for the purpose is obtained from the young growths from the centre of the plant, which, if pulled out carefully, will generally have some rootlets already formed or about to be formed, and quite a number of these may sometimes be obtained from one clump. Some put them in sandy soil in a frame, while others dibble them in rows on a border in a shady position, and keep them moist for a week or so, remembering that slugs and snails are very fond of them at this stage. In October they should be strong enough to plant out in their permanent positions, where they will begin to flower early in the spring.

If some favourite sorts are scarce, the old clumps may be cut up in October or February, each piece with a root attached being planted separately, and these will make fair plants the following spring, though sometimes rather straggling, and they will not produce such fine blossoms as those which were struck in the summer.

Many prefer to buy plants of named sorts, instead of going to the trouble of raising seedlings with its doubtful results and somewhat long period of waiting. If we buy them from some leading nurseryman who keeps a good named collection, it is more satisfactory to make a list of those varieties which have taken our fancy at the exhibitions rather than to leave it to the nurseryman to send so many sorts at so much a dozen. It is best to get these in the autumn if good results are expected the following spring. Another method is to buy plants in flower as displayed in the shop windows, costers' barrows, etc., which has the recommendaton of enabling us to choose our own sorts as regards flower, though possibly not true to name. Generally these are displayed too late in the season, April to May, for any good results to be obtained the same year, and it is better to plant them in good ground in a rather shady place, keeping the blossoms picked off and the plants well watered, so as to encourage the growth of suitable material for cuttings as described above, when a very good stock may be obtained for the next year.

No attempt has been made here to give a list of the best named varieties, as so few people, comparatively, know them as named sorts. It may be mentioned here, however, for the benefit of the uninitiated, that florists' pansies are divided into two classes, the Fancy or the Belgian, and the Show or English, the latter being further divided into three sections, white ground, yellow ground, and selfs. Alger Petts.

Gardeners' Sick Children.—An appeal is being made on behalf of the funds of the Hospital for Sick Children, Great Ormond Street, W.C., in connection with the opening of the new wing by Her Majesty the Queen in June. This new wing is for out-patients, and has been built by Mr. W. W. Astor, in memory of his late daughter. Mr. S. Johnson, the secretary of the hospital, informs us that in one year no fewer than 123 children of gardeners were treated at the hospital; any assistance in cash, or in kind for the bazaar, will be thankfully received by Mr. Johnson.

AMERICAN CARNATIONS.

The American interest in the perpetual carnation is still unabated, new varieties are constantly being raised, and subjected to critical trials, in the hope that they may surpass the standard varieties. It is worthy of note that many of the newer sorts are rapidly ousting older varieties from popular favour, and the grower who would be up-to-date in carnation culture must be fully alive to the happenings in the carnation world.

The successful début in this country of Beacon, Winsor, Aristocrat, etc., will pave the way for the varieties which are to follow them. The most one can do is to keep in touch with these newcomers, give them a sound trial if possible, and compare notes with the especial favourites of one's collection.

Probably the grandest of all carnations of recent origin is Afterglow, a splendid Lawson shade of pink, which was shown with such marked success at Washington. Its career from the fall of 1907 up to the present moment has been one series of triumphs, as it scored at Rhode Island, Philadelphia, St. Louis, Indianapolis, etc., and won four notable prizes at Washington. It also gained a silver medal at the Boston Spring Show, and the cordial approbation of the judges, who regarded it as "first class in colour, form, length, and stoutness of stem."

Another splendid novelty which will appeal to many growers is Andrew Carnegie, which can best be described as a scarlet Harlowarden, with the same free open habit and floriferous character as that standard crimson. It is not often that we get such useful sorts, and one may be sure that Andrew Carnegie will be welcomed on this side of the Atlantic. A good scarlet, which is noted for its clear colouring and fine form is Defiance, an attractive medium-sized variety, which is credited with being very free. An extended trial should be accorded to Welcome, a newcomer of the Lawson type, which carries the same shade of pink as Winsor, and has stems as long as Enchantress.

Speaking of Enchantress reminds me of the various white forms which have arisen from time to time, but which have not made much headway in this country. It seems, however, that there is a vast deal of difference in them, but Messrs. Pierson, of New York, have probably the best type (this met with the approval of the committee at Washington) in a good-all-round carnation of spotless whiteness. In May we note a serious rival to Enchantress; it is a charming light pink, free, of good size, and with long stems. As yet it is not greatly known, but good prices are obtained by growers for the blooms. Red Chief, which I have noted in a previous issue, is popular, on account of its throwing a heavy crop of blossom at Christmas, though for continuous flowering the orange-scarlet Beacon is exceptionally useful. Another scarlet, Mrs. George A. Frost, has been certificated at Boston, and gives promise of a useful career.

A goodly number of carnations were displayed at the recent Boston (U.S.A.) Spring Show, and it is worthy of note that the older varieties were well to the forefront. In the dark pink class Mrs. Lawson secured the two leading prizes. Harry Fenn (which seems at its best during the spring), took first and second for crimson, the old Octoroon being third. The pale-pink group resolved itself into a struggle between Enchantress and Winsor, the former securing first place. Of the scarlets it was Victory all the time, this famous variety sweeping the board. Lady Bountiful proved the best white, closely followed by White Perfection. For the best vase of 100 blooms, Helen Goddard took the lead, proving that so-called secondary varieties are often worthy of more attention.

These competitive classes for carnations have a distinctly educative interest, and help to popularise this most charming section of the carnation family. It only remains to be added that, as yet, the private growers in this country seem to fight shy of carnation exhibiting (as far as the perpetuals are concerned), a fact which one can but deplore, seeing that the trade growers make such good displays, and are doing so much to further the interests of the perpetual carnation. P. S. Hayward.

SAXIFRAGA BOYDI ALBA.

Although I always deem it right to express my regret that this beautiful saxifrage has been called by a name which leads us to infer that it is a white counterpart of the scarce, but charming yellow-flowered S. Boydi, it is so valuable that one cannot refrain from writing a note upon it at present. It is much freer and easier to grow than S. Boydi, which is now most difficult to obtain, only a few nurseries possessing a stock of this charming flower, and it is now little cultivated in the south. S. Boydi alba may, however, be placed in a different category, as it is a good grower, and is, in this, superior to that valued early saxifrage, S. Burseriana. It is more robust, more vigorous in every respect, and it does not seem so liable to that failing of S. Burseriana, its becoming brown and dying off in the centre. It is also fully earlier with me, and even in this dull winter came into bloom in January, flowering also at the same time in the garden of a friend a short distance away.

But, although more easily cultivated than S. Burseriana, I have discovered that it is greatly improved by covering it with a sheet of glass elevated a few inches above the plant by one of Wood's glass holders or some other suitable support. This is not only kept over the plants in winter, but in summer as well, and the most suitable situation seems to be one which is partially shaded from strong sun. My best plant is one well raised on my rock garden, planted in a hard and gritty loam of poor quality, shaded from the sun by taller plants, and covered with a piece of glass on Wood's glass holders. All the year it is the picture of health, and from early in January flowers had begun to open. These blossoms are pure white, and equal in size to those of any of the Burseriana varieties. D.

Salvia Pride of Zurich.—We have now several forms of the Brazilian Salvia splendens, and the typical kind as well as the varieties have long been justly valued as flowering plants for the greenhouse Late summer and autumn, however, are usually regarded as the flowering period of this member of the sage family, but in the variety at the head of this note we have one that can be had in flower during the spring months. This is fully borne out by the fact that at the last two meetings of the Royal Horticultural Society Messrs. H. B. May and Sons, of Edmonton, have shown numerous examples of this salvia thickly studded with their bright scarlet blossoms. For summer bedding Salvia splendens has much in its favour, but up to now its comparatively late season of blooming was a decided drawback. With this compact-growing and early variety, the just-named difficulty will disappear. As Salvia splendens is of easy propagation and culture, this newer variety (for it is not absolutely new) should soon be generally met with in gardens.—W. T.

THE APRIL SNOWSTORM.

As in many other parts of England, the fall of snow at Foots Cray was very heavy, and quickly enveloped trees and shrubs, and, indeed, vegetation of all descriptions, in the folds of its white fleecy mantle. The fall in the south, as in the north, was so heavy as to cause considerable inconvenience by the stoppage of some of the means of locomotion, and to give rise to considerable apprehension as to the safety of coniferous trees and evergreen shrubs on which the snow had effected a lodgment. Notwithstanding the inconvenience and the anxiety to which the snow gave rise, one could not help admiring the delightful pictures it produced in gardens well furnished with trees and shrubs. Our friend, Mr. C. E. Shea, was not slow to recognise the possibilities of picture making which his delightful gardens at Foots Cray afforded, and promptly taking advantage of his opportunities he obtained some beautiful photographs. He very kindly sent us a selection of his studies in snow scenery, and, with his customary kindness, readily acceded to our request to publish some of them. Mr. Shea also sent us a note on snow photography which we are well assured will be much appreciated by those of our readers who include photography among their hobbies. Photographing snow scenes is so extremely difficult that the advice which so expert a pictorial photographer as Mr. Shea can give is especially welcome. The chief difficulty in photographing snow is to retain its texture, as is so admirably done in the examples that we have the pleasure of reproducing herewith, and thereby avoid the large areas of white paper, and the black shadows that are so common in pictures of snow scenes produced with the aid of the camera.

[Photo: O. E. Shea.

A SNOW SCENE IN "THE ELMS" GARDENS, FOOTS CRAY, APRIL 25.

Snow photography is one of the most difficult branches of a very fascinating art. I say art, although pictorial artists deny that photography can be legitimately included in the term, a proposition which I distinctly deny. As with every other branch of photography, excellence is only to be obtained by a correct realisation of the true standard which alone should be accepted as correct. The two essentials of a typical snow photograph are "texture," as it is called, in the snow, and at the same time detail in the shadows. The fault of many snow photographs is that the snow has no gradations, and the shadows are almost jet black--the result of under exposure. Many, if not most, snow photographs are taken as snapshots, with the above result. To procure gradations and texture in snow a slight, and only a very slight, over exposure is essential. This, followed by a slow and carefully "restrained" development, is the secret of success. To obtain this correct over-exposure a "time" exposure is absolutely necessary, a very small "stop" being required to permit of this. Of course, under certain conditions of intense light a snapshot exposure may give what is wanted, but this is a chance result. To make the required result a certainty the course which I have indicated is the true one. Of all schools for snow photography the experience gained in the High Alps is perhaps the best. Charles E. Shea.

[Photo: O. E. Shea.

SHADOWS ON THE SNOW, "THE ELMS," FOOTS CRAY, APRIL 25.

THE CROCUS TULIP.

One of the brightest of the tulip species is that sometimes called the Crocus, or Celsius's, Tulip (Tulipa australis, syn. Celsiana), a pretty little plant which has never yet received the due recognition its merits would justify, and which might be more frequently utilised in quantity in the gardens of the many, whereas it is at present only met with in those of the few who are especially devoted to hardy bulbous flowers. It deserves a better appreciation than this, as it is one of the prettiest and most showy of the really dwarf species, particularly where it is in full sun, when its large flowers spread out almost flat, and resemble some magnified yellow crocus. When the flowers are closed they are interesting also, and the exterior tinting of reddish-brown and green is then well in view. The flowers are smaller than those of some of the more popular species, but they are quite large enough for the stature of the plant, which is from six to eight inches, and even a few more inches.

Tulipa australis is one of the stoloniferous species, and where it is happy increases with fair freedom.

The Crocus tulip is a native of the South of Europe and the shores of the Mediterranean, and in cultivation requires a warm and sunny position in a light and rather sandy soil. Here it should be planted about two inches deep, the bulbs being set about two or three inches from each other if a close clump is desired. It is a charming little tulip for the rock garden, and does pretty well in the border, but it is not sufficiently robust to hold its own well in the grass, which would be its best situation were it amenable to this method of cultivation in our climate. A bright little flower, T. Celsiana is now obtainable at a moderate price in autumn, when it should be planted. It opens in the early days of May, as a rule. S. Arnott.

Horticultural Club.—Owing to the annual dinner of the Gardeners' Orphan Fund being held on Tuesday, the 12th inst., and to the first day of the Temple Show being on Tuesday, the 26th inst., no house dinner of the club will take place during May. Dinner will be served at the club, at 6.30 p.m., on Tuesday, May 26, for those members who may wish to dine together after the show.

HYBRIDISATION OF ROSES.

The following paper was written by Mr. Alexander Dickson, of Messrs. Alexander Dickson and Sons, Newtownards, Ireland, and read before the American Rose Society in Chicago, March 27, 1908:

It was with considerable hesitation that I consented, at the request of your society, to write a paper upon hybridisation and cross-pollination in relation to the rose. I may say at once, it is a request that I have refused many times from similar organisations here and elsewhere, because I have always felt, and indeed still feel, it is a subject upon which it is extremely difficult to write a satisfactory paper. The subject is one which cannot possibly be dealt with satisfactorily in a paper such as the present, and the chief difficulty one has is selecting the lines upon which to write, or the point of view from which to discuss it. I will do my best to make the paper as interesting and instructive as I can within the limited scope at my disposal. I have given the subject my most careful consideration, and I am convinced that the best method of dealing with the subject in this paper is to give you, in a condensed form, some of the results which have accrued from the labours of my brother and myself, extending over a period of almost thirty years.

From a Practical Point of View.

I would ask those who hear this paper read, and those who may read it for themselves, to remember that it is written by a professional rose grower, and, therefore, by one to whom the practical results, from a commercial standpoint, were of the most vital importance, and of necessity this point of view had always to be borne in mind by my brother and myself in our line of experimental inquiry; and it is from this point of view that I deal with it.

Hybridisation is a subject of intense interest, and the practical application of the science opens up an infinite and even inexhaustible field of inquiry, but those of us who are professionally engaged upon this branch of horticulture must abandon, to some extent at least, the scientific aspect, in favour of the practical. With the stern realities of life facing me, I have many times, contrary to my desire, been compelled to abandon scientific lines of inquiry, as against the production of new varieties of commercial value—a situation I regretted, but could not help.

After thirty years' steady and continuous work I am inclined to the opinion that the further one pursues the subject of hybridisation, the greater the field for exploration. I have often thought, while pursuing my work and watching the results, that the effect was much like that produced when climbing up a steep mountain—the farther one rises the more the plains below are opened up. I will try to explain more fully as I go on exactly what I mean, and the foregoing observations are made with a view to render less keen the disappointment which I feel will inevitably follow the reading of this paper.

Much Due to Chance.

I am conscious that my observations will be read before, and by, men of practical experience in horticulture, and particularly in the culture or advancement of the rose, and by men keenly intent upon the development and improvement of the rose; and I am sorry, for this reason, that I can give little practical assistance to those who are desirous of entering the field of hybridisation on their own account. I may, however, render their disappointment less acute. The main reason why I can render little practical help is that, when all is said and done, hybridisation is a science of pure experiment, or rather chance, as I can easily show. To do this it is only necessary for me to assume that everyone—at least everyone interested in horticulture—knows that, so far as seed-bearing plants are concerned, they will reproduce their kind in some shape or form, perhaps with some variation, or perhaps exactly similar. And it follows that by the fertilisation of different varieties of the same species, new varieties, or, at least, varieties with some distinctive feature, may be produced. It is a different matter, however, to reduce the chaos which results from indiscriminate cross-fertilisation to something like definite order—a result far beyond my ambition or the scope of this paper, if indeed it is at all possible. All I can do in this direction, and indeed it is very little, is to give some results of our labours in hybridisation.

Early Discouragements.

We began work in 1879, and naturally our first operations were upon what were considered the finest show varieties of that day. Naturally, we chose parents of the choicest colours, having beauty of form, and, as far as possible, vigour of habit. The hope, of course, was that the fertilisation would result in varieties of a different kind, with at least some of the qualities for which the parents had been selected. The results for many years were disastrous.

Keen and bitter disappointment followed our experiments. We, however, persevered, always upon fixed lines, carefully recording our crosses and results, making a close and careful observation of the most important features of the offspring of the cross; and I regret to say that in the majority of instances there was nothing but dismal failure to record. I think I can safely say that the most certain result of our crosses in the early stages of our experiments was to convince us of the absolute uncertainty of what our results would be.

This prevails even now, though in a lesser degree. Possibly this is one reason why rose hybridisation is so intensely interesting. There is always and ever the element of uncertainty in it, so dear to human nature. One never knows what the fertilisation of any two varieties will produce, or, more correctly, how many different varieties. One seed pod containing four seeds may produce—and has produced, to my knowledge—four seedlings absolutely distinct in every conceivable respect. Many and many a time I have seen produced from the seeds sown from one hip half a dozen seedlings, absolutely distinct in colour and form, some as single as the ordinary dog rose, and some so full in substance that it was impossible to get them to open even under glass.

A Change of Method.

In the early eighties, when we began to see the results of our labours, we abandoned the original basis of our experiments, namely, the fertilisation of the better varieties of hybrid remontant or perpetual, and began a series of cross-pollination between the hybrid perpetual and teas and Austrian briars, and then using the results of this first cross in a systematic course of inbreeding. The main object which we had in view was to produce varieties of roses at once vigorous in their habit and continuous in their bloom, at the same time retaining the absolute essentials of all good roses; namely, beauty of colour, perfection of form and delicacy of perfume. It was, of course, a great ambition, and how we have succeeded we must leave the world to judge. Broadly, I would say that such success as has attended our labours is due far more to the careful selection than to any defined plan of fertilisation.

As a broad basis of our experiments, we took as parents such varieties as appeared to us to embody the chief elements of our ideal, and worked steadily from these. We had, of course, to experiment upon a very extensive scale, and my point will be readily appreciated when I say that we were only able to retain for use, either for further fertilisation or for commerce, about five per cent. of the seedlings raised.

To appreciate the labour this entails upon the hybridiser, one must follow the rose from the hip until it reaches maturity. In hybridisation, carried out upon a systematic plan such as ours, it means that the plants with which we are working have to be specially selected, planted, and grown, and the blooms fertilised. There is then the period required to ripen the hip, and in Ireland this takes considerable time, owing to the cold and dampness of our climate. Then comes the sowing of the seed, and the attention and care during the period of germination.

In this respect it is interesting to note the wide differences in the period of germination in the different cases. In some instances the seed will germinate in two or three months, and in others I have known it to lie dormant from twelve to fifteen months. I have never been able to give any reason why this should be so, and, particularly, why there should be marked differences in the periods of germination in seeds taken from the same hip; yet there is very frequently a marked difference.

Danger of Rash Judgment.

To continue on the point I am making, it takes any time from three to six months, according to the vigour of the plant, to bring it to such amount of growth as will enable us to bud it for the purpose of testing outside. Then, when it is budded, of course it takes a full year to bring the plant to maturity. Here, again, one has to face uncertainties, and to be very careful about forming a judgment, as experience has proved time and again that in the early stages of culture some varieties have displayed the greatest shyness in flowering, and yet, after a few years' cultivation, have taken their places in the front rank as perfect garden roses, blooming with the greatest freedom.

Each year we are compelled to make a very close selection, and to discard every seedling which does not suggest some improvement in at least one or two of the essential elements of the perfect rose; otherwise we would, of course, have been flooded out with varieties which would have been of no practical value to us, or, indeed, to the rose world at large.

An Exact System of Experiments.

The system we ultimately adopted was hybridisation, in the first instance, between hybrid perpetuals and teas, and then inbreeding from their offspring, upon the following lines: We made four distinct crosses. We took a seedling of our own, which gave some evidence of possessing at least some of the qualities aimed at, and in the first instance this seedling was crossed with the male parent; secondly, the seedling crossed with the female parent; thirdly, the male parent crossed with the seedling; fourthly, the female parent crossed with the seedling.

As soon as we were able to form an opinion of the results of this interbreeding, we again made a selection of those most closely approaching our ideal, again inbreeding, [illegible] with this difference, that we only made use of a limited number of parents, but in almost every instance making a double cross.

For example, if we made a seedling with, say, Marie Van Houtte as the male parent, then during that season we reversed the cross, making Marie Van Houtte the seed-bearing parent, and the seedling the male parent. We always had relays of plants prepared in duplicate for this purpose, and we carefully and methodically registered each experiment, thus carrying on our work in a systematic manner, the system of selection, of course, always playing the most prominent part in the results.

Gratifying Results.

From practical experience, we were able to ascertain which varieties, or rather types, gave us the best results, and we were, therefore, able to a considerable extent to lessen the waste, and to reduce our methods to a system containing at least some element of certainty. Of course, we have [illegible] of varieties of other raisers, where we have been struck by any special features which they contained, which were, in our opinion, an advance upon anything in commerce.

The result of our labours has been to produce what is admittedly an absolutely distinct class, if not family, of roses, known as the Alexander Dickson type. We, of course, claim that the type of roses we have introduced have made a great advance on those previously in commerce. We aimed at producing a type having vigour of growth, freedom and continuity of bloom, the flowers full and perfectly formed, with unusually long petals, at the same time growing on bushes the foliage of which is luxurious and handsome. How far the varieties we have sent out have done what we claim for them you must judge.

Work with La France.

In our experiments and in struggling with the qualities we have indicated, we felt convinced that La France would prove one of the most useful parents we could possibly have, if we could succeed in making it produce seed. It was, of course, the opinion of most hybridisers that La France was sterile, and with this opinion we were for a long time inclined to agree, and indeed the best that could be said for it is this, that there is just the possibility that it may be fertilised. Out of many hundreds of crosses with this rose, only in one single instance did we succeed in making it produce seed, but we feel that the labour we spent was amply repaid, as the ultimate result of it was the introduction of Mrs. W. J. Grant, known to you as Belle Siebrecht, in our opinion one of the finest roses in cultivation, at least from the Britishers' standpoint.

Some Notable Varieties.

In addition to this, we have always found from practical experience that the roses descended from this particular cross have always impressed their offspring with some, at least, of the more prominent qualities of the parents, and it was pursuing this particular line of breeding that enabled us to produce varieties which, from a British standpoint, are ideal exhibition flowers, and at the same time the plants are floriferous and of excellent constitution. In this group we might mention Killarney, Mrs. Edward Mawley, Bessie Brown, Liberty, Lady Moyra Beauclerc, Lady Ashtown, Mrs. David McKee, Dean Hole, Countess of Derby, Betty, Mrs. G. W. Kershaw, and, last but not least, Mildred Grant and William Shean, two of the finest exhibition roses at present in cultivation in Great Britain. Mildred Grant resulted from a seedling between Niphetos and Madame Willermoz in the first instance, crossed with a seedling of our own which is not in commerce, and the system of which this is an instance applies pretty generally to all the better classes of roses introduced by us.

The Long Sought Yellow Tea.

After many years of continuous experiment on various lines, we have at last been able to produce what has long been sought for, namely, a yellow tea of good size and colour with the vigour and hardiness of the hybrid perpetual. I refer to the rose Harry Kirk, which is now being grown by most of you, and you will shortly be able to judge whether it fulfils the promises we have made on its behalf. I think you will not be disappointed.

It is interesting to note, in relation to the La France cross, that the same inclination to sterility is apparent in the rose Augustine Guinnoisseau, a sport from La France. Out of hundreds of experiments we have not succeeded in getting a single seed pod from this variety.

Continuity of Bloom.

The only other point of practical importance which occurs to me, is the fact that in our early experiments, when we had in view the object of producing varieties which would give a greater continuity of bloom, we used in our efforts Rosa indica, and after a considerable amount of labour, we succeeded in impressing this much-valued quality on some of its offspring which are now in commerce.

In a general way, we found it very difficult, and indeed impossible, to place the smallest dependence upon the presumption that hybrid perpetuals would impart to their offspring anything of their own colour, and in a general way we may say that, after much experience, the chief varieties which we use, and use with the best results, for the purpose of getting blends, are the hybrid perpetuals, Horace Vernet, Charles Lefebvre, General Jacqueminot, and also Austrian briars, Persian Yellow, and Harrisoni.

From what I have said, you will readily appreciate the fact that it would be wholly impossible, and, indeed, I think, a waste of your time and mine, to give in detail the results of thirty years' hybridising, and I have done my best to make clear the general lines upon which our work has been conducted, from which it will be readily inferred that the element of chance must always play a prominent part, and I might aptly use the well-known quotation from Pope:

> All nature is but art, unknown to thee;
> All chance, direction, which thou canst not see.

And I ask such of you as may desire to enter for yourselves upon this interesting field of experiment, to go forward with confidence—

> Knowing that nature never did betray
> The heart that loved her.

BEETLE REVELATIONS.

(Continued from page 269.)

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Asparagus Beetle.

Growers of asparagus are frequently troubled by the doings of a rather pretty beetle a quarter of an inch long, with red back and faintly bronzy-green wing cases bearing large yellowish spots. It lays its eggs during the early part of the summer on the plants, and from them hatch green grubs with black heads and three pairs of feet, which would ordinarily be called legs. The grubs feed vigorously on the leaves and branches. Dressings of lime dust, paraffin solutions, and remedies of a like character should be adopted, but the best plan would be to capture the perfect beetles themselves by shaking them on to freshly tarred boards, papers, or cloths.

THE ASPARAGUS BEETLE.
Much enlarged.

JAMES SCOTT.

(To be continued.)

There is no better guide to the kitchen garden than VEGETABLES AND THEIR CULTIVATION, by T. W. Sanders. It is a complete treatise on the general management of the garden, and the successful culture of vegetables, saladings, and herbs for home use. Price 5s. net, by post, in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

ANGULOAS.—The different members of this genus are advancing their young growths, and some are already producing their flower scapes, which make their appearance at the base of the newly-developing growth when it has advanced a few inches in length. With the yellow A. Clowesi there is little difficulty experienced in producing satisfactory flowering results, but with A. Ruckeri, A. eburnea, and A. uniflora difficulties are frequently met with. There can be no doubt that a great deal depends on the treatment the plants receive during the resting and dormant season. In the first place, I think, the principal cause is that the plants are too liberally treated during the resting period. When grown in the intermediate house, where the atmosphere throughout the year is generally kept reasonably moist, there is ample moisture to keep the pseudo-bulbs in a normally plump state without the use of the water-can. In the second place, when the new growths make their appearance water is afforded over-abundantly, and the plants are rushed into vigorous leaf growth to the disadvantage of the flowers. I consider that only sufficient moisture should be afforded at the roots to keep the pseudo-bulbs in a normal state, until the flowers are observed at the base of the new growth.

Repotting anguloas is best attended to immediately after the flowering season; the new growths are then emitting new roots, so that if potting is done then the plants are re-established in the fresh potting compost with the least prospect of injurious effects. They are robust-rooting plants and therefore require liberal pot-room. The pots used should be clean and filled to one-third their depth with clean broken crocks. Use a potting compost of about equal portions of fibrous peat, turfy loam, and chopped sphagnum moss, with sufficient sand and broken crocks to render the compost porous. Careful watering will be required until the plants become thoroughly rooted, after which every encouragement should be given to encourage development of growth.

LYCASTES.—Many of the early-flowering kinds, such as L. Skinneri, L. aromatica, L. cruenta, and L. Deppei, will have passed out of flower, and should now be examined with a view to repotting. I do not advise annual repotting for any of these so long as there is ample room in the pots and the compost is in a good state, but where the moss is dead on the surface this should be removed and fresh living moss be added. Where repotting is necessary care must be observed in turning the plants out of their pots, to avoid, as far as possible, any damage to the roots; these are very brittle, and more than ordinary care is necessary in the process of repotting. When the old compost has been removed cut away all dead roots, remove any useless back pseudo-bulbs, and in the selection of pots ample room should be afforded. A potting compost as described above for anguloas is suitable for the lycastes also. The cool intermediate house suits these plants best, but where the odontoglossum house is maintained at a temperature of about 55 degrees, the plants may be suitably accomodated there. H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

MUSA CAVENDISHI.—This stately and distinctly ornamental foliage plant is most effective and useful when cultivated expressly for this purpose. Where sufficient space is available for specimens they form an interesting addition to a collection of foliage plants. They may be easily propagated from suckers separated from the parent plants with a few roots attached, and placed singly in small pots; if plunged in a brisk heat they will grow away very freely. Musas succeed well in good fibrous loam with a little peat and sand added. The plants are extremely gross feeders and will soon require attention and repotting. If used for decorative purposes they are best cultivated in large pots or tubs, but if retained for fruiting I think they succeed best planted out in a specially-prepared border with ample drainage. During the summer months and when growing freely they require a good supply of water, and if the roots are at all restricted give frequent applications of diluted liquid manure. Keep the plants free from insect pests at all stages.

OUVIRANDRAS.—These curious and interesting plants are cultivated more as a novelty than for any practical use. They are commonly known as lattice-leaf plants and are stove aquatics, the leaves floating near the surface of the tank in which they are cultivated. Plants are raised either from seed or by division of the crowns, and should be placed in teak wood baskets filled with fibrous peat and loam with the fine soil taken out; these are then placed in the tubs or tanks and covered with tepid water. An important item in their culture is to maintain the temperature of the water as uniformly as possible at 80 degrees. Very little further attention is required if the water is kept sweet and clean and the foliage occasionally sponged.

POTTING.—Most of the potting in the stove will have been completed, with the exception of spring-raised stock, which may require attention, and ought to be taken in hand at once. When potting plants so late in the season much care must be exercised in dealing with the roots, or serious results will follow this operation. Those treated will require shading thoroughly from the sun and an occasional spraying with the syringe will be found beneficial. The sun now affords much heat during the middle of the day, so that careful attention to firing is very necessary.

POINSETTIAS.—Cuttings may be taken as soon as they have developed two or three inches of growth; these should be removed with a portion of the old wood attached and plunged into powdered charcoal to prevent bleeding. Place the cuttings singly in small thumb pots and plunge them in brisk bottom heat.

EUPHORBIA JACQUINIÆFLORA.—A further supply of cuttings of this useful winter-flowering subject ought to be inserted; select those growths which have been thoroughly exposed to the sun, as they are not so liable to suffer from damping. Plants are otherwise raised as advised for poinsettias.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

FIGS.—Owing to the sunless weather figs have been long in ripening. Even pot plants have failed to ripen at the required time, and it will not serve the purpose to provide a higher temperature by the aid of fire heat or the fruits will drop. Give weak liquid manure occasionally, damp down when possible, and ventilate to prevent stagnant atmospheric moisture. As soon as the earliest crop is removed give copious syringings; and if the plants are in pots, and the house is required for some other crop, place them in another house, in a suitable temperature, for them to finish their growth, or to furnish a second crop in the autumn, which, if they are healthy and strong, they are quite capable of doing. In other fig houses the shoots should be well regulated and thinly tied in to ensure their ripening for another season; thin out the fruits if at all thick, and water carefully in dull weather. Figs in a cool structure are now showing up their fruit, and are most useful in the early autumn, both for exhibition and home use; these will need but little water, having no fire heat and a cool border. Even a few in pots should be left out for late fruiting, and the variety Brown Turkey is one of the best, though of this there are a good many varieties, and only the best should be selected.

YOUNG FIGS.—Cuttings placed three in a 60-sized pot last autumn are now growing away, and may be potted as they need it; give them good loam and a little soot, and they will give a few fruits next season. Plunge them in a bed of leaves in a cool frame, and keep them well syringed. Brown Turkey raised this way two years ago are now showing fruit; for keeping up a stock this plan has much to recommend it.

VINE EYES.—When sufficiently rooted the young plants from vine eyes should be potted in good fibrous loam and again plunged in the hotbed for a few days. When they get over the shift, place them on the stage of the melon house, where they will receive plenty of heat and moisture.

PLANTING VINES.—These required for planting while green at the end of next month should have a small shift if they are likely to become too root-bound by planting time, or they will not take readily to the new soil. Keep them steadily growing, with as much air in the house as can be reasonably given; when they are in full growth strong laterals will be thrown out, and this is then the best time to plant. Stronger canes that are required for fruiting next season should be also given a shift into good rough loam and half-inch bones; these may be grown between the rods in a house freshly planted, and where they will be required next season for carrying a crop to relieve the permanent ones, this method being preferable to planting extra canes and cutting them out in a few years. Muscats treated this way do well and give good returns for the trouble taken. Watering during the hot sunny days tells upon them most, as they do not like the constant soakings; this can be remedied by putting them inside other and larger empty pots or tubs.

PINES.—Those shifted last month into their fruiting pots will require plenty of attention in the way of watering and syringing. Once the ball of the plant gets dry no top waterings will soak it through; water with tepid soft water, because chalky water leaves unsightly marks on the leaves. Frequent damping during the day, if hot, will be required to keep plenty of moisture in the house or pit; ventilating should be done carefully and with a view to keeping the plants sturdy and healthy; close the structure according to the weather. The strongest plants should throw up in the autumn, and these should be looked over occasionally for white scale, using a piece of sponge tied on the end of a long stick to remove it. No more than one or two suckers should be left on each plant.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

POTATOES.—Give free ventilation to the latest crops that are maturing in warm pits, and add a little more soil to them if it is thought necessary, for they have a tendency to work themselves near to the surface, and they would soon become green if not excluded from the light. Let them have sufficient water in a tepid state to swell up the tubers, with an occasional dose of diluted liquid manure. The early batches of Sutton's Ringleader have proved most satisfactory.

CARDOONS.—It is always as well to have a few rows of this vegetable, in case it should be asked for, and now is the best time to sow the seeds. The best way of growing it is in trenches as for celery, sowing the seeds in a single line about a foot apart. If the weather is dry give the plants copious supplies of water when they are growing.

BEANS.—A few rows of French beans should now be sown on a somewhat sheltered border that has been previously trenched and manured, choosing an early variety, such as Webb's New Harbinger, followed by Canadian Wonder. The Dwarf Butter bean is a most useful kind to grow, and is quite distinct in colour from the other sorts, and is an agreeable change for the table. Should haricot beans be appreciated, a few rows can now be planted, which will give them ample time for the seeds to ripen before storing. Stir the soil with the hoe between the rows of broad beans, and draw a little soil to those more advanced in growth. Another sowing of the broad Windsor type should be made, which is of fine quality and a very free cropper.

PLANTING OUT.—Where the planting of such things as onions, Brussels sprouts, and cauliflowers was delayed owing to the wintry weather we experienced a fortnight ago, they should be put out at once, allowing them plenty of room, so that they may properly develop and grow on without a check.

BEET.—Providing the ground is in a friable condition, the main crop may now be sown, but there is no advantage gained by sowing before this date. The turnip-rooted variety for early use is now up and ready for thinning out. It is always wise to select ground for beet that has been prepared early in the winter, but by no means sow on recently-manured ground. Medium-sized roots are always more valuable than large ones, and of much superior flavour and colour. The seeds should be sown in drills about 1½in. deep, and drawn at a distance of 15in. apart. But if any are required for exhibition, 18in. between the rows will be not any too much, making holes with a bar, and filling these up with good soil, sowing two or three seeds in each hole, and thinning out to the best plant, when they have germinated. By this method much straighter and more uniform specimens are secured. Green Top, Volunteer, and Perfection are three good varieties to grow of the long kinds, while Crimson Ball and Reliance are two most useful sorts of round beet for use during the summer months, when salads are in demand.—T. W. BIRKINSHAW, Hatley Park Gardens.

Newly - planted Trees and Shrubs should be kept well watered and receive careful attention. The cold, dry, windy weather experienced of late has been very trying, especially to evergreens, and unless watchful care is given the percentage of deaths may be large. On cool, wet soils that do not part with moisture very rapidly the dry weather will not be so trying to newly-planted subjects, though with these an overhead spraying morning and evening will be beneficial. On light and gravelly soils it will be advisable to water often enough to prevent the soil about the roots becoming unduly dry. Clear water only should be given. If any uncertainty is felt as to the condition of the soil a test can easily be made by inserting a stake or iron rod in the soil and observing its condition when withdrawn. The stake or rod will show whether it has passed through wet or dry soils, especially if the loose, dry surface is just scraped away before inserting it into the soil. Yews and hollies, especially the latter, may be planted during this month. Any that have not been transplanted for a few years may now be removed with greater safety than at any other time of year, and the end of May is better than the beginning.—E. F. HAZELTON.

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of the
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YORK.
June 17th, 18th, and 19th, 1908.
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EXHIBITIONS AND MEETINGS.

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National Auricula and Primula Society.

(MIDLAND SECTION.)

APRIL 29.

Typical flower show weather materially contributed to the success of the ninth annual exhibition of the Midland branch of this society, and afforded a striking contrast to the wretched weather that characterised the opening of the daffodil show a few days previously. This was the best attended show in the annals of the society. The exhibition was opened by Madame Moody Manners, from the Theatre Royal, Birmingham.

SHOW AURICULAS.

Considering the absence of the southern growers, excepting, however, the presence of Mr. James Douglas, of Great Bookham, and Mr. W. Smith, the Midlanders were to be congratulated on having secured such a signal success, so far as the average quality of the exhibits was concerned. Mr. J. Douglas led with a superb lot in the premier class for eight show auriculas, showing George Lightbody, Mikado, Abbé Liszt, Amy Robsart, Mrs. Henwood, Favourite, Charm, and Eucharis. The Rev. F. D. Horner brought a good second prize lot from Burton-in-Lonsdale, containing such as Mrs. Henwood, George Lightbody, Melaine, Shirley Hibberd, Favourite, Doctor Horner, Orpheus, and [illegible] Horner; third, Mr. W. M. Shipman; and fourth, Mr. W. Smith. In the class for six show auriculas Mr. Douglas repeated his lead with Mrs. Phillips, Greylag, Abbé Liszt, George Lightbody, Shirley Hibberd, and Richard Headley; Mr. C. Winn, Selly Oak (gardener, Mr. T. F. Shepperd), second, with Shirley Hibberd, Abbé Liszt, Favourite, Ruby, R. Headley, and Marmion; Rev. F. D. Horner, third. For four varieties, the first prize was annexed by Mr. W. H. Parton, Kingswood Grange, Hollywood, with superb examples of Acme, Mrs. Phillips, Shirley Hibberd, and Favourite; Mr. Thomas W. Eglington, Birchfields, second, with Cleopatra, Beauty, Gerald, and Mrs. Henwood. For two varieties Mr. G. D. Ford, Acock's Green, led with George Rudd and Gerald; Mr. G. D. Ludford, Four Oaks, second, with Acme and Shirley Hibberd. The class for single plants was also well represented.

MAIDEN AND LOCAL GROWERS.

For two plants, show auriculas, Mr. Ford was first among maiden exhibitors with two seedlings; Mr. H. W. Miller second with Acme and Cleopatra.

The local growers gave a very good account of themselves in the small classes for three show auriculas. Mr. C. Winn was to the fore with Shirley Hibberd, Mrs. Henwood, and Favourite. Mr. Ludford second with Letitia, Ruby, and Mrs. Henwood; Mr. Eglington third with very good examples.

ALPINE AURICULAS.

These formed a very interesting and attractive feature, and they strongly appeal to public admiration. The class for eight varieties was a capital one; Mr. James Douglas was the leader, his varieties being Mrs. James Douglas, Teviotdale, Argus, [illegible], Olivia, Phillis, Rover, and J. F. Kew; the second prize falling to Mr. C. Winn for excellent examples of Mrs. Danks, Firefly, Blue Bell, Thetis, Phito, General Buller, Argus, and J. F. Kew; a good third was Mr. Eglington.

For six varieties Mr. Douglas was again to the fore with Rosy Morn, Teviotdale, Flora McIvor, Lady of the Lake, Mrs. James Douglas, and Argus; Mr. C. Winn second with Firefly, Thetis, General Buller, Duke of York, Mrs. Danks, and Argus. For four varieties Mr. W. H. Parton scored with fine examples of Duke of York, Mrs. Martin Smith, Mrs. Gorton, and Thetis; a close second was Mr. Richard Holding (the secretary), with Acantha, Richard Dean, R. Holding, and Argus; Mr. Ludford came third in this keen contest. For two plants Mr. Parton again asserted his right with excellent examples of Mrs. Gorton and Thetis, followed by Mr. Ford with Duke of York and Teviotdale, a close third being Mr. H. Lawton, Aston.

In the class for a single variety with a golden centre Mr. R. Holding won with a variety named Unexpected, and possessing considerable promise; Mr C. Winn second with an unnamed, but very good variety. For a light centre Mr. Parton won with Thetis; Mr. Eglington second with Argus, and Mr. Ludford third with Thetis. For two alpines (maiden growers) Mr. S. E. Williams, Brierley Hill, was to the fore with Mr. W. Smith and Argus; Mr. H. Miller, Perry Barr, second, with Friendship and Thetis; Mr. Ford third with Dean Hole and a seedling.

In the class for three varieties, local growers, Mr. C. Winn won with Argus, Richard Dean, and Thetis; Mr. R. Hutching second with Golden Acme, Auriaila, and Prudence; Mr. E. Danks, Handsworth, third.

SEEDLINGS, ETC.

For two varieties of seedling show auriculas the Rev. F. D. Horner was first with Geraldine and Sunrise; Mr. W. Smith second, with Mr. Ludford third, both with unnamed varieties. For one plant, green-edge, Rev. F. D. Horner led with Orient; Mr. C. Winn second with Mrs. Shepperd; Mr. W. Smith third with an unnamed seedling. For a grey-edge Mr. W. Smith had Stately; Rev. F. D. Horner second with Greylag, and third with Vanguard. For a light-edged variety Mr. E. Danks secured the first prize with an unnamed seedling.

The society's silver spoon for the premier show auricula was won by Mr. James Douglas, with Harrison Weir. In the class for six fancy auriculas, dissimilar, Mr. Ludford annexed the first prize with Old Gold, Golden Plover, Isis, Queen Alexandra, Transformation, and an unnamed seedling; Mr. C. Winn second with Victoria, Old Gold, Libra, Rolt's Red, Buttercup, and an unnamed seedling.

POLYANTHUSES AND PRIMROSES.

As usual, prizes were offered for polyanthuses. It is much to be deplored that the good old-time gold-laced varieties should have come so near to extinction, considering also that they are not more difficult to cultivate than their relatives, nor has such a variety as George IV., for instance, deteriorated from its original condition. The sole exhibitor was the veteran grower, Mr. J. Stokes, of Harborne, and who was awarded the first and second prizes for a very good exhibit, each of George IV., and who also staged a plant of Miss R. Turner, less meritorious. It may be remarked that Mr. Stokes also exhibited in the auricula classes, and secured several minor prizes.

Prizes were offered for six pots of fancy polyanthuses or primroses, single or double. The only competitors were Miss Ludlow and Mr. T. Collier, who had fairly good examples, and were placed in the order named. For six pots of hardy primulas, distinct (first prize a gold-centre medal), Mr. Ludford was the only entrant, and was awarded the medal.

First Class Certificates were awarded to Mr. J. Douglas, for Orient and Harrison Weir auriculas; to Mr. C. Winn for Mrs. Sheppard; and to Mr. W. H. Parton for Jack Parton auriculas. A silver medal was awarded to Messrs. W. H. Simpson and Sons, Edgbaston, for a huge and effective bank of daffodils, arranged in masses, and a bronze medal was awarded to Mr. C. Winn for a nice group of Schizanthus Wisetonensis.

National Auricula Society.

NORTHERN SECTION.

MANCHESTER, MAY 2.

The thirty-fifth annual exhibition of this society was a very successful one, and clearly showed that there is no danger of auricula growing dying out in the North of England. Both exhibitors and plants were there in greater numbers than usual, and the exhibits were rather uncomfortably crowded in the space available at the Coal Exchange. The stage auriculas showed signs of the uncongenial spring, and most of the exhibitors would have staged better had the show been held a week later, still the classes were all well filled, and many good exhibits were not placed in the prize list. There were few novelties of note. Mr. Wilson, of Sheffield, had a good purple self seedling called Miss Violet, which was certificated; George Lightbody was well shown, green and white edges were not so good as usual, but selfs were numerous and good. Alpines were well shown, and there were many new varieties of great merit; a considerable number of the exhibitors are evidently raising seedlings and doing good work in producing good novelties. Some of the younger growers would do well to take more pains in staging their flowers, for judges cannot be expected to look for merits in flowers that modestly hang their heads in a retiring fashion. Polyanthuses were not quite so numerous as usual; there were, however, some good flowers shown, and George IV. worthily won the premier prize. Mr. Lord, as usual, had the premier auricula with Mrs. Henwood, Mr. Bentley the premier alpine with Miss Vernon, and the premier polyanthus with George IV.

SHOW AURICULAS.

In competition for the prizes for six distinct varieties the awards were as follows: 1, Mr. T. Lord, Todmorden, with G. Lightbody, A. Barker, Mrs. Potts, Acme, Ruby, and Mrs. Henwood; 2, Mr. W. H. Midgley, Halifax, with Ruby, Orient, Letitia, Mrs. Henwood, John Simonite, and G. Lightbody; 3, Mr. J. H. Wilson, Sheffield, with G. Lightbody, Favourite, Letitia, A. Barker, Cleopatra, and Traills Beauty; 4, Mr. W. M. Shipman, Altrincham; 5, Mr. A. Yates, Castleton; 6, Mr. J. E. Beaumont, Stalybridge; and 7, Mr. S. Etherington, Middleton Junction. For four dissimilar: 1, Mr. T. Lord, with Mrs. Henwood, G. Lightbody, Acme, and Mrs. Potts; 2, Mr. J. E. Beaumont, with Acme, G. Rudd, Shirley Hibberd, and Mrs. Potts; 3, Mr. F. Faulkner; 4, Mr. J. H. Wilson; 5, Mr. W. M. Shipman; 6, Mr. W. H. Midgley; and 7, Mr. A. Yates.

For pairs of auriculas: 1, Mr. J. W. Bentley, Middleton, with Shirley Hibberd and Ruby; 2, Mr. J. H. Abbott, Heaton Mersey, with Shirley Hibberd and Mrs. Potts; 3, Mr. S. B. Bolton, Warrington; 4, Mr. J. Stelfox, Stalybridge; 5, Mr. B. Simonite, Sheffield; and 6, Mr. G. D. A. Hall, Stockport. For maiden growers: 1, Mr. J. H. Abbott; 2, Mr. S. B. Bolton; 3, Mr. T. Sharpe, Kendal; and 4, Mr. James Antrobus, Wilmslow.

Single specimens were numerous, and of much merit. Green edge: 1, Mr. W. M. Shipman, with A. Barker; 2, Mr. T. Lord, with A. Barker; 3, Mr. J. W. Bentley, with Shirley Hibberd; and 4, Mr. T. Lord, with A. Barker. Grey edge: 1 and 2, Mr. T. Lord, with G. Lightbody; and 3 and 4, Mr. W. M. Shipman, with G. Lightbody. White edge: 1, Mr. T. Lord, with Acme; 2, Mr. A. Yates, with Acme; 3, Mr. W. M. Shipman, with Acme; and 4, Mr. W. H. Midgley, with Letitia. Self: 1, Mr. J. H. Wilson, with Miss Violet; 2, Mr. J. W. Bentley, with Midgley's Seedling; and 3 and 4, Mr. T. Lord, with Mrs. Potts.

In the class for three dissimilar (for growers not employing a gardener): 1, Mr. J. E. Beaumont, with Acme, Shirley Hibberd, and Mrs. Potts; 2, Mr. W. H. Midgley; 3, Mr. J. Stelfox; and 4, Mr. F. Faulkner. One seedling: 1, Mr. J. H. Wilson, with Miss Violet; 2, Mr. B. Simonite, with Ossian; and 3, Mr. W. H. Midgley. For four dissimilar, open to maiden growers in 1905, 1906, 1907, or 1908: 1, Mr. F. Faulkner, with G. Lightbody, Ruby, Letitia, and Shirley Hibberd; 2, Mr. James Antrobus; and 3, Mr. J. Fillingham, Manchester.

The premier show auricula was Mrs. Henwood, exhibited by Mr. Lord.

In the class for six dissimilar alpines, shaded, the successful exhibitors were: 1, Mr. J. W. Bentley with J. F. Kew, Captain Hunt, Vestal, Miss Vernon, Gentle Jackie, and D. Jackson; 2, Mr. T. Lord with Mrs. J. W. Bentley, Mrs. Lord, Gentle Jackie, Miss Baker, Mrs. M. Smith, and Mabel; 3, Mr. F. J. Dickens, Sam, Firefly, Pluto, Miss Baker, Lillie Dickens, and Quakeress; 4, Mr. G. Geggie (Sale); 5, Mr. W. M. Shipman; 6, Mr. J. Stelfox. For four distinct, 1, Mr. T. Lord with Pluto, Mrs. J. W. Bentley, Miss Baker, and Gentle Jackie; 2, Mr. F. J. Dickens with Oswald, Attraction, Rufus, and E. Phillips; 3, Mr. J. W. Bentley with J. B. Sams, Vestal, Claribel, and Lottit Slowboy; 4, Mr. W. M. Shipman; 5, Mr. J. E. Beaumont. For pairs, 1, Mr. S. B. Bolton with Firefly and Thetis; 2, Mr. Jas. Antrobus with Pluto and Duke of York; 3, Mr. G. D. A. Hall; 4, Mr. J. E. Beaumont; 5, Mr. T. Lomas, Stalybridge; 6, Mr. F. Faulkner. For maiden growers, 1, Mr. S. B. Bolton with Firefly and Thetis; 2, Mr. Jas. Antrobus; 3, Mr. J. Tonge, Altrincham. One, yellow centre, 1, Mr. G. Geggie with Joyce Atkinson; 2, Mr. J. Bentley with Dr. Kershaw; 3, Mr. T. Lord with Mrs. M. Smith; 4, Mr. S. B. Bolton; 5, Mr. T. Lord; 6, Mr. W. M. Shipman. One, white centre, 1, Mr. T. Lomas with Mrs. N. Turner; 2, Mr. T. Lord with Winifred; 3, Mr. J. W. Bentley with Cynthia; 4, Mr. W. M. Shipman; 5, Mr. G. Geggie; 6, Mr J. Edwards, Polackley. Three distinct, for growers not employing a gardener, 1, Mr. J. E. Beaumont; 2, Mr. G. Geggie; 3, Mr. F. Faulkner; 4, Mr. W. Stringer, Middleton.

The premier exhibition alpine was Miss Vernon shown by Mr. J. W. Bentley.

GOLD-LACED POLYANTHUSES.

The results in the class for three dissimilar, black ground, were as follows: 1, Mr. J. W. Bentley with Mrs. S. Holden, Exile, and Mrs. Brownhill; 2, Mr. J. Lomas, Seedley, with Coronation, Princess Ena, and Fred Morrey; 3, Mr. W. Stringer, with Tiny, Mrs. Holland, and Mrs. Brownhill. For three dissimilar, red ground, 1, Mr. J. W. Bentley with Sir S. Smith, George IV., and Middleton Favourite; 2. Mr. James Lomas with Red Den, Red King, and King Alphonso, 3, Mr. W. Stringer with Mrs. Brownhill, Mrs. Holden, and Sir S. Smith; 4, Mr. G. Geggie with Mrs. Holden, J. Turner, and George IV.

Single specimens, black ground, 1, Mr. J. Lomas with Mayfield Gem; 2, Mr. J. W. Bentley with Mrs. Brownhill; 3, Mr. J. W. Bentley with Exile; 4, Mr. J. Lomas; 5 and 6, Mr. J. Fillingham. Red ground, 1, Mrs. Helen Young, Chorlton-cum-Hardy, with King Alphonso; 2, Mr. J. W. Bentley with George IV.; 3, Mr. J. Lomas; 4, Mr. J. W. Bentley; 5, Mr. J. Lomas; 6, Mr. J. Fillingham.

For three dissimilar, for growers not employing a gardener, 1, Mr. J. Lomas with J. Burns, Mamie Scholes, and seedling; 2, Mr. W. Stringer; 3, Mrs. Helen Young; 4, Mr. S. Etherington.

The premier polyanthus in the exhibition was George IV., exhibited by Mr. J. W. Bentley.

Certificates were awarded to self auricula Miss Violet, shown by Mr. J. H. Wilson, to the undermentioned alpine auriculas: Miss Vernon, from Mr. J. W. Bentley; Sam, from Mrs. F. J. Dickens; Joyce Atkinson, from Mr. G. Geggie; and Ethel Faulkner, from Mr. F. Faulkner; and to show polyanthuses Mamie Scholes and Mayfield Gem, from Mr. J. Lomas.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, APRIL 28.

Present: Mr. E. A. Bowles, M.A., F.L.S., F.E.S. (in the chair); Dr. A. B. Rendle; Messrs. W. Cuthbertson, J. T. Bennett-Poë, J. W. Odell, H. J. Elwes, A. Worsley, W. Hales, and F. J. Chittenden (secretary).

DAFFODIL SEEDLINGS.—Rev. G. Engleheart, V.M.H., sent the following communication concerning the white seedling daffodils shown by him at the previous meeting. "During the past twenty years I have several times, in successive years, cross-fertilised Narcissus M. J. Berkeley ♀ on a considerable scale in order to obtain a race of early-coloured N. incomparabilis, and in this I have been successful. But in each set, when it reached the flowering stage, there have appeared some of these white trumpets, virtually M. J. Berkeley itself, except in colour. There has always been also a sprinkling of yellow trumpets, i.e., M. J. Berkeley itself, reproduced from seed of a few flowers which escaped being totally disanthered, and the whites, I am convinced, originated in the same way. I mean that they were not produced by pollen of any white trumpets being conveyed to M. J. Berkeley. For (1) no white trumpets were grown near, and few, if any, were in bloom so early as M. J. Berkeley; (2) early white trumpets, such as N. cernuus, invariably, in my large experience, modify the form of the ♀ parent, and (3) the appearance of flowers of this same character in every batch of seedlings points to a uniform internal cause in M. J. Berkeley itself. Not only the form of the flower, but the foliage, stature, whole habit, and precise period of bloom are M. J. Berkeley in counterpart.

"M. J. Berkeley was raised by Backhouse about 1840, and is pretty obviously a self-fertilised seedling from N. maximus, which in its turn is a wild species indigenous on the French side of the lowland Pyrenees. I have had bulbs direct from the wild habitat, and have been in correspondence with a good botanist who has seen the plants in bloom there, but I have never heard of any white wild variety of N. maximus. I have myself raised from self-fertilised seed of N. maximus a flower in the way of M. J. Berkeley, and that form has no appearance in any single feature of being the result of a cross with a white trumpet. Personally, I have no doubt whatever that this is a sudden 'spontaneous' break to white from yellow.

"The nearest analogy I can adduce is the occasional appearance of a pure white form in wild beds of the yellow Pyrenean N. muticus, quite reproductions, in every feature but colour, of muticus itself. No white trumpet exists in the same zone as N. muticus, the little wild white N. moschatus being thousands of feet higher in a remote valley.

"I have no reason whatever to suppose that there is any white hybrid blood in the ancestors of M. J. Berkeley, i.e., that these white seedlings exhibit a reversion to ancestral character. It seems more likely to be an instance of a sudden 'mutation' from yellow to white in colour progress. It is interesting to note that precisely the same thing has been noticed in New Zealand in seedlings of M. J. Berkeley."

SEEDLINGS OF GRETUM.—Mr. W. Hales showed seedlings of Gretum Gremon grown at the Chelsea Physic Garden, exhibiting the foot which absorbs the food stored in the seed for the nourishment of the growing seedling; this foot is developed only to a very slight degree in some other gymnosperms, such as ephedra.

DELAYED FLOWERING OF AMARYLLIS.—Mr. Odell showed some flower buds of Amaryllis belladonna which were now appearing. The flowering had been delayed in many cases in the autumn, apparently through the short suitable season. Mr. Baker states that the normal period of flowering was in April in the native habitat, but this statement was called in question.

FLORAL MALFORMATIONS. — Mr. Bowles showed, on behalf of Messrs. Hogg and Robertson, of Dublin, a malformed flower of Narcissus J. T Bennett-Poë. The parts of the perianth and the stamens were each nine, and springing from the base of the style was a narrow tubular growth embracing what appeared to be a secondary style. This flower, and a double-spathed caladium, L. A. Van Houtte, somewhat similar in structure to the double-spathed richardia shown at the last meeting, exhibited by Messrs. J. Veitch, of Chelsea, were referred to Mr. W. C. Worsdell for further examination.

PYRONIA JOHN SEDEN.—Messrs. J. Veitch and Sons showed fruits of one of the hybrids exhibited before the committee in the autumn. The fruits of this hybrid were quince-like in appearance, and had a remarkably pleasant aroma, but were still quite hard.

SNOWDROP BULBS.—Brodie of Brodie, Brodie Castle, Forres, sent two snowdrops with the new-formed bulbs produced at a distance of two inches above the original bulbs, with which they were connected by means of a tube formed by sheathing membranous leaves.

Norfolk and Norwich Spring Show.

This fixture was held at Norwich on Saturday, April 25. Thursday is early closing day, and the usual day for shows. But the hall was engaged, and it was unfortunate for the society. Then the elements were against one thinking of flower shows, and talks of snowfalls and sharp frosts seemed to predominate in one's ears. Still, taken generally, the show was very pretty, and quite up to its predecessors. What it lost in outdoor-grown subjects was ably made up by the display of indoor subjects. The orchids sent by Mr. Rider Haggard, Ditchingham, and those from Mr. Lewis Smith, gardener to Robert Fellowes, Esq., Shotesham, were fine examples of cultural skill. The four circular groups of foliage and flowering plants were also worthy of special mention, the arrangement and blending of colours being tastefully carried out. In the softwood plants Mr. F. Williams, gardener to Louis Tillett, Esq., M.P., Catton, staged some of the best cinerarias ever seen at Norwich, and his six pots of strawberries were pictures of health, with a uniform crop of deep-coloured fruits. Mr. George Davison, Westwick Hall Gardens, secured all the best awards for narcissi, the strength of his flowers and fresh look upon them won him many complimentary remarks. Mr. L. Smith, gardener to Robert Fellowes, Esq., in spite of the adverse climatic conditions, made a pretty display of hardy flowers, which were a credit to him. One might go on specialising in this way for some time, but one word more, however, is due to the various trade firms, who by their exhibits, gave a greater interest. Messrs. Daniels Bros., Lim., Norwich, made a [illegible] display of flowering and foliage plants; Hobbies, Lim., Dereham, set up hosts of roses of the polyantha type, and other subjects. Mr. R. C. Notcutt, Ipswich, gave a display of forced flowering shrubs, and Mr. Dawes, of Syderstone, made a display of his new variety of rhubarb.

Bristol Gardeners' Association.

The tenth annual meeting held on Thursday, April 23, partook of a very hearty and enthusiastic character. Mr. J. C. House presided, and Mr. J. Scott, Downside Gardens, read a very encouraging report of the year's proceedings, followed by the [illegible] statement, which records a balance [illegible] for the first time in the society's existence. It is largely owing to the energetic [illegible] rendered by Mr Scott that the society is [illegible] in such a flourishing condition.

Lieut.-Colonel Carey-Batton, High [illegible] of Bristol, was re-elected president [illegible]mously; Mr. Shelton, Redland Lodge dens, and Mr. Shaddick were respectively elected chairman and vice-chairman for the ensuing session; Mr. J. C. House was thanked for so ably and efficiently carrying out the duties of the chair in the past session; Messrs. J. Scott and H. Woodward were re-elected as hon. secretary and treasurer and assistant secretary respectively. There is a bright prospect for the new session; five new members were elected.

Mr. Curtis was awarded first prize for three cool house orchids, and a certificate went to Mr. Shewring, gardener to Mr. Densham, for Cypripedium hirsutissimum.

NEW VARIETIES OF DAFFODILS.

The following were the leading new daffodils at Birmingham:

Buttercup (Dawson), received a first-class certificate. It is the fine deep yellow, jonquil-looking magni that gained an Award of Merit from the Royal Horticultural Society on April 14, and illustrated in the GARDENERS' MAGAZINE of April 18.

Chloe (T. Batson), which received an Award of Merit, is a typical giant Johnstoni with pale, soft colouring, and a flat, overlapping perianth. It is a decided acquisition to this type of flower.

White Wax (P. D. Williams), is an elegant medium-sized, pure white magni with great substance in its petals. It is a real florist's flower.

Pixie (Crosfield), was thought by many to be the flower of the whole show. I am quite sure its owner would not have changed it for any other. It has an Engleheartei crown, edged with red and with a green centre. The perianth is thick and fleshy.

Uncle Robert (Crosfield), an immense white trumpet, probably the largest we have.

Brilliancy (R. H., Bath), a large Barri conspicuus.

Milkmaid (P. D. Williams), a pure white drooping Leedsi.

Warrior (Currey), a large red-cupped Incomparabilis with a pale yellow perianth.

Mrs. C. M. Alderson (Spurrell), a nice flower of the Albatross type.

Furnace (Barr), the most fiery-red cup there is.

Tennyson (P. D. Williams), a grand Poet.

Satisfaction (Crosfield), a stiff giant bicolor incomparabilis.

The Rising Sun (Cartwright and Goodwin), a large Tenby, very good.

Penguin (Hogg and Robertson), a very beautiful giant Leedsi that invariably attracts me whenever I see it.

Coxswain (Pope and Sons), a white ajax with a beautifully twisted perianth.

JOSEPH JACOB.

TRADE NOTE.

Messrs. John K. King and Sons, Coggeshall, sent us, a few days ago, some specimens of their specially selected stock of Green Curled Kale. The curling and frilling of the leaves show the high-water mark of perfection in this curious, interesting, and extremely useful section of the cabbage family. The exquisite frilling is really beautiful, and when one attempts to smooth out a leaf the large amount of food material each one contains becomes evident. The pains that our seedsmen take to improve existing vegetables, and also the excellent results those pains ensure, are made evident in this fine stock of curled kale.

FORTHCOMING ENGAGEMENTS.

TUESDAY, May 12.—Royal Horticultural Society: Committee meet at 12 o'clock; lecture at 3 p.m. "On Gardening in the West Highlands," by Mr. Osgood H. Mackenzie; Scientific Committee at 4 o'clock.

WEDNESDAY, May 13.—Royal Society of Arts.

TUESDAY, May 19.—Croydon Gardeners' Society.

WEDNESDAY, May 20.—Royal Botanic Society's Exhibition.

Royal Society of Arts.

THURSDAY, May 21.—Brighton Horticultural Society Meeting.

ANSWERS TO CORRESPONDENTS.

ADDRESSES.—T. L. T., Loughborough: Messrs. James Veitch and Sons, Lim., Royal Exotic Nursery, King's Road, Chelsea; Messrs. Bees, Lim., Ness, Neston, Cheshire; and Messrs. T. S. Ware, Lim., Feltham, Middlesex.

CLIMBING ROSES.—M. E. J., Faversham: The weather has been too much for the newly-planted climbing roses, and the discoloured growths you send are quite dead. Your only plan is to cut the growths right back to sound live wood, and probably if you cut back to within six or eight inches of the ground the buds will start freely, and strong growths be made in the course of the season.

DAFFODIL BUDS.—E. W., Durham: As soon as the flower buds show signs of opening you may pick them, with long stems, and place them in clean water in a warm greenhouse, where they will soon expand, and thus open out quite clean and beautiful. Market growers pick the flowers as soon as the buds show colour, and open them under glass. You will notice that a daffodil is not quite at full size when it first expands; in a day or so afterwards the segments spread, all the wrinkles are smoothed out, and the flowers appear to be much larger than at first.

FORCED DAFFODILS.—J. C. C., Swindon: Place the pans and pots of bulbs close up to a sheltering hedge or fence, where they will receive full sunshine; give water as needed until the leaves begin to turn yellow, then withhold water, and eventually turn out the bulbs, and plant them as early as possible in the grass or shrubbery or woodland, as the case may be. After the leaves have died down take advantage of every opportunity for getting the bulbs planted, they will then be out of the way, and also be starting to make roots.

SHANTUNG CABBAGE.—W. E. A., Weybridge: The Chinese Cabbage, known variously as the Shangtung, Shangton, and Khantung Cabbage, is a variety of Brassica chinensis, and, in appearance, is something between a Cos lettuce and a strong Spinach beet. The Chinese name is Pe-tsai. The plant is an annual, and is best sown in late summer and early autumn, as there is a great danger of its running to seed if sown in spring or early summer; however, it would be well to sow at both seasons. Sow in drills from sixteen to twenty inches apart, and thin out the seedlings eventually to eighteen inches or two feet apart. The leaves are boiled and served as cabbage or kale, and the broad ribs may be cooked separately, and served like asparagus. You may possibly obtain seed through the several firms who advertise in our columns, but, if not, then apply to Messrs. Vilmorin-Andrieux and Co., Quai de la Megisserie, Paris. We have no remembrance of ever having tasted Shantung cabbage, but we are informed that it is of quite poor quality as compared with our own cabbages and kales.

FUMIGATION.—S. N. W., Cambridge: It is only in the hands of professional or long-experienced amateur gardeners that fumigation with rough tobacco and red-hot coke is safe, and even then the process is a most unpleasant one. Your better plan will be to use one of the nicotine compounds over a tiny spirit lamp; there is no need to stay in the house while this method of fumigation, or vapourising, is going on. A good syringing should be given fumigated plants, weather permitting, the following day.

PLANTING DAHLIAS.—F. F., Tamworth: Do not plant out the dahlias until the end of May or early June. If the plants have filled the pots with roots give them a shift at once, as the roots will have taken possession of the new soil before planting time comes. Obviously, only a small shift should be given. If the ground is not ready lose no time in preparing it, so that the soil may settle by the time you are ready to put out the plants.

SHELL FLOWER.—A. G. R., Islip: The great difficulty attending the use of popular names lies in the fact that the same name may be applied to several different plants, and, in different parts of the country the same plant may have different names. Several species of chelone, a genus closely allied to pentstemon, have been called shell flowers, but most probably the plant to which you refer as "a perfectly hardy annual, two feet high, and one of the most unique and interesting plants known to botanists," is Molucella lævis, a native of the Mediterranean region. The flowers are borne in little whorls; the labiate corolla is white, and the large, membranous, and veined calyx is somewhat shell-like in shape and appearance, and it persists for some time, forming a fine subject for skeletonising. If you grow the plant please send us flowering specimens at a later date, and we will do our best to name it for you.

GARDENER'S ILLNESS.—W., Yeovil: So far as we understand the case, the gardener, a domestic servant, living on the place, is entitled to his usual wages during illness, provided, of course, the illness is not caused by any foolish action on his part when away from business.

ROSA WICHURAIANA.—G. W., Harrow: According to the "Botanical Magazine," of June, 1895, the rose we have grown more or less familiar with as R. Wichuraiana should be labelled Rosa Luciæ, as the latter name was given to the species in 1871, whereas R. Wichuraiana was the name given by Crepin in 1876. The rose is a native of China and Japan, it is variable, and has a wide distribution. It is supposed to have been discovered by M. Callery, but the date of its introduction to cultivation is not certain. Plants were sent to Harvard University, from Berlin, in 1888, and from Harvard to Kew in 1891, but it must have been grown in England much earlier than this, as there is a specimen in the Kew Herbarium sent by Canon Ellacombe in 1880. With its lustrous leafage, abundant white flowers, and pleasing fragrance, and trailing habit, R. Wichuraiana is fine for clothing banks, and for rockwork, while as a parent, in association with garden varieties, it has given us a beautiful race of roses of graceful habit, fine for pillars or weeping standards, and Dorothy Perkins may be taken as one of the best, certainly the most popular, of that race. We may add that the name R. Luciæ was given in compliment to Madame Lucie Savatier, who actively aided her husband in his scientific exploration of Japan; in the recent "Handbook of Trees and Shrubs," published at Kew, however, the name of R. Luciæ is discounted, and R. Wichuraiana is the name adhered to.

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ROSE FLOWERS DAMPING.—T. V. Rodmersham: The flowers have suffered from excess of moisture in the atmosphere. Careless syringing may be partly answerable, but improper or insufficient ventilation is the chief cause of damping. Open the ventilators earlier, and gradually increase the ventilation as the weather permits.

NAMES OF PLANTS.

F. E. F., Southampton.—1, Hacquetia epipactis; 2, Primula frondosa.

W. B., Crawley.—The daffodil is Sir Watkin, and the orchid is Bifrenaria Harrisoniæ.

F. E. M., Horsham.—1, Orobus vernus; 2, Arabis aubrietioides; 3, Caltha palustris fl.-pl.

M. S. W., Motherwell. — Cœlogyne occellata; flower received safely, but answer overlooked.

M. C. H., Lowestoft.—1, Tulipa biflora; 2, Myosotis dissitiflora; 3, Fatsia (Aralia) japonica.

H. R., Nantwich.—1, Selaginella apoda; 2, S. Kraussiana aurea; 3, S. Emileana; 4, S. Galeotti.

L. H., Burton.—1, Prunus Pissardi; 2, Forsythia suspensa; 3, not recognised; 4, Thymus carnosus.

H., Malden.—Not sufficient for identification; send when in flower. No. 1 is, possibly, Achimenes (Gloxinia) tubiflora; and No. 2 an ageratum.

NEW BOOKS.

DAHLIAS AND THEIR CULTIVATION.

By J. B. Wroe. (London: (W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.) Price 1s., by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d.

The various types of the dahlia, and especially the cactus and single-flowered sections, have become very popular for the decoration of gardens and for exhibition. The cactus dahlia, indeed, in its many rich and beautiful varieties, has proved itself indispensable for diffusing lustre and beauty in our gardens in autumn, and for yielding a harvest of charming flowers for cutting for the decoration of the home when the majority of other flowers have lost their attractiveness. Hence everyone owning or cultivating a garden in town, suburb, or country, should cultivate dahlias, and the author of the book before us has made it his business to supply the information needed in a clear and simple manner, teaching the proper method to pursue to not only grow the several types of the dahlia in the most successful manner for the decoration of the garden, but also how to cultivate them to the highest state of perfection in order to obtain honours in a close competition at an exhibition. He has told the reader how to propagate the dahlia by cuttings, seeds, and division of the tubers; when and how to plant; the best soil and position in which to grow the plants; how to train the shoots; manner of feeding to ensure a fine display of flowers; the pests that are likely to prove troublesome, and how to deal with them: and has given a careful selection of the best varieties for all purposes. We are just on the eve of the planting season, and it will well repay everyone who intends to plant dahlias to read the excellent advice given by Mr. Wroe on preparing the soil, planting in the most approved manner, and selecting the best and most beautiful varieties.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Supplies are hardly up to the standard of this time of the year. Prices are well maintained, and there is a good demand.

		s. d.		s. d.
Acacia	per doz. bun.	6 0	to	8 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 6		3 0
Arums	per doz.	2 0		4 0
Asparagus	per doz. bun.	1 6		6 0
Azalea, white	per doz. bun.	3 0		4 0
„ mollis	per bun.	0 9		1 6
Berberis leaves	per doz. bun.	1 6		2 6
Carnations	per doz. blms.	1 6		3 0
„	per doz bun.	8 0		12 0
„ Malmaison	per doz. blms.	8 0		12 0
Cattleyas	per doz.	8 0		12 0
Cœlogynes	per doz. blms.	1 0		1 6
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	6 0		7 6
Cypripediums	per doz. blms.	2 0		3 0
Daffodils	per doz. bun.	0 9		3 0
Eucharis	per doz.	3 0		5 0
Forget-me-not	per doz. bun.	2 0		3 0
French fern	per doz. bun.	1 0		3 0
Freesias	per doz. bun.	2 0		3 0
Gardenias	per doz.	2 0		3 0
Gypsophila	per doz. bun.	3 0		5 0
Hyacinths	per doz. bun.	4 0		6 0
Iris, Spanish	per doz. bun.	8 0		12 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	2 0		4 0
Lilium auratum	per bun.	2 0		3 0
„ speciosum	per bun.	2 0		3 0
„ longiflorum	per bun.	2 6		7 6
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		5 0
„ yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	4 0		9 0
Narcissus	per doz. bun.	1 0		2 6
Odontoglossums	per doz. blms.	2 0		3 0
Pelargoniums	per doz. bun.	5 0		10 0
Ranunculus	per doz. bun.	5 0		7 6
Roses	per doz.	1 6		6 0
Smilax	per doz. trails	2 0		3 0
Spiræa	per doz. bun.	5 0		7 6
Statice	per doz. bun.	8 0		10 0
Stocks	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	3 0		5 0
Tuberoses	per doz. blms.	0 4		0 6
Tulips	per doz. bun.	5 0		14 0
Violets	per doz. bun.	2 0		4 0
Wallflowers	per doz. bun.	1 6		2 0

Fruits.

Supplies are fairly good, but the variety is limited. The demand continues steady.

		s. d.		s. d.
Apples, Australian	per case	9 0	to	18 0
„ Canadian	per barrel	10 0		21 0
„ Californian	per box	10 0		15 0
Bananas	per bun.	5 0		10 0
Grapes, English (new)	per lb.	2 0		10 0
„ Belgian	per lb.	1 9		3 0
„ Cape	per box	1 6		10 0
Lemons	per case	8 0		12 6
Melons, Guernsey	each	2 0		3 0
Oranges	per case	7 0		30 0
Peaches	per doz.	15 0		30 0
Pears, Cape	per box	5 0		7 6
„ Australian	per box	3 0		6 0
Pineapples	each	2 0		4 6
Strawberries	per lb.	1 6		4 0
Walnuts	per bag	7 0		8 6

Vegetables.

A steady business is conducted at firm rates.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	3 0
Asparagus, Paris green	per bun.	3 0		5 0
„ English	per bun.	4 0		5 0
„ Spanish	per bun.	1 2		2 6
„ Sprue	per bun.	0 6		1 0
Beans, Guernsey	per lb.	0 8		1 0
„ Madeira	per bskt.	2 0		2 6
Beet	per bush.	1 3		2 0
Cabbage	per tally	3 0		5 0
Carrots	per doz. bun.	1 0		1 6
„	per bag	2 6		3 0
„ French, new	per doz. bun.	5 0		7 6
Cauliflowers	per doz.	2 0		3 0
Celeriac	per doz.	1 6		2 0
Chicory	per lb.	0 2		0 4
Cucumbers	per doz.	2 6		4 0
Endive	per doz.	1 0		1 6
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	9 0		12 0
Leeks	per doz. bun.	1 0	to	1
Lettuce, cabbage	per doz.	1 0		1 4
„ Cos	per doz.	3 6		4
Mint	per doz. bun.	1 0		2
Mushrooms	per doz. lb.	8 0		10
Onions, spring	per doz. bun.	1 0		2
„ Spanish	per case	5 0		6
Parsley	per doz.	1 6		3
Peas, Guernsey	per lb.	8 0		9
Rhubarb	per doz. bun.	1 0		2
Seakale	per doz. pun.	9 0		18
Tomatoes, Teneriffe	per package	8 0		10
Turnips, French, new	per doz. bun.	6 0		10
Watercress	per doz. bun.	0 4		0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. April 26 to May 2.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
April 26 Sunday	12 40	39	36	49	32
„ 27 - Monday	1 0	47	43	49	37
„ 28 - Tuesday	0 35	49	48	54	45
„ 29 - Wednesday	7 55	52	49	63	45
„ 30—Thursday	—	50	50	62	49
May 1—Friday	8 0	62	58	74	50
„ 2—Saturday	10 5	64	59	76	49
Means	5 45	52	49	61	44

Date. 1908. April 26 to May 2.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	Temperature of the Soil. At 9 a.m. At 2 ft. deep.	Temperature of the Soil. At 9 a.m. At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
April 26—Sunday	-	40	43	45	32
„ 27—Monday	0·18	43	44	45	35
„ 28—Tuesday	0·31	45	45	44	42
„ 29—Wednesday	0·22	46	46	45	42
„ 30—Thursday	0·05	49	47	45	46
May 1—Friday	—	50	48	45	50
„ 2—Saturday	0·27	53	50	46	42
Means	(total) 1·63	47	46	45	41

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SITUATION COUPON

To the Advertisement Manager of "The Gardeners' Magazine,"
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THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

TO Noblemen and Gentlemen requiring HEAD GARDENER.—G. GRUBB offers himself as above; life experience in good gardens; highly recommended from present situation; disengaged when suited; married, age 32; at present general foreman at Somerhill Gardens, Tonbridge.

GROWER or as HEAD GARDENER.—A. WILLIAMS, for the last 7 years and 3 months Foreman Grower of Lane and Sons' famous Vines and Figs, is open to a Re-engagement, or Head Gardener where five or more are kept; of large and varied experience in all Horticultural matters. WILLIAMS, Park Street, Berkhamsted, Herts.

GARDENER (Head Working), where two or more are kept; middle-aged; life experience Inside and Out; hard working; good references from last and previous employers. G. BURGESS, 17, Eversleigh Road, Lavender Hill, London, S.W.

GARDENER (Head Working), age 31, married; life experience in good places, including Syon House, Mereworth Castle, and Old Warden Park; 3½ years as Head; highest references. F. FRENCH, Covent Garden, Barming, Kent.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working).—F. SMITH seeks SITUATION with any Lady or Gentleman requiring a thorough all-round Gardener; first-class references; life experience; age 45; married, no family. Address Rose Cottage, Mellis, Suffolk.

GARDENER (Head Working), life experience with glass, flowers, kitchen garden, and orchids; good character; married. W., 32, Eleanor Road, Bowes Park, N.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working).—A thoroughly practical and reliable Man seeks Engagement as above, where four or five are kept; highest references as to abilities in all branches of the profession; 16 years' character; Wife could undertake Dairy. HANCOCK, Shrublands Avenue, Berkhamsted.

GARDENER (Head Working or good Single-handed); age 40; married, no family; experienced in all branches; good reference. Apply E., 65, Beulah Road, Thornton Heath, Surrey.

GARDENER (Head Working).—Mr. F. STRONG would be pleased to highly recommend H. DOWELL, as a thorough practical Man, to any lady or gentleman requiring such; life experience; abstainer; age 27. High Grove, Pinner.

GARDENER (Head Working), where 2 or more are kept; life experience in all branches of gardening Inside and Out; age 40; married, one boy, 15 years; leaving through estate being given up; good references from present and past employers. H. KENT, Sidmouth Grange, Earley, Reading.

GARDENER (Head Working). – Mr. JUNIPER, Dyrham Park Gardens, Barnet, desires to recommend his late Foreman, C. BAKER, to any lady or gentleman; a practical, trustworthy man; age 30. Apply as above; or to C. BAKER, 49, North Road, Highgate, N.

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GENTLEMAN strongly recommends his HEAD WORKING GARDENER where more are kept, experienced in all branches; age 39; married; two in family, youngest 8; leaving through place being sold; excellent testimonials. JACKMAN, Town Road, Rotherfield, Sussex.

THOROUGHLY practical Man, married, seeks Post as HEAD WORKING GARDENER, or Place of Trust; excellent references; life experience in all branches. BESWICK, Lower Halstow, Sittingbourne, Kent.

MR. WEBBER, The Gardens, Norton Hall, Daventry, will be pleased to recommend his Foreman, J. SADLER, as HEAD WORKING GARDENER to any Lady or Gentleman requiring the services of a thoroughly good all-round Man; age 31; married when suited.

MR. J. ALLEN, Gardener to Honble. R. STANHOPE, Revesby Abbey, Boston, Lincs, can strongly recommend W. EDWORTHY, who has been Foreman here for the past six years, to any lady or gentleman requiring practical, reliable Man as HEAD WORKING GARDENER; age 32; married when suited. Address W. EDWORTHY, as above.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER wants SITUATION; Single-handed; 3½ years in present situation; married. A. STEVENS, 179, Beechcroft Road, Upper Tooting.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER.—Single-handed, with help; age 35; married, one child, 4½ years; last situation as single (5¼ years); disengaged; willing to be useful. C. H. SMITH, 26, Bishop Road, Croydon.

GARDENER (Single-handed, or Kitchen Garden, Lawns, etc.), no objection to cows or poultry; married, no family; age 31; 2 years reference. H. L., Ivy House, Edgware, Middx.

GARDENER (Single-handed or with help); good experience Inside and Out; age 26; single. G. OSBORNE, Green Street Green, near Orpington, Kent.

GARDENER (Single-handed or with help, or Second), Inside and Out; good references; age 25; married when suited; near London preferred. T. CLARKE, Eastcourt Gardens, Malmesbury, Wilts.

GARDENER (Single-handed), age 24, unmarried; 9 years' experience in good private gardens; well up in roses and herbaceous borders, also fruit, flowers, and vegetables; Inside or Out; can be well recommended for same. Apply G. THORNTON, 12, Page Heath Villas, Bickley, Kent.

MARRIED MAN as KITCHEN GARDENER or SINGLE-HANDED; life experience; 7 years in present situation; good references.—S. GEORGE, Woodside Gardens, Maidenhead, Berks.

GARDENER (Single) seeks a SITUATION as Under, Inside and Out; age 23; good reference; Bothy preferred. H. GODDARD, Caryll's Cottage, Fay Gate, Horsham.

GARDENER, where two or three are kept, or good Single-handed; 14 years' experience; excellent character. A. BROWN, Bransgore, Christchurch, Hants.

GARDENER (Second); 12 years' experience in all its branches, both Inside and Out; excellent references; age 26. F. GUMM, 10, High Street, St. Mary Cray, Kent.

GARDENER (Under), Second of three or four; life experience Inside and Out; leaving through death; highly recommended; age 22. WESTBROOK, The Gardens, Connemara, Alleyn Park, Dulwich, S.E.

FOREMAN (Inside), or GARDENER (Second); age 27; 9 years' experience; 3 last place as above; good references. Bothy preferred E. SMITH, North Runcton, King's Lynn, Norfolk.

FOREMAN or good SECOND, chiefly Inside, seeks SITUATION; age 25; life experience Fruit, Plant, and Forcing Houses, House and Table Decorations. HEAD GARDENER, Hanford House, Blandford, Dorset, highly recommends G. LONGMAN as above.

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JOURNEYMAN (Second).—A. J. BOOKER, Gardener to the late W. Berkeley Monck, Esq., Coley Park, Reading, highly recommends W. HARRIS as above; two and a-half years' excellent character; age 18. Address W. HARRIS, 1, Elm Park Road, Reading.

JOURNEYMAN (Second); 20; six years' experience; good references; Bothy preferred. Apply W. GEARING, Rose Hill, Binfield, Bracknell, Berks.

JOURNEYMAN (Third).—Mr. WHITE wishes to highly recommend W. TUCKER; 2½ years present, Inside or Inside and Out; bothy preferred. The Gardens, Grange, Kingston, Taunton.

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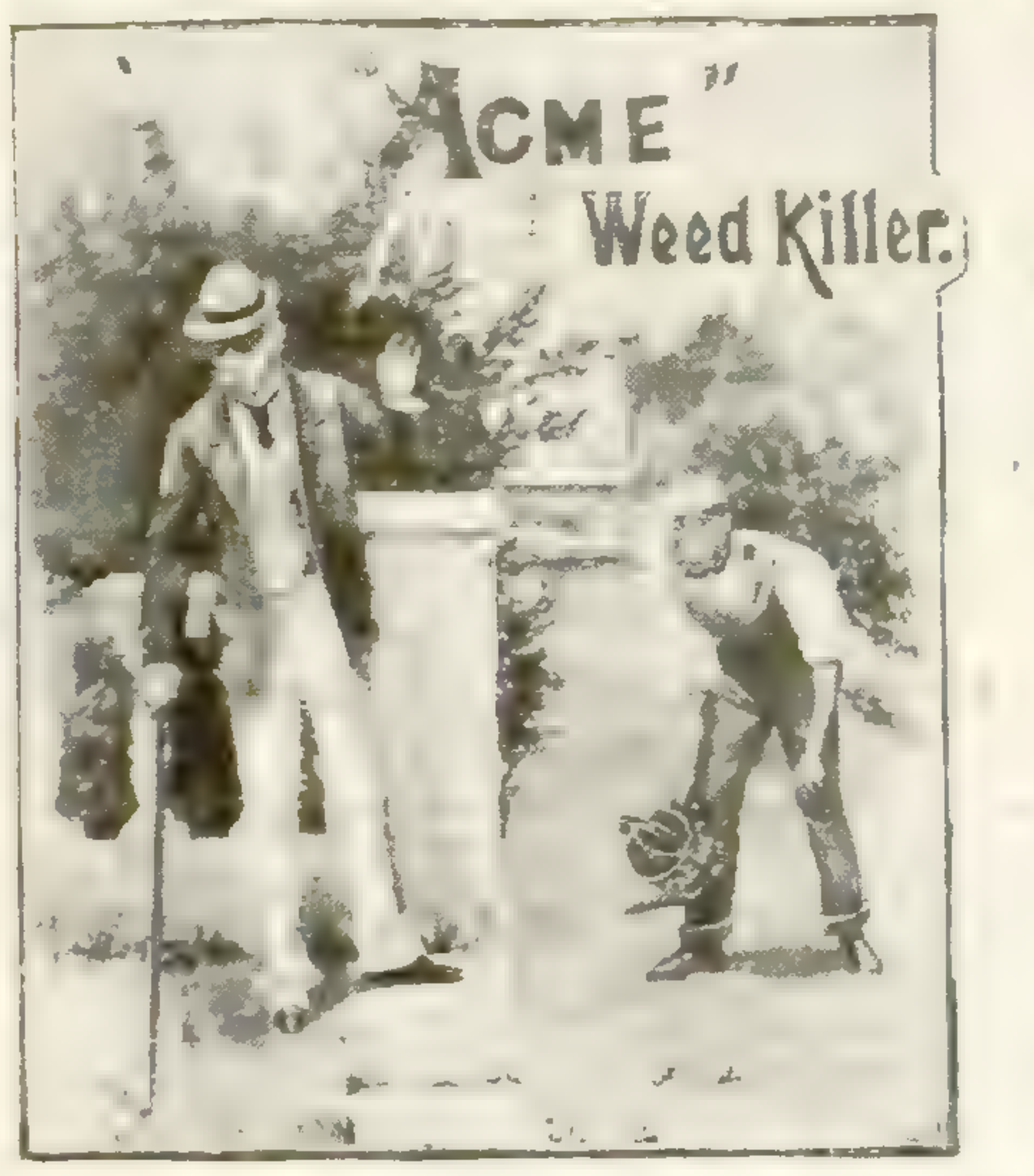

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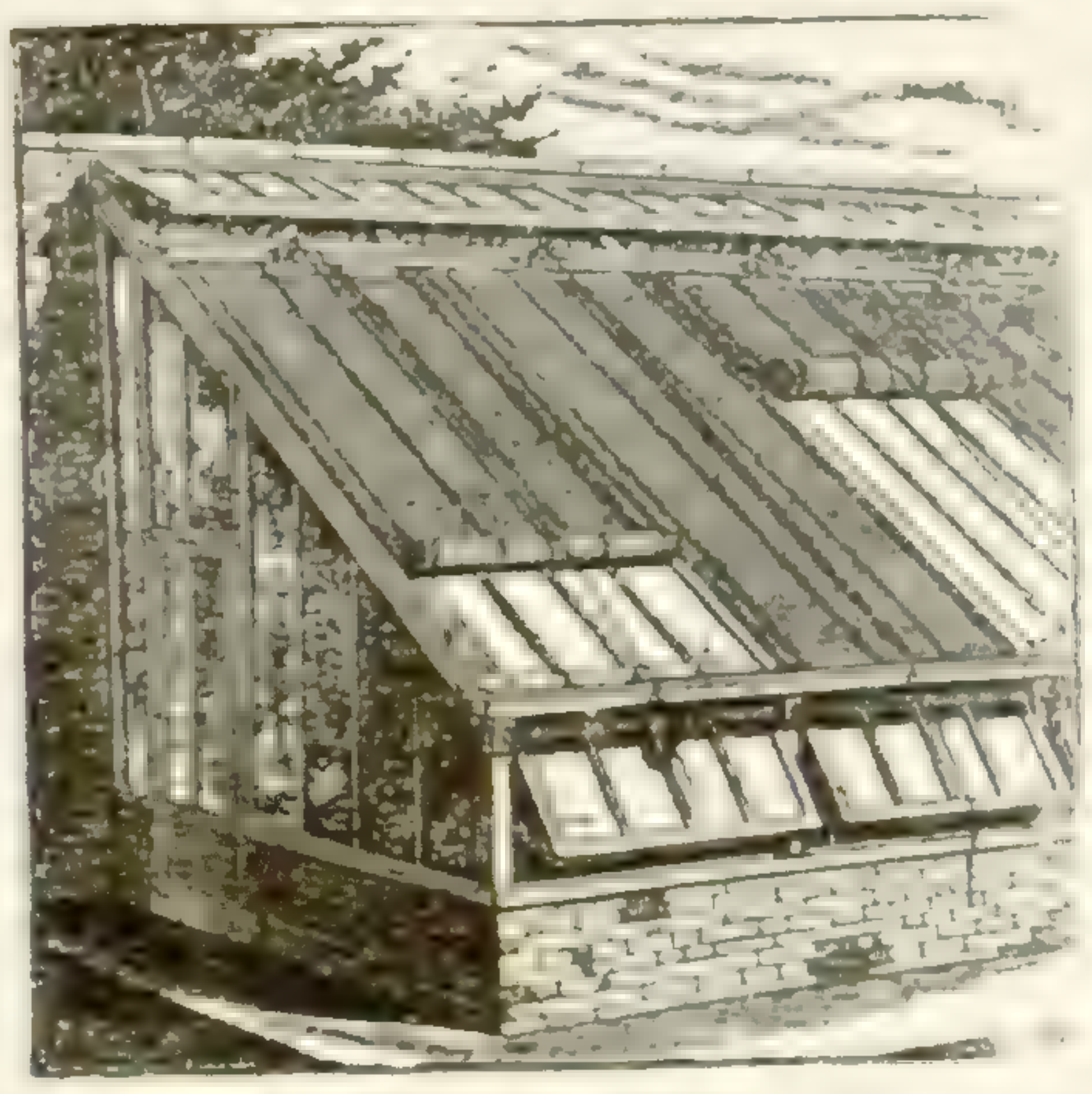

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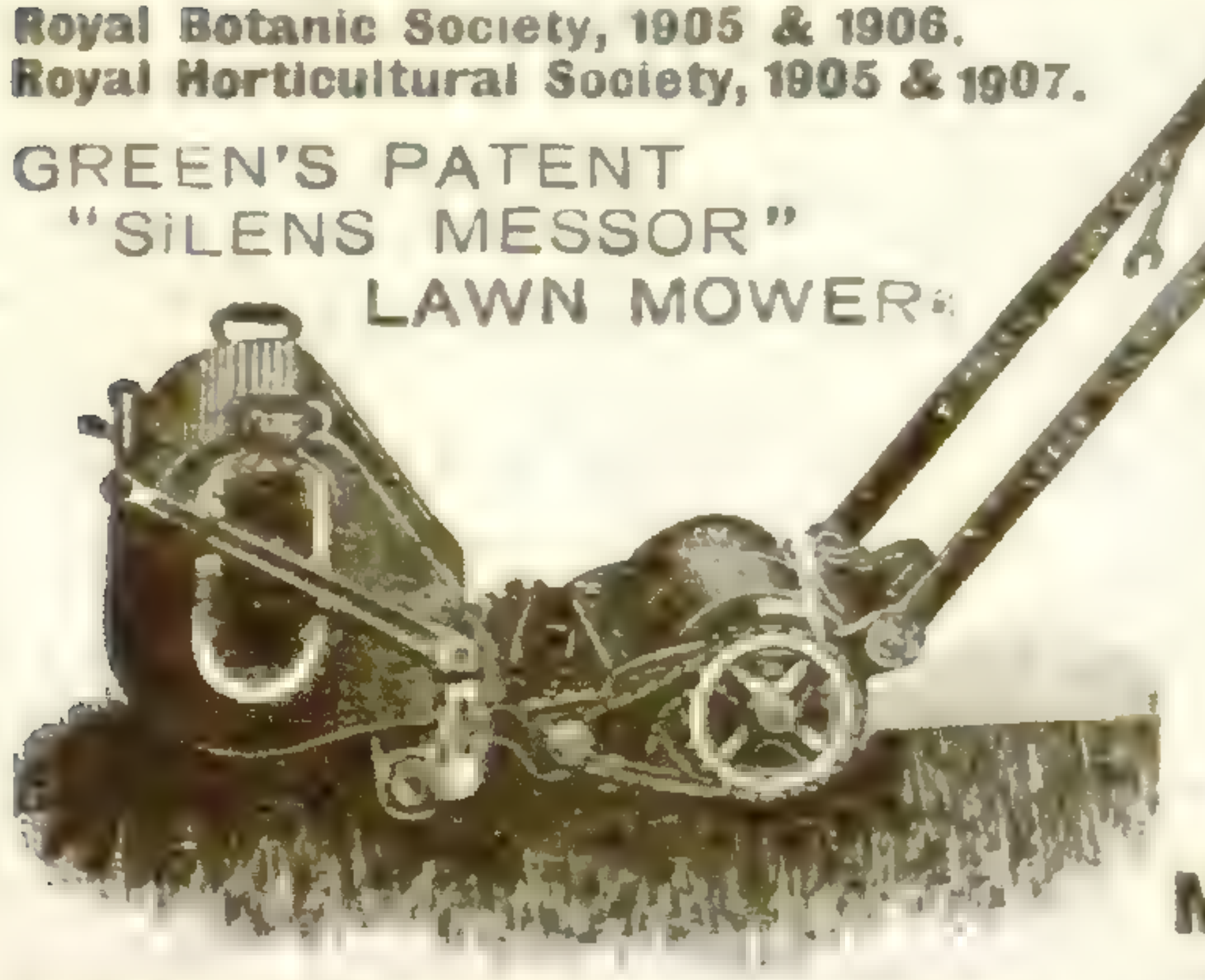

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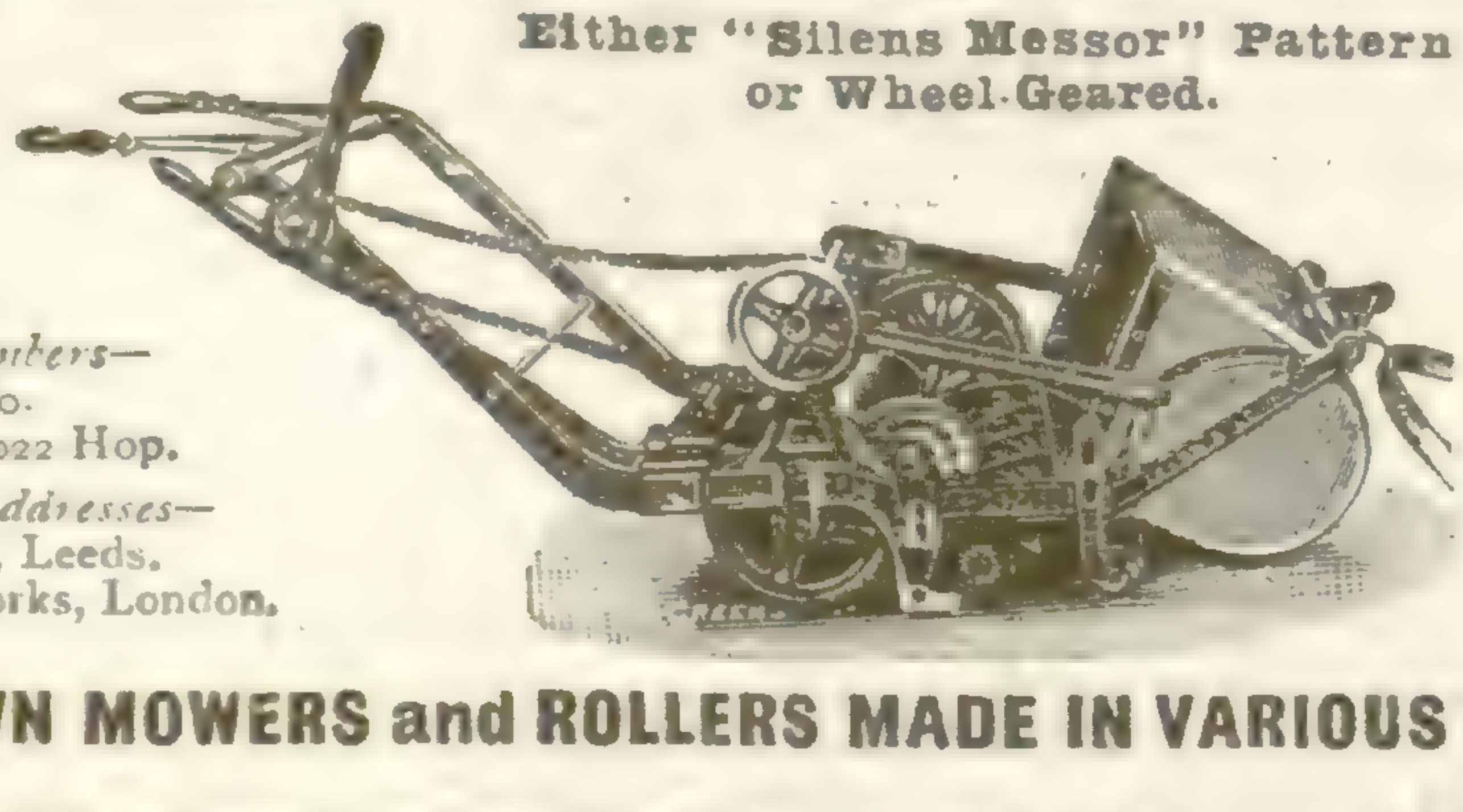

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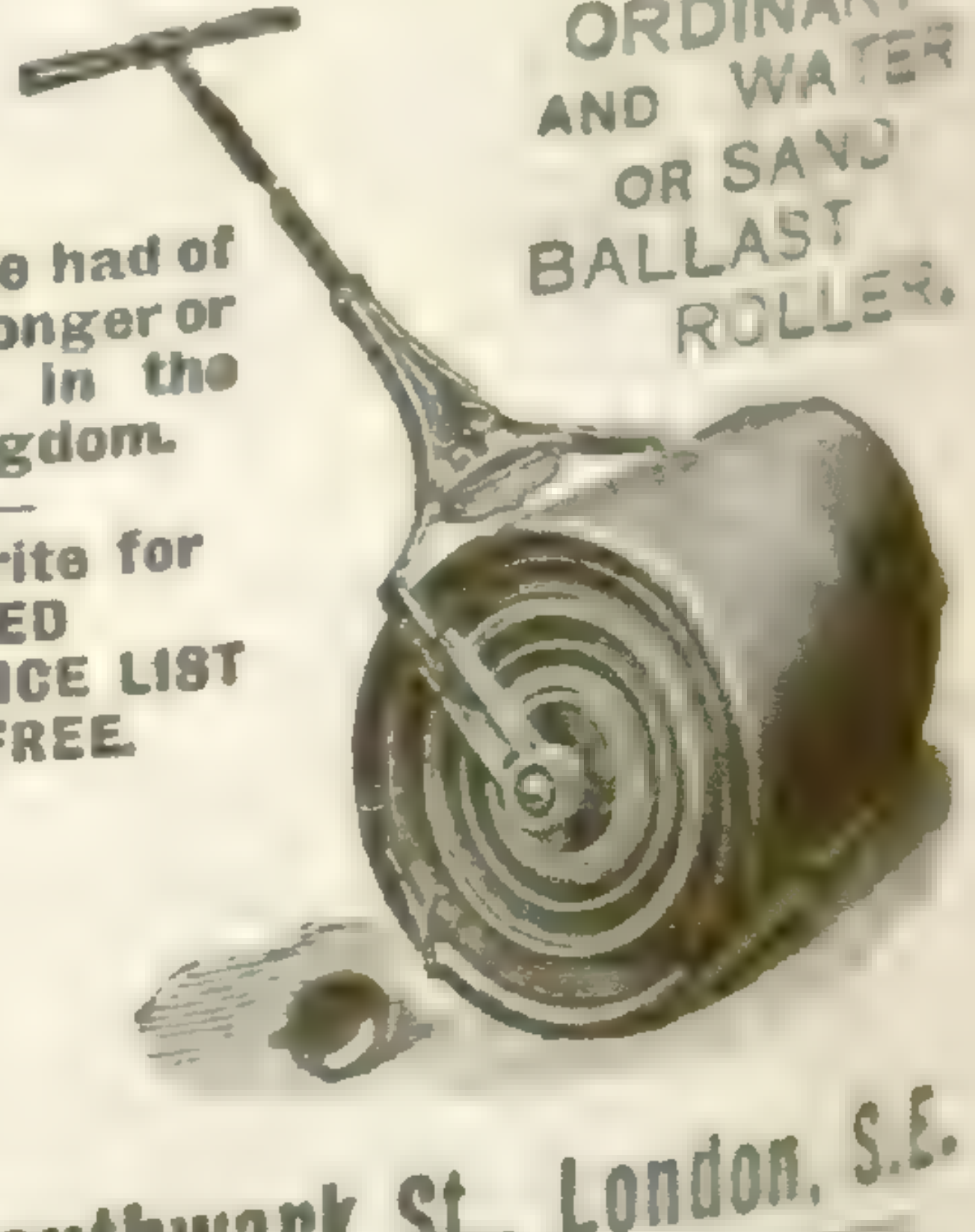

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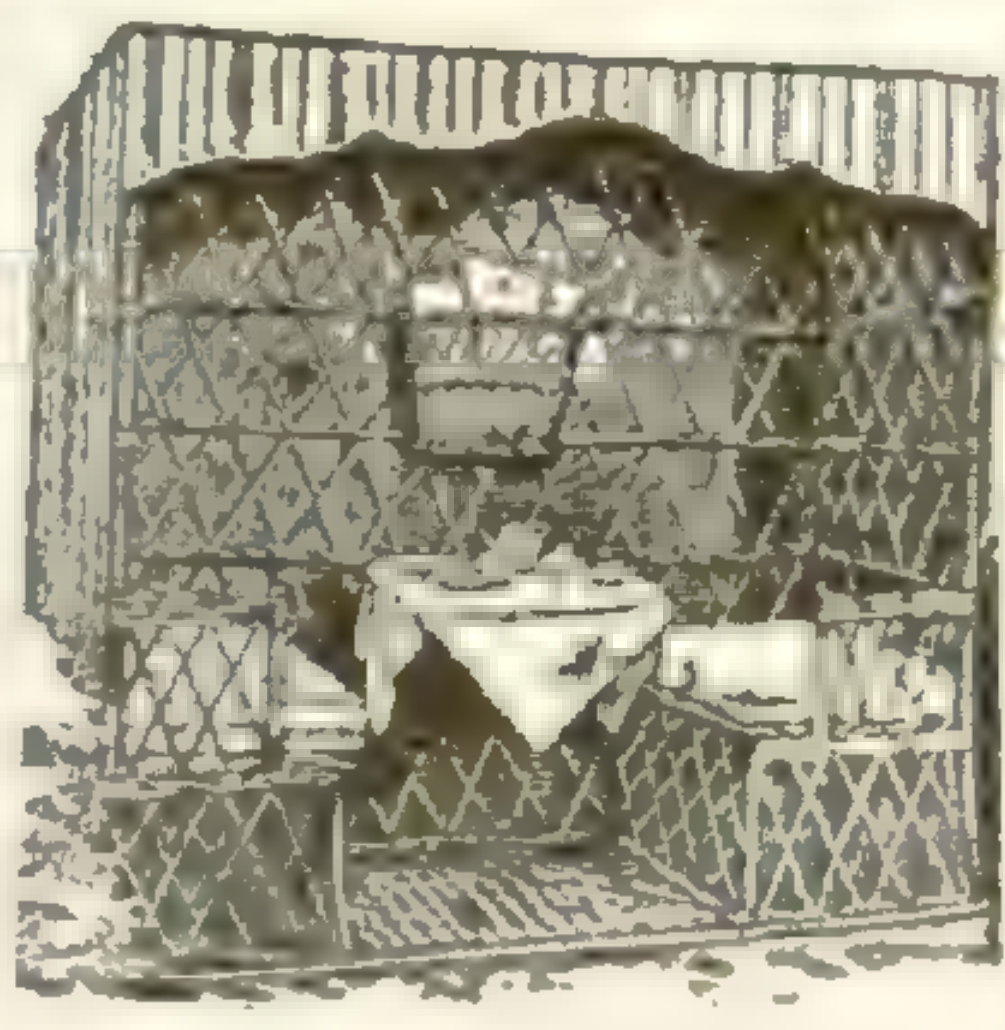

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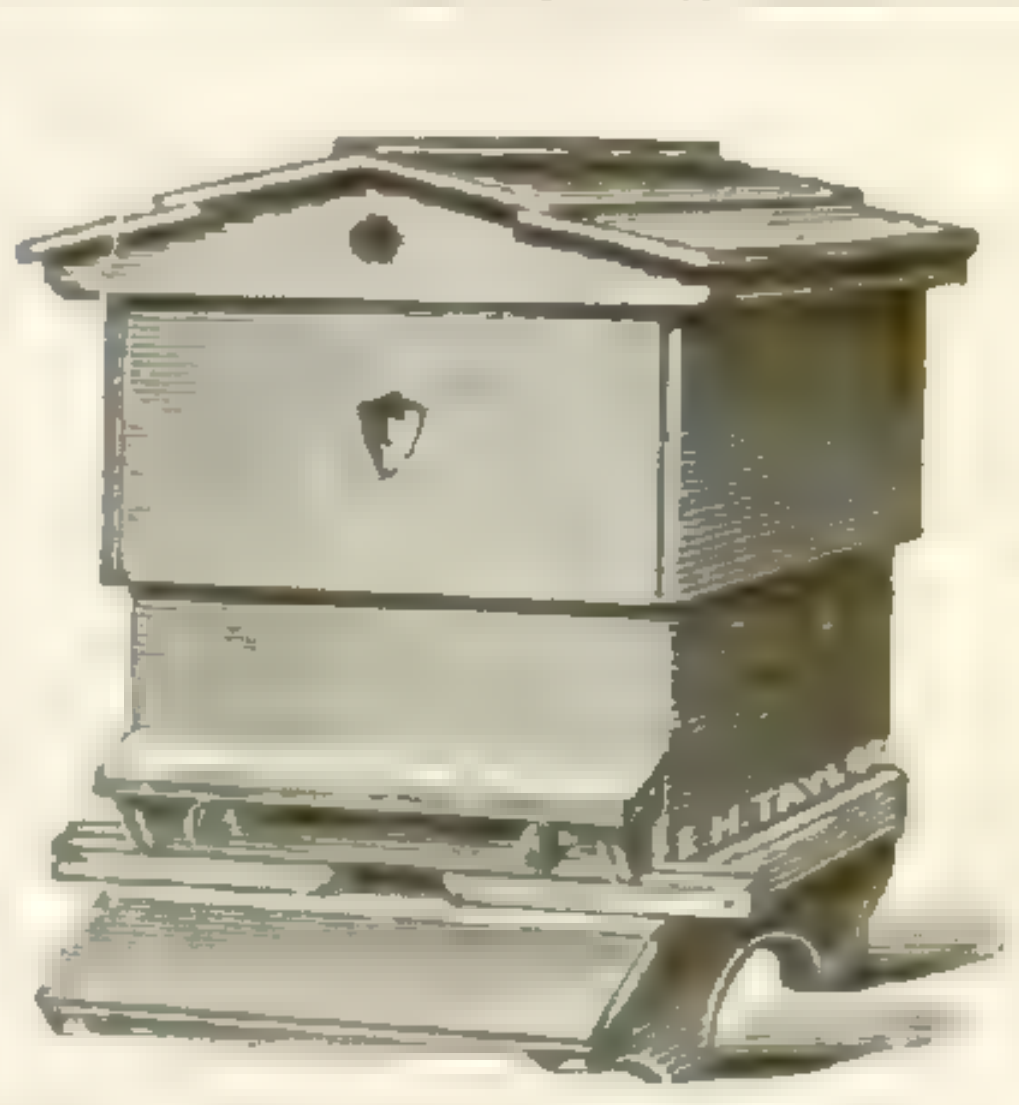

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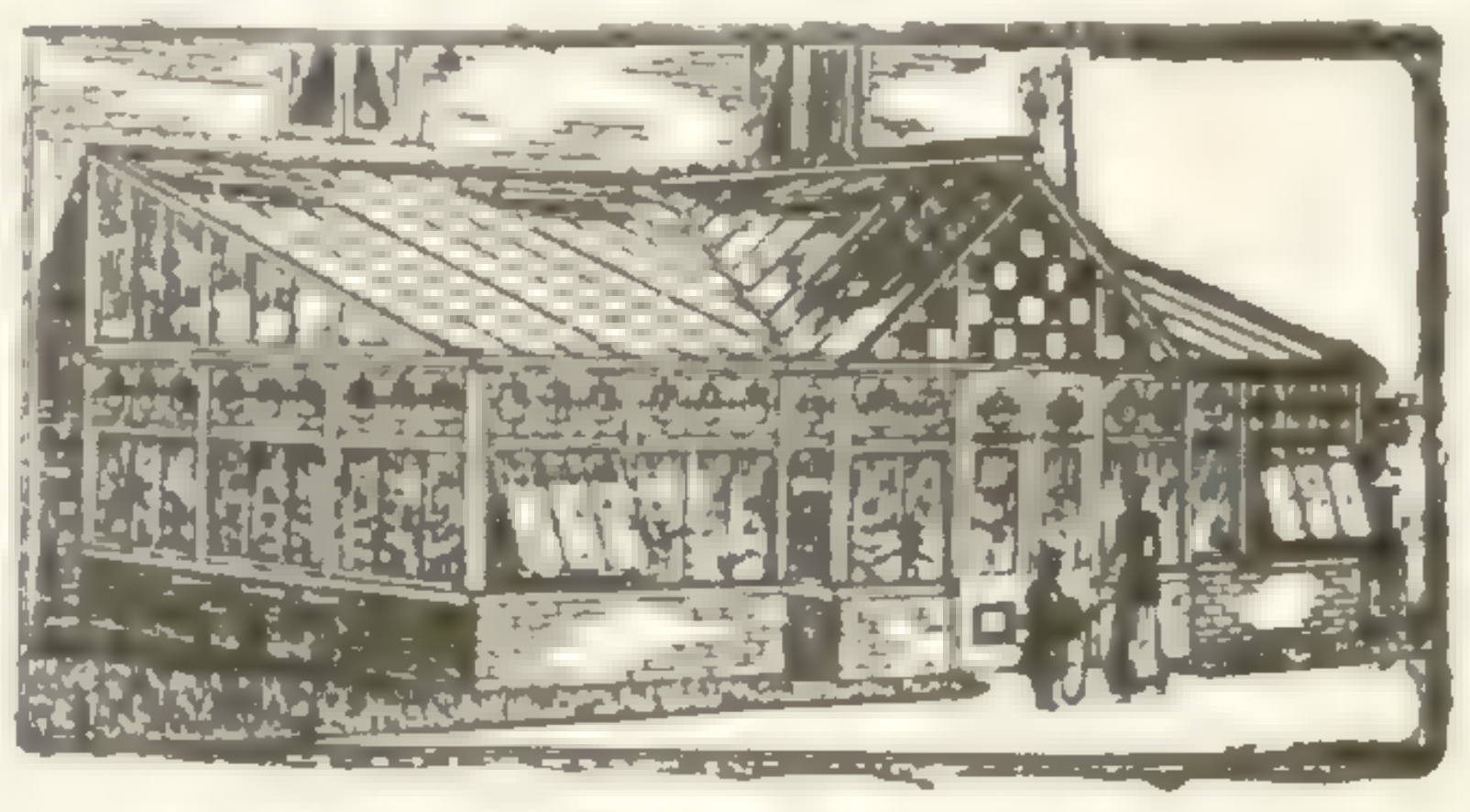

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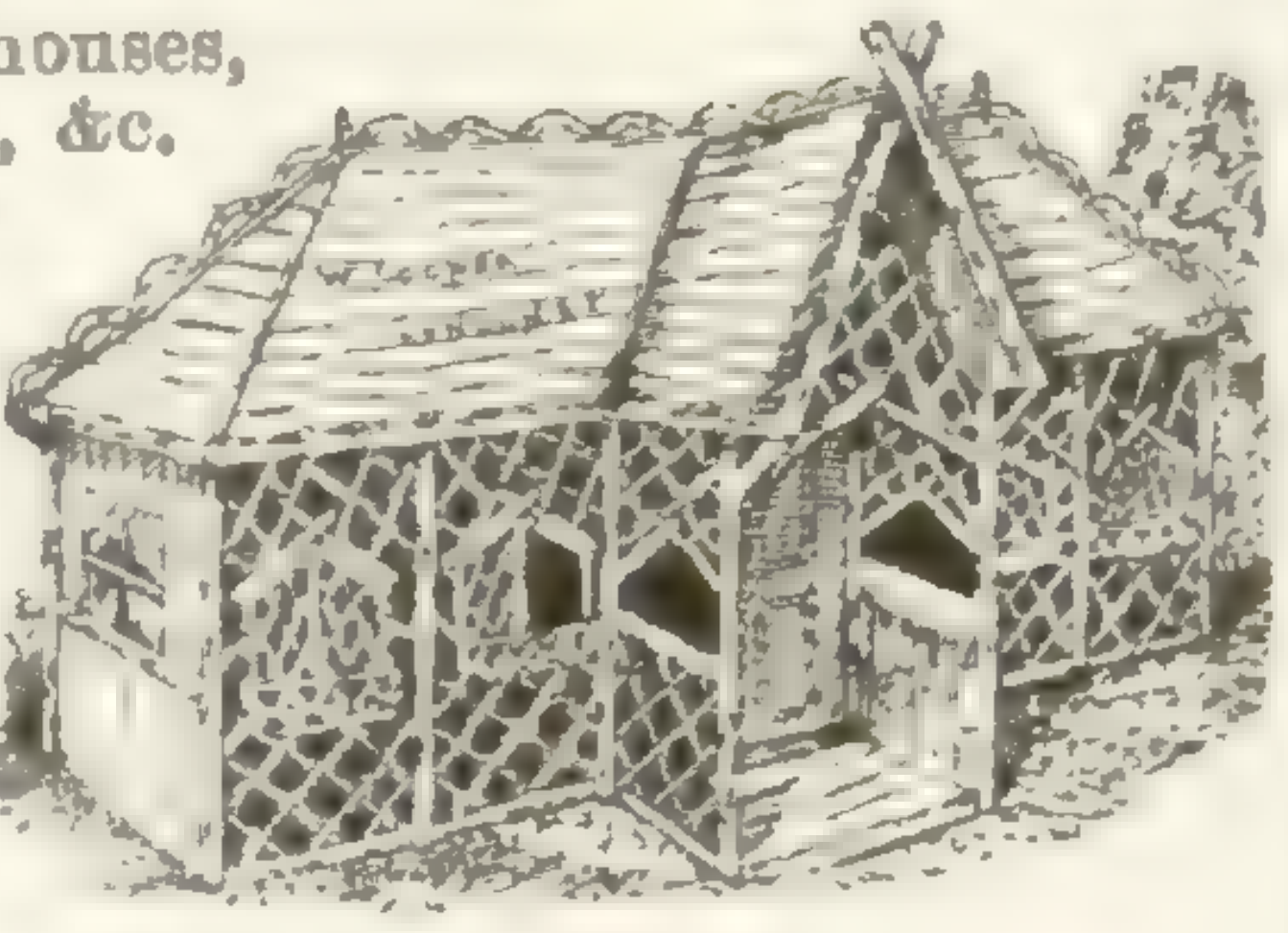

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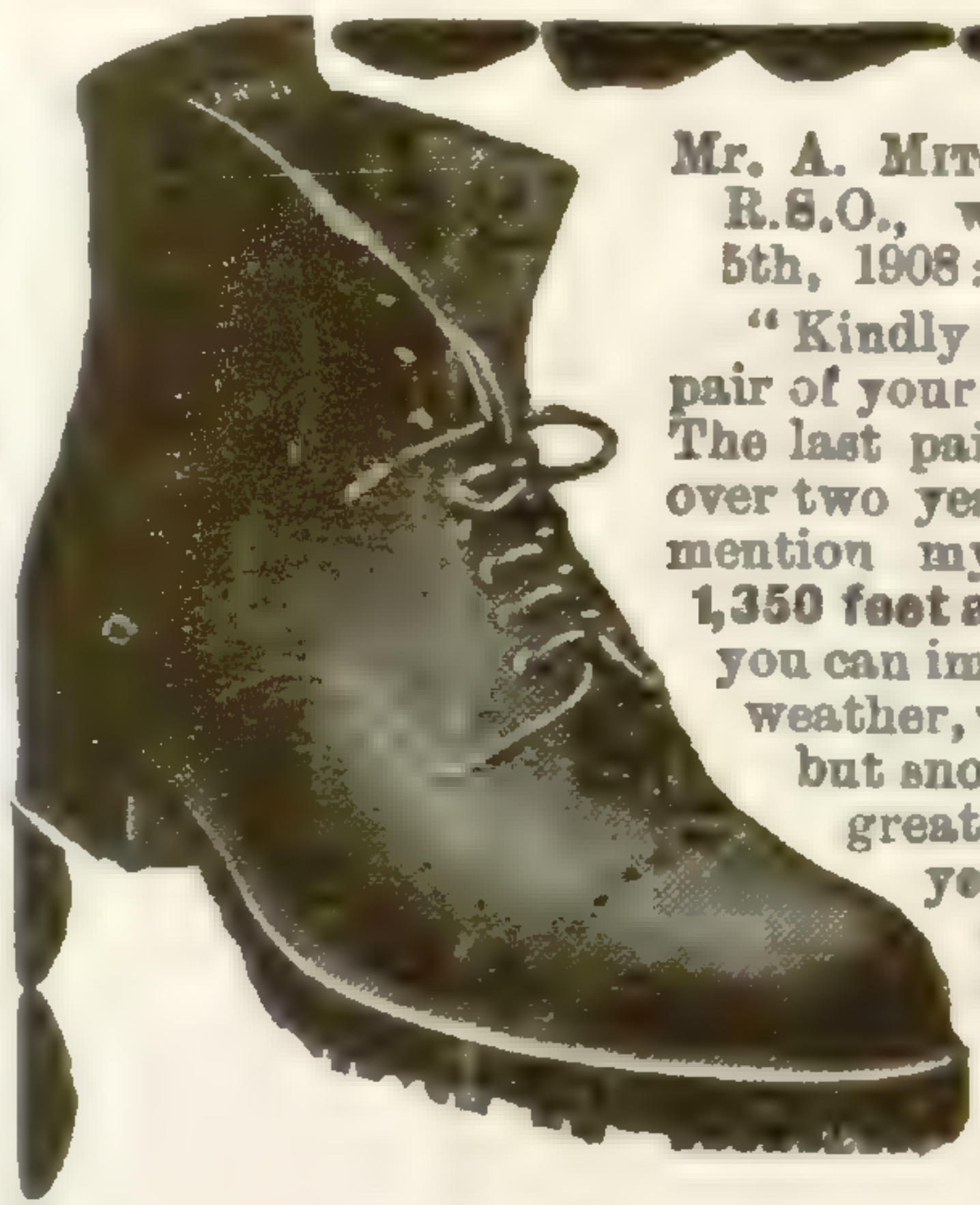

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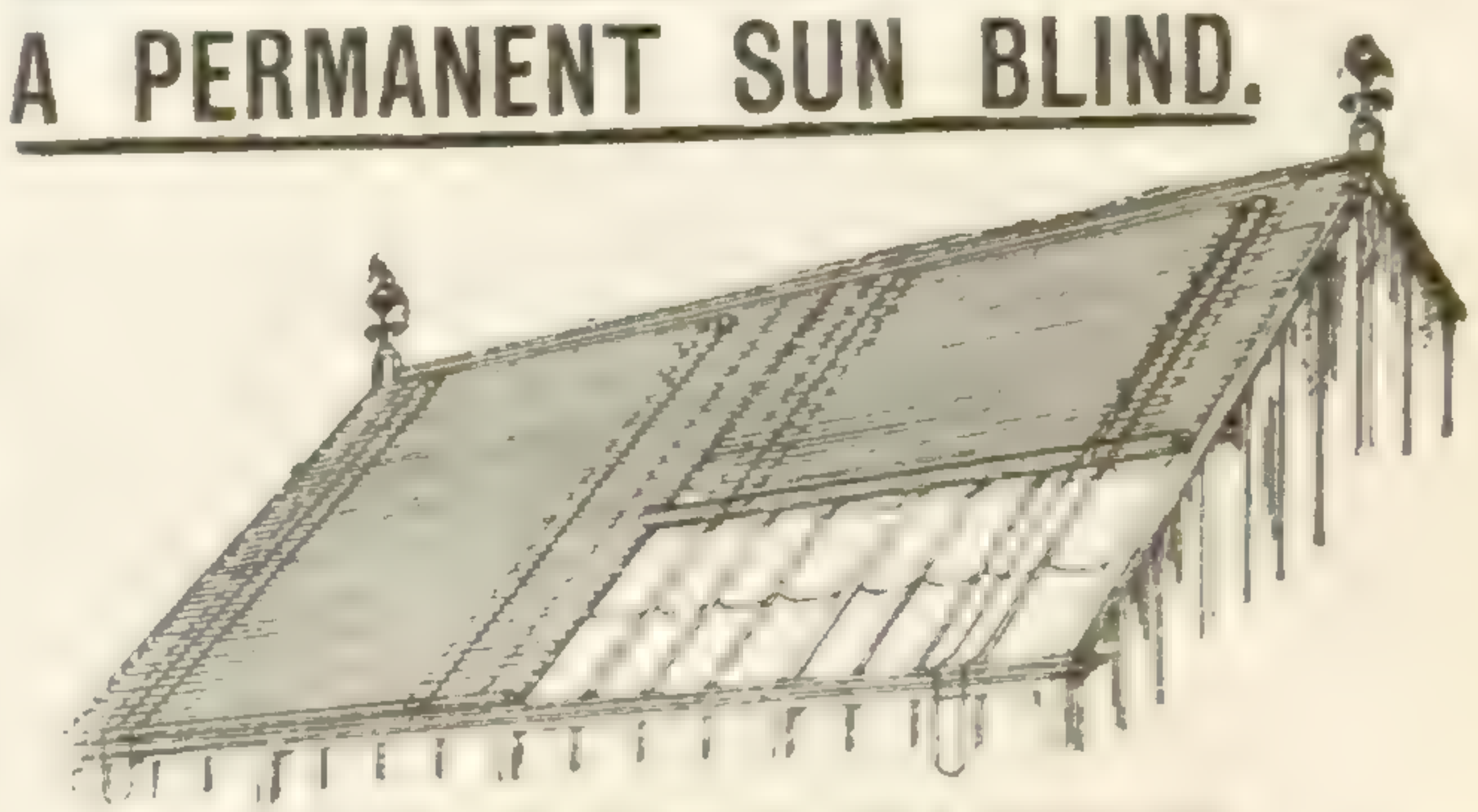

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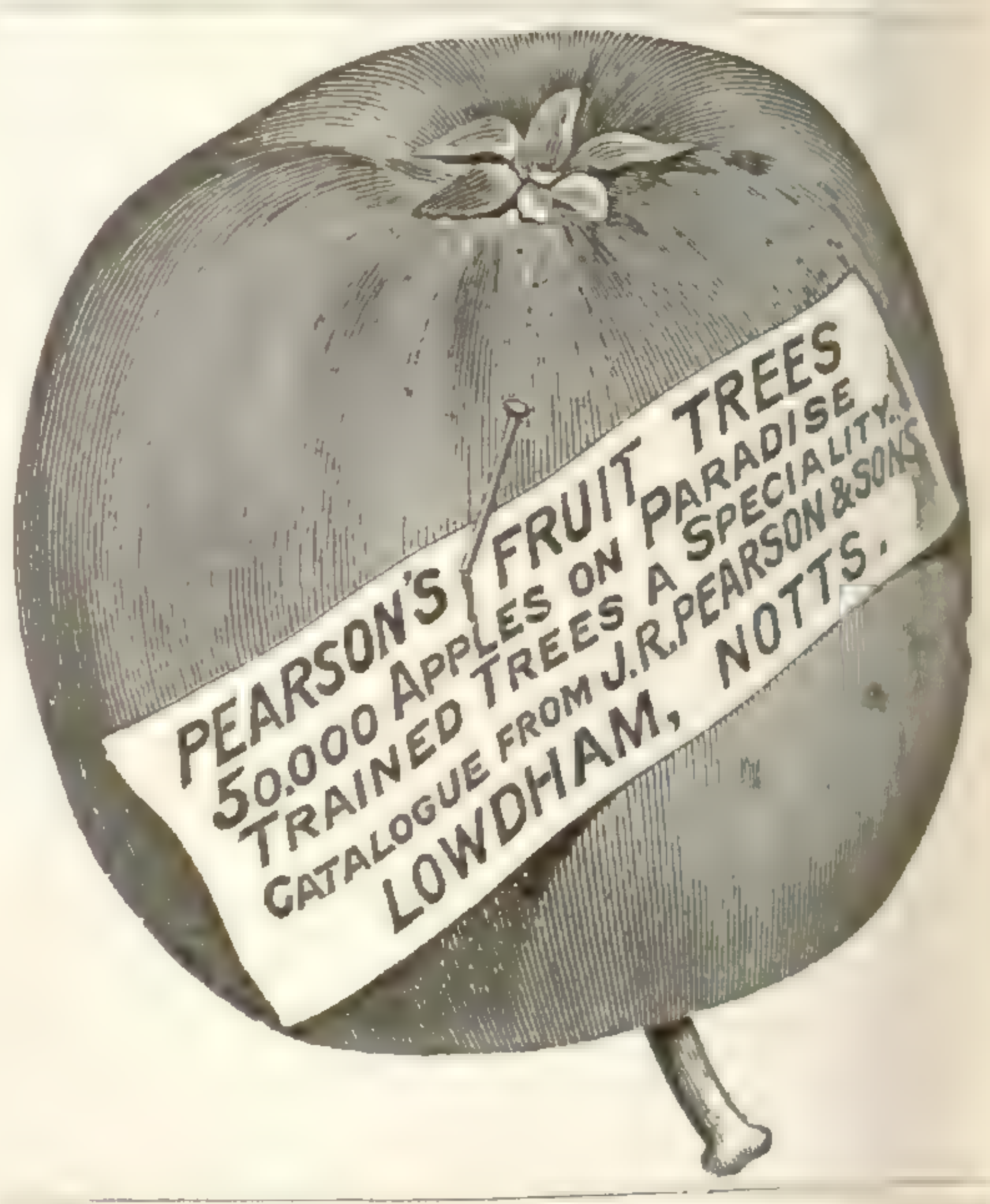
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VOL. LI.—No. 2,846. SATURDAY, MAY 16, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The Flower Garden in Summer.

Strenuous efforts are now being made on all sides to complete the needful arrangements for beautifying the flower garden during the summer months; and within the next fortnight or so the beds and borders devoted to seasonal subjects will have received their summer occupants. Those who have acted upon the advice that has been given in these pages during the past few months will have their arrangements well advanced, and be in a position to give the finishing touches immediately the season is sufficiently advanced for the more tender subjects to be fully exposed to the weather. We have good cause for congratulation that the form of garden decoration popularly known as "carpet bedding" no longer has a place in private gardens, and that ribbon borders, with their long lines of gaudily-coloured flowers, have all but disappeared. We may rejoice also in the fact that hardy perennials are now so fully appreciated by flower lovers that a well-furnished "hardy herbaceous border" is generally regarded as an essential part of the flower garden. The finest of the large number of hardy perennials that are now in cultivation are so extremely beautiful, and rich in interest, that their value in contributing to the attractions of the garden cannot well be over-estimated. Some of their advocates, however, place too high an estimate upon their usefulness when they write and speak of them in such manner as to suggest their being grown to the exclusion of other plants for the embellishment of the flower garden and pleasure grounds. If there are any of our readers who prefer hardy perennials to all other ornamental plants that can be successfully used in furnishing beds and borders for the summer display, we would not suggest they should modify their views in the slightest degree. Moreover, we regard hardy perennials with so much favour, as evidenced by the attention given to them in our pages, that we strongly advise those who have but little, if any, glass, to confine their attention chiefly, if not wholly, to them. Having thus made our position quite clear with regard to hardy plants, we can, without any fear of being misunderstood, proceed to point out that a flower garden can, during the summer season, be made more interesting and attractive by the judicious association of both hardy and half-hardy plants. Speaking generally, hardy herbaceous plants are not so suitable as could be desired for the furnishing of beds occupying prominent positions on the lawn, or forming part of geometric schemes. The habit of some of the more beautiful kinds is not such as to render them specially suitable for beds, and but few have a long season of flowering. A comparatively short period of flower production is not of any great consequence when the plants are grown in mixed borders, because of the difference in the time of flowering of the several kinds, and the consequent succession of bloom. In beds the case is different, and the best course is to furnish them each year with two distinct sets of plants. In the autumn they will be planted with bulbs and other hardy plants for the production of a display of colour in the spring, and during the summer months they may be occupied with half-hardy plants remarkable for the beauty of their flowers or foliage, in mixture, or in masses of separate kinds. But unless the beds are quite small, tasteful combinations are preferable. We need not particularise, but with such subjects as the strong-growing calceolarias, fuchsias, heliotropiums, ivy-leaf pelargoniums, etc., in association with fine-foliaged plants of free habit, it will be possible in large beds to produce the most charming effects, while small beds might be wholly devoted to begonias, ivy-leaf pelargoniums, violas, and other plants of medium growth that bloom continuously throughout the season. In positions where subjects of bolder growth would be preferable the dwarf cannas might be utilised in the furnishing of small beds. It is not desirable all the beds should be devoted to temporary occupants, for some part of those on the lawn should certainly be furnished with tea-scented and hybrid tea roses. No hardy subjects will bloom more continuously or produce a more charming effect than these, provided they are placed under conditions favourable to their full development. As yet these two sections of roses have not been utilised for garden decoration in accordance with their merits, and we would urge their being planted more largely, especially by amateurs, who have, comparatively speaking, but little time to devote to their gardens. There are three points to be considered in growing roses in beds specially for garden ornamentation; the first is to select varieties that are free and continuous in flowering, to plant but one

DUKE OF BEDFORD, K.G.,
President of the Royal Gardeners' Orphan Fund.

variety in each bed, or, if more than one, to have varieties that differ but little in habit, and harmonise in colour, and to provide a deep rich soil. Violas of dwarf growth may be associated with the roses, as so successfully done at Hopetoun House and in many other good gardens. There is yet another point in the beautifying of the flower garden in summer that must have brief reference, and that is the representation of annual flowers. The most beautiful of these consort admirably with hardy herbaceous plants, and if the borders are not unduly crowded a selection of them may be grown without injury to the perennials. The annuals will not so impoverish the soil that the plant food cannot be readily replenished, and they will add greatly to the attractions of the borders, more especially towards the close of the summer when the permanent occupants have lost much of their charm.

The Duke of Bedford, K.G., has contributed so liberally to the furtherance of the science and practice of hardy fruit culture, and has been so generous in his support of the orphans of gardeners, that it gives us great pleasure in presenting our readers with his portrait in this issue. Appreciating the importance of giving the tenants on his large estates such guidance as would assist them to cultivate their holdings in the most profitable manner, and recognising the possibilities of hardy fruit growing for commercial purposes, he set apart, fourteen or fifteen years ago, a considerable area on his Woburn estate for the purpose of experimental fruit culture. This farm, of which Mr. Spencer Pickering, F.R.S., is the director was well arranged and admirably equipped, and since its formation an immense amount of experimental work of great value in its bearing on fruit culture has been accomplished. The object lessons the farm has been able to give can hardly have failed to prove most useful to the tenants on the estate, and indeed to all who have had an opportunity of visiting it and making observations on the experiments in progress. The annual reports edited by the Duke of Bedford and Mr. Pickering have been of much value, more especially the one issued at the beginning of this year which dealt chiefly with spraying and fruit tree washes. On the death of Sir Julian Goldsmid, Bart., who was the first president of the Royal Gardeners' Orphan Fund, the Duke of Bedford was elected as his successor, and throughout the period he has presided over the charity he has taken a keen interest in its affairs. The Duke of Bedford has now presided twice at the annual festivals of the fund, and on each occasion gave a strong proof of his sympathy with the objects of the charity, in whose interest we would express the hope that he may long continue to occupy the position of its president.

Foreign Fruits were plentiful in British markets during April, and the value of the imports was considerably in excess of that of the corresponding month of last year. The imports of apples were very large, as in the earlier months of the year, the total having having been 261,976 cwt., of the value of £182,040, or an increase in quantity of 83,798 cwt., and in value £39,783. Apricots and peaches do not make a very large showing in the month's returns, as only 1 cwt., of the value of £2, was imported. Banana imports dropped from 618,482 bunches, of the value of £176,710, in April, 1907, to 475,735 bunches, of the value of £132,785, last month. Of gooseberries the imports were 2 cwt., of the value of £10, the first time these fruits have been received from abroad so early in the year. Of lemons and oranges there were largely increased supplies, but in the imports of nuts there was a small decrease. The imports of grapes were largely in excess of those of the corresponding month of last year, the aggregate being 5,536 cwt., of the value of £21,192, as compared with 1,676 cwt., of the value of £7,345. In the pear imports there was an increase of 66 cwt., of the value of £148, the total having been 1,866 cwt., of the value of £3,337. Plums, on the other hand, show a relatively large decrease, the total having been 8 cwt., of the value of £8. Strawberries were imported to the value of £8, but the quantity is not given, and the value of unenumerated fruits was £5,082. The total value of the fruit imports was £798,460, or an increase of £26,548.

Recently Introduced Plants at Ghent.—We have much pleasure in acknowledging the list, which M. Maurice L. de Vilmorin has kindly sent us, of the large collection of recently introduced plants that he exhibited at the Ghent show. The list is of much interest, as indicating the large numbers of hardy trees and shrubs that have been introduced to Europe from Western China and elsewhere within recent years. The trees and shrubs include such promising subjects as Actinidia chinensis, Ailantus Vilmoriniana, Ampelopsis cantoniensis, Berberis sanguinea, Carpinus polyneura, Cormus foliolosa, Corylus thibetica, Cotoneaster angustifolia—an elegant species, producing a profusion of scarlet berries, of which we have given an illustration in these pages. Deutzia Vilmorinæ, Ligustrum Delavayana, Paulownia imperialis alba, Philadelphus Magdalenæ, Rosa sericea pteracantha, and Rubus lasiostylus. Unfortunately, the date of the exhibition was too early in the year for hardy trees and shrubs to be shown at their best, but the collection was of much interest, and the members of the jury showed their appreciation of the exhibit by awarding M. Vilmorin a gold medal.

Royal Gardens, Windsor.—The King has graciously consented to allow the members of the standing committees of the Royal Horticultural Society to visit the Royal Gardens at Frogmore. Wednesday, June 10, is the date arranged, though, should the Court be at Windsor at that time (which is unlikely) the day will be altered. The party will leave London at 12.5 noon; and on reaching Windsor, will be entertained at luncheon by the Mayor in the Guildhall. After lunch the gardens at Frogmore will be visited, and the party will return to town, reaching Paddington about 6.30 p.m.

Foreign Asparagus has been very plentiful in the London markets during the past ten days, and the prices of even finest produce has been very low. The supplies from France and Spain have been exceptionally large, owing to the stimulative effect of the high temperature that was experienced over Europe at the commencement of the month.

Vegetable Imports were in April last much larger than in the corresponding month of last year, both potatoes and onions having been received in increased quantities. The imports of potatoes were 997,392 cwt., of the value of £256,383, an increase in quantity of 549,489 cwt., and in value of £129,739. Of the aggregate, Germany sent 204,576 cwt.; France, 284,892 cwt.; Channel Islands, 4,461 cwt., and other countries, 503,463 cwt. Onion imports were 747,959 bushels, of the value of £97,054, or an increase of £151,352 bushels, of the value of £23,308. Tomatoes, on the other hand, show a decrease of 34,140 cwt., of the value of £34,609, the total having been 74,917 cwt., of the value of £59,196. Unenumerated vegetables dropped in value from £57,876 in April, 1907, to £46,355 last month.

Birmingham Flower Shows.—The Birmingham Botanical and Horticultural Society have decided to hold, as in 1906 and 1907, two extra flower shows. The first of these will be held on June 11, and will be devoted chiefly to orchids and early summer flowers, and the second will be held on July 15, and will comprise roses and midsummer flowers. The shows will be held at the Botanical Gardens, Edgbaston, and schedules may be obtained from the honorary secretaries.

Big Prizes for Apples.—Cultivators of apples should make note of the fact that in December next a National Apple Show will be held at Spokane, Washington State, America. As growers of apples in Canada and Europe are invited to compete for the liberal prizes offered, it would be more correct to describe the exhibition as international, but this is a small matter. The sum allocated for prizes is, we are informed, £3,000, and of this amount £200 will be given for the best apple. The object of this exhibition is, it is stated, to "popularise the apple as the great national fruit" of America. Washington State is remarkable for the extent to which apples are cultivated within its boundaries and also for the high state of development to which these fruits attain. Last year there were nearly 3,000,000 of apple trees in full bearing, and the value of the crop was estimated at £2,000,000. This year about 500,000 trees will come into bearing, and probably double that number of trees has been planted during the past planting season. There will thus be two national horticultural exhibitions in America this year, one at Chicago in November, and the Spokane apple show in the month following.

New American Rose Wyndmoor. A new rose that is regarded as an improvement on Killarney, and of a darker pink than that variety, has been raised in America by crossing American Beauty with Safrano. The variety won the American Rose Society's silver cup recently, and it is expected to prove as useful an outdoor rose as it is an indoor one.

Franco-British Exhibition. Mr. C. I. Kiralfy informs us that, owing to the arrangements it has been necessary to make in connection with the opening of the exhibition and the visit of the King and the President of the French Republic, the flower show fixed for May 19 and 20 will not be held.

Seed Inoculation. A bulletin has been issued by the Ontario Department of Agriculture giving the results of seed inoculation with bacteria obtained by Canadian farmers in 1906 and 1907. A total of 170 reports were received, and of these 72 described the inoculation of the seed with legume bacteria as beneficial to the crop, and in 42 reports it was stated that no benefit was apparent. The form in which the cultures are distributed has an important bearing upon the utility or otherwise of inoculation, and it is therefore unfortunate that the bulletin gives no information with reference to this point.

Diseased Broad Beans.—During 1907 two injuries to broad beans were investigated by the consulting botanist of the Royal Agricultural Society, and, according to his report, the leaves in one case were covered with numerous small orange-coloured pustules, being the fruiting stage of Uromyces fabæ Pers. No serious damage results from the attack of this fungus. The other case was an injury to the stems of beans from a field in Norfolk. The attack had begun in the root and passed up into the stem, suggesting the disease of blackleg in the potato plant. The parts killed in both the root and stem were filled with a greyish slimy substance swarming with innumerable very minute rod-like bacteria. The bacterium was isolated and cultivated on sterilised carrot. It grew freely, forming gelatinous, dirty white colonies. From these the bacteria were transferred on a needle to young seedling beans. The bacteria began to multiply, and in four days the blackness of the rootlets and the stem as in the original specimens made its appearance. The examination of the blackened tissues showed that the injury was due to the same bacteria. A further experiment was made to test whether this bacterium of the bean was the same as that causing blackleg in potato. Bacteria from the beans were transferred to healthy potato tubers which were planted in the soil. The shoots that were developed were healthy, but after direct infection of the shoots the disease appeared and they were killed. These results may not be sufficient to determine the identity of the bacterium causing blackleg in potatoes and in beans, it nevertheless establishes that the potato may be infected by the bacterium from the bean. It is, therefore, well that caution be exercised when an attack of blackleg appears in a crop of either beans or potatoes, neither plant should be the succeeding crop.

Calcium cyanamide.—With a view to test the relative merits of this new nitrogenous fertiliser as compare with nitrate of soda and sulphate of ammonia, a trial was last year conducted on the farm of the Royal Agricultural College, Cirencester. The Calcium cyanamide was used in the cultivation of both cereals and turnips, and it is reported that finer crops were obtained from the plots to which it had been applied than from those which had received equivalent applications of nitrate of soda and sulphate of ammonia.

Potato-disease Fungi. — Mr. Massee contributed to a recent meeting of the R.H.S. Scientific Committee specimens of potato tubers affected with "winter rot," with the fungus Nectria solani, which is the cause of the disease, growing thereon, remarking that it had been particularly prevalent during the past season, a fact that he attributed partly to the prevalence of rain during the last summer, and the difficulty of thoroughly drying the tubers before they were stored. This fungus had recently, he said, been described under another name by an investigator, a condition of things found not alone in this disease, for recently the fungus long ago described by Berkeley (see Journ. Roy. Hort. Soc., Vol. I., 1846, p. 33, Figs. 30, 31) under the name of Tubercinia scabies, and now known as Sorosporium scabies, Fisch., one of the causes of potato scab, had been apparently rediscovered and renamed as new, Spongospora solani on the Continent, and this name had been taken up by some botanists in England and Ireland as the newly-discovered cause of potato scab.

COLOUR CHART FOR SWEET PEAS.

An open letter to the Hon. Secretary of the National Sweet Pea Society:

Among the interminable discussions which take place in the world of sweet peas with respect to the truth, or otherwise, of varieties, nothing stands out more sharply than the difficulty in which the disputants find themselves when they wish to name, or describe, a colour.

Now this is not difficult to understand when it is remembered how many and various are the conditions necessary to the true judgment of colour.

Setting aside for the moment the question of colour-blindness (which is much more common than is generally supposed), the colour of an object depends on the light it sends back to the eye of the observer, and as much of this light must be reflected, it further follows that the colour is greatly dominated by the nature of the light in which it is seen. Moreover, the colour is very greatly affected by other colours placed in juxtaposition, either harmonising or contrasting. Again, the eye, when fatigued, or whenever any given colour has been under observation for some time, loses much of its normal nicety of judgment.

Partial colour blindness is present in only about 4 per cent. of the male population of these islands, but without doubt, some slight degree of this defect is much commoner. Now it is a significant parallel that the most commonly confused colour is red, and that the greatest controversies amongst sweet pea growers are those which relate to the pink and scarlet sections.

Now if these premises be granted—and I believe them to be incontestable, is it not a pity that there exists no standard by which these colours may be judged—a scientific standard erected by competent and recognised judges, which would enable the tyro and the expert alike to accurately describe the colours of his blooms—in other words, a standard colour chart, produced under the authority of the National Sweet Pea Society?

Various and many have been the objections raised to the proposal that the society should take this course, and all are more or less based on its admitted difficulty.

But a great society like the N.S.P.S. is destined to become—and even now, is—should not be turned from so eminently desirable a project on the mere score of the many obstacles to be surmounted—rather should it concentrate all its energies and overcome them—and it may further be urged that in dealing with the question of colour in a firm and unbiassed manner, the society is in reality, only forestalling and dispersing the grave danger of the over-multiplication of varieties that are no varieties, and the consequent reaction to disgust on the part of all growers, amateur and professional alike.

To deal first with the question of colour names, the difficulty of agreement on them would be met and solved by the very fact that this chart would be the standard of the sweet pea world: or, if you like, it would be evaded by the very easy plan of numbering the shades of colour in lieu of naming them, a course which would render agreement on the nomenclature unnecessary, and thus avoid clashing with preconceived ideas.

The fact of other charts differing in any respect would in nowise affect the issue—is not, in fact relevant; this and no other would be the Court of Appeal in the matter of sweet peas.

It has been urged that to issue such a chart under authority would necessitate altering the description of practically every florist's flower given in catalogues. The answer to that, to my mind, is that the project deals with sweet peas alone, and that any such alteration as that foreshadowed, although it would certainly be paying a high compliment to the society, would be totally unnecessary.

It has also been said that a sister society cannot agree over its highly elaborate French chart—yet it is admittedly easier to match colours than to name them offhand, and the said society certainly agrees on its colours eventually. It may be freely admitted that many existing charts are worse than useless, but it may be fairly said that no colour chart has yet been issued with quite our idea in mind.

Such a chart should have special characteristics.

In the first place, each shade should be not less than three square inches in dimension, so that a good-sized bloom might be laid thereon for comparison. Then, no more than the various shades of any one given colour should appear on a page, for the reason of alteration by contrast or harmony referred to above. Again, the surface of the paper employed should be matt, and the colour of the purity and lack of shine best produced perhaps by washes of water colour on "Whatman's hand-wove" paper. As before said, the shades should be numbered, and not named, though an index giving names might be added if desired. It would also be useful to illustrate the differing forms of the flower and name them, as there is occasional confusion displayed in this respect—this though is not germane to my subject.

In addition, the society might adopt some standard method to be followed when assaying colour, as some experts will take a single bloom and analyse it—others bunch a few in the hand, shading them from direct light—others again put a bunch into a vase and judge by the massed effect.

To conclude, there is no doubt that the production of such a chart would be a long and arduous undertaking, but I venture to say that the resulting gain would be great, out of all proportion to the effort we are called upon to make.

I therefore beg to offer a formal proposal that a small committee be appointed to deal with the matter, and that a special fund be opened and placed at its disposal.

To this latter I do myself the honour of offering the first guinea, and remain, dear Mr. Curtis.

Yours very sincerely,
Stanley Brook.

18, St. George's Place,
York.

Brentford, May 9, 1908.

The question of a colour chart for sweet peas has been discussed at some length in committee by our society, but no decision has yet been arrived at. Ways and means appear to be the chief stumbling-block, because it would be of little use if the N.S.P.S. brought out a colour chart at a price beyond the reach of many of its members. The "Repertoire des Couleurs" is a fine colour chart, but the price is prohibitive. To be effective the colour chart must be cheap enough for every flower lover to purchase, so that when a flower is described by its raiser or introducer, or in the records of the society, according to the chart, everyone would be able to turn to his or her colour chart and at once understand what colour the description indicated.

Personally, much as I would like the National Sweet Pea Society to have the honour of bringing out such a colour chart, I am afraid the cost of production would be too great for us to undertake, even with kindly help from friends as interested as Mr. Stanley Brook. But is not a colour chart rather the work of a combination of the floricultural societies? What a splendid thing it would be if for, say, 5s., we could have a colour chart that was at once the colour law for the Rose, Dahlia, Carnation, Chrysanthemum, Sweet Pea, and other National Societies. If the matter is beyond such a combination, then, might not our splendid Royal Horticultural Society produce such a chart at a moderate price? Surely it might, and we should then have a colour chart for all our floral descriptions.

Charles H. Curtis,
Hon. Sec., National Sweet Pea Society.

SIMPLICITY IN THE GARDEN

> "One looked all rose tree, and another wore
> A close-set robe of jasmine sown with stars;
> This had a rosy sea of gillyflowers
> About it; this a milky way on earth
> Like visions in the Northern dreamer's
> heavens,
> A lily avenue climbing to the doors;
> One, almost to the martin-haunted eaves,
> A summer burial deep in hollyhocks;
> Each its own charm."
>
> —Tennyson.

If one were asked to say what was the most strongly-marked characteristic of the gardens of the present day, one could scarcely do better than describe it as a return to Nature. We see it in the ever-increasing number of climbing and decorative roses of various types; in the modern taste for the single forms of some flowers as well as, or in some cases, instead of, the double forms, as in the rose and the chrysanthemum; and, above all, in the number of hardy wild plants of other countries which have been introduced into our gardens, either in their original state or in an improved form, of which the American prairie flower—Helianthus rigidus—and its many varieties, offer a striking instance, these and similar plants now occupying much of the space which was formerly devoted to summer bedding plants of a temporary character, which never looked, and never could look, as if they had become naturalised where we saw them growing.

It is not only in the character of the plants we grow, but in the way we grow them, that such a change is noticeable, a change almost as great as that which has taken place in the arrangement of cut flowers in the house. The tendency seems to be, in short, to get effects as nearly as possible like those which would be produced if the flowers were growing in a state of nature. Hence one seldom sees the ribbon border and the carpet bed outside the most formal of gardens; nor outside the gardens of inexperienced amateurs, or the cat-ridden suburban plots, to which Mr. Rider Haggard so often refers, do we see startling colour effects, gardeners, both amateur and professional, studying natural combinations of colour masses to good effect.

Though we often speak of a return to Nature—and apology should be made for the second use of so hackneyed an expression—we do not, perhaps, at the same time always think of the things we see in it, which it is possible for us to imitate to some extent in our gardens. We never see straight rows of hyacinths or tulips in a setting of bare earth, or roses growing on a small mop-like tree, or numbers of plants on a rockery with a wooden label stuck to each. What we do see is roses growing with the utmost freedom, forming perfect showers of blossom, and the ground everywhere well covered, so that bare earth is not usually visible, for, even in dense woods, it is covered with a carpet of leaves, while in the home of alpines and rock plants, though there is necessarily often a deal of bare rock, there are usually large patches of the same thing; Nature producing the same effect by massing together the small flowers of rock plants, namely, a display.

Above all, we see that Nature produces her most beautiful and striking effects with very simple materials, as with a hedge of blackthorn or may, or, late in the summer, with honeysuckle and travellers' joy growing over the same, while a meadow covered with buttercups, cowslips, or marguerites, or "a field of charlock in the summer sun" is one of the most beautiful sights one can see, and yet it is produced by the aid of one or two things only at the same time and in the same place. Art lovers will recall McWhirter's picture, "June in the Austrian Tyrol" in the Tate Gallery. It is true we enjoy the heterogeneous collection of flowers in an Alpine meadow, and to a less extent, in an English meadow, but, beautiful though they are, their beauty is chiefly owing to their remarkable luxuriance and the all-pervading rich grass as a setting for them all, so that it blends into one harmonious whole; but they do not produce that striking effect and command that voluntary admiration as is the case with the simple pictures referred to.

It is here that we have the visual illustrations of one of the great principles which should never be absent from our minds in all our garden plans and alterations. We do not, of course, want to limit ourselves to two or three things in flower at the same time, but our gardens will lose in effectiveness—however interesting they may be to their owners—if they become simply botanical collections. We have all seen collections of alpines and rock plants staged at the flower shows—small plants puddled into holes or cup-like depressions in pieces of concrete, each with a wooden label attached, setting out its generic and specific name, and I have seen actual rock gardens not much more natural in appearance, however interesting they may be, and there is no doubt they are that even to a chance visitor, if he knows anything at all about alpines; still they are not objects of beauty, and never will be until most of the plants die and the few remaining ones grow all over the place.

Therefore, to produce the best effect, we have to make a compromise, by which, however tempting it may be to try and grow a large number of things, most of them indifferently, we confine ourselves to a relatively small number, and, by keeping all plants of the same kinds together, produce some amount of display with each, and thus a succession of more or less striking pictures at different seasons of the year. We often see favourite plants dotted about from end to end of a mixed border, and in various other parts of the garden, producing no good effect, whereas if they were all together the effect might be very good. It resembles the difference of effect produced by the black and white threads in a piece of cloth being mixed together, producing a pepper and salt effect, and the same threads collected together into bands of black and white. This illustration, however, must not be pushed too far, and it is an unfortunate one if it gives the idea that violent contrasts are recommended. To quote from the advertisement to "Nature's Own Gardens": "The true value of any garden, whether constructed on the plan of the wild garden or that of the distinctly artificial and formal garden, always lies in the power for giving pleasurable and reposeful sensations in the manner of its arrangement, both as to colour-contrast, colour-massing, and in the grouping of plants in the right situations."

To give these "pleasurable and reposeful sensations," we should endeavour, as far as possible, to have harmony of colours rather than violent contrasts, and next to simplicity in the arrangement and number of flowers, this is the most important consideration in planting, and if one has not the artist's eye for colour, many mistakes will be made even with the best of intention before one has studied the effect of the juxtaposition of different colours in the garden for a long time. There are few who will not have felt that scarlets and purples do not mix well together, or that lilac and red or pink do not produce a pleasing effect upon the observer, whereas a pale yellow is a most useful and satisfactory go-between, preparing the eye for the transition from reds to purples, or from blues to mauves. This is a subject which one may study all one's life, one's eye becoming better and better trained in the appreciation or otherwise of different combinations of colours, until "that inner eye which is the bliss of solitude" will tell us, even at the first thought of a certain arrangement, whether it will be good in its effect or not. Perhaps it may be said that this study of the arrangement and combination of different colours in the garden is not simplicity, but smplicity does not imply the want of cultivated taste, and, even if only two flowers are grown near each other, the colours either go well together or the reverse, though it should be said in conclusion that there is a Tom Tiddler's ground, or debatable land, where experts may meet and strive for victory.

ALGER PETTS.

THE HIMALAYAN BRIAR, ROSA MOSCHATA.

The spirit which pervades all ranks of rose-lovers, seeking in every rose—whether it be a wild species or garden hybrid—for some merits worthy of admiration, has long since accorded to the Himalayan briar (Rosa moschata) a foremost place amongst wild roses.

It is no stranger to English gardens, having been introduced some 300 years ago from India, though it is occasionally found wild in Southern Europe. The aspect of this rose is formidable, and when growing freely it sends out stout shoots in one season some 10 to 15 feet long; these are closely covered by strong curved spines which makes it one of the most difficult roses to disentangle.

The flowers are single, borne in large bunches the full length of the shoots; the colour is soft creamy-white, with a boss of yellow stamens in the centre. They appear in July, and are at their best about the end of the month and beginning of August. The leaves are uniform grey-green, a colour not common among roses, but one which harmonises effectively with the flowers, and is a distinct change at all others seasons.

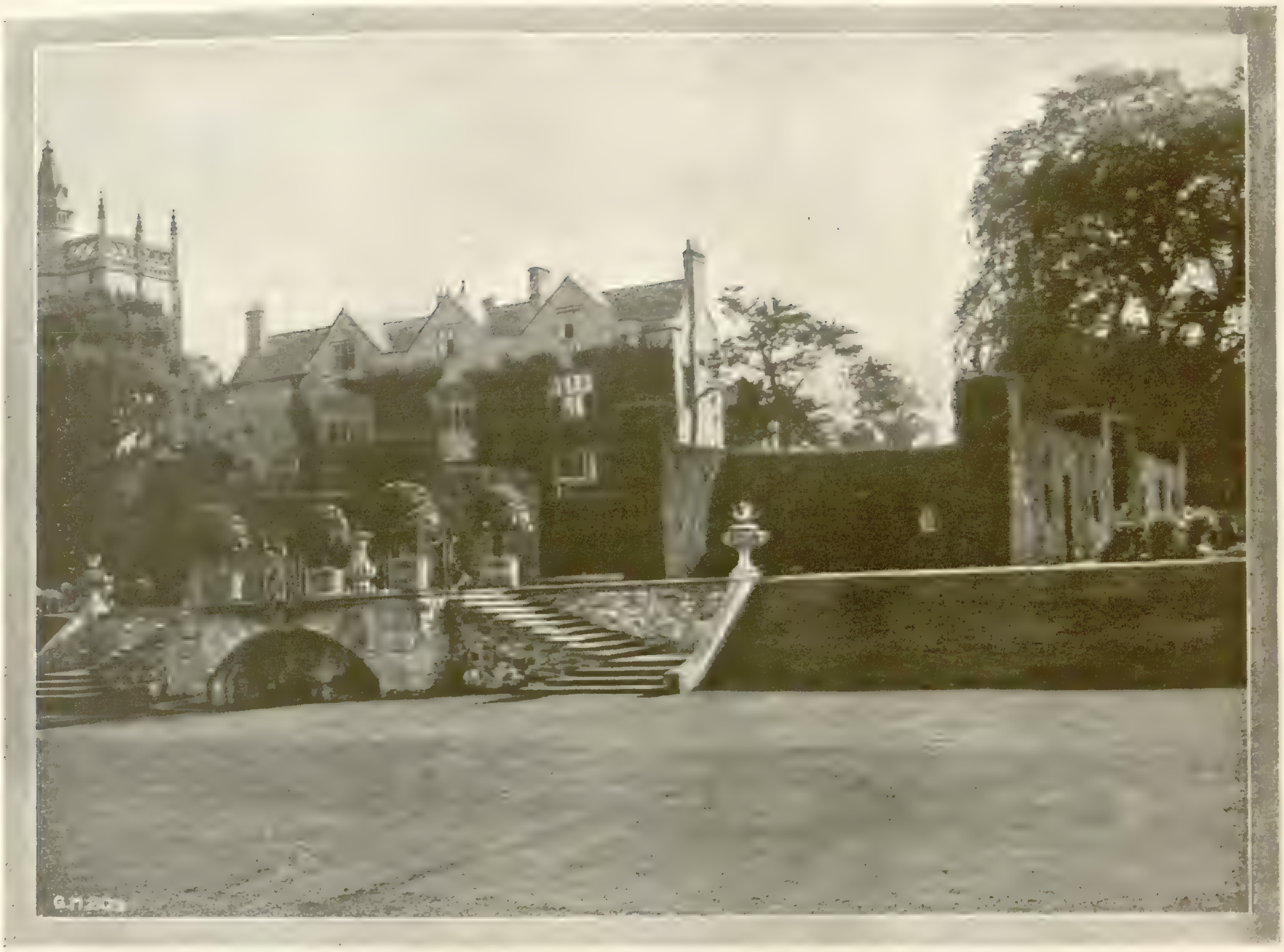
Rosa moschata grows freely in any good garden soil, but it reaches the greatest luxuriance on a chalky soil, which is probably accounted for by the fact that the subsoil is warm during winter, and therefore allows excessive moisture to pass rapidly away. If the ground is broken up—ample drainage being provided on heavy soils—and sufficient good soil added to give it a start, in two seasons it will become established, after which it requires no further attention.

Few roses call for greater judgment in planting than moschata. To enjoy its unique beauty is to see the great [illegible] wreathing a clump of pines, thujas [illegible] similar trees, up which it soon ascends, forming a cascade of blossom that sparkles [illegible] in the distance with telling effect. [illegible] should have ample shelter from north and east winds, with full exposure to the [illegible] and ought not to be planted where the pruning knife is necessary to restrain it.

Old plants transplant well, if the work is performed early in spring; care must be exercised in lifting; the roots be carefully pruned, and the top growth be cut hard back. The first season it recovers [illegible] check, flowering freely the following and in subsequent years.

THOMAS SMITH.

Walmsgate, Louth, Lincs.



BARROW COURT, FLAXBOURTON, BRISTOL.
(The Residence of H. M. Gibbs, Esq.)

SOME BRISTOL GARDENS—I.

An historian has written, "Bristol, the capital city of the West of England, has been distinguished for its commerce from a very early period, and was for many centuries the second city in the British dominions." Everyone knows that to this famous port, city, and county—for Bristol is a county of itself, lying between Somerset and Gloucester—there once came practically the whole of the West Indian trade. Small wonder, then, that the merchant princes built themselves fine houses and surrounded these with large gardens and estates, on the outskirts of this city of seven hills. Though much of the ancient trade and glory have departed from Bristol, it is yet a fine city. The River Avon runs through the city, and boats of considerable tonnage come right up to Bristol Bridge, in its centre. In the matter of public parks and gardens, Bristol does not seem to be very well served, but it has one of the finest open spaces that any city could have, and this is Durdham Down and Clifton Down, which are practically one, and extend from the elegant suspension bridge at Clifton right beyond Stoke Bishop towards Westbury-on-Trym and Henbury. It is a grand piece of rolling country, left pretty much to nature, although at various times young trees have been planted to eventually replace those that are already old.

It were an easy matter to fill many issues of the GARDENERS' MAGAZINE with descriptions and illustrations of gardens in and around Bristol, and it must not, therefore, be taken for granted that those gardens dealt with in this and the succeeding issue are far and away finer than all else in the district, or the only ones worthy of mention. Limits of time for visiting and space for describing have to be sharply marked out, so readers generally and Bristol friends in particular will please understand that at present we give but a fair sample of the many good gardens round about this western city, and that in the not far distant future we hope to give another selection.

Barrow Court.

A few miles west by south of Bristol, where the land begins to rise in wave-like foot hills towards the higher levels of the Mendip Hills, and amid peaceful surroundings and delightful scenery, Barrow Court is charmingly set. The nearest railway station is Flaxbourton. To the left, rather more to the south-east, and beyond Barrow Court, Dundry Hill rises 700ft. high, surmounted by its old church tower. Straight ahead is the Dial Quarry, and further on again is Brockley Coombe, a spot frequented by the poet Coleridge, and one from which a beautiful view is obtained; he wrote:

"Ah! what a luxury of landscape meets
My gaze! Proud towers, and cots more dear to me,
Elm-shadow'd fields, and prospect bounding sea."

One could not wish for fairer country than this part of Somerset. Long, long years ago, other folks admired this district, for here, where Barrow Court now stands, was once a nunnery. The present house is a fine old Elizabethan mansion, with a paved courtyard and a pretty church so close by its side as to form part and parcel of it. A very distinctive garden surrounds Barrow Court, and the owner, H. M. Gibbs, Esq., has preserved all that was good of the old style, and added much that is good in the more modern style of gardening. The stout yew hedges, some old, some young, and some only now in course of development, provide seclusion and shelter such as the modern garden does not afford, and they are entirely in keeping with the house and its ecclesiastical inheritance.

The accompanying illustrations will serve admirably to show the character of the Barrow Court gardens. Here and there the thick, closely clipped, and dense yew hedges, cut to represent battlemented walls, are pierced with door-like opening through which one passes to other enclosures or out into the open spaces. In other cases window-like openings have been cut, and yet again, in the thickness of the yew walls, and always on the inner side of an enclosure, recesses have been cut and comfortable seats placed therein. Closely-clipped standard bays, hollies, and Portugal laurels, in tubs, stand at the head of the several flights of steps, as in the view of the house, while others have their place in the yew enclosures. The warm corners of these enclosed gardens are veritable sun traps, and each has its quota of sub-tropical plants in tubs. Here "in a nook with a book," one could pass many pleasant hours.

An ornamental lily pond fills the larger part of one of these old gardens, and in the view given the scene is carried beyond the lily-decked water into another retreat, where a handsome urn marks the centre of a little garden of old-time and fragrant flowers. Throughout the whole of this portion of the Barrow Court gardens fine urns and handsome vases mark the intersecting pathways, or ornament the terrace walls. The vases yield their meed of beauty, too, because they are filled with flowers in the summer time. There are also several ancient sun-dials, each in its proper place.

Outside the yew hedges there are several big and bold beds of hardy herbaceous flowers and also of roses. Beautiful lawns extend beyond the terrace slope, and here are the tennis courts, and still further out is a first-rate cricket ground that must be a delight to play upon. Westwards, towards the park, these beautiful lawns spread until they are brought to a pleasing conclusion by a large semi-circular screen-like railing of considerable height and great beauty. The central feature consists of handsome pillars that carry gates of exquisite workmanship. On each side of these gates are six pillars, each surmounted by a finely carved female head. These represent "The Daughters of the Year." On the left January commences the series, and on her breast are snowdrops. February and March follow, the latter with a cluster of daffodils. April has spring flowers, May has hawthorn, and June has a bunch of roses. To the right of the gates July takes up the tale, and presently comes September and October with fruits and grain, November with chrysanthemums, and finally, close-hooded December, with holly and mistletoe, finishes this beautiful set of figures, than which nothing could well be more appropriate in connection with garden scenery.

In an exactly opposite direction another pleasing and entirely different scene presents itself. The green turf now extends down a long avenue of fine lime trees, all clean-stemmed standards in the vigour of lusty youth. Alternating with these tall graceful trees, and in the ample intervening spaces are standard round-headed hollies, and so, when the limes are leafless there is still a green line along either side of this broad grass walk. At the far end, in a bold crescent-shaped shelter are convenient seats from which one may look along the lime vista across the lawns to the Daughters of the Year. Behind the lime trees, on each side, collections of flowering trees have been carefully planted, and lilacs, syringas, and spiræas are especially fine.

Crossing the terrace one comes upon a small formal flower garden, with its strictly kept box edges and hedges. Opposite this, and very near the house is an ancient Tithe Barn, a very fine bit of old English work, and in a fine state of preservation. It serves for various purposes, such as concerts, cricket suppers, balls, and dances, and on occasion, a religious service has been held in it. Near by an old pit has been converted into a pleasing water garden, where irises are a special feature.

Leaving this portion of the grounds and passing to the more utilitarian portion, we are reminded at the entrance to the kitchen and fruit garden, that "God giveth the increase," this old text standing out boldly over the gateway. Particularly effective is the long, straight, and sloping central walk, part of which is seen in the accompanying illustration. Mr. Mincher, the able head gardener, does not believe in excluding the beautiful from this necessary part of the gardens, and so we find long borders of hardy herbaceous perennial and annual flowers the whole length of this garden walk, and other flowers along the lower walk that extends the whole width of the garden and ends in a fine summer-house.

The horizontally trained trees shown in the illustration will interest many readers, but at present I shall only say of them that one may travel far and not find any so good as these seven-year-old apple trees. They are beautifully clean and well trained. The glass department is not a large one, but the several structures, which were built about twenty-five years ago by Messrs. W. H. Smith and Co., Bury St. Edmunds, are well suited to the various purposes to which they are put. Apricots and peaches do not do well here out of doors, the soil being a stiff clay-loam. Eucharis is well managed, and the popular orchids that are so useful for floral designs find a place among the plants necessary to such an establishment as Barrow Court. Schizanthuses, Rehmannia angulata, Crassula coccinea, Clerodendron fallax, clivias, standard fuchsias, Impatiens Holsti, and Francoa ramosa, are a few other subjects that Mr. Mincher grows largely and well.

LILY POOL AND OLD GARDEN AT BARROW COURT, NEAR BRISTOL.

It were an easy matter to linger long at Barrow Court, and dwell at considerable length upon its many characteristics and excellences, but for the present this [illegible] notice must suffice. There are other things to tell of at a later date, if the fates are kind.

Ashton Court.

Among the many notable places in and around Bristol none is better known than Ashton Court, Lady Smythe's famous residence. The Court stands on rising ground, in the midst of a finely-wooded park that was enclosed and planted in 13[illegible] [illegible] Thomas de Lyon. From Bristol, [illegible] Court is about three miles distant, [illegible] south-westerly direction. The Court [illegible] many historic associations. It was once the residence of Sir Richard Choke, [illegible] Chief Justice of England, who died in [illegible] and the battlements, buttresses, and [illegible] gateway of the ancient building still remain, though the whole of the extensive and beautiful front of the Court, 150ft. long, is the work of Inigo Jones, and was erected in 1634.

The Ashton Court estate is an extensive one, and the gardens, also on a large scale, have a well-deserved reputation. Below the windows, all along the fine garden front of the Court, is a dense continuous mass of the pink-flowered Escallonia macrantha. A broad lawn spreads away in front of the Court, and is bounded on either side by a low ornamental wall that serves in each case to form a background for hardy flowers, chiefly herbaceous and annual, that are planted in broad borders. Great care is taken to produce large masses of colour, to associate the colours pleasingly, and to arrange for a floral display from early summer until late autumn. Herbaceous lobelias, coreopsises, sweet peas, gladioli, Galtonia candicans, chrysanthemums, Michaelmas daisies, spiræas, campanulas, salvias, and a host of other subjects are brought into use in these borders, and no small amount of skill is needed to maintain them in perfect condition for many months, for it must be remembered they are in full view of the Court.

THE LIME AVENUE AT BARROW COURT, NEAR BRISTOL.

At the western end of the Court there is a small and simply constructed rock garden, designed by the late Mr. Meyer not long before his death. It occupies rather a curious position at the extremity of the garden, and on the edge of the park, and it contains fine collections of alpine shrubs and saxifragas. The carriage drive, seen in the illustration of the rock garden, terminates at the front entrance and older part of the Court, where a very fine old Magnolia grandiflora spreads over the walls. The terrace on which the Court stands ends abruptly at the western end, and one descends by a long steep flight of steps, close to the rock garden, down to what is called the Wilderness. The high terrace wall is clothed with Magnolia grandiflora, and crowned with an abundance of rambling roses. In this lower garden there are many fine conifers, chiefly Wellingtonias and cupressus, but it is in no sense a wild garden, its name notwithstanding. Here is a rose garden, the beds filled with the finest H.T. and H.P. varieties. A little further on are large beds of glorious Mollis and Ghent azaleas, and big bushes of Choisya ternata, a shrub that does very well at Ashton Court. Here, too, is a "pleached alley" of lime trees, that leads to a collection of hardy ferns.

The great surprise to a stranger is to find a magnificent range of glass houses in this part of the garden, because, if the gardens are entered from the Bristol side ranges of houses and pits will have been inspected earlier, within the high surrounding walls of the kitchen garden. But here, in this lower Wilderness garden are some very fine vineries and plant houses, the whole forming a handsome range. There is no need to enter into great detail over the contents of these houses, and it may be taken for granted that Mr. H. Noble, who has been head gardener here for fifteen years, and whose reputation has extended far beyond Bristol, is a most capable cultivator. There are several large vineries, a banana house where Gloriosa superba, calanthes, and tropical ferns all find a congenial home; and a large stove where the vanilla is regularly fruited, and where the beautiful Ipomæa Horsfalliæ drapes the high back wall and yields an abundance of bluish flowers. A considerable amount of work has been done in the glass department by Messrs. Skinner, Board, and Co., horticultural builders, Bristol. Very interesting and attractive is the Grotto, a glass-covered rock-fernery, where the gentlemen of the house frequently come to smoke. It is a spacious house, designed by Messrs. Pulham and Son, and it is planted with Rex begonias, Ficus radicans, selaginellas, ferns of many kinds, and bamboos; it is a very pleasant and pretty retreat. The large central conservatory portion of the range is a considerable tax, owing to its extent and height; bougainvilleas are the chief climbers, while large hydrangeas, Malmaison carnations, tuberous begonias, show and zonal pelargoniums, campanulas, coleuses, cinerarias, calceolarias, etc., etc., are used in their several seasons to provide a floral display.

In front of this range of glasshouses a very broad walk extends the whole length of this lower garden, and is continued above the steps along the front of the higher ground directly in front of the Court. It is a very fine promenade, and at the Wilderness end it terminates with a comfortable wooden seat guarded by columnar cypresses. The whole length of the walk, on each side, are roses on chains, Lady Gay, Dorothy Perkins, Flora, Crimson Rambler, Leuchtstern, Hiawatha, Felicité Perpetue, and others filling the scene with beauty, and the air with sweetness. Beds of roses, rhododendrons, azaleas, etc., are cut in the grass near the walk.

An interesting part of the flower garden is that where, on sloping ground, and with narrow winding paths, choice shrubs have been grouped in masses. Hardy heaths and dabœcias, olearias, ceanothuses, spiræas, **Prunus triloba**, hypericums, hardy fuchsias, vincas, blue hydrangeas, and rare lilacs are here set out in bold groups, and liliums, galtonias, and a few roses are associated wth them. The association is a pleasing one, and everything is arranged so that it can be inspected at close quarters.

Quite a long way from the Court and the Wilderness garden is the kitchen and fruit garden. These departments are nearer Mr. Noble's house, and are surrounded by high old walls that give shelter to large numbers of peaches, nectarines, pears, cherries, and roses. Kitchen garden crops of all kinds are grown on a large scale, and there is evidently ample work for each of the thirty-one pairs of hands under Mr. Noble. The peach cases are a feature of the department, and the trees are finely trained. Strawberry forcing is a rather big item, and some large deep frames are found very handy for the later supplies. Mr. Noble does not believe in big vine borders, and certainly the Muscat and Black Hamburgh grapes lack nothing in crop or finish. Figs are largely grown, and from one tree of Negro Largo, five hundred and twenty-five fruits were gathered last season. That reminds me that here, as in not a few other big gardens, an account of everything produced is kept, so that it is an easy matter to determine what crops or trees or houses are more or less productive as the seasons pass. Melons are favourite fruits with Lady Smythe, and a long supply is maintained. Mr. Noble grows Sutton's Scarlet and Blenheim Orange largely, but lately he has also added a very big scarlet-fleshed variety that is named Shavington Hall, the seed having been brought from Scotland. It is a splendid cropper, and of good flavour, but the fruits are too large for all but large families.

"THE DAUGHTERS OF THE YEAR," BARROW COURT, NEAR BRISTOL.

There is much to be seen and learned at Ashton Court. Its fine deer park, its Domesday Oak, its big fruit room, and its bothies and mess room for the men, all merit attention, but there is only room now to say that Lady Smythe takes the keenest interest in her estate and gardens, and also in the many that are employed therein.

Downside.

Downside, the residence of W. E. George, Esq., is at Stoke Bishop. The gardens and grounds, with the little model farm cover about a hundred acres, and every part shows the good taste of the owner and the great interest he takes in it. The many-gabled house is amply draped with climbers, of which the small-leaved ampelopsis is chief. Here, as in almost all of the Bristol gardens visited, there are terraces, the lay of the land making these a necessity. It must be remembered that Bristol, like ancient Rome, is built on seven hills.

Downside has many attractions for a horticulturist, it has an unusually fine range of glasshouses, a big kitchen garden, a brilliant flower garden, long herbaceous borders, a quaint old-time pleasaunce, and also a fine selection of the best trees and shrubs, the latter serving alone to give it distinction. On opposite sides of the west front of the house are two very distinct gardens. The one, on a square lawn, is given over to beds that are filled in spring with a bright selection of tulips, daffodils, wallflowers, and other popular spring flowering plants, while in the summer they are gay with tuberous begonias grouped in masses of one colour, with larger beds of taller subjects, flowering and foliage, that serve to enhance the gaiety of the begonias, pelargoniums, etc. The other garden is a rectangular one, surrounded by clipped yews and flowering shrubs, and containing old-fashioned hardy flowers, and beds of fragrant roses.

Some fine views over well-wooded country are obtained from the terrace, but the most striking outlook is from the long garden below the terrace wall. Here are the tennis courts, and the fields beyond slope down to the farmstead. Golden hollies, splendid masses of Berberis Darwini, a fine old cedar of Lebanon, and a big deodar are features of this part of the garden. A long straight walk that skirts the tennis lawn ends in a picturesque tea house, and from this pleasant retreat the view extends right away down the valley to the south-west, out to the open water of the Bristol Channel.

On the north-west and north sides, the grounds are sheltered by larch and elm woods, and within this shelter there are large belts of trees and shrubs containing numbers of fine plants that receive careful attention at the hands of Mr. Scott, who is well aware of the great evil that results from overcrowding. The value of such belts of the finer trees and shrubs is not always considered in relation to its value to the garden and grounds generally. In many places a good strip of ground might be well prepared and carefully planted with only the best material, and then, as years pass, and the trees and shrubs increase in size, such a plantation serves as a nursery from which well developed specimens may be drawn to beautify other parts of the grounds. The remaining trees and shrubs have thus room to develop properly, so that the original plantation and the garden proper alike profit by the undertaking.

Deodars, Abies Douglasi, A. Parryana glauca, Cedrus atlantica glauca, Cupressus macrocarpa, and its handsome golden variety lutea, Cryptomeria elegans, and retinosporas in variety are among the largest and most handsome of the conifers. The thorns are largely planted, as are the flowering plums and cherries, especially along the portions visible from the house. Shrubby spiræas, laurustinuses, viburnums, Berberis Darwini, B. stenophylla and B. Thunbergi, magnolias, and laburnums, are all effectively grouped; here and there are also contoneasters, a handsome plant of the Knap Hill oak, and several very strong examples of Buddleia variabilis and its varieties; the latter are regularly cut back each year, as they are best managed in this way and make large, spreading, and elegant bushes. Where this plantation meets the new carriage drive there are bold masses of Rhus cotinus and R. typhinus, that give fine bits of colour in summer and autumn. Groups of golden yews, hollies and retinosporas are planted on the lawn close to this approach to the house.

No pains have been spared to make the glass department a success. The teak-wood vineries and the heating arrangements were in the hands of Messrs. Mackenzie and Moncur; they are very fine lean-to houses, and grapes, chiefly Madresfield Court, Muscat of Alexandria, Mrs. Pince, Alicante, Black Hamburgh, and Gros Col-

HERBACEOUS BORDERS IN THE KITCHEN GARDEN AT BARROW COURT, NEAR BRISTOL.

THE ROCK GARDEN AT ASHTON COURT, BRISTOL.

mar are produced in abundance in them. In a large stove there is a very fine allamanda on the roof, while deciduous dendrobiums, chiefly D. Phalænopsis Schroderiana, are very largely grown. A fernery, with the ferns and selaginellas all planted out in rock work, is very pretty. The conservatory is kept gay with flowers grown in the ample greenhouses and pits at Mr. Scott's command, and much might be written about their contents. Carnations and pentstemons are very popular at Downside, and these are cultivated in the borders on either side of the kitchen garden paths. Bush apples are good, and Mr. Scott speaks highly of the merits of Stirling Castle, Newton Wonder, and Bismarck. Late peas are in great request, and, in addition to the Gladstone and Late Queen, the variety named The Bell, distributed a year or two ago by Messrs. Bell and Bieberstedt, of Leith, has been found remarkably useful.

There is only one thing that seems at all out of place at Downside, and it is the circular lily-pond in the centre of the kitchen garden. It is a beautiful piece of work, in terra cotta, but its usefulness and beauty are lost, wasted, in its present position. Mr. Scott has a very pretty cottage at one end of the kitchen garden, and near the glasshouses, and it is almost smothered with ampelopsis and roses, Dorothy Perkins being much in evidence. The grape room and the apple room are very finely planned, and in handy positions. Figs flourish on the old garden walls, but with a reference to a huge Phormium tenax that flowers very freely in a corner just outside the kitchen garden, near the herbaceous border, these notes must conclude.

It should be added that Mr. Scott is hon. secretary of the Bristol Gardeners' Association, and he has been mainly instrumental in placing the association in a good financial position.

Elmfield.

A delightfully pretty place is Elmfield, the residence of A. Shipley, Esq., J.P., at Westbury-on-Trym, midway between Bristol and Henbury. The garden was formed some thirty-six years ago, and is remarkable for its gaiety and first-rate upkeep. Mr. Shipley is very proud of his charming garden, and, under the kindly influence of an interested employer, Mr. Wakefield has every inducement to display his skill to the full. No heroic measures have been adopted at Elmfield, but there is a brightness, neatness, and generally well-cared-for appearance pervading the whole place that raises it above many of its neighbours.

Set at a considerable elevation, lying open to the south and west, and sheltered from the north and east by rows of grand old elms, the gardens are in an excellent position and only liable to suffer from an unusually furious south-westerly gale. Flowering trees and shrubs have been judiciously planted along the drive sides, and in beds, and as specimens on the lawns. Prunus Pissardi, P. triloba, pæonies, berberises in variety, shrubby veronicas, select rhododendrons, lilacs, laburnums, and viburnums are a few of the plants boldly grouped.

Where the drive sweeps round to the front entrance to the house ample room has been allowed for a broad herbaceous border in front of the shrubs, and, as a rule, this part of the garden is very gay from spring to late autumn, and thus forms a striking contrast to similar parts of other gardens, where the commonest and dingiest shrubs so often appear to be regarded as the proper accompaniment to the front door. Goodness only knows why this should be so, for, while first impressions are not inevitably the best, there is no doubt they count for a good deal. From the entrance gate to the front door Elmfield gives a visitor the impression that here is a bright, homely, and beautiful garden, a little Paradise of fragrance and colour, and that impression deepens as one enjoys the fine lawns, the stately trees, and the woodland path.

Large crescent-shaped beds are cut in the lawn, and some are filled with hardy herbaceous plants and others with a selection of dwarf roses. Specimens of the golden yew, purple beech, Berberis Darwini, and pampas grass adorn the lower part of the lawn, but care has been taken not to spoil the greensward by over many specimens and beds. In the double border that leads along from the front of the house hardy and tender subjects are both used; this permits of a spring display of bulbs and an autumn display of dahlias. The bulbs used in this part of the garden are transferred to the little bit of woodland or semi-wild garden, or to the borders, between the shrubs wherever there is room for them.

A tiny path among a group of conifers leads to a wider path that skirts the garden proper, and is entirely hidden from it. This is a pleasant surprise, especially in the spring time, when multitudes of daffodils, bluebells, double and single wood anemones, and other early flowers are in full bloom. In summer time it affords a cool and shady retreat, and there are several little nooks where inviting seats are placed. A wicket gate at the end of the path gives access to the kitchen and fruit garden where peaches and pears on the one side and Morello cherries on the other, fill every bit of wall space. All the walls are fitted with iron brackets to carry a protecting coping or shelter for the wall fruit trees. There is a small rose garden here, and beyond are the well-kept vegetable quarters margined with healthy bush apple trees.

Elmfield is a very compact place, and its glasshouses are arranged behind the house

THE GROTTO AT ASHTON COURT, BRISTOL.

close together, and thus their heating and general management are rendered as easy as possible. The three vineries provide good crops of Lady Downes, Madresfield Court, Muscat of Alexandria, Buckland Sweetwater, and Black Hamburgh grapes. The houses are span-roofed, and so unusually sharp-pitched that in a bright summer some light shading becomes necessary. The contents of the plant houses show that Mr. Wakefield is as much at home under glass as in the garden outside. His calanthes, splendid gloxinias, streptocarpuses, and the inevitable Begonia Gloire de Lorraine, at once display his cultural ability. Anthurium Andreanum, brilliant crotons, and large, splendidly grown standards of Acalypha hispida (Sanderiana) are of chiefest interest among the many stove plants. Nerines and vallotas are grown in large batches, and of the former there are many very large old specimens.

There are three nice houses of orchids, and though no especially rare hybrids or varieties are grown, the collection is a good one, a plantsman's collection and not a specialist's. A few kinds that are much in evidence by reason of the extent of their culture and their fine condition, are thunias, Miltonia vexillaria, Epidendrum vitillinum majus—a very great success—Odontoglossum crispum, O. triumphans, Cœlogyne cristata, Cypripedium insigne, C. Charlesworthi, C. Rothschildianum, Cattleya Trianæ, C. Dowiana aurea, C. Lawrenceana, deciduous dendrobiums, and Oncidium varicosum.

The big camellia house is rather unusual in these days. It has a sunken floor, and in it are planted out some large camellias and azaleas. Close by is the conservatory, a very pretty but not large structure. The central feature is a very fine Trachycarpus excelsa, which flowers annually in May, a handsome palm that will soon outgrow the limits of the place; even now its tub is sunk several feet below the level of the conservatory floor. Streptosolen Jamesoni is trained up the slender surrounding pillars, and bougainvilleas and roses are trained under the roof. Achimenes in pots and pans provided the leading floral display at the time of my visit, but there were also groups of show and zonal pelargoniums, Francoa ramosa, Rehmannia angulata, Lobelia tenuior—very popular in the West, liliums and campanulas, the whole making a very attractive display.

Chas. H. Curtis.

⁂ The second of the two illustrated articles on the gardens round Bristol will appear in our next issue (May 23).

CACTUS DAHLIAS.

Notes on New Varieties.

The chief interest in the dahlia is still closely centred round the cactus section, and is likely to be for some years to come. No doubt some of the more recent sections deserve a certain amount of attention, but nothing like to the same extent as the popular cactus varieties.

Although the general public perhaps do not purchase a large number of the new dahlias owing to the comparatively high price, still a number of enthusiasts do make a selection each season from the varieties offered. The novelties are undoubtedly the chief attraction at our large exhibitions, and there can be no question that the stream of new varieties undoubtedly helps to swell the ranks of dahlia growers. The novelties of 1908 are fairly numerous, and many of them of the highest merit. It is difficult to judge the merits of a new dahlia the first season, because we have to simply form our opinion as to value from the blooms that appear before us, and I fear many people are disappointed with the plants when they see them growing. The trade growers and old dahlia fanciers can pretty well judge how a variety is going to grow from its very appearance. As an instance, most of the large heavy flowers hang down from sheer weight of the bloom, while those that do not contain so many florets are generally carried erect. It is pleasing to note, however, that an improvement is taking place in this respect. A type that requires watching is the one formed by varieties that only produce short flower stems. This defect is readily noticed in a novelty by the stems, and the removal of six or eight pairs of leaves tells its own tale.

Space will not allow descriptions of a long list of varieties, but those enumerated will all be found thoroughly reliable: Rev. A. Bridge, Helium, Saturn, Harold Peerman, C. E. Wilkins, Etruria, and Dr. G. G. Gray struck me as being the best of those being introduced by Messrs. Stredwick and Son, although some of the fancy varieties are distinctly better than those already in commerce.

Mr. H. Shoesmith has a really fine set, and those that impressed me most were: Charles H. Curtis, Flame, Elsa Ellrich, and Snowdrift; while from Mr. J. T. West we have Mrs. W. Baxter, Rosa Starr, and W. T. Rogers, all of which will give a good account of themselves on the exhibition tables. Messrs. T. S. Ware, Lim., are introducing Cynthia, which will be appreciated by lovers of large flowers.

Mauve Queen from Messrs. J. Cheal and Sons will also prove useful. From Messrs. Keynes, Williams, and Co. we have nine varieties, some of the best being: Foxhunter, Spanish Prince, and Killarney. We have from Messrs. Burrell and Co. Celia and Hilda, both distinct and beautiful.

I am under the impression that our raisers are paying far too much attention to the varieties that can be best described as shades of yellow and pink, and in some instances they have so far failed to recognise the importance of distinctness. In conclusion I have just another grumble, that is in the selection of names. In at least a dozen cases we have a name that is repeated in the cactus, show, pompon, and single sections, which causes no end of confusion, not only to the trade growers, but to the general public also.

J. B. Riding.

Esher Horticultural Society will hold its summer exhibition on Wednesday, July 29, and, by permission of the Sandown Park Company, the show will be held on the famous Sandown racecourse.

VIEW OF THE HOUSE AND GARDENS, DOWNSIDE, BRISTOL.

STONE FRUITS GROWN IN POTS.

In the colder and uncertain districts in which fruit growing is a precarious undertaking, the orchard house becomes in reality a necessary equipment in any up-to-date garden. Orchard-house fruits do not always assume their full size, at any rate, not when grown in pots, but perhaps to some degree what is lost in bulk is amply repaid in quality, for it is well known how full flavoured indoor fruits become under intelligent cultivation. Varieties are not all alike suitable for this restrictive principle, but there is ample of material to choose from for all purposes and seasons, and a selection of stone fruits should embrace plums, apricots, peaches, nectarines, and cherries.

Plums.

These have a distinctly pleasing aspect growing successfully in pots, and they fruit with marked regularity as regards crop and season. Except in unfavourable districts the dessert varieties are those most valued, for the simple reason that only when the scheme is an extensive one would it be profitable to attempt to grow them for culinary purposes under glass. Cooking plums certainly need not be barred, for when well ripened, they are, many of them, quite fit for dessert. Among early maturing plums Oullin's Golden Gage must be mentioned as of first-class quality; it is both productive, handsome, and good eating. So also is Washington, which follows closely in season. This has, in some years, quite a crimson flush on its golden skin, which renders it a distinctly handsome plum. The early Transparent Gage proves a great advance in this popular section. It is of recent introduction, and should be included in the most select collection. The old Transparent Gage is much later, though equally handsome and high flavoured. Some account the old Green Gage still the finest flavoured of all the Gages, and where this popular belief is favoured, it should not be omitted. Jefferson's plum grown well, equals any for handsome outline and colour, but it must not be overcropped or the quality is low, and appearance poor. It is usually extra prolific. Kirke's Black is, we consider, one of the finest of summer plums, though it has the objectionable habit of dropping from the tree as soon as ripe. Without doubt, the highest value is set upon late kinds of plums, and as these, many of them, will hang until they shrivel, they may be made to serve an extended season under glass. Coe's Golden Drop, Late Orange, Archduke, Pond's Seedling, Primate, President, Bryanston Gage, and Reine Claude de Bavay are some that can be depended on to give crops lasting and enjoyable.

Cherries.

These give fruits freely in pots, and when well fed assume a size equal, if not superior, to those grown in the open. They require most careful treatment in the matter of watering and ventilation once they approach the ripening period; they are very liable to crack if any excess of vapour occurs, or if they are not kept uniformly moist at the roots. Once split they quickly become a prey of flies or wasps, and often early decay is set up in consequence. A few varieties suffice for pot-culture, and may include May Duke, Early Rivers, Bigarreau Napoleon, Bigarreau Schrecken, Governor Wood, Belle d'Orleans, Black Tartarian and Guigne de Winkler. The last-named is a particularly good late variety, being quite fresh and crisp in mid-October. Black Tartarian is a handsome large-fruiting kind, of exquisite flavour.

Apricots.

These are not so often cultivated indoors, as they are rather impatient of the confinement of the glasshouse. They therefore need special treatment, and a more liberal use of the ventilators. If placed by themselves at one end of the structure they are more easily accommodated. They are readily amenable to the demands of the orchard house in their growth and fruiting, as they bear on short spurs, and pinching of the summer shoots provide these in plenty. The Large Early is a fine apricot, large, distinct in shape and colour, and free-bearing. Grosse Peche, or peach apricot, is another large and distinct, and free to fruit. Moor Park is too well known to need comment. Hemskirk, always a favourite for succession, is followed by Shipley's, sometimes known as Blenheim.

Peaches.

The culture of pot peaches has become an almost universal practice, and the manner in which they respond to this restrictive culture makes them dependable and popular fruits. Really very fine fruits may be had from well managed pot peach trees, and there is not, as far as we have ascertained, much to choose between varieties as regards their productiveness. The new American variety, Earliest of All, comes in advance of Waterloo and Alexander, two other American varieties. Except for the sake of variety no one need grow the last two kinds, for they differ so little in their characteristics. Hale's Early is a good early peach that can be depended on to bear freely large, well-coloured fruits. Duchess of Cornwall and Duchess of York are comparatively new, one early, the other late, both of them desirable kinds, to add to the general collection. Amsden June fruits at the same time as Waterloo, and, if needed for very early forcing, is more trustworthy. Grosse Mignonne, Condor, Crimson Galande, Bellegarde, Stirling Castle, Barrington, Dymond, Sea Eagle, Thomas Rivers, a new late sort of fine colour and size, Princess of Wales, and Golden Eagle comprise an assortment of the best of the well-tried peaches.

Nectarines.

The same remarks are applicable to these which are said of peaches, they differ only in their flavour and having smooth-skinned fruits. New additions to the lists come somewhat slow, though there is even now ample for the requirements of most persons. The advent of Early Rivers brought the forced nectarine into a much more favourable position, and Cardinal comes as a stepping-stone to still further progress. These are invaluable fruits for the orchard house in pots. Lord Napier is still a good successional sort, providing large, sweet, well-coloured fruits after Early Rivers is over. Elruge, a favourite of past days still retains a place with some, as does the larger-fruited Stanwick Elruge. Dryden colours beautifully, grows large, and has a fine flavour. Rivers' Orange, Pine Apple, Darwin, and Humboldt are yellow fleshed nectarines possessing the finest flavours, free in bearing, and healthy in growth. Goldoni is an extremely bright and attractive fruit succeeding in pots. It is not of the largest size. Newton, Spencer, and Milton are good late kinds belonging to the white-fleshed section, possessing not quite the same sugary sweetness as Humboldt or Pine Apple. They are, however, indispensable where a large late supply is sought, and all do well in pots. Periodical pinching of the summer shoots, especially the stronger ones, constitute the principle work among pot-grown trees, reducing these at the winter pruning, so that sun and air has free access to every part of the tree. It is fatal to high colour development if the summer shoots are allowed to crowd themselves unduly, and this needs to be borne in mind when disbudding is attended to in spring. In the daily syringing of the fruit-bearing tree some care is necessary in having water free from pond or lime deposits, the first-named in particular giving a highly objectionable aspect to ripening peaches; and nectarines cannot, even though they have smooth skins, be freed from pond deposits. Where rain water can be had this is far preferable for syringing the trees.

W. STRUGNELL.

NOTES FROM SCOTLAND.

The unusually severe weather that was experienced over the greater part of the country in the closing days of April wrought considerable damage in some places. As would naturally be expected, the more favoured districts in respect to climate have suffered most, owing to vegetation being more advanced than was the case of those less sheltered. Here, in the extreme South-West of Scotland within a short distance of the sea, the thermometer on several mornings registered from 12 to 16 degrees of frost, and the protection of snow that was so much in evidence in some districts was here wanting.

Plum and cherry bloom upon walls was about half expanded, and all is now destroyed and hanging limp upon the trees; while much that remained in an unopened state it is feared has suffered injury. Apples and pears are probably unharmed, as, except in the case of an early variety occupying a favoured position, neither kind was showing colour. Red and white currants will certainly be a light crop, from the cause stated, while black currants appear to have escaped fairly well. Strawberries, too, are probably safe, as few, if any blooms were open, but growers for market upon the open field system hold opinions the reverse of this.

Among hardy plants growing entirely in the open the destructiveness of the frost becomes daily more evident, as not only are many, as spiræas, lupins, and delphiniums, badly cut, but many of the hardier shrubs that are very seldom affected by low temperatures have their foliage discoloured, and many of the more immature shoots destroyed.

Early planted potatoes, both in fields and gardens, were, at and previous to, the frost visitation, making good progress, but all are now reduced to pulp, the stems being rendered soft much below the ground line. Growers of large quantities of bedding and vegetable plants have sustained severe losses, as these, in many instances, were removed from the protection of glass and placed under such improvised coverings as mats, branches, and other ready-at-hand material to ward off the effects of such frosts as are usually provided against such this season, but such materials were in this case quite ineffective.

Vegetation in unheated houses and frames has also suffered badly, tomato growers in several instances having to deplore the loss of the leading shoots if not the whole plant. Rain and fog have now succeeded the cold snap, and growth is fairly rapid, but withal the season must now be late, and fruit crops, it is feared, below the average.

JAMES DAY.

CROPPING FRUIT TREE BORDERS.

I have been prompted to send some notes upon this subject from having been asked my opinion upon whether it is advisable or not to crop fruit tree borders with vegetables. This is a matter of importance and of great interest to gardeners, and is the more deserving of consideration because of its bearing upon the maintenance of a supply of general garden produce that most of us are expected to keep up. It is not, therefore, the fruit trees and their crops alone that have to be taken into account.

If considered from the standpoint of fruit trees alone most of us would doubtless, unhesitatingly declare in favour of giving up the borders entirely to the roots of the trees, be they apricots, peaches, pears, or any other sort. The great importance of keeping the roots of fruit trees near to the soil's surface by the aid of mulchings, etc., so that they may to a greater extent promote wood growth of a fruitful description has been constantly impressed upon our minds both in practice and in theory throughout our gardening career, and there is, I think, no question that if the borders were entirely devoted to the roots of the trees, and otherwise managed for their sole benefit, better crops of wall fruit would be more generally procured than is now the case.

At the same time it is doubtful if the extra fruit that might be thus obtained would compensate for the sacrifice of early vegetables that we should by this practice be called upon to make. I have come to this conclusion after reviewing the various rules of practice I have seen followed during my gardening career, and notwithstanding the fact that the borders for indoor fruits are invariably, in so far as any radical interference with the roots of vines, peaches, etc., are concerned, looked upon as being almost sacred. I know, all the same, only too well, that fruit trees upon walls are not always in that perfect condition that might be expected, but digging and cropping the border are not by a long way alone responsible for the injury sometimes attributed to them.

Digging the borders to within 3ft. or 4ft. of a fruit wall, when done regularly, does not mutilate the tree roots to the extent that it is sometimes supposed to do, for the simple reason that there are but comparatively few roots, other than those made annually, within the spade's reach, though certainly the roots are in this way induced to keep deeper than would be the case if the border was left undug, carefully mulched, and otherwise well attended to. Undoubtedly this is injurious to the trees, but not to the extent that it would be if the soil was of an ungenial character.

Deep-rooting, combined with heavy manuring, does, however, in many cases create serious evils, by promoting disease and coarse, strong growths which are one of the chief causes of sterility; and yet this can, however, be corrected by root-pruning, which has usually to be resorted to whether the borders are dug or not. The vegetable crops also rob the soil of its manurial properties and its moisture, though the latter is in a measure counteracted by the shade afforded by the crops; but each of these evils can be rectified by artificial means. Few gardeners, or their employers, would, I venture to say, care to sacrifice their earliest crops of outdoor potatoes, peas, French beans, cauliflowers, etc., for the chance of securing a slightly better crop of wall fruit. Altogeth it seems far better to follow the old custom of cropping borders and make the most and best of them. Walls are really deserving of erection if for no other purposes than that of forwarding crops of early vegetables, and affording shade to others during the height of summer.

T. COOMBER.

RAISING APPLES FROM SEEDS.

It is superfluous to say that the apple is far and away the most popular and extensively cultivated of hardy fruits, but in view of this fact, it is somewhat remarkable that the raising of new kinds and their cross-fertilisation has been undertaken by only a very few growers.

The work is of an interesting nature, but it calls for considerable patience and perseverance, as the percentage of useless forms, inferior in every way to the parents, is very great, and we gather from one of the leading experts in this country that it is not at all unusual to fail to produce amongst a large batch of several thousands of seedlings, a single form to equal those already under cultivation, and, further, that upwards of one-half are not far removed from the wild crab. It should be explained that this applies to seeds saved from choice kinds without cross fertilisation.

It is interesting to note that the majority of our best and finest apples have resulted from chance seedlings. Seeds taken from Ribston Pippin produced that superb variety Cox's Orange Pippin. Cornish Gillyflower and Devonshire Quarrenden are responsible for John Gidley and Worcester Pearmain respectively in the same way. We cannot trace the pedigree of Devonshire Quarrenden, Blenheim Pippin, and Ribston Pippin, and other instances may be quoted ad lib.

From the foregoing remarks, it will be seen that the prizes are few and scantily bestowed, even when the work is taken up seriously, and the amateur who cares to try his hand should proceed in a systematic and methodical manner, and effect a cross between two kinds of sterling merit. Within the next week or two the matter must receive attention, and now is the time to consider and decide upon the programme in order that steps may be taken when the flowers are expanded.

The work is simplicity itself, and the veriest tyro or novice has excellent material to work upon. Apple blossoms are well adapted for cross-fertilisation, the anthers being numerous, and they arrive at maturity very gradually. It is advisable to cover the blossoms it is intended to operate upon, just before they develop, with thin muslin, the object being to keep insects at bay. Then there must be the removal of anthers and importation of pollen from another variety.

When grown from seeds the results are not seen for at least four years, and even then we can form but a vague idea as to the value of any fruit that presents a promising appearance, as their flavour, fruiting, and keeping qualities, etc., have to be put to a severe test. A number of our leading fruit growers and specialists hasten the matter by grafting the two-year-old growths of seedlings on suitable stocks, but this is altogether too hazardous a speculation for amateurs generally, and the few stocks that are purchased or are created by cutting back inferior kinds, may be utilised.

WALTER H. AGGETT.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CATTLEYAS. — Many of the summer-flowering cattleyas are interesting subjects at the present season; such species as C. Schroderæ, C. Mendeli, C. Mossiæ, and the numerous showy hybrids usually flowering at the present season, are, owing to the late season, in a backward state. Where plants are retarded by their flowers being so long in development, there is always the risk of undue strain being placed on them, and this is bound to be followed with more or less ill effects, which may not be apparent until the following season. Where delay has been thus caused in flowering, it is advisable that flowers should be removed from the plants as soon as possible after they have expanded. There is generally a period at which the plants are in practically a dormant state, between the flowering period and that in which they produce their new growths. Careful watering is desirable at this period, only sufficient moisture being required to maintain the pseudo-bulbs in a plump state. As soon as new growth commences more liberal treatment may be given.

CATTLEYA WARSCEWICZI (Gigas), in its varied forms, is the finest of all the C. labiata group. It has the reputation of being a shy-flowering species, but a great deal in the success or failure to flower it depends upon the conditions under which the plants are grown, and the treatment they receive in the early stages of growth. I am of opinion the longer C. Warscewiczi can be kept from starting into growth the greater the prospect of successful flowering and the less chance will there be of secondary growth, which is one of the chief troubles. There are two distinct types of this species, although both are among the best of the cattleya species to cultivate. One type is shy-flowering, and unless the plants can be grown under cool conditions until growth commences, and then be placed in a position where they may obtain the maximum light, they can be rarely induced to flower. I have known plants of this type in cultivation for many years without flowering. The free-flowering or Sanderiana type, is not nearly so difficult to manage, and if care is observed not to over water until growth has well advanced, and the plants are suspended close to the root glass in a position where they may obtain the advantage of all the available light, little difficulty is experienced in successfully flowering them. I consider it is quite time enough to afford liberal root moisture when the growth has advanced so far that the flower sheath may be seen inside the unfolding leaf. Up to this stage only sufficient root moisture is necessary to keep the pseudo-bulbs plump.

WHITE VARIETY.—From the experience I have had with the white C. Warscewiczi Frau Melaine Beyrot, it appears to be one of the most free-growing varieties in cultivation, breaking freely from dormant eyes on the back pseudo-bulbs, as well as from the leading growths, in a most remarkable manner. We grow it suspended at the south end of the cattleya house, where it obtains full light. It is so distinct in habit of growth from the type that one is tempted to express doubts as to its being a form of C. Warscewiczi, but a decided opinion on the matter should be deferred until we are better acquainted with it. It is a plant worthy of a place in all prominent orchid collections.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

TREE CARNATIONS.—The present is an anxious time for growers of tree carnations, as early-struck plants in small pots will need repotting and staking, and there is usually at this time of the year a press of other work. An effort, however, should be made to get them shifted before becoming pot-bound, as they are liable to refuse to grow freely, and sometimes they turn yellow and sickly. Before removing them fumigate slightly twice, giving the foliage a good syringing after each fumigation, and as the nights are often cold all through May, the plants are best kept in a cool, airy house until quite the end of the month. Great care is needed at all times in watering carnations, but more especially after potting and until new roots are working freely in the soil.

WHITE STOCKS.—These are now to be seen in quantity in Covent Garden Market. The Brompton and the East Lothian are both grown, but the latter is the favourite. For purity and fragrance nothing can excel a good strain of Lothian stock. For early blooming the seeds should be sown towards the end of May, and the young plants shifted along, so as to have them well established in 6in. or 7in. pots by the autumn. They can then be subjected to a mild forcing, and this is the surest way of getting early bloom; but for the main supply a simpler method is pursued. The plants are put out under glass in autumn and under such circumstances they give a wealth of bloom in April and up to June.

WINTER-FLOWERING BEGONIAS. — Cuttings should now be put in. About one leaf may be taken off at the base and the cuttings put in just deep enough to keep them firm. The beautiful and useful Begonia Gloire de Lorraine, which has been flowering during the winter, will now be making a few shoots from the base, and these will make good cuttings. They should be taken off when only about an inch or so long, as if left they soon begin to show bloom, and after they have set their bloom they are of no use as cuttings unless taken off two or three joints below where the first bloom appears. Where good cuttings can be had there is little difficulty in rooting them. Put them into light sandy compost, and keep quite close in the ordinary propagating pit, and they will not be long in striking root; care should be taken not to give too much moisture. Most of the Rex type may be propagated from leaves, but such sorts as Mme. Lebourg, Mme. Peratto, and others which branch freely may be established more quickly from cuttings. All the begonias will root freely in cocoanut-fibre refuse, but they should be potted as soon as they have a start, as if left too long the roots spread, and they suffer when taken up.

HYDRANGEAS.—Shoots which have failed to flower will make good cuttings. Many of the strong-flowering plants will also produce lateral shoots, which make good cuttings. These should be put singly into small pots. The cuttings must be kept close, and well shaded until they are rooted, when they must be gradually exposed, and before they begin to make growth should have all the light and air possible. The most important point is to secure short-jointed growths, and to ripen them off early in the autumn. Hydrangeas may also be propagated during the autumn after they have set their flowers for spring, but these do not produce such large heads of bloom as the spring-struck plants.

THE TUBEROSE. — For late blooming, with strong, sound bulbs, heat is not necessary provided there is no excess of moisture. To get bloom in September and later I pot firmly in sound loam with a little coarse sand, about the third week in May, placing the pots in a cold frame, and giving one watering if the soil is dry to settle it firmly round the roots, and not watering again for some weeks, when the roots will have been made, and the top growth is just pushing up. In some seasons even frame protection is not necessary. The only difficulty is an excess of moisture at the start, and to be on the safe side, under glass in a cold frame is the safest place for them, as roots must be made in advance of the foliage. In this way growth is robust, and the lights may be removed in a few weeks, or the plants plunged in cocoa-fibre under a north wall. There is little gain in keeping the bulbs too long out of the soil, as if potted and kept rather dry they do not shrivel, and growth later on can be retarded by placing the plants in the open. — T. B. FIELD, Ashwellthorpe, Norwich.

THE FLOWER GARDEN.

WEATHER.—The severe snowstorms and blizzard of the 25th ult. will, in many places, have done a considerable amount of damage to trees, shrubs, and spring bedding, and where this is so the evil must be remedied in the best way possible. Examine trees and shrubs, support damaged boughs, and remove broken ones. Where climbers were torn from their supports they must again be tied up. Here, in Lancashire, we escaped the blizzard, and three inches of snow was the heaviest fall we had.

LOOKING FORWARD.—Carefully note the effect of spring bedding as plants are in bloom, and of early-flowering herbaceous plants, with a view of arranging for another season. May-flowering tulips, English and Spanish irises will soon begin to open; doronicums, trollius, saxifragas in variety (especially the well-known old S. umbrosa, or London pride, large masses of which, with tulips or iris coming through them, produce a fine effect) should also be noted. S. Wallacei, on the rockery, is a most desirable kind, and S. umbrosa makes a good carpeting in shaded parts of woods or the wild garden, but do not plant it where water-hens can get at it, or in the winter time they will soon destroy it.

SUMMER BEDDING.—If a plan of the summer bedding has not yet been settled upon, either mentally or on paper, it should at once be attended to. The mixed style of bedding, with its more subdued harmonies of soft colours, seems each year to be more and more replacing the old style of massing bright colours in large quantities; but indiscriminate planting must be avoided. In large gardens, where there are a goodly number of large beds to fill, some of them should still be filled with masses of one colour, always arranging or placing the brightest colours farthest from the chief point of view, with softer colours near at hand; the eye then travels over the soft colours to the brighter ones. Where large and long borders have to be filled the mixed planting, if not more noticeable at first sight, is ultimately more interesting than the ribbon border, with its continued design of a few bright colours, especially where the display is required for a long period, but in these good masses or clumps of one thing are preferable to a large number of single plants scattered all along the border. Make the border pleasingly informal, not relegating all the very tall plants to the back row, but using some as dot plants irregularly along the border. Strong poles, with climbing roses, gourds, or other climbers also give a pleasing effect, as do clumps of sweet peas in separate varieties. When planting all mixed borders or clumps guard against having large spaces devoid of flowers for any prolonged time, or the general effect will be spoiled. As one subject passes out of bloom adjacent ones should be coming on, and this can generally be accomplished if due care is given when planting.

SUGGESTIONS FOR PLANTING.—No hard and fast rule can be laid down, as position and circumstances must always be considered. Different shades of scarlet and crimson seldom harmonise when adjacent to each other; where a mass of scarlet is decided on an edging of white, yellow, or light blue will suit; pink may have white, yellow, or light lavender with it; sometimes double rows may be used, and one pleasing mixture is yellow and bronze calceolarias alternately in the second row, with blue lobelia and the little white Alyssum maritimum alternately in the front row. Where mixed beds are used the tall ones may consist of palms, eucalyptus, Melianthus major, Cannabis gigantea, eulalias, nicotianas, Chilian beet, wigandia, Rehmannia angulata, maize, pentstemons, solanums, scented-leaf geraniums, etc., etc., with an edging of Dactylis glomerata variegata, or other similar plant; a bed of this sort should not have any dwarf carpeting. A carpeting of Alyssum maritimum, with large plants of dark heliotrope above, looks well, with taller liliums above them. On a carpet of alyssum, dwarf single scarlet dahlias and Acacia lophantha above them, looks well. Always try and arrange to have a number of sweet-smelling plants near the residence, the perfume being specially welcome in the cool of evening.—E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

RASPBERRY BEDS. — These should be examined and any fresh growths which will not be wanted for fruiting next year, or for stock plants, may be removed. The strong growths should be left, and the weaker ones pulled up. If desirable the young growths may be lifted carefully with a small portion of roots and planted on a shady border. These, if kept moist, will make nice planting canes by the end of the season, and is a good way of increasing stock. Keep the land free from weeds, and provide a mulching over the roots on both sides of the row. Heavy, deeply worked land need not be mulched yet, but on light land raspberry canes benefit very largely by the aid of good mulchings and heavy watering in dry weather. In some gardens it is the practice to crop between the rows of raspberry canes with lettuce, early cauliflower, or turnips. The rows, however, need be a good distance apart, so that any digging done does not interfere with the roots of the canes. Intercropping is not advisable when the rows are only about 5 or 6ft. apart. In dry weather the hoe should be kept going amongst gooseberry and currant bushes, so that the weeds may be kept in check.

STRAWBERRY BEDS.—All our fruiting plants have been bedded down with litter, which, owing to the heavy rains, has become nicely bleached, so that no trouble will arise in that direction. The growth of late has greatly improved, and a nice lot of flowers is visible, although on some plants not very strong as yet.

DISBUDDING. — This work will require much forethought and attention from now onward, so as to keep pace with the growth. An active hand can do much of this work, if kept at it, in a comparatively short space of time. The trees should be attended to at intervals, and should not be allowed to become crowded with useless shoots before removing a part of them, peach trees in particular. Any blistered leaves ought to be pinched off and taken away to the fire heap.

CHERRY, PEAR, and PLUM TREES on walls need in turn to be dealt with, and any new growths not wanted for any particular purpose may be rubbed or pinched off. Keep a keen eye on all the growths wanted for training in and building up of a good, well-balanced tree. All protecting materials may now be gradually removed, and as soon as the weather is safe dispense with them entirely. Keep a sharp look out for aphis, and if any put in an appearance lose no time in cleansing the infested parts. Quassia extract is dependable and safe. Tobacco liquor, fir tree oil, etc., are other tried remedies, and, when used as recommended on the labels, will be found both effective and safe. A few good syringings ought to rid the trees of insects. Syringe overnight with insecticide and apply clear warm water with force in the morning.—H. MARKHAM, Wrotham Park Gardens.

The Green-flowered Tulip (Tulipa viridiflora).—There are always a certain number of people who care for the curious in the way of tulips and other flowers, and a reminder of the green-flowered Tulip, Tulipa viridiflora, may not be unwelcome to them. It is, to all appearance, a derivative of T. gesneriana, and has blooms of much the same character as the type of our garden varieties, but its flowers are of a pale greenish-yellow and green, and are thus pretty aptly named. It is a wonderfully hardy tulip, and seems to survive well without replanting after a rest. I have grown it for a good few years, and although it increases but little, it always survives. I grow it in rather light and dry soil as a permanent plant.—S. ARNOTT.

SOUTH SHIELDS and NORTHERN COUNTIES CHRYSANTHEMUM SOCIETY.
ANNUAL EXHIBITION
in the
ROYAL ASSEMBLY HALL, SOUTH SHIELDS,
on WEDNESDAY and THURSDAY.
November 11th and 12th, 1908.
£150 IN PRIZES, 7 SILVER CUPS, MEDALS, etc.
FIRST PRIZE FOR 36 JAPANESE, £10.
Entries close November 6th.
Schedules and all particulars from ALLEN PURVIS,
Albany Chambers, King Street, South Shields.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

MAY 12.

A beautiful day served to bring crowds of visitors to the exhibition on Tuesday, and those who came saw a splendid show of plants and flowers that filled every corner of the hall with beauty and fragrance. The display was as interesting as it was effective and extensive.

FLORAL COMMITTEE.

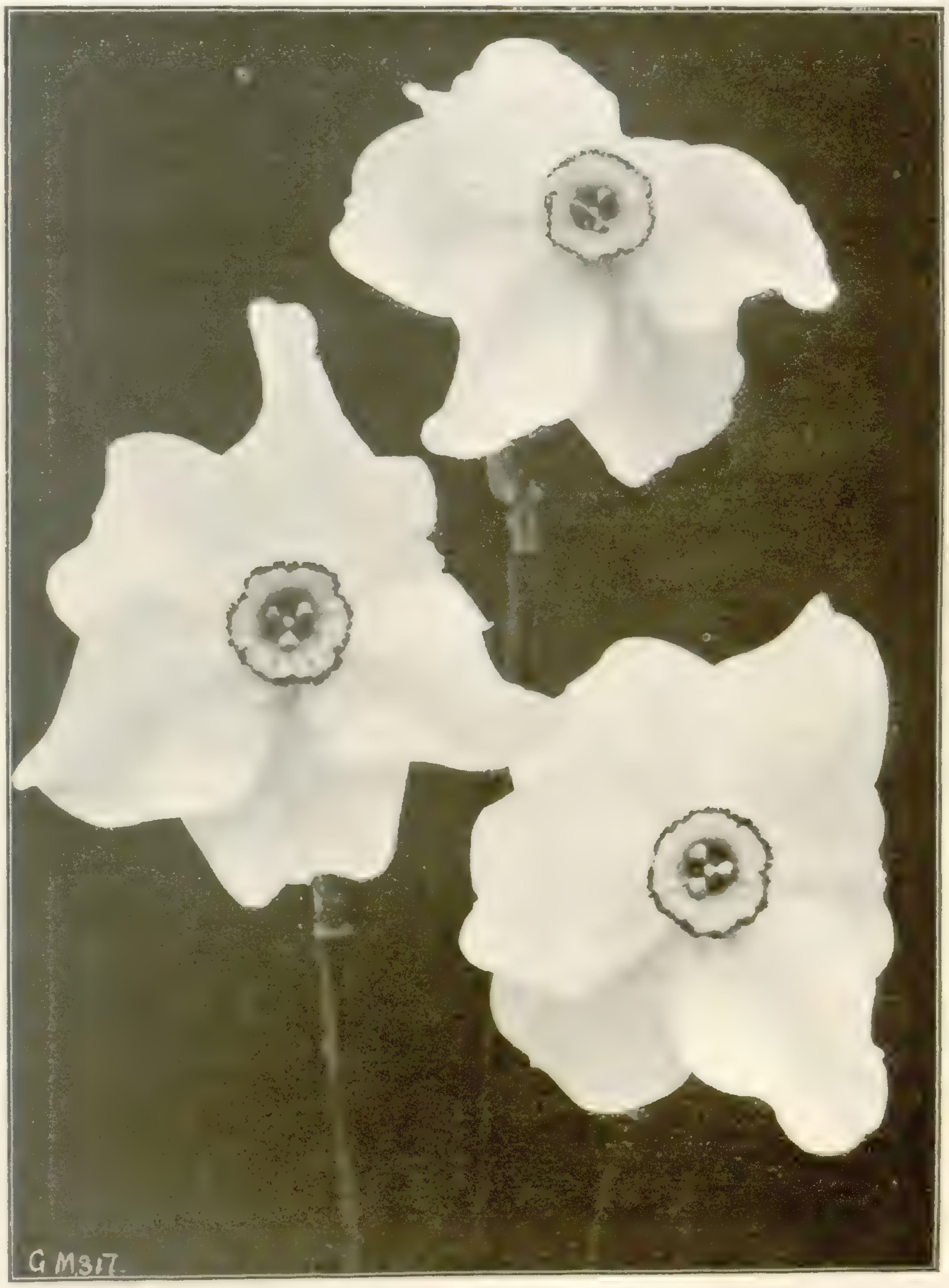
Sprays and branches of flowering trees and shrubs were exhibited by Messrs. J. Cheal and Sons, Crawley, and conspicuous in their display were Pyrus malus floribunda, P. Riversi, lilacs, cytisuses, berberis, etc. Mr. R. Gill, Penryn, Cornwall, showed some wonderful rhododendrons, the trusses of R. grande, R. Gill's Triumph, R. Kewense, R. Falconeri, and R. Beauty of Tremough attracted a great deal of attention, as also did the branches of the gorgeous and beautiful Embothrium coccineum. Rock and alpine plants were sent by Messrs. Heath and Son, Cheltenham, whose principal plants were Ramondia pyrenaica, Primula Veitchi, Corydalis Wilsoni, and Aubrietia Dr. Mules. Mr. J. R. Box, West Wickham, was also an exhibitor of alpines,and his Gentiana verna, Saxifraga muscoides albo-purpurea, and Dodecatheon Hendersoni were leading features. Messrs. Cooper, Taber, and Co., Southwark Street, S.E., submitted blooms of the Algerian, American, and English strains of winter-flowering sweet peas; the former showed the widest range of colours.

A splendid exhibit of hardy ferns, filling the whole end of the hall, was arranged by Messrs. H. B.May and Sons,Edmonton. Space does not permit of a detailed description, but we may say that the varieties of Scolopendrium vulgare were wonderful in their frilling and tasselling, that the osmundas were fine, and the Lady ferns particularly beautiful, especially the Plumosum varieties. The Messrs. May also sent gardenias,petunias, verbenas, etc. Mr. W. H. Young, Mercury Nursery, Romford, contributed the narrow-leaved bright red Coleus salicifolius nanus, a useful bedding variety. The Misses Hopkins, Mere, Shepperton-on-Thames, had a very brilliant display of primroses, alpine auriculas, and other early flowers.

Messrs. James Veitch and Sons, Chelsea, showed some beautiful cinerarias, such as Feltham Beauty, Antique Rose, Feltham Bouquet, etc., all very beautiful. The firm had also some very handsome grandiflorus hybrids of schizanthuses, Arum Mrs. Roosevelt, and the golden R. Elliotiana, Statice Sworowi, several colour variations of Lobelia tenuior, and Kalanchoe Ena, the latter a deep crimson hybrid between K. grandiflora and K. flammea. This firm had a fine flower of a rich rose-pink amaryllis named Doris. A beautiful display of roses was made by Mr. G. Mount, Canterbury, who had magnificent flowers of Frau Karl Druschki, Mrs. J. Laing, Ulrich Brunner, Joseph Low, Richmond, and Mrs. Sharman Crawford, with plants of Lady Gay and Dorothy Perkins.

Perpetual and Malmaison carnations were extensively and beautifully shown by Mr. C. F. Waters, Balcombe, Sussex, whose Winsor, Rose Pink Enchantress, Britannia, and Beacon were very fine. Mr. Charles Turner, Slough, contributed an interesting group of varieties of Primula Sieboldi, and a set of fine bedding varieties of violas. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, had a very bright and attractive exhibit of perpetual carnations, their Robert Craig, Mrs. Burnett, and Lady Bountiful showing up finely; the same firm showed good rose blooms, a few orchids, and a set of acacias, metrosideros, heaths, etc.

A small group of Ghent and mollis azaleas and forced viburnums and cytisuses were set up by Messrs. R. and G. Cuthbert, Southgate. Some lovely pure white amaryllis were submitted by Mr. C. Fielder, gardener to Mrs. Burns, South Mymmes Park, Hatfield; this little exhibit shows distinct progress, and Mr. Fielder has now quite fixed the strain. Bright hardy flowers in quantity were shown by Mr. Amos Perry, Winchmore Hill, whose display contained dwarf irises, gentians, Trillium grandiflorum, Trollius Fortunei plena, Arnebia echioides, and Phlox canadensis Perry's variety.



NARCISSUS POETICUS SNOW SHOE.

This fine new variety was shown at R.H.S. Meeting, May 12, by Messrs. Walter T. Ware, Lim., Bath, and gained an Award of Merit. The substantial flowers are pure white with red cup having a crimson rim.

Messrs. William Paul and Son, Waltham Cross, showed a grand group of roses in pots, they had Banksian roses and the wonderful Tausendschon, the latter with its huge trusses of bright pink flowers overshadowing everything else. Messrs. J. Peed and Son, West Norwood, sent a group of clematises and graceful Japanese maples. Messrs. Thomas Rochford and Son, Broxbourne, set up a big group of large specimens of Hiawatha, Leuchtstern, Lady Gay, Tausendschon, Crimson Rambler, and Sweetheart rambling roses; there were from three to five plants in a pot, and the training was rather too formal, but the cultivation was superb. Messrs. James Veitch and Sons, Chelsea, contributed some very fine hydrangeas, H. hortensia, H. Mariesi, H. Thomas Hogg, H. Veitchi, and H. mandschurica; with these were azaleas, primulas, and the fine new Meconopsis integrifolia and the crimson M. puniceus. The Misses Kipping, Hutton, Essex, had alpine plants in rockwork.

Mr. S. Mortimer, Farnham, showed some wonderfully fine polyanthuses, and the crimson, white, and yellow varieties were very pure and good. Messrs. Dobbie and Co., Rothesay, showed a fine selection of polyanthuses and a collection of lovely violas and pansies; among the violas, Isolde, Nancy Marsh, Mrs. H. Kinross, and Robert Menzies attracted our attention. From Mr. L. R. Russell, Richmond, came a showy group of Ghent and mollis azaleas, cytisus, and lilacs, suitably associated with ferns and palms. Mr. J. Holland, gardener to F. Bostock, Esq., Springfield, Northampton, showed a fine strain of large-flowered polyanthuses. The Guildford Hardy Plant Company, Guildford, submitted trilliums, androsaces, Haberlea rhodopensis, aubrietias, etc. Alpine auriculas and a few alpines came from Messrs. Phillips and Taylor, Bracknell, Berks.

Gloxinias were finely shown by Messrs. J. Peed and Son, West Norwood; these represented a very fine strain, and among the spotted varieties were many exquisite flowers. Messrs. G. and A. Clarke, Dover, sent a large selections of hardy flowers and their trollius, tulips, and anemones were striking; this firm also had a display of zonal pelargoniums. Mr. F. J. Patmore, Lymington, showed a few violas, on moss. Messrs. Paul and Son, Cheshunt, staged a number of kinds of flowering trees and shrubs; some new roses cut and in pots were also shown by this firm, and Aubrietia Paul's Pink (A.M.). Messrs. B. R. Cant and Sons, Colchester, showed rambling roses in pots, and also cut flowers of Philadelphia Rambler, Leonie Lamesch, etc.

Mr. W. H. Page, Tangley Nurseries, Hampton, showed some very fine perpetual carnations, the flowers of Enchantress, White Enchantress, Governor Roosevelt, and Mrs. T. W. Lawson being especially good. Mr. H. Burnett, Guernsey, had wonderful blooms of such beautiful carnations as Enchantress, Marmion, Mikado, Mrs. T. W. Lawson, and Robert Craig.

Messrs. G. Bunyard and Co.'s contribution of hardy flowers contained selections of tulips, aubrietias, primulas, with Arum Lehmani with pink spathes, and the brilliant Gerbera Jamesoni.

Azaleas of the amœna type, Rhododendron Pink Pearl, roses in variety, and the new Peach Blossom and Queen Alexandra spiræas were largely shown by Messrs. William Cutbush and Son, Highgate, who also had a display of particularly fine perpetual carnations in variety, and a bright yellow shrubby calceolaria named Decorator. Glorious bunches of zonal pelargoniums from Messrs. H. Cannell and Son, Swanley, made a grand blaze of colour; the firm had also a contribution of verbenas, fine hydrangeas, wallflowers, and Eynsford Pink rambling rose. Messrs. Carter Page and Co., London Wall, had a pretty exhibit of violas, a few annuals, and some very early cactus dahlia flowers.

Mr. James Douglas, Great Bookham, Surrey, had a wonderful display of auriculas, alpine and show varieties, and we regret that limits of space prevent our entering into details concerning the beauties of the numerous varieties: we will say, however, that the alpine varieties were of greatest beauty and very sweetly scented, and Mildred Jay, May Day, and Coronet gained each an A.M. Mr. Maurice Prichard made a good display of hardy flowers, and his varieties of Scilla nutans were very interesting. Mr. A. Watts, St. Asaph, sent a good strain of polyanthuses and primroses.

Mr. Thomas S. Ware, Feltham, sent a collection of hardy flowers that contained irises, saxifragas, primulas, and a few hardy orchids. Messrs. William Bull and Son, Chelsea, sent stove foliage plants, and someone sent a dozen bunches of sweet peas, but there was nothing to say from whom they came.

Mr. Elwes, Colesbourne, Gloucester, showed some handsome fritillarias and Oncocyclus irises. Mrs. Hensley, Farnham, Surrey, showed a set of flower paintings, some of which were very good. Mr. Bain, gardener to Sir Trevor Lawrence, Bart., sent up a new and beautiful asparagus named A. filicinus (A.M.). This has flat frond-like sprays of soft green leaves or phyllodes, and is a very elegant new plant.

ORCHID COMMITTEE.

Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, showed Brasso-cattleya nivalis, Angræcum Germinyanum (A.M.), Cattleya Dusseldorfi Undine, and C. Mossiæ Goosensianum (F.C.C.), a beautiful variety with a wonderful violet-purple lip. Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester, exhibited Brasso-cattleya Heatonense Westonbirt var. (F.C.C.), a beautiful pink and yellow hybrid with an exquisitely fringed lip: and Odontoglossum crispum Zoroaster. Messrs. James Veitch and Sons, Chelsea, set up a small group of orchids that contained a fine Brasso-catt.-lælia Veitchi, numerous odontoglossums, L.-c. G. S. Ball, and a few dendrobiums.

Mr. A. W. Jensen, Lindfield, Haywards Heath, set up some good forms of Odontoglossum crispum, and a fine form of Cattleya Mendeli. Mr. Day, gardener to H. S. Goodson, Esq., West Hill, Putney, showed a small group of orchids that contained some very fine odontoglossums, Cœlogyne pandurata, miltonias, and cypripediums. Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham, showed the beautiful Odontoglossum Wilckeanum Schroderianum (F.C.C.), carrying a spike of twelve perfect flowers. Mr. Maurice Mertens, Mont St. Amand, Ghent, sent a few beautiful odontoglossums, of hybrid origin, but they were not named.

A bold group of orchids came from Messrs. J. Cypher and Sons, Cheltenham, and this was chiefly notable for its fine assortment of Lælia purpurata, odontoglossums, and a few masdevallias. Mr. Davis, gardener to J. G. Fowler, Esq., Glebelands, South Woodford, showed Odontoglossum crispum Britannia, with rather small but brightly marked flowers: he also sent O. Ossulstonei Glebelands var. (A.M.) A wonderful plant, and the most admired of the orchids, was Odontoglossum crispum Leonard Perfect (F.C.C.), shown by Mr. H. J. Chapman, gardener to Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne. This carried thirteen exceptionally large and exquisitely beautiful flowers that mark it as one of the foremost of its race.

Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks, showed Odontoglossum crispum Isolde (white), O. Queen Alexandra, O. illustre Theodora (A.M.), O.-c. Mr. De Barri Crawshay, and O. Urania, J. S. Moss, Esq., Wintershill Hall, Bishop's Waltham, sent the pale Odontoglossum apterum Mossiæ (A.M.).

DAFFODIL COMMITTEE.

Messrs. R. Wallace and Co., Colchester, contributed an extensive exhibit of tulips, together with a few hardy herbaceous and alpine flowers. Among their tulips we noted La Candeur, Fra Angelica, Pride of Haarlem, Circe, Glow, Flame, and Feu Ardent, all very fine Darwin varieties. Messrs. Barr and Sons, Covent Garden, had a very interesting display of clean late daffodils, and a very effective exhibit of early, double, and Darwin tulips in variety. With these they showed some charming pans of primula, irises, saxifragas, anemones, sparaxis, etc. Some choice daffodils were submitted by Mr. F. H. Chapman, High Street, Rye, and the little group contained Homer, Horace, Orangeman, Easter, Barcarolle, Brass Bell, Cassandra, and Epic.

In the group of daffodils staged by Mr. A. M. Wilson, East Keal, Spilsby, there were charming examples of Will Scarlet, Gleam, Weardale Perfection, Stone Chat, Ursula, Eoster, Homespun, Chaffinch, Horace, White Slave, Lucifer, and Blood Orange. Messrs. James Veitch and Sons, Chelsea, contributed a bright exhibit of tulips. Miss Katherine Spurrell, Bessingham, Norwich, sent a few choice daffodils, many of them new seedlings; F. C. Spurrell, Agnes Harvey, Roundhead, and Major Spurrell were very good.

Messrs. R. H. Bath, Lim., Wisbech, had a bold exhibit of tulips and daffodils; among the former Rosa Mundi, Feu Ardent, Eleanora, Rose Luisante, and Brunhilde were very fine. Mrs. Benson, South Street, Park Lane, sent a few blooms of very large Darwin tulips.

VEGETABLE COMMITTEE.

An interesting exhibit of vegetables produced under the French system of culture, was made by Messrs. James Veitch and Sons, Chelsea; it contained fine lettuces, good Veitch's Model broccoli, Gradus peas, climbing French beans, mushrooms, and Frogmore Selected tomatoes.

CERTIFICATES AND AWARDS.

First-Class Certificates. — To Cattleya Goosensiana, from Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking. Brasso-cattleya Heatonense Westonbirt variety, from Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester; Odontoglossum Wilckeanum Schroderianum, from Mr. H. Ballantine, gardener to Baron Schroder, The Dell, Egham; and to Odontoglossum crispum Leonard Perfect, from Mr. H. J. Chapman, gardener to N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne.

Award of Merit. — To Angræcum Germinyanum, from Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Dorking; Odontoglossum Ossulstonei Glebeland's var., from Mr. Davis, gardener to J. G. Fowler, Esq., Glebelands, South Woodford; Odontoglossum illustre Theodora, from Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks; Narcissus poeticus Snow Shoe, from Messrs. Walter T. Ware, Lim., Inglescombe, Bath; Aubrietia Paul's Pink, from Messrs. Paul and Son, Cheshunt; Auriculas Mildred Jay, May Day, and Coronet, from Mr. James Douglas, Great Bookham, Surrey; and to Asparagus filicirus, from Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Dorking.

MEDALS.

Gold.—Messrs. H. B. May and Sons, Edmonton, for ferns; Mr. H. J. Chapman, gardener to N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne, for Odontoglossum crispum Leonard Perfect.

Silver-Gilt Flora. Mr. J. Douglas, Great Bookham, Mr. G. Mount, Canterbury; Messrs. James Veitch and Sons, Chelsea.

Silver Gilt Banksian.—Messrs. Hugh Low and Co., Bush Hill Park, Enfield.

Silver Flora.—Messrs. William Paul and Son, Waltham Cross; Messrs. Thomas Rochford and Sons, Broxbourne; Messrs. G. Bunyard and Co., Maidstone; Messrs. H. Cannell and Sons, Swanley; Messrs. W. Cutbush and Sons, Highgate; Messrs. J. Peed and Son, West Norwood; Mr. M. Prichard, Christchurch, Messrs. R. H. Bath, Lim., Wisbech; Messrs. Barr and Sons, Covent Garden; Messrs. R. Wallace and Co., Colchester; Mr. A. M. Wilson, Spilsby; Messrs. J. Veitch and Sons (orchids).

Silver Banksian.—Mr. H. Burnett, Guernsey; Mr. W. H. Page, Hampton; Messrs. Carter, Page, and Co., London Wall; Mr. R. Gill, Falmouth; Mr. L. R. Russell, Richmond; Mr. C. F. Waters, Balcombe, Sussex Messrs. J. Veitch and Sons, Chelsea (vegetables); Mr. Day, gardener to H. S. Goodson, Esq., Putney; Mr. Mertens, Ghent.

Bronze Flora.—Messrs. Dobbie and Co., Rothesay.

Bronze Banksian.—Messrs. B. R. Cant and Sons, Colchester; Messrs. R. and G. Cuthbert, Southgate; Misses Hopkins, Shepperton Messrs. Paul and Son, Cheshunt; Mr. G. Reuthe, Keston; and Mr. C. Turner, Slough.

Royal Gardeners' Orphan Fund.

The twenty-first anniversary of the Royal Gardeners' Orphan Fund was celebrated in fine style at the Hotel Cecil, Strand, on Tuesday, May 12, when His Grace the Duke of Bedford, the president of the charity, occupied the chair, and was supported by a large number of the leading nurserymen and seedsmen, and a contingent of Covent Garden friends. Altogether there were 176 sat down to dinner, and this constitutes a record attendance, and is a happy augury for future festivals.

After dinner and the usual loyal toasts, the Chairman proposed "Continued Success to the Royal Gardeners' Orphan Fund." He spoke briefly, clearly, and very much to the point, and we could wish that other speakers on these occasions would confine their attention to the matter on hand instead of attempting oratory or a disquisition on extraneous subjects. His Grace said that the Fund was instituted for the purpose of maintaining the children of men who had been gardeners. No greater shadow could hang over a man's life than that of the care of his children after he has gone. He was sorry to find that so many who required the services of gardeners specified that there should be "no incumbrances." This was a disastrous policy in every sense, and considering the decrease in the birthrate it was a national calamity that this specification should be made. At present the Fund relieves 116 orphans, and there was ever a need for more donations and annual subscriptions. At present the expenses of the Fund were met by income from investments, so that the donations and subscriptions went directly to relieve the orphans. The Fund was economically administered, and therefore had a special claim on their consideration. No pursuit, said the Chairman, gave so great pleasure as gardening, and none at so little pain to others. The Chairman concluded with an earnest appeal on behalf of the Fund, pointing out that now it had come of age and entered upon full manhood, higher duties and a more extended sphere of usefulness opened out before it.

Mr. Edward Sherwood, the treasurer, in responding cordially thanked the President for his presence and appeal. He hoped that the enthusiasm that had so far marked the proceedings was but a prelude to a more material enthusiasm to be shown later in the evening. He hoped all had done their best to make this coming of age festival a success. He had endeavoured to canvass county friends who did not usually come within the operations of other friends of the Fund, and he had been surprised to learn how little these good people knew of the Fund and its operations. And yet it could not be too widely known that the Fund was helping orphans all over the British Isles; the Fund was in no sense metropolitan, and London was considered only as a convenient distributing centre. In commemoration of the coming of age, he wished on behalf of his father, Mr. N. N. Sherwood, V.M.H., his brother, Mr. William Sherwood, and himself, to present to the Fund a sum of money for the relief of one child, this Fund to be called, after their grandfather and niece, the Maybud Campbell Fund. Needless to say, this generous offer was enthusiastically received.

The Mayor of Westminster, Mr. J. W. Dennis, J.P., proposed, "Gardeners and Gardening," and this was responded to by Prof. J. B. Farmer, F.R.S. Mr. W. Poupart pleasantly proposed "The Visitors," and to this Mr. Arnold White responded, giving the meeting his ideas of the duty of employers to gardeners, and the duty of gardeners to their employers. His chief points were that gardeners should educate themselves, and so obtain positions that would permit them to place their children beyond the need of charity, and that employers should pay gardeners a rate of wage commensurate with the great demands made upon their skill and time.

Then followed the list of donations, headed by £250 from the chairman, £100 from Mr. Leonard Sutton, £63 from Mr. G. H. Cuthbert, £60 from Mr. G. Reynolds, £55 from Mr. J. F. McLeod, £32 from Mr. R. B. Leach, £20 from Lord Mount Stephen, £18 18s. from Mr. W. Thomas, £14 14s. from Mr. R. Hooper Pearson, and substantial sums from Messrs. Barr and Sons, Mr. T. W. Sanders, Messrs. James Veitch and Sons, Mr. H. J. Veitch, Mr. Caselton, the Thames Bank Iron Company, Messrs. Anderson and Sons, etc. The Covent Garden friends contributed together the noble sum of £260 13s. 6d., and the shilling collection instituted by Mr. Clayton, one of the promoters of the Fund, reached £229. The grand total donated and collected on this occasion was £1,385, exclusive of the Messrs. Sherwood's special contribution.

Mr. H. B. May, the genial chairman of the committee, neatly proposed the health of "The Chairman," and this was given with great enthusiasm and musical honours. His Grace briefly and suitably responded, and expressed his pleasure at having presided over such a record meeting.

The musical arrangements for the evening were admirably carried out under the direction of Mr. Turle Lee; Miss Kate Rooney, Miss Rosa Dallow, Mr. A. Heather, and Mr. Randell Jackson, all sang well, and Mr. J. Bull contributed wonderful banjo selections.

Dutch Bulb Growers' Society.

The following awards were given by the Narcissus and Mixed Bulbs Committees at the meeting of April 22:—

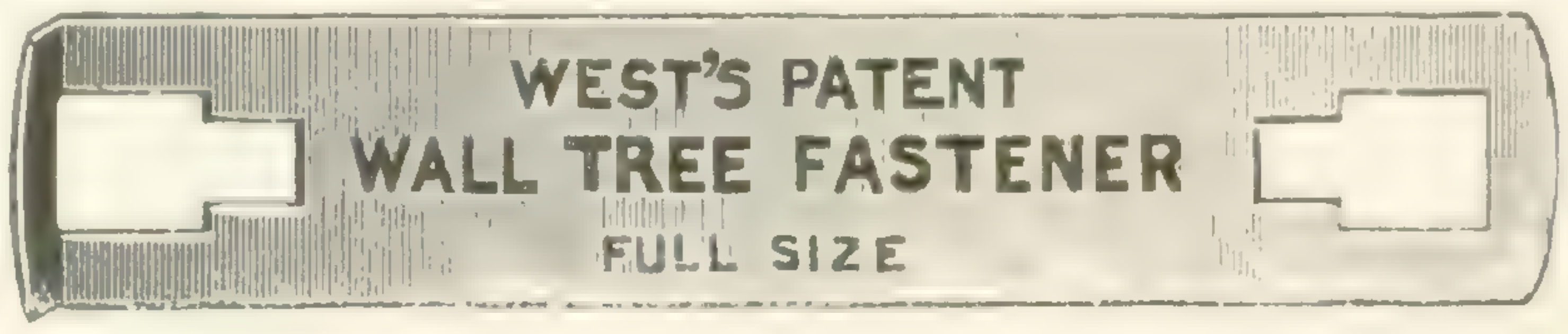
First-class certificates to Narcissus General Baden Powell, a deep yellow trumpet daffodil; Narcissus Sulpher Beauty with white perianth and clear sulphur trumpet. Narcissus bicolor Dick with white perianth and yellow trumpet; Astilbe Queen Alexandra, and Astilbe Peach Blossom, both of a handsome rosy pink colour, good forcing, free-flowering varieties.

Awards of Merit were given to Narcissus J. H. Krelage, a very early free-flowering trumpet daffodil with light yellow perianth and pure yellow trumpet; Narcissus Mr. van Noort, a cross between Emperor and Golden Spur, a large flower with broad yellow trumpet and light yellow perianth; Narcissus Sir Henry Campbell Bannerman with deep yellow trumpet and yellow perianth with rather pointed petals; N. bicolor Giant, with fine broad trumpet and cream white perianth, a large flowering, strong growing variety; N. bicolor Miss Ellen Terry, with clear yellow trumpet and white perianth; Narcissus Snow Queen, a white trumpet daffodil with curling petals; N. Tom, with dark yellow trumpet and yellow perianth, a large-flowering variety.

Cultural awards and medals were awarded to various exhibits.

TRADE NOTES.

To the numerous appliances that have been introduced by Mr. West, of Higham Hill, for the purpose of assisting amateur and professional gardeners in carrying out the many details associated with garden management must be added a patent wall-tree fastener. This new appliance is remarkable alike for its ingenuity and simplicity, and will be found extremely useful in the training of trees to wall surfaces. The patent fastener consists of a strip of aluminium, provided at each end with a graduated aperture so that when passed over the nail it is held firmly, while the free end is bent over the branch. The slot of the free end is then passed over the nail head, and the two ends of the strip folded together. As will be readily understood from this brief description and the accompanying illustration, the nail can be fixed in the wall before the patent fastener on the branch is brought into position. For this reason the patent fastener can be removed and used elsewhere if desired, without removing the nail. Mr. West has also introduced an aluminium label which has the merit of brightness and permanency. The label readily receives and retains the impression of the pen or pencil, the character of the metal contributing to the permanency of the writing.



In connection with the two articles descriptive of noteworthy gardens in and around Bristol, of which the first appears in this issue, it is of interest to mention that a considerable amount of work in the glass departments of Ashton Court and Cote House has been done by Messrs. Skinner, Board, and Co., horticultural builders, Rupert Works, Bristol. Having regard to the high reputation enjoyed by the firm we need hardly say that the buildings erected by them are equally remarkable for elegance of design, sound workmanship, and adaptability to the purposes for which they were constructed. Messrs. Skinner, Board, and Co., are, we would add, the makers of Board's Patent Wire Tension Greenhouses, which, we understand, are in big demand throughout the United Kingdom. They have already been erected in large numbers of the principal gardens as well as in those of modest dimensions, and their popularity is, we learn, increasing with both amateurs and practical gardeners.

FORTHCOMING ENGAGEMENTS.

TUESDAY, May 19.—Croydon Gardeners' Society.

WEDNESDAY, May 20.—Royal Botanic Society's Exhibition.

Royal Society of Arts.

THURSDAY, May 21.—Brighton Horticultural Society Meeting.

MONDAY, May 25.—Linnean Society Anniversary Meeting.

Kew Guild Annual Meeting and Dinner at the Holborn Restaurant.

TUESDAY, May 26.—Great Temple Show; three days.

WEDNESDAY, May 27.—Bath and West and Southern Counties Show; five days.

Hayward's Heath Gardeners' Outing to Abbotsleigh

ANSWERS TO CORRESPONDENTS.

MILDEW IN ROSES.—S. C. J., Mitcham: Under the circumstances, you cannot do better than use black flowers of sulphur, distributing it by means of a bellows early in the morning, when dew is on the foliage and the air is still.

COLARETTE DAHLIAS. — J. H. J., Hitchin: These dahlias have originated on the Continent, and are much like single dahlias with a row of highly-developed disk florets between the disk and the ray florets or petals. This ring of large florets is very interesting, as it often differs in colour from the other parts, and, by virtue of its position, it prevents the ray florets from falling quickly, and so extends the life of a flower. A few of the best of the Colarette dahlias are Grand Papa Charmet, purple and white; Duchesse Melzi d'Eril, yellow, red,and white; Merveille de Lyon, scarlet, yellow, and white; Corbeille de Feu, red and yellow; La Fusee, red and white; Pres. Viger, crimson-purple and white; Mdme. le Page Viger, scarlet and yellow; Signorina Esengrini, orange and two shades of yellow; and Comte Cheremeteff, vermilion and gold.

PROPAGATING A RARE SWEET PEA.—W. F., Chester: Not a few people have the same complaint to make, and no doubt the moist cool season of 1907, while admirable for the production of fine flowers of sweet peas, was not a good one for seed-ripening, hence so many seeds have failed to germinate. You may propagate your variety by cuttings, though this procedure should not be carried to any great length. Take cuttings of the side shoots or the apical growth three or four inches long, and insert them near the sides of the pots, in sandy soil, and place them in a close frame in a warm pit. Give shade for awhile, and under usual conditions the cuttings will be rooted in a fortnight. Then pot them singly, proceed to harden them, and plant out as soon as the plants are fairly well rooted. Plants so raised are worth a little extra attention, and if this is given them they will give a good account of themselves. It is not generally known that sweet peas may be raised from cuttings, and it is as well to point out that such propagation is likely to reduce the vigour of the sweet pea if carried out in a wholesale manner.

ADA AURANTIACA.—R. C., Barnstaple: This very beautiful and useful orchid has never, in our opinion, been cultivated as widely as its merits deserve. It comes from the Cordilleras of Colombia, and was discovered by Schlim in 1851. It is a fine cool house orchid, and you will find it thrive under the conditions found successful for odonteglossums. It sometimes flowers in autumn, but February and March may be regarded as its proper flowering time. The flowers are vivid cinnabar-red, produced in arching spikes from seven to fourteen inches long. Repot as soon as new roots commence to form.

APPLE MILDEW. — M. E. M., Isle of Wight: We cannot tell what the trouble or its cause is without specimens, but, judging from your description, the disease is Apple Tree Mildew (Sphærotheca mali), a pest that is often very prevalent in the spring time, soon after the flowers have fallen. The growth is stunted as a result of the attack, and the leaves are covered with white or greenish white powder, which arrests growth. Where the attack is a very bad one the infected growths should be cut off and burned, as then new branches will be sent out, and these will probably be clean and healthy. After such treatment in the case of badly-infected trees, and also in the case of light attacks, the trees should be sprayed with a solution of sulphide of potassium, at the rate of 1oz. of sulphide to two gallons of water. Where trees have been subject to infection previously, it is a good plan to spray with sulphide of potassium directly the leaf buds begin to expand, and to follow this with a later spraying if the disease is observed. It has been noticed that where American Blight and green-fly are prevalent in orchards and gardens, there also does Apple Tree Mildew become a pest. Whether the former distribute the fungus spores or in any other way aid the dispersion of the disease, or whether they merely reduce the energies of the plants, and thus render it liable to attacks, is not yet determined, but in any case general precautions against insect and fungus attacks should be taken, and a caustic winter dressing should always be given.

BUTTERFLY ORCHID.—L. S. E., Grantham: The descriptive title of Butterfly Orchid has been given to several species, but those that seem to have the best claim to the title are Oncidium Papilio, and O. Kramerianum, both of which, with their brilliant colouring, pose, and elongated petals and dorsal sepal, do suggest a tropical butterfly. Doubtless you are aware that Phalænopsis and the beautiful Dendrobium Phalænopsis Schroderiana are known as Moth Orchids.

SOIL FOR WINDOW BOXES.—G.R.N., Manchester: Good sound loam should form the basis of the soil for window boxes, and it is worth while going to the expense of securing good material because the plants do so much better in it. Use three parts of loam to one each of leaf-mould and decayed manure. A little coarse sand may be added if the loam is inclined to be adhesive. Add to this mixture one pint of bone-meal per bushel. Do not fill the boxes too full of soil: leave room for ample waterings, and then two or three top-dressings can be given during the season. Such top-dressing should consist of rather fine loam mixed with an approved fertiliser and spread over the surface. It is a good plan to water the boxes in the morning and apply the top-dressing in the evening, syringing the plants afterwards to clear off any soil or fertiliser that may attach to them, and also to settle the new soil.

NAMES OF PLANTS.

W. W. G., Shanklin.—Spiræa arguta.

S. S., Tewkesbury.—Magnolia stellata.

B. E. A., Swansea.—1, Rosmarinus officinalis; 2, Santolina canescens.

R. S. J., Ipswich.—1, Oncidium Marshallianum; 2, Spiræa arguta; 3, Prunus triloba.

A. Q., Retford.—1, Saxifraga Rhei; 2, Primula frondosa; 3, Sonerila Hendersoni; 4, Clematis indivisa lobata.

L. M., Leicester.—1, Epigæa repens; 2, Sagina procumbens; 3, Dendrobium Falconeri; 4, D. Devonianum.

T. T., Oswestry.—1, Adonis vernalis; 2, Doronicum Harpur Crewe; 3, Abies nobilis; 4, Myrsiphyllum asparagoides.

G. S. W., Welwyn: 1, Asplenium biforme; 2, A. bulbiferum; 3, Adiantum fissum; 4, Davallia polyantha; 5, Nephrolepis Duffii.

U. T. W., Bedale.—1, Fuchsia triphylla; 2, Nertera depressa; 3, a species of Marsilea; 4, a schizanthus of the Wisetonensis type.

O. E., Guernsey.—1, Pittosporum Tobira; 2, Lotus peliorhynca; 3, Desfontainea spinosa; 4, Clianthus puniceus; 5, Acacia lophantha; 6, Acacia Riceana.

F. B. C., Cheltenham.—1, Odontoglossum crispum, a very poor, weedy form, and one not worth cultivating when others of great beauty can be obtained so cheaply; 2, O. crispum, a good type of flower, but the flowers are set too loosely on the spike; 3, Masdevallia Chimæra; 4, M. Harryana.

I., Hants.—We do not undertake to name florists' flowers, and you have rendered it practically impossible for us to do so by cramming flowers into a small box in wet moss. Further, not a single specimen was numbered. The broad variety is evidently Barri conspicuus, the white one Narcissus poeticus, the double yellow is Yellow Phœnix, and the other double is Butter and Eggs, while the trumpet variety is probably Horsfieldi.

OBITUARY.

◆

MR. BERNARD COWAN.

We regret having to record the death of Mr. Bernard Cowan, superintendent of the South Shields Cemetery, a position he has occupied during the past twenty-seven years. Mr. Cowan was the descendent of an old Irish family, and, after serving an apprenticeship in a north country garden, and occupying positions in the gardens of Hesleyside and Gibside Hall, he was in 1874 appointed head gardener at Axwell Park, the residence of Sir Henry Clavering. In 1880 Mr. Cowan was appointed to the position, for which there were 108 candidates, of superintendent of the South Shields Cemetery, which has long been known as one of the most beautiful cemeteries in the north of England. The duty of laying out the cemetery devolved upon Mr. Cowan, and in the accomplishment of this task, he displayed remarkable taste and judgment. Imbued with the idea that "God's Acre" should be made as beautiful as possible, Mr. Cowan utilised with exceptional taste the trees and shrubs that thrive in such exposed positions as that occupied by the cemetery, both on the boundaries and alongside the principal walks, and he has annually arranged attractive displays of flowers during the spring and summer months. Mr. Cowan was the senior vice-president of the English Arboricultural Society, and for many years the hon. secretary of the South Shields Chrysanthemum Society.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. May 3 to May 9.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 3—Sunday	—	52	52	56	52
„ 4—Monday	—	53	52	59	48
„ 5—Tuesday ...	0 25	52	51	56	48
„ 6—Wednesday .	4 40	53	51	59	50
„ 7—Thursday ...	11 10	53	47	61	43
„ 8—Friday	—	54	53	59	51
„ 9—Saturday ...	9 30	59	53	65	52
Means	3 40	54	51	59	49

Date. 1908. May 3 to May 9.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
May 3—Sunday	0·01	56	52	47	48
„ 4—Monday	0·04	54	52	47	49
„ 5—Tuesday ...	0·15	53	52	48	44
„ 6—Wednesday .	0·04	52	52	48	49
„ 7—Thursday ...	0·04	51	51	49	38
„ 8—Friday	—	53	52	49	50
„ 9—Saturday ...	—	53	52	49	50
Means ...	(total) 0·28	53	52	48	47

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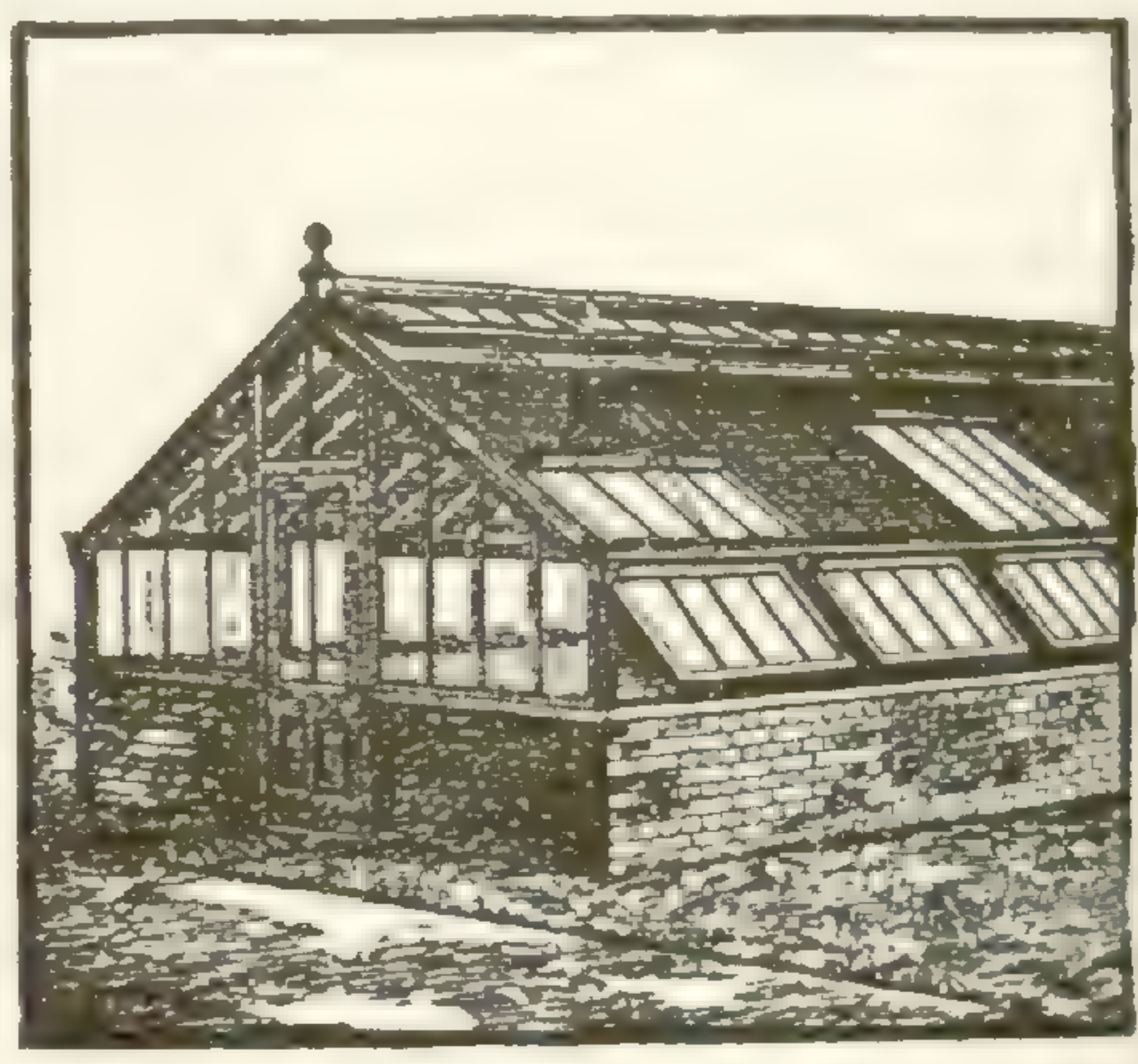

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GARDENER (Head Working), where two or more are kept; middle-aged; life experience Inside and Out; **hard working; good references from** last and previous employers. G. BURGESS, 17, Eversleigh Road, Lavender Hill, London, S.W.

GARDENER (Head Working).—F. SMITH seeks SITUATION with any Lady or Gentleman requiring a thorough all-round Gardener; first-class references; life experience; age 45; married, no family. Address Rose Cottage, Mellis, Suffolk.

GARDENER (Head Working), age 31, married; life experience in good places, including Syon House, Mereworth Castle, and Old Warden Park; **3½ years as Head; highest references.** F. FRENCH, Covent Garden, Barming, Kent.

GARDENER (Head Working), life experience with glass, flowers, kitchen garden, and orchids; good character; married. W., 32, Eleanor Road, Bowes Park, N.

GARDENER (Head Working or good single-handed); age 40; married, no family; experienced in all branches; good reference. Apply E., 45, Beulah Road, Thornton Heath, Surrey.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of vines, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working).—Mr. F. STRONG would be pleased to highly recommend H. DOWELL, as a thorough practical Man, to any lady or gentleman requiring such; life experience; abstainer; **age 27. High Grove, Pinner.**

GARDENER (Head Working), where three or more are kept.—A gentleman, reducing his establishment, can highly RECOMMEND his HEAD GARDENER as thoroughly trustworthy and experienced in all branches; strong, energetic; married, [illegible] 15. "P.," West Cottage, Broomfield Lodge, [illegible]

GARDENER (Head Working); experienced in Vines, Peaches, Plants, Outside Fruits, and Vegetables; good testimonials; age 40; married, one child. F. BEARDALL, 54, Charlton Street, Maidstone.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married, no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

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GARDENER (Single-handed); eight years' experience in Kitchen and Flower Gardens, little Glass; excellent references; age 23; single. W. M., 30, High Street, Battersea, S.W.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall, married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent

GARDENER (Single-handed or Second); age 27; good reference; life experience in Fruit, Flowers, and Vegetables (Inside and Out). SIMMS, Brook Street, Watlington, Oxon.

GARDENER (Single-handed or with help); good experience Inside and Out; age 26; single. G. OSBORNE, Green Street Green, near Orpington, Kent.

GARDENER (Single-handed, or with help); married, age 39; life experience with Fruit, Flowers, and Vegetables; Inside and Out; good character. J. S., 5, White Cottages, Clay Hill, Enfield.

GARDENER (Single-handed or with help, or Second), Inside and Out; good references, age 25; married when suited; near London preferred. T. CLARKE, Eastcourt Gardens, Malmesbury, Wilts.

MARRIED MAN as KITCHEN GARDENER or SINGLE-HANDED; life experience; 7 years in present situation; good references.—S. GEORGE, Woodside Gardens, Maidenhead, Berks.

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GARDENER (Single) seeks a SITUATION as Under, Inside and Out; age 23; good reference; Bothy preferred. H. GODDARD, Caryll's Cottage, Fay Gate, Horsham.

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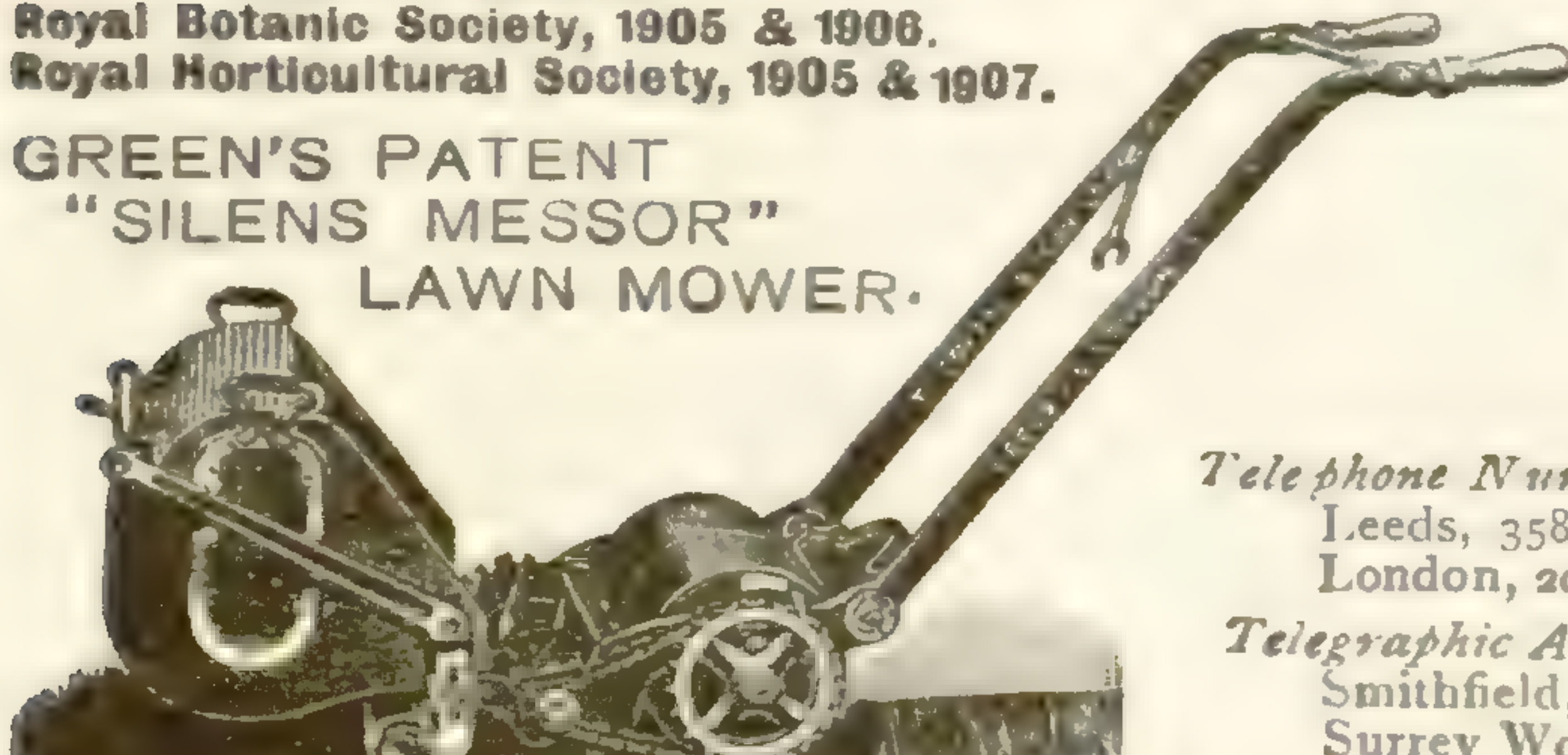

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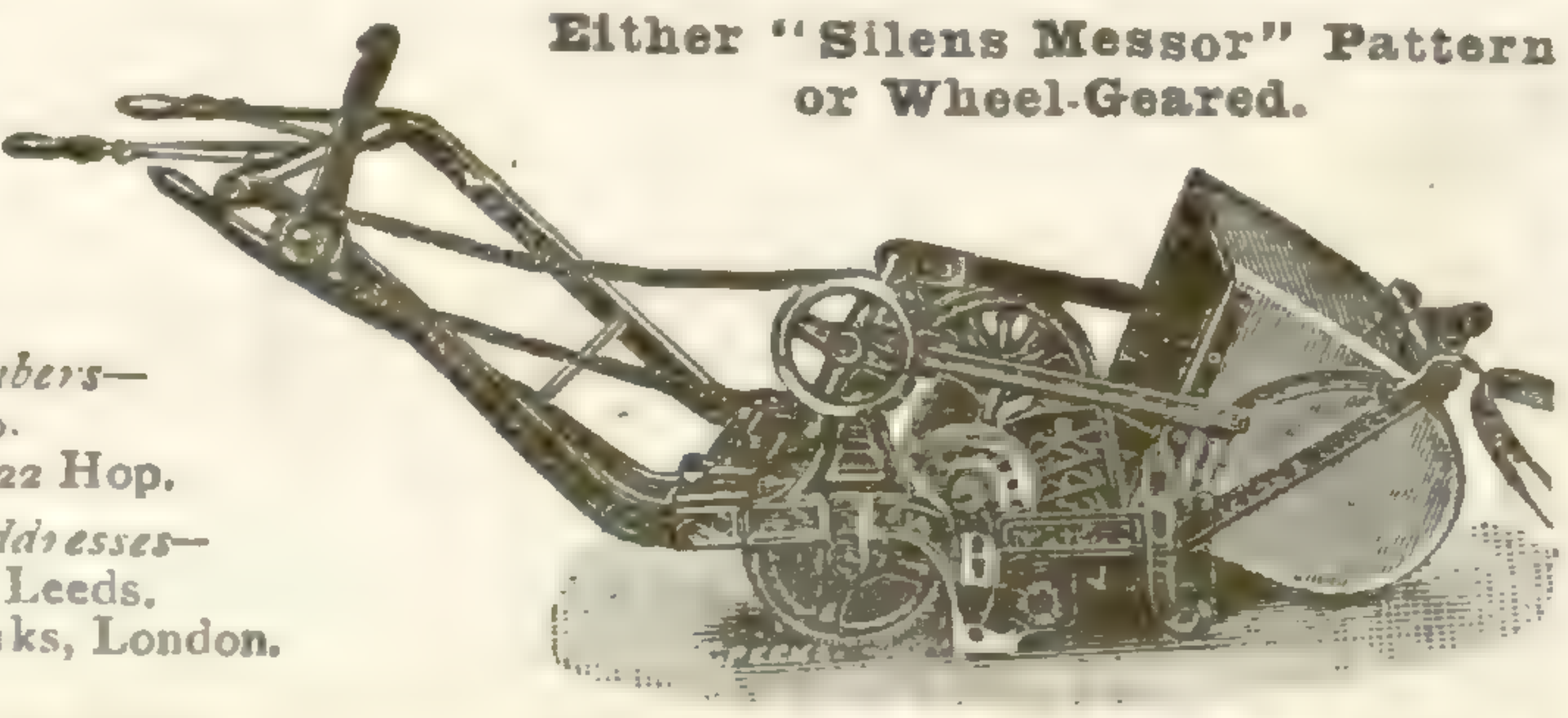

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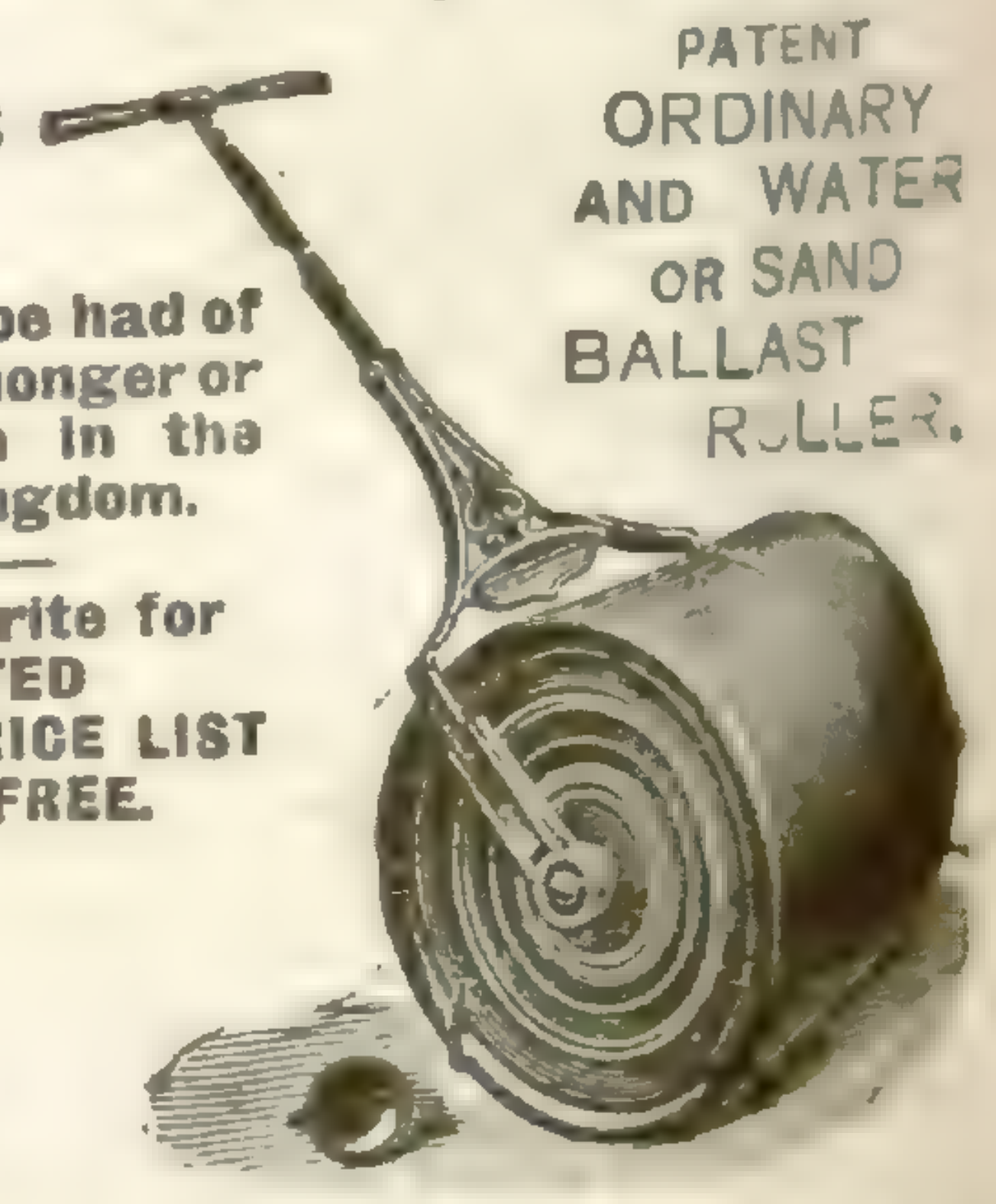

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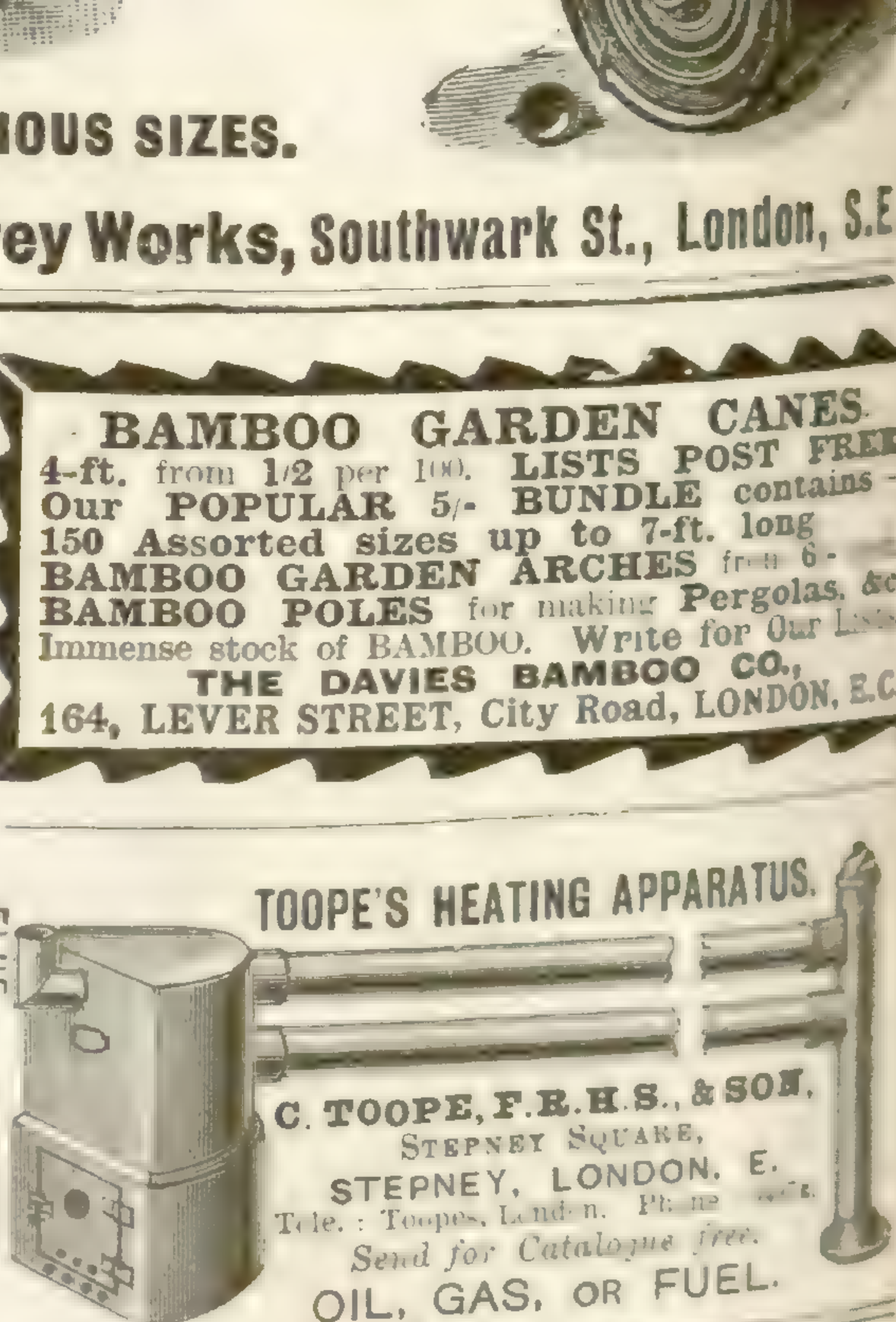

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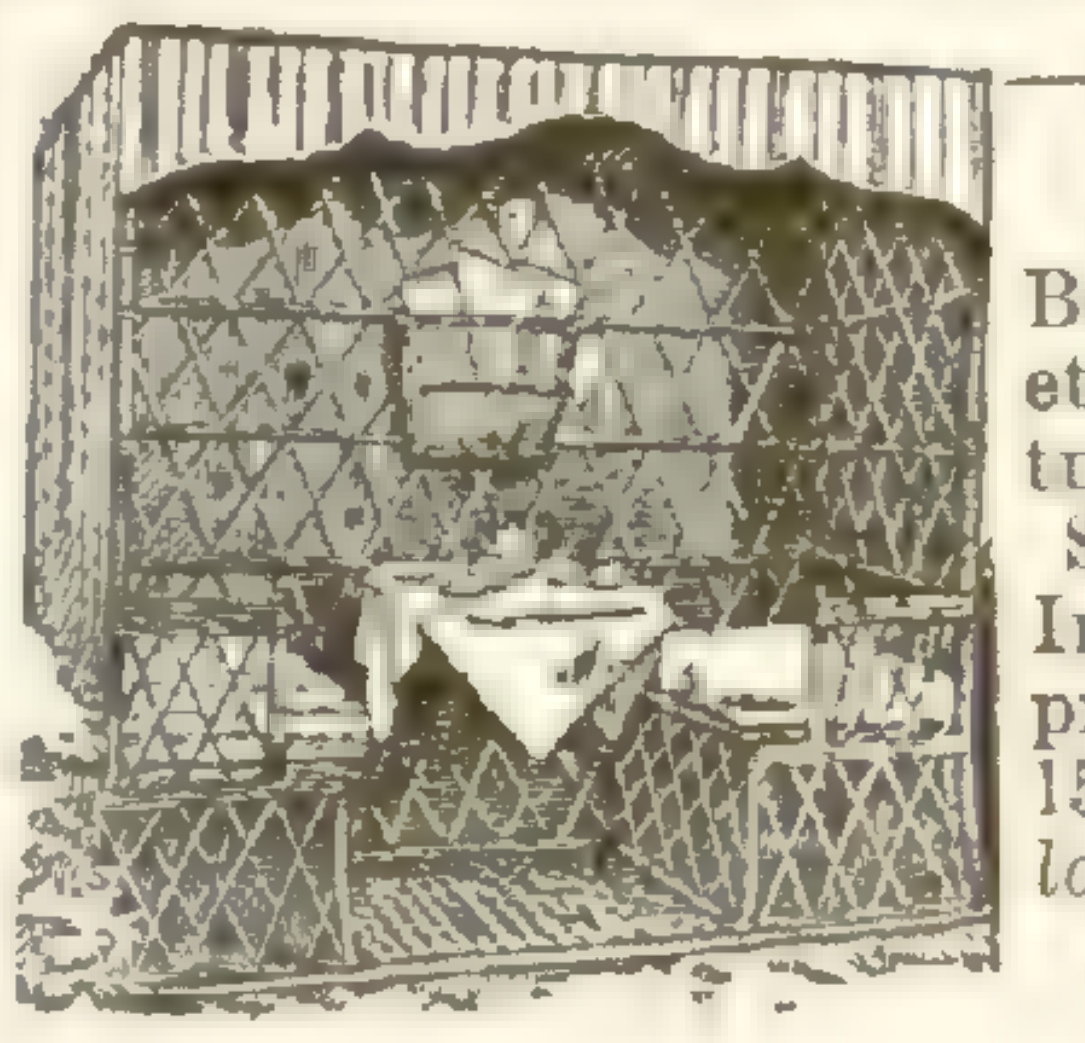

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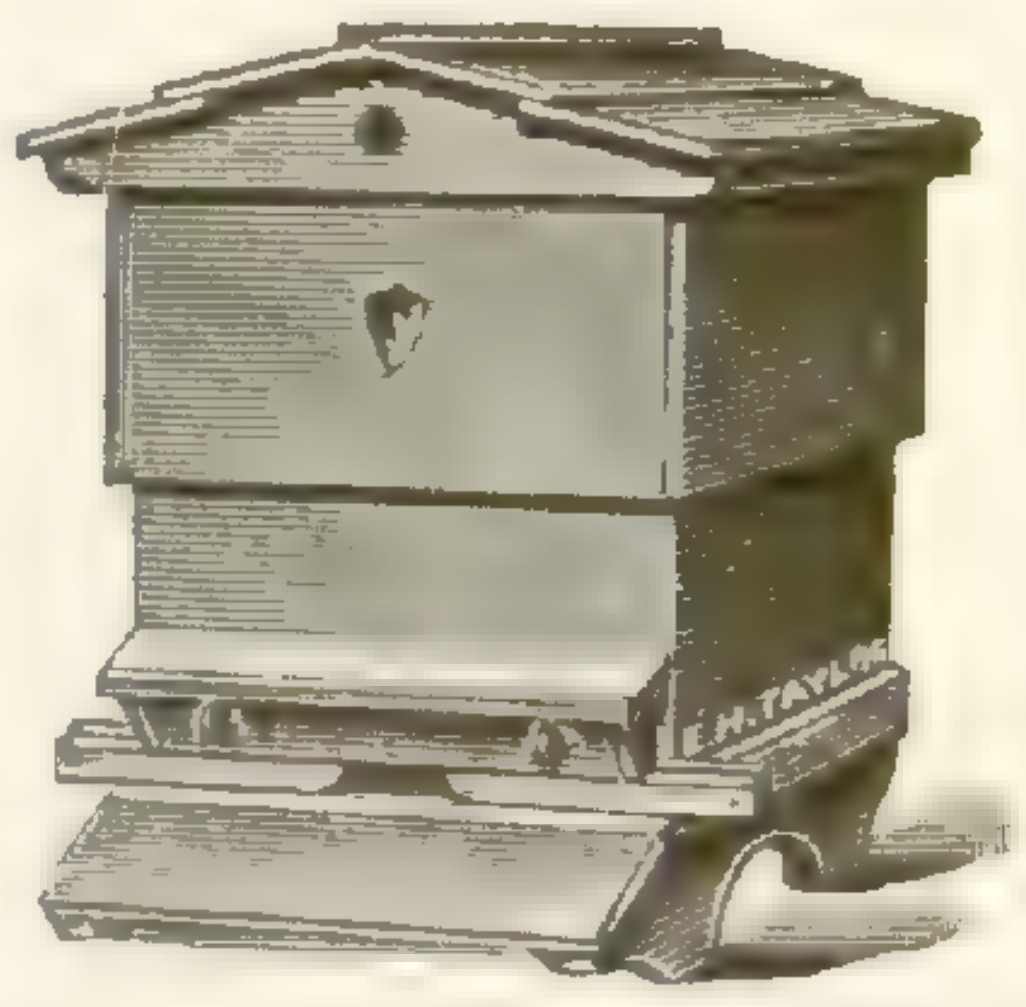

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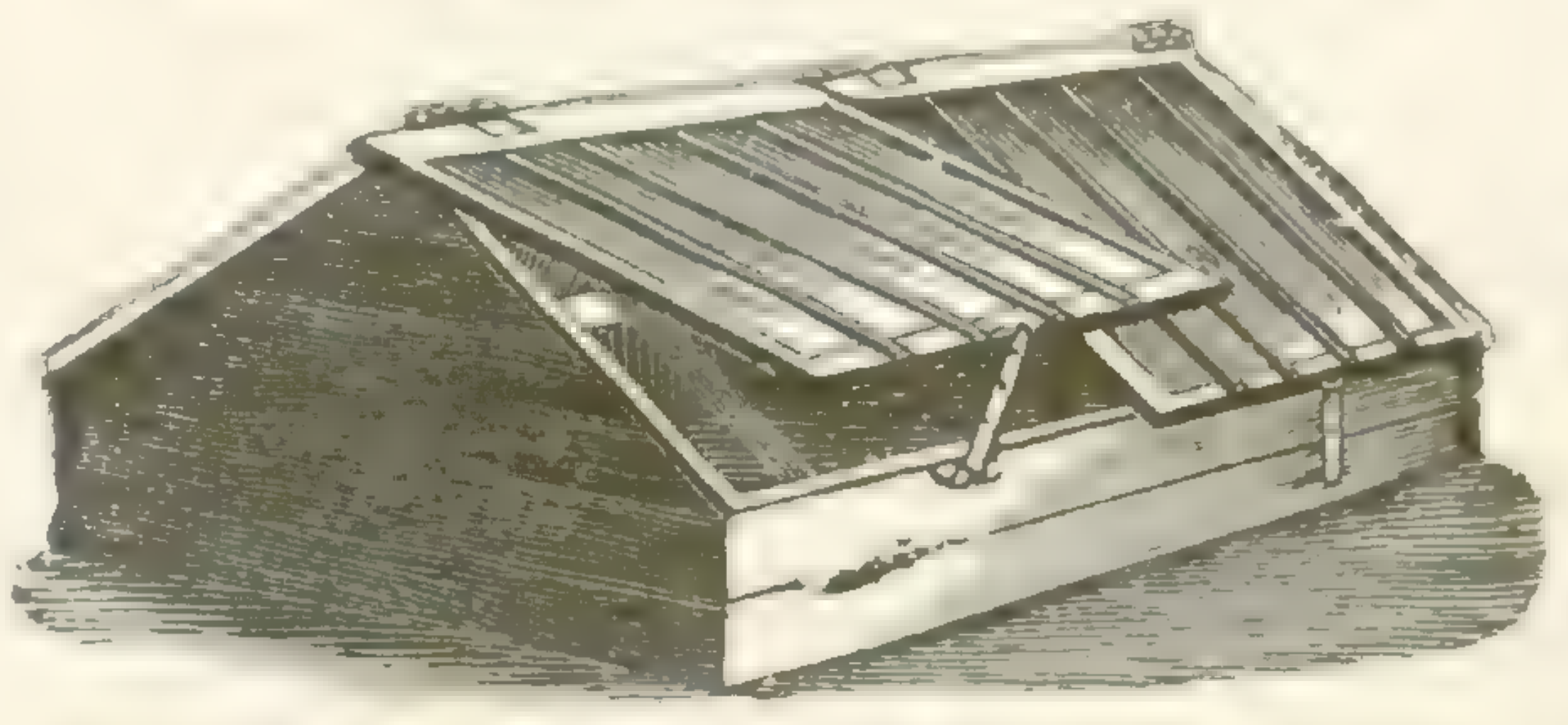

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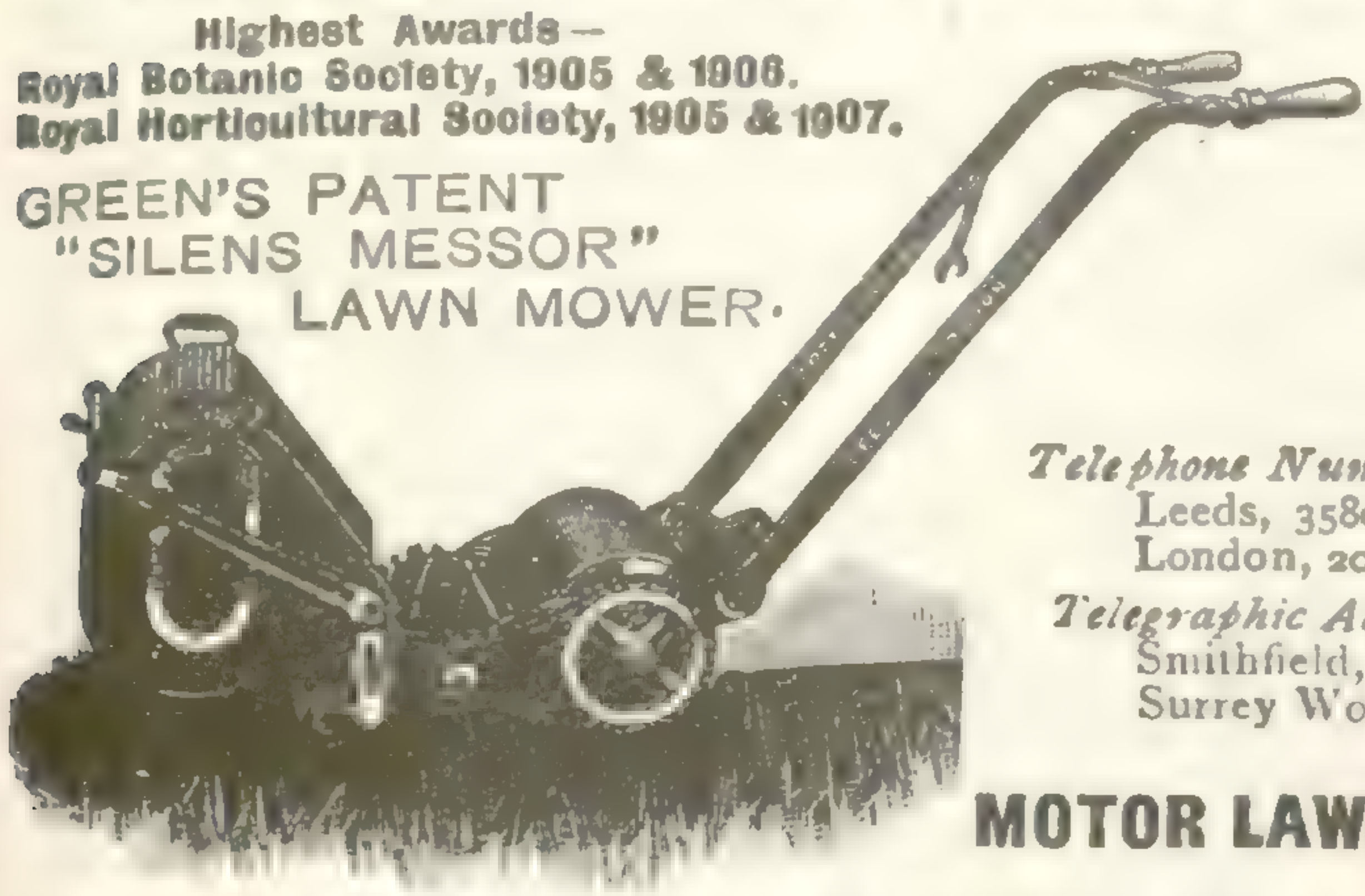

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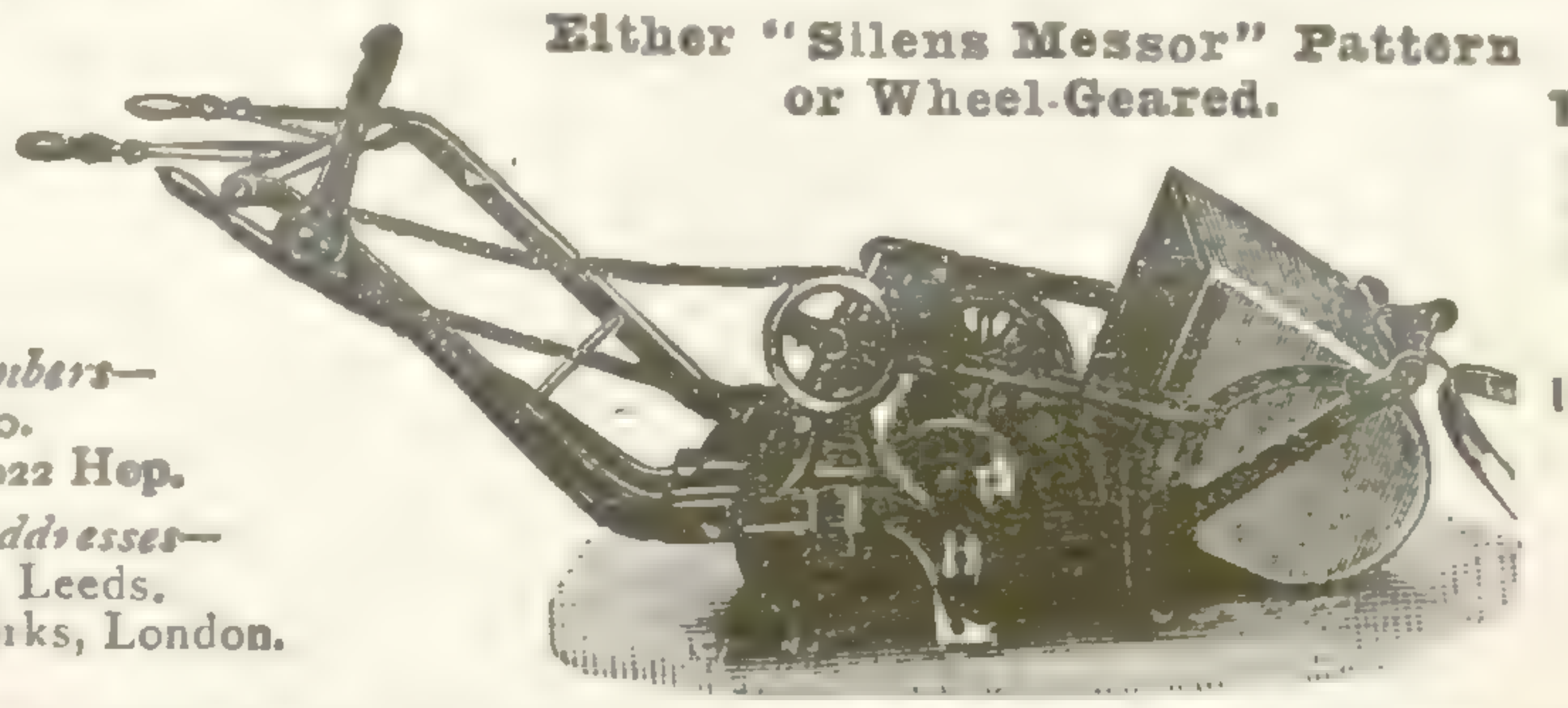

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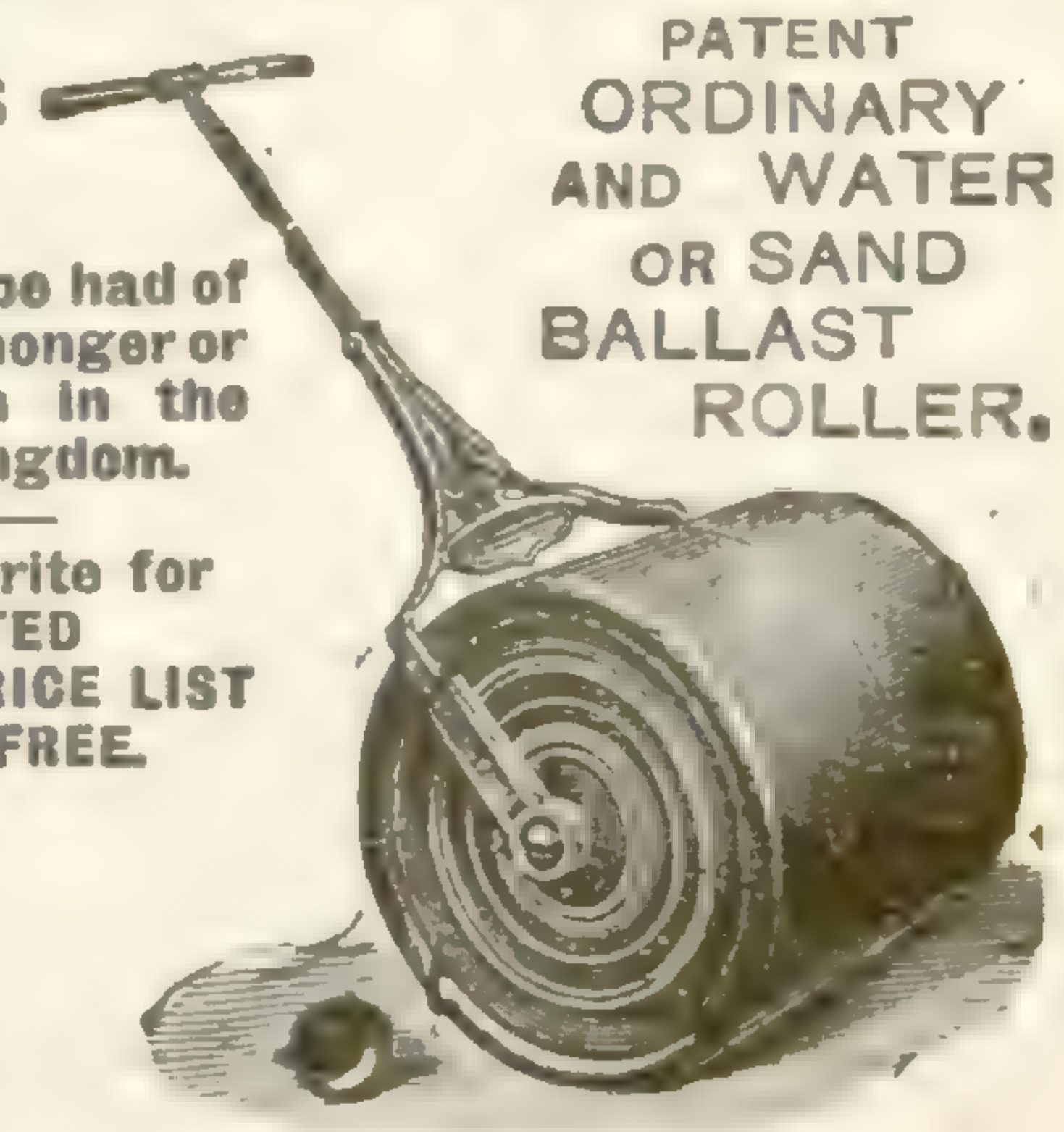

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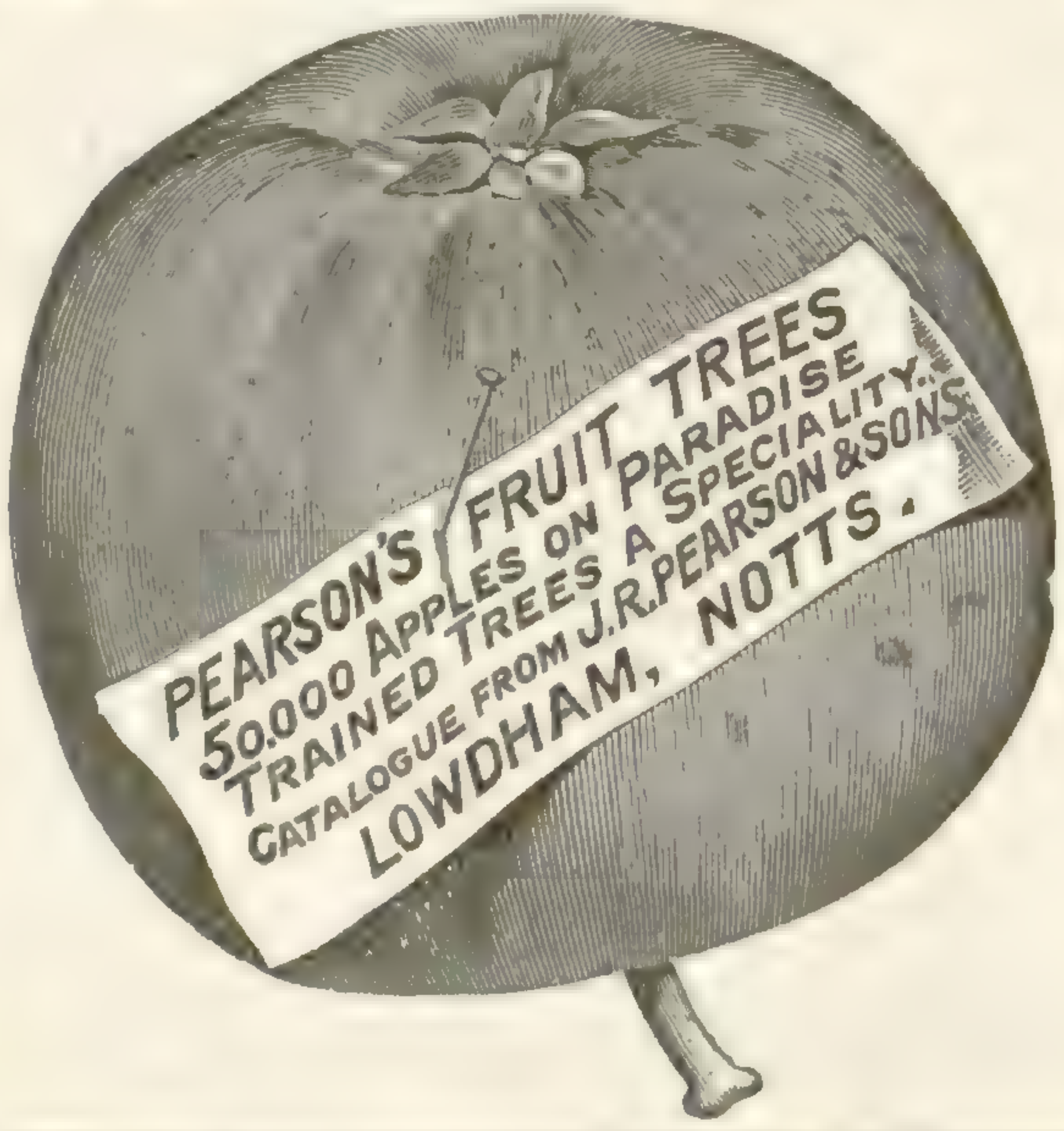
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VOL. LI.—No. 2,847. SATURDAY, MAY 23, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Germs.

It is a curious exemplification of the old proverb that "Familiarity breeds contempt," that the ubiquitous nature of germs of innumerable kinds in the food we eat, the air we breathe, and the water we drink should trouble us so little. Another old proverb, that what cannot be cured must be endured, comes in as a sort of mitigant, and it is well that it should be so, since otherwise life would not be worth living. Fortunately, too, we know that the vast majority of these germs are entirely innocuous, so far as we are concerned, their habitats are outside the human organism, and their destructive powers find outlet elsewhere in directions which do not immediately concern us, although in many cases they certainly do so indirectly. It is due to some of these germs that no sooner does vitality depart from an organism, animal or vegetable, than their materials are seized upon, reutilised, and put, as it were, again into circulation. Every dead leaf, for instance, so soon as it reaches the soil, becomes the prey of a host of fungoid and insect destroyers, which break it up, and reconvert it into material readily assimilable again by fresh vegetation. Death and decay are thus seen to be terms involving mere translation into other forms of life in the endless round of vital transformation, while without these germs the world would become encumbered with ever-increasing masses of inert dead matter. A good deal of such transformation work is undoubtedly effected by the larger forms of life, cattle devour the grass, and we devour the cattle; carnivora of innumerable kinds, insect and animal, prey upon the vegetarians, but few of these can or do feed upon already dead material; hay and similar dried vegetation is dead, it is true, in one sense, but it is only edible by virtue of artificial preservation of its nutrient qualities by man, left to the elements after cutting, no cattle would touch it. Germs of all kinds constitute one of those subtle vital arrangements by which Nature is constantly restoring the balance, and even those deadly ones which carry disease in their train, must, when broadly viewed, be regarded as beneficent factors in the scheme of creation by indicating to us some breaches of Nature's laws which we have ourselves committed through our ignorance or neglect, and thus by forcing us as a matter of self-preservation to take proper sanitary measures, the condition of humanity step by step is raised to ever higher levels. Looking back to the time of the great plague, we can now clearly see that it was due to insanitary conditions, and the immensely improved position of London and other great cities is thus seen to be largely the outcome of the efforts of these deadly germs to enforce the needful lesson. One by one we are now solving the secrets of the life histories of such, and thus learning how to baffle their attacks, but the more we learn the better we know that immunity can only be maintained by constant vigilance, and so we are kept up to the mark. We live, as it were, in a citadel which is ever being besieged by countless hordes of foes, but we are beginning to learn that the innumerable hosts have their internecine struggles, which resolve many of them into allies. Most of these germ foes are incapable of effective attack unless the way be already prepared for them. The gardener, for instance, knows perfectly well that if by judicious ventilation and treatment generally he can induce robust growth, the plant will be immune from many pests and diseases. Most of the prevalent diseases and ailments, whether in the lives of man or plant, may be traced to some neglect of natural laws which has weakened the powers of resistance to the all-pervading germ. As we have said, however, there are germs and germs. Who until recent years would have dreamt of the soil being pervaded by busy hordes of living bacteria, one kind of which, in one direction, may stimulate the orchid seed to germinate, feeding it in some mysterious way like a foster mother until it can run alone, while in another direction another kind may double and treble our crops of the pea tribe and associated plants by its symbiotic presence in the roots. The first great fruits of the germ theory was the discovery and application of germicides, i.e., antiseptics, a discovery which transformed our hospitals from death traps into means of salvation. The next was that of a power of attenuating their virus by anticipation, i.e., vaccination, and now by their continued study we are finding out the other side of germ history and discovering our friends among the foes.

[Photo: Arthur Weston, 17, Poultry, E.C.

MR. CHARLES T. DRUERY, V.M.H., F.L.S.

Mr. Charles T. Druery, V.M.H., F.L.S., has, during the past seventeen or eighteen years, contributed so freely to these pages of his remarkable knowledge of

British ferns and some other subjects, that we feel sure our readers will welcome the portrait which we have the pleasure of giving in this issue. Throughout this comparatively long period Mr. Druery has, through these pages, persistently kept the claims of the choice varietal forms of our native ferns before plant lovers, and he, with us, has the satisfaction of knowing that as the result of the attention given to these exquisitely beautiful plants, in the pages of the Gardeners' Magazine, they are once more rapidly acquiring popularity. Mr. Druery has been successful in obtaining several good "finds," as well as in cultivating British ferns, and advocating the claims they have upon those who are interested in hardy plants. After some years' study, and making a small collection of choice varieties, Mr. Druery obtained his first fern "find" in 1881, this being Blechnum concinnum Druery. Two years later, as the result of close observation in the study of his favourites, he discovered apospory, until then a quite unknown form of reproduction in ferns. This Mr. Druery subsequently discovered in five, or including Cystopteris montana, in six British species. In 1885 he was elected a Fellow of the Linnean Society, and in 1897, due presumably to these original discoveries, received the distinction of the Victoria Medal of Honour in Horticulture from the Royal Horticultural Society. Both in selective culture of ferns and discoveries of wild sports, Mr. Druery has been peculiarly fortunate. Two quite new and unique strains of athyrium and polystichum originated in his fernery, and among the beautiful wild sports he was successful in finding were Athyrium filix-fœmina cristata Kilrushense, Lastrea montana cristata gracile, and L. m. plumosa Druery. In addition to his contributions to the Gardeners' Magazine Mr. Druery has written two books on British ferns, the first "Choice British Ferns," and the second, "The Book of British Ferns," and he has also written several books in a lighter vein, notably "The New Gulliver."

Spraying for Apple Psylla.—Mr. Spencer Pickering, F.R.S., writes from Woburn: As there is still time for growers to spray their trees for this pest, they may be interested to know that the results obtained by the use of tobacco at Woburn have been as satisfactory this year as they were last year. The liquid used on this occasion was a 7.5 per cent. solution of nicotine, obtained from Messrs. W. Voss and Co., Glengall Road, Millwall, which was diluted with 100, 75, and 50 times its volume of water in the various experiments. Standard trees were sprayed with the two weaker of these on the morning of May 7, and in both cases 95 per cent. of the psylla were killed. The stronger solution was not used till the afternoon of the same day, and the results were not so good, the mortality being only 60 per cent. This was due to the fact that rain fell for an hour and a-half later in the same afternoon. Various other insecticides which were applied at the same time as these nicotine solutions proved comparatively ineffective.

The Season of the Bluebell (Scilla nutans) is so well known to be coincident with the "merrie month of May" that we shou'd not refer to it, were it not that we are anxious to again call attention to the great value of the flower for beautifying the less highly-dressed parts of the pleasure grounds and woodland walks at this season of the year. Bluebells are to be met with in all parts of the country, and object lessons on the best means of utilising them in the garden are not difficult to obtain by those who have access to woodlands in the more rural parts of England. There are, however, no object lessons of greater value than those to be found in the Royal Gardens, Kew, and they have the advantage that they are accessible to all who are resident within a convenient distance, or are able to make a journey thither. In the grounds of the Queen's College, and in other parts of the Royal Gardens, the bluebells are now in perfection, and, with the mind full of the charming pictures they have produced, it is difficult to regard them from a practical point of view, and write about object or other lessons. It is still more difficult to convey anything approaching an adequate idea of the exquisite beauty of the effects produced by the myriads of their elegant blue flowers. In the Gardeners' Magazine of April 4 we gave an illustration of the bluebells in the woodland glade to the south of the Queen's Cottage, but, delightful as was this in composition and perfect in detail, it failed to realise otherwise than imperfectly the poetic charm, to quote from Shelley, of

> "Tender bluebells at whose birth
> The sod scarce heaved."

or as even more exquisitely expressd by Tennyson, of

> Sheets of hyacinth
> That seemed the heavens upbreaking through the earth.

We advise those of our readers who can do so to visit the gardens during the next few days, and make a point of seeing the bluebells.

Spring-flowering Bulbs at Birmingham.—The arrangements of spring-flowering bulbs in the Birmingham public parks have been on the same liberal scale as for some years past, and they have throughout been remarkable for the taste shown by Mr. Morter, the superintendent, in carrying them out. The principal display was in Cannon Hill Park, but all the parks were so liberally embellished as to afford abundant entertainment for visitors. As evidence of the extent of the several displays it may be mentioned that of the bulbs used, there were 250,000 daffodils, 80,000 tulips, and 15,000 hyacinths, 7,500 of the last-named bulbs being planted in Cannon Hill Park.

Kew Guild Dinner.—At the annual dinner of the Kew Guild, to be held in the Venetian Chamber of the Holborn Restaurant at 7.30 p.m. on Monday, May 25, Mr. William Pettigrew, superintendent of the Cardiff parks, will preside. A number of Colonial and Indian members will be present, including Messrs. G. Cave (Darjeeling), E. W. Davy (Nyassaland), R. Derry (Singapore), A. E. Evans (Gold Coast), and G. T. Lane (Calcutta). The annual general meeting of the Guild will be held on the same evening at 6.30 o'clock in a room adjoining the Venetian Chamber.

The Temple Show, which will be held on Tuesday, Wednesday, and Thursday next, has the promise of proving at least equal to the best of the many magnificent exhibitions that have been held in the historic gardens of the Inner Temple. We shall give in our next issue a full report, with numerous illustrations, of this great gathering.

Interesting Primulas.—At the recent meeting of the R.H.S. Scientific Committee Mr. James Douglas, V.M.H., showed, on behalf of the Right Hon. the Earl of Waldegrave, some flowers of the green primrose, in which the corolla is virescent and the stamens are but imperfectly formed. Rev. A. R. Upcher, M.A., of Halesworth, Suffolk, showed a large number of flowers of polyanthus of large size and much substance, and many with a very distinct eye. The calyx was large and very broadly campanulate in most of the flowers. Mr. Upcher had started some thirty years since with the old "butter" polyanthus, and had pollinated this with pollen from Primula sinensis and P. auricula; but although considerable variation in many directions was observable in the flowers shown, the committee did not consider that there was any evidence that the pollen of these species had had any effect in producing the results obtained. Some of the forms had fringed petals, some smooth-edged, the petals in some were remarkably broad, the "eye" was well marked, and contrasted with the remainder of the corolla in some, while in others the deep colour was suffused over the whole of the petals. The collection showed in a marked manner the variation obtainable in polyanthus through cultivation without the introduction of new blood. Mr. Bowles showed a number of flowers of P. officinalis from a wild source lacking the deep yellow spot which is usually to be found in the flowers of this species. He asked that others would make observations in order to note whether this was a common phenomenon or not.

The Horse Chestnut Trees are, as we write, in the first flush of their floral beauty. At Kew, at Hampton Court, and in the world-renowned avenue at Bushey Park, the trees are now a beautiful sight, and if the fine weather continue, no doubt many thousands of people will visit Bushey Park on Saturday and Sunday, May 23 and 24, to see the noble trees carrying myriads of erect spikes of handsome flowers. Lilacs and laburnums are also very beautiful just now.

Early Raspberries. — The first consignment of raspberries reached Covent Garden this season on May 17, and were sold on May 18 at 10s. per lb. These had been ripened under glass, and the fruits being very fine they were quickly purchased by those who love to have the "first" fruits, and are ever looking for something wherewith to startle their guests.

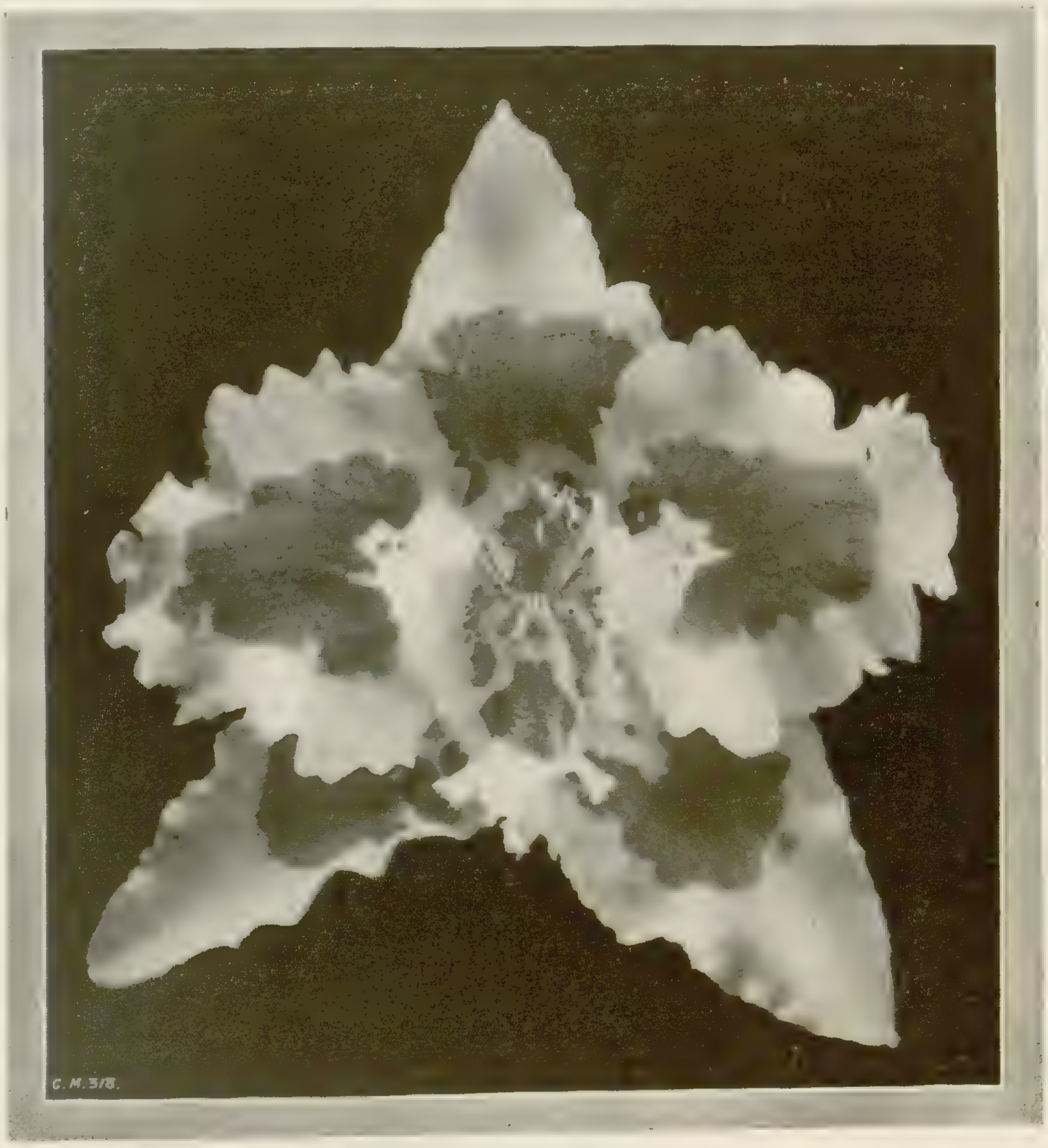
Franco-British Exhibition. — This exhibition, which is being held at Shepherd's Bush, was opened on Thursday, the 16th inst., by the Prince and Princess of Wales. Although it rained more or less heavily throughout the day there was a large attendance, upwards of 123,000 persons passing the turnstiles. Owing to the magnitude of the task much remained to be done on the opening day, but rapid progress has been made with the work of completion during the past week. In the large flower beds to the right and left of the main avenue and adjacent to the Palace of Music, Messrs. Sutton and Sons have made an extremely beautiful display, which is of special interest as an illustration of what flowers can be grown from seed within a short period. Messrs. Sutton and Sons have supplied the grass seeds required by the exhibition authorities. Messrs. James Carter and Co., of High Holborn, have a bold and effective group of flowers, shrubs and palms in the centre of the garden in the Court of Arts. The Messrs. Carter are laying out the gardens and lawns of the Royal Pavilion, the Indian Pavilion, and the Canadian Pavilion, in which more than a million bedding plants will be utilised.

The Sweet Pea in France.—Mr. G. D. Clark, of Dover, is one of the few English horticulturists who can be congratulated on having written a work in the French language. His recent production, "Les pois de Senteur," is a neat little treatise of about 32 pages, dealing with the history and culture of the sweet pea in a succinct form for the benefit of our neighbours on the other side of the Channel. Popular as the flower is here and in America, it has not yet been much grown in France, and the object of the pamphlet is to familiarise French flower lovers with its culture. The treatise contains several illustrations, and a list of varieties, besides the cultural matter.

Black Scab in Potatoes.—The National Fruit Growers' Federation have taken the potato under their care, and, as the result of their activities, a conference was the other day held at the offices of the Board of Agriculture. The points suggested by the Federation for discussion were as follows: (1) That the "black scab" of potatoes be made a notifiable disease under the Destructive Insects and Pests Act, 1907, with the object of enabling the Board of Agriculture to ascertain at once the exact areas at present affected. (2) That where the disease is known to exist on any farm or holding it shall be illegal for the grower to sell any potatoes until the same shall have been examined by an inspector from the Board of Agriculture or duly qualified person; and that all potatoes found to be diseased shall be destroyed, the grower to be compensated for the same up to half their value, such compensation to be paid from the Treasury funds. (3) That the Board of Agriculture be requested either to publish the scientific details of the investigations on which the following statement (published in the Board's leaflet) is based—viz., that the black scab of potatoes is able to attack mangel and beet, or to withdraw this statement and to substitute the scientific name Chrysophlyctis endobiotica for that of Œdomyces leproides (the beetroot disease) at present used by the Board, and in the latter case to place no restrictions upon the growing of mangel or beet on land contaminated with the black scab disease of potatoes. (4) That in view of certain statements that have been made, the Board of Agriculture be requested to investigate as to whether the disease is being introduced into this country by means of imported seed. The Board agreed to the suggestion in No. 1, and will, it is understood, immediately schedule this disease, and also agreed to No. 3, and are withdrawing the leaflet in question. The suggestions for the examination and restriction of sale of diseased crops, etc., contained in No. 2 were favourably received, and will probably be adopted, or in any case there will be restrictions upon similar lines. The suggestion in No. 4 will be adopted by the Board.

Possible Introduction of San Jose Scale.—At a conference held at University College under the auspices of the Association of Economic Biologists, Mr. Walter E. Collinge directed attention to the possibility and danger of the introduction of the San Jose scale into this country. In the course of his remarks he said that this scale was a most dangerous insect pest which would, if introduced into England, be capable of endangering the fruit-growers' interest. The insects were rapid breeders, and were capable of adapting themselves to any climate. He expressed a very strong hope that the eggs on fruit and fruit bearing twigs would not be introduced into this country. He had seen the insect alive on pears purchased in Birmingham fruit-markets, and unless stringent steps were taken it would be introduced here, and once here it would be a great pest to horticulture. In the course of the discussion that followed there was a strong expression of opinion that care should be taken to prevent importation of harmful insects with foreign fruits.

Colouring Matter of Flowers.—To a recent issue of "Nature" Dr. H. C. Sorby, F.R.S., contributes a highly scientific article on "The Colouring Matters of Flowers," and it is one of special interest to those who make a study of this subject. Dr. Sorby shows that there is a great variety of colours in cultivated plants. In many cases, he states, this is easily explained, because we can see that two pigments exist, either alone or mixed in various proportions, one frequently being a yellow insoluble in water, and the other a blue or red soluble in it. As an example, he refers to the common wallflower of our gardens (Calendula vulgaris), which is sometimes a clear yellow, sometimes a sort of crimson, but more commonly a crimson-brown. The yellow is a xanthophyl soluble in carbon bisulphide; the crimson is a pigment soluble in water; the common colour is a mixture of these two, and gives the same spectrum as a yellow and a purple petal combined. We have a similar case in chrysanthemums and various other flowers. The common garden marigold is sometimes a pure yellow and sometimes a true orange or an intermediate tint, which is due to two different pigments alone or variously mixed. One or other of these may occur separately in different parts of the same flower in some plants.



ODONTOGLOSSUM CRISPUM LEONARD PERFECT.

Gold Medal and First Class Certificate, R.H.S., May 12, when shown by Norman Cookson, Esq. Flowers white, marked with bright brownish-red.

BRITISH FERNS.

The magnificent exhibition of British ferns, in a multitude of beautiful varietal forms, for which Messrs. H. B. May and Sons deservedly received a gold medal on Tuesday, the 12th inst., at the R.H.S. Hall, constituted practically the first display of any note since the Fern Conference of 1891.

At that time the trade took little or no interest in these beautiful native plants, and their culture was consequently almost exclusively confined to those amateurs who made a speciality of them, some devoting their attention to search among the wild forms for the fresh "sports" which form the basis of the cult, while others, in addition to this, added largely to the existing collections by selective culture through the spores. To this latter branch of study we owe a number of the very finest dissected and plumose types, but it is noteworthy that in every case these have been derived from wild finds showing the decomposite character, more or less markedly in their frondage, as distinct from the less divided normal ones whence they had sported. The result of this has been really marvellous, especially in the polystichums or Shield Ferns, the athyriums or Lady Ferns, and the scolopendrium or Harts-tongue, in which last the diversity of form in the fronds is peculiarly astounding when we consider the normal simplicity of the plain, undivided, pointed strap-like foliage.

This latter species indeed embraced the great majority of the varieties shown, and to the experienced cultivator of hardy ferns, the vigorous growth and consequent full development of type appealed as evidence of the most skilful culture possible. Another element of surprise was that fully-developed plants could be exhibited so early in the season, since hardy ferns, like many other hardy plants, resent forcing, and to hasten growth, as has been done in this case, involves very judicious handling to be healthily effective, as was undoubtedly the case in all the specimens shown.

Among the most noteworthy plants were two varieties of the common bracken (Pteris aquilina), one of P. a. congesta has thick, leathery, densely congested fronds, with the divisions prettily crisped and curled, a very beautiful and rare form originally found in Westmoreland, and the other, also found in that district, was P. a. glomerata, certainly one of the most extraordinary sports ever found. In this, although the fronds rise fairly stiffly and erectly, all the divisions and sub-divisions twist themselves into dense knots, the main divisions bearing large round knobs on their terminals, and the secondary ones lapping themselves tightly round the stalks. It was found on a hillside not far from Kendal, and, as the finder remarked, looked in the distance like so many huge bunches of grapes hanging down the slope. The curious part of the story is that no one has been able to find the place again.

The polystichums were in very fine form, the plumose and tripinnate sections especially, as were also some of the plumose and crested Lady Ferns of the now well-known "superbum" class, which originated in the writer's fernery. Blechnum spicant, the Hard Fern, was represented by some half-dozen of the best varieties, but fully-grown specimens have yet to be acquired.

A recent visit to Messrs. May's nurseries at Edmonton, was well rewarded by the sight of many thousands of native ferns being grown for the market, house after house, frame after frame, being filled with robust, healthy, and, above all, perfectly clean plants, while thousands of the tougher varieties were planted out in the open for development. One feature which struck me was the general correctness of the names, a point which in many instances presents insuperable difficulties, and even to the expert is often puzzling, owing to the necessary retention of old names for well-known varieties, which names are not infrequently very misleading. The principle adopted here, however, is, as far as possible, to give a really descriptive name, which then cannot be reasonably challenged.

Apart from the thousands of established plants, a peep into one of the propagating houses showed literally millions in the making, ranging from the just sown and invisible spores, through others with a dense coating of green prothalli, representing the first stage of spore germination, and on to wooden boxes by the hundred, into which these incipient growths are pricked out, and in which the infant ferns are pushing up their tiny first fronds by the myriad. Thence they are transferred, stage by stage, to isolation boxes, thumb pots and larger pots, until at last a tiny pinch of spores, much less than the equivalent of a pinch of snuff, but otherwise exactly like it, demands a hundred feet house for the accommodation of the resulting crop.

Chas. T. Druery, V.M.H., F.L.S.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in Easily Grown Hardy Perennials, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM CRISPUM LEONARD PERFECT.

A wondrously handsome and finely-marked odontoglossum, one of the largest and one of the finest blotched forms of this variable species. The segments are all broad, making up a flower well over four inches across; the ground colour is white, and the heavy markings are of a rich brown-red or bronze-red colour. The margins of the segments are fringed, and the lip has a yellow crest. The whole spike shown carried fourteen flowers, but these were so closely set on the spike that they overlapped each other. Our illustration does not represent an artist's idea of the variety, but is a reproduction from a photograph taken by Mr. H. J. Chapman. F.C.C. and Gold Medal, R.H.S., May 12. Mr. H. J. Chapman, gardener to Norman C. Cookson, Esq., Oakfield, Wylam-on-Tyne.

ODONTOGLOSSUM WILCKEANUM SCHRODERIANUM.

A magnificent variety, the plant exhibited carrying a splendid spike of large fringed flowers. The colour is soft yellow, with heavy blotches of deep crimson-red. F.C.C., R.H.S., May 12. Mr. H. Ballantine, gardener to Baron Schroder, The Dell, Egham.

BRASSO-CATTLEYA HEATONENSIS WESTONBIRT VAR.

This beautiful hybrid is the result of crossing Brassavola Digbyana with Cattleya Hardyana. The shape of the flower and the exquisite fringing of the lip are similar to those found in most of the large Brasso-cattleya hybrids, but the colour in this variety is soft buff yellow, overlaid with silvery rose. The lip has a central greenish yellow area. F.C.C., R.H.S., May 12. Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

CATTLEYA MOSSIÆ GOOSENSIANA.

A remarkably beautiful member of the white group of C. Mossiæ varieties. It has fine flowers, of good form, in which the sepals and petals are all white, while a white margin surrounds the bright violet-purple area of the lip. F.C.C., R.H.S., May 12. Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

ANGRÆCUM GERMINYANUM.

A dwarf species, but not an especially attractive one. The long narrow sepals and petals are greenish white, but the more effective three-lobed lip is white. A.M., R.H.S., May 12. Sir Trevor Lawrence, Bart., Dorking.

ODONTOGLOSSUM ILLUSTRE THEODORA.

A handsome orchid derived from O. Vuylsteki and O. ardentissimum. The flowers are of medium size, and of a rosy heliotrope shade, edged with white. The lip is brownish or bronze. A.M., R.H.S., May 12. Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks.

ODONTOGLOSSUM OSSULSTONI GLEBELANDS VAR.

One of the largest of its small group; it is derived from O. Pescatorei Charlesworthi and O. crispo-Harryanum. This strong-growing variety carried a long, branched spike, the flowers being white with numerous distinct markings of claret purple. A.M., R.H.S., May 12. Mr. J. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford.

ODONTOGLOSSUM NEBULOSUM (APTERUM) MOSSIÆ.

A neat variety that differs from the type in having its shapely flowers pure white, save for the yellow crest on the lip. A.M., R.H.S., May 12. Mr. J. S. Moss, Wintershill Hall, Bishop's Waltham, Hants.

ASPARAGUS FILICINUS.

A slender-stemmed erect-growing species that is particularly elegant and beautiful. It is bright green, and the growths spread out frond-like. The little leaf-like blades are practically all on one plane, and do not surround the stem, as in Sprengeri. The species is Himalayan, and may prove hardy in the southern counties. A.M., R.H.S., May 12. Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

AUBRIETIA PAUL'S PINK.

Another very fine aubrietia, a little late in flowering. It has large blooms of a charming and effective pink shade of colour. A.M., R.H.S., May 12. Messrs. Paul and Son, Cheshunt.

AURICULAS.

May Day.—A beautiful yellow self, with white paste; it has very large blooms. A.M., R.H.S., May 12. Mr. Jas. Douglas, Edenside, Great Bookham, Surrey.

Mildred Jay.—A splendid alpine auricula, with yellow tube, and pale mauve-purple margin to the bright purple body colour. A.M., R.H.S., May 12. Mr. James Douglas.

Coronet. — A well-defined, large green-edged show auricula. A.M., R.H.S., May 12. Mr. J. Douglas.

LARIX GRIFFITHI.

A rare larch, and one of the most difficult to cultivate in Great Britain. It comes from Sikkim and Bhutan, where it was found in 1838. In its native home it will grow 65ft. high; at Kew it has never exceeded 3ft. high, but at Leonardslee, Horsham, it succeeds better. Commercially it is valueless, and as an ornamental plant it can only be considered worthy of trial in the milder parts of the country. "Bot. Mag.," t. 8,181.

BERBERIS ACUMINATA.

First discovered in Yunnan by the Abbé Delavay, and more recently by Dr. Henry and Mr. E. H. Wilson; this fine shrub proves to be a most distinct one. It is most closely allied to B. Wallichiana; it has narrow spiny leaves, and bears its bright-yellow flowers in small fascicles all along the slender growths. "Bot. Mag.," t. 8,185

CYPRIPEDIUM DEBILE.

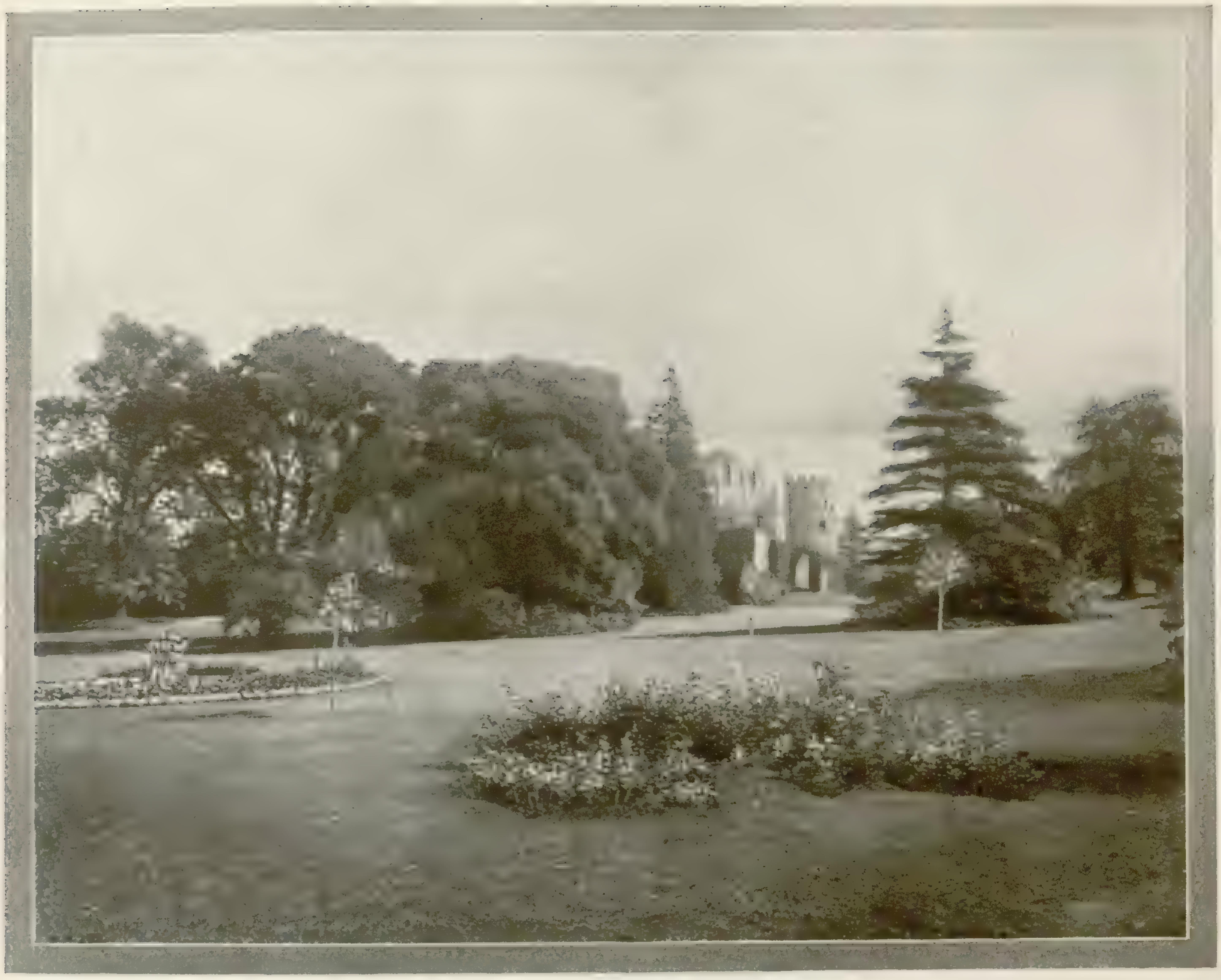
A quaint little species from China and Japan; it is a terrestrial orchid, growing rather less than six inches high, bearing slender two-leaved stems, each producing a little arching scape, carrying one small flower that has pale-green sepals and petals, marked with brown at the base, and a roundish, inflated lip that is white, with purple streaks and has a greenish base. "Bot. Mag.," t. 8,183.

SINNINGIA REGINA.

A handsome Brazilian gesneraceous plant that was introduced as a chance seedling from Brazil by Mr. de Smet-Devivier, of Ghent. The stock was subsequently purchased by Messrs. Benary, of Erfurt, who distributed seeds of it and of hybrids between it and the garden gloxinias. The plant flowers freely when treated like a gloxinia; indeed, it resembles a semi-pendant-flowered gloxinia, but the flowers are [illegible] violet, with a yellow, purple-spotted band in the throat. As in the gloxinias, so in S. Regina, the root stock is a stout tuber. "Bot. Mag," t. 8,182.

ROSA WILLMOTTIÆ.

A charming new species from China, where it was collected on the Saugpan Mountains near the Thibetan frontier by Mr. E. H. Wilson. We understand that it is quite hardy. The species makes a densely-branched shrub from 5ft. to 10ft. high, and its slender, [illegible] brown branches are freely clothed with small leaves, each with nine leaflets. The flowers, borne singly on the short, lateral branchlets, are an inch or more across, and of a [illegible] rose colour, the buds being deep reddish-rose. The yellow anthers are a great attraction. "Bot. Mag.," t. 8,186.



COTE HOUSE AND GARDENS, BRISTOL.

SOME BRISTOL GARDENS—II.

◆

Cote House.

On the opposite side of Durdham Down, from Bristol, is Stoke Bishop, so named because it once belonged to the Bishops of Coutances, one of whom, Godfrey, held Bristol, in 1088, in favour of Duke Robert against William Rufus. Behind Stoke Bishop is Westbury.

None of the gardens around Durdham Down are better known than that of Cote House, at Westbury-on-Trym, the home of Mrs. St. Vincent Ames, and I think I am safe in saying that no gardener is more widely known or respected in the district than Mr. Bannister, whose association with the gardens began when many of us were very young. In his younger days Mr. Bannister gained experience in many of the finest gardens in the country, and during later years he was a frequent and highly successful exhibitor of garden produce, but chiefly fruit.

Cote House is an old, picturesque battlemented structure that has long been the seat of the Ames family. A hundred years and more ago the poet Coleridge, John Wedgwood, who befriended him, and who was brother of the creator of British art pottery, and the poet Southey, met frequently at Bristol, and it is supposed that they met sometimes at Cote House; it is said, moreover, that it was at Cote House Wedgwood first put forward the idea that presently developed and materialised in the formation of the Royal Horticultural Society. Be that as it may, the grounds of Cote House show that in those early days, and even earlier, the estate was well cared for, the splendid old elms, grand cedars, and fine limes and chestnuts being standing monuments of an early planter.

Right in front of the house there stands a particularly fine cedar of Lebanon, with mighty bole and grandly spreading branches. It is a magnificent tree and cones freely. Closely beside it, in the summer time, there stands a tiny but ancient Cupressus obtusa, a dwarfed specimen from far Japan. This giant and dwarf remind one forcibly of Landseer's famous picture, "Dignity and Impudence." The illustrations given herewith will at once convey to the reader the idea that the grounds of Cote House are finely wooded. and that coniferous trees are abundant. And this idea is a correct one. Deodars, Lebanon and Atlantic cedars, cupressus in variety, and Wellingtonias are numerous and large. The copper beeches are also particularly well developed, and there are some large oaks and a rare old tulip tree around the house.

Contrasting with the giant trees and sombre conifers is the rose garden on the south-east side of the house, planted on a site formerly occupied by beds of tender summer flowers. In excellent soil and a kindly climate these roses have thriven well. La France, Maman Cochet, Augustine Guinoisseau, and G. Nabonnand grow well enough to please the most exacting rosarian, and there is one bed filled with an uncommon, but very pretty pinkish-buff rose that bears the extensive title of Marquise de Querhoent. It is a Continental variety that is very beautiful, and one that grows well, though it might not find favour with exhibitors. Crimson Rambler and other climbing roses have been pressed into service for the adornment of pillars and arches, so that most sections of roses are represented. Some of the finest views in the garden are obtained from the rose beds, where the eye is carried out over the park and the valley to Shirehampton and the distant eminence where Blaize Castle stands. The fine old trees that surround her stately and historic home appeal most perhaps to Mrs. St. Vincent Ames, but if one wishes to draw out her gardener then one needs only to talk about fruits and fruit culture to discover where his affections chiefly lie. In all that relates to pomology and fruit culture Mr. Bannister is a master. With his own hand he planted practically every fruit tree in the garden, and he has seen them grow to a large size. He has a weakness for grafting and regrafting trees, especially pears, and, with a chuckle, he tells how he manages always to secure a crop, no matter what the season. Some trees carry from three to five varieties. and if frosts spoil the prospects of one or even two varieties, the third rarely fails, and in some kind seasons all the varieties will bear well. Here is an old General Todleben, grafted with Fondante de Thirriott, Princess, and Doyenne du Comice, and it is never a complete failure. In another case a Gansel's Bergamott is also partly Doyenne du Comice, and partly Beurre Bosc.

Outside the area absolutely necessary for the crops of vegetables, and those are finely grown, the enclosed kitchen and fruit garden has not a bit of space without its fruit tree, young or old. With apples as with pears, Mr. Bannister is quite au fait, and he tells with pride of his dozen fruits of Peasgood's Nonsuch that scaled 15lb. 13oz.; of six that weighed 8lb. 14oz.; of a pair that weighed 3lb. 7½oz., and of the one finest example of them all that was no less than 1lb. 12oz. in weight. You point to an immense old fig-tree that covers a large wall space, and extends over the gateway, and Mr. Bannister is reminded that it was once in a small pot and raised by himself. In the vineries the character of the man is also seen, for his experiments in grafting or its sister method of inarching is not excluded from the glasshouses. Mr. Bannister grew good grapes two generations ago, and grows good grapes still. He has a vine of a rich black muscat-flavoured variety named Venn's Seedling, that I do not remember to have seen in any of my previous travels.

Over the details of stove and greenhouse plants the pen must skip, stopping only to tell of a wonderful Ipomæa Horsfalli that completely covers the wall of one large warm house and flowers so profusely each year that Mr. Bannister is puzzled to find a reason why this beautiful climber is so seldom grown. One more example of this rare old gardener's skill and ingenuity is found in the mushroom house. Mr. Bannister crops both sides, top and bottom, of his beds! A stout angle iron framework is made to carry sheets of very stout open wirework, and on these sound old turfy loam is placed, and then a layer of prepared mushroom bed manure. Then the spawn is inserted, about three inches from the wire bottom, and more prepared manure is filled in firmly till the desired height is reached, when in due course the surface is spawned and cased over. In this way a crop of mushrooms is secured from both sides of the bed, and there is room for another flat bed on the ground below.

A very ingenious man is our friend, and a painstaking one also. Some years ago he thought schizanthuses might be improved and so he set about improving them, with the result that he raised the extremely floriferous and beautiful race that Messrs. Garaway and Co., of Bristol, distribute under the name of Garaway's hybrids. To the originator is left the task of keeping this fine strain up to the high-water mark of perfection, and one hopes he may be spared many years yet to produce other good flowers and graft many more pear trees.

THE FLOWER GARDEN AT COTE HOUSE, BRISTOL.

Down House.

An attractive building, clothed with ampelopsis, and facing across Durdham Down, is Down House, the residence of Howell Davies, Esq., M.P., a gentleman well-known in Bristol for his support of philantropic institutions. From behind the house the gardens slope rapidly towards the boundary wall, and this has necessitated the construction of a very high retaining wall to provide an elevated terrace along the garden front. The conservatory attached to the house is on this terrace, and from it, and indeed from all along the terrace, fine views are obtained over Shirehampton and Westbury-on-Trym.

The grounds of Down House are well wooded, and the elms are especially fine. A big oak, a towering Wellingtonia, a fine araucaria, and a splendid copper beech are also deserving of special mention. Roses are a prominent feature of the well-kept gardens, especially the rambling varieties that are extensively used to form arches, screens, and arbours, and right well they succeed. The high terrace wall, like the house itself, is entirely draped with climbing plants. Gloire de Dijon and other strong roses cluster around the terrace steps, while on the wider stretches of wall the broad-leaved Dutchman's Pipe (Aristolochia sipho), and blue ceanothuses spread themselves comfortably.

Bedding-out is not an extensive business at Down House, but there are summer flowers in plenty nevertheless. The borders contain a selection of flowering trees and shrubs, roses abound, and there is a long and well-kept herbaceous border along the front of the range of neat glass-houses. The latter are at the lower part of the garden, and it may be said here that the Down House gardens are not large, but every inch of space is cared for, and the most is made of it. Considering its size Down House has a rather large glass department, and a well-kept one, and Mr. J. T. Curtis is well known in the district for his skill as a plantsman and as a grape grower, and the potting-shed is ceiled and lined with a host of cards that prove his prowess on the exhibition table.

Orchids receive a fair share of attention though special houses are not devoted to them. The deciduous dendrobiums well grown in a plant stove, rested in a vinery and flowered in a warm conservatory. Cattleyas, Cymbidium aloifolium, C. Lowianum, and calanthes are other orchids that are most creditably managed, while cypripediums and cœlogynes are grown on a smaller scale. In the plant houses there is no waste space, and Mr. Curtis has shelves over every pathway and against every back wall, and so, by much contrivance, he manages to produce such an abundance of good plants as would astonish most people. Crotons, caladiums, palms, pandanuses, aralias, and other bold foliage plants abound. Allamandas on the stove roof produce hundreds of splendid golden flowers, and Gloriosa superba trained on balloon and also on umbrella-shaped trellises, are a very fine feature.

Mr. Curtis does not forget the merits of homelier plants, and so one finds brave batches of summer and winter-flowering zonal perlargoniums, Francoa ramosa, campanulas, Streptosolen Jamesoni, coleuses, winter-flowering carnations, tuberous and fibrous-rooted begonias, and other very useful subjects necessary where there are frequent calls for decorative groups.

THE GARDENER'S HOUSE, COTE HOUSE, BRISTOL.

In fruit culture as well as in plant and flower culture Mr. Curtis excels. The peaches on the outside walls are evidence of his care and skill, but it was very easy to see that his greatest love is for the vines. Muscat of Alexandria is splendidly grown, and bunches of good size and fine finish are always produced. Black Hamburgh naturally occupies considerable room, while Alicante, Buckland Sweetwater, and Lady Downes are other grapes for which the Down House gardens have a high reputation. There are both inside and outside borders.

Of the kitchen garden there is not room to write, nor of the collections of cactus dahlias and sweet peas, nor of the chrysanthemums arranged along the lower path. The whole place is wonderfully neat and compact, and testifies at once to the delight Mr. Davies takes in it, and the skill Mr. Curtis brings to bear upon his work. In conclusion, it is of interest to notice that a small fountain basin, surrounded by rock and water plants and once filled with goldfish, was the scene of a tragedy. The goldfish abounded, but last season the wind blew the pollen from the neighbouring yew trees on to the water, quite covering the surface. The goldfish all died, and the only probable reason for their sudden demise is that the yew pollen poisoned them.

The Priory.

Many years ago I was told of some wonderful pelargoniums that were to be seen at a garden in the vicinity of Bristol, growing against a long wall in a conservatory. I heard the story some twenty years ago from one who had been employed at Ashton Court, but who was himself only a purveyor of news, for he had not seen the plants. It was, therefore, with no small surprise I found myself admiring these old pelargoniums at The Priory, Westbury-on-Trym, as I entered the garden without the slightest idea that the foundation for that old bothy tale would be revealed.

The Priory has, probably, many associations with the early Saxon days when Westbury was the seat of a monastery. Even in much later times there was a clerical college here, but it was destroyed by the Royalists during the wars of the Commonwealth, to prevent its falling into the hands of the Roundheads. It is said that Wycliff and John de Trevisa were members of this college, and consequently Westbury must have been intimately associated with the work of the Early Reformation.

Devonhurst, Chiswick, once the residence of the Watts family, had gardens that extended along behind those of the Royal Horticultural Society, and these were very well kept. It is not surprising, therefore, to find that Edgar Watts, Esq., a member of the Devonhurst family, and who now resides at The Priory, is fond of and interested in his garden. Mr. Woodward, his gardener, is a strong believer in the value of horticultural mutual improvement societies, and, as assistant-secretary to the vigorous Bristol society, he works hard to increase their benefits to the younger members of the profession.

The Priory possesses a fine conservatory, with ample room for beds of permanent plants, and staging for seasonable flowers. Bougainvillea Sanderiana and Plumbago capensis provide wreaths and massed clusters of mauve or blue flowers up the pillars and along the roof. Tall fuchsias furnish the smaller pillars, and a big Datura suaveolens is the centrepiece. Specimen davallias and nephrolepis serve to add grace to the flowering plants, and large masses of Hedychium Gardnerianum and H. coronarium, yield fragrance as well as beauty.

But the corridor that connects the conservatory and house is the great attraction. The back wall is 76ft. long and 18ft. high, and every bit of it, from base to summit, from end to end is covered with zonal pelargoniums. Some of the plants are quite ancient, certainly sixty years old. Older readers will be interested to know the varieties here represented; they are: Stella, Tom Thumb, Countess of Buckingham, Lord Wolsey, Queen of the Belgians, Rev. W. Atkinson, Etoile de Lyon, Hyacinth, Lady Sheffield, Lucy Lemoine, Madame Berard, Gullian Mangilla, Agnes, Cassiope, Phyllis, and Duke of York.

There is a floral display in this corridor all the year round, but the glory of the many thousands of trusses of brilliant flowers is at its height during May and June. Regular attention is paid to the removal of old unnecessary growths and the training and tying in of new ones, and each spring the border is given a good top-dressing of chopped turf, to which is added a liberal supply of soot and bone meal. Certainly this pelargonium wall is a striking and unique feature.

With a few exceptions the houses are near the mansion, and they are devoted to carnations, ferns, cyclamens, primulas, begonias, and other flowering and foliage plants that are in demand. Beyond the conservatory and screened from it by a belt of fine deciduous and evergreen oaks is a rose garden, with a central lily pond around which a rockery is now built. Fine trees abound on every hand and include some famous old mulberries and graceful larches. Evergreen oaks skirt the drive, but the carriage way is chiefly notable for its Wellingtonias and Cedrus atlantica. In the front spaces, between the big trees along the drive, Mr. Woodward plants colonies of cactus dahlias, and these produce an unusually good effect in such positions. Behind the drive, and extending in terraces to the house, are broad new lawns for tennis, croquet, etc.

The Priory has an old walled-in kitchen garden, but practically all the fruit trees are new ones, indeed, the whole garden has been deeply trenched and entirely renovated in recent years. James Grieve and Early Transparent are among the apples that Mr. Woodward has planted freely. Pentstemons, sweet williams, violets, and mignonette grow amazingly well in this garden, and I measured flowers of Princess of Wales violet as big as a five-shilling piece. The vineries are very old, but they crop heavily and well. One Black Hamburgh vine, filling a large house, is about sixty years old, and shows no signs of failing. Muscat of Alexandria is well managed, and the old vines give fine bunches in quantity.

Large supplies of tomatoes and cucumbers have to be provided, and Mr. Woodward has come to the conclusion that Carter's Sunrise tomato, and Sutton's Every Day cucumber, are respectively the best varieties for long and regular crops. Both are seen at their best at the Priory. Chrysanthemums are grown largely for the big conservatory and the front of the corridor, and the great rows of sweet peas, consisting of twenty-six varieties, are ample evidence of the popularity of these lovely annuals with the members of Mr. Watts's family.

Old Sneed Park.

To the left of Stoke Bishop, as one crosses Durdham Down from Clifton or Bristol, and on the far side of the slope, lies Old Sneed, a very pretty residential district, where all the houses are finely built, and where the gardens are mostly of considerable extent. In the centre of this district is Old Sneed Park, with its mansion, the home of F. Tagart, Esq., set on a prominent eminence on the far side of the valley. The house and gardens are a long way from the entrance gates, close by which is Mr. Binfield's house. Mr. Binfield has for many years been head gardener here, and one soon discovers he has more than an ordinary affection for his charge.

The drive skirts the fields and meadows as it gently dips at first, and then steadily rises to the house and gardens. In the middle distance the farmstead nestles comfortably in the shelter of rising ground and a group of elm trees. The stacks of hay, the farm buildings, and the cattle in the fields make up a picture that many an artist might desire to place on canvas, and it is the more remarkable because it is all so near to a great and busy city. Presently the fields merge into lawns, with groups of shrubs and numbers of splendid old lime and elm trees, and then sweeps round to the front of the house, where, on the lawns, and almost in the centre of the broad carriage way are large flower beds.

GROUP OF ORCHIDS AT DOWN HOUSE, BRISTOL.

One very large bed occupies a prominent position in this central lawn in front of the house. Large numbers of plants are required to fill it and its central vase, and each year the scheme is as distinct as possible from its predecessors. Our view of this big bed shows a modified carpet bedding arrangement that was particularly popular a year or two ago. Echeverias, sedums, cotyledons, agaves, aloes, ricinus, mesembryanthemums, dwarf begonias, dracænas, Cineraria maritima, and small palms may all be seen in the illustration, and the manner of their association is so obvious that no description is necessary. Last season taller plants, such as cannas, abutilons, fuchsias, etc., were associated with tuberous begonias, so that a quite different but not less attractive design and arrangement were presented. Mr. Tagart takes a great interest in his garden and farm, and each year the filling of the big bed is a subject that comes up for discussion; indeed, the whole family regards this feature of the garden with especial pride, and there is great sorrow if an untoward season prevents the full development of the scheme decided upon.

The garden front of the house is very attractive, with its draping of ampelopsis, ceanothuses, euonymuses, ivy, and cratægus. In the borders next the house a profusion of bright flowers is provided all through the season. A small conservatory is attached to the house, but it serves rather as an extra and pleasant sitting-room than a place in which to set up a brilliant display of flowers. The conservatory proper is a large structure a few yards away, and one end of it is seen in the accompanying view of the mansion. Between the conservatories a central fountain is surrounded by narrow beds of dwarf flowering plants. Annuals are freely used, and the variously coloured Tom Thumb tropæolums are effectively planted here.

Fine ferns, notably some cyatheas, dicksonias, nephrolepis, and davallias are prominent in the conservatory, where, at the time of my visit big groups of finely-grown specimen campanulas, marguerites, pelargoniums, Trachelium cœruleum, and smaller kalanchoes, etc., afforded, with tuberous begonias, a brilliant spectacle. Mr. Binfield is a successful local exhibitor, and this big house and also a large neighbouring stove permit the cultivation of large plants that are of material service in large decorations, and add largely to the effect of a flower show.

A broad lawn practically fills the terrace along the garden front, but roses and other climbers cluster over the boundary wall. Many folks would want to cut up this lawn into numbers of flower beds, and thus spoil its beauty. Flowers there are in abundance in the lower terraces and walks, and every turn provides a new and pleasing surprise. Two giant Cupressus macrocarpa have long formed a dense living gateway to the lower grounds. They remind one of pictures of the gateways pierced in the great walls of Chinese cities. Probably thirty feet high and ten feet thick, they are kept closely clipped, and thus form a very interesting feature.

Hardy herbaceous plants find a very congenial home at Old Sneed Park, and I was particularly interested in the free use Mr.

Binfield has made of what may be described as the bulbous section of summer and autumn flowerers, a section that, to my mind, has by no means yet received the attention it merits at the hands of gardeners generally. The several classes do, perhaps, call for a little more attention than the great family of composite flowers, and are rather more expensive in the first instance, but the additional care and expense are trifling, and the results obtained are ample compensation. It is of gladioli, montbretias, irises, Galtonia candicans, the stately and beautiful liliums, hemerocallis, and tritomas that one thinks in this connection. The well-drained sunny gardens—almost hanging gardens, at Old Sneed are admirably supplied with all these in the long, straight borders that are sheltered in good old-fashioned style, by dense hedges of yew and box.

The fruit and plant houses, the kitchen garden and frame ground are all situated along a broad ridge opposite the mansion, and this ridge is extended through a semi-wild garden to a point overlooking the Avon, where a rustic shelter and seat command a fine view of the rocks and water. From a gardener's point of view, the irregular shape of the gardens and their position on sharply sloping ground, are not idealistic for working. They are strikingly picturesque and novel and well kept, but no great knowledge of horticultural matters is needed to discover that the attractiveness of Old Sneed is only maintained at the expense of a vast amount of hard work and continual care. Mr. Tagart provides the sinews of war, and Mr. Binfield the skill and care; each adds that loving interest without which no garden has marked character and real beauty.

Chas. H. Curtis.

THE PRIORY, BRISTOL.

FLOWERING TREES AND SHRUBS AT KEW.

With the extraordinary weather that prevailed during the latter part of April many of our hardy trees and shrubs usually at that time in flower were kept back, but with the more genial weather of May they came on rapidly.

As the same influence brought out the May flowering kinds, a visit during the middle of the month was especially interesting, and one was completely staggered with the wealth of blossom among the flowering trees and shrubs.

A list of the different subjects would be far too lengthy for the pages of the Gardeners' Magazine, hence these remarks will be more of a general than an individual character. The various members of the natural order Rosaceæ were, of course, very strongly in evidence, especially in the case of the apple, cherry, and plum families.

Apples and Cherries.

Of the apples the Chinese Pyrus spectabilis was particularly noted, with its dense rounded head completely clothed with blossoms, coral red in the bud state, but paler after expansion; Pyrus baccata (the Siberian crab), equally floriferous, but with white blossoms; Pyrus floribunda, a general favourite, often met with in gardens as Malus floribunda. Of this there is a deep coloured variety—atrosanguinea, some specimens of which were at Kew a glorious sight, their spreading yet slender branches being laden with rich-tinted blossoms. The Caucasian Pyrus Niedzwetzkyana is quite as striking as its name. It has stout, rather wide-spreading branches, while the apple-like flowers are large and of a distinct shade of red. The leaves, to be developed later on, have also a reddish hue. This species is at present very little known, but it merits increased cultivation, being in every way so striking and distinct.

The Japanese Pyrus or Cydonia japonica and its near relative Pyrus Maulei, are as bush plants represented by several varieties, and the collection thereof is particularly interesting and beautiful.

The cherries are also strongly in evidence, though in many seasons they would be nearly, if not quite, over by this time. The Japanese Prunus pseudo-cerasus, of which the variety J. H. Veitch is one of the most striking, contrasts markedly with the quaint, wide-spreading Prunus serrulata from China. Besides these there are the numerous forms of the Gean (Prunus avium); some of them have very large double flowers. Quite distinct therefrom is Prunus Mahaleb, a light, graceful tree, with semi-pendulous branches absolutely laden with clusters of pure white flowers, which individually are but little, if any, larger than those of the hawthorn. That pretty little prunus which is so much used for forcing, viz., P. japonica flore plena, is for trade purposes usually grafted on to the sloe, the suckers from which are always a nuisance. At Kew there is near the fern houses a bed of dwarf plants on their own roots, under which conditions this double-flowered kind is seen at its very best. Close by is a bed of Amelanchier canadensis oblongifolia, the plants from four to five feet high were quite a mass of white, and springing from a carpet of Grape hyacinths, were seen at their very best.

Other rosaceous plants for which a word must be spared are Kerria japonica in its several forms, and Spiræa arguta, which is certainly entitled to a foremost place, if not absolutely first place, among the shrubby spiræas. It grows from four to six feet in height, and forms a dense bush, whose slender gracefully arching shoots are studded along their upper surface for some distance with little clusters of white blossoms, whose purity is enhanced by contrast with the blackish colour of the bark.

THE PELARGONIUM CORRIDOR, THE PRIORY, BRISTOL.

Azaleas, Heaths, Rhododendrons.

Next to the rose family in point of numbers comes the ericaceæ, of which there is an attractive and interesting series arranged in beds at the back of the Palm House, where the moist sub-soil is very favourable to ericaceous plants in general. Each kind fills a bed or two, so that they can be well studied from a decorative standpoint. The best at the time of my visit were Kalmia glauca, Rhododendron (azalea) amœnum, Rhododendron racemosum, which charming little species varies considerably in habit and in colour of the blossoms, and Rhododendron compactum multiflorum, a dwarf growing garden variety whose light flowers are marked with red. Besides these the beds of Erica Veitchi were nearly over, though they had been very beautiful, and the hybrid Rhododendrons (azaleas) of the mollis class had but few flowers expanded.

In the rhododendron dell large masses of such early varieties as Broughtoni, Russellianum, Auguste Van Geert, and Smithi coccineum lent colour to the scene, lighter tints being represented by such kinds as caucasicum, pictum and macranthum. A bush of the variety Ascot Brilliant, raised many years ago by Mr. Standish at Ascot, was remarkable for the rich blood red of its flowers, a feature inherited from one of its parents—the Himalayan R. Thomsoni.

Near King William's Temple many of the smaller kinds are gathered together, and flowering plants were numerous. Among others especial mention may be made of R. anthopogon, a little straw-coloured species from the Alpine Himalayas, R. Smirnowi, with lilac flowers and leaves curiously felted on the undersides, R. compactum multiflorum, a garden form, with light coloured blossoms, R. glaucum, with rosy-purple thimble-shaped flowers, a native of the Himalayas, R. rhombicum, whose purple flowers somewhat suggest those of the North American Rhododendron rhodora, which used to be known as Rhodora canadensis.

The early-flowering heaths, such as Erica carnea and E. mediterranea were over, or at all events past their best, but in some parts of the gardens the other varieties of the Mediterranean heath were quite a mass of colour. The larger growing E. arborea and E. australis were also still fresh and pretty.

Brooms and Berberis.

The leguminosæ form an extensive class, and one member at least may be described as really gorgeous. This is the furze, whin, or gorse, which, represented chiefly by its double variety, forms during the spring dense masses of gold. Its merits are too often overlooked, as among its other desirable qualities is that it will thrive in poor hungry soils. The brooms were at the time of my visit more backward than usual, still, the sulphur-tinted Cytisus præcox was in full flower, as also was C. biflorus, whose yellow blossoms make their appearance simultaneously with the unfolding leaves. A notable feature of a large bed of the common broom (Cytisus scoparius) was the variation in the time of flowering, as some individuals were in full bloom, while others close by were only in the bud state. The variety Andreanus had only one or two flowers expanded, a remark which also applies to the white Portuguese broom (Cytisus albus).

Two delightful little hybrid brooms, both of which originated at Kew, made a goodly show. They are C. kewensis, whose habit and general appearance was well shown in the Gardeners' Magazine of May 9, page 355. The second, C. Beani, a hybrid between C. Ardioni and C. biflorus, is a more recent and up to the present, scarcer plant. This is also of low growth, but not quite so spreading as C. kewensis, and when at its best forms a dense mass of rich golden yellow blossoms. Another of the pea family—the Judas Tree, Cercis siliquastrum, when in full flower presents at a little distance the appearance of a purplish cloud.

Miscellaneous.

Of the barberries those two well-known evergreen species, viz., B. stenophylla and B. Darwini were at their best. Concerning the last-named one cannot fail to be struck with the difference in the colour of the flowers, indeed, it is so noticeable as to suggest whether by a process of continual selection it might be possible to obtain a scarlet form of Darwin's barberry.

The flowering currants (Ribes) were in some instances over, but the two deep-coloured kinds—atrosanguineum and atrorubens were still in good bloom, as also was that variety of the golden currant known as aurantiacum minus. It is decidedly unusual to have the early flowering deciduous magnolias in bloom so late in the season, but at Kew many of them, even the little M. stellata, were in good condition.

The Californian Ceanothus rigidus, on the wall of the herbaceous ground, was simply a mass of lavender blue flowers, thus rendering it especially noticeable among the whites, yellows, and pinks which go to make up the bulk of flowering shrubs at this season.

Lastly, the comparatively new Viburnum Carlesi, which was given an award of merit by the Royal Horticultural Society on April 14, last, and was figured in the Gardeners' Magazine of April 25, was in full flower in the heath beds near the Pagoda, and it certainly promises to be a valuable addition to flowering shrubs. K.

Sweet Peas.—Another sowing of these may yet be made, and if sown in rows, on light, hot soil, it will be best to prepare shallow trenches, working in a good dressing of well-decayed manure. Should the weather in summer become very hot a mulching can then be given very easily. If sown in clumps in borders, make the ground surface saucer-shaped for the same purpose. Continue to stake or support all earlier-sown ones as they need it, and protect from enemies. Pheasants and wood pigeons are both very destructive here unless protection is given, and as it is impossible to net everything, we find it helpful to lay pea sticks thickly all over the ground, afterwards using them for supports.—E. F. H.

CATTLEYA BOWRINGIANA.

As this is the best season of the year for repotting or dividing Cattleya Bowringiana a few notes may be of interest relating to this superb autumn-flowering orchid.

It is a native of British Honduras, in Central America, where it was found growing on cliffs by water-falls, probably in 1884, but it is not in the 1885 edition of "Williams' Orchid Growers' Manual." We first had it from Mr. William Bull in 1889, and soon found it was a species deserving a rather large place in our collection. In "Sanders' Orchid Guide" it is described as growing from 9in. to 18in. high and being from 5 to 15 flowered. Several of our plants are 2ft. 9in. high, and exceedingly vigorous. One traveller in the orchid business says he only knows one garden where the plants are as vigorous as ours, and another says ours are the largest he sees in his travels. It is no boast to say we can easily beat any seen in establishments I visit.

A few details of culture may well be given. We grow our plants in a house mainly devoted to Lælia and Cattleya hybrids, C. Bowringiana being placed at the warmest end of the house. We use both pots and pans for their culture, but as they are only shallow rooting pans are quite deep enough for the purpose. Our pans are 18in. in diameter, and the pots are 12 and 14in. size. The pots we fill three parts full of potsherds, and pot the plants in a mixture of chopped sphagnum moss and good peat, well pulled to pieces and with the fine part shaken out; with this we incorporate pieces of brick and charcoal, broken small. The potting should be finished off so that the plants are well above the rim of the pot or pan. The plants should be divided every two years or potted into larger pots or pans.

C. Bowringiana requires plenty of water during the growing season, May, June, July, August, and September. When they flower in October water must be more sparingly applied, and it is better to move the plants to a drier atmosphere as the flowers are apt to become spotted if damp, and lose their beauty. After flowering the plants should have less water, but never be allowed to become dry at the roots or the bulbs will lose their plumpness, which is detrimental to the health of this orchid.

They are subject to the usual insect enemies, scale, yellow thrip, etc., which must all be dealt with in the earliest stages of the attack, the scale by cleaning it carefully off, and yellow thrip by fumigation. We do not practise syringing the plants, but on very hot days in the afternoon we sometimes spray them over with tepid water, using a Muriatori sprayer for the purpose. W. M.

Cheshire.

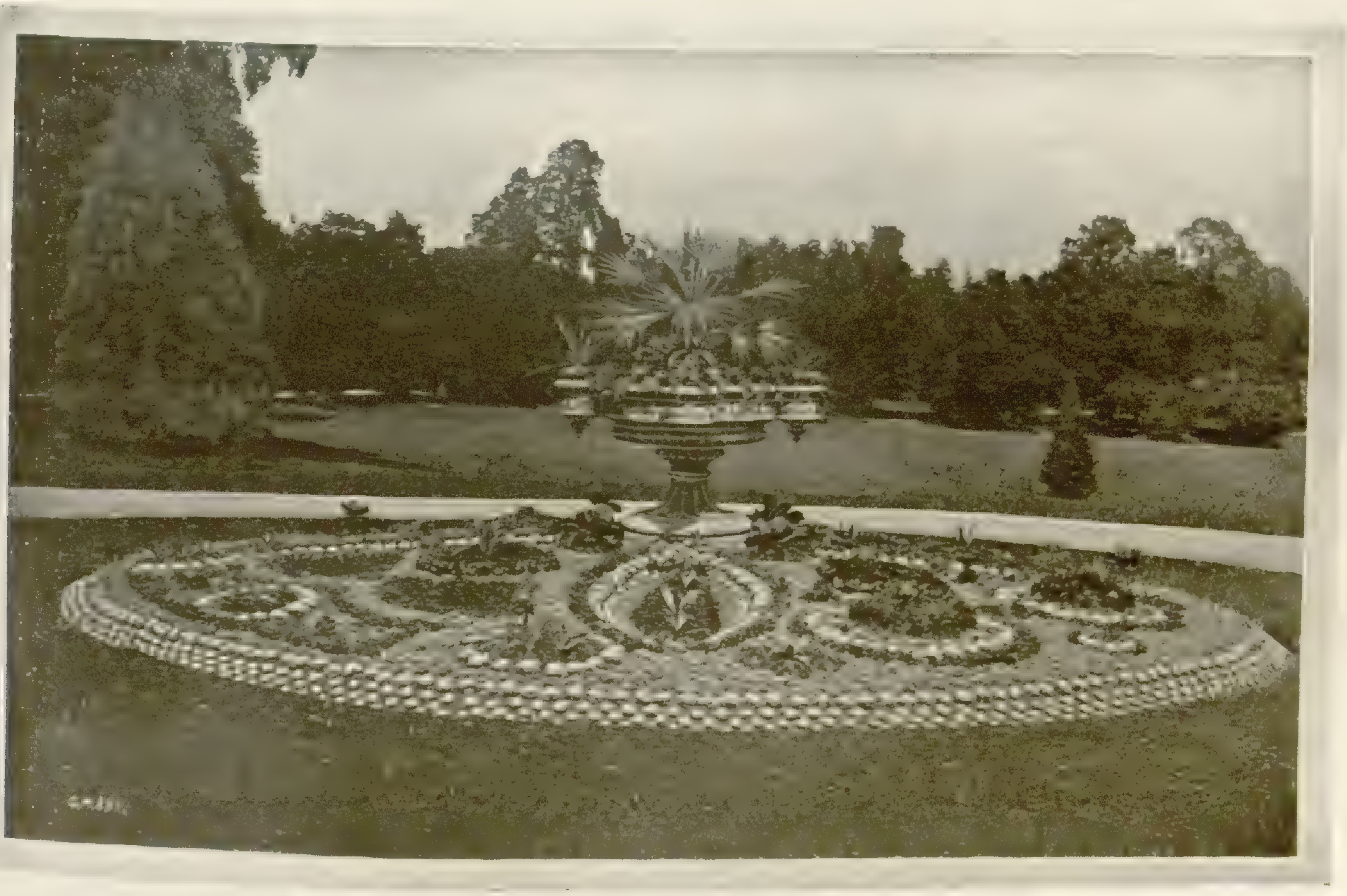
POPULAR CACTUS DAHLIAS.

It is always a difficult matter to make a selection of dahlias from catalogue descriptions, for when the plants are to be sent out, we have the elaborate description of the raiser, followed by the general trade description in abbreviated form, until they convey little idea of the value of colours. Again, many would-be dahlia growers select the names of their varieties at an exhibition. From an exhibitor's point of view, this is doubtless correct, but where the plants are required for decoration in the garden one ought to see the plants growing, for there is nothing more disappointing than a huge plant that to all appearances is simply a mass of greenery, and that does not make a decorative display. It will be a good thing when dahlia growers publish a list of the varieties that exhibit their flowers well above the foliage. Trials in this respect have been carried out by the Royal Horticultural Society at Wisley, but I do not think they have satisfied the dahlia community. The conditions imposed on the plants have been such that many of our best garden varieties have failed to give a good account of themselves. I believe an alteration is to be made this season. It is all very well to put out a plant in the garden and let it take care of itself, some, no doubt do very well under such circumstances, but the majority do not. In making a selection for exhibition or garden purposes, one has to bear in mind the object they are required for, and select accordingly, and where the grower has no knowledge of the matter it is advisable to leave it in the hands of a reliable grower, who has a reputation to maintain.

It is, however, not an easy matter to make a limited selection, because it is largely a matter of opinion and taste; but should any reader wish to bring their collection up to date or to start on a fair level, I would suggest the following varieties, which are culled from those introduced in 1907, and which can be obtained from twelve to eighteen shillings per dozen: Australian, rich purple; Caradoc, yellow, with extra strong erect stems; Flag of Truce, white; Crespy, pale heliotrope; Clincher, heliotrope, with a white centre; Daisy Staples, a bright mauve-pink; Eureka, purple, a variety that will grace the exhibition boards; Imperial, reddish carmine; Kathleen Bryant, rich crimson; Rev. A. H. Hall, ruby-crimson; Ruby Grinstead, rich pink, shaded fawn; and Whirlwind, a shining crimson.

Garden Varieties.

It is, perhaps, not generally realised that dahlias are something on a par with varieties of fruit or even of potatoes, all do not succeed equally well on all soils. A variety may do splendidly in one district, while in another it may prove unsatisfactory. Again, it is also necessary to change one's stock occasionally, but I shall deal with this matter on another occasion. The following varieties are thoroughly reliable for garden purposes, none of them are too tall, and they all flower freely, with flowers standing clear of the foliage: A. D. Stoop, rich crimson; West Hall, scarlet; Lustre, vermilion; Primrose, primrose; Mrs. F. Grinstead, rich crimson, tinged purple; Florence M. Stredwick, white; Amos Perry, rich red; Dainty, pale yellow, shaded pink; Pearl, rose-pink; Thomas Wilson, reddish fawn; Butterfly, crimson, with white tips; and Alexander, deep crimson. J. B. Riding.



LARGE FORMAL FLOWER BED AT OLD SNEED PARK, BRISTOL.

AMONG THE DAFFODILS AND TULIPS.

The present season has not been a kind one to daffodils and early tulips. The flowers were so long in the bud state that when a little sunshine opened them they were short lived. However, any little disappointment experienced this season is due to the weather vagaries, and not to the flowers themselves. Next spring, perchance, will be kindlier, and then we shall admire the individual blooms as keenly as we this season have admired the great breadths of flowers in garden and woodland, park and nursery.

Wisbech Floral Farms.

Messrs. R. H. Bath, Lim., Wisbech, have a very large tract of fen land under cultivation at Wisbech, and here they cultivate fruit, daffodils, tulips, pansies, and violas, carnations, tomatoes, hardy herbaceous plants, and sweet peas in surprisingly large quantities. On the occasion of a recent visit we inspected eighty acres of daffodils and eleven acres of tulips, and the display was a marvellously beautiful one, and also a delightfully fragrant one. Wooden screens serve to afford slight shelter for the choicer and costlier daffodils and tulips, but the great bulk of the tulips, and the trumpet and other bold daffodils is right out in the open. The poeticus group of daffodils and the elegant Leedsi varieties are largely grown in long beds between rows of apple and currant, or plum and currant trees, and here they are very effective, and the trees afford that little shade they love so well. Altogether there are a dozen acres of Poet's daffodils at Wisbech, and the great tracts of snowy blossoms ready for market provide a picture not easily forgotten.

Daffodils.

The selection of Poet's narcissi at Wisbech is good, and great faith is shown in Laureate, a comparatively new seedling that is very strong, has large white blooms, and a richly-hued cup. For garden or for market it is a fine daffodil. All the large plots of daffodils at Wisbech are planted after the plough, by women; the share is set at one and a half times the average depth of the bulbs to be planted. The chits, or small bulblets, of many commoner varieties remain in the ground for three years, and in the third year they yield an enormous crop of flowers and give fine bulbs. But in most cases the flowering-sized bulbs are lifted annually, as they are shapelier when thus treated. Standard varieties grown in quantity are lifted with a plough.

We need not stay to discuss the merits of Emperor, Empress, Horsfieldi, Grandee, and Sir Watkin more than to say that in the second year of planting a quarter acre of this latter variety will yield 1,050 dozen of fine flowers. Such splendid sorts as these should be planted by the thousands. For the woodland and for grass the sulphur-coloured W. P. Milner and the white, pendulous William Goldring are first rate. All the Poet varieties are similarly suitable. Autocrat is a fine incomparabilis, cheap enough to plant extensively; and the Hon. Mrs. Barton, whitest of Leedsi varieties, is another beautiful and cheap variety. Duchess of Westminster is one of the best of the Leedsi group, with white segments and light canary yellow cup; Gem is smaller but of rounded form, and one that has been rather overlooked. Queen Sophia remains a little expensive yet, but it is a lovely incomparabilis daffodil, with a frilled orange-scarlet cup of great beauty. Princess May is an orange cupped variety of this group, and one that may be grown largely at a sma'' utlay.

Turning to the trumpet varieties, we were attracted by the wonderful freedom of that very beautiful cream and white variety Mdme. de Graaff; this is fine for pots or beds, and no collection is complete without it, but for extensive planting most of us must wait for it another year or two. Mdme. Plemp, with its long golden trumpet and white perianth, is deserving of wider culture. Duke of Bedford, of fine form and soft colour, is one of the newer varieties. Victoria, despite its beautiful form, and its value for forcing, is not a good bed or border variety. Weardale Perfection, one of the largest of trumpet daffodils, is, like the even more beautiful King Alfred, a flower for the fancier. Those who want a very big trumpet daffodil at moderate price should consider Glory of Leiden, but it lacks the refinement of some other varieties. Mdme. Plemp, Golden Spur, Emperor, Empress, Maximus, Horsfieldi, Grandee, and J. B. M. Camm, are all splendid varieties for general cultivation, and they are grown in many thousands at Wisbech.

Delightful daffodils belonging to other sections are Gloria Mundi, a grand incomparabilis; White Lady, an exquisite Leedsi; Maggie May, a rare and beautiful Leedsi; Beatrice, a charming and cheap Leedsi; and Fusilier, with vivid red cup.

Tulips.

More gorgeous than the daffodils were the tulips, and, looking across the acres of brilliant blooms, broken up into great patches of varied colours, one could but wonder why tulips are not cultivated a dozen times more freely than they are. There are early tulips and late tulips, single tulips and double tulips, self-coloured and fancy tulips, dainty little species and extraordinary Parrot varieties; indeed, tulips in such variety of form and size and colouring that surely there are enough to please everyone. Among bright colours there are such splendid varieties as Keizerskroon, Vermilion Brilliant, Scarlet Pottebekker, Prince of Austria, Tom Moore, and Duchess de Parme. The yellow varieties are especially beautiful, and King of the Yellows is fine for forcing, as well as other purposes; Prince de Ligny is a grand yellow variety of fine form and substance; Mon. Tresor is a popular golden yellow, and Yellow Prince with variegated foliage, is very interesting and attractive. Queen Emma, deep red, and Moucheron, deep red scarlet, are two varieties worthy of attention. Rose Gris de Lin is very free, large, and of a deep salmon-rose hue, a splendid tulip. Proserpine is a beautiful pink tulip, and Brunhilde as a white, with a little touch of greenish-yellow on the outside base, is one of the finest and boldest of varieties. White Hawk is good and of great value for forcing; and Artus, as a scarlet variety for large beds or borders, is hard to beat at a modest price. Cottage Maid, with its pink flushes over white, and Queen Wilhelmina, deep rose-pink are a beautiful pair. La Reve, salmon-pink over buff, is a very distinct and handsome tulip that is certain to become very popular. Cottage Boy, an orange-yellow and red counterpart of and sport from Cottage Maid, is also a commendable variety.

That double tulips are growing in popularity was evidenced by the large breadths of them at Wisbech. A selection of the best would include La Candeur, white; Vuurbaak, scarlet; Rex Rubrorum, crimson-scarlet; Queen Emma, cerise; Murillo, pink; Couronne d'Or, yellow; Toreador, red and yellow; and Tournesol, red and orange.

The Messrs. Bath have entered heartily into the business of bulb cultivation, and have shown that the very finest tulip and daffodil bulbs can be grown in this country. The firm grows the bulbs it sells, and instead of being importers they are now frequently exporters, even to Holland.

Long Ditton.

In one sense Long Ditton, near Surbiton, may be regarded as the home of the daffodil, for here are the nurseries of Messrs. Barr and Sons, and it was Mr. Peter Barr who first made the horticultural world comprehend the beauties and usefulness of this family of spring flowers. Ever since Mr. Barr brought together existing varieties and commenced to introduce new ones, the firm has also done much work in improving the flowers by cross fertilisation. So long as daffodils are grown the name of Barr will be held in high esteem.

Daffodils.

This season, the daffodil season, so far as the big breadths of varieties are concerned, was a very short one at Long Ditton. small batches planted late in various tions enabled visitors to make compar and selections for future guidance and The newer varieties attracted our atten mostly. The brilliant broad-cupped Scarlet was very fine; it gives a bit of finest colour in the family. Cassandra Chaucer are both good Poet's narcissi. via, a strong-growing Leedsi form, is ch ing, but White Lady has even gre charms, and is a fine grower, with large flowers. Rosalind, a pretty white Bur with deep red eye, is a fine and useful daffodil; while Firebrand, in the same tion, is notable for its brilliant cup. Star, a grand flat-crowned daffodil, the progress made in this particular tion; the broad, frilled crown is ye orange, and orange-red—a striking com tion. Polestar, Egret, Gold Eye, and all belong to this latter section, and the named, with its flat yellow crown, is pretty.

Evelyn Hodge, a cross between N. monta and N. biflorus, has a round white with yellow eye; it is free, late, and new. Of different character is the Merry Maid, a very rich Barri form with vivid red rim to its yellow crown. Harvey, a beautiful Leedsi, and Bian refined flower of the same class, merit attention. The newer trumpet varieti clude the king of white trumpet daff Peter Barr; G. P. Haydon, a splendid va with palest yellow trumpet and white anth; Knight Errant, white with trumpet; Pharoah, creamy white, with yellow trumpet; C. H. Curtis, a flower with heavily frilled trumpet King Alfred, the grand golden trump dil; and Mrs. G. H. Barr, snowy white

Twin-flowered daffodils have always ested us, and we believe that for gard not for market purposes, varieties that two flowers of good size on one stem long be required in quantity. In these flowered varieties one flower always before the other, and consequently the ral display is prolonged; while if the cut as the first flower expands, the flower opens in due course in the room. The old N. biflorus is not to pised, but in The Twins, The Sis Cloth of Gold, St. Patrick, S. A. de A. Rawson, Miss White, Hyacinth, and others, the blooms are of good varied colours. The hybrids betw Tazetta and the larger-flowered daff sure to yield many fine garden pla the Messrs. Barr's seedlings conta promising forms.

The Ditton collection is rich in daffodils, and a few others besides ready referred to are Janet Image, the biggest and best; Elaine, silvery Diana, white and lemon-yellow; Mag white and citron; Heroine, snow w citron and orange crown; Silver M very white, very pretty; White Sta White Queen, the latter a large and white variety with citron-tipped

Tulips.

Passing to the tulips, we paid tion to the Darwin group, the which were just expanding beneath fluence of genial weather. Heliotr and violet shades are now very among ladies, and so we may such tulips as Gudin, silvery helio H. Ewbank, soft heliotrope, with a Electra, lilac-rose; Cordelia, deep silvery shading; Corydon, heliotr thy, heliotrope and white, and rosy violet, come within this class Of very high merit in this class Mr. Farncombe Sanders, rosy-sc garet, lovely blush; Sultan, very ish maroon; Mrs. Krelage, Hecla, crimson; Europe, Clara Butt, exquisitely beautiful Pride of Haarlem, very bold scarlet crimson; Glow, fine cherry red, salmon-rose. There are many merit, and as the season is a late is ample time for visitors to make selections, as Darwin and other May-flowering tulips are as remarkable for their lasting power as for their beauty and effectiveness.

The collection of cydonias, the fine polyanthuses, the splendid set of pumila and other dwarf irises, the saxifrages, and the beautiful aubrietias are a few other of the attractions at present to be found at Long Ditton.

ISOLATED GARDENERS.

Through the very nature of their calling it is the lot of many gardeners to live quiet—shall I say hum-drum?—lives, a long way from town or railway and far removed from any centre of excitement and activity. Compared with fellow craftsmen who reside within easy touch of the metropolis or some other big centre of population, these isolated gardeners have few opportunities of keeping in touch with the progress of horticulture, and it would not be surprising if they got quite out of date, as it were. To their credit, however, it may be said that, with here and there an exception, they do not; and, on the other hand, isolated gardeners, as a rule, are a well-informed class of men. We hear a good deal about gardeners of the present day being inferior to those who belonged to what we are pleased to call the old school, but it is all nonsense, and the typical isolated gardener is a proof of this.

He may be a little prejudiced in some things, but the narrow limits of his surroundings tend to make him so, and men must be judged by their opportunities. As a rule, the isolated gardener is superior in intelligence to the individuals with whom he is brought in daily contact, and for the want of congenial companions he lives his life very much to himself. Fortunately, he has the capacity for adapting himself to circumstances, and he has his books, his papers, and his work. Let us take the latter in rotation.

First there are books. Well, the isolated gardener stands at a disadvantage with his friend in a town suburb as regards books, but if the supply is limited he reads more diligently, and probably gets more real benefit from his reading. Then there are the papers. Perhaps the news is a day old when the isolated gardener gets it, but the newspaper is the connecting link between him and the outside world, and he devours the contents with an interest unknown to the man who just scans the chief items on his way to business in town. At the week-end the gardening papers arrive at the isolated establishment, and our friend is in clover, for this is the channel through which he is kept in touch with horticultural matters. Let it be remembered that the isolated gardener reads—yes, reads—his horticultural journal, and the news items are the first to be devoured. It is not the solid practical article on the cultivation of the potato that attracts our friend (though he will religiously read this and agree or differ with the writer, as the case may be), but it is the items of news, which tell how the horticultural world wags outside the narrow limits of the garden in which he labours.

The quiet country garden is far removed from the busy printing office and the editorial sanctum in London, and it is not the nature of the isolated gardener to dictate, but he hungers nevertheless for news, and when he tears the wrapper from his weekly gardening paper on a Saturday morning he does it with an expression that seems to say, "Ah, now I shall get to know how things are moving." Do not think that the isolated gardener is so wrapped up with his little world that he has no interest in outside matters, for such is far from being the case, and if he is not in the front ranks, he is a gardener, and one of the crowd, therefore his interests are in things horticultural. It is a godsend to our isolated friend when a neighbouring gardener drops in to have a look round, for the two can talk shop to their heart's content, and he welcomes even the nurseryman's traveller, though he may have no order to give him, for the latter has interesting little items of horticultural news to impart as together they walk round the place, and he feels that he is in the company of one of his own fraternity.

It would take more than books, papers, and friendly calls to reconcile many an isolated gardener to his hum-drum life, but fortunately for him he has another factor, i.e., his work. Here we have the secret of his contentment, and the reason why the monotony of his daily round does not weigh heavily upon him. Gardening is fascinating work, it is interesting, and though all gardeners are not happy, comfortable, and contented in their situations, it is not the work they complain about, and if this was all they had to contend with, there would be fewer changes than there are. In his planning, arranging, and organising, the isolated gardener finds occupation for his spare moments, and, as in the case of the village blacksmith of immortal fame, "each morning sees some task begun, each evening sees its close." The isolated gardener has his triumphs of cultural skill, and though, perhaps, the products of his labour never find their way to the Royal Horticultural Hall at Westminster, nor compete for prizes at provincial shows, they serve an equally great purpose in bringing personal satisfaction to the grower and pleasure to his employer.

Though through sheer force of circumstances his life is cast in quiet places, our friend is by no means a recluse, and on the occasions when he has a holiday he shows no inclination to get away from horticulture. On the other hand, you find him at the Temple Show, the Fruit Show, Shrewsbury, or some other big exhibition, keenly examining the exhibits or hob-nobbing with his friends of the craft whom he meets on these occasions. The Temple Show is the Mecca of many an isolated gardener, and nobody knows so well as himself how much he looks forward to the little change which this event affords him. One doesn't need to be an expert student of humanity in order to pick out the country gardeners amongst the crowds who congregate at the Temple on the occasion of the great show. There is an individuality about our friend who has "come up for the Temple Show," which distinguishes him from the rest, and the real, unfeigned interest which he takes in everything is one of the strong features about him. He feels that he has a lot to do in a little time, and he must pack as much into those few days' vacation as it is possible for man to do.

And when it is all over it is a thoroughly tired gardener who leaves, perhaps with some regret, the bustle of London, to take up again the daily round, maybe for another year, in solitude and isolation, but he takes up his work with a new vigour, and feels thankful for these brief opportunities of rubbing shoulders with the outside world. H.

Turnips.—Early sowings should be thinned out without delay, for if the plants become drawn the roots are sure to be of inferior quality. Make small sowings at short intervals of Orange Jelly, Snowball, and White Milan. To obtain tender roots of turnips, it is necessary to choose deeply-worked, well-manured soil.—T. W. Birkinshaw.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

MEXICAN LÆLIAS. — Such species as Lælia albida, L. autumnalis, the different forms of L. anceps, and the natural hybrids of this class, will be producing their new growths, and repotting may be attended to at this season. It is not advisable to disturb plants more frequently than is absolutely necessary. In the case of L. anceps, a great deal can be done by pegging back the leading growths during top-dressing, and many growths that have exceeded the limit of their receptacles may with care be brought back in such a way that they may add to the appearance of the plants. Top-dressing generally becomes a necessity where plants are subjected to a prolonged resting season. The dead sphagnum moss will need to be replaced by living material, and any decaying matter on the surface may be removed. Division of the pseudo-bulbs, either to increase the stock or add to the size of the specimen, may be done at this time. I consider two or three bulbs behind the leading growth to be ample; the rhizomes between the pseudo-bulbs may be cut asunder behind this, and there is little trouble in inducing them to produce new growths in due course.

THE COMPOST we find suitable for these orchids is a mixture of fibrous peat, sphagnum moss and about one-fifth of broken oak or beech leaves. Sufficient sand and broken crocks being added to render the compost porous. The success or failure to flower L. anceps depends entirely upon the conditions under which the plants have to be grown. I consider it well nigh impossible to produce satisfactory flowering of the white section when the plants have to be grown in a cattleya house under the same conditions as the cattleyas. To do the white L. anceps, L. autumnalis, and L. majalis justice a house should be set apart for their culture. Where this is provided, cool and dry airy conditions can be afforded in the spring; this has the effect of retarding the growing season until a period when the plants are benefited by the heat of our all too short summers. Where plants can be grown together in this way, little or no shading is required, as a discreet use of the ventilators will prevent scorching. It is well to retard growth if possible until the present season, and very little root moisture is necessary until the plants get into full growth, and then liberal moisture must be afforded. Shutting up early as the season advances and syringing the house overhead, thereby procuring a hot, humid atmosphere, suits the plants well as the season advances.

IN THE CATTLEYA HOUSE, where these lælias have to be so grown a portion of the house should be set apart for them in a position where the maximum available light is obtainable, and if possible where the roof blinds may be removed earlier than may be safe for the cattleyas, or they may be suspended near the roof glass, but the chief aim should be to procure as much light for the plants as possible. Without ample light, it is impossible to flower the plants satisfactorily. I would advise also that the plants be afforded only sufficient moisture at the present season to retain the pseudo-bulbs in a normal plump state, and for the encouragement of the newly-formed growth. Syringing overhead in bright weather is advantageous, and is best done in the mornings. As growth advances more liberal treatment may be afforded. Rain water should always be used, both for watering and syringing. If hard water is used, there is little prospect of the sphagnum moss growing, and in syringing a white deposit will be found on the foliage.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

PLUMBAGO ROSEA.—This plumbago is most valuable as a winter-flowering subject for the intermediate stove. It is very easily propagated at this season from cuttings of the young shoots, which are produced in abundance after the spring batch of flowers is over. Insert about six cuttings firmly in four-inch pots filled with a sandy compost; keep moist and plunge in gentle bottom-heat. In a few weeks they will readily take root, and may be put singly into 60-sized pots, using as a compost good fibrous loam and leaf-soil in equal parts with a sprinkling of silver sand. Pot firmly, and shade from the hot sun, affording plenty of light by growing the plants near the glass. In order to counteract the naturally erect habit of growth pinch out the growing points occasionally. As the plants require further attention transfer them to larger pots. For the final potting use soil of a somewhat rougher nature, with a small quantity of well-decayed manure added; 5-in. and 6-in. pots are quite large enough for the final potting.

BEGONIA GLOIRE DE LORRAINE. — The earliest rooted batch will now be ready for repotting into 4-in. pots. For this purpose use a compost of good rough fibrous loam, peat, and leaf-soil in equal parts with enough sand added to keep the whole porous. During the operation of potting care must be exercised as the roots are easily damaged. Do not pot firmly, as this begonia appears to revel in a loose rooting medium. In the successful cultivation of this begonia the most essential items are careful attention to watering, abundance of heat and moisture, and shade from the hot sun. During July, August, and September, when the plants are growing freely, we usually fill up the evaporating pans with liquid manure each evening, and the house is occasionally fumigated with nicotine compound. Under this method of cultivation we have not experienced any trouble from the so-called Begonia Rust.

BEGONIA GLOIRE DE SCEAUX. — This forms a charming addition to any collection on account of its handsome metallic foliage, and it is sure to receive appreciation during its flowering season, which usually extends over the first three months of the year. Plants are now readily raised from cuttings, or, by cutting the stem into lengths growths will soon appear from the bases of the leaves. Its management is much similar to that outlined for B. Gloire de Lorraine, with the exception that cooler treatment is necessary. It succeeds well in a temperature of 55 degrees, and the plants, on account of their robust habit of growth, do not require much feeding. They also flower much more freely when the roots are restricted to small pots.

B. AGATHA is very like the well-known B. Gloire de Lorraine, but its flowers are larger and of deeper colour. B. Agatha compacta resembles a miniature B. Gloire de Lorraine, is of very compact habit, dwarf, and very floriferous. Cuttings of either of these may be inserted now, and treated as recommended for B. Gloire de Lorraine.

BOUVARDIAS.—Plants which were raised during the spring now require to be shifted into larger-sized pots as soon as they require more root room. They may also be gradually hardened off ready for their summer quarters, and well ventilated span-roof pits or frames are well adapted for this purpose. The stock ought to be sprayed over every afternoon, and the frames closed up, retaining some of the sun-heat, and under these conditions bouvardias will make steady progress; lightly shade during the hottest part of the day, and always keep the plants free from attacks of aphis or red-spider. Give ventilation on all favourable occasions. — John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

MUSCAT HOUSE.—The weather has been anything but favourable for these. Sudden bursts of sunshine, with alternately hot and cold nights, make up a variation not suitable for setting the flowers. It was necessary to syringe a little whitewash over the glass outside, during the few hot days at the beginning of the month, otherwise scalded leaves would have been numerous; ventilating takes up a lot of time, and damping down must be done carefully and according to the weather outside, as well as the inside temperature. When watered, if the vines are young, no manure will be required, and the clear water should be tepid. Do not overcrop young vines, as they soon show signs of it in the foliage, which refuses to develop. One of the best houses of Muscat grapes that ever came under my notice was in the North; here the vine shoots were allowed to grow down and cover the border inside (not the shoot that the bunch was on), and root action was kept up all the summer. When the crop was removed thinning was done gradually. The vines took more nourishment under this treatment. The borders were inside and out, and the rods were partly on the extension system.

FOSTER'S SEEDLING GRAPE.—This, ripening in the early Hamburgh house, will require to be kept rather dry, and any plants under them on the stage must be removed or the berries will crack. Let some of the shoots run for a time until the grapes are cut. Being thin-skinned and of a juicy nature this grape requires a little extra attention.

LATE VINES.—These will most probably be in flower, and should not require any assistance in setting; the bunches should have been drawn out to get them away from the shoot, especially in the case of Alicante, as the best bunches generally come in an awkward place and are difficult to thin. No great amount of fire heat will be necessary unless the weather continues dull, but the pipes should be well warmed at night and a little air be left on at the top. Lady Downes will probably be in the same house, and will not be so forward; this is more difficult to set, and may require assistance. An extra shoot should be left on the spurs of this variety in case one is broken during tying down.

GROS COLMAN and GROS MAROC do not require any assistance, and I find that these two varieties yield better on the extension system,as they are such rank growers. They also need a lot of room for this system, and are best in an inside border. Appley Towers makes a good late grape, and does well in the late Muscat house, where it obtains more heat; this also does better on the extension system. It is of good flavour and keeps well, and though the bunches are rather small they are of good colour.

FRUIT TREES IN POTS.—These will be fast swelling their crop, and will require to be plunged in the ground in the house, to keep the roots cool; they also do not then require so much water, though they must be liberally supplied with liquid manure, providing they are well established. They may be top-dressed with some fresh horse manure, renewing this as it becomes exhausted. Where these trees have fire heat this should be given with care, or the fruits will drop off. If a dry atmosphere prevails, especially for cherries, black fly is very troublesome; it must be sponged off as soon as noticed as it increases rapidly.—A. B. Wadds, Paddockhurst Gardens, Sussex.

THE KITCHEN GARDEN.

CELERY.—The earliest plants, which were pricked out in good time and have been carefully attended to are now ready for putting out in the trenches. Select the strongest, and all of one height if possible; take them up with good balls of soil, so that they do not flag when the sun is hot. A few spruce boughs placed over them will give the desired shade until they become established. Sprinkling water over the foliage late in the afternoon will also prove beneficial. Weak liquid manure should be given occasionally during the growing season, for if watering is not well attended to on dry soils the celery will be tough and stringy.

ENDIVE.—A few rows may now be sown for an early supply in drills drawn 15in. apart, allowing the plants to mature without transplanting them. But thin them out to a foot apart; Broad-leaved Batavian and Green Curled are the two chief varieties grown. Sow more seeds for succession at monthly intervals until the middle of August.

LETTUCE.—Tie up the most forward plants so that the hearts may become nicely blanched. Thin out successional crops, and plant the strongest thinnings on sheltered borders in rich soil; make small sowings every fortnight, according to the demand.

BROAD BEANS.—When the plants are from 2ft. to 3ft. in height, pinch out the tops, so as to assist the pods to mature early. This will be the means of preventing the ravages of black-fly. The plants should be given plenty of room to grow sturdily, then the pods will set quickly and come earlier into bearing. Sow a few more rows now for succession, and when they are through the soil some more may be sown for a late supply. A few dishes of this excellent vegetable are always appreciated, especially when they are sent to the table quite small.

WINTER GREENS.—The seedlings of most of these are now well up, and to obtain nice sturdy plants it is most necessary to prick them out into beds two or three inches apart, placing a label to each variety as the work proceeds. This will give them ample room to develop, and they will be dwarfer, and more able to withstand the hot weather when removed into permanent quarters.

MARROWS.—These are always welcome, and plants that were raised from seed sown early in the season, and grown on in heated pits, will now be yielding supplies. Those that are to follow for succession should now be planted outside, giving them a little protection for a few nights with handlights or cloches. Still continue to fertilise the blooms of those plants that are growing in heated structures.

CAPSICUMS. — Continue to pot these as they require it; 7-inch pots are a fair size for them to fruit in, using sandy loam. Keep them growing in a buoyant atmosphere, which will assist in keeping them clean.

GENERAL WORK.—Keep the hoe at work on all favourable occasions between growing crops, such as onions, carrots, and turnips; it seems to help them on amazingly. Take lights entirely off young carrots, and potatoes, peas, etc., in the day time, and give them plenty of water at their roots when they become dry.—T. W. Birkinshaw, Hatley Park Gardens, Sandy, Beds.

THE MAY FLOWER.

One of the prettiest trailing plants for the rock garden or sheltered shrubbery is the American May flower (Epigæa repens), a plant that is so remarkably easy to grow that one can recommend it to the veriest amateur as a shade-loving subject he can successfully manage. It is rare in gardens, not on account of any cultural disability, for there is none of this, but on account of neglect to make use of it in the best possible way. The leaf and stem system is practically that of Euonymus radicans—prostrate growths, minutely hairy throughout, thickly studded with oval leaves an inch or two long. The trailing growths terminate in the daintiest of white flower trusses, miniatures of orange blossom really, and of snowy-whiteness, the centre of each five petalled flower being filled by a ring of raised white filaments that recalls velvet pile.

There is nothing ornate or gaudy about the plant at any time, but a measure of refinement in every leaf and petal that appeals to one's artistic sense very strongly. This is not all, however, its fragrance, literally spiced hawthorn, is singularly sweet, and on this account alone one could welcome its presence in the spring garden. It delights in a root run of leaf-soil and peat, and its shade-loving nature is fully satisfied by its being planted as a carpet for rhododendrons of the ferrugineum type, the conditions of growth being identical for both plants. In the absence of shade, cool conditions at the root must be maintained, and a soil consisting almost wholly of peat afforded it.

G. B. Mallett.

NEW BOOKS.

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THE BOOK OF WATER GARDENING.

By Peter Bisset (A. T. de la Mare Printing and Publishing Company, New York).

Within recent years water gardening has attained to a high degree of popularity in America, as in this country, and as the result, the cultivation of aquatics and moisture-loving plants generally has been greatly extended, both in public parks and gardens and in private establishments. There is probably no feature of greater interest in the garden, or one that is capable of giving greater pleasure to the owner thereof, than a judiciously made collection of aquatics so arranged as to display their distinctive charms to the best advantage. Many owners of gardens, realising this, have had well-appointed water gardens added to the pleasure grounds, while a still larger number are actively engaged in the development of streams, ponds, and other water areas with a view to their utilisation in the cultivation of such plants as thrive in or on the margins of water.

In the United States the extension of water gardening has proceeded rather more rapidly than in this country, and this may perhaps be attributed in a large measure to the great difference in the climatic conditions that obtain in the two countries during the summer months. In America the summers are invariably hot and dry, while here the temperature is lower and the amount of atmospheric moisture much greater, and water and the vegetation belonging thereto have greater attractions to most persons in hot, dry weather than in weather that is cool and moist. Moreover, the high temperature experienced in America during the summer renders the cultivation of some tropical water lilies in the open possible without the necessity of warming the water in which they are grown by artificial means.

The handsome volume now before us is one of the best proofs of the interest that is being taken in water gardening in the United States, and it also affords abundant evidence of the thorough acquaintance by the author with the characteristics and the cultural requirements of the plants necessary in the equipment of a water garden of the highest class. In the opening chapter the author gives a sketch of the history and development of the water lilies, and writes in eulogistic terms of their manifold charms. He then proceeds to deal with the formation of ponds and basins for their cultivation, and with reference to the most suitable site, writes: "In selecting the location of a pond or pool in which to grow water lilies, the ground should be gone over carefully, and a site chosen where a supply of water, either from a natural stream or from an artificial source, will be provided. The location should, if possible, be sheltered by buildings, by a planting of trees and shrubs far enough away from the edge of the pond that they will not overshadow the water, or by a high bank on the north-west, north-east, and north, but open toward the south, south-west, and south-east. This will ensure the full benefit of the sun's rays in warming the water, and at the same time afford protection from high winds that would soon ruin the tropical growth of the tender water lilies and the subtropical plants in the surrounding borders. If the pond is intended for the growth of hardy kinds only, it will not be necessary to protect it, as these will thrive in a much lower temperature than the tender ones, and the leaf surface of the hardy sorts is so small that they are never seriously damaged by the wind." Of the excellence of this advice there can be no question, and what is true in America is in a large degree true in this country.

Having thus briefly described the most suitable site for the water garden, Mr. Bisset proceeds to give full directions for preparing existing streams, ponds, and other water areas for the water lilies and other suitable forms of plant life, and for the formation of new ponds and streams to be supplied with water from natural or artificial sources. In advising at some length on the preparation and planting of ponds and basins suitable for gardens of various classes, Mr. Bisset does not overlook the requirements of those who for various reasons have to limit their cultivation of water lilies and other aquatics to a few tubs placed in sunny positions in flower or kitchen garden; but gives advice on the best methods of procedure in tub culture.

There would, indeed, appear to be but few, if any, details in the making and management of a water garden that have escaped the attention of the author, and the advice is throughout that of a practical cultivator, and therefore thoroughly trustworthy.

The book is profusely illustrated with finely-executed engravings, which serve to elucidate the text, and to contribute materially to the attractions of its pages. As a text-book on the subject with which it deals, Mr. Bisset's work has our heartiest commendation.

CULTIVATION OF THE PERPETUAL-FLOWERING CARNATION.

By C. H. Taudevin. (Young and Co., American Tree Carnation Specialists, Hatherley, Cheltenham.) Price, 1s. net.

Having regard to the high degree of popularity to which the perpetual-flowering carnations of the American type have attained, it is of much importance that cultivators should have at their command information that is at once concise and trustworthy. Hence the neat and essentially practical book that has been published by Messrs. Young and Co. is especially welcome. Mr. Taudevin describes in clear language the various details to which growers have to give attention to ensure success, and also gives an excellent calendar of operations for the year.

A COMPENDIUM OF THE AGRICULTURAL HOLDING ACTS.

By Walter de Houghton Birch, F.S.I., F.H.A.S. (The Country Gentlemen's Association, Lim., 24 and 25, St. James' Street, S.W.) Price, 2s. net.

This compendium of the Agricultural Holdings Acts, 1883 to 1906, has been arranged to enable the several Acts to be read concurrently, which is impracticable in their original form, owing to the constant reference to the earlier Acts, and should prove of much value to both farmers and market gardeners. The contents include the titles, scope, and general application of each Act, and compilation of the Acts. There is also an excellent index.

APPLE FRENCH CRAB.

With reference to the letter of "Straffan" relating to the apple French Crab, which appeared in the Gardeners' Magazine of the 11th ult., we are writing to say that we are glad you directed attention to the fact that this variety is not distinct from Northern Greening. We are also pleased that you quoted the late Dr. Hogg in support of your views, for he was undoubtedly the greatest authority on apples. We would at the same time mention that the apple catalogued by us as French Crab is the same variety as that mentioned by your correspondent, and that we have repeatedly had fruits hanging on the trees in our nurseries till well into the winter.

W. Seabrook and Sons.

Fruit Tree Nurseries,
Springfield, Chelmsford.

Maize.—In some establishments this vegetable is in great demand, and to produce fine cobs it is necessary to choose a deep rich soil, so that the growths may develop to their fullest extent without any check. Sow the seeds at once in rows about 2ft. apart, and thin out, when they have germinated, to 1ft. apart, and if the summer is favourable to their growth good dishes will be given in the autumn.—T. W. Birkinshaw.

THE PROFESSION OF LANDSCAPE GARDENING.

At the afternoon meeting of the Royal Horticultural Society, held on April 28, Mr. Edward White, the eminent landscape gardener, gave a lecture, at once interesting and instructive, on the all-important subject of "The Profession of Landscape Gardening." He said: I will not take advantage of the wide scope for observation which the title of my paper seems to offer, but propose simply to consider in a few aspects the profession of landscape gardening, literally, as a vocation.

I believe there is enough interest in the calling, and sufficient mystery as to the means by which essential knowledge of it can be acquired, to justify a few reflections. In Vincent Square an attempt to define the mission of the landscape gardener would appear an impertinence. No one present is so ingenuous as the lady who thought the term a complimentary description of persons who tidied up gardens. The designation, however, is cumbersome and inadequate, and it is a pity that one cannot find a short and comprehensive substitute.

In spirit, at all events, we here are all landscape gardeners, and much too zealous to allow our conceptions to be confined by garden and park enclosures. We are stimulated by our appreciation of landscape scenery and anxious to bestow its beauties upon districts where they are non-existent, and, in short, if I may parody that well-worn phrase, to break down the fence and make all nature a garden. Closely associated with the desire is the idea cleverly crystallised in the expression "garden cities."

A town or city should no longer signify the compression of the largest number of dwellings into the smallest possible space. Neither is what it should be without the adornment of tree-planted streets, and parades, in addition to parks, recreation, hospital, and other grounds. In fact, you expect that practically every corner of public land, if not already picturesque, shall be subjected to ornamental treatment. The proportion of town areas committed to the care of gardeners is, therefore, happily becoming very considerable, and it is of extreme importance that the whole matter should be under professional direction. But while the assistance of Nature is being successfully enlisted to relieve the oppressiveness of bricks and mortar in towns, the builder is taking full revenge by his invasion of rural retreats.

Life in the country has become fashionable largely at the expense of much of our best landscape scenery, especially as it is coupled with a desire for the pure air of the more elevated places, which are naturally the most conspicuous points of interest and beauty. The most beautiful districts available for occupation suffer most, and the attractions which tempted the first-comers to many of them are rapidly fading—indeed, the word Ichabod might well be added to advertisement boards standing on many a sylvan site.

The rate at which virgin country is disappearing is so prodigious that it would be most interesting to know the exact acreage which is annually withdrawn from a free state of nature. A moment's thought will help us to appreciate the extent of the diminution and to realise how much land is being cut up for new roads, and either lost to view behind garden fences, or, as may be sometimes worse, defiled and exposed in ugly disorder.

However regrettable may be the transformation of so much beautiful country, any protest would be puerile in view of the social development of which it is a symptom. We can only temper our regret with some satisfaction by insisting that where Nature is dispossessed it shall be succeeded by art worthy of the traditions of the site. Herein lies a legitimate opportunity for the landscape gardener. Sufficient proof can be furnished that the material advantages which result from expert artistic treatment justify it as a practical consideration.

For the landscape gardener there are problems of great interest involved in the preservation and use of features beautiful and natural, and their combination with technical details essential to the development of building property. Every road may become a vista of potential beauty, which may be accentuated, and not prejudiced, by the buildings for the service of which it is created.

The solution of the problem which will give such a result should be greatly aided by the conditions of spaciousness which appear to be necessities of the future. This is forecasted particularly by the proposals contained in the Town Planning Bill now before Parliament, which meets with sufficient approval to justify an expectation that in some form it will become law. It offers certain local bodies authoritative powers, hitherto unheard of in this country, over areas in their charge. It confers upon them the power to lay down the lines of new roads irrespective of intermixed ownership, and to enforce the execution of their own model plans of development, which will provide for such open spaces as are deemed necessary. One may be quite sure that lively controversies will result from the exercise of these powers, and may entertain the hope that æsthetic considerations will provide their share of debatable points, which can only receive due justice if they are represented by technical advisors who have devoted special study to the subject. There is some excuse for anxiety on this point when one remembers how often gentlemen, whose official engagements depend on their ability as civil engineers, are saddled with such extraneous responsibilities as the designing of parks and public gardens.

It seems only reasonable that municipalities desiring the luxury of artistic amenities—paid for compulsorily by ratepayers—should obtain designs from, and entrust the supervision of the work to, men technically educated to deal with such matters. It is no disparagement of some able men who hold municipal gardening appointments to say that the custom does not generally prevail. There are a few notable exceptions which greatly strengthen the case for a wide extension of the principle advocated.

In this direction there may be a considerable opening for the landscape gardener—but before it can be confidently demanded on his behalf, the public must be satisfied as to the existence of men fully qualified for the work. It is only if this condition can be secured that the object may be attained. The increased dignity and prestige which have attended the development of scientific and artistic gardening must facilitate such an end. Gardening ranks no longer as a mere hobby. It has developed into a great social factor. It is a nursery of art, and the school for the love of Nature. As a nation we admittedly prefer open-air amusement to artistic indoor pursuits. Gardening as an outdoor occupation therefore exhausts a large share of our æsthetic impulses—a share, indeed, so large that it is practically the national art.

Both the art and our country might be equally proud to represent the other. Art can scarcely require a better medium of expression than those living forms of vegetation which supply so many arts with their best material for inspiration. Although it is suggested that the garden is the school for the love of Nature, it is no paradox to say that the characteristic genius of English gardening receives an impulse from the recognition of the natural beauties of our country.

An English landscape gardener, whose work is to appeal truly to the mass of his fellow countrymen, in addition to his other qualifications, must have served a long apprenticeship in the school of Nature. The British Isles, thanks to their geological inconsistency, and to other advantageous peculiarities, offer for study, within the smallest radius, a wonderful variety of types of landscape beauty. The generosity of Nature in this country is emulated by many owners of beautiful gardens. Their gardens are freely opened to the student, the Press, and to the public, and by this means gratuitous lessons in horticulture and artistic effect are received, advantages resulting from, and only made possible by, great expenditure of time and money. Such liberality is the greater because all that is best is immediately seized for imitation, and, if possible, improved upon. It would not be inappropriate to allude to the educational facilities afforded by visits to the many splendid nurseries throughout the country, and to the courtesy and goodwill of their owners.

The opportunities for self-education offered to men who wish to follow the profession of landscape gardening are, therefore, numerous and varied, and at first sight it may appear that they are sufficient. Whether this be so or not depends entirely upon the ambition of the student, and the scope of action which contents him or her. If he desires to be self-reliant, and does not wish, for instance, to be continually referring to the architect, civil engineer, or surveyor, for technical assistance, he must be versed in such details of these sciences as are essential to his operations. It is exceedingly difficult, however, for a student to discriminate in the acquisition of knowledge of these details, and avoid wasting much time upon unnecessary matter. To a person whose temptation to embark on the career is solely the love of gardening, the idea of mastering two or three other pursuits seems appalling and unnecessary—unnecessary it certainly would be for him. The chances are that he will refuse to enter upon such subjects, and, that if he does not decide to abandon his aspirations he will devote himself to a system of gardening which affects to despise the so-called extravagances of constructional effort, and confine himself to a sphere of activity which is strictly limited.

It really seems unnecessary to emphasise such a point as the value to any young man of having his business education mapped out and directed by proper advisors, especially when he is preparing for a profession which discovers among its supporters such a large number of highly-skilled amateurs. Foreign critics of our educational methods might possibly recognise landscape gardening as our national art from the fact that it is practically untaught in this country.

(To be continued.)

LAW.

Nurserymen's Titles.

The case of Dickson v. Dickson recently heard in Dublin before the Master of the Rolls, was of considerable interest to the nursery and seed trade. In this case Messrs. Alex. Dickson and Sons, Lim., rose growers and seedsmen, of Newtownards, Belfast and Dublin, sought an injunction against Mr. Alexander Dickson trading as Messrs. Alexander Dickson and Sons, of Parliament Street, Dublin, and Woodlawn Nursery, Dundrum, restraining him from carrying on the business of nurseryman and seedsman in any style in which the name of Dickson appeared without taking reasonable precautions to clearly distinguish the business carried on by him from that carried on by the plaintiff company. At the close of the hearing, which extended over four days, the Master of the Rolls gave judgment in favour of the plaintiffs.

The Gardeners' Royal Benevolent Institution.—The 69th anniversary festival dinner in aid of the funds of this institution will take place on Wednesday, June 24, at the Hotel Metropole. The chair will be taken by the Right Hon. the Lord Aldenham. Subscriptions or donations to be placed on the chairman's list are earnestly solicited, and may be sent to Lord Aldenham, or to the secretary, Mr. G. J. Ingram, at the offices, 175, Victoria Street, Westminster, S.W.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

SCIENTIFIC COMMITTEE, May 12.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Dr. A. Voelcker, Messrs. G. S. Saunders, H. T. Güssow, L. de B. Crawshay, J. T. Bennett-Poë, H. J. Elwes, W. C. Worsdell, E. M. Holmes, J. Douglas, and F. J. Chittenden (secretary). Visitor, Rev. A. E. Upcher, M.A.

MALFORMED NARCISSUS.—Mr. W. C. Worsdell reported that he had examined the malformed Narcissus Mr. J. T. Bennett-Poë sent to the last meeting by Messrs Hogg and Robertson, and found that the flower exhibited signs of fasciation, but this was only partial, since the perianth pieces were only nine in number, as were the stamens. There were, however, two completely formed ovaries, each with its full complement of three carpels. The style was somewhat flattened, and springing from its base was a branch which was probably a second style. This had become petaloid and tubular, and in the tube thus formed a third style had developed.

FASCIATION IN NARCISSUS.—Mr. J. W. Odell sent flowers of Narcissus Emperor which had been produced after all the normal flowers in the bed had died off, and which were fasciated, some having flattened stems bearing at the apex three flowers, each on a separate pedicel, others having the fasciation carried farther, so that the flowers themselves were coherent.

PELORIC CALCEOLARIA.—Mr. H. Tysoe, of the Lodge Gardens, Bedford, sent flowers of calceolaria showing regular peloria. All the flowers on the main branches of the inflorescences of two plants exhibited this phenomenon.

SEAKALE DISEASED.—Mr. H. T. Güssow showed a specimen of seakale which had become rotten, one of a considerable number in a plantation in Norfolk, which he said had been attacked by a bacillus, at present undescribed, differing in certain characters from Pseudomonas campestris. He considered that the attack of the organism upon the seakale had been made possible by the methods adopted in forcing the seakale, and that the attack might have been avoided if air had been admitted by raising the seakale pots somewhat above the soil level, so as to admit air.

INTUMESCENCE IN BRUGMANSIA.—Mr. G. S. Saunders showed a leaf of Brugmansia exhibiting small warty growths known as intumescences, a condition brought about usually by lack of a proper balance between the amount of water supplied at the roots and the humidity of the air, and a proper regulation of temperature.

AMARYLLIS SPECIES.—Mr. H. J. Elwes, F.R.S., showed a plant apparently allied to Amaryllis solandræflorum, but having a rose suffusion upon the perianth. The flowers are of very elegant form, and the plant appears to be very rarely met with in this country.

MORÆA IRIDIOIDES VAR. JOHNSONI.—Mrs. J. L. Richmond, F.R.H.S., of Woodlands, Lustleigh, South Devon, sent a flower and leaf of the very beautiful variety Johnsoni of Moræa iridioides. The flowers are considerably larger than those of the type or the variety Macleayi, and the foliage is upright instead of being fan-shaped; the bud was picked on May 7, and the flower was still almost perfect on the 12th. The seed from which the plant sprung was brought by a lady (Mrs. Johnson) from the mountains of Ceylon, where it had probably been originally taken from South Africa.

Royal Botanic Society.

A very pretty little exhibition was held on Wednesday, May 20, in the Royal Botanic Gardens, Regent's Park. The corridor was well filled, and the bulk of the display was made up of tulips in great beauty and variety, four fine groups of these handsome flowers being staged.

A glorious display of tulips was arranged by Messrs. R. Wallace and Co., Colchester, who in most cases put up three vases of a variety, and contrasted the colours well. A few of the finest of the hundred or so varieties shown were Gesneriana lutea, La Tulip Noire, Whistler, Inglescombe Pink, Painted Lady, Margaret, Calliope, Pride of Haarlem, the lovely yellow Mrs. Moon, Picotee, Fairy Queen, Zulu, Mr. Farncombe Sanders—one of the best, Hammer Hales, the beautiful pink Clara Butt, Gala Beauty, Maiden's Blush, Afterglow, and Anthony Roozen.

Messrs. Wm. Paul and Son, Waltham Cross, contributed a large group of roses in pots, chiefly pillar and rambling varieties, all in good form. Conspicuous in the centre were the specimens of the free, large-flowered Tausendschon, carrying numerous pendant trusses of deep pink blooms; around this were other rambling varieties, such as Grace Thomson, a new soft red variety with dull white centre; Hiawatha, Claire Jacquier, Crepuscule, the free single-flowered Kathleen, the popular Lady Gay, the new Paradise, an elegant starry flower, almost scarlet when first opened, but fading to pale pink; and Stella, Eugenie Lamesch, Aennchen Müller, Grace Darling, La France, Gloire Lyonnaise, Dora, and Senateur Belle, were other roses well shown in this group.

Tulips were also largely shown by Messrs. R. H. Bath, Lim., Wisbech, who had a very bright exhibit, consisting of a fine assortment of Darwin and cottage varieties; Maiden's Blush, elegans alba, Gesneriana major, Gesneriana lutea, Prince of Orange, Mrs. Moon, Isis, La Tulipe Noir, Isabella, and Inglescombe Pink were among the best varieties staged. Mr. J. Williams, Oxford Road, Ealing, showed table decorations in yellow irises and trollius blooms.

A prettily arranged rockwork group was set up by the Misses E. and M. Kipping, Hutton, Essex, and in it were some charming violas and pansies, alpine phloxes and aubrietias, Cheiranthus alpinus, Anthemis aizoon, saxifragas, Aster alpinus, polemoniums, etc. The Misses Hopkins, Mere Gardens, Shepperton, contributed a small collection of rockery plants, such as Saxifraga pyramidalis, Cheiranthus alpina, Primula Sieboldi, Phlox canadensis, Incarvillea grandiflora, I. Delavayi, Dryas octopetala, etc.

A bold group of bright tulips came from Messrs. Hogg and Robertson, Mary Street, Dublin, and it included handsome bunches of Gesneriana forms, Laurentia, Millet, the golden Mrs. Jas. Robertson, Bartigon, Glory, [illegible], Caledonia—very bright scarlet, Mrs. Moon, Loveliness, Bouton d'Or, Isabella, Hecla, Fairy Queen, Calypso, and other handsome varieties.

Messrs. Barr and Sons, King Street, Covent Garden, contributed a bright display of tulips, setting up large vases of such handsome varieties as Louis XIV., Golden Glow, Leghorn Bonnet, Picotee, Inglescombe Pink, Chameleon, Mauriana, The Dove, Fairy Queen, Margaret, Mrs. Moon, Sunset, La Merveille, Orange Beauty, and Landelle. With the tulips, the Messrs. Barr showed irises of the germanica type, I. Susiana, the new I. Hecate, Ranunculus aconitifolius fl. pl., single pæonies, and trolliuses. Messrs. John Peed and Son, West Norwood, S.E., made up a group of Japanese maples, associating these with clematises and yellow arum lilies.

MEDALS.

Large Gold.—Messrs. R. Wallace and Co., Colchester; Messrs. Barr and Sons, Covent Garden.

Gold.—Messrs. Hogg and Robertson, Mary Street, Dublin; Messrs. Wm. Paul and Son, Waltham Cross.

Large Silver-gilt.—Messrs. R. H. Bath, Lim., Wisbech.

Silver.—Mr. Williams, Oxford Road, Ealing; the Misses Kipping, Hutton, Essex; Messrs. J. Peed and Son, West Norwood.

Bronze.—The Misses Hopkins, Mere, Shepperton.

AWARDS OF MERIT.

Awards of Merit were made in favour of Rose Paradise, a new single-flowered rambler, from Messrs. Wm. Paul and Son, Waltham Cross; Tulips Afterglow, Psyche, and Millet, from Messrs. R. Wallace and Co., Colchester.

British Gardeners' Association.

At the monthly meeting of the B.G.A., held on May 12, with Mr. Chas. Foster in the chair, seventy-eight new members were elected, and two candidates were declined. Questions affecting the payment of wages due to a Northampton member, and the alleged grievances of men at Kew, were considered, and will come up for further report. Arrangements were made for the annual general meeting, which will take place at the Essex Hall on Wednesday, May 27, at seven p.m. A very large meeting is anticipated.

LONDON BRANCH.

In spite of inclement weather, a large number of gardeners attended the meeting of the London branch at Carr's Restaurant, Strand. It was announced that the committee had decided that monthly visits be made to parks and gardens, with an appointed leader, during the recess. This met with general approval. Further business having been transacted, the important item of the programme was the address by Mr. T. Winter, superintendent of the Marylebone public gardens. Although the subject—"Construction of Public Parks and Gardens"—is a wide one, it was ably dealt with by the lecturer, under several headings. The locality was important, and it was always necessary to consult the local authorities concerning drainage and other matters, as connections have often to be made with main drains. Preparation of the ground, its nature, whether undulating or comparatively level, extent, and shelter afforded by existing trees and shrubberies, were all discussed. Tile drains were recommended as the best and cheapest to use. Although expensive in the initial outlay, it was very necessary the making of carriage drives should be well done. A road ought not to skirt the edge of the grounds, neither should its lines have meaningless curves. In excavating for a road the nature of the subsoil must be considered. Where the lower strata is fairly firm, 9in. of hard core on this, and a 6in. layer of flints, finishing with a good thickness of fine gravel, would make a road which would look and wear well. Walks should join a road with an easy curve. They are often made too narrow. Straight walks should be avoided, but at the same time the object of a curve should be easily seen. In the preparation of ground for lawn seed, Mr. Winter said he preferred the surface to be trodden rather than rolled.

Previous to planting, the ground should be well trenched for the reception of trees and shrubs. In giving a list, the lecturer said that rhododendrons ought to receive more attention. In conclusion, Mr. Winter dwelt upon the benefits conferred upon the public by having large parks and open spaces.

In the discussion which followed there was no lack of speakers. The chairman, Mr. Hawes, allowed each speaker as much time as possible. Messrs. Lewis, Frogbrook, Hill, Lock, Harding, W. B. Little, Cresswell, and Summerfield raised various points which were subsequently dealt with by the lecturer. Mr. J. Weather (general secretary) made some forcible remarks, concerning the butchering of street trees in some localities. Other points which he gave brought up Mr. Barnes, of Southwark Park, who ably responded.

A hearty vote of thanks was given to Mr. Winter for his excellent address, and a similar one having been given to Mr. Hawes for presiding, the proceedings closed.

LEEDS BRANCH.

A meeting of this branch of the B.G.A. at the Grand Central Hotel, Briggate, was recently held. Mr. Campbell, Methley Park Gardens, presided. There was a good number of gardeners present.

Mr. Clayton, of Ullerskelf, near York, was the lecturer for the evening, the subject being "Gardeners and Gardening." In dealing with the subject, Mr. Clayton made reference to the working of large gardens with garden labourers or permanent garden hands versus the usual army of journeymen. Although the lecturer was in favour of a permanent staff, much discussion was raised and many useful items given for and against both systems. Mr. Clayton also dealt with the training of the young gardener, and gave much valuable information bearing on the method of procedure. A good discussion followed, after which Mr. Clayton was accorded a hearty vote of thanks.

The committee of the local branch intend to make the above address their headquarters, and to hold during the summer months bi-monthly meetings. The next meeting will be held on Saturday, July 4, when Mr. John Donoghue, Bardon Hill Gardens, Leeds, will give a lecture on "The Carnation: Its History and Cultivation." Many varieties of this popular flower will be exhibited at the meeting. All gardeners are invited.

Croydon Gardeners' Association.

The eighth annual spring flower show of this society was held at the Horniman Hall, Croydon. The committee endeavours to foster a love of horticulture in all, and through the generosity of the society's supporters is able each year to give free admission to the general public to this early exhibition. Needless to say, the number of visitors attending is very great, and from the time the show opens at three o'clock till it closes, about ten, the hall is full. No prizes are offered to the exhibitors, so that they are to be complimented on the enthusiasm they display in making the affair a success.

From the gardens of the president, Mr. J. J. Reid, came a grand exhibit of schizanthuses, azaleas, and mignonette, reflecting great credit on his head gardener, Mr. F. Oxtoby. Mr. J. Pascall's gardener, Mr. A. Edwards, had a miscellaneous group of plants, including well-grown calceolarias and double cinerarias. Mr. C. Lane, gardener to E. H. Coles, Esq., Caterham, put up some good hippeastrums and caladiums. In one corner Mr. J. J. Pittman's gardener, Mr. A. Dyer, staged an effective exhibit of Cineraria stellata, cyclamen, and white stocks. Sir Walpole Greenwell sent cut flowers, including double and regal pelargoniums, cypripediums, and two fine sprays of Cymbidium Lowianum, which his gardener, Mr. W. Lintott, very effectively arranged. A very fine azalea came from Mrs. Matthew's garden, Anerley, and her gardener, Mr. C. Thrower, evidently understands the cultivation of this class of plant, for it was a mass of flower measuring about 2 feet 6 inches across.

A pretty exhibit was made by Mr. Wateridge, gardener to Otto Hehner, Esq., with Cineraria stellata in good colours and vigorous plants. Mr. Frank Allen's spiræas and hippeastrums were also much admired, and the society welcomed a new exhibitor in his gardener, Mr. Beacon. Two cottagers contributed exhibits, Mr. J. R. Filce bringing some well-grown auriculas, and Mr. R. Cleveland a collection of cacti.

The trade was well represented. Messrs. J. Peed and Son, West Norwood, had a collection of alpines arranged in boxes, and these, with a few carnations, made an interesting exhibit. Alpines were also shown by Mr. J. R. Box, West Wickham, whilst the firm of Messrs. J. R. Box and Co. staged cut tulips and narcissi. Mr. P. Chaff arranged a miscellaneous group of plants, and the stage was tastefully decorated by Mr. T. Butcher. Messrs. E. W. and S. Rogers had a table of hyacinths, including the best varieties, all of them bearing very fine trusses.

United Horticultural Benefit and Provident Society.

The usual monthly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, on Monday evening last, Mr. Charles H. Curtis in the chair. Five new members were elected, and one nominated. The death certificate of a member was produced, and the amount standing to his credit in the books was ordered to be paid to his nominee. The amount paid for sickness during the month was £25 12s.

The sick pay from February to May, 1907, amounted to £199 11s., but for the corresponding period this year it was but £154 8s., a reduction of £45 3s. At the present time there are five chronic sick and five other members on the sick fund. The annual report and balance-sheet has been posted to all honorary and benefit members. Any member not having received one will please notify the secretary.

East Anglian Horticultural Club.

Although the elements were not favourable, a large gathering of members assembled at the May meeting of this club, held at the Boar's Head, Norwich, on the 14th inst. Mr. J. Powley presided, and among those present were Messrs. T. B. Field (Ashwellthorpe), L. Smith (Shotesham), H. Goude (Old Catton), E. Peake, W. Chettleburgh (Worstead), J. Forder (Messrs. Daniels Bros.), Mr. T. G. Bishop (Messrs. Daniels' Nursery), H. Perry, and W. L. Wallis, secretary.

As no paper had been received in the essay competition, Mr. H. Perry suggested an impromptu discussion upon the subject of "Insecticides," and led off with a query as to the best way of mixing paraffin and applying it. Mr. H. Goude gave a useful formula and how to prepare same, adding some very useful remarks. Mr. L. Smith gave some practical suggestions, and Messrs. J. Clutsom, E. Peake, R. Watson, C. Hines, and others, also contributed to the discussion. By this means an interesting evening was spent.

It was decided, if permission can be obtained, to visit Lord de Ramsey's garden at Haverland Hall, and from thence to Blickling Hall, on the occasion of the summer outing of the club, on Thursday, July 16.

The exhibition for the evening contained a varied assortment of good things. Among the non-competitive subjects were some twin-flowered Narcissi King of Spain from Mr. W. Chettleburgh, Worstead; some sprays of Piptanthus nepalensis from the nursery of Messrs. Daniels Bros., Lim.; roses from Messrs. Hobbies, Lim., Dereham; and some good streptocarpus blooms from Mr. E. Goldspink.

Included among the competitive exhibits one noticed a plant of the charming Phlox divaracata from Mr. F. Willing, gardener to F. Bainbridge, Esq., Hethersett, which is so useful for spring bedding. The pods of Daniel's dwarf prolific pea, shown by Mr. E. Grand, gardener to J. Wilson Gilbert, Esq., Cringleford, were as good as one could wish for, and proved the merits of this variety for early use. Apples and strawberries maintained the reputation of the fruit section, whilst the cut flowers of Mr. W. Palmer, gardener to J. B. Coaks, Esq., Mr. F. Williams, gardener to Louis Tillett Esq., M.P., and Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, were splendid arrangements. Pot plants and vegetables also added their quota to the exhibition.

Commons and Footpaths Preservation Society.

At the monthly meeting of the Commons and Footpaths Preservation Society, with Lord Eversley in the chair, it was reported that the owners of over 6,000 acres of land in the neighbourhood had already assented to the society's scheme for the regulation of Towyn Trewan Common, Anglesey, a tract of 1,300 acres of open land situate at Rhosneigr, near Holyhead, and that the Board of Agriculture had now issued a draft order for the regulation of Maidenhead Thicket and Cookham Commons, Berks. The Chairman stated that a joint deputation of the Verderers of the New Forest and the society had been received by Mr. Haldane on the subject of the proposed holding of extensive military manœuvres in the Forest in August and September next, and that the War Office undertook to enter into an agreement embracing all the safeguards which the public would have enjoyed if the manœuvres had taken place under the provisions of the Military Manœuvres Act, 1897. The Secretary announced that the Ludshott Common and Waggoners Wells purchase fund amounted, with guarantees, to £1,654, leaving £150 to be raised to complete the purchase of 560 acres of moorland on the borders of Hindhead.

TRADE NOTE.

The latest invention to aid the gardener in baffling his natural enemies, the birds, is Hewett's Patent Webber. This little apparatus, which is not unlike a miniature fishing rod in appearance, enables an entirely unskilled person to cotton a fruit bush in about a minute at a cost of less than a farthing for material. What has always been regarded as an unpleasant and unsatisfactory operation is rendered easy and effective with Hewett's Webber, and the centre of the bush, which is generally left untouched when the work is done by hand, can be quite protected from the attack of birds. Seed beds are equally protected by means of this webber, and a few odd pieces of stick, and a perfect network of cotton can be placed over a bed in a minute or so. It is the neatest and most effective thing of the kind we have seen, and its inexpensiveness should ensure a brisk demand. Mr. Hewett's address is 16, Avenue Road, Winchester.

FORTHCOMING ENGAGEMENTS.

MONDAY, May 25.—Linnean Society Anniversary Meeting.

Kew Guild Annual Meeting, 6.30 p.m., and Dinner, 7.30 p.m., at the Holborn Restaurant.

TUESDAY, May 26.—Great Temple Show; three days.

WEDNESDAY, May 27.—Bath and West and Southern Counties Show; five days.

British Gardeners' Association; Annual Meeting at Essex Hall, Strand, W.C.; 7 p.m.

Hayward's Heath Gardeners' Outing to Abbotsleigh

ANSWERS TO CORRESPONDENTS.

PLANTS FOR A SHADY BALCONY.—S. R. B., Thame.—You must be content wi foliage, chiefly, as comparatively few plan yield a display of bloom under shady con tions. The better hardy ferns, Aralia boldi, Creeping Jenny, fuchsias, m Cobæa scandens (climber), and Runner bea may all be pressed into service, and there ar funkias, anthericums, and Solomon's Seal. few palms that have been well hardened m be used during the summer, and a few flow ing plants in pots or tubs should be brough from sunnier positions to sojourn aw among the flowerless plants. By the exercise of a little ingenuity, and the expenditure of a little labour the shady balcony may be kept beautiful all the summer.

MAGGOTS IN RASPBERRY SHOOTS.—R. S., Birmingham: The trouble is due to a rather severe attack of the raspberry stem-bud caterpillar (Lampronia rubiella). This little pest is unfortunately all too well known in market garden districts, from the southern counties of England almost to the [illegible] midlands. The little red maggots, each with a tiny black head and small black tail spot, are readily recognised once they have been identified. These caterpillars or maggots live through the winter, and early in the spring they pierce the raspberry leaf-buds, eating out the centre or pith, so that directly the weather induces the shoots to elongate they fade, and by hanging limp show prompt evidence of the damage done. A close inspection of the canes in early spring will be the means of discovering many of these little red caterpillars, and a boy might profitably spend an hour or two each day capturing and killing the pests, because it has been proved that, after emerging from one bud they pass on to attack others, consequently inspection should be made directly the buds show signs of bursting. The moth lays her eggs in the newly-opened raspberry flower, and here they hatch and live, until by the time the fruits are ripe the caterpillars are full fed, and they spin themselves a cocoon and remain therein for the winter. Hunting the caterpillars and removing and burning all infested shoots should be done at this season or earlier. In the winter, after the leaves have fallen and the old canes and unnecessary new ones have been cut out, remove as much of the surface soil as possible, and put some rich garden soil in its place. The old soil should be buried deeply, or treated with fresh gas lime, to kill the hibernating caterpillars. Very early in spring frequently dust the canes with soot and strew soot around the plants so as to make everything as distasteful as possible to any caterpillars that may have escaped the winter treatment.

SPORTING AMONG TULIPS.—E., Chippenham: It is by no means an uncommon thing for tulips to sport, although an inspection of the splendid stocks of bulbs in Eng lish, Irish, and Continental nurseries [illegible] hardly lead one to suppose it was anything but an unusual circumstance. The [illegible] Cottage Boy is a sport from the [illegible] Cottage Maid. We saw recently [illegible] sports in a batch of Lion d'Orange. There [illegible] no good reason why the white flower [illegible] not be a sport from the yellow one. [illegible] the bulb carefully, and lift it in due [illegible] planting it again early in an isolated [illegible] tion. It may prove to be like some [illegible] white variety, and consequently only [illegible] interesting variation; on the other hand [illegible] may have a distinct commercial value [illegible] flowers are pure, substantial, and [illegible]

DISEASED TOMATOES.—J. R., W[illegible]stow: The plants are suffering from [illegible] bad attack of tomato rust (Cladosp[illegible] vum), a fungus pest that frequently [illegible] the leafage, and sometimes the fruits [illegible] toes. Too generous treatment [illegible] plants during ungenial weather, [illegible] if the plants were weakened at all [illegible] seedling stage, is the chief cause [illegible] disease, consequently a buoyant atm[illegible] such as ventilating during the present [illegible] weather will produce, will materially [illegible]

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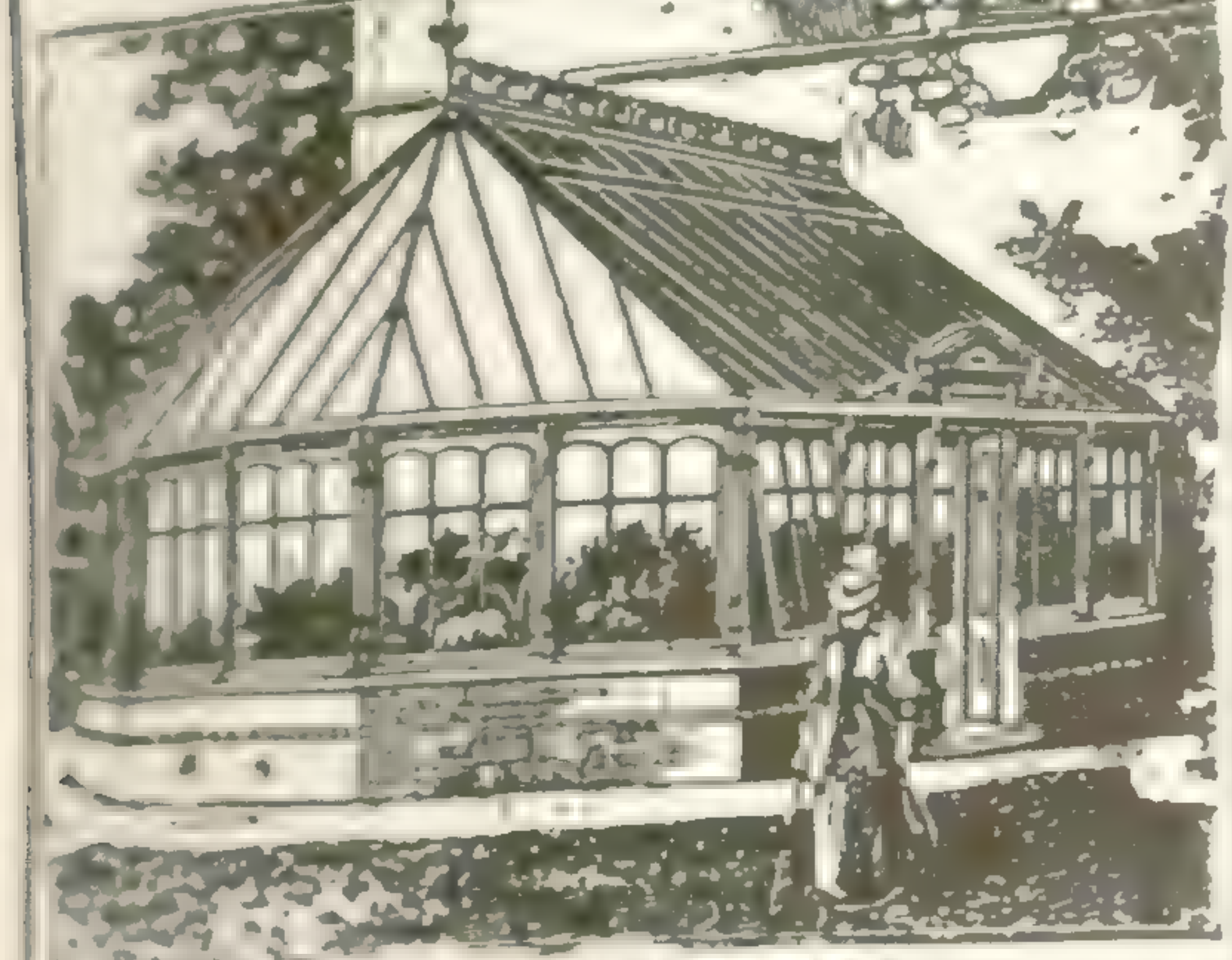
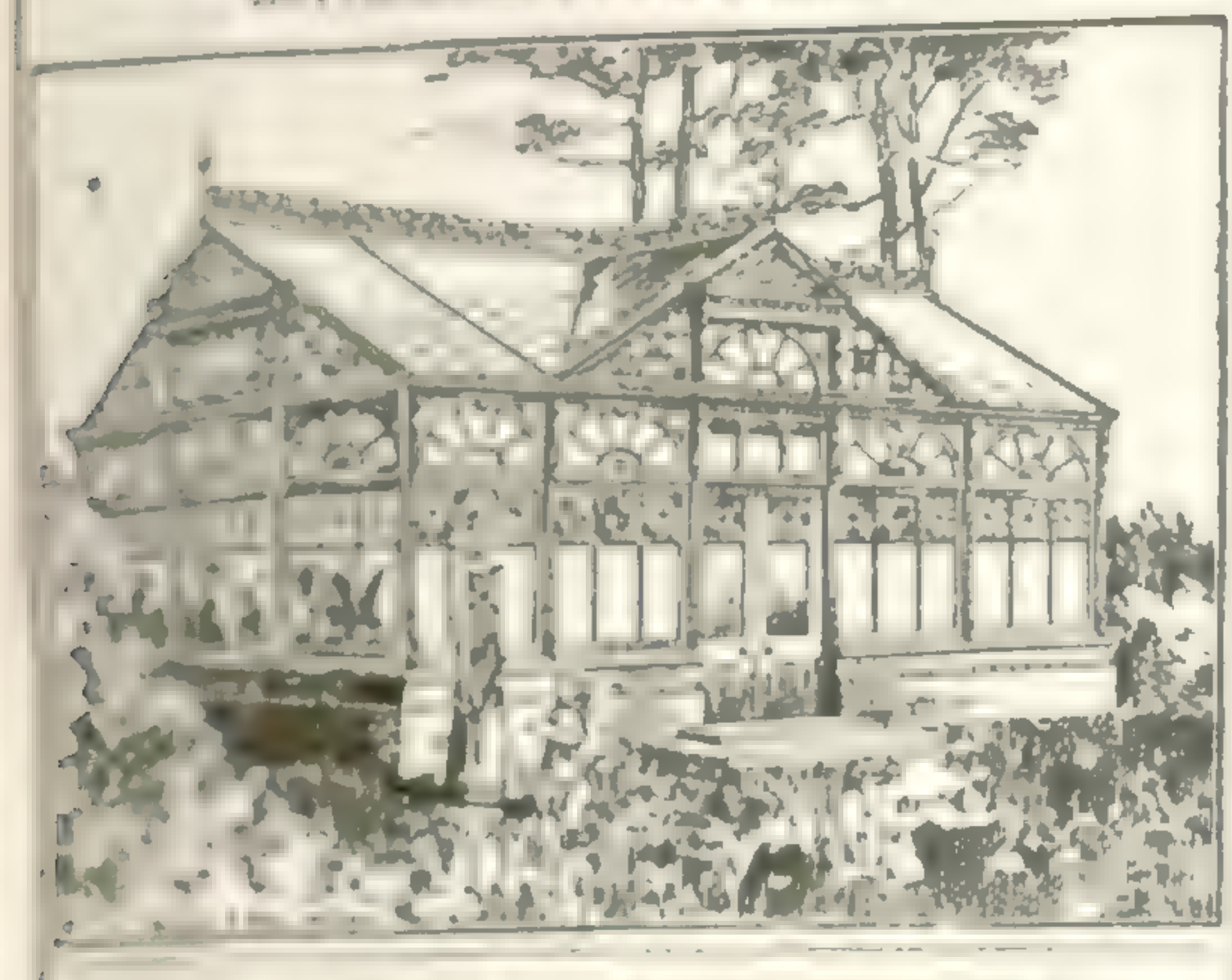


ESTIMATES SUBMITTED.



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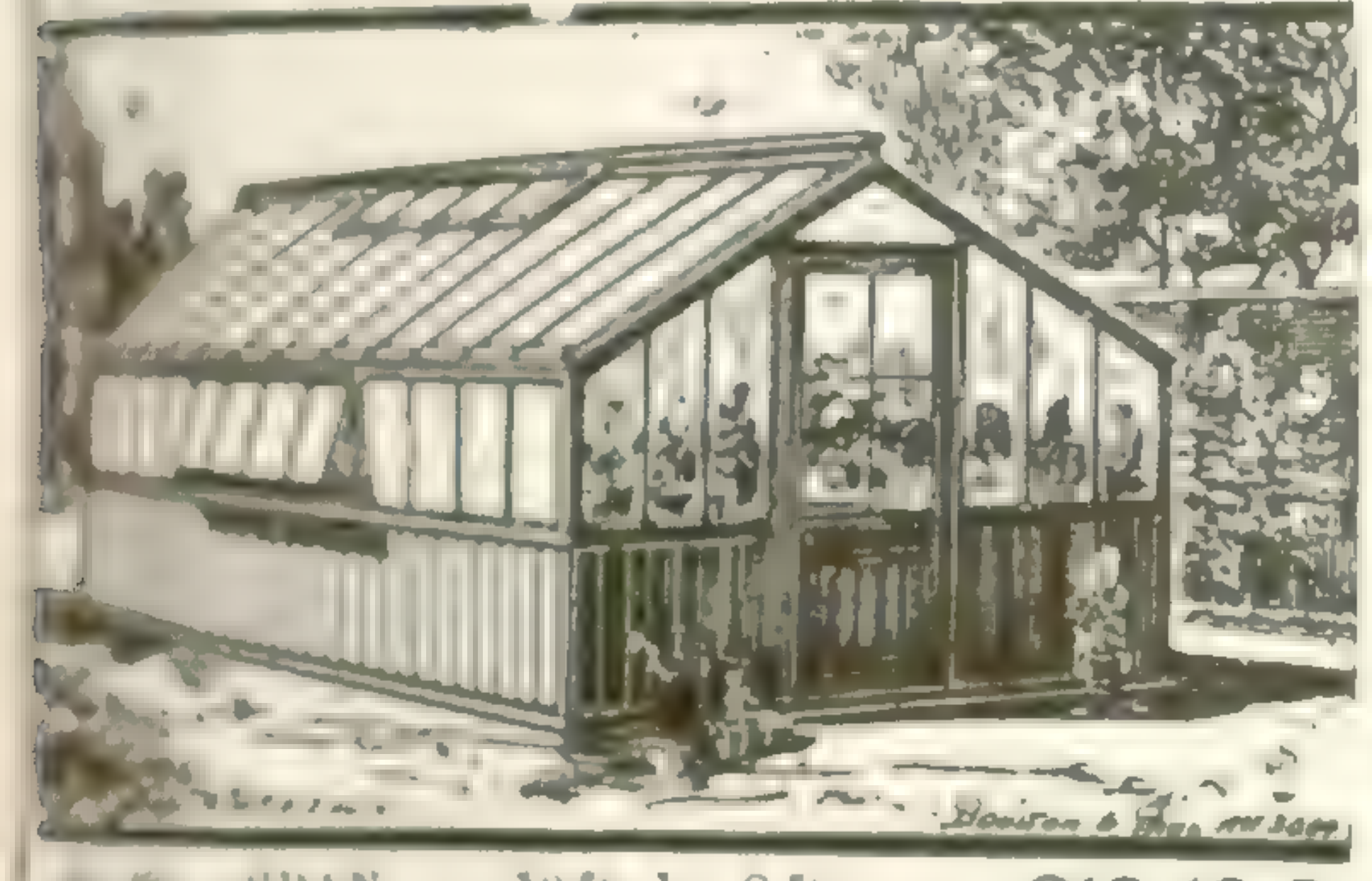

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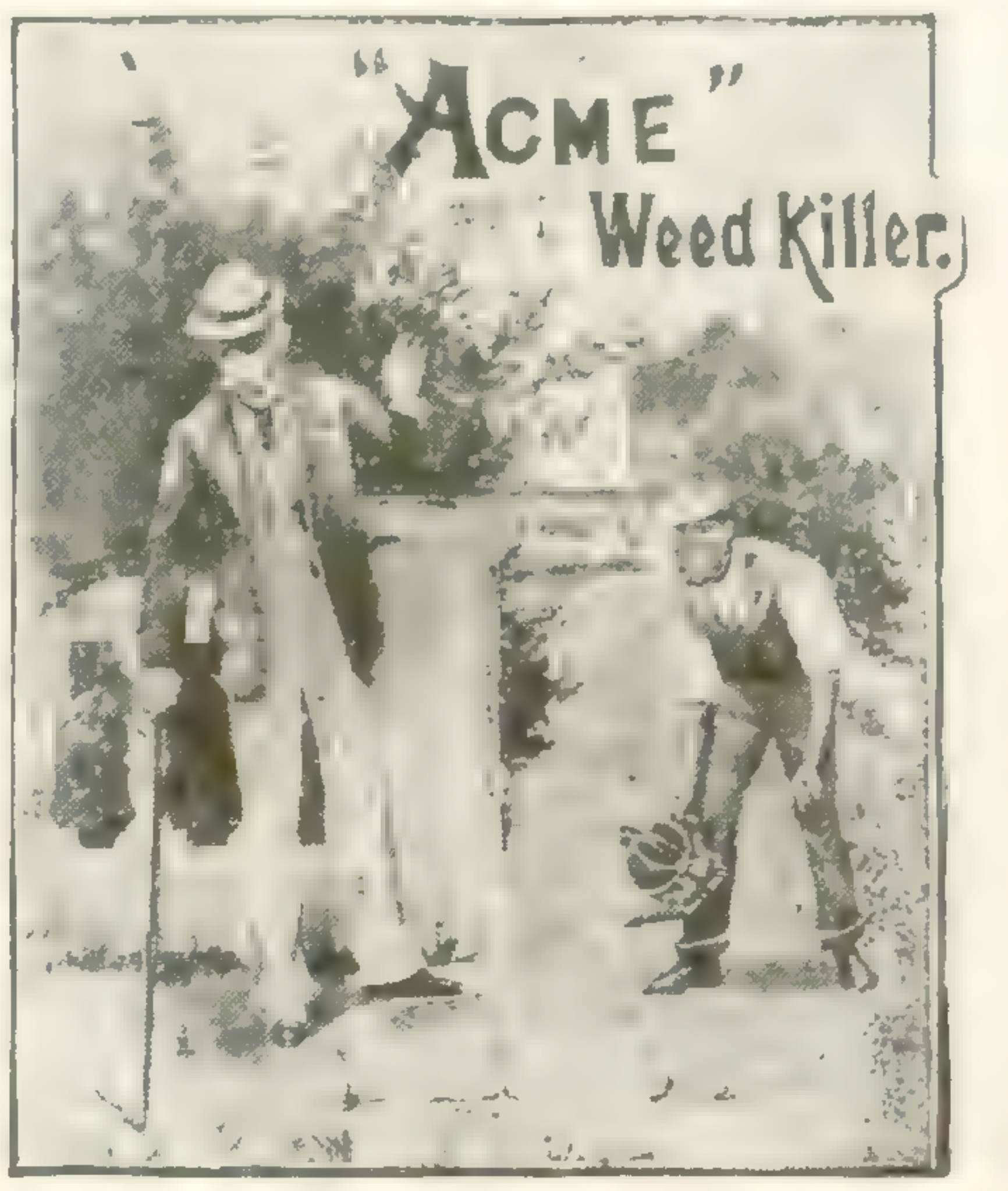

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and strengthen the plants. Remove and burn all the badly infected plants, and also cut away and burn the diseased leaves on other plants. Spray the plants left, and also the soil, walls, and woodwork, with a weak solution of potassium sulphide—one ounce of sulphide to three gallons of water, dissolving the sulphide (liver of sulphur) in hot water before making up the desired quantity with tepid water. After this, fill up the vacant places with healthy plants from a new source and spray the whole houseful of plants once a week until the fruits are of some size. The potassium sulphide solution ought always to be used upon quite young tomatoes where there has been a fungus attack of any kind during the previous season, as it is a splendid preventive. Liver of sulphur should always be kept handy, not in large quantities, in an air-tight glass or earthenware jar, ready for the slightest appearance of disease. All too often diseases are allowed to obtain a hold upon plants before remedial measures are adopted, and in comparatively few places are preventive measures taken.

CATERPILLAR OF THE MAGPIE MOTH.—S. E. J., Cork: The caterpillars of the magpie moth feed upon gooseberries and red and white currants, eating the young leaves. They usually appear towards the end of May, or during early June. They are not difficult to catch, though they have a habit of dropping smartly to the ground or to a lower branch if disturbed. Smartly tapping the bush will dislodge them, and if the soil beneath the bush is raked clean and level the caterpillars can be easily seen as they fall, and a spade back will put an end to them. The caterpillars feeding now will, if permitted, spin cocoons as soon as full fed, and from these the pretty magpie moths with their black spotting on a cream or white ground, emerge about the middle of the summer, lay their eggs, and the resulting caterpillars winter among the fallen leaves, rough soil-clods, or in the shelter of fences, etc. The value of carefully cleaning a plantation after the leaves have fallen will be obvious.

SELF-SOWN TROPÆOLUMS.—M. B., Malton: Although tropæolums are tender annuals, it is of quite common occurrence for self-sown seedlings to appear in spring where plants were set out the previous year. These seedlings seem to understand the possibilities of the season, and rarely do they appear early enough to fall a prey to late frosts. If the plants are conveniently situated, do not disturb them, but if not, then transplant them where you wish them to flower. We had a piece of new trellis covered with Tropaeolum canariensis last summer, and a very beautiful feature this was, with the golden flowers shining amid the elegant and delicate green leafage; now, all along the base of the fence young tropæolums, varying in height from one to six inches, are abundant, and they will have to be severely thinned out directly.

SEEDLING CYPRIPEDIUM.—T. B., West Dulwich: It may seem unkind to suggest that the baby you have watched over so carefully for several years should be promptly consigned to the flames, but really that is the best thing we can advise you to do with it. There are so many beautiful and useful species of cypripediums, and a whole host of hybrids, many of them fairly cheap now, that it is not worth while giving house room to worthless seedlings. The flower sent is small, and has a badly reflexed dorsal sepal; moreover, it has nothing attractive in its colouring. Keep it another year if you wish, and then, if it flowers no better, destroy it. Do not destroy the other seedlings until they have flowered, because the fact that the first to flower is worthless does not prove that the others will be also.

THE
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NAMES OF PLANTS.

W., Gerrard's Cross.—Anemone fulgens.

MARPOOL, Exmouth.—Sambucus racemosus.

H. M., Ware.—1, Anthericum liliago; 2, Nephrolepis tuberosa; 3, a form of Pteris tremula; 4, Cupressus funebris.

W. X., Bridgewater.—1, Epimedium pinnatum; 2, Genista hispanica; 3, Iberis gibraltarica; 4, I. sempervirens; 5 and 7, garden forms of Helianthemum vulgare; 6, a geranium, send when in flower; 8, Phlox setacea; 9, Potentilla alba; 10, Alyssum saxatile fl.-pl.

H. S. C., Wicklow.—The specimen is a very poor one, but so far as we can make out it is Ruscus hypophyllus, a native of the Mediterranean region, from whence it was introduced in 1640. Its popular name of Double Tongue is suggested by the one small cladode growing out of the mid-rib of the larger one.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. MAY 10 TO MAY 16.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 10 Sunday	5 40	53	51	63	48
,, 11—Monday	2 55	55	48	59	38
,, 12—Tuesday	7 20	55	51	62	47
,, 13 Wednesday	7 55	53	47	58	43
,, 14—Thursday	0 25	50	48	54	44
,, 15—Friday	1 25	51	47	57	47
,, 16—Saturday	5 0	57	53	62	46
Means	4 23	53	49	59	45

DATE. 1908. MAY 10 TO MAY 16.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
May 10—Sunday	—	53	52	49	42
,, 11—Monday	0·15	53	53	49	30
,, 12—Tuesday	—	54	53	49	48
,, 13—Wednesday	0·29	54	53	50	40
,, 14—Thursday	0·21	53	53	50	39
,, 15—Friday	0·16	51	52	50	40
,, 16—Saturday	—	51	52	50	41
Means	(total) 0·81	53	53	50	40

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Arums	per doz.	2 0	
Asparagus	per doz. bun.	1 6	
Azalea, white	per doz. bun.	3 0	
,, mollis	per bun.	0 9	
Berberis leaves	per doz. bun.	1 6	
Carnations	per doz. blms.	1 0	
,,	per doz. bun.	8 0	
,, Malmaison	per doz. blms.	8 0	
Cattleyas	per doz.	8 0	
Croton leaves	per bun.	1 0	
Cyclamens	per doz. bun.	6 0	
Cypripediums	per doz. blms.	2 0	
Eucharis	per doz.	3 0	
Forget-me-not	per doz. bun.	2 0	
French fern	per doz. bun.	1 0	
Freesias	per doz. bun.	2 0	
Gardenias	per doz.	1 6	
Gladiolus Colvillei	per doz. bun.	7 0	
Gypsophila	per doz. bun.	3 0	
Iris, Spanish	per doz. bun.	4 0	
Lapagerias	per doz.	1 0	
Lilac	per bun.	2 0	
Lilium auratum	per bun.	2 6	
,, speciosum	per bun.	2 0	
,, longiflorum	per bun.	2 6	
Lily of the Valley	per doz.	6 0	
Marguerites, white	per doz. bun.	3 0	
,, yellow	per doz. bun.	2 0	
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Odontoglossums	per doz. blms.	2 0	
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Apples, Australian	per case	8 0	18 0
,, Canadian	per barrel	10 0	19 0
,, Tasmanian	per box	8 0	18
Bananas	per bun.	5 0	10 0
Cherries, French	per box	1 0	1
Figs	per doz.	2 0	8 0
Grapes, English (new)	per lb.	2 0	10 0
,, Cape	per box	2 0	10 0
Lemons	per case	8 0	12 6
Melons, Guernsey	each	1 3	3 0
Oranges	per case	7 0	30 0
Peaches	per doz.	15 0	30
Pears, Cape	per box	5 0	7 6
,, Australian	per box	3 0	7 0
Pineapples	each	2 0	4 6
Strawberries	per lb.	1 6	3

Vegetables.

The brighter weather has increased business in salading, asparagus, and greenstuffs.

		s. d.	to s. d.
Artichokes	per doz.	2 0	
Asparagus, Paris green	per bun.	1 3	
,, English	per bun.	1 0	
,, Spanish	per bun.	0 6	
,, Sprue	per bun.	0 6	
Beans, Guernsey	per lb.	0 6	0 9
Beet	per bush.	1 3	
Cabbage	per tally	3 0	
Carrots	per doz. bun.	1 0	
,,	per bag	2 0	
,, French (new)	per doz. bun.	5 0	
Cauliflowers	per doz.	1 0	
Celeriac	per doz.	1 6	
Chicory	per lb.	0 2	
Cucumbers	per doz.	1 6	
Endive	per doz.	1 0	
Greens	per bag	1 0	
Horseradish	per doz. bun.	9 0	
Lettuce, cabbage	per doz.	1 0	
,, Cos	per doz.	3 0	
Mint	per doz. bun.	1 0	
Mushrooms	per doz. lb.	8 0	
Onions, spring	per doz. bun.	1 0	
,, Spanish	per case	5 0	
Parsley	per doz.	1 6	
Peas, Guernsey	per lb.	0 6	
Radishes	per doz. bun.	0 10	
Rhubarb	per doz. bun.	1 0	
Seakale	per doz. bun.	9 0	12 0
Tomatoes, Teneriffe	per package	16 0	
,, English	per lb.	0 8	
Turnips, French (new)	per doz. bun.	5 0	8 0
Watercress	per doz. bun.	0 4	

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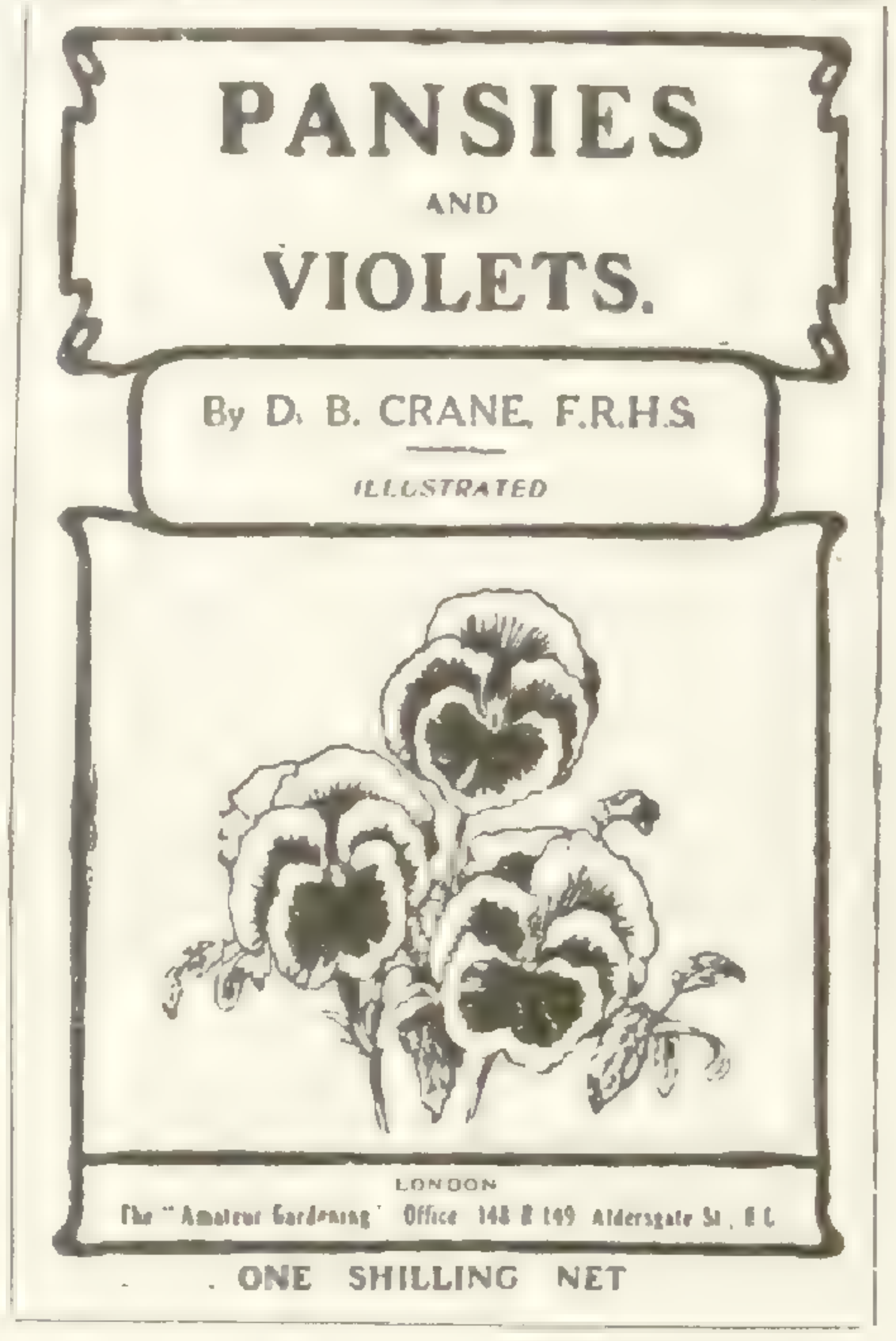

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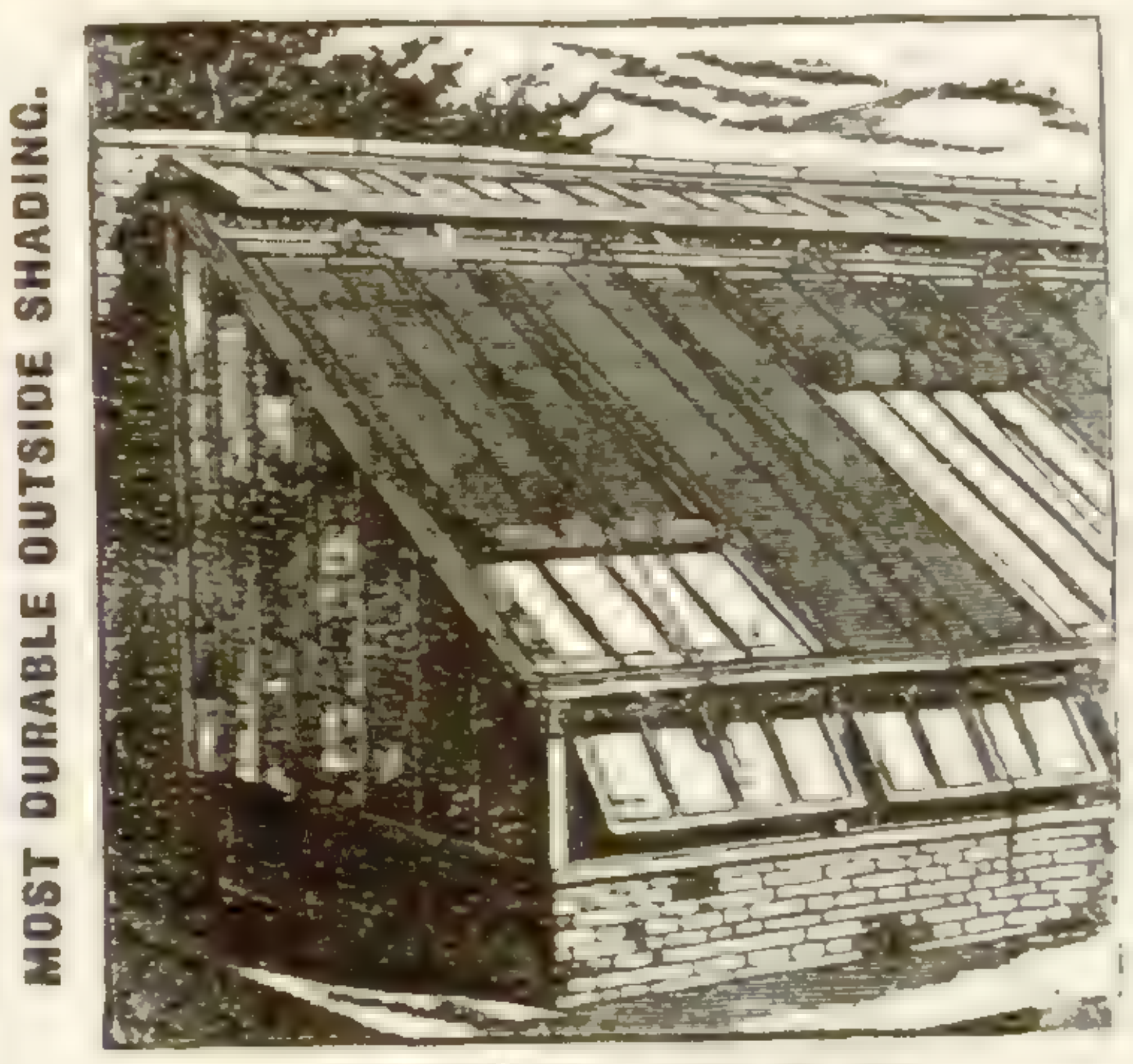

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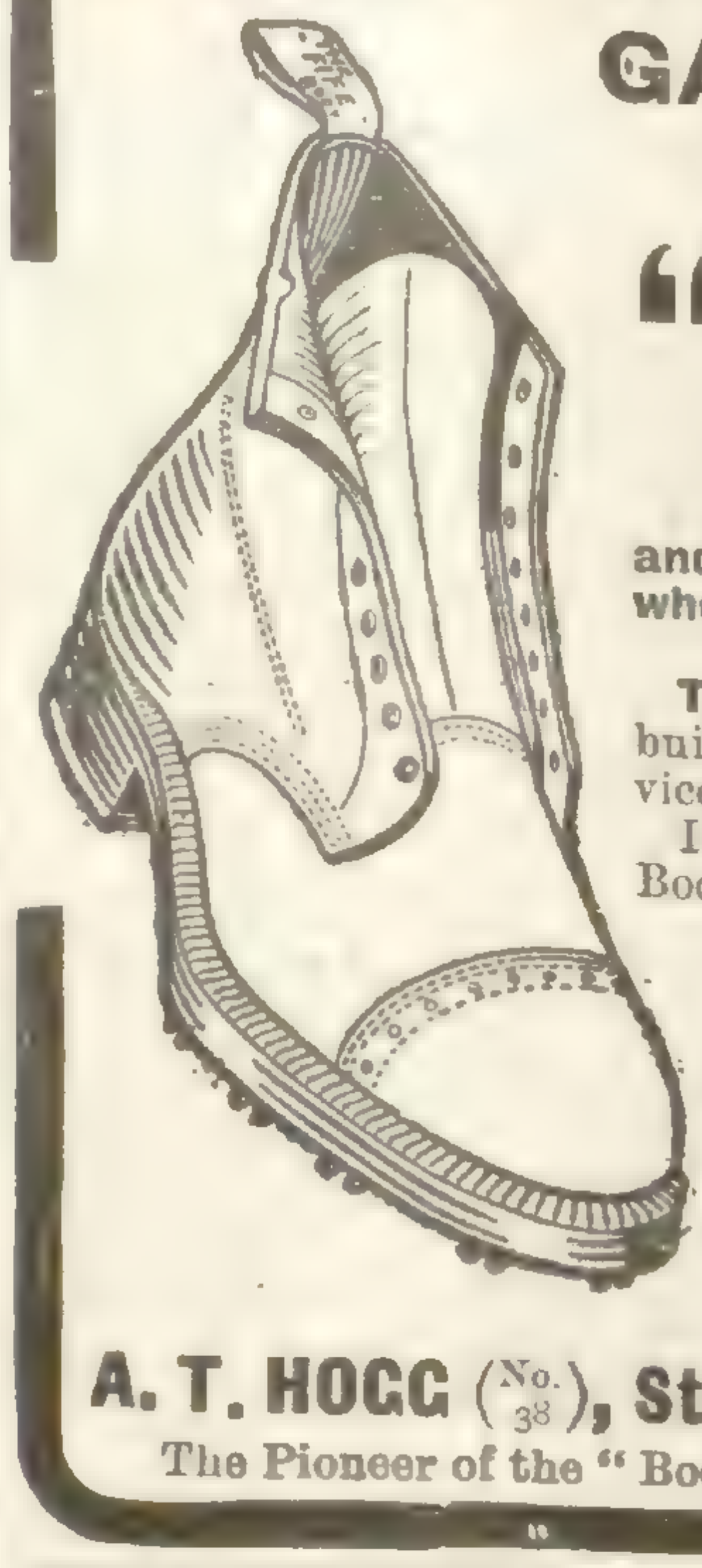

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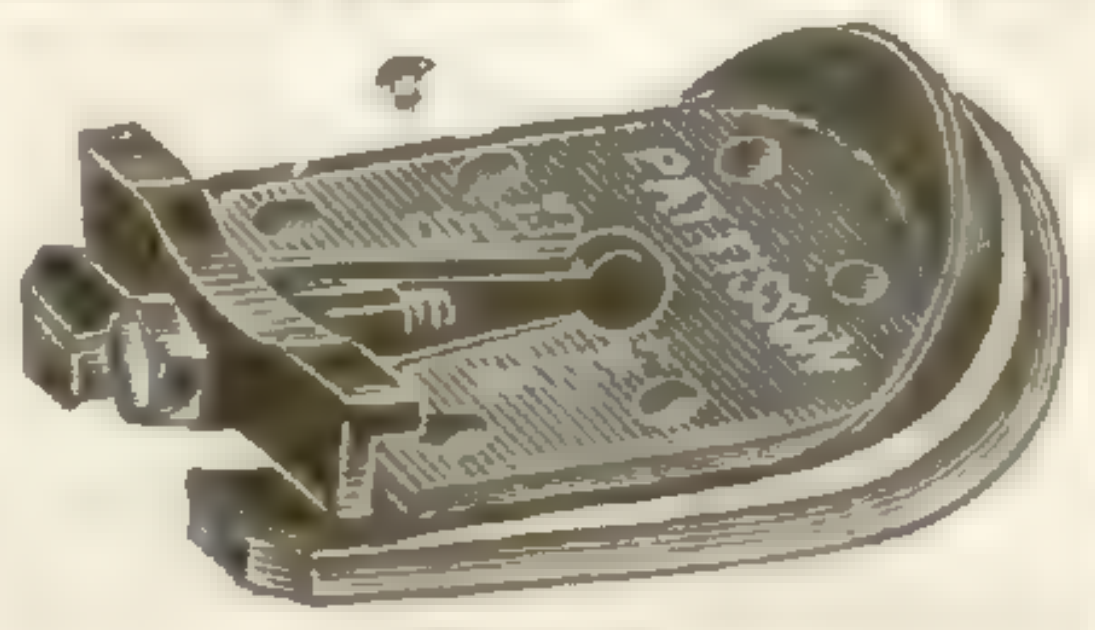

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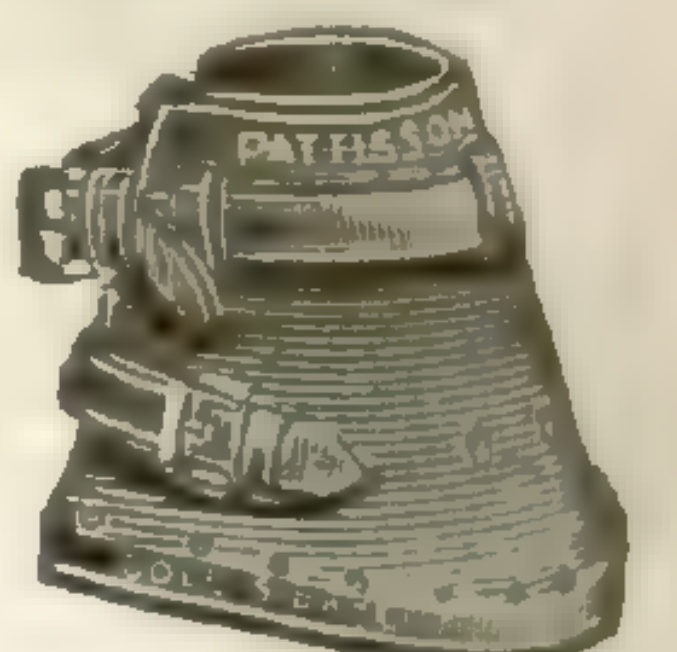

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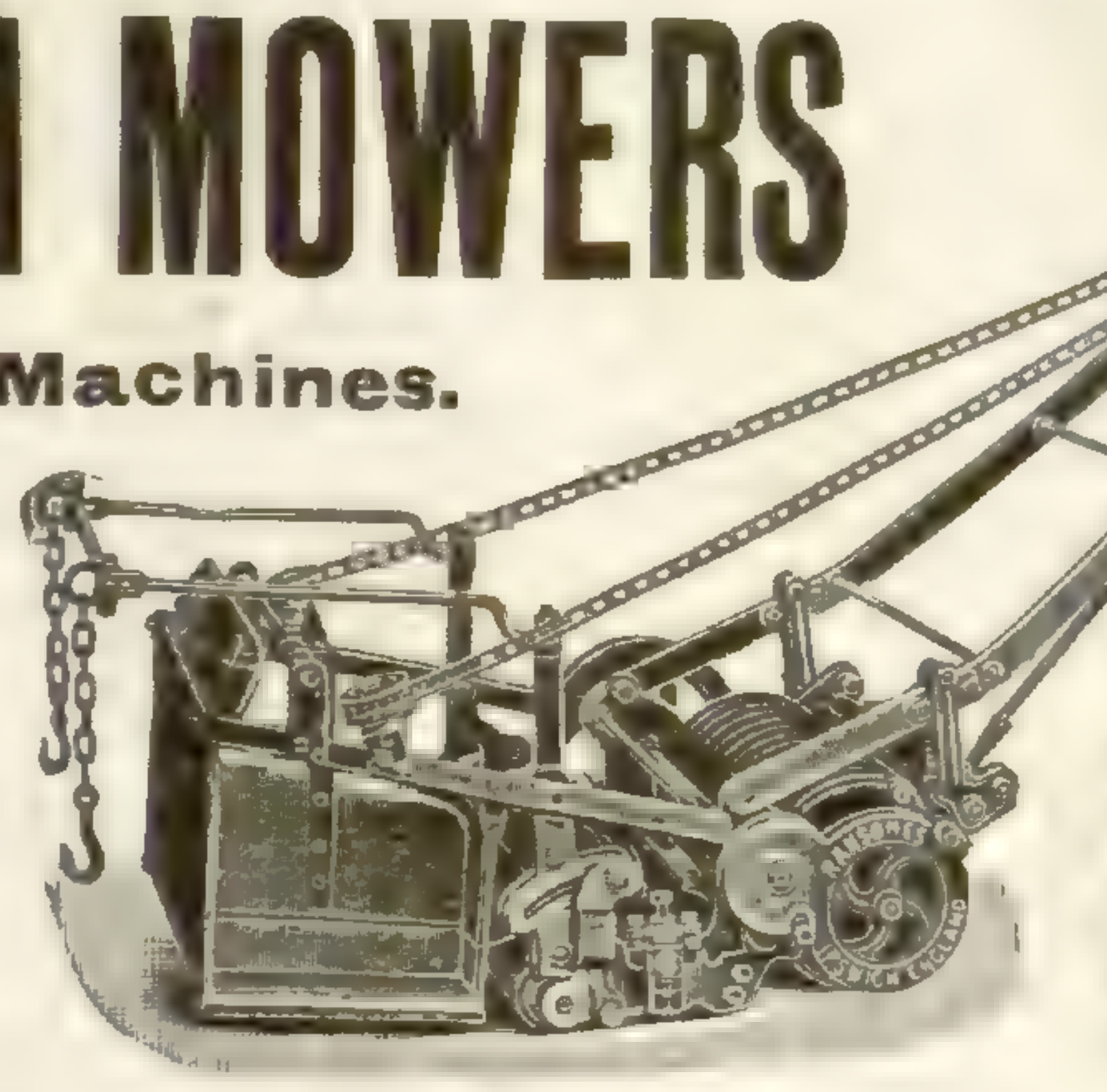

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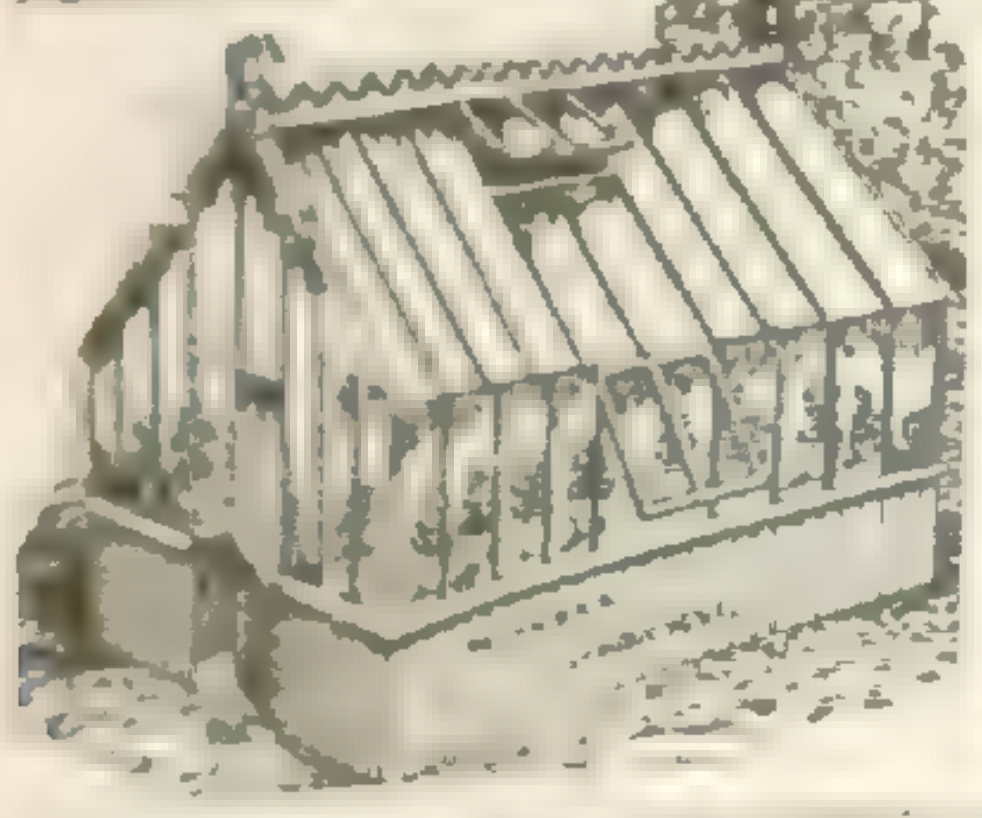

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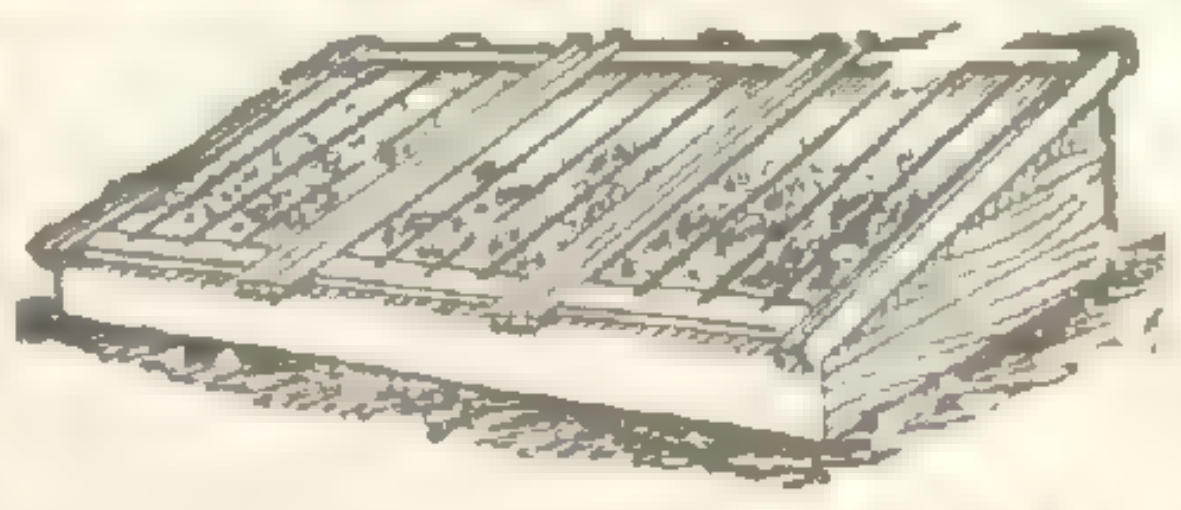

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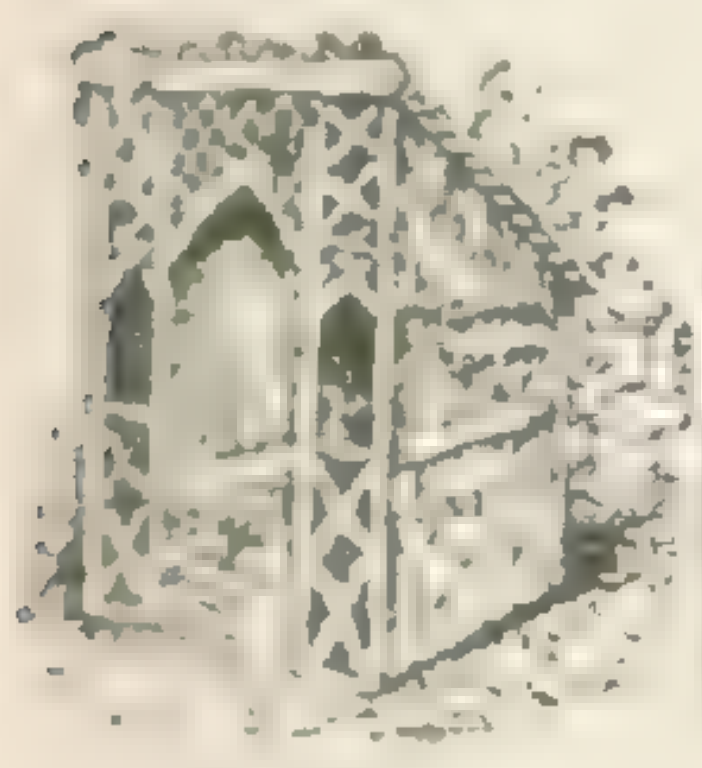

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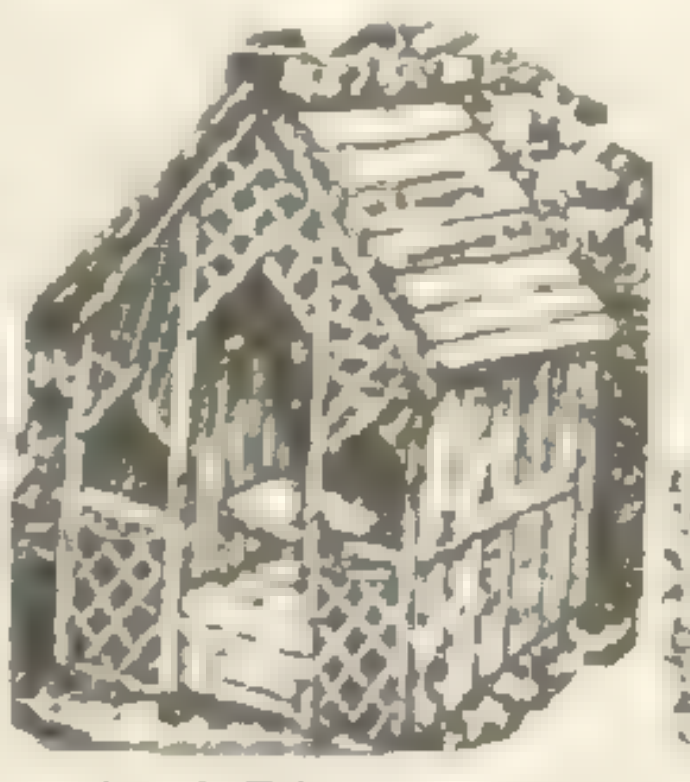

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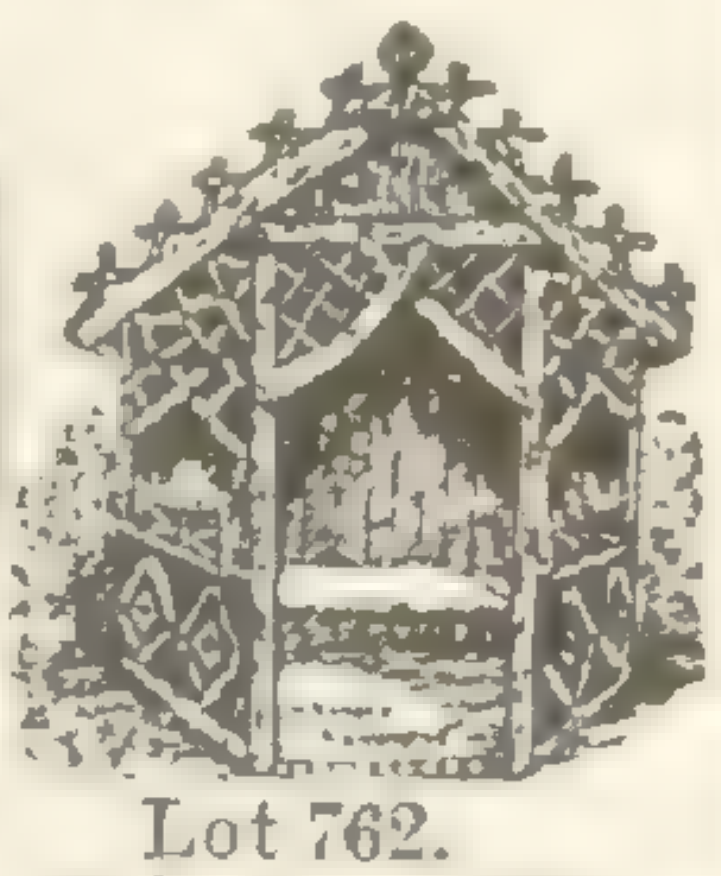

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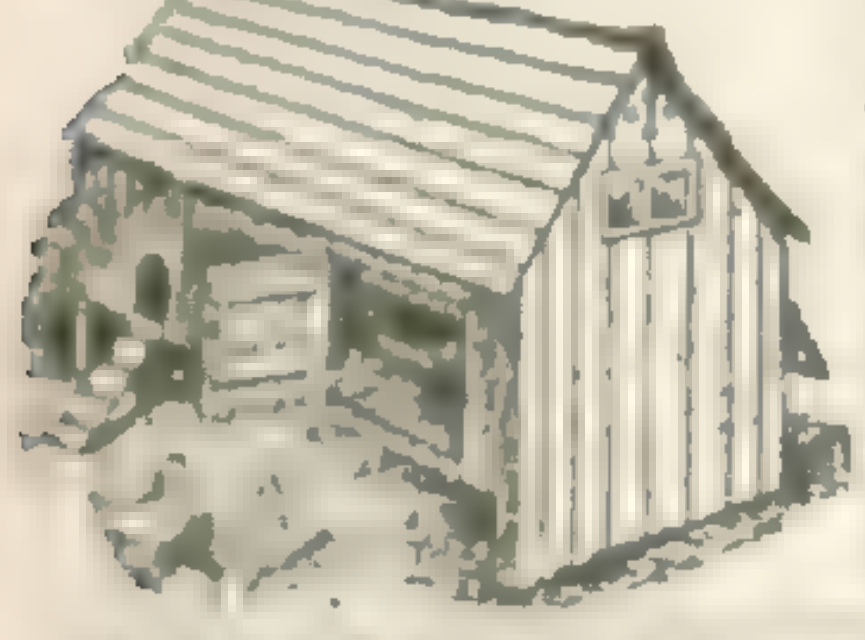

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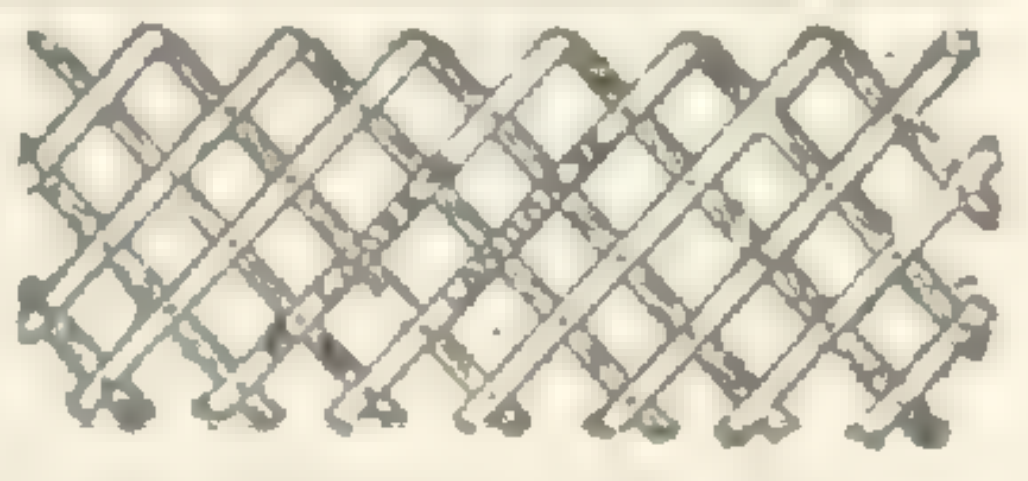

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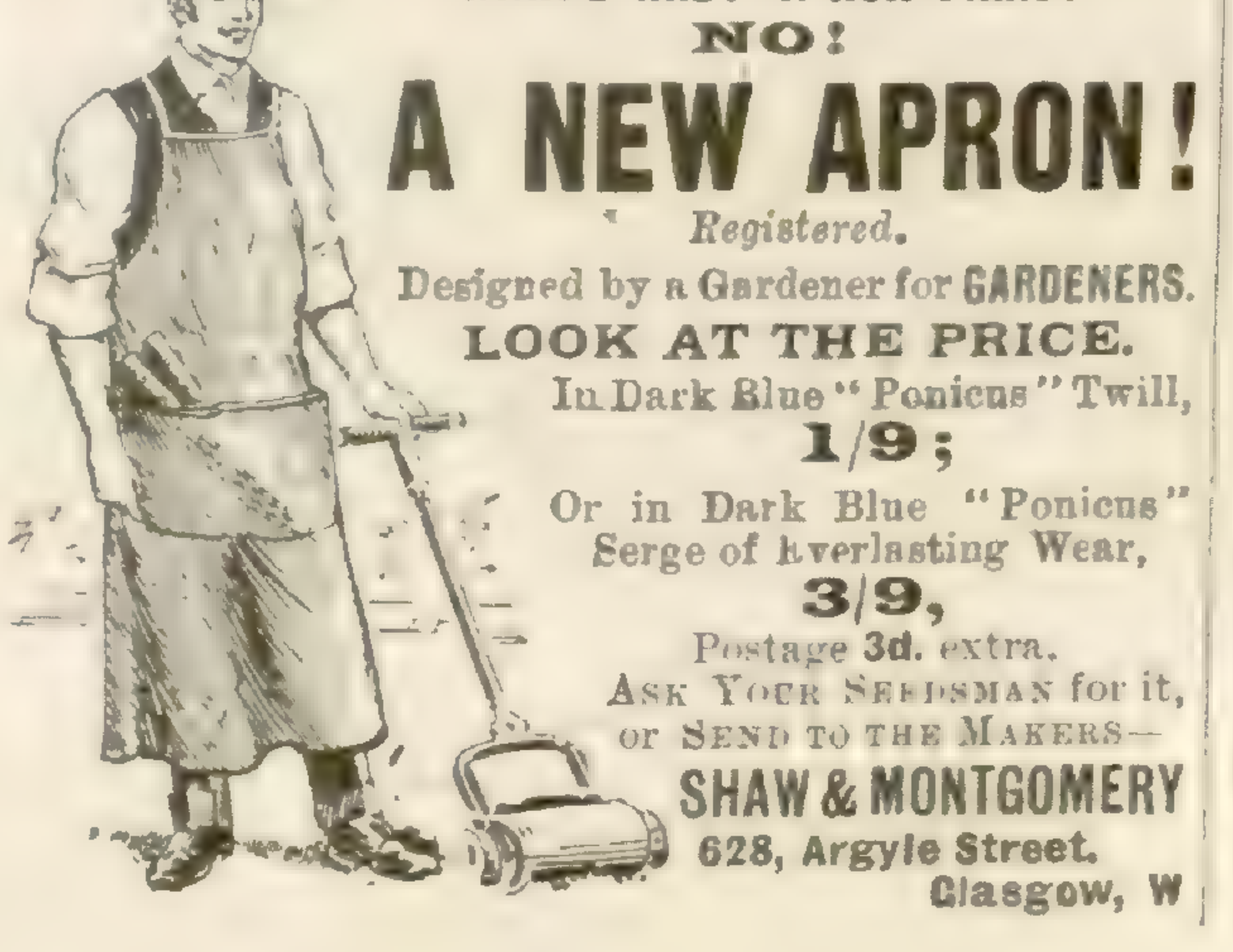

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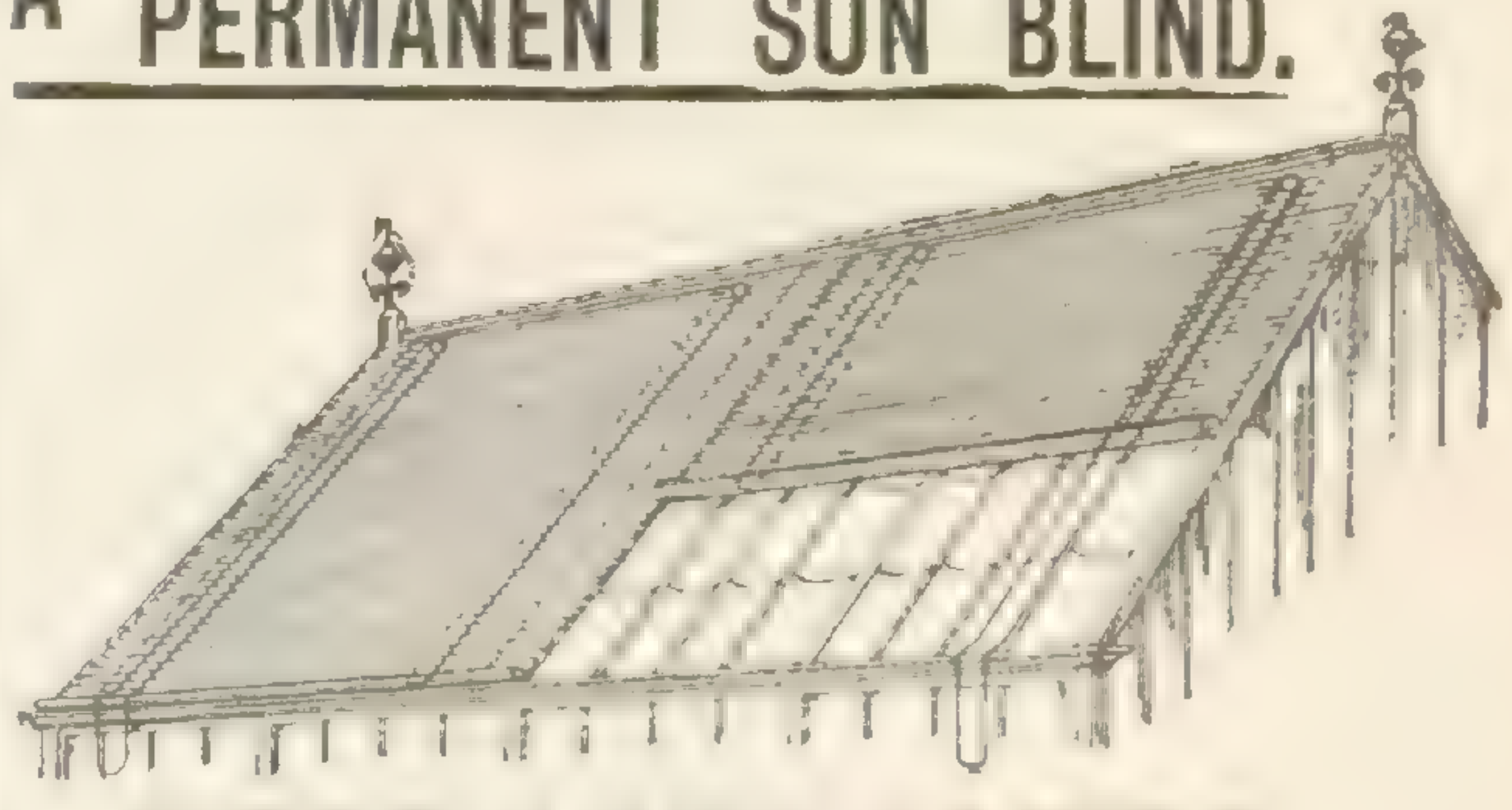

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VOL. LI.—No. 2,848. SATURDAY, MAY 30, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The Temple Show.

The magnificent exhibition that has been held in the gardens of the Inner Temple during the past week was the twenty-first of the great horticultural gatherings that have been held in these historic gardens, and consequently possessed much interest apart altogether from its many attractions. The Temple shows represent perhaps the greatest revolution in horticultural exhibitions that has been made since they were established in this country. There have been many changes in flower shows since their institution, but these have for the most part been brought about by the changes in public taste and the endeavour made to adapt them, as far as possible, to the altered conditions. They underwent but little alteration in one respect; they were almost exclusively competitive. Classes were provided for specified collections and single specimens, with prizes proportionate to the importance of the objects invited, and these were competed for in accordance with the prescribed conditions. There were changes in the character of the exhibitions, but there was no material deviation from the practice of stipulating what the exhibitors should show, or of offering prizes as an inducement for them to contribute of their best. The practice of providing prizes at flower shows had indeed been so invariable that the announcement made by the Council of the Royal Horticultural Society, that they were about to hold an exhibition without specified classes and cash prizes came as a surprise. Not only were horticulturists surprised when the programme of the first Temple Show in 1888 was issued, but many horticulturists feared that an exhibition held under such conditions would fail to obtain a full measure of success. The results of the exhibitions held during the past twenty-one years have proved to demonstration that there was really no cause for fear either as regards the attractions and interest of the displays or the support of the flower loving public. We should have to go back many years to find exhibitions of any one society that have been so uniformly successful, and this exceptional success does not appear difficult of explanation. Exhibitions conducted on orthodox lines, while admirably adapted to local conditions, do not afford the same opportunities for presenting to public notice so great a diversity of plants and flowers, or of giving prominence to novelties as do the Temple shows, as at these exhibitors are practically free to show what they please. Hence the exhibitions have been most varied and interesting, and they have afforded facilities for becoming acquainted with much larger numbers of plants than was possible at the competitive gatherings. To over estimate the educational value of the Temple Shows would be impossible, and it appears difficult to conceive any other means by which so full a representation of hardy and tender ornamental plants could from time to time be brought into prominent notice. Neither would it be easy to devise any scheme by which gardeners in country districts could be more fully informed as to the trend of public taste than these annual gatherings afford; and that they fully appreciate their opportunities is made evident by the large numbers who annually make a point of "coming up to the Temple Show." We find in these shows also the best possible proofs of the great changes that have been made in the embellishment of the garden during the past two decades. In the earlier exhibitions, stove and greenhouse plants were largely represented, but now they are so sparingly shown as to form a relatively small part of the display. As a set off there has been so great an increase in the contributions of hardy plants and of their flowers in a cut state, that they would alone form an exhibition of no mean proportions and of immense interest. Still more noteworthy has been the increase in the exhibition of hardy trees and shrubs remarkable for the beauty of their leafage and flowers, and on this occasion, as for some years past, they constituted one of the most attractive and useful of the many good features. Roses continue to be increasingly shown, and both plants and cut blooms were sufficiently numerous to provide abundant entertainment for the rose-lover. Dwarfs and standards were numerically strong and of high quality, but the ramblers in their varied colours, grown in pillar form, probably appealed the most strongly to the general body of visitors. Orchids have throughout the past twenty-one years contributed materially to the success of the shows in the Temple Gardens; but it need hardly be said that there was a considerable difference in the contributions to the section devoted to them this year as compared with the collections contributed to the earlier exhibitions. The increased numbers indicated the higher degree of popularity to which these fascinating plants have attained, and the larger numbers of new forms testified in no uncertain manner to the activity of the ever

MR. CONWAY JONES.

increasing number of hybridists. It was gratifying to have evidence in the exhibition of the continuous increase in the popularity of hardy plants, trees, and shrubs, and orchids; and not less so to find that British ferns are once more being regarded with favour. Of the exhibition as a whole we have nothing but praise, and we heartily congratulate all concerned in bringing it to a successful conclusion on the splendid results of their labours.

Mr. Conway Jones, whose portrait we have much pleasure in giving in this issue, has for many years occupied a prominent position among amateur rosarians, and has throughout been held in the highest estimation by rosarians generally. We are not in a position to say how long Mr. Conway Jones has been engaged in the winning of prizes for roses, or how many awards have been made to roses from his garden, but we know that for a very considerable period he has been a formidable competitor at the exhibitions of the National Rose Society and a few other of the leading societies; and that the prizes he has been successful in winning would make a lengthy list. He has for competitive purposes confined his attention almost exclusively to the cult of the exhibition rose, and year after year we find him staging blooms of the hybrid perpetuals, the hybrid teas, and the teas, remarkable for their splendid development alike in form and colour. Both in culture and staging Mr. Conway Jones has shown so marked an improvement during the past few years that we shall not be surprised to find him carrying off the amateur's challenge trophy at the Metropolitan show at no distant date. There is certainly justification for the anticipation that he will in due course attain to the highest position open to an amateur rosarian, for, in addition to his many other successes, he was awarded the jubilee trophy at the northern exhibition of the National Rose Society in 1906, and last year he obtained second place in the keen competition for the amateur championship at the society's Metropolitan show. Mr. Conway Jones has for some years been a member of the National Rose Society's general committee.

The Rock Garden at Kew contains much of interest at this season of the year, but at present its great attraction lies around the Dripping Well, where white sheets of candytuft drape the surrounding rocks, and where golden calthas are reflected in the little streamlet. But of equal beauty is the large patch of Cardamine latifolia, a very handsome purplish-rose flowered species from the Pyrenees. It is quite at home in its moist surroundings, and is well worthy of noting as a meritorious plant for water margins.

Prospects of the Fruit Crop.—It is now many years since the prospects of an abundant yield of fruit have been so favourable at the end of May as they are this season. When at the end of April the United Kingdom was visited by wintry weather of quite exceptional severity, it was feared by many that an immense amount of damage had been done in orchards and fruit plantations; but happily at that time but few blossoms of orchard fruits had expanded. The plum trees were the most advanced, and where, as in the neighbourhood of London, they were partly in bloom, the flowers on the outside of the trees were destroyed. Those on the inner branches escaped, and fairly good crops will be gathered from trees that were almost in full bloom. The majority of the plum trees were not in flower, and as the fruits have set well, there will, on the whole, be a heavy crop. Cherries promise an abundant yield, and of Morellos there is a prospect of an exceptionally heavy crop. Pears have set their fruits so freely as to justify the anticipation of one of the heaviest crops of recent years. Apples also promise a record crop, for the fruits have set well, and as the trees have not been taxed of late years by excessive fruit bearing the quality should be high. Currants and gooseberries were in bloom at the end of April and suffered considerably from the effects of the severe frost, but the damage is less than was at one time feared would be the case. Some damage was also done to strawberry plants in open fields, but not sufficient to have any material effect upon the crop as a whole. Altogether, the outlook for fruit growers is more satisfactory than for several years past, as all kinds have at the present time the promise of yielding an excellent harvest in due season.

The Gardeners' Company.—A special meeting of the Court of Assistants of this company was held on the 19th inst., at Fishmongers' Hall, to confirm the minutes of a meeting held on March 24 relating to the conferring of the honorary freedom of the company on the Duke of Teck, Lord Meath, Lord Monkswell, Professor W. A. Herdman, and Mr. F. S. W. Cornwallis. The Duke of Teck wrote expressing his regret that his duties prevented him leaving Vienna, and Lord Monkswell was stated to be too indisposed to attend. Lord Meath, Professor Herdman, and Mr. Cornwallis were then admitted to the freedom of the Guild. Following the special meeting was a ladies' dinner at the same hall, and at this, as at the meeting which preceded it, the Master, Sir Thomas Dewar, presided. The toast of "The Gardeners' Company," was proposed by the Lord Mayor, and in reply the Master said the Gardeners' Company was doing its best to raise the prestige of the City Guilds, and they were about to apply to the Court of Aldermen to allow their livery to be enlarged. Their aim was to foster gardening industry and to further the interest of gardeners.

Apple French Crab.—With reference to the correspondence on the question of the identity or otherwise of Northern Greening with the French Crab, Mr. George Bunyard, V.M.H., writes: "Your correspondents are wide of the mark in thinking Northern Greening apple to be the same as French Crab. The former is more egg-shaped and often has an enlarged stalk or knob, and the growth is upright, compact, and full of spurs, while French Crab is of moderate growth, rather open in the head, and generally in old trees umbrella shaped. The fruits are very hard and firm, and often keep two years, and I have seen them hang on the trees till January. Northern Greening, which in Sussex is called Walmer Court, is a smooth green apple, sometimes in sunny years deep red and bronzy on the sunny side, and is sub-acid in flavour, and quite distinct from the dry and harsh flesh of the French Crab. It is unfortunate that Winter Greening is recognised as a synonym of French Crab, and very confusing. The best form of the Northern Greening type is the variety known as Sandringham.

Cyclamen Flowers from York.—From the Deighton Grove Gardens, York, Mr. G. W. Richardson sends us a box of flowers and leaves of the strain of cyclamen which he cultivates so successfully. The strain of giant forms is an exceptionally good one, the flowers large, with broad, stout segments, the whites remarkable for their purity, and the rose, pink, and red shades bright and effective. The butterfly type is not less remarkable in its way, the flowers being large and effective in colour. The flowers have not been sent us for the purpose of obtaining an expression of opinion as to the merits of the strain, but as evidence of the value of cyclamens for decorative purposes, and the supply of cut flowers when well grown. We have, however, thought it desirable to refer to the high quality of the types for the purpose of congratulating Mr. Richardson on the judgment he has shown in devoting his cultural skill, which is evidently of a high order, to subjects worthy of it. Some of the leaves have a diameter of fully five inches, and are beautifully marbled and free from a trace of coarseness.

Rhododendron Exhibition at Regent's Park. — Messrs. John Waterer and Sons' exhibition of rhododendrons in the gardens of the Royal Botanic Society, Regent's Park, will be opened on Wednesday, the 10th inst.

Summer Bedding at Birmingham.—Preparations for the great summer display of flowers in the Birmingham parks are now being pressed forward. The spring display has been good, but very late. Mr. W. H. Morter, the parks superintendent, has a busy time before him during the next fortnight, as a quarter of a million zonal pelargoniums have to be planted, together with tens of thousands of lobelias, pyrethrums, alternantheras, etc., ten thousand fuchsias, two thousand five hundred [illegible]liums, and about a hundred thousand each of stocks, coreopsis, and marigolds, as well as fifty thousand asters. These figures give one some idea of the immense amount of work to be done, and the forethought brought to bear upon the beautification of Birmingham's parks.

Friar Park Gardens.—Sir Frank Crisp, LL.B., has forwarded the sum of £31 6s. 5d. in aid of the funds of the Gardeners' Royal Benevolent Institution, being a proportion of the admission fees paid by visitors to the beautiful gardens of Friar Park, Henley-on-Thames, on the occasions on which he has generously thrown them open to the public.

A Heavy Hailstorm passed over South Lincolnshire a few days since, and, although of short duration, did some damage in fruit plantations. The injury to the tender fruits is, however, much less than was at first supposed to be the case.

Flowers sent to this country from abroad during April were returned as of the value of £42,681, making the total for the first four months of the year £137,5[illegible]. These figures represent a decrease for the month of nearly £8,000, and for the four months an increase of £472.

Tulip Show at Philips Park, Manchester.—One of the largest of Manchester's open spaces is Philips Park, in the Bradford and Clayton district, and here each spring a fine display of bulbous plants is provided, and on Sunday, when these are at their best, if the day be fine, the residents and many folks from the surrounding neighbourhood make a point of visiting the park, and bright dresses vie with bright flowers. "Show Sunday" was on May 17, and the tulips, then in great beauty, attracted many thousands of people.

OUTDOOR TOMATOES.

From the point of view of a gardener who has glass structures to spare for the culture of tomatoes, the outdoor culture of this subject is scarcely worth troubling about, so uncertain is it in our climate. It is quite a different thing, however, in the case of those who lack glass accommodation, for the chance of getting a good return for the pains involved is to them well worth hazarding.

In warm, sunny seasons, under good management, a fair return is almost certain, though, unfortunately, when preparations for a crop have to be made one cannot foresee what kind of season we are entering upon, hence the risk. Some years ago we used to grow a number of plants out of doors, but for the foregoing reasons the practice was discontinued. Chemin Rouge, Vick's Criterion, and Large Red were the varieties we were most successful with.

It is important for outdoor culture that the plants are sufficiently advanced at planting time, early in June, for their earliest clusters of flowers to have set fruit, and even then, in the best of seasons, the weather does not keep warm enough for a sufficient length of time for the latest fruits of a good crop to ripen out of doors. Notwithstanding this, a mistake may be thoughtlessly made by sowing the seeds too early, and thus sometimes the plants are kept long enough in pots to become stunted and weakened ere they can be safely planted out.

The end of March or beginning of April are suitable times, if the plants are given good treatment, for sowing the seeds. The young plants should be potted off in small pots, and subsequently shifted on, until finally planted out from pots of six-inch or seven-inch diameter. While passing through these stages of growth they should be kept near the glass in gentle heat, be carefully watered, and the pit must be well ventilated in accordance with outside conditions. They must, however, be gradually hardened off, and for a week or so fully exposed before being planted out.

The tomato is a sun-loving plant, therefore one of the most necessary points in its cultivation is to plant it upon a warm sunny site, and this is desirable even in the brightest of seasons. If walls or close wooden fences are available they answer admirably for training the plants upon, and, moreover, they assist in forwarding the ripening of the fruit. In any case, in the absence of walls, a sheltered warm border is to be preferred, though in favourable districts splendid crops may be grown in open quarters.

The land should be well manured, and especially is this necessary in hot, dry seasons, when the plants may be relied upon to produce good crops. In wet, dull seasons manure may not be so much wanted, but in whatever way the land is prepared, the crops will be of little value under such conditions of weather. The best outdoor crops that we ever had were grown upon an otherwise disused old vine border, which was heavily dressed with stable manure previous to planting.

Walls with south or nearly west aspects only should be utilised, and against these the plants should be placed, two feet apart, each being kept to a single stem. When planting on borders or in open quarters the rows should be at least two feet apart, and the plants in them the same distance asunder, each plant being provided with a sound stake, to which a single stem should be secured. Stop the plants when they have made three or four clusters of flowers, and rub out all side growths. If the weather proves to be hot and dry mulch with short stable manure, and water as necessary, using weak liquid manure, or give a top-dressing of a suitable quick-acting artificial fertiliser, should the plants show signs of distress.

T. Coomber.

The Hendre Gardens.

THE PERPETUAL CARNATION FOR SUMMER FLOWERING.

Much has been written about the perpetual-flowering carnation from the many aspects in which it appears to the various writers. Yet, regarded as a summer bedding plant, it seems to have a new aspect entirely. The future of this popular plant in this sphere is, I think, assured, as last summer Messrs. Hugh Low and Co., of Bush Hill Park, Enfield, had a collection of all the current varieties flowering out in the open, thus proving their adaptability to this method of cultivation.

Larger flowers on long, stiff stems are procured in greater quantity by this means than would have been obtained had the border varieties been grown. There is also a double advantage in that May or June is quite early enough to plant out the perpetual varieties, whereas the border varieties demand being planted in the autumn or very early spring.

If late-rooted cuttings of the perpetual carnations are grown and wintered in cold frames, they should be fine bushy plants in five-inch pots, with from eight to ten flowering shoots, fit for planting out in May of the following year, while plants which have produced an early winter crop of bloom, will flower profusely if planted out for summer flowering in May; even early rooted cuttings, stopped, and with five or six breaks, flower well out of doors during the summer if planted in May. These latter may be lifted and potted in the autumn to produce a continuation of bloom during the winter. In the trials at Enfield, it was found that the plants allowed to remain out of doors, also some planted out as late as September, withstood the winter perfectly; indeed, quite as well as the border varieties grown as neighbours to them.

TEMPLE SHOW—NEW DWARF POLYANTHA ROSE BABY DOROTHY.
Messrs. Hugh Low and Co., Bush Hill Park, Enfield.

In a cold frame, with simply a covering of frame lights, and in which fifteen degrees of frost were registered, several thousands of plants withstood the winter perfectly, only an occasional plant dying. Surely this points to a bright and happy future for the perpetual-flowering carnation.

Montagu C. Allwood.

Bush Hill Park.

New Botanical Garden for Baltimore.—The new botanical garden of the John Hopkins University, at Homewood, Baltimore, U.S.A., is under the charge of Professor D. S. Johnson. The head gardener is Mr. W. H. Witte, who has had considerable experience of botanical gardens in Germany and Italy.

THE DAHLIA AS A GARDEN ORNAMENT.

The dahlia is a plant that has suffered from its own popularity; instead of being used for actual garden adornment it is too often cultivated in plots, or stiff rows, merely for blossom yielding; sometimes the flowers are designed for the needs of the house vases or to give away, in other cases they are wanted for exhibition, while many an instance could be quoted in which they are for no purpose except to prove how well their owner can grow them. No doubt these are all legitimate objects of cultivation, yet the dahlia is not treated justly unless it is recognised as one of the most beautiful of plants for improving the effect of the garden.

TEMPLE SHOW—A FINE WHITE TREE CARNATION, LADY BOUNTIFUL.
Mr. W. H. Page, Hampton.

Last year I was privileged to see how a large lawn can be studded along the edges with dahlias with truly excellent effect. The plants were set singly in smallest round beds, so that their luxuriant foliage touched and spread over the turf when they had attained full growth, quite hiding any earth. Some groups were made of those beds in threes, fives, and fifteens, the colours having been chosen for giving an exquisitely shaded result; in other places single beds were ranged round the edges, just as we treat standard roses; cactus, decorative, and single dahlias were the kinds employed.

Show dahlias, handsome though they undoubtedly are, scarcely possess sufficient elegance to be selected for such use; they are at their best in shrubbery borders where they will create colour harmonies, enrich spots where spring blooming shrubs are looking dull, and fill up gaps. They are especially useful to add to new shrubberies or hedges of young shrubs in order to gain shelter and a screen during the immediate summer and autumn; the nourishment and water demanded by them will prevent their neighbours from suffering through their gross feeding propensities, for superfluous food and drink will actually benefit the permanent subjects, and the interlopers will be removed just as the trees and shrubs are storing up strength for the winter and the following spring's bud and leaf production.

Many a plain laurel hedge or shrubbery could be made beautiful each year by the cultivation of show dahlias in a border bed of rich soil made in front; scarlet, gold, crimson of the brown type, cream, lemon, and white varieties might well be mingled. There are a few admirable effects to be gained by massing dahlias of any class against certain trees and shrubs. Copper beeches, for example, prove a glorious ruddy background for salmon dahlias, so also, of course, would any other subject possessed of bronzy-crimson foliage. The peach-mauve of some dahlias may well be arranged against golden elders and other foliage in which yellow shows, while cream or white dahlias would be equally beautiful if less uncommon in effect.

Wherever there is woodland adjoining a garden, any sort of park land in fact in which bracken fern appears in quantity, the practice should be adopted of planting a few groups of different coloured dahlias, in self masses, at various points, because the autumn hues that the bracken assumes is one of the natural beauties that should be pressed into the service of the landscape-gardener. It is customary to add rhododendron bushes to cultivated woodland openings, but the dahlia should also be recognised as a fit robust plant to introduce annually.

Silver, and white and green variegated trees and shrubs, of which Acer negundo may be taken as an example, make the best backgrounds possible for either rose and carmine, or cerise and scarlet dahlias. In many shrubberies there is not space for any quantity of show, cactus, or single dahlias, yet foreground sites could even then be found for pompons and Tom Thumb dahlias.

The value of the dahlia for bank adornment does not seem to be sufficiently realised; certainly there are bleak places where the gales that sweep across the land would wreak havoc upon plants raised higher than the level, yet this remark applies with extra force to many of the shrubs, etc., usually chosen, and the dahlia when thoroughly staked and tied can weather many a storm. It is essential to give a support to each shoot; this means that stakes painted a dull green must be used, or else the artificial aid will have an unpleasing appearance. Pompon dahlias are especially suitable for this method. A hedging row of young arbor vitæs upon a bank that surrounds the lawn of a newly-built residence I know has a fine show of alternate cactus dahlias, and a row back and front of pompons, the whole forming a close screen of foliage and blossom.

For terrace ornaments dahlias grown singly in square green-painted deep boxes can be highly recommended, not only will their stately height be of value until there is danger of frosts at night, but if the boxes are removed to sheltered south verandahs, balconies, or porches, the flower-yield will be continued much longer, while should there be a conservatory, or any glass-house large enough to accommodate them, the chances are that perfect dahlia blossoms will be produced in November and December.

Lastly, the kitchen garden borders may be made lovely by the planting of a single row of dahlias, the various types of the flower being skilfully grouped and alternated so as to prevent any stiff monotony.

M. H.

Primroses and Polyanthuses, wallflowers, campanulas, and other biennial seeds should now be sown to insure good strong plants for another season. Sow on a warm open piece of ground, well pulverised, but with no fresh manure added. Draw shallow drills about six inches apart, and should the ground be very dry give a good watering a few hours before sowing. Do not sow seed too thickly in the drills.—E. F. H.

Spring Bedding.—Continue to clear away spring bedding plants as they pass out of bloom. With myosotis that have any seed on them, a plan I have sometimes followed has been to scatter them about in parts of the wild garden or woods, where a number of the seeds are sure to germinate, and the following season produce a nice effect, though I find the plan does not answer as well here as in the south. All other plants required for future use must be planted in the reserve garden, propagating and dividing them according to requirements. Aubrietias may be either divided into small tufts or have cuttings inserted singly in a close cool frame, where they will soon root and make nice material for autumn planting; pink cuttings may be inserted in a similar way.—E. F. H.

INFLUENCE OF UNFAVOURABLE SEASONS.

[illegible] aftermath of a cold, sunless summer [illegible] 1907 is sure to be well marked [illegible] ways the following season. On [illegible] ing in a daily newspaper of the suicide [illegible] fraternity at Halifax, and that [illegible] was the unsatisfactory promise for [illegible] of the peaches and vines and [illegible] conservatory plants, it occurred to [illegible] a few remarks on the subject may [illegible] interesting. I know from personal contact with many gardeners that no class of [illegible] are more anxious to please their employers, and we are equally certain that no class of men are as much subject to the vagaries of the different kinds of seasons than are gardeners.

Speaking generally, 1907 was not a good [illegible] for the wood of peach trees to be well [illegible], a condition so essential to success. [illegible], in many places, the crop will this [illegible] as good as usual, and in others of [illegible] different character. We find this year [illegible] some sorts have not set well, notably [illegible] Silver. Such free setters as Dr. Hogg are as good as usual. Hale's Early never fails, but Alexander is not as good as usual. Violette Hâtive, Royal George, and Sea [illegible] are very good. Princess of Wales has [illegible], likewise Exquisite. Dagmar never [illegible]. This year Noblesse is not good, [illegible] very full of flowers. Of nectarines [illegible] Rivers set well, Pineapple and Pitmaston Orange are promising a good crop, Victoria and Prince of Wales are not as good as usual. Of the Salway we have a tree, planted in 1865, and this has set a good crop.

During my thirty years' charge this is the only old peach tree left. I have replaced all the others at different times. We have twenty-five trees, and these are all inside, as outside culture is unsuccessful in our district. We invariably have good crops, though some seasons better than others, and in cold summers it is better to give the trees more fire heat, and not throw the houses open too soon after the fruit is gathered. This, in an artificial way, materially assists in ripening the wood for the following season. I have omitted to say Downton and Lord Napier nectarines have not set so well as usual. From practical observations of the varieties of peaches and nectarines, if I was limited to one variety of each I should select Royal George peach and Elruge nectarine, for those varieties are of the highest order of merit as regards flavour, and withal sure bearers.

With regard to vines, the same treatment applies. A very great deal more fire heat than usual was necessary last year to ripen the crops, and also to mature the wood for this season. The promise this year is good, with the exception of the capricious variety, Cannon Hall Muscat, which has several blind spurs, and shows most fruitfulness on long shoots laid in, and not spurred in very close, indeed the restrictive system does not suit this variety.

With regard to conservatory plants, camellias are not so free-blooming as usual, for in many cases they made a second growth last year owing to lack of sunshine and to the excess of humidity. Azaleas of the Indian type made fewer flower buds. Callas were too exuberant in growth, and consequently fewer flowers. The tea roses in pots [illegible] rather starved outside, and consequently are not as good as usual. The wet [illegible] just suited genistas and coronillas, [illegible] have been better than usual. Agapanthus have fewer flowers than the average. [illegible] plants, such as habrothamnus, [illegible], cantuas, brugmansias, wistarias, and kindred subjects are about as usual, or [illegible] to be. Cyclamen, cinerarias, primulas, calceolarias, pelargoniums, etc., are not [illegible] affected by the weather. No doubt the [illegible] wet weather had a prejudicial effect on the Continental bulbs, which were not quite [illegible] the average, and the clumps of lily of the valley have been somewhat inferior.

[illegible]

W. M.

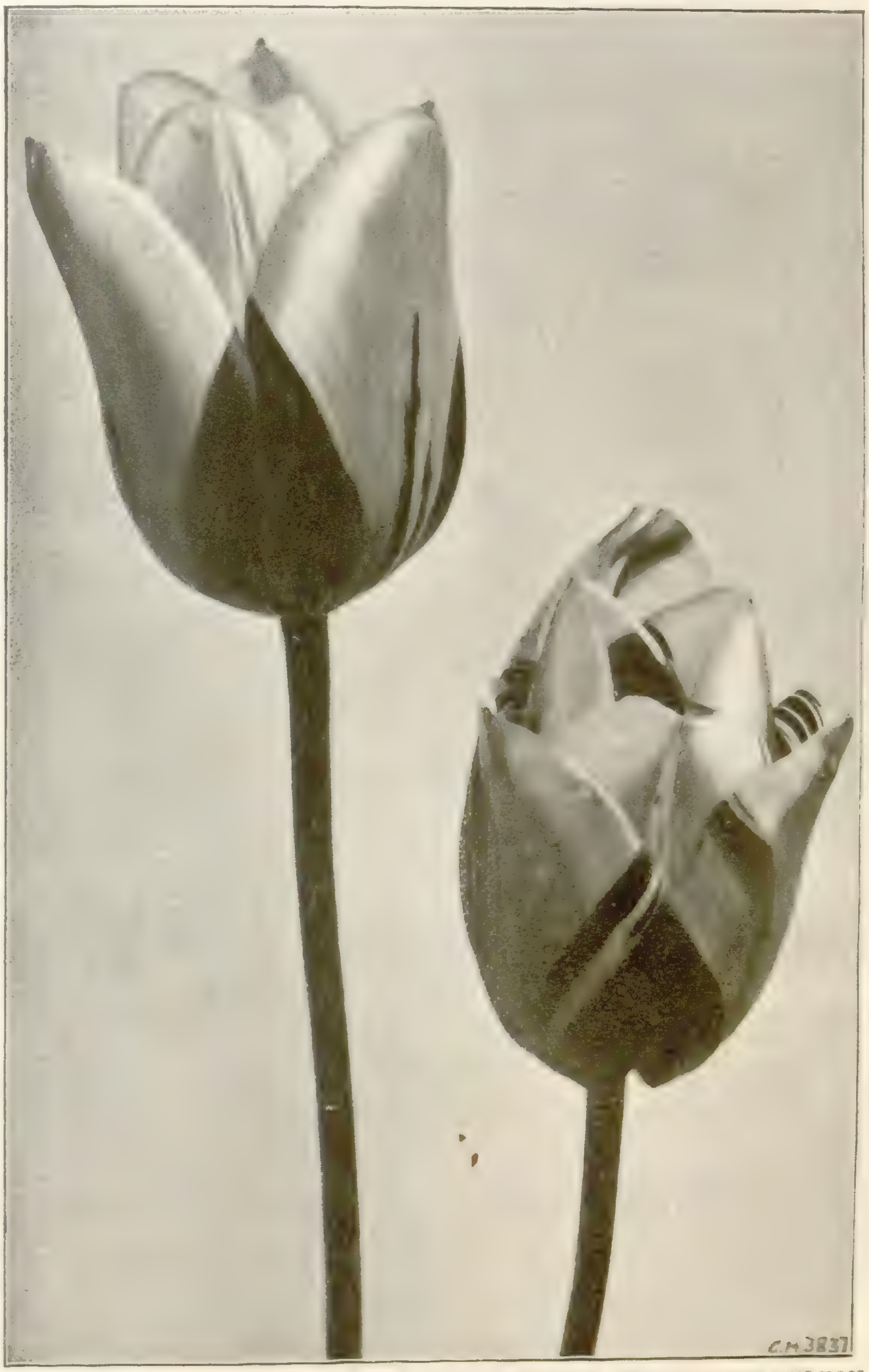
ONOSMA ECHIOIDES.

The Golden Drop finds a host of admirers everywhere, and, although it is quite an old plant, and has been widely recommended, it is still far from common in gardens, and well-flowered specimens are not often displayed at shows. It forms a low mound of narrow hairy leaves in close rosettes, and produces from May onwards a series of trailing two-cleft spikes of tubular golden yellow flowers that are sweetly scented, and very attractive when in full display. It grows just as well in the border as in its home—the rock garden, but in every instance needs the support of a few half-buried stones to raise the spikes from the soil and to keep the growths free from stagnant moisture—the greatest difficulty the plants experience under cultivation.

I have seen it thriving in "torrent" form, amid boulders on the rock garden; I have seen it draping a large boulder in its own inimitable way; as a border plant, and growing also in an old retaining wall where a brick or two was missing, so that its roots had access to the bank of soil beyond. In all these positions there was a plentiful display of the curious snaky growths and flower stems.

It will need a year in which to establish itself, and will thrive indefinitely afterwards, but removal of an established plant is practically a certain way of killing it. Propagation is readily effected by layering the growths, carnation fashion, at midsummer; if the plant's position does not admit of this being done, tiny pipings which spring from the root-stock can be removed intact in August, and rooted under a bell-glass in shade, without the aid of heat. The largest leaf rosettes will not root if severed from the plant entirely. Plant in full sunshine and in spring always.

G. B. MALLETT.



TEMPLE SHOW—A BEAUTIFUL MAY-FLOWERING TULIP, CHAMELEON.
Messrs. Hogg and Robertson, Dublin.

PROFITABLE FRUIT GROWING for Cottagers and Small Holders of Land.—By John Wright, V.M.H. A Gold Medal Essay, written for the Worshipful Company of Fruiterers. Fully illustrated. Price 1s., by post 1s. 3d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

AMONG THE ALPINE FLOWERS.

"Hail! bounteous May, that dost inspire
Mirth and youth and warm desire;
Woods and groves are of thy dressing;
Hill and dale doth boast thy blessing."

As these notes are written the "merry month" is closing, but, after a late season, we seem as yet just entering upon the realisation of the beauties of the time. The garden is winsome indeed, and, although there are evidences to those who know it best of the stress and strain through which the plants have passed in the hard weather of last month, to the unknowing these are invisible, and the flowers seem as brilliant as ever before. There are many calling for notice now, and only a few can be chosen for it in this time of true rejoicing for the cultivator of the alpines flower in the garden.

Saxifraga Wallacei

One of my favourite saxifrages of the mossy section, albeit the foliage is a little too large to come satisfactorily under the ægis of that class, is the charming S. Wallacei, probably a hybrid form, which was raised by the late Mr. Wallace, of Dean Cemetery, Edinburgh, and which worthily bears his name. It is by no means uncommon, but it is such an excellent flower of its kind that there are many more who might cultivate it to advantage. It seems to have a preference for a northern exposure, and a good plant trailing over a large stone and draping it with its pretty light green leaves, liberally spangled with the comparatively large, shining white flowers is attractive in the extreme. It was raised originally from seed of S. Maweana or S. corsicana, and is probably a hybrid, as it always appears to produce infertile seeds. Its whole height is about six inches, but it will hang over a stone of some dimensions if left alone for some years, and can be satisfactorily cultivated in a gritty soil which is not too rich.

Lithospermum canescens.

Although apparently plentiful in its own land, the Hoary Puccon, as Lithospermum or Batschia canescens is called in the United States, is far from common in collections of alpine flowers in this country, and I am glad to find that it has now become established in this garden, where it is doing better than in my former one, although it grew fairly well there. It seems to have an inherent dislike to the wet which is the bane of so many alpine flowers in many parts of these islands, and, as it naturally affects a dry soil, this must be specially studied here. It is growing with me on a dry and sunny ledge a couple of feet or so above the ground level, but partly shielded from the west rains by a hedge, and is otherwise exposed to full sun. It is a true herbaceous plant, and those who may secure it for the first time are not to suppose that it is lost because it is long of making growth in spring, seeing that it is late in appearing above the ground in all seasons. In height Lithospermum canescens is variable, growing at home from six to eighteen inches high. The form here is about six inches high, and it constitutes a rather distinct-looking subject with its narrow leaves, and its clustered flowers of a deep orange-yellow. It opened here this year about May 20, and will remain in bloom for a considerable time. The name of canescens is given because of the rather hoary foliage. As already indicated, it ought to have a dry soil, as it grows in such in its native habitats—from Ontario to Western New Jersey and Alabama, west to the North-west teritory, Kansas, and Arizona.

TEMPLE SHOW—A HANDSOME STOVE FOLIAGE PLANT, HELICONIA ILLUSTRIS.
Messrs. W. Bull and Sons, Chelsea.

Corydalis nobilis.

The noble fumitory is one of the best of the rock plants which can be cultivated in the ordinary border, but it always looks much more ornamental when on rockwork than on the level, and I well remember the effect of a specially well-grown plant which I once saw in a splendid collection of alpines on a rockery bank, and about two feet above the level of the eye. This plant considerably exceeded the normal height of nine to twelve inches. It flowered extremely well, and a most pleasing appearance it had with its finely-cut, ornamental foliage, and its pretty flowers of a pale yellow, tipped with chocolate and green in clusters. Corydalis nobilis is not difficult to cultivate in ordinary soil, and as it is a reliable May-blooming plant, and a long liver save in most unfavourable positions, it might be again more sought after, as it does not seem to be so much in favour as at one time, when good hardy flowers were less plentiful. It likes a light and deep rather rich soil, and can do with some shade, although thriving well in the sun. It comes from Siberia, and is perfectly hardy with us.

Saxifraga cotyledon icelandica.

I have here just beginning to bloom the fine silvery saxifrage, about whose true name some mystery exists (as, alas, exists about the names of too many saxifrages), and which is known as S. cotyledon icelandica. I have had it thriving here for some three years or so, and it is only lately that I have learned from Mr. Reginald Farrer's "My Rock Garden," whence it came, and all that is known about it. It came to me from a friend, who only knew its name as S. icelandica, and I have been so much impressed by it that it was with more than ordinary pleasure that I found it referred to by Mr. Farrer in the following words in speaking of the forms of S. cotyledon: "The finest of all dislikes me, unfortunately, and, I fancy, craves a soil devoid of lime. (They have, I hear, the same ill-success with it at Kew.) I call the thing Cotyledon icelandica because at St. John's, Oxford, whence I had it, it had been originally collected, I believe, in Iceland. It is a most gorgeous plant, as they grow it there—forming enormous, impressive flat rosettes of unusually bronzed, feathery, strap-shaped leaves, with great four-foot plumes of blossom almost incredibly splendid. Here, however, it only exists, and displays no such generosity."

I have ventured to quote Mr. Farrer at some length because he gives what is a fairly well-balanced account of this saxifrage, which is, without doubt, the most handsome of all the forms of the fine pyramidal saxifrages. Here it is doing more than merely existing, as it is flourishing well up in the rock garden, and is a truly fine thing either in or out of bloom. There is no lime in the soil of this part of the rock garden, and this perhaps accounts for its thriving state here, but there are few of the silvery saxifrages which dislike calcareous matter. My plant must, however, have more space, as a Spanish geranium next it threatens to carry out a process of expulsion, which must not be allowed, and it must itself find a happy corner elsewhere. The keeping of strong-growing kinds well within bounds is at all times essential.

S. ARNOTT.

THE PROFESSION OF LANDSCAPE GARDENING.

(Continued from page 404.)

There are a few centres of enlightenment devoted to horticulture in which the subject is treated, I believe, as an important branch of gardening, but I have been unable to discover any educational institution which adequately recognises it as affording professional possibilities distinct from horticulture, and it is certain that many earnest young men who desire to adopt the career are at a complete loss as to the best means of doing so. Some of them have been blindly through a long course of horticultural study, and at the end have found themselves short of many essential qualifications.

There are, of course, considerable difficulties in the way of providing education on an adequate scale, but if the gardening world were unanimous in demanding it, an important step would be taken towards their removal. It is an obvious criticism that with so much difference of opinion among garden designers as to what constitutes beauty in a garden, it might be difficult to hit on a form of teaching which would meet with enough general approval to warrant the experiment. After a century or so of controversy, however, the matter seems to be simmering down sufficiently to render practicable a sort of "Cowper Temple" settlement.

A good deal of hard language has been uttered against both formal and informal gardens by men whose prejudices incline them towards one or the other, but each form of art seems to have thrived on abuse, and seems unshakeably established.

Thinking it would be interesting to know something of what was being done in other countries in the matter of education in landscape gardening, I have bothered some eminent gentlemen for information, which they have given me with the utmost kindness and readiness. In Germany the subject of landscape gardening is not included in the curriculum of any University. Instruction in the art is given, however, in all public and private horticultural schools. The chief school (formerly at Potsdam) is now at Dahlem, near Berlin, where great attention is given to the question. At Laubegast, near Dresden, a great speciality is made of it in the Gartenbauschule. There are also important schools at Weihen Stephan, in Bavaria, at Reutlingen in Würtemberg, and a private school in the principality of Reuss.

There are now two National Societies of Landscape Gardeners in Germany. It is interesting to know that there is some difference of opinion as to whether garden construction is a perquisite of the architect, or should be the privilege of the landscape gardener. We seem to have heard the echo of a debate over here. One hears incidentally that the designing of race-courses occupies a considerable share of the time of many of the best landscape gardeners in Germany. But it can scarcely be suggested that this diversion offers an extended field for practice in England.

In France landscape gardening is taught in no University or public schools, although it is exhaustively treated at the Ecole Nationale d'Horticulture in Versailles, which is considered the University of Horticulture. It is also made a special subject for study at the Ecole d'Horticulture de la Ville de Paris. There is no society of landscape gardeners in France beyond that formed by a special section of the National Horticultural Society. Landscape gardening is taught in Austria in all horticultural training schools, particularly in the agricultural schools in Eisgrub, near Lindenburg, Lower Austria. There is no society or special department for landscape gardening in Austria.

It is in the United States, however, that one finds a model precedent which may be of great assistance, and it will surprise many to find how seriously the question of education in the art of landscape gardening is considered in that go-ahead country. It is, in many respects, an ideal land for the development of gardening of all kinds, owing to the individual wealth and public spirit of the inhabitants—to competition in luxury—to the sylvan resources of the country, and to the new and vast spaces available for treatment.

The capacity of Americans to concentrate and specialise makes them rivals always to be respected, and there is little fear that impracticable schemes of education will be found at their best Universities. Americans use the phrase "landscape architect" in place of our term "landscape gardener," but in the references which follow the English expression is substituted.

Definite instruction in landscape gardening is given at Cornell University, Ithaca, N.Y.; at the University of Illinois, Urbana; at Columbia University, New York City; at Massachusetts Institute of Technology, Boston; and at Harvard University, Cambridge, Mass. Some tuition in landscape gardening is offered by many of the horticultural and agricultural schools and colleges, but I do not know what weight is to be attached to it. A typical example of this group is to be found in the Massachusetts State Agricultural College at Amherst. The course offered at the famous University of Harvard is decidedly the most complete and important obtainable in America. The official register of the University deals with, and illustrates, the importance attached to the question so fully that I shall venture to quote verbatim, and piece together a good many points of information and advice contained in it.

A pamphlet issued in 1907 states that "the object of the courses of education outlined, is to provide instruction in the elements of technical knowledge, and training in the application of principles of design, which together form the proper basis for the professional practice of landscape gardening." A student may obtain professional training in landscape gardening in Harvard University, including both elementary and advanced work, or having had the necessary preparation in another college or scientific school, may proceed at once to the graduate courses. By registering in Harvard College a student may elect courses which will be counted for the A.B. or S.B. degree, and prepare him for the concentrated professional study in the Graduate School of Applied Science.

(To be continued.)

TEMPLE SHOW—NEW RAMBLING ROSE TAUSENDSCHON.
Messrs. Wm. Paul and Son, Waltham Cross. (Award of Merit.)

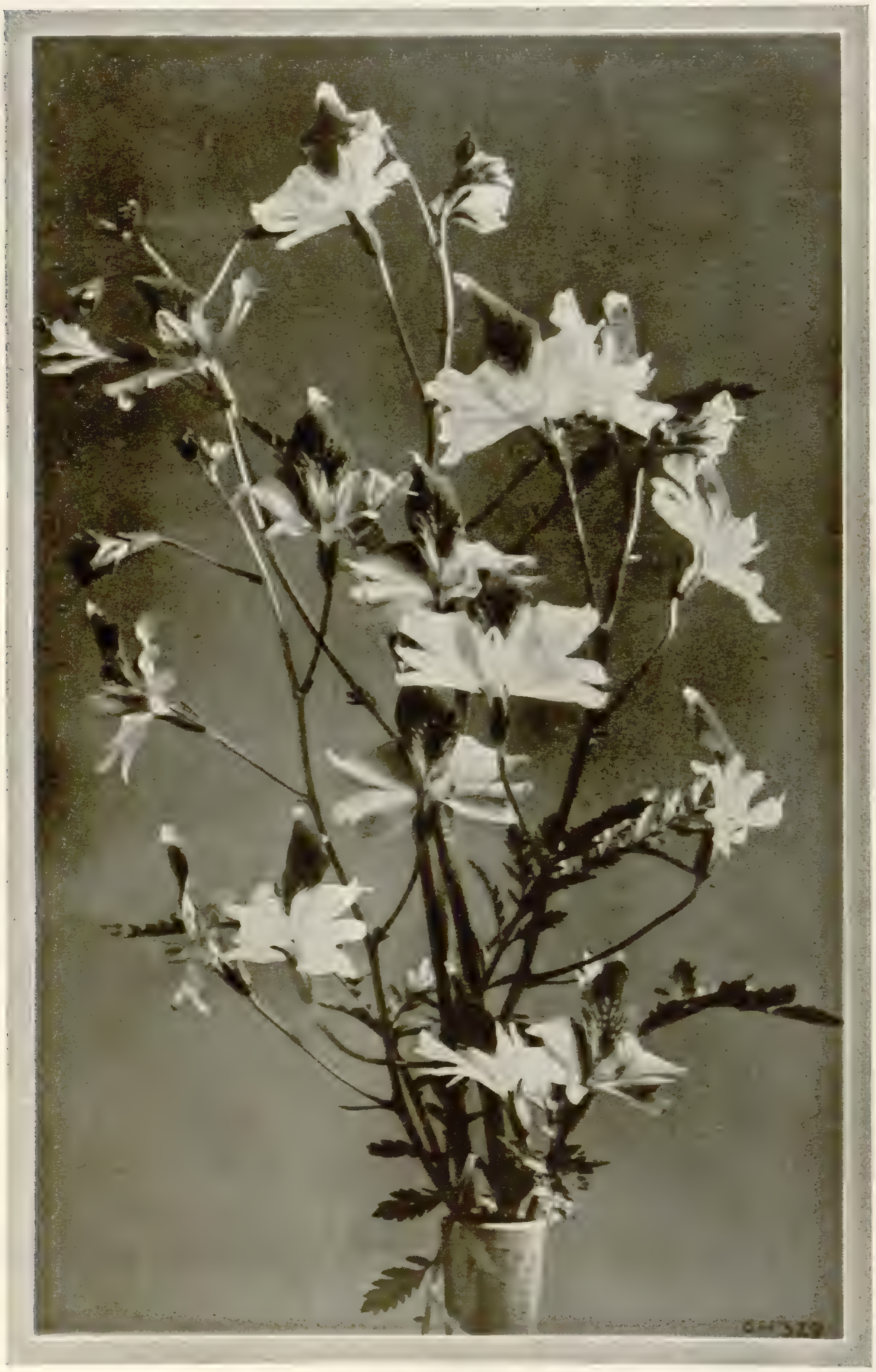
Roses may be grown to perfection by following the instructions given in ROSES AND THEIR CULTIVATION, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

HARD-WOODED PLANTS.

There can be no question that plant growing, as carried out one or two generations ago, needed far closer application than is usually bestowed upon it at the present time. Not only were the glass structures and their heating in a less advanced state than nowadays, but the different hard-wooded plants which were at that time so popular required incessant attention in order to build up the huge specimens which formed the main attraction of the flower shows as held in my younger days.

Many of the plants then shown have almost, if not quite, dropped out of cultivation, and it is well nigh, if not quite, impossible to obtain any of the leschenaultias, for even the blue-flowered Leschenaultia biloba major, which the Messrs. Balchin used to do so well, seems to have been discarded since they gave up their nursery at Hassocks. Chorizema Henchmanni, too, with little linear leaves, which render it quite distinct from all the other members of the genus, I have not met with for years, and a specimen of Hovea Celsi, once a fairly common object, though it was always considered to be a good test of the cultivator's skill, is now practically unknown.

The different forms of aphelexis now merged into the genus Helichrysum, were at one time plentiful enough, though they always needed very careful handling, and much the same might be said of the South African Phœnocoma prolifera, whose brightly-coloured flowers always gained them plenty of admirers. Other specimen plants that used to figure largely in the flower shows of byegone days were Aotus gracillima, Bossiæa linophylla, diosmas, Dracophyllum gracile, genetyllis, pimelias, and pultenæas.



TEMPLE SHOW—FINE NEW STRAIN OF SCHIZANTHUS RETUSUS.
Messrs. Sutton and Sons, Reading.

The hard-wooded heaths, too, were represented by numerous species, the large specimens of which were many years old. Now they are nearly gone, for most of the heaths which are grown in quantity by a few of the cultivators for Covent Garden Market belong to what is called the soft-wooded section, under which head are included Erica gracilis, E. hyemalis, E. propendens, E. persoluta, E. Wilmoreana, E. Spenceriana, and a few others. While perfect little plants of these are turned out by the market growers, the plants, as a rule, are grown only in the 48-sized pots, that is to say, those with a diameter of five inches. Two of the hard-wooded section are treated in the same way, viz., E. Cavendishi and E. ventricosa, indeed, delightful little specimens of both of these may be met with at the present time.

The boronias are perhaps the most generally cultivated of all the other hard-wooded plants, for the azaleas, forming, as they do, quite a class by themselves, scarcely come under the above heading. One subject which is still grown in the shape of large specimens is the Scarlet Bottle Brush (Callistemon speciosus), which in nurseries and gardens is more generally known as Metrosideros floribunda. Of this a showy group was noted at the meeting of the Royal Horticultural Society on April 28. W. T.

CLEMATIS MONTANA VAR. RUBENS.

The well-known and justly popular Clematis montana is one of the most lovely climbing shrubs we possess, and numerous instances can be recalled of it growing luxuriantly over wall or verandah, on a fence, or over an old tree or bush, every branch during May bearing a profusion of glistening white, star-shaped flowers. The variety under notice forms a worthy companion to the type, for it is a replica of that plant, with the exception that stems, leaves, and flowers are all deeply tinged with a reddish hue. C. montana is a Himalayan shrub, whilst the variety rubens hails from China. Although the type has been in cultivation for very many years it is only recently that the variety has been included amongst the occupants of our gardens.

Messrs. J. Veitch and Sons received seeds of this variety a few years ago from their collector, Mr. Wilson, and the plants from these were distributed about three years ago. Like C. montana the variety has an excellent habit, and is a free grower, arriving at its best condition in good loamy soil. Cuttings of young wood root readily about the end of July, and it is possible to get really good strong plants in twelve months from the time the cuttings are inserted. Grown in pots and placed in the greenhouse it may be brought into flower in March, but the blossoms are then deficient in colour.

W. Dallimore.

Fragrant Plants.—In gardens which are sufficiently extensive beds or groups of sweet smelling plants can often be arranged, these are not as showy as some others, consequently suitable positions should be selected for them where their fragrance will be appreciated, and their lack of colour not be noticed. Some are quite bright in colour, and a few suitable ones are roses, carnations, stocks, tobaccos, heliotropes, liliums, mignonette, tuberoses, daturas, lavender, scented-leaved pelargoniums, Aloysia citriodora (demon plant), alyssums, and others. Nicotiana affinis has the defect of having a withered appearance in bright light or sunshine, but its fragrance in the evening when it quite revives, more than counterbalances this defect.—E. F. Hazelton.

MUSHROOMS.

The mushroom is at all times much sought after for various culinary purposes. For its cultivation during the winter months, especially in private gardens, heated houses are provided, which are very convenient and useful during the bad weather, not only for mushroom culture, but for the forcing of rhubarb, seakale, and salads.

These houses, although useful, are not absolutely necessary, as far as mushroom growing is concerned, for with carefully prepared horse manure and due attention to the making up of the beds outside during the autumn, and to spawning and covering abundant crops may be secured throughout the winter. In most cases the produce from these beds is to be preferred, being thicker and firmer in texture, and often of better flavour. At any rate, mushrooms from houses during the summer are invariably unsatisfactory, being especially liable to maggots and quick decomposition. For this part of the year I wish to offer a few suggestions as to how useful dishes can be produced with comparative ease.

I am aware that in some parts of the country mushrooms are plentiful in the meadows during the summer and autumn months, and this does away with the necessity of artificial cultivation during this portion of the year. But where they do not so exist crops may be produced by making up small beds at the foot of a north wall. Simply dig out a trench about twelve inches deep and two feet wide, to provide a receptacle for the compost, which should consist of carefully prepared horse droppings and chopped turf, mixed together. Strong heat is not required, but just sufficient to make the spawn run strongly, and from 70 to 75 degrees will do this.

The trench serves the twofold purpose of prolonging the heat and economising the amount of material necessary to form the bed, which should, as the work proceeds, be made moderately firm by constant treading. When finished it should slope slightly from the wall, so that much rain may not settle upon it to saturate it unduly. There will not, with this amount of material, be any danger of the bed rising to a high temperature, but it will, if the usual course of fermenting takes place, be ready for spawning in a few days after making up. As spawn is so cheap and reliable, when procured from specialists, one cannot do better than purchase from them for the best results. Place lumps of the size of a hen's egg about six inches apart and about two inches deep in the beds, and afterwards cover them over with two inches of rather adhesive loam in a moist condition, patted down with the spade to a smooth surface.

The mushroom appears to revel naturally in the fields in a cool, moisture-laden atmosphere, its growth being principally made during the night, especially so after rain, or very heavy dews. Possibly we cannot do better than copy nature as nearly as we can. The position under the wall, as recommended, is cool, and a corresponding moisture can be easily conserved in the beds by giving a dressing of a few inches of grass from lawn mowings, which may be damped over periodically as the weather demands. This simple form of culture does not trespass upon time very heavily, and, as a rule, gives a generous return for the attention and trouble in carrying it out. In many cases such beds go on bearing for three months.

Referring to spawn again, one of the most productive beds that has come under my notice was made up of some fermented horse droppings, loam, and part of an old mushroom bed that contained some strong mycelium: these were merely mixed together, and formed into a bed without further attention as to spawning. The result was highly satisfactory in this case. Yet, unless in practised hands, it is not advisable to accept this method for general use, as there is some uncertainty about the mycelium, and disappointment might follow. Hence my reason for recommending the use of spawn made by specialists.

CHARLES FLACK.

Cholmondely Castle Gardens.

TEMPLE SHOW—A BEAUTIFUL PLUMOSE LADY FERN (ATHYRIUM F.F. PLUMOSUM GRANDICEPS).
Messrs. H. B. May and Sons, Edmonton.

THE SUPPOSED DEGENERACY OF THE POTATO.

Sir W. T. Thiselton-Dyer, K.C.M.G., F.R.S., contributes the following interesting notes on the supposed degeneration of the potato to the current issue of the "Journal of the Board of Agriculture":—

The undoubted difficulties which now occur in the cultivation of at any rate some kinds of potatoes present a problem which is obviously of great practical importance as well as of scientific interest. It is not, however, satisfactorily disposed of when attributed to degeneracy. The potato plant has not been run out, but too much has been demanded of it, and it has broken down in the attempt to respond. I think a little further light may be thrown on the subject by examining rather more closely what happens in a potato under natural and healthy conditions.

TEMPLE SHOW—NEW FANCY TREE CARNATION, PERDITA.
Messrs. R. H. Bath, Lim., Wisbech.

A potato tuber is an underground branch which, towards the end of the growing season, becomes swollen out laterally and filled with accumulated nutriment for the purpose of giving its buds a vigorous start in the following year. This nutriment is stored up for the most part in the form of starch. Now this is insoluble, and is not available to support growth till it has been converted into something—a sugar—which is soluble. This conversion is effected by a ferment or enzyme called diastase. It can be extracted from the potato tuber and it will do its work quite as effectively outside as inside; it has been found, however, that if an extract be made from an ordinary healthy potato it has, at first, no action on starch; but, after standing for a few days, attacks it energetically.—(Vines, Physiology of Plants, p. 192.)

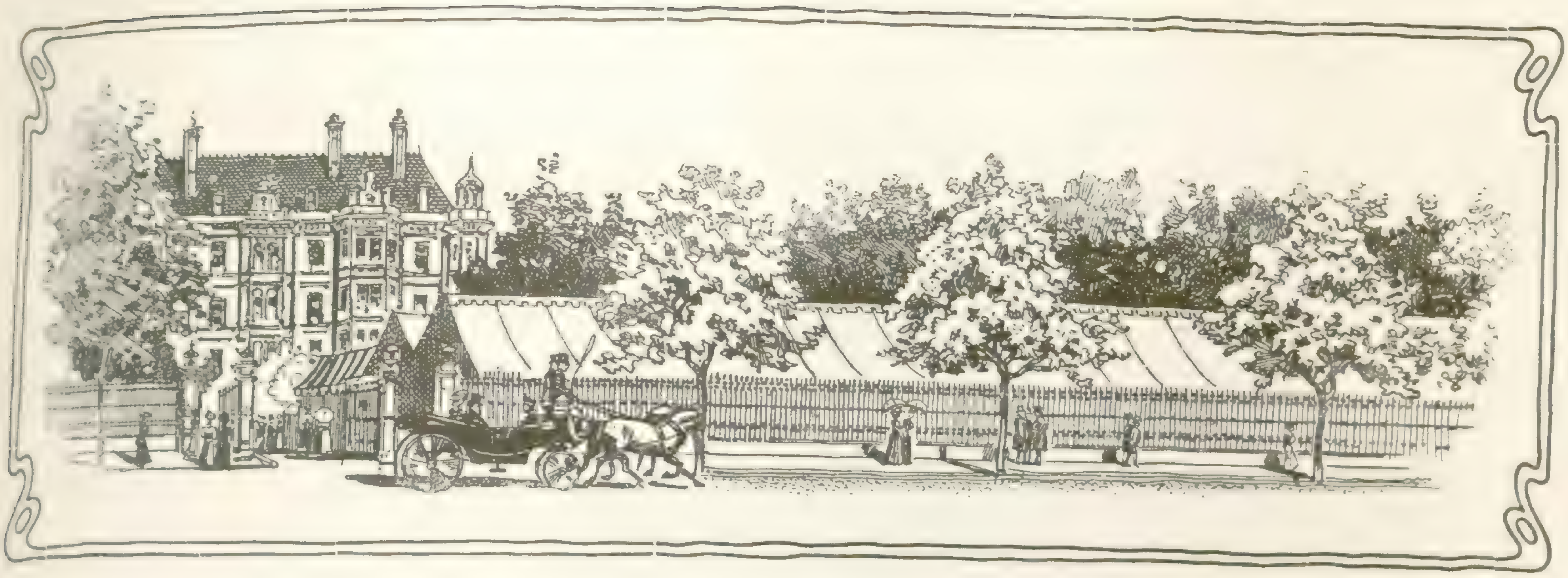
The explanation is that diastase is not present as such in a potato tuber, but is the result of the decomposition of another substance called a zymogen, a word which merely means "ferment producer." Before the starch in a potato tuber can be made available to support growth two things have to take place: (1) Decomposition of the zymogen to produce diastase; (2) conversion of the starch into sugar by its action. Until they do take place there will be no growth from the tuber.

When, therefore, a tuber fails to grow it is not a sufficient explanation of the failure to say that the plant is degenerate, or that diastase is wanting. Both explanations are conclusively disproved by the interesting experiment of the Curator of Kew in exposing the sluggish tubers to a higher temperature. They then sprouted vigorously, and, after planting, produced a normal crop. It is clear that what was really amiss was that the diastase remained locked up in the zymogen and was not available to do its work. It is known that the production of diastase requires the access of oxygen from the air: it also needs some amount of warmth, and
probably stimulated by light.

When a sluggish tuber is planted, it eith
remains completely dormant or sends
feeble growth which utilises little
accumulated starch. On the other hand
shoot manufactures more, and this is
ferred to the tuber, which actually in
in size. What is now complained of
to be only an extreme form of a sta
things which has long been known to c
tors. In Gloucestershire the remedy
mended is "greening" the tubers.
method is described in Leaflet No. 1
4, 5, issued by the Board. The tubers
placed in the autumn in shallow boxes
taining no soil or other material, and sto
throughout the winter in tiers in a cool,
ventilated and well-lighted shed."
the influence of light the dormant su
the tuber becomes active and green.
means that chemical action takes place, d
tase will be set free, starch will be mad
available for growth, and sprouting foll
It was found in Yorkshire in 1903 that
Up-to-Date, "an advantage of two tons
acre followed the use of boxed seed."

As far as any general conclusions can
drawn from the facts as stated it can hard
be said that the potato is in any intelligib
sense degenerate, but it appears to have
come sluggish in starting into growth and
require the stimulus of a higher temperat
than formerly. It must be remembered th
the modern potato is a highly artificial p
duct. It has been induced by contin
selection to load itself with starch to a p
far in excess of any natural requirements
the plant. It may be that, as already su
gested, too much is demanded of it, and th
the machinery for the processes of gro
has reached its breaking point. The
desirable for food may not be one which
prompt to start into growth without
creased stimulus from heat and light.
can control nature in altering the cons
tion of a plant; but eventually a barrie
reached beyond which it is impossible t
The case of the sugar-beet is instructive.
ginning with 8 to 10 per cent. of its weig
of sugar, it has been brought up by sele
to 16 to 18 per cent. But H. L. de Vilmo
informed me this was the limit. "Beet-r
containing more than 18 per cent. sugar
to vegetate properly and die."—(Kew Bu
tin, 1897, p. 317.) If a similar limit has b
reached in the potato, growers must be c
tent with sturdier but perhaps from a
nary point of view less desirable kinds.

Psychotria jasminiflora.—F
purity of tint there are very few flowe
equal those of this pretty stove shrub. B
tanically it is a near relative of the
vardia, and forms a neatly-growing e
green bush clothed with ovate leaves
inches or so in length, glabrous above
whitish underneath. The flowers, which
borne in rather compact terminal pani
are in size and shape much like those
bouvardia, and of an exceedingly pure
tint. It is frequently met with in gar
under the generic name of Glonera.
specific title remaining the same in bo
stances. This psychotria is a native
Brazil, and its cultural requirements
about the same as those of an ixora
roots are not particularly vigorous, a
excess of water at all seasons mus
avoided. Not only are the flowers delig
but a succession is kept up for som
The Kew Hand List contains seven sp
psychotria, but, except this one, I a
aware of any of them being in gen ral c
vation. One species which was of
with twenty years or more ago, but w
have not seen for some time, is Psy
cyanococca, a native of Nicaragua.
flowers of this are not at all showy, b
are succeeded by berries about the
small peas. These are borne in dense
ters, and when ripe are of a beautiful
blue colour. As they remain in this sta
a considerable time, the ornamental feat
of P. cyanococca certainly merits ex
cultivation.—W. T.



THE GREAT TEMPLE FLOWER SHOW.

It is difficult to believe that twenty-one years ago the Temple Show was being held for the first time. This is a coming-of-age show, and, although we cannot say that the present show is far and away better than its more recent predecessors, we can say that the exhibition is in every way a splendid one. It would be interesting to learn how many firms or individuals exhibiting now were exhibitors at the first Temple Show. That the shows have altered in character will be obvious to all who have had cognizance of these displays during the whole of the series.

In extent this twenty-first show differs little from the twentieth. The extra length of the big tent is as last year, but by a little rearrangement of tabling in other tents it has been possible to add a few feet to the exhibitor's area. Outdoor exhibits are numerous, and of an unusually high character. The orchids are magnificent, and the big tent contains a marvellous picture of graceful beauty and exquisite and gorgeous colouring: the value of the orchids must be immense. Roses, too, are a great feature, and they show in a marked degree the trend of popular taste. Formerly, whereas big specimen H.P. roses were a feature, now the display is chiefly of rambling roses in great variety and beauty. Stove plants, though well shown, are not the feature they formerly were. Hardy flowers are prominent, from alpines and herbaceous plants up to choice flowering and foliage trees and shrubs, and in these respects the present show differs widely from the first.

One distinct feature of the exhibition is the prominence given to annual and biennial greenhouse plants; all these have been developed wonderfully during recent years. Schizanthuses, calceolarias, cinerarias, nemesias, etc., provide a wealth of colouring, and show the care the seedsmen have taken to improve them. Fruit and vegetables, owing chiefly to the backward season, are almost conspicuous by their absence.

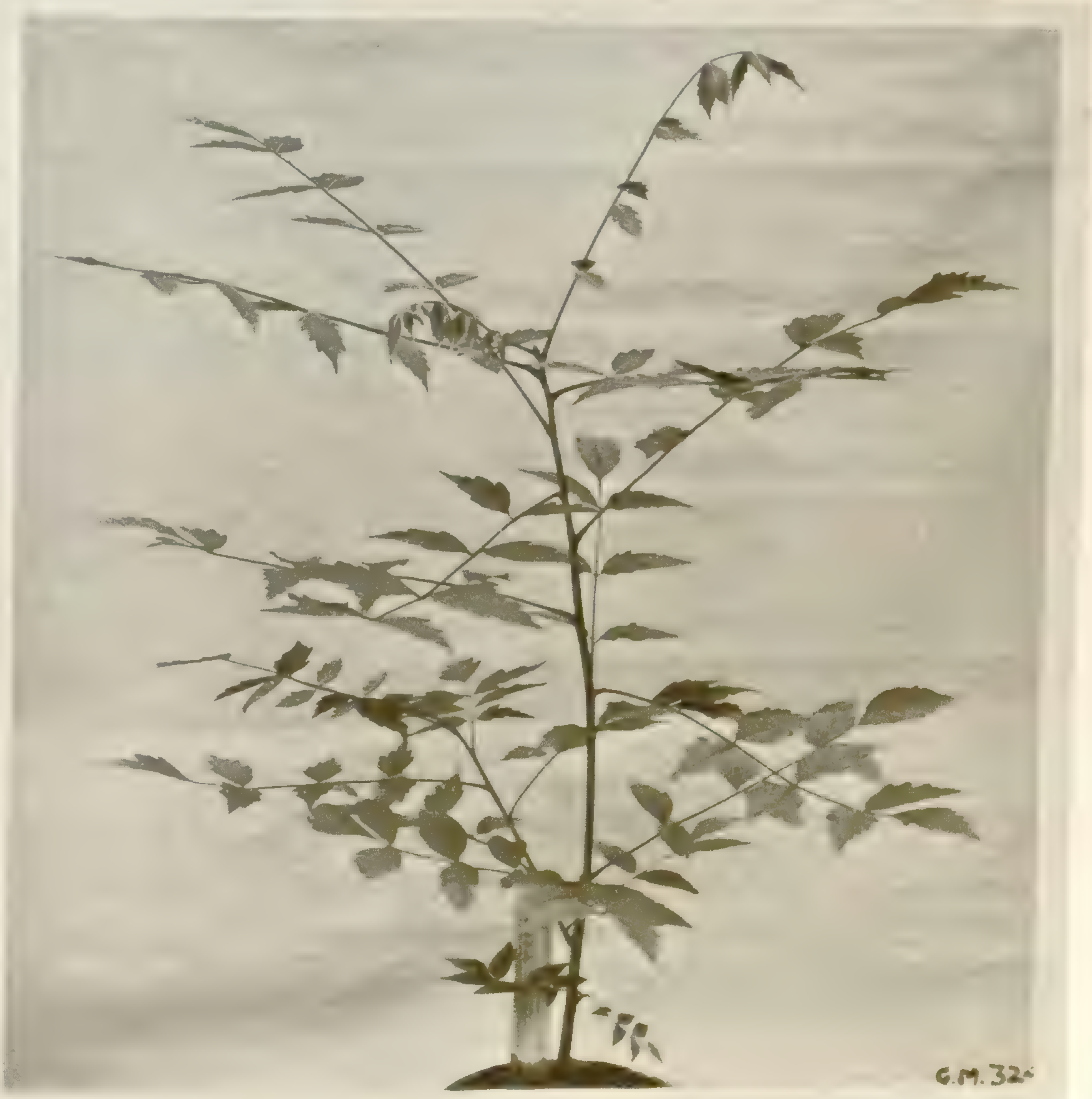
To judge this display there were about forty judges, divided into about a dozen groups. Altogether there are about a hundred and thirty exhibitors. To every visitor was given a catalogue containing a list of exhibitors and their exhibits, and where to find them, a plan of the show, a programme of the music performed by Godfrey's band, and an account of the history and progress of the society, the whole making up a very interesting booklet.

We cannot pass without a word or two of praise to those who have worked so strenuously to secure the success of this wonderfully fine show. The whole of the officers and council of the society fulfil their duties admirably, but everyone knows that the bulk of the work falls upon the shoulders of the Rev. W. Wilks, Mr. S. T. Wright, Mr. Gaskell, and Mr. Reader. Mr. H. B. May and Mr. H. J. Veitch also help very materially. To all these, however, the success of the show is the greatest and highest commendation they can receive. To the Benchers and officers of the Inner Temple thanks are also due for the loan of their gardens for the Temple Show.

The Queen, accompanied by the Princess Victoria, visited the exhibition on Tuesday morning. Her Majesty was received by Sir Trevor Lawrence, Bart., president, Sir Albert Rollit, Mr. J. Gurney Fowler, Mr. H. J. Veitch, and other members of the council, and, under their escort, made a tour of the tents and inspected the collections arranged in the open. On leaving, her Majesty graciously expressed her appreciation of the great excellence of the exhibition.

ORCHIDS.

A group that attracted an unusual amount of attention was the large and bold one set up just inside the entrance to the big tent by Mr. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester. It was a beautifully arranged display, but it lacked something of the brilliant colouring associated with some of Major Holford's finest efforts. It was a cool and graceful group, in which odontoglossums were a chief and very fine feature. Every plant in the group was grandly grown, so there is no need to say



TEMPLE SHOW—NEW HARDY SHRUB, RHUS SINICA.
Messrs. Paul and Son, Cheshunt.

the odontoglossum spikes were good. A few of the finer forms, all of light hues, were O. c. Zoe, O. c. Fairy Footsteps, O. c. Madonna, O. c. Corsair, O. c. Mrs. Lindsay, and O. c. Panther. Then there were the cattleyas, such as C. Reineckiana, C. Mendeli, in fine form; C. Mossiæ Prospero, C. Mossiæ Baroness, and the hybrids, Brasso-cattleya Digbyana-Mossiæ Westonbirt var., with eight very large, bright, and finely-fringed flowers; L.-c. Aphrodite, Cattleya Dusseldorfi Undine, and L.-c. Fascinator nobilior, with thirteen very large and beautiful flowers. Other very fine things were Miltonia vexillaria Westonbirt variety, with two spikes of its butterfly marked blooms; a big specimen Miltonia with twenty-eight spikes of glorious flowers; the yellowish Brasso-cattleya Minerva, and the fine crimson-lipped Lælio-cattleya Aladdin Westonbirt variety. There were heaps of other good things, and it would be easy to say twice as much about this superb exhibit did not limits of space forbid.

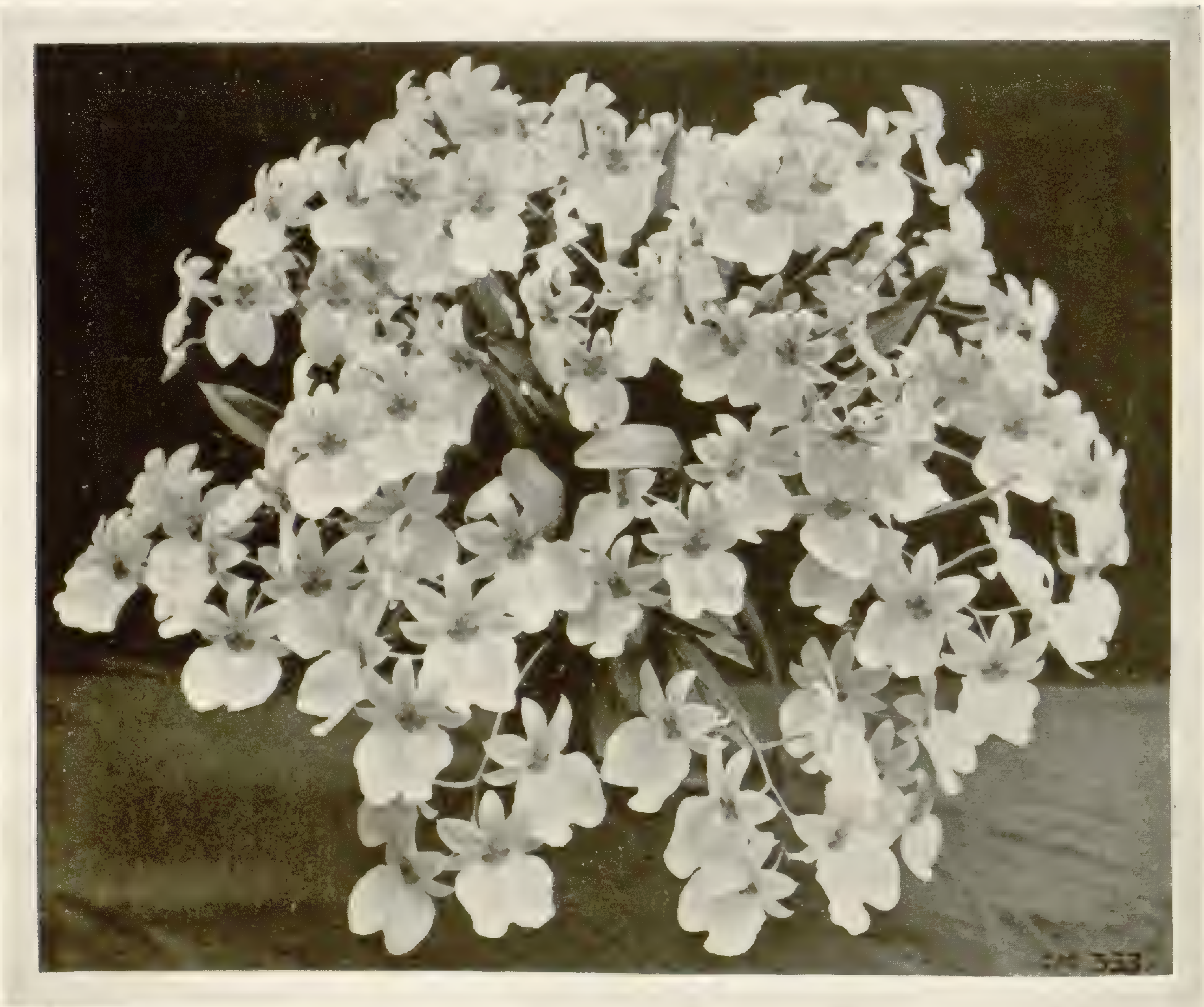
As usual, Messrs. Sander and Sons, St. Albans, contributed a big, interesting, and beautiful display of orchids. Ferns, asparagus, and palms formed a delightful background and groundwork for the gorgeous orchids, and we were glad to find these used more freely than usual, and also to find the arrangement of the group more informal than previously. It is difficult to know where to begin to discuss so rich and interesting a contribution. A batch of Phalænopsis Rimestadiana made a graceful central group, and around this were grouped Miltonia vexillaria in variety, Cattleya Skinneri, the pendant spikes of Dendrobium densiflorum, and D. thyrsiflorum, and the newer D. Brockhardti, Masdevallia ignea, and M. Harryana, with Renanthera Imschootiana and Cochlioda Noezliana, gave touches of brilliant colour that served to show up the lighter odontoglossums, and the splendid forms of Cattleya Mendeli, C. Mossiæ, C. Mrs. Myra Peeters, and Lælia purpurata. Of special interest, beauty, and merit were Cymbidium Sanderæ, a beautiful white orchid with yellow and crimson marked lip; the black and green Cœlogyne pandurata; Cypripedium Godefroyæ leucochilum; the graceful Odontonia Lairessi; the white, erect-spiked Diacrium bicornutum; the dwarf rosy-coloured Bifrenaria Harrisoniæ pubigera; and such glorious odontoglossums as O. eximium, O. crispum transcendens, with scarlet-brown markings; O. c. festivus, a beautiful O. Lambeauianum, O. excellens, O. c. Mauretania, and O. c. Lusitania.

Messrs. Jas. Cypher and Sons, Cheltenham, were again extensive exhibitors of orchids, and they had a display elevated rather more above the stage than most. In a setting of ferns and deep green moss they grouped a fine assortment of Miltonia vexillaria varieties, these forming the groundwork, so to speak, of the exhibit. The background consisted of some beautiful forms of Lælia purpurata, Cymbidium Lowianum, odontoglossums, and oncidiums. In the centre of the group we noticed Cypripedium Rothschildeanum, Cattleya Dusseldorfi, Odontoglossum excellens aureum, O. amabile cærulescens, Oncidium Kramerianum, and Lælio-cattleya Highburyensis. At one end of the group Cypripedium bellatulum, O. caudatum, Zygopetalum citrinum, the quaint and sensitive Bulbophyllum barbigerum, Masdevallia Wagneri, and the beautiful Lælio-cattleya Ganymede were shown together.

A finely arranged exhibit of well-grown orchids came from Mr. Balmforth, gardener to F. Menteith Ogilvie, Esq., The Shrubbery, Oxford. Miltonia vexillaria was splendidly shown, and there was a prominent large specimen of the good old Cattleya Bowringiana. The groups of such albino cypripediums as C. callosum Sanderæ, C. Lawrenceanum Hyeanum, aggregating about fifty blooms, were a great attraction to the specialists. Cymbidium Lowianum, Lælia purpurata, Oncidium macranthum, and O. Marshallianum, formed, with palms and ferns, a background for the general display. Odontoglossums were very numerous, and their graceful spikes added a peculiar grace and charm to the group. A few other specially interesting plants were Cattleya Bowringiana alba, two of Cymbidium Devonianum, Cypripedium May Beatrice, O. crispum Menteith, deeply marked, O. Vuylstekei, a batch of Cypripedium niveum, C. Honoriæ, and a fine O. ardentissimum.

Messrs. William Bull and Sons, King's Road, Chelsea, set up a display of orchids, in which Odontoglossum crispum, Miltonia vexillaria, and fine forms of Lælia purpurata figured extensively. Cattleya Mendeli was also well represented, and there were some excellent varieties of C. Mossiæ. Epiphronitis Veitchi was also conspicuous. The pretty and brilliant hued Odontioda St. Fuscien, a cross between Cochlioda Noetzliana and Odontoglossum Adrianæ, showed the characters of both parents, but C. Noetzliana was predominant. This was shown by Mons. Henri Graire, St. Fuscien, Amiens.

From Gatton Park, Reigate, Mr. W. [illegible] Bound, gardener to Sir Jeremiah Colman, Bart., brought up a large and interesting exhibit of orchids. The background was composed of three groups, the centre one of Cymbidium Lowianum, and the side ones of various orchids, Odontoglossum citrosmum, O. crispum, Cattleya Wm. Murray, and Miltonia vexillaria figuring largely in them. The central foreground was made up with cymbidiums, notably C. Lowio-eburneum, and Masdevallia Harryana Bull's Blood variety, and Cochlioda Noetzliana. At either end [illegible] odontoglossums were conspicuous, and with these the beautiful Spathoglottis aurea and S. Colmani were very fine. A few [illegible] plants we noted were Cypripedium [illegible] lum, Cattleya Arnoldiana magnifica, L.



TEMPLE SHOW—A SPLENDIDLY-FLOWERED SPECIMEN OF MILTONIA VEXILLARIA IN MAJOR HOLFORD'S COLLECTION OF ORCHIDS.

This specimen was growing in an 8-in. pan, and had 28 spikes with an aggregate of 134 flowers.

[illegible] Lady Eldridge, the vivid orange-coloured Sophro-lælia Psyche, Miltonia Bleuiana Gatton Park var., Cymbidium Colmaniæ, the golden Odontoglossum [illegible], Cirrhopetalum pulchrum, and the curious Bulbophyllum vibrans.

A very fine exhibit of orchids was arranged by those famous hybridists Messrs. Charlesworth and Co., Heaton, Bradford, whose display was a large one, and contained many rare and beautiful plants, set up above ferns. Vandas, Oncidiums macrantha and Marshallianum formed a pleasing background to a whole host of novelties. This was one of the finest contributions ever made by the Heaton firm, and one that the enthusiasts as well as the general public lingered long over. It is quite impossible to enter into every detail of the exhibit, but we pick out a few of the most striking features. These were Odontioda Charlesworthi, brilliant crimson-scarlet with yellow crest, one of the startling orchids of the Temple Show; Odontoglossum crispum President Fallières, the red colouring almost covering the flower; the lovely orange-hued L.-c. Eleanor Gloria Mundi; Odontoglossum hibernicum (Halli x hastilabium), O. Othello, heavily blotched; O. crispum Czarina, Miltonia vexillaria alba, O. crispum Queen Maud, O. Eleanor (cirrhosum x Uro Skinneri), Trichopilia Backhousiana, Læliocattleya callistoglossa ignescens, O. Warnhamense, O. Phœbe, and a big specimen Cattleya Skinneri.

A graceful bower-like group of odontoglossums was set up by Messrs. J. and A. McBean, Cooksbridge, Sussex. These were, naturally, very fine, both in flower and spike, and they were mostly unblotched varieties. Oncidium superbiens was fine, and so were the Cattleya Mendeli varieties, Cypripedium bellatulum, Cochlioda Noetzliana, and a finely blotched O. crispum named O. c. F. H. Sander.

Messrs. Moore, Lim., Rawdon, Leeds, contributed a display of considerable beauty and interest. Cymbidiums and oncidiums formed an effective background, Cattleyas Schroderæ, Mossiæ, and Mendeli, formed the groundwork, and over these came choice odontoglossums, etc. Renanthera Imschootiana shone brightly in the middle, surrounded by blotched O. crispum, O. Phœbe, O. Ossulstoni, O. amabile, O. Loochristiense, O. Lambeauianum, and O. Wilckeanum. Other good things were Cœlogyne pandurata, Dendrobium Victoria Regina, Cypripedium Queen of Portugal, Disa Veitchi, and Angræcum Sanderianum.

Messrs. Armstrong and Brown, Tunbridge Wells, put up a very distinct exhibit, consisting of an elevative forward central group, and a deep bay on either side. Taking the centre first, it had Cœlogyne Dayana at its highest point, with Cymbidium Lowianum concolor below it, and fine spikes of Odontoglossum percultum, O. Wilckeanum Urana, and O. ardentissimum Mrs. Temple. In one bay were Cypripedium Rothschildeanum, C. Curtisi superbum, C. Lawrenceanum, and on the other side were C. bellatulum, C. Orphanum, C. callosum Sanderæ. Anguloa eburnea and [illegible] fragrans were other good and interesting plants.

In the large display submitted by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, there were many large plants of Cattleya [illegible], Cymbidium Lowianum, Cattleya Mendeli and Epidendron prismatocarpum. Odontoglossums were excellent, and included a wonderfully fine pure white crispum with [illegible] flowers, and O. Pescatorei virginalis—very beautiful. The forms of Cattleya Mendeli were very fine, as were C. Mossiæ [illegible], Diacrium bicornutum, Renanthera Imschootianum, Cattleya Mossiæ The [illegible], with a grand lip. Dendrobium [illegible], Cypripedium Lawrenceanum Hackbridgensis, Dendrobium Bronck[illegible], D. Bensoni x anthinum, and Oncidium [illegible].

Mr. H. J. Chapman, gardener to Norman [illegible], Esq., Oakwood, Wylam-on-Tyne, showed the beautiful Odontoglossum crispum [illegible], carrying six lovely richly marked blooms of finest form. A wonderfully beautiful Cattleya Mendeli named His Majesty, one of the most beautiful of varieties we have seen, was exhibited of Mr. Hopkins, gardener to F. Wellesley, Esq., Westfield, Woking; it has splendid blush sepals and petals, and a white, yellow-throated, purple-tipped lip.

Very fine were the odontoglossums shown by Mr. Chas. Vuylsteke, Loochristy, Ghent; these were O. Queen Alexandra, O. Laudatum (A.M.), finely formed and deeply coloured; O. luxuriosum, a brilliant odontoglossum, O. infuscum, and the beautiful O. crispum Rainbow. M. Jules Hye, Ghent, showed Miltonia Memoria G. D. Owen, O. crispum F. K. Sander, and O. Emma, very bright. Mr. Day, gardener to H. J. Goodson, Esq., Putney, showed Odontoglossum crispum President Fallières, large, prettily marked flowers on a huge spike, and also O. c. Goodsonæ.

In the group of orchids staged by Mr. John Robson, Altrincham, Phalænopsis Rimestadtiana was particularly fine; those were associated with a goodly assortment of odontoglossums, and a few dendrobiums, and masdevallias. R. Ashworth, Esq., Ashlands, Newchurch, showed the curious and pretty Odontoglossum crispum Marjorie, O. Pescatorei Charlesworthi, the rosy O. c. Heliotropium, and O. c. virginalis. The beautiful Vanda teres was finely shown by Mr. W. Lovett, gardener to Mrs. Collingwood, Lilburn Tower, Alnwick.

SWEET PEAS.

Sweet peas are no longer a novelty at the Temple Show, and the beautiful flowers exhibited rather made one fancy that it was July instead of the end of May. Mr. Robert Sydenham, of Birmingham, set up a nice collection of cut blooms arranged with their own foliage. Conspicuous amongst the varieties were Scarlet Gem, Dorothy Eckford, Paradise, Gladys Unwin, Miss Willmott, and White Spencer.

Messrs. E. W. King and Co., Coggeshall, Essex, were represented by a very tasteful display of sweet peas, the flowers being fresh and good throughout. They were arranged in an artistic manner, and the varieties which showed up most conspicuously were Mrs. William King, a very bright shade, Frank Dolby, Countess Spencer, Dorothy Eckford, Flora Norton, Queen Alexandra, Nora Unwin, and Helen Pearce.

In connection with the exhibit of sweet peas from Mr. Breadmore, of Winchester, we heard nothing but praise, and to say that it was well deserved is not exaggerating in the slightest degree. Beautiful indeed were the large flowers mounted on long footstalks, and the stamp of quality denoted good cultivation. The varieties which attracted most attention were Mrs. Collier, which comes as near to yellow as any variety we have, Helen Lewis, Countess of Northbrook, Etta Dyke, very fine, George Herbert, Helen Lewis, King Alfonso, and Princess Victoria. Taken as a whole, it is doubtful whether finer flowers were ever shown in May.

TEMPLE SHOW—NEW ROSE WHITE DOROTHY.
Messrs. B. R. Cant and Sons, Colchester. (Award of Merit.)

The collection of sweet peas from Dobbies, of Rothesay, was not large, but the flowers were very fresh, and the variety pleasing. Particularly attractive were The King, a bright crimson; Burpee's White Spencer, Helen Lewis, Menie Christie, Prince Olaf, James Grieve, King Edward VII., Burpee's Primrose Spencer, D. R. Williamson, and Hannah Dale.

Messrs. G. Stark and Son, Great Ryburgh, Norfolk, had a very interesting exhibit of sweet peas, in which a number of novelties were represented, including Maggie Stark, a new scarlet seedling, Nell Gwynn, Miss Willmott, Olive Ruffell, and Giant Blush Spencer, altogether a very effective display.

FRUIT AND VEGETABLES.

A Temple Show without pot fruit trees from Sawbridgeworth would seem wanting in one of its regular features, but there is little fear of such a thing, and again Messrs. T. Rivers and Son were represented by finely fruited specimens of peaches and nectarines, amongst which were noticeable the Cardinal nectarine, and Duke of York peach. Cherries were represented in the group, and a small collection of oranges fruiting in pots added considerably to its interest.

An element of variety was presented in the long tent by a display of fruit from Laxton Brothers, of Bedford, in which strawberries, peaches, and nectarines were the predominating features. Amongst the latter fine specimens of Early Alexander peach and Cardinal nectarine were shown in baskets, and amongst the varieties of strawberries we noticed Laxton's Epicure and Bedford Champion, the plants in pots showing the free fruiting characteristics of the varieties. We may add that the varieties Epicure and Connoisseur are remarkable for their very fine flavour.

Once more Messrs. G. Bunyard and Co., of Maidstone, demonstrated to the public that they can not only grow fine apples, but also that they know how to keep them. So fresh and firm did the apples look that it was difficult to realise that they were grown in 1907, and as a demonstration of what can be done with proper storage the exhibit was most educational. There was no lack of variety, and amongst others in fine condition we noticed specimens of Smart's Prince Arthur, Belle de Pontoise, Calville Malingre, Belle du Bois, Newton Wonder, Striped Beefing, Norfolk Beefing, and Bramley's Seedling. An element of variety was added by a few fruiting cherry trees in pots.

There is a proverbial connection between Suttons and potatoes, and in addition to an interesting collection of plants, comprising members of the Solanum family in pots, the famous Reading firm exhibited a collection of potatoes grown under ordinary frame culture, and the produce of tubers planted in February last. A large number of varieties were represented, including May Queen, Harbinger, Myatt's Ashleaf, Northern Star, and others now in general cultivation. The exhibit was set up in Messrs. Suttons' usual tasteful style.

Considering that French gardening has been brought very much to the notice of the man in the street of late, it is not surprising that the products of the system were represented. Messrs. Watkins and Simpson represented the French system with vegetables and salads packed in small market crates which bore the name of J. N. Harvey, The French Garden, Evesham. Carrots, lettuces, and turnips were shown, and in the centre of the exhibit were two dozen heads of early Six-weeks cauliflower, shown in good condition.

The collection of salads and forced vegetables from the Thatcham Fruit and Flower Farm, Newbury, would have looked better if they had occupied a little more space. The lettuces of cos and cabbage varieties looked crisp and fresh, and the same may be said of the bunches of radishes, carrots, and turnips. Parsley was freely used for garnishing.

Size was a striking feature about the heads of asparagus which came from Burwell, Cambridge, and were shown by Mr. R. Stephenson, and large bundles of this delicious vegetable were staged by Mr. W. Godfrey, Colchester, and Mr. A. J. Harwood, of the same place.

TULIPS.

Evidence of the popularity of tulips was given in the expressions of approval one heard in front of Messrs. Barrs' collection of these interesting and showy flowers. It was indeed a fine exhibit, and well set up. Some of the visitors favoured the showy and ragged parrot tulips, while others found delight in the fascinating English tulips, with their numerous and varied shades of colour. We were much taken up in this section by Andrew Hunter, King of the Universe, Beauty of Litchchurch, and Sulphur. Not less striking was the fine display of cottage tulips, which made a show in themselves, and conspicuous amongst them were Golden Spire, Salmon Prince, Pararoma, Ellen Willmott, Inglescombe Yellow, and the White Cygnet. Completing the collection was an interesting collection of May-flowering Darwin tulips, in which the dark-flowered Zulu and the Crimson Salmon King were most effective.

Two tulips which attracted much attention was a new late variety called Red Standard, and a fine yellow flower Walter T. Ware, both staged by Messrs. W. T. Ware, Lim., of Bath.

Messrs. Richard Smith and Co. set up a nice collection of tulips, in which several sections were represented, but in the case of several of the varieties the flowers were a little too open.

Quite a pleasing exhibit of tulips was that staged by Messrs. W. Bull and Sons, Chelsea, though the arrangement was a little too stiff. Some of the dark varieties were very effective, and included Zulu, Nigretta, and La Tulipe Noire; while others which attracted attention were Mrs. Moon, yellow, Clara Butt, Salmon Queen, Orange Queen, and Prince of Orange. Lovers of tulips found plenty to interest them in this collection.

Mr. John Walker, of Thame, Oxon, showed a very interesting group of florists' tulips. Size and quality were noticeable in the flowers, and the chief varieties were Surpass Calpuda, George Hayward, George Brown, and Gold Cup.

Old Ireland was represented in the way of tulips by Messrs. Hogg and Robertson, Dublin, and except for a little overcrowding the display was very effective. Beautiful amid a blaze of colour were the following showy varieties: Columbus, Zomerschoon, Ellen Wilmott, Macrospila, Chameleon, Mrs. James Robertson, and Margaret. The flowers throughout were of high quality, and shown in the pink of condition, despite the fact that they had travelled from Dublin.

Mr. A. M. Wilson, of Spilsby, set up a very fresh-looking exhibit of tulips, shown on long foot-stalks. Amongst the varieties we noticed Red Dragon, Coquette, Walter T. Ware, Mrs. F. Sanders, Scarlet Emperor, Millett, The Fawn, Orange King, and Yellow Picotee, were all shown in good condition.

Messrs. Alexander Dickson and Sons, of Belfast, made a very fine display with their tulips, and the flowers were displayed in a very fresh condition. Amongst the Darwin varieties Sunset stood out conspicuously, and The Rev. H. H. D'Ombrain, Dom Pedro, Clara Butt, King's Court, Zulu, Tara, and Gorgeous were much admired. Orange King is a very showy May-flowering tulip, and we were also taken up with Bouton d'Or in the same section. Taken as a whole, this exhibit was highly interesting and attractive, and it afforded a good idea of the supply of material that the firm must have to draw upon.

Small collections of tulips came from Mr. Amos Perry, of Enfield, and at each end of a big collection of herbaceous plants the colours of the flowers were very telling. A small but interesting collection of old English tulips were staged by the Hon. A. H. T. de Montmorency, Dublin. Parrot tulips, Darwins, and other forms were well shown by Messrs. George Bunyard and Co., Maidstone, and in the collection Lutea vitellina, Bouton d'Or, Picotee, Billietiana, and Gala Beauty were much admired.

ROSES.

Exquisitely beautiful and delightfully fragrant was the splendid group of roses set up so well by Messrs. Wm. Paul and Son, Waltham Cross. As evidence of the modern trend of opinion, the rambling roses were a leading feature, and the big pillar plants wreathed in flowers of great brilliance were one of the glories of the show. A few of the loveliest varieties were Tausendschon, a grand rose, Minnehaha, the bright single Hiawatha, Kathleen, the ever-popular Dorothy Perkins and Lady Gay, the graceful and bright single-flowered Paradise, and Crimson Rambler. Below these delightful plants were pot plants of such splendid large-flowering roses as the blush-coloured Pharisaer, the white Frau Karl Druschki, the rosy Dr. William Gordon—very fine, the new white Elaine, Antoine Rivoire, the brilliant Etoile de France, Mrs. John Laing, David R. Williamson, Mdme. Abel Chatenay, Mdme. Fanny Gillemot, Marquise Litta, and Mina Barbanson, all first-rate varieties, and all famously grown and shown.

Mr. G. Prince, Oxford, had a pretty exhibit of roses in the big tent. There were standards, and pillars of Dorothy Perkins, Lady Gay, Hiawatha—very fine, Philadelphia, Tausendschon, and Blush Rambler; these were set over smaller plants, and in the foreground were fine cut flowers of light-hued tea and hybrid tea roses. Messrs. H. Cannell and Son, Swanley, were also exhibitors of roses, and their exhibit consisted of a brilliant and well grown batch of the dwarf and fine Maman Levavasseur, a useful dwarf variety. Behind these were taller examples of Dorothy Perkins, Debutante, Hiawatha, and the large single variety American Pillar, all clothed with beautiful blooms.

Messrs. Wm. Cutbush and Son, Highgate, contributed a beautiful display in one corner of the big tent, using big palms as a background, with a few Ghent azaleas to lend colour, they grouped in the foreground big batches of roses and carnations. The whole group was bedded with the dwarf polyantha rose Mrs. W. H. Cutbush, and tall arching plants of Hiawatha and Paradise rose well out of and above the other things. The carnations in small groups of a variety were chiefly Baldwin, the bright scarlet King Arthur, the yellow Cecilia, the orange-hued Pasha, the big pink Mrs. Martin R. Smith, and the crimson Maggie Hodgson. The whole made up a graceful and effective display.

In their usual place in the big tent Messrs. Paul and Son, Cheshunt, put up one of the best of displays, contributing standard and pillar roses in great variety, with small plants of the larger flowering varieties arranged below and in front of them. Of course, Dorothy Perkins and white Dorothy, and Hiawatha were very much in evidence; and Lady Godiva and Goldfinch were fine, and the standards of larger varieties were chiefly [illegible] Paula, Mdme. de Watteville, G. L. Pa[illegible] and very beautiful. Among the newer roses represented by smaller plants were David Harum, Souvenir de Pierre Notting, Queen of Spain, Richmond, Dean Hole, Dorothy Page Roberts—a lovely H.T., and Lady Roberts. The whole exhibit was delightfully staged and it attracted a great deal of attention.

Messrs. B. R. Cant and Sons, Colchester, were represented by an attractive exhibit of roses, wherein such rambling roses as Hiawatha, Dorothy Perkins, Evangeline, The Garland, White Dorothy Perkins—very fine, Blush Rambler, and Tausendschon, were used effectively as a graceful and beautiful background. Among the lovely cut blooms in the front of the group we noted specially the flowers of Marechal Niel, Mdme. Ravary, Anna Olivier, Marquise Litta, Killarney, Bessie Brown, Frau Karl Druschki, Papa Lambert, King Cole, and Prince de Bulgarie.

We always expect great things from Mr. George Mount, of Canterbury, in the way of roses, but this year his contribution was far and away the finest he has ever put up at a Temple Show. In variety, arrangement, and cultivation it was a grand effort. Dorothy Perkins and its white counterpart, with Crimson Rambler and Hiawatha, were used as arches to form an attractive background. In front of these the large quantities of glorious blooms of the exquisite new Joseph Lowe, pink that is sure of a good future, because Mr. Mount has shown it so well; Frau Karl Druschki, the brilliant Liberty, and Richmond, Mrs. John Laing, Mrs. Sharman Crawford, Caroline Testout, and Ulrich Brunner were other grand varieties, and every bloom was perfect and set on a long stem, with ample healthy foliage—a superb rose exhibit.

At the extreme end of the long tent [illegible] Messrs. Hobbies, Lim., Dereham, set [illegible] large crescent-shaped exhibit of roses. The plants were largely tall standards and pillars, and Dorothy Perkins and Lady Gay [illegible] those tall standards were specially [illegible] pillars were chiefly Hiawatha, but D[illegible] was a favourite with most visitors, its [illegible] dant single rose-pink flowers attract[illegible] great deal of attention. The dwarf or [illegible] ture standards, and the dwarf plants [illegible] drift, were other features of this big dis[illegible]

A charming display of roses was [illegible] the top tent by Messrs. Frank Cant [illegible] Braiswick Nurseries, Colchester. The [illegible] was a long narrow one, and right up ag[illegible] the tent roof were arches of the leading rambling roses, smothered in flowers; there were Hiawatha, Dorothy Perkins, White Dorothy, Philadelphia, Tausendschon, and Minnehaha. Below the arches were plants of Austrian Copper, the new Baby Rambler, Killarney, Mrs. F. W. Flight, Lady Roberts, J. B. Clark, Irish Elegance, Countess of Derby, Florence Pemberton, etc., etc. Cut blooms of leading varieties were distributed along the foreground in vases and in boxes. Looking right along this lengthy exhibit of roses a very beautiful view was obtained, especially from the entrance end, and the Messrs. Cant are to be congratulated upon arranging such a lovely display in such a position.

A fine group of roses from Mr. Chas. Turner, Slough, contained fine standards of Bessie Brown, Mrs. Sharman Crawford, Niphetos, Souvenir de Pierre Notting, Mrs. J. Laing, and Dorothy Perkins. Crimson Rambler as dwarf plants were a brilliant feature, and Stella was also good.

ALPINES AND ROCK PLANTS.

In making a review of this section it may safely be said that alpines were as largely represented as ever, and there was no falling off in the interest displayed by the public in these popular plants. As usual, the gems of the alpine section were made to look as natural as possible by being shown in temporary arrangements of rockwork, and one interesting exhibit was that set up by the well-known firm of Messrs. Barr and Sons. Along the front of the table were tiny primulas, myosotises, Iberis pinnata, and others, phloxes in variety, saxifragas, and other favourites, while an interesting background was formed by fine spikes of Gladioli Blushing Bride, Ackerman, and Peach Blossom. Aquilegias were effective in this collection, and especially pleasing were the plants of Primula japonica, and the collection of ixias in variety.

Amongst the rock plants shown by Messrs. Geo. Jackman, Woking, were some nice plants of Saxifragas longifolia and granulata flore plena, and a pretty little phlox called Sprite.

By no means the least interesting collection of rock and alpine plants was that staged by the King's Acre Nursery Company. The arrangement was effective, and the flowers that appeared to attract the most were Phlox canadensis Laphami, Saxifraga cotyledon pyramidalis, Incarvillea grandiflora, and Cheiranthus Allioni. In the centre of the display was a rockery mound on which phloxes, alyssums, aubrietias, cyclamen, dodecatheons, silenes, and primulas, formed the chief furnishing material.

Cork bark and tufa were employed to advantage by Messrs. Baker, of Wolverhampton, in arranging their rock plants, and the little gems looked very natural amid their artificial surroundings. Charming in their simplicity were such plants as Saxifraga moschata atropurpurea, Achillea rupestre, Aubrietia Fire King, sempervivums in variety, Viola pedata, Lithospermum prostratum, and many others.

A feature in the big exhibit from Messrs. Carter and Co., Holborn, was the collection of alpine and rock plants. Nestling in naturally arranged pockets were the principal gems of the section, including Saxifraga pyramidalis, Achillea rupestris, Anthemis aizoon, Phlox Nelsoni, Gentiana verna, and a host of others. By a clever manipulation of moss, cork bark, and tufa, the plants were shown to advantage, and every specimen could be seen and examined without difficulty.

A very pretty little arrangement of rockwork was set up by the Craven Nursery, Clapham, Yorks, and conspicuous amongst other pretty things were Androsace villosa, Edraianthus serphylifolius, and Gentiana verna. At the end of the rockery the above firm also had a very fine bank of the white Trillium grandiflorum, which was much admired.

We are quite within the mark in saying that one of the most complete and interesting rock-work arrangements was that made by Messrs. J. Cheal and Sons, Crawley. tufa was employed with advantage and little pools of water held the aquatic plants. Saxifragas, trilliums, primulas, and, in fact, most of the gems of the alpine section were shown, and the crowd of people round the exhibit showed how much they admired it.

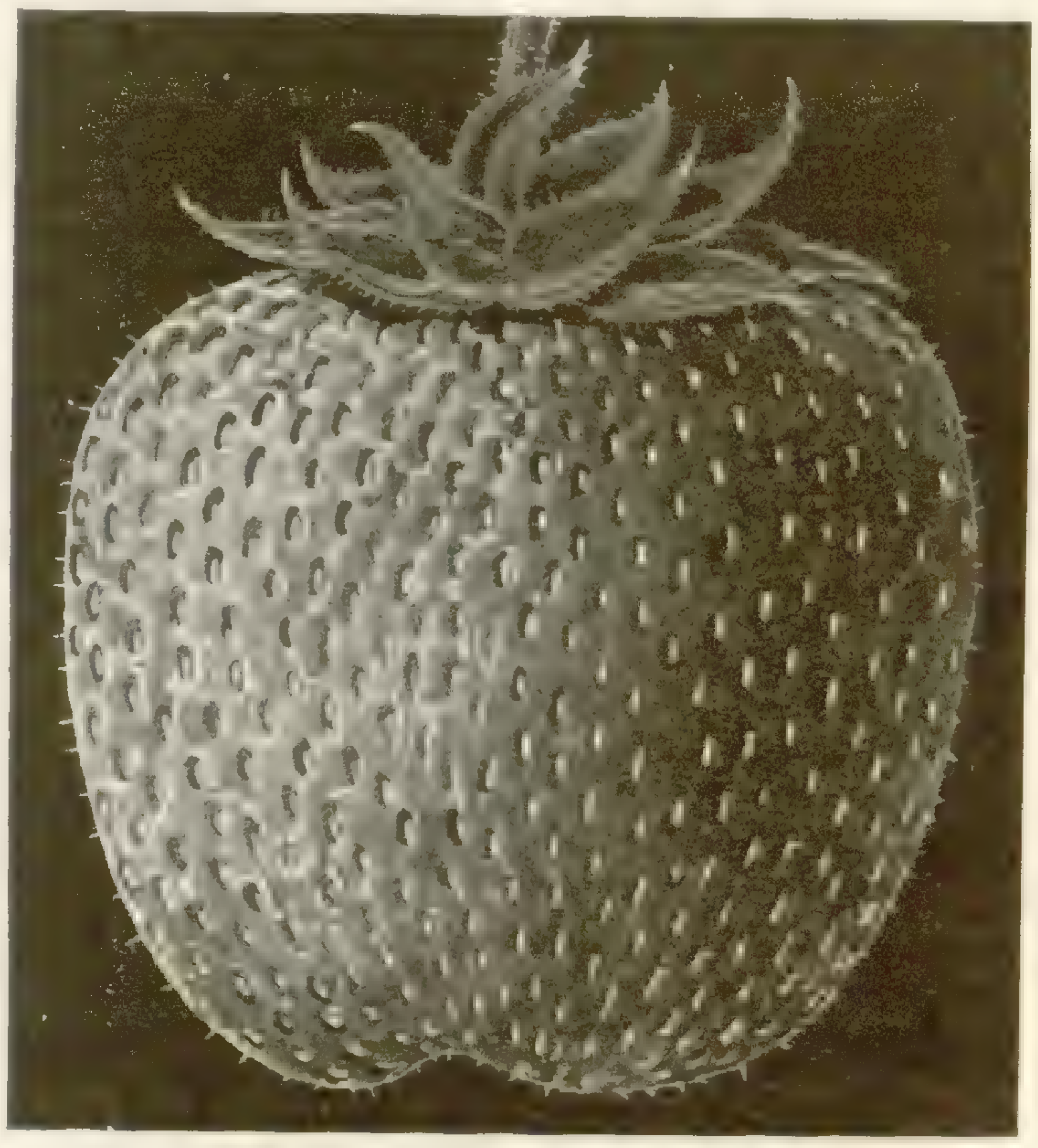
Very natural are the words which best describe the rockery set up by Mr. J. R. Box, of West Wickham. Stone and water were quite in place, and, as there was not too much of the latter, the flowers stood out, and were seen to great advantage. Iberises were attractive in the exhibit, as also were dwarf phloxes, sempervivums, arenarias, and epimediums. The exhibit as a whole reflected great credit on the firm. Messrs. T. Ware had an interesting collection of alpines which formed part of a large and varied exhibit.

A very pretty rockery was set up by the Misses E. and M. Kipping, Hutton, Essex. Tall subjects were arranged as a background, and along the front, nestling in little pockets amongst blocks of stone and tufa, were a number of alpine plants of varying character. The usual run of rock plants were represented, and the way they were displayed reflected great credit on the Misses Kipping. Mr. G. R. Reuthe, of Keston, staged a choice collection of alpines, in which phloxes, saxifragas, and linarias figured with modest effect. The Misses Hopkin, of Shepperton-on-Thames, won a Banksian medal with a very nice rock garden arrangement. Stones and plants were artistically placed, and rock plants, Messrs. Baker, of Wolverhampton, made an attractive display with Lilium croceum, Trollius europæus, Primula pulverulenta, Saxifraga pyramidalis, Incarvillea Delavayi, Aquilegia Stuarti, Lupinus Moerheimi, Phlox canadensis, and Trillium grandiflorum. The flowers all through were very fresh, and the arrangement pleasing.

Primulas Sieboldi, Mrs. Brownhill, Arthur, and others were features in the collection of plants and flowers staged by Messrs. W. Artindale and Son, Sheffield, but there were many other charming subjects, including aubrietias, daphnes, alyssums, phloxes, and cypripediums. A few hardy ferns were dispersed amongst the flowers, and looked pleasing by contrast.

From Messrs. Reamsbottom and Co., Alderborough Nurseries, Ireland, came a delightful exhibit of anemones. The colours were extremely bright, and the flowers, which were well set up, were much admired.

Messrs. George Bunyard and Co. had a fine display of hardy flowers, which were set up without the overcrowding which is often noticeable in this class of exhibit. Delphiniums, pyrethrums, eremuri, papavers, irises, pæonies, and lupins were represented in great variety, and the flowers in all cases were very fresh. Included in this exhibit were amongst other things was a pretty pink daisy called Alice.



TEMPLE SHOW—NEW HIGHLY-FLAVOURED STRAWBERRY EPICURE.
Messrs. Laxton Brothers, Bedford.

The Guildford Hardy Plant Company had a very effective rockery, in which many gems were represented, including saponarias, daphnes, ajugas, oxalis, and Androsace sarmentosa. There was nothing flat or monotonous about the arrangement, and every plant showed itself to advantage. Messrs. G. and A. Clark, Dover, set up a small rockery, which contained the usual subjects, and in addition a pretty rare plant in the shape of Mimula cupreus. The same firm also staged an interesting collection of sempervivums.

HARDY FLOWERS.

Interesting, varied, and tastefully arranged were the cut flowers in the exhibit of Messrs. George Jackman and Son, Woking. There were flowers of the yellow Trollius Orange Globe, further on Lupinus polyphyllus, and close at hand a pretty collection of gladiolus, including Pink Perfection, Peach Blossom, Blushing Bride. Pyrethrums were attractive, particularly the variety Mrs. Bruce Findlay, while also interesting were the irises, liliums, the latter in pots, and the as yet somewhat uncommon Rehmannia angulata.

As a background to their arrangement of well flowered specimens of Astilbe Peach Blossom.

Mr. Amos Perry, of Enfield, had a fine display of hardy flowers, in which we noticed irises in variety, and Papaver Crimped Beauty. In the firm's exhibit was an interesting collection of water lily flowers in variety, with a big Gunnera manicata at the back. Mention must also be made of the liliums, which were represented in great variety, and plants that attracted a good deal of attention were the dodecatheons of different kinds. The varieties of Phlox canadensis were very charming, and eremurus spikes stood up boldly above the other things. Altogether this was a most varied and interesting exhibit.

Messrs. B. Ladhams, Lim., Southampton, made a big display of hardy flowers, amongst which were represented Rehmannia angulata, Aquilegia Stuarti, Primula japonica, Incarvillea grandiflora, Anchusa italica, Lupinus Rose Queen, and aquilegias in variety.

A selection of beautiful rhododendron flowers figured in the exhibit staged by Mr. G. Reuthe, Keston, and another unique feature of the group was Myosotidium nobile. Primulas and gentians were much admired, and as a whole the exhibit was a highly interesting one.

Mr. H. C. Pulham, of Elsenham, Surrey, sent a small collection of hardy flowers taken from trees and shrubs, the chief subjects being azaleas, lilacs, and staphylea. Quite a unique exhibit was the display of oriental poppies set up by Mr. W. J. Godfrey, Exmouth. Solanum Wendlandi was also represented, and the exhibit as a whole attracted much attention, though no one seemed to be able to describe the colour of the poppies.

Messrs. J. Cheal and Sons, Crawley, had a pretty exhibit of lupins, which included the varieties polyphyllus, and its white form Lupin polyphyllus albus. Tree pæonies and violas were included in the exhibit.

Messrs. Gunn and Sons, Olton, Birmingham, were responsible for a beautiful display of phloxes, amongst which we noticed White Swan, Eclaireur, Le Soliel, Mrs. Miller, and Rosy Gem. Viola cornuta purpurea was also a feature in this exhibit. Mr. N. Lowis, of Bridgewater, had a pretty show of anemones, the bright colours of which were much admired.

A long length of tabling was filled by Mr. M. Prichard, of Christchurch, with hardy flowers, conspicuous amongst which were Eremurus robustus, German irises, scillas in variety, pyrethrums, and poppies.

Mr. R. C. Notcutt, of Woodbridge, had a large exhibit of hardy flowers. White broom in the centre was very effective, and other flowers that were admired were Kalmia latifolia, Phlox canadensis, and Cerasus J. H. Veitch.

The chief items of interest in the collection from Lilley's Bulb Nursery were Iris pavonia, the Peacock iris, Arum crinitum, the green tulip, and the green ixia. These novelties attracted the attention of visitors, particularly the peacock iris and the green ranunculus. Included in the exhibit were some fine tulips, including Crested Crown, ixioides, and Velvet Gem. Altogether this exhibit was quite unique.

A rather unique exhibit was a little collection of seedlings of the Blue Poppy, Meconopsis racemosa, staged by Lady Northcliffe, Guildford.

Messrs. Paul and Son, Cheshunt, sent a very interesting collection of lilacs, and in the exhibit were plants of Catalpa syringæfolia pulverulenta, and a fine specimen of the beautiful white Hydrangea arborescens grandiflora alba.

Messrs. Gilbert and Son, of Dyke, Lincs, made a pretty display with anemones, amongst which the white and scarlet varieties, both doubles and singles, were much admired.

Messrs. G. and A. Clark, Dover, had a big collection of hardy flowers, which contained amongst other things different varieties of trollius, German irises, geums, pyrethrums, and aquilegias. Rhododendrons, azaleas, and other hardy flowers were well shown by Messrs. W. H. Rogers and Son, Lim., Southampton.

Messrs. W. Paul and Son, of Waltham Cross, had an exhibit of cut lilacs and rhododendrons. The variety was considerable, but the flowers would have been seen to better advantage if they had been given more space.

A brilliant and interesting group of hardy flowers came from Messrs. R. Wallace and Co., Colchester. At one end they had a group of the fine blue Anchusa Opal, and, passing along the group, we noted the pretty Papaver Rose Queen, Eremurus himalaicus, E. robustus, Colvillei forms of gladiolus, the vivid Habranthus pratensis, a selection of Spanish irises, German irises, ixias, liliums in great variety, Incarvillea Delavayi, the new pink spiræa Queen Alexandra, Primula sikkimensis, and a little group of pretty hardy orchids, and ferns, Pæonia decora alba, and Primula japonica in variety. With these beautiful herbaceous and alpine plants the Messrs. Wallace showed a small selection of May-flowering tulips, their set containing such superb varieties as Inglescombe Pink, Clara Butt, The President, Walter T. Ware, Orange King, Fairy Queen, Inglescombe Yellow, King Harold, and Red Cardinal.

Messrs. T. S. Ware, Lim., Feltham, showed a large collection of hardy flowers, and a few carnations. They had a selection of German and Spanish irises, Delphinium Persimmon, Trillium grandiflorum, Meconopsis cambrica, Conandra ramondiodes—very rare, and Anchusa italica Dropmore variety.

AZALEAS AND RHODODENDRONS.

A gorgeously beautiful exhibit of Ghent and mollis azaleas, arranged by Messrs. R. and G. Cuthbert, Southgate, in the big tent, was a great attraction. Tall standards rising well above the bushes, gave the display a lighter effect than it would have possessed without them. The fine Anthony Koster made a fine corner group, while the light and beautiful Magnifica filled up the centre front. Graciosa, a new white, lemon tinted variety; Nancy Waterer, golden-yellow; Fanny, a single rosy-hued Ghent variety; Raphael de Smet, double pink; and Peter Koster, orange, were a few of the finest of a fine set, though one cannot omit the exquisite lemon-yellow Mdme. A. Koster, a large-flowered mollis variety.

Messrs. George Jackman and Son, Woking, showed some well-flowered specimens, which were the result of crosses between Azaleas mollis and sinensis. The varieties which took our attention most were President Carnot, Anthony Koster, Dr. Reitenbach, and Mrs. A. E. Endtz. The same firm also staged a number of Ghent azaleas, amongst which we noticed Pallas, of an orange shade of colour, and Narcissiflora, a creamy yellow. Conspicuous also in this exhibit were fine trusses of Rhododendron Pink Pearl.

A bank of Azalea rosæflora was staged by Messrs. J. Backhouse and Son, Lim., York. The pretty semi-double flowers of this azalea are freely produced, and the plant has a dwarf, compact habit.

The group of bold and beautiful rhododendrons submitted by Messrs. J. Waterer and Sons, Lim., Bagshot, was a very fine one. Quite naturally Pink Pearl was a feature of the exhibit, its big trusses of lovely pink flowers placing it ahead of all others. Marquis of Waterford, Mrs. Holford, the deep and brilliant pink Cynthia, Frederick Waterer, scarlet; Strategist, Doncaster, and Helen Waterer were other splendid varieties of these magnificent hardy flowering shrubs.

A great variety of colour was presented by the rhododendrons in pots staged by Messrs. H. Lane and Son, Great Berkhamsted. Conspicuous also were plants of the golden-yellow azalea Anthony Koster. Amongst the rhododendrons Purity, Blandyanum, and Lady Grey Egerton were a few of the most attractive varieties.

Mr. R. Gill, of Penryn, Cornwall, had a very interesting display of rhododendrons and other flowers. Amongst the former were R. Manglesi, Falconeri, Dalhousei, Aucklandi, and others, and amongst the most admired flowers was Embothrium coccineum. Clianthuses puniceus and puniceus alba also attracted attention.

Choice flowering shrubs, climbers, etc., were largely shown by Messrs. James Veitch and Sons, Chelsea, in the big tent. This firm relied on the mollis azalea Anthony Koster and the beautiful Pink Pearl rhododendron for colour. A few of the newer things were Actinidia chinensis, Clematis montana rubens, the lovely little Cytisus Beani, grown as a standard, Primula pulverulenta, P. sibirica chinensis, P. Veitchi, Rheum Alexandræ, with big pale green bracts all up its spikes; Viburnum rhitidophyllum, Ceanothus Veitchianus, and Vitis megalophylla. The brilliant Embothrium coccineum, several clematises, and tree pæonies were also good and effective. Indian azaleas, as pyramidal specimens were exhibited by Mr. Charles Turner, Slough, and the chief varieties were Spitfire, Prince Albert, Roi d'Holland, and Madame Van Houtte.

FERNS.

Ferns were superbly shown by Messrs. H. B. May and Sons, Edmonton, who had a large exhibit of fine specimens of Gmynogramma schizophylla gloriosa, the bold Asplenium magnuatum, the drooping Goniophlebium subauriculatum, Polypodium glaucum cristatum, Polypodium Knightiæ, the beautiful Nephrolepis Whitmani, N. exaltata superba, N. Scotti, Platycerium alcicorne, Davallia dissecta, adiantums in variety, and a host of other lovely graceful varieties.

Messrs. J. Hill and Sons, Lower Edmonton, put up a bold exhibit of exotic ferns, that contained good examples of Platycerium grande, Nephrolepis todeaoides, Lygodium scandens microphylla, Davallia dissecta elegans, Nephrolepis Amerpohli, and the beautiful Adiantum Veitchianum, etc.

STOVE PLANTS.

A superb group of stove plants was finely arranged by Messrs. Jas. Veitch and Sons, Chelsea. The display was composed of a central group of orchids, in which odontoglossums and oncidiums figured largely, and this was flanked by the leading perpetual carnations in small groups, but the bulk of the exhibit consisted of splendidly grown examples of Nepenthes Mastersiana, Caladiums Rose Laing, Mdme. Schmidt, Gaspard Crayer, Louis van Houtte, Baron Rothschild, The Mikado, Raymond Lemonier, Dracæna Doucetti de Groot (F.C.C.), a rather broad-leaved form of Doucetti, Medinella magnifica, beautiful single-stemmed Croton caudatus tortilis, Dracæna Sanderiana, Alpinia Sanderiana, Aralia elegantissima, and Cynophyllus magnificum. The newer nephrolepis were represented, and the palms and ferns were used freely among the brighter things, the whole making up a very glorious display.

A giant specimen of Heliconia illustris, with handsome red-green leaves and lighter veins, made a fine centrepiece to a group of stove plants set up in the big tent by Messrs. Wm. Bull and Sons, Chelsea; Dracæna Laudeni, Anthurium crystallinum, crotons, a few caladiums, palms, tree ferns, and bertolonias completed the exhibit. Messrs. John Laing and Sons, Forest Hill, S.E., contributed a display of caladiums, mostly of half specimen size, and representing such varieties as Gerard Dow, Reine de Danemark, Major Joicey, Mikado, Mdme. Schmidt, Gaspard Crayer, and B. S. Williams. A comparatively small group of caladiums was set up by Messrs. J. Peed and Son, West Norwood, who had grand specimens of such splendid varieties as Mdme. Marie de Flacourt, Mdme. J. R. Box, Candidum, John Peed, Mikado, Oriflamme—very bright, Racine, lovely pink and red; Maria Mitzana, rich bronzy-red, Ladas, and Lord Penhryn. The big leaves with their beautiful texture and grand colouring still attract a great deal of attention. Messrs. Sander and Son, St. Albans, set up a group of their new plants, including the new Croton Fred Sander, Furcræa Watsoniana, the elegant Polypodium Knightiæ, Bougainvillea glabra Sanderiana variegata, the bold-leaved Anthurium Sanderi, the red-leaved Vitis atro-rubens, Pereskia Godseffiana with variegated leaves, Iguanura Rex—a bold palm, and the handsome Pandanus Sanderi superba with yellow variegation.

BEGONIAS.

Wonderful was the colouring seen in the splendid group of tuberous begonias set up by Messrs. Blackmore and Langdon. The frilled or fringed varieties were exquisitely beautiful, especially in the single varieties, of these latter the yellow Mrs. Pankhurst, the white Mr. Justice Darling, and the orange Mrs. Coles Child, and the pink Mdme. Tetrazzini, were the best. Among the grand round-flowered doubles we picked out Mrs. J. B. Blackmore, Mrs. W. L. Ainstie, Colonel Turner, Pink Pearl, Empress Marie (A.M.), white; Rev. Canon Horsley, and White Swan as of exceptional merit in a grand collection.

Mr. J. R. Box, West Wickham, submitted a very handsome collection of double and single tuberous begonias in a great variety of forms and colouring; their Lady Fexton, Prince Fushima, Gold Mine, Lady Donaldson, and Lady Kerry were among the good things.

Messrs. Thos. S. Ware, Lim., Feltham, had a beautiful group of tuberous begonias, set up rather flatly, but containing a number of splendidly formed and exquisitely coloured varieties. A few of the best were Rhoda Pope, King Edward VII., Hon. Mrs. M.

Glyn, orange-salmon, Countess of Dartmouth, a lovely cream; Beatrice Pardy, pure white; and Countess of Ilchester, pale yellow, and Lord Cromer, with double pink flowers, perfect in form, and about six inches in diameter. Mr. A. L. Gwillim, Cambrian Nursery, Eltham, showed splendid double and single begonias, that in form, size, and colour gave ample evidence of close selection and fine cultivation.

CLEMATISES.

Clematises were beautifully shown by Messrs. Geo. Jackman and Son, Woking, who had a fine set of varieties, all in the pink of condition. Fortunately, the plants were not formally trained. Lady C. Neville, Nelly Moser, Mrs. Hope, Mrs. G. Jackman, Fairy Queen, Ville de Lyon, vivid rose-red; Wm. Kennett, Lady Northcliffe, a grand blue; Jackmani rubra, brilliant ruby-crimson; Lord Neville, blue; and Hovevi, white, were a few of the best. The contribution of clematises from Messrs. Richard Smith and Co., Worcester, was an attractive one, and the plants were well flowered and very fresh. There were arches, pillars, and trained specimens, representing King Edward VII., the bright blue Sensation, Mrs. G. Jackman, Fairy Queen, Marie Lefebvre, Nellie Moser, Lady Caroline Neville, President, and Gloire de St. Julien.

CARNATIONS.

A grand group of carnations in pots, shown by Mr. A. Grubb, gardener to Cecil F. Raphael, Esq., Shenley, Herts, was a fine sight, and showed that Mr. Grubb is a master of Malmaison carnation culture, and also of perpetual varieties. The white Malmaison, Princess of Wales, King Arthur, and Maggie Hodgson were the varieties displayed. Malmaison carnations and tree pæonies were well shown by Mr. W. H. Smith, gardener to W. James, Esq., Chichester; the carnations needed a few more days to be at their best, but the huge flowered pæonies were gorgeously beautiful.

Magnificent blooms of carnations in considerable variety were shown in elegant glass on long footstalks by Mr. W. H. Lancashire, Victoria Vineries, Jersey. Mr. A. J. Paskett, gardener to E. J. Johnstone, Esq., Groombridge, set up a fine lot of plants of Carnation Burrswood Scarlet, a fine flower, but rather wanting in scent. Mr. C. H. Herbert, Birmingham, sent fine flowers of a new perpetual-flowering pink carnation called Progress.

Mr. A. F. Dutton, Iver, Bucks, had one of his fine exhibits of perpetual-flowering carnations, showing large vases of fine blooms of Imperial, Lady Bountiful, Melody, Mabelle, Mrs. T. W. Lawson, Red Riding Hood, and President.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, were extensive exhibitors of perpetual carnations, and they arranged these in vases and tall stands over maidenhair fern. They had Autocrat, Marmion, Mrs. Burnett, Victory, Lady Bountiful, Winsor, Britannia, and Beacon in fine style.

Perpetual carnations were superbly shown by Mr. W. H. Page, Tangley Nurseries, Hampton, who had grand vases of Lady [illegible], Aristocrat, General Roosevelt, White Enchantress, Winsor, and the old [illegible] Pike.

Mr. C. F. Waters, Balcombe, Sussex, had a beautiful lot of carnations, showing the leading varieties in fine style, his Marmion, White Perfection, Princess of Wales, Autocrat, and Aurora were very good.

Mr. H. Burnett's group of carnation blooms brought over from Guernsey were very fine, and he had grand flowers of Marmion, Aurora, Winsor, Autocrat, Mikado, Enchantress and Mrs. Burnett. Mr. G. Engelmann, Saffron Walden, had a small group of carnations, and he also exhibited large bunches of the leading kinds.

Messrs. Bell and Sheldon, Guernsey, showed a beautiful lot of perpetual-flowering carnations, setting up fine flowers in large vases; Sensation, Lady Bountiful, Autocrat, Evangeline, and all the popular varieties were present.

Mr. S. Mortimer, Farnham, Surrey, exhibited a bank of carnations just inside the second big tent, and he also had a beautiful lot of flowers of the leading varieties set up in large vases.

GREENHOUSE PLANTS.

We must congratulate the King's Acre Nursery Company, Hereford, on the very effective way in which their exhibit of petunias, heliotropes, schizanthuses, and carnations was set up. The pretty little Begonia Bronze Beauty was put in as groundwork, and rising above it were banks of Schizanthus Wisetonensis, with crimson Carnation Prime Minister behind. Very large-flowered heliotropes in a number of more or less distinct varieties, and a delightfully pretty deep pink new single petunia called the Countess of Chesterfield, were included in the group. The whole of the upper end of the big tent was filled by Messrs. Sutton and Sons, Reading, in their usual superb style. The central group was a semi-circular one of the firm's fine new selection of Stellate cinerarias, including the pretty cactus-flowered varieties; the new mauve shades were a great attraction, and the delicate perfume was also a noted feature. On either side of the cinerarias there were big groups of glorious and gorgeous calceolarias, remarkable for their wonderful colouring and spottings, and one of these banks was surrounded by a splendid set of double begonias, some of the blooms measuring nearly seven inches across. The other group was surrounded by gloxinias of splendid habit and colour, not a single flower requiring support. The lovely schizanthuses, particularly the new retusus forms, the hybrid nicotianas, and Nemesia strumosa in great variety added to the many other attractions of this beautiful exhibit.

Succulents and cacti were submitted by Messrs. H. Cannell and Son, Swanley, but vastly more attractive than these were the firm's calceolarias, their big-headed hydrangeas, the gorgeous cannas, and their group of the graceful and effective Fuchsia Coralle, an orange-flowered variety of much merit.

At the end of an exhibit, which included a variety of flowers, Messrs. Richard Smith and Co., of Worcester, staged a few calceolarias of moderate quality. A number of well-grown plants of the new pink-tinted spiræa Peach Blossom were staged by Messrs. W. Bull and Sons, Chelsea. Messrs. Pope and Son sent plants of a new double clematis called King's Norton. The Hon. Mrs. Evelyn Cecil, Eaton Place, staged plants of Gloriosa lutea collected in Rhodesia.

Very quaint and interesting were the sarracenias shown by Mr. A. J. A. Bruce, Chorlton-cum-Hardy, who, as usual, had a very good collection of these carnivorous plants. Darlingtonia californica, Dionæa muscipula, and a set of droseras were shown with the Side-saddle plants.

A fine bank of schizanthuses in pots was set up by Messrs. J. Garraway and Co., Bristol. The plants were very well grown, and the colours varied. Messrs. Jarman and Co., Chard, sent flowers of their fine new Centaureas Bridegroom, The Bride, Honeymoon, and Bridesmaid. Mr. Vincent Slade, of Taunton, was responsible for a comprehensive collection of single and double zonal pelargoniums, the trusses of which were very fine. Beautiful lilacs were shown by Mr. T. Jannoch, Dersingham, Sandringham, and the fragrance was as delightful as the colour and grace of the flowers; Marie Legraye, Charles X., Louis Spathe, Louis Henry, and Charles Joly were very fine.

A long length of tabling was filled with gloxinias exhibited by Messrs. John Peed and Son, West Norwood. A good many of the varieties were named, and there were also a good sprinkling of new seedlings. The size of the flowers and the vigour of the foliage were apparent signs of good cultivation, and the mingling of ferns amongst the plants in staging added to the attractiveness of the exhibit. A very pretty group of mixed single petunias came from Mr. W. R. Chaplin, Waltham Cross. A mixed collection of plants, including cactuses, calceolarias, and yellow arums, interspersed with ferns, was set up by Mr. Pitts, gardener to E. Ascheson, Esq., Charing, Kent.

Never did the well-known firm of Carters make a finer show than on this occasion, and one hardly knew which to admire most, the excellence of the plants and flowers, or the artistic way in which they were shown. Baskets of schizanthus hung from archways covered with smilax, and the above greenhouse plant was also well shown in pots. Tuberous begonias were noted for the health of the foliage, the size of the flowers, and the method of arrangement. One recess in the tent was completely filled with cinerarias, all splendidly grown, and representing a striking array of colour. Facing the entrance of the tent was a fine bank of Cineraria stellata, and on one side of the table was a grand collection of gloxinias. Good quality was the stamp of the whole display from beginning to end, and Messrs. Carter and Co. have every reason to feel proud of their effort.

A very unique exhibit was the collection of flower and foliage plants sent by Messrs. W. and J. Brown, Peterborough. Amongst other things a fine basket plant, Lotus pelios hynthus, of pretty pendant habit, was much admired, as also were the Verbenas Miss Willmott, Snowflake, and Heliotrope Lord Roberts. Bakers, of Wolverhampton, had a beautiful collection of violas, one of the most attractive varieties being Jessie Baker, but without exception the flowers were very charming. A bank of beautiful Stellata cinerarias was set up by Mr. G. H. Street, gardener to J. A. Young, Esq., Stone House, Putney; this was a beautiful mass of colour.

Messrs. J. Veitch and Sons had a beautiful bank of plants that were much admired. Streptocarpuses achimeniflorus albus and achimeniflorus gigantus were very fine, and the same remark applied to Cineraria Feltham Bouquet. Richardia Elliottiana was well represented. Variety was supplied in a collection of cannas, and a plant that attracted general attention was Kalanchoe Kewensis. New hybrid gerberas were included in the group, and both Lobelia tenuior, Coreopsis Granti, and Amphicome Emodi were very fine. In short, this fine collection well deserved the gold medal it won.

Mr. Godfrey, Exmouth, set up a good group of pelargoniums, and amongst the best varieties we noticed Mars, Beauty, Dora Godfrey, Godfrey's Pride, and Bridesmaid. Mr. Edwin Beckett, of Altrincham fame, can evidently grow streptocarpuses as well as he can vegetables, and the collection he set up was characteristic for the fine flowers and healthy foliage. The colours were kept distinct, and the effect of the collection was very pleasing.

Very beautiful were the gorgeous amaryllis exhibited in grand style by Messrs. Ker and sons, Aigburth Nursery, Liverpool. They were magnificent in colour, form, and culture. Alba perfecta, Queen of Spain, Jasper, Margot, the latter rich pink varieties, Empress, and Virginia, were all very splendid varieties. In one of their groups, Messrs. H. Low and Co., Enfield, had the beautiful free-flowered Azalea rosæflora, Dracæna Lindeni, fine bushes of the red and white Bottle-brush, the pink spiræa, and some heaths.

A large collection of calceolarias came from Messrs. Webb and Sons, of Stourbridge. There was a good variety of colour, and the finely-flowered plants were extremely well grown. Mr. L. R. Russell, Richmond, set up a group of a striking looking ivy called Hedera dentata variegata.

About twenty grandly grown standard plants of the comparatively new, pink, scented-leaved pelargonium Clorinda were shown by Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts. These were superbly grown examples, 5ft. to 7ft. high, with heads about 4ft. through, and finely clothed with bloom. Mr. Beckett has demonstrated the value of this variety for conservatory, balcony, and terrace decoration. White spiræas formed a groundwork for the pelargoniums.

A collection of plants in which were gloxinias, came from the Studley College, Warwick, but there was nothing in it which called for particular comment, the plants being quite of an ordinary character.

CUPS AWARDED.

Veitchian Cup. — F. Mentieth Ogilvie, Esq., Oxford, for orchids.

Silver Cups. — Messrs. Sutton and Sons, Reading, miscellaneous; Messrs. Barr and Sons, Covent Garden, herbaceous plants; Messrs. Bunyard and Co., Maidstone, herbaceous plants and fruit; Messrs. J. Waterer and Sons, Bagshot, rhododendrons, etc.; Messrs. H. B. May and Sons, Edmonton, ferns, etc.; Mr. L. R. Russell, Richmond, clematis, shrubs, etc.; Messrs. R. Smith and Co., Worcester, clematis and herbaceous plants; Mr. C. Turner, Slough, roses and azaleas; Messrs. Paul and Sons, Cheshunt, roses, etc.; Messrs. Jackman and Son, Woking, herbaceous plants; Messrs. Pulham and Son, Broxbourne, alpines, etc.; Messrs. J. Cheal and Sons, Crawley, trees, shrubs, and herbaceous plants; Messrs. W. Paul and Son, Waltham Cross, roses, etc.; Messrs. T. Cripps and Son, Tunbridge Wells, acers, etc.; Messrs. R. P. Ker and Sons, Liverpool, hippeastrums; Mr. A. Perry, Enfield, herbaceous plants; Messrs. R. and G. Cuthbert, Southgate, azaleas, etc.; the Hon. Vicary Gibbs, Elstree, pelargoniums and streptocarpus; C. F. Raphael, Esq., Egham, carnations, etc.; Messrs. Blackmore and Langdon, Bath, begonias; Messrs. R. Wallace and Co., Colchester, herbaceous plants; Sir J. Colman, Bart., Reigate, orchids; W. James, Esq., Chichester, carnations and pæonies; Messrs. J. Cypher and Sons, Cheltenham, orchids, etc.; Mr. M. Prichard, Christchurch, herbaceous plants.

MEDALS.

Gold Medals.—Messrs. J. Veitch and Sons, Chelsea, foliage plants, flowers, etc.; Messrs. W. Cutbush and Son, Highgate, roses, carnations, alpines; Messrs. Sander and Son, St. Albans, orchids and foliage plants; Messrs. Charlesworth and Co., Bradford, orchids; Major G. L. Holford, C.I.E., C.V.O., Westonbirt, orchids; Messrs. H. Low and Co., Enfield, orchids, carnations, etc.

Silver Gilt Flora Medal. Messrs. T. S. Ware, Lim., Feltham, begonias, carnations, Messrs. Cannell and Sons, Swanley, roses, calceolarias, cannas, etc.; Messrs. J. Carter and Co., Holborn, flowering plants; Mr. G. Mount, Canterbury, roses; Messrs. Hobbies, Lim., Dereham, roses; Mr. G. Reuthe, Keston, herbaceous plants, etc.; Messrs. A. Dickson and Sons, Newtownards, tulips, Messrs. J. Hill and Son, Edmonton, ferns; Mr. A. J. A. Bruce, Chorlton, sarracenias; Messrs. Armstrong and Brown, Tunbridge Wells, orchids; Mr. H. Burnett, Guernsey, carnations; Mr. A. F. Dutton, Iver, carnations; Mr. R. Ashworth, Newlands, orchids.

Silver Gilt Knightian Medal.—Messrs. T. Rivers and Sons, Sawbridgeworth, fruit trees in pots; Messrs. Laxton Bros., Bedford, strawberries.

Silver Gilt Banksian Medal.—Messrs. J. Peed and Son, West Norwood, caladiums and gloxinias; Messrs. Bakers, Wolverhampton, herbaceous plants, Mr. J. R. Box, West Wickham, begonias, The Craven Nursery Company, Lancaster, alpines; Messrs. Fromow and Sons, Chiswick, trees, shrubs, etc.; Mr. R. Notcutt, Woodbridge, herbaceous plants.

Silver Lindley Medal.—F. Mentieth Ogilvie, Esq., Oxford, orchids.

Silver Flora Medal.—Messrs. F. Cant and Co., Colchester, roses, Messrs. D. Russell and Sons, Brentwood, trees, shrubs, etc., Messrs. J. Laing and Sons, Forest Hill, begonias, caladiums, Mr. C. W. Breadmore, Winchester, sweet peas, Mr. A. R. Upton, Guildford, herbaceous plants; Messrs. Webb and Son, Stourbridge, calceolarias; Messrs. B. R. Cant and Sons, Colchester, roses, Messrs. Dobbie and Co., Rothesay, violas, etc.; Messrs. Hogg and Robertson, Dublin, tulips, Messrs. J. and A. McBean, Cooksbridge, orchids, Mr. J. W. Moore, Rawdon, orchids, Mr. R. Gill, Penryn, rhododendrons.

Silver Knightian Medal.—Thatcham Fruit Farm Co., Thatcham, vegetables; Mr. Stephenson, Burwell, Cambridge, asparagus.

Silver Banksian Medal.—J. D. Enys, Esq., Penryn, Myosotidium nobile; Mr. W. P. Horton, Seaford, alpines; The King's Acre Nurseries, Hereford, herbaceous plants; Mr. A. M. Wilson, Spilsby, tulips; Messrs. W. Bull and Sons, Chelsea, orchids, foliage plants; Mr. H. Crane, Highgate, violas; the Misses Hopkins, Shepperton, alpines, etc.; Mr. F. Lilley, St. Peter's, Guernsey, bulbous plants; Mr. G. Prince, Longworth, roses; Messrs. Watkins and Simpson, Covent Garden, vegetables; Messrs. R. H. Bath, Wisbech, tulips and carnations; Mr. A. L. Gwillim, Eltham, begonias; Mr. A. J. Harwood, Colchester, asparagus; Mr. T. Jannoch, Dersingham, lilacs, etc.; Mr. B. Ladhams, Shirley, herbaceous plants; Mr. W. H. Page, Hampton, carnations; Messrs. Bell and Sheldon, Guernsey, carnations.

CERTIFICATES AND AWARDS.
ORCHID COMMITTEE.

First-class Certificate for Odontioda Charlesworthi, from Messrs. Charlesworth and Co.; Cypripedium ventricosum, from Messrs. W. Cutbush and Son; L.-c. Elva Westonbirt var., from Major Holford; Cattleya Mendeli His Majesty, from F. Wellesley, Esq.; Odontoglossum illustre var. luxuriosum, from Mr. Ch. Vuylsteke, Loochristy; and Odontoglossum eximeum Queen Alexandra, from Mr. Ch. Vuylsteke.

Award of Merit to Odontoglossum Lindeni, from Sir J. Colman, Bart.; Cirrhopetalum pulchrum, from Sir J. Colman, Bart.; Odontioda St. Fuscien, from Mons. H. Graire; Odontoglossum laudatum, from Mr. Ch. Vuylsteke; O. crispum Kenneth, from N. Cookson, Esq.; O. hibernicum, from Messrs. Charlesworth and Co.; Cattleya Mossiæ Le President, from Messrs. H. Low and Co.

Botanical Certificate to Bulbophyllum vibrans, from Sir J. Colman.

Cultural commendation to Miltonia vexillaria, from Major Holford (grower Mr. Alexander).

FLORAL COMMITTEE.

First-class Certificate to Dracæna Doucetti de Grootei, from Messrs. J. Veitch and Co.; Tulip Walter T. Ware, from Messrs. W. T. Ware, Lim.

Award of Merit to Azalea occidentalis graciosa, from Messrs. R. and G. Cuthbert; Begonia Empress Marie, from Messrs. Blackmore and Langdon; Croton Fred Sander, from Messrs. Sander and Sons; Dimorphotheca aurantiaca, from Messrs. Barr and Sons; Pæonia decora alba, from Messrs. R. Wallace and Co.; Rose Elaine, from Messrs. W. Paul and Son; Rose Tausendschon, from Messrs. Hobbies and Messrs. W. Paul and Son; Rose White Dorothy, from Messrs. B. Cant and Co. and Messrs. Paul and Son; Tulip Duchess of Westminster, from Messrs. A. Dickson and Sons.

⁂ We are compelled to leave over the sections devoted to the groups, etc., arranged in the open air, and to miscellaneous subjects. These we shall give in our next issue, with descriptions of new plants, and illustrations of these, and other objects of special merit. The reports of the annual meeting and dinner of the Kew Guild, of the National Tulip Society's exhibition at Westminster, and the Paris spring show will also be given in our next issue.

LEICESTER.—ABBEY PARK FLOWER SHOW will be held on the 4th and 5th August, 1908.

Schedules and full particulars can be obtained from JOSEPH BURTON, Superintendent.

ROYAL OXFORDSHIRE
HORTICULTURAL SOCIETY.
June 23, 1908.

OPEN CLASS. — Group of Stove or Greenhouse Plants:—£15, £12, £8. Also liberal prizes for displays of Roses, Perennials, Dinner Table Decorations, Sweet Peas, etc.

Schedules on application to
W. GREENAWAY (Sec.),
Paradise Square, Oxford.

WOLVERHAMPTON
GREAT FLORAL FETE.
July 7, 8, and 9, 1908.
£800 in prizes. Schedules on application.
W. E. BARNETT, Secretary.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

EPIPHRONITIS VEITCHI. — This most interesting bigeneric hybrid, derived from the intercrossing of Sophronitis grandiflora and Epidendrum radicans, is one of the brightest of small growing orchids. When grown into good-sized specimens, and flowered satisfactorily, it is one of the most useful, as well as one of the most attractive; being suitable either for exhibition or for cutting purposes, it deserves a place in all gardens where orchids are appreciated. The season at which the flowers are produced depends entirely on the conditions under which the plants are grown. Our plants are grown in the intermediate house, on the staging during the summer months, and suspended near the roof glass during the winter. It is so placed because during the summer it is in more or less active growth, and I find it produces more satisfactory growths in this position, and I have no doubt the better facilities thus provided for acquiring moisture are of considerable advantage to the plants.

POTTING.—I consider annual repotting advisable, and this is best attended to when the new roots are in an active state, and the plants are usually in condition soon after flowering. They should be turned out of their pots, and, after removal of the old potting compost, any dead and useless matter should be cut away from the base of the stems. To make the plants effective, the strongest stems should be selected and placed several together in the same pot, keeping the weaker growing ones also together. The pots used should be clean, and filled to one-half their depth with clean broken crocks or bracken roots. The compost we find suitable consists of equal portions of fibrous peat, broken leaves, and chopped sphagnum, with sufficient coarse sand added to render the whole porous. The material should be made moderately firm, and the surface covered with chopped sphagnum. The plants should be shaded for a time after repotting, and the atmosphere kept moist about them; syringing overhead will also be found beneficial in bright weather.

INCREASING THE STOCK.—There is no plant I know that lends itself more readily to propagation than this epiphronitis. The stems that have flowered are constantly breaking into new growth, and these growths may be cut off when the roots make their appearance, and potted in the usual way. Strong shoots may be either laid out on a bed of moss, or they may be cut into short lengths and inserted as cuttings in a compost of sphagnum moss and sand, when they readily produce growth.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PELARGONIUMS AND AZALEAS, when they begin to drop their petals, need a good deal of picking over, and when the plants are beyond a certain stage have them removed to another house, if possible. In the conservatory shabby plants should not be tolerated, as they detract from the enjoyment of good specimens. Olearia Gunni is a charming little white-flowered bush, now very effective as a pot plant, and Cytisus Andreanus is a good companion to it. Both should be retained for the unheated conservatory. Well-grown bushes of white marguerites, ivy-leaved pelargoniums, and hydrangeas of any variety, are all easily grown, and help to make a good show.

ASTILBE JAPONICA.—This is one of the most popular plants for early forcing, and if the clumps are potted early in the autumn they may be plunged in ashes or cocoa-nut fibre refuse outside. They will soon commence to root, after which they should not be allowed to get dry. For early forcing they should be placed in heat as soon as they have commenced to root in the pots, but it is best to force gently, as they then flower more freely. When the plants are well furnished with foliage and flowers, place them of water to prevent them becoming dry, as they are difficult to keep sufficiently moist when in full growth. After the flowering season the plants should be divided, planted in good soil in an open position, and given copious supplies of moisture through the summer months. They will repay a supply of liquid manure weekly, and in light soil should be given a mulch of decayed manure. Treated thus they force freely and bloom satisfactorily.

ARUM LILIES.—When grown for the production of spathes under glass, different methods of culture are practised by various growers, some planting them out in trenches of rich soil during the summer months, and others allowing them to remain in their pots and become thoroughly dry before potting. Both plans have their advocates, who testify to the superiority of their course. Good results have doubtless been obtained by the followers of each system, but the thorough ripening of the roots is certainly more in accordance with the conditions experienced by the plants in their native habitat, where, in the hot summer the soil surrounding the roots often becomes parched to a brick-like consistency. Where the system of permanent pot culture is adhered to, the plants may be placed in the open by the end of May. Water should be given in decreasing quantities until the leaves begin to turn yellow, when it must be entirely withheld, and the pots turned on their sides. In this position they should be left until the end of July. The plants should then be turned out, and repotted, using fresh rich soil, and given a good watering. From this time they should not be allowed to become dry, and in about two months they must be housed in a genial temperature and given a plentiful supply of water, with periodical applications of liquid stimulants. Treated in this way the plants will make healthy and vigorous foliage, and commence to throw up spikes in November, and produce their white spathes in quantity for Christmastide.—T. B. **Field**, Ashwellthorpe Hall Gardens.

THE FLOWER GARDEN.

SUMMER BEDDING.—Every preparation for bedding-out should now be completed as soon as possible; if any beds are not yet prepared, no further time should be lost, as when June enters planting may be at once proceeded with, or even earlier in favourable, well-sheltered sites, for all except the most tender plants. By making all preparation possible, the actual work and untidiness of planting is not then so long about, and plants have better opportunity of establishing themselves before the hottest weather ensues. Lawns should be mown, and all beds clipped round with edging shears before other work is commenced. If much traffic has to pass over any part of the lawn, planks should be laid down to protect the grass. The soil in the beds must be in a well pulverised condition, so that it can be evenly firmed down all round each plant. Should the weather be hot and dry do not allow the roots to be exposed a moment longer than necessary, or, in the very hottest hour or two of the day it may be advisable to cease planting and attend to other matters. See that nothing suffers through lack of moisture, though it is not advisable to give heavy soakings of quite cold water direct from the water mains, that which has been exposed to the sun's rays being much more helpful.

HARDENING OFF. — Should any plants not yet be in a sufficiently hardy condition, do not plant them at once, because to take plants direct from warm growing quarters and place them in exposed positions outside, means the disfigurement and loss through sudden exposure of tender foliage. Especially is this so with palms, musas, cannas, and other foliage plants used for subtropical and mixed bedding, and which, if once damaged, take a long time to recover, frequently marring the effect for nearly the whole season. All the more tender subtropical and other bedding plants, such as heliotrope, begonias, ageratum, iresine, coleus, alternantheras, etc., are best kept until about the middle of June before planting. Any of the plants that are plunged in the beds or ground, such as the taller ones used as dot or standard plants in beds or single specimens on lawns, must be so placed that the water may pass freely away from them.

SUCCESSIONAL PLANTS.—Where a full effect is at once required, and one has to be maintained all through the season, successional batches of the chief flowering subjects used as standards or dot plants must be grown for that purpose, and as the sets pass out of bloom they can then be replaced by others; these may be liliums in variety, cannas, gladiolus, fuchsias, lantanas, Plumbago capensis, Campanula pyramidalis, etc. If any calceolarias or Lobelia cardinalis still have to be planted, these should be attended to at once, especially on the lighter warmer soils. Daturas are very noble for use as standards.

PLANTING. — In arranging or planting, site, aspect, locality, and individual taste must all be considered, as often what appeals to one as a very beautiful arrangement, design, or combination, is much less so to another, and the gardener should always endeavour to follow the known wishes of his employers, even though these may not be what he himself would prefer.

ROSES. — Continue to support all rose growths as they advance, also watch for any rust or mildew that may appear, at once dressing with either sulphur or one of the prepared specifics.—E. F. **Hazelton**, Knowsley Gardens, Prescot.

HARDY FRUITS.

VINES.—Where these are grown outside the young growths require great care and attention at this season of the year; disbudding, and the removal of useless laterals must not be neglected, and at the same time suitable young wood for filling up wall space, and for the purpose of replacing older canes must receive careful attention. The main rods ought to be arranged 3ft. apart, and the fruiting laterals on either side at about 14 to 18 inches apart, neatly arranged, and trained to the walls. The points of each lateral should be pinched at one or two joints above the flowers and the sub-laterals, the results of this stopping at one leaf when required. Do not allow the young growths to ramble and become crowded before thinning, and then remove a lot at one time, but make sure of all the leaders, and keep them regularly secured to the walls or trellises. Old vines will be greatly benefited by a good soaking of liquid manure occasionally, especially if the roots are growing in a somewhat restricted border. Mildew later on is one of the worst enemies to contend with, and if not checked will quickly spread and destroy the whole crop. A slight spraying with Bordeaux mixture, or a good dusting with sulphur, distributed with a dredger, are good remedies. Red-spider sometimes attacks the leaves, but if the roots are well cared for, and the vines kept in good health and syringed at intervals with clean soft water, not much harm will be done.

ALPINE STRAWBERRIES, raised from seed sown in heat, should be kept growing in good soil, and when large enough may be planted outside on a rather dry and not too rich border; they should be planted firmly and kept watered if the weather should prove dry. The fruits are much liked by some, although small, and from a bed of healthy plants some good dishes may be obtained.

INSECTS.—Keep a sharp lookout for insect pests on all fruit trees; repeated washings with quassia extract, rather strong soapsuds, or some other suitable insecticide will, in most cases, serve to keep the foliage clean and healthy.

GOOSEBERRIES. — Although the severe weather damaged many things, and our gooseberry bushes were more than once completely covered with snow when in flower, we shall still have a very fair crop. On some bushes the tiny fruits turned yellow and dropped. Where heavily cropped the fruits need to be thinned early. The tiny fruits can be used for making tarts. Those intended for jelly should be picked when the size of hazel nuts, and just before they show signs of colouring, the jelly being much brighter than if the fruits are left until later. We also have a great quantity bottled, and if properly done, the fruit keeps well, and, needless to say, is much appreciated later. Keep a watch for gooseberry caterpillars; a slight dusting with hellebore powder at night and a thorough wash the following morning with clear water will settle them.—H. **Markham**, Wrotham Park Gardens.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. May 17 to May 23.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 17—Sunday	9 0	59	57	72	55
,, 18—Monday	9 0	55	52	70	51
,, 19—Tuesday ...	9 25	55	54	74	51
,, 20—Wednesday .	6 0	57	53	69	53
,, 21—Thursday ...	7 25	56	52	66	46
,, 22—Friday	8 25	52	47	57	42
,, 23—Saturday ...	10 10	52	47	61	39
Means	8 29	55	52	67	48

Date. 1908. May 17 to May 23.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
May 17—Sunday	—	54	52	50	52
,, 18—Monday	—	56	54	50	46
,, 19—Tuesday	—	57	55	51	43
,, 20—Wednesday .	—	59	56	51	45
,, 21—Thursday ...	—	57	56	51	43
,, 22—Friday	0·07	55	56	52	37
,, 23—Saturday ...	—	54	55	52	34
Means ...	(total) 0·07	56	55	51	43

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, June 3.—Royal Society of Arts.

THURSDAY, June 4.—Linnean Society Meeting.

MONDAY, June 8.—Whit-Monday.

TUESDAY, June 9.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture at 3 p.m. by Sir George Birdwood, K.C.I.E., C.S.I., on "Wild Flowers, Wild Shrubs, etc."; Scientific Committee at 4 o'clock.

SOME SPECIAL FEATURES

. . IN . .

THE GARDENERS' MAGAZINE.

1908.

Jan. 4.—**ISLES OF SCILLY** (Illustrated).
11.— ,, ,, Bulb Industry.
Feb. 8.—**HORSHAM GARDENS** (Illustrated).—Denne Park, Leonardslee, Holbrook Park.
15.—**HORSHAM GARDENS** (Illustrated).—Warnham Court, Warnham Lodge, South Lodge, Wimblehurst.
March 7.—**THE GARDENS OF CORNWALL** (Illustrated).—Tremough, Trelissick, Rosehill, Penjerrick.
14.—**THE GARDENS OF CORNWALL** (Illustrated).—Carclew, Trebah, Enys, Penmorvah.
April 11.—**NORWICH GARDENS** (Illustrated).—Gunton Park, Blickling Hall, Westwick Hall, Shotesham Hall.
18.—**NORWICH GARDENS** (Illustrated).—Dunston Hall, Crown Point, Town Close House, Ashwellthorpe Hall, Oakland House, Boyland House,
May 2.—**GHENT CENTENARY FLOWER SHOW.**
16.—**BRISTOL GARDENS** (Illustrated).—Barrow Court, Ashton Court, Downside, Elmfield.
23.—**BRISTOL GARDENS** (Illustrated).—Cote House, Down House, The Priory, Old Sneed Park.

Copies of the above, price 2d. each, or by post 2½d. may be obtained from the Publishers, 148 and 149 Aldersgate Street, London.

ANSWERS TO CORRESPONDENTS.

SUB-TROPICAL BEDDING.—M. C. A., Dorchester: In your district there should be no good reason for delay in placing sub-tropical plants in position for the summer, but it is always a good plan to get out the hardiest subjects first, and leave the most tender until last. By this means the plants receive a full hardening off, and the weather should be more settled by, say, the middle of June. Shelter from strong winds should be provided for sub-tropical plants, because, if they are lashed by the wind they lose a great deal of their beauty and value.

CROWN IMPERIALS.—D. M. P., Knutsford: We have carefully examined the specimens, and find no trace of disease likely to prove the cause of failure. It is possible there may have been some weakening of the bulb during the previous season, as this often results in a number of spindly shoots. The growths should not be removed until they have quite died down. Lift and examine the bulbs after the stems have died down; reject any that seem unhealthy, and plant the others in a group, giving sufficient space to each, so that disturbance is not necessary for a year or two. Select a more open position, and a sunny one, and mulch the plants as soon as growth commences, as it is then the bulbs and roots need some assistance. The winter mulch should be of light material, such as half-decayed leaves or old crumbly manure. The spot occupied by Crown Imperials should be carefully marked with short sticks or labels, as there is great danger of harm being done to them when the border or bed is cleaned and forked over.

SWEET PEAS FOR SCREEN.—B. L., Loughton: Train the strong growths carefully all over the screen, attending to the training every second or third day, as growth is very fast at this season, and the tendrils readily grip neighbouring shoots. Pinch back any weak shoots towards the base, as this will induce new growth that will be of special service in furnishing the lower portion of the screen.

SCHIZANTHUSES.—N. D., Conway: You have made a mistake in keeping the plants more or less shaded. Schizanthuses are sun-loving plants, and at no period of their growth do they need shading, unless it be for a day or so directly after potting, if the weather is bright.

CHOICE TULIPS.—A. E., Salisbury: Your best plan will be to let the choice varieties remain until the leaves have turned yellow and become quite flaccid, before lifting them. If they are carefully lifted as soon as the flowers fade, and laid in in light soil where they will not want for moisture so long as they are green, little or no harm will result; but with choice varieties it is much better to let them remain until the foliage ripens and begins to die down.

EMPLOYMENT AT KEW AND WISLEY.—E., Stoke: For information relative to employment at Kew, you should apply to the Director, Royal Gardens, Kew, Surrey, stating age and experience. For particulars relative to employment at Wisley, you should apply to the secretary, Royal Horticultural Society, Vincent Square, Westminster, S.W.

ODONTOGLOSSUM ADRIANÆ.—D. P., March: Odontoglossum Adrianæ is a hybrid between O. crispum and O. Hunnewellianum, and is quite frequently imported. Some odontoglossums regarded as varieties of O. crispum are not infrequently, it is suspected, descendants of O. crispum pollinated with O. Adrianæ.

FAILURE WITH TULIPS.—S. W. T., Sheffield: We cannot tell the cause of failure without seeing bulbs, but we expect the failure is due to the bulbs being too young to flower properly, or to their being insufficiently ripened during the cool, moist season of 1907. As the bulbs were purchased at a sale you cannot recover—indeed, you have no one to complain to. Some cheap goods are very dear.

WHITE EUPATORIUM FOR CHRISTMAS.—C. B. W., Eltham: You probably can obtain cuttings or young plants of Eupatorium Weinmannianum, one of the best of species for flowering, about or before Christmas time. It is usual to put cuttings in early in May, but you need not hesitate to start now if cuttings are procurable. Such cuttings produce root readily in sandy soil in a close pit, or under a handlight in a greenhouse. Striking the cuttings in strong heat is not recommended. During late summer and early autumn the plants may be stood out of doors, but they must not lack moisture, and they must be protected from strong winds. Placed in a warm greenhouse in October, they will soon come into bloom, yielding abundance of sweetly-scented white flowers. The newer E. vernale is winter-flowering, but later than the other, and it has large pale pink flowers. E. riparium flowers in spring. All are easily grown.

WARTED VINE LEAVES.—A. R. G., Swindon: The wart-like processes on the leaves are formed by the plant in its effort to get rid of superfluous moisture. Their presence does not necessarily mean a poor crop of fruit or failing health, as with the brighter weather and more ventilation the balance of moisture between root and leaf will be restored; but the presence of these warts in abundance is evidence of error in cultivation, or in the construction of the border.

TEMPERATURE FOR ORCHID HOUSES.—D. P., Coventry: We do not believe in fixed temperatures; that is to say, we do not agree with the principle of marking the thermometer tab with certain figures and compelling the man in charge to keep the temperature at that figure no matter what the outside conditions may be. The figures should serve as a guide, and provide for a margin either way in accordance with the weather. For the summer season the following figures will serve as such a guide: Warm house, 70 deg. at night, 80 deg. by day; cattleya house, 65 deg. by night, 75 deg. by day; intermediate house, 60 deg. by night, 70 deg. by day; cool house, 52 deg. by night, 55 to 60 deg. by day. Close down the fires early in morning, and start them quietly again about three o'clock in the afternoon.

SWEET PEAS IN TUBS.—M. T. P., Ulverston: Mix a little bonemeal with the soil, and leave ample room for the application of water and liquid manure, and for one or two top-dressings of rich soil or old flaky manure during the season. Sweet peas in tubs will need more water and more manurial feeding than those in rows or clumps in rich garden soil.

KALANCHOE FLAMMEA. — A. R. E., Pontefract: Take off the tops and insert these as cuttings in sandy soil, over bottom heat. As soon as rooted pot them in a mixture of good loam and finely-broken crocks and coarse sand. Grow the plants in a warm house, near the glass, and give a second potting as soon as necessary. Six weeks or two months of brisk cultivation will produce good stock, and then means must be taken to harden off the plants gradually, so that a greenhouse or pit will accommodate them until cooler weather compels one to bring them into a warm greenhouse. Except when newly-potted Kalanchoes should have abundance of light and sunshine. Quick growth, porous soil, plenty of sunshine, and a good hardening or ripening process are essential for the handsome Kalanchoe flammea.

NAMES OF PLANTS.

N. C., Bideford.—Send when in flower.

A. E. M., Horsham.—1, Cupressus macrocarpa lutea; 2, Myosotidium nobile.

G. L. F., Huntingdon.—1, Odontoglossum Adrianæ; 2, O. crispum, a pretty variety; 3, not recognised.

D. P. S., Warwick.—1, Pyrus betulæfolia; 2, Schizostylis coccinea; 3, Adiantum æthiopicum; 4, Ærides Vandarum.

M. A., Tetbury.—1, Calceolaria amplexicaule; 2, Russellia juncea; 3, Anemone Pulsatilla; 4, Iberis gibraltarica; 5, Hoya carnosa.

F. L. P., Esher.—1, Saxifraga Wallacei; 2, Rubus deliciosus; 3, Exochorda grandiflora; 4, Berberis stenophylla.

S. E. J., Truro.—1, Desfontainea spinosa; 2, Phlox Nelsoni; 3, Spiræa arguta; 4, Ceanothus thyrsiflorus; 5, Trollius europæus; 6, Iris pumila var.

A. M. P., Cinderford.—We do not undertake the naming of florists' varieties of flowers, simply because a large collection of each race of such flowers would be necessary to enable us to make comparisons. In the case of species or well-marked varietal forms, the case is different, and we are always ready to help our readers in naming any such. Roses, chrysanthemums, pelargoniums, etc., should be sent to nurserymen who specialise in these plants, and who, as a rule, will name the specimens at a small fee. In your case No. 1 reminds us of Scipio; Nos. 2 and 4 are probably the same, growing under rather different conditions, and may be Mrs. Agnew; No. 3 is somewhat like Old Port.

CATALOGUES RECEIVED.

WM. PAUL AND SON, WALTHAM CROSS.—An interesting and finely illustrated catalogue of new roses, including a double-page coloured representation of the new tea-scented Hugo Roller.

PAUL AND SON, CHESHUNT, HERTS.—In this catalogue of new roses, etc., prominence is given to the new rambling roses, and several of these are figured.

VILMORIN-ANDRIEUX AND CO., PARIS.—A comprehensive list of chrysanthemums, the varieties arranged in their several sections in true alphabetical order.

BARR AND SONS, COVENT GARDEN.—Dahlias, begonias, cannas, and various bulbous and tuberous-rooted plants are listed in this spring catalogue.

W. H. WILLCOX AND CO., LTD., 23, SOUTHWARK STREET, S.E.—A descriptive and illustrated list of semi-rotary pumps and pump accessories; a useful catalogue.

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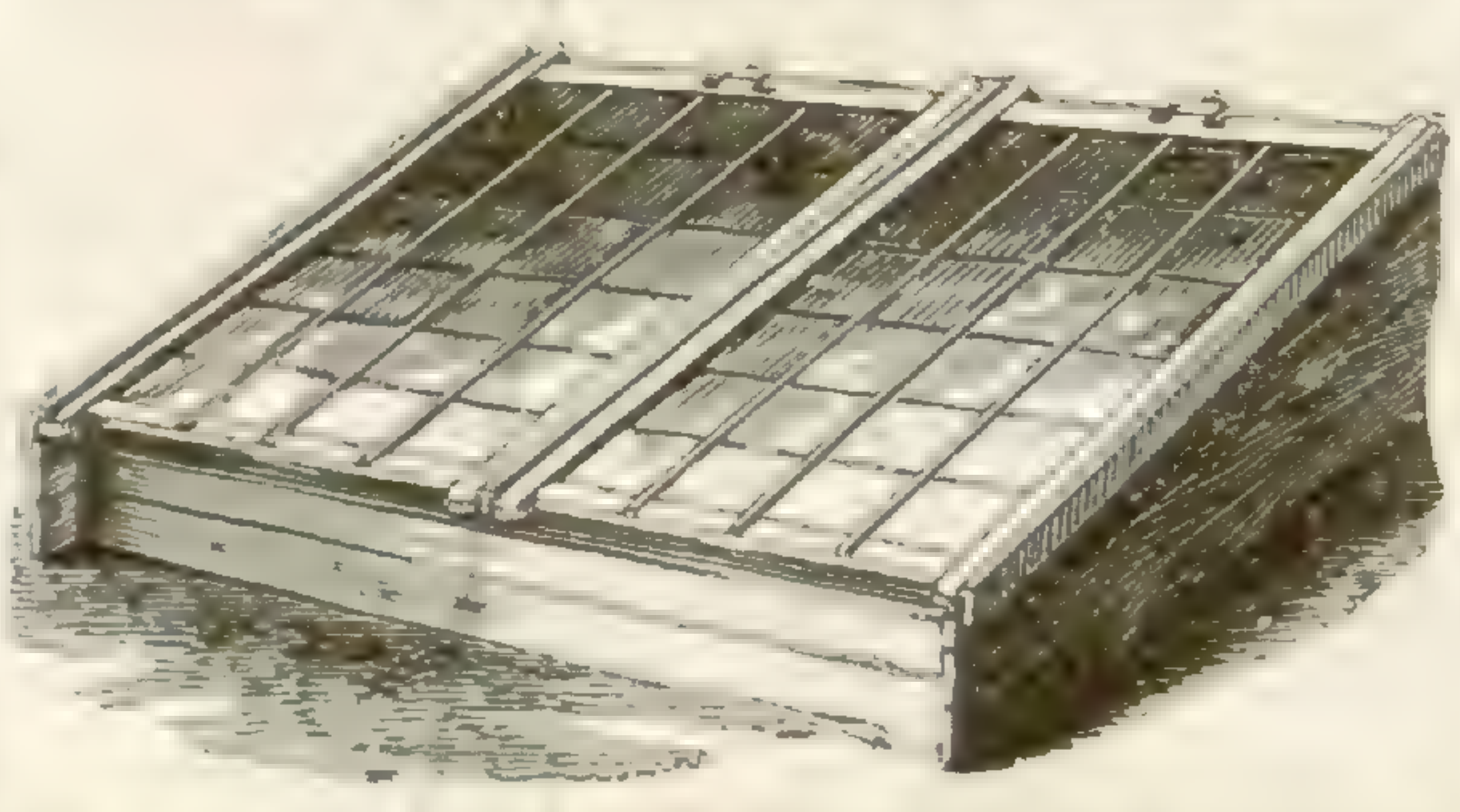

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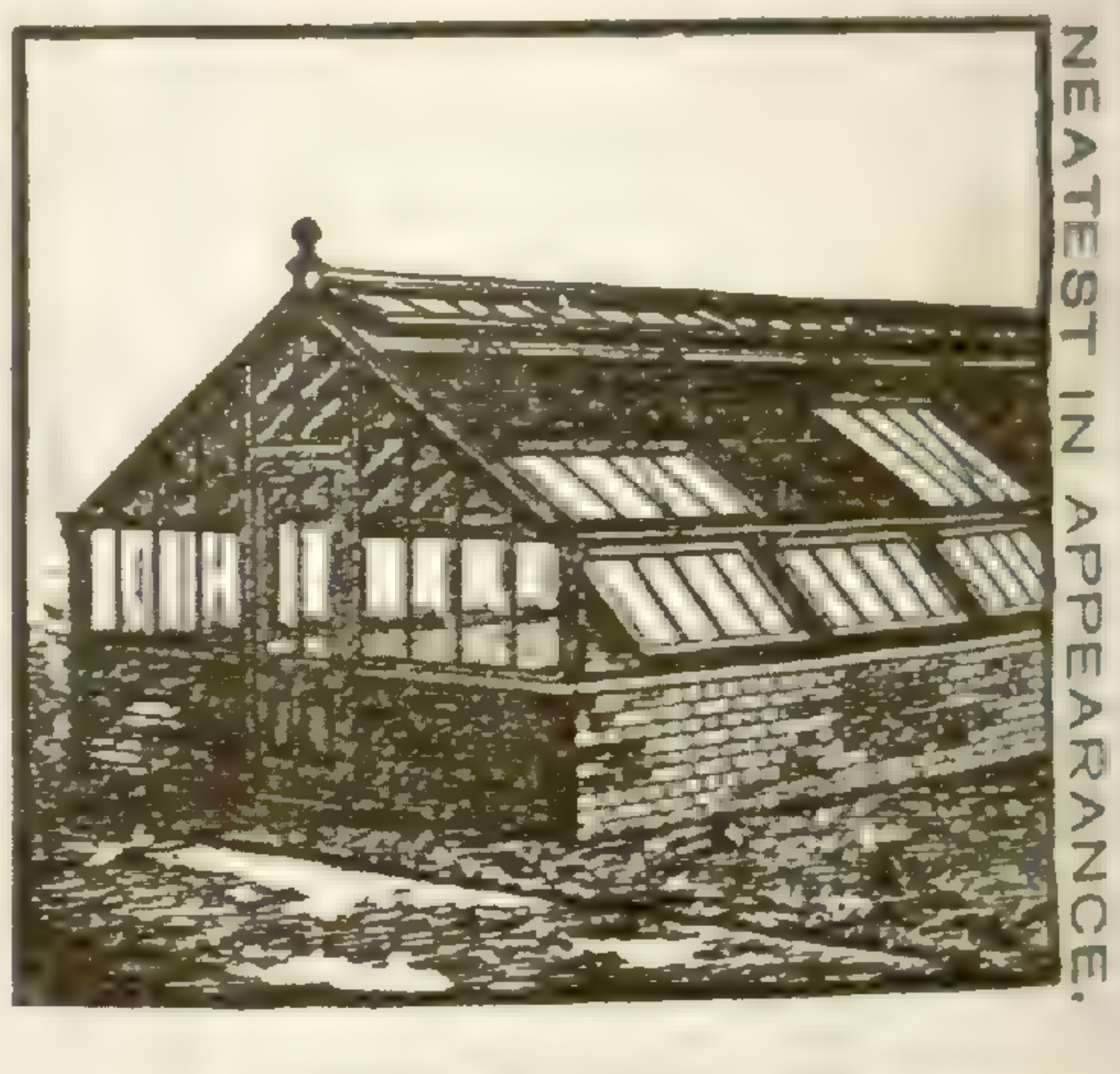

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Many kinds in small pots for late planting.

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THOMSONS' VINE, PLANT AND VEGETABLE MANURE

Has stood the Test of Quarter of a Century.

Splendid for all purposes.

This valuable Manure is yearly growing in Public favour

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Thomsons' Special Chrysanthemum Manure.

Perfect Plant Foods. Sold by all Seedsmen.

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Price Lists and Testimonials on application to Sole Makers—
WM. THOMSON & SONS, LTD.,
Tweed Vineyard, Clovenfords, Galashiels, N.B.

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Intending Purchasers should send for our Illustrated Price List of Greenhouses, etc., complete from 48s., post free, two stamps.—S. HARTLEY and CO., Horticultural Builders, THE WHARF, SHIPLEY, YORKSHIRE.

ONCE USED. ALWAYS USED. The 'PATTISSON' LAWN BOOTS

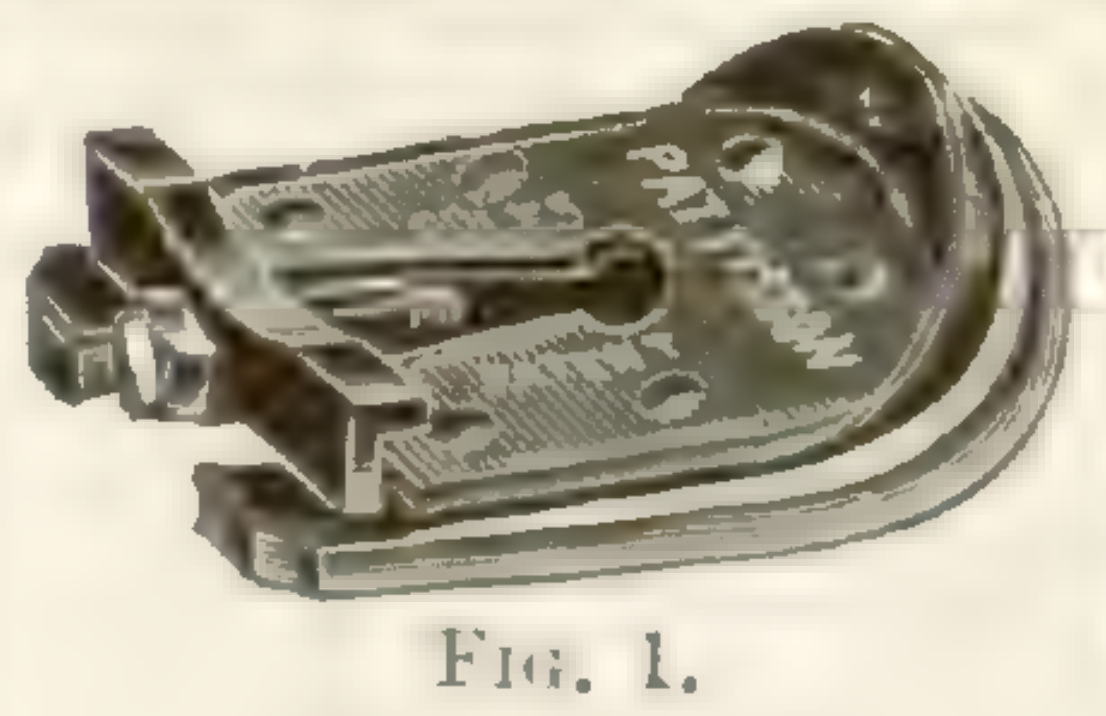


FIG. 1.

Simplest! Strongest! Most Economical!

Soles of Best English Sole Leather (Waterproofed) and Motor Tyre Rubber or Solid Rubber. Fig. 1 can be RE-FITTED repeatedly, equal to New Boots. **Rubber Soles strongly recommended.**

Silver Medal—Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.

The Field says: **"As good as anything that could be devised."**

Mr. TROUP (Head Gardener to H.M. THE KING, Balmoral Castle), writes: "The boots supplied two years ago **are as good as ever."**

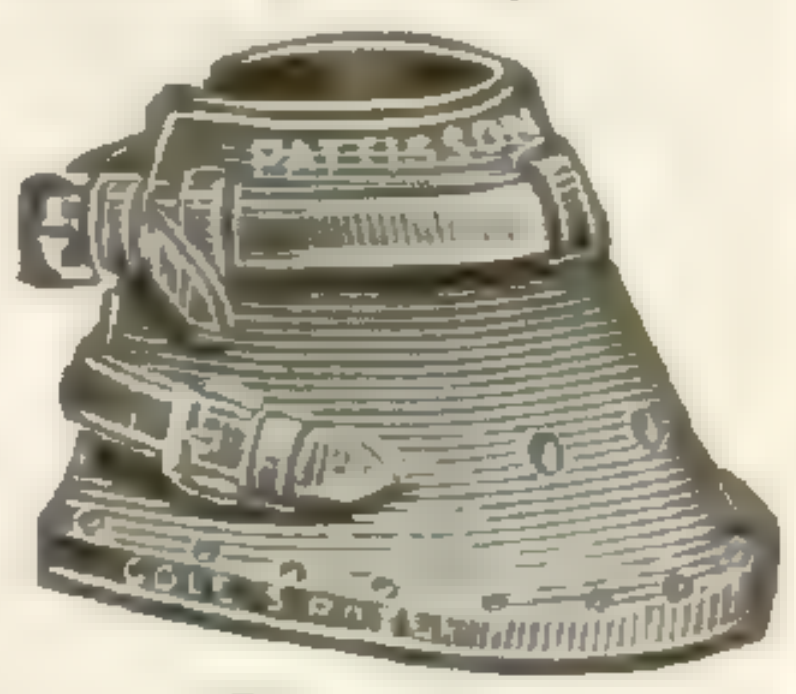


FIG. 2.

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

TRADE
NICOTICIDE
MARK

NICOTICIDE

FUMIGANT. Pint, 15/-; ½-pint, 7/6, 4/6, 3/-, 1/8, and 10d.

FUMIGATORS, 1/- ea. for 5,000 cubic ft.

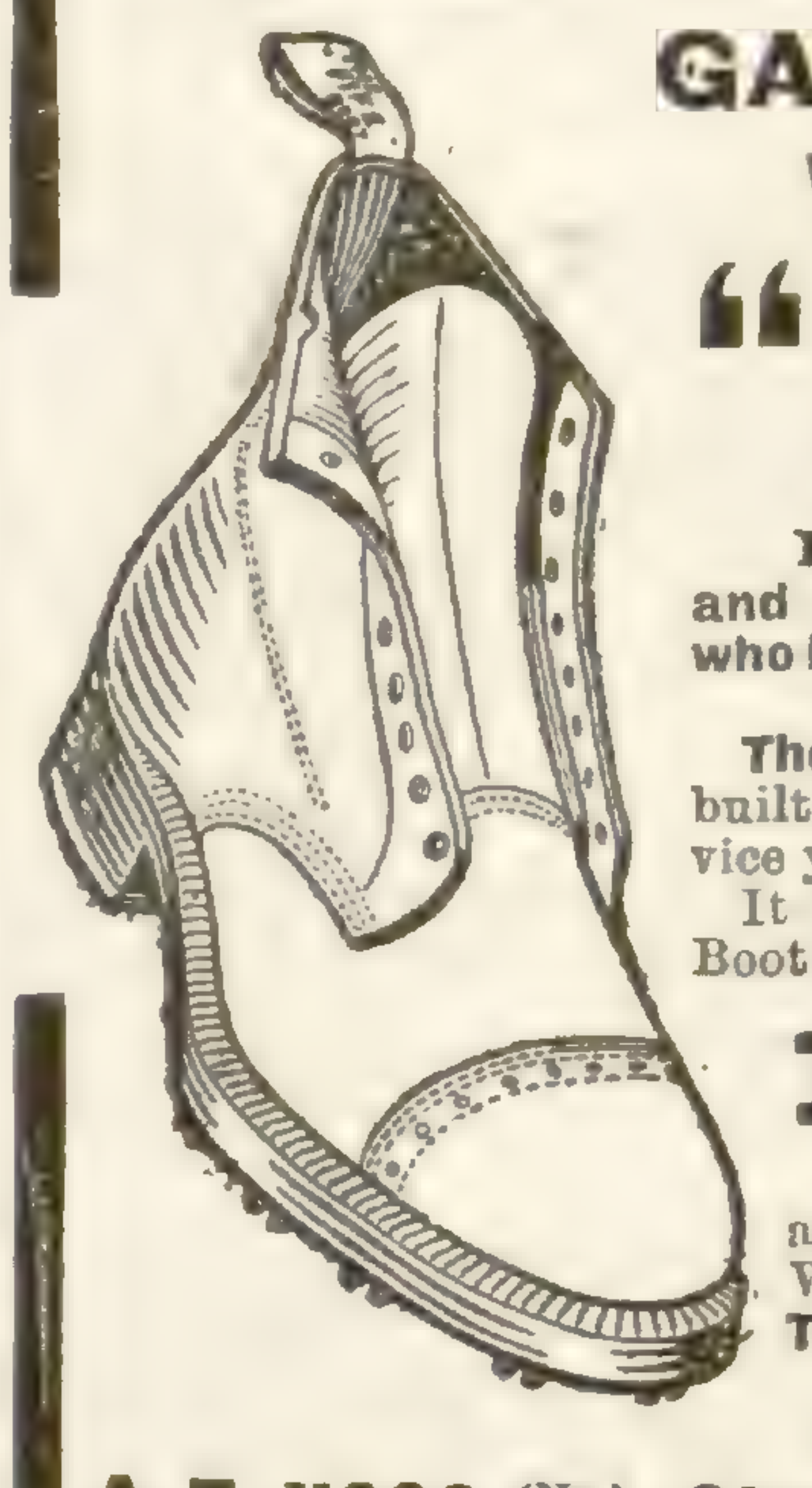
NICOTICIDE PLANT SPRAY. ½-gall. 5/-; gall. 10/-

GOW'S Lawn Sand, carr. paid, 21 per cwt.

Insist on your Seedsmen supplying them.

HUNTER & GOW, 46, Thomas St., Liverpool.

TALK WITH A GARDENER



WHO WEARS THE WELL-KNOWN

"FIFE"

BOOTS (Regd.)

and you talk with a man who is generally enthusiastic over his footwear.

The Gardener's "Fife" is built to give service—as it's service you require and pay for.

It is the most dependable Boot for Garden work.

11/6 Carr. Paid.

All Sizes. Send size and P.O. With or Without Tackets.

Trial Order will prove ts worth to you.

Illus. Catalogue Free.

A. T. HOGG (No. 38), Strathmiglo, Fife.

The Pioneer of the "Boots-by-Post" Trade.

In 1906 America bought in other countries, Nursery Stock to the value of $1,542,011; Seeds to the value of $5,411,815.

You need—

THE WEEKLY FLORISTS' REVIEW to keep in touch with the marvellously rapid growth of Horticulture in America. The largest Horticultural Trades Periodical in the World; carries more advertising than any other. Has a department devoted exclusively to European advertisements.

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E. Y. TEAS, Centerville, Ind.

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CAXTON BUILDINGS, 334, DEARBORN STREET, CHICAGO, U.S.A.

Horticulture in France.

LE JARDIN

A Review of Practical Horticulture (21st year).

Published by the
LIBRAIRE HORTICOLE,
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PARIS.

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....

Fill in this Coupon and send it, with a Cheque or Money Order for 4 francs, to the Manager of **"Le Jardin," 84*bis*, Rue de Grenelle, Paris.**

Sales by Auction.

SALES NEXT WEEK.

WEDNESDAY next, June 10th, at 12 o'clock, BEDDING PLANTS in variety, Gladiolus, Tuberoses, Begonias, Dahlias, Liliums, Geraniums, Pansies, Violas, [illegible] Ornamental and Decorative Palms and Plants, [illegible], and Standard Bays, also retarded Lilies, [illegible], Lily of Valley, etc.

FRIDAY next, June 12, at 12.45 o'clock, Imported and Established ORCHIDS from various sources; Orchids in flower and bud.

MESSRS. PROTHEROE and MORRIS will SELL the above BY AUCTION, at their Central Sale Rooms, 67 and 68, Cheapside, E.C.

On view morning of sale, and catalogues had.

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100 NURSERIES, MARKET GARDENS, FLORIST AND SEED BUSINESSES TO BE DISPOSED OF.

MESSRS. PROTHEROE and MORRIS'S HORTICULTURAL REGISTER contains full particulars of the above, and can be obtained gratis at 67 and 68, Cheapside, E.C.

AMERICAN CARNATIONS. — Blooms the Year Round. — The GARDENER'S OPPORTUNITY.—Splendid COLLECTIONS of well-grown, healthy PLANTS, in pots. (Our Speciality.) Varieties choice, quantities liberal, prompt delivery, carriage free (United Kingdom). Sample plant, 1s. free. YOUNG and CO., Hatherly, CHELTENHAM. (Estab. 1890.)

BEDDING PLANTS.—Well-rooted, trans[illegible] stuff. Asters, Stocks, Scabious, Calliopsis, Yellow Calceolaria, Dble. and Single Lobelia, Nicotiana, Celery, red and white, all at 4d. doz.; 2s. 6d. 100; cash. JORDAN, 7, Hereford Gardens, Lewisham.

NETTING FOR TENNIS COURT BORDERING.—Good colour and specially prepared, with line attached to net top and bottom throughout; easy to erect or take away; 25 yards long, 3 yards wide, for 7s. 6d.; standards for same, 10ft. high, 1s. each; Garden Netting, 30 square yards, for 1s.; carriage paid on orders over 5s. H. J. GASSON, Net Works, Rye.

PROTECT YOUR GARDENS.—Netting, good, strong, small mesh, oiled and dressed, 100yds. by 1yd., 4s.; by 2yds., 8s.; by 3yds. wide, 12s., and so on to any width or length. Carriage paid on all orders over 5s.; can be sent on approval. H. J. GASSON, Net Works, Rye.

GARDEN NETTING (Best Tanned), special small mesh, best twine ½-inch mesh, 100 x 5 yds. wide 98s. each, any length, width, cut to order, 3d. sq. yd., ¼-inch Cotton, 70 x 13 yds. wide, £3 each, cut to order, 1d. square yard (on diamond); carriage paid; list samples free; supplied to gardens throughout the country. W. OLIVER ALLEN, Porthleven Works, Cornwall.

REDUCTION in PRICE of ANTHRACITE COAL for Horticultural Purposes. — W. H. ESSERY, Swansea.

SMITH'S
PERFECT WEED KILLER
LIQUID & PATENT POWDER
MARK SMITH *Limited*
LOUTH, LINCOLNSHIRE
THE ORIGINAL AND BEST
BEWARE OF IMITATIONS.

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" Inch	0	6	0
" Half Column	1	12	6
" Column	3	0	0
" Page	9	0	0

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SITUATIONS.—Advertisements of Persons seeking Employment are charged 6d. each. Situations vacant are charged 1s. for 32 words.

The Gardeners' Magazine will be posted direct to Subscribers at the following rates:—

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6 " "	5s. 6d.
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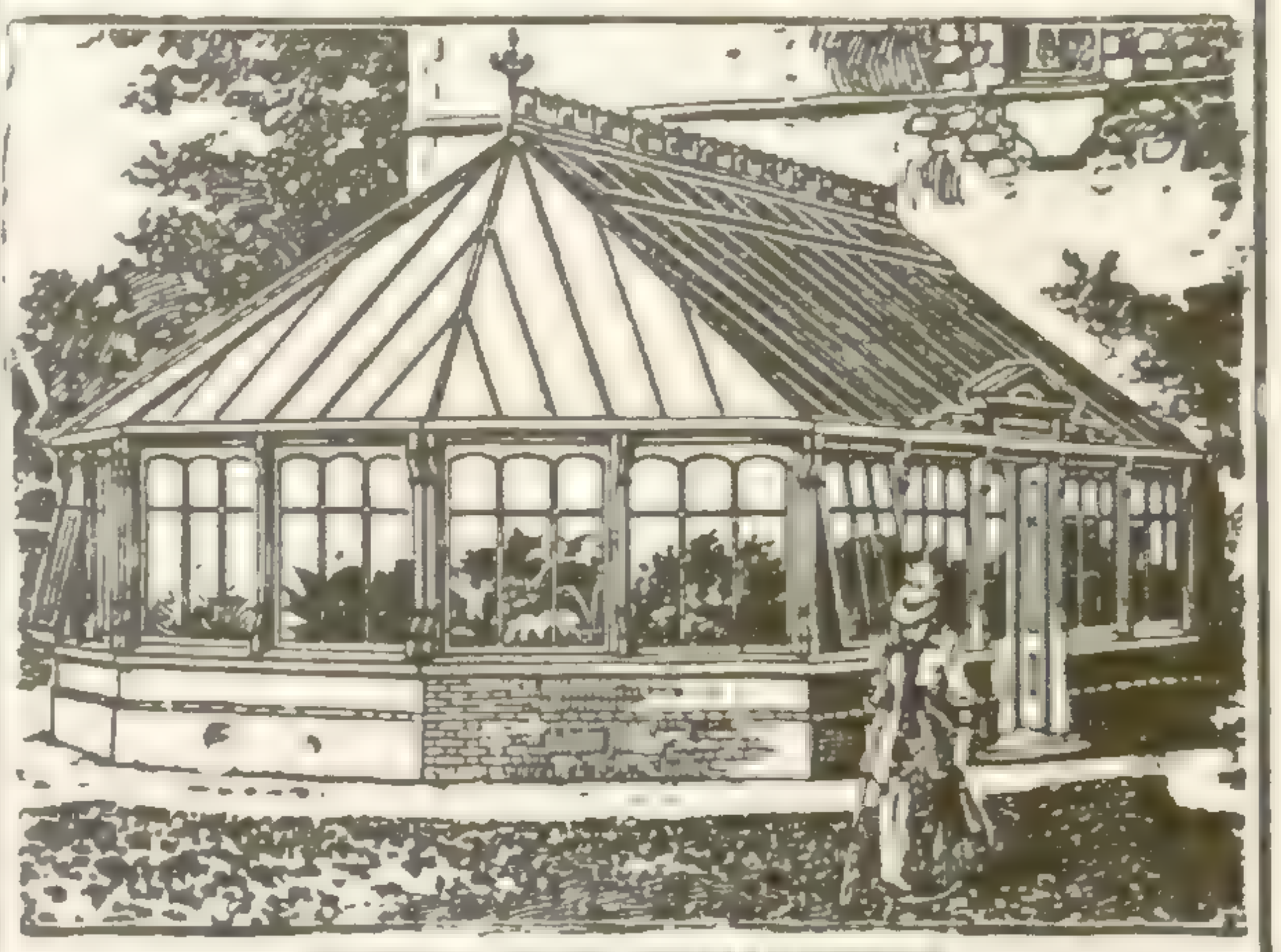
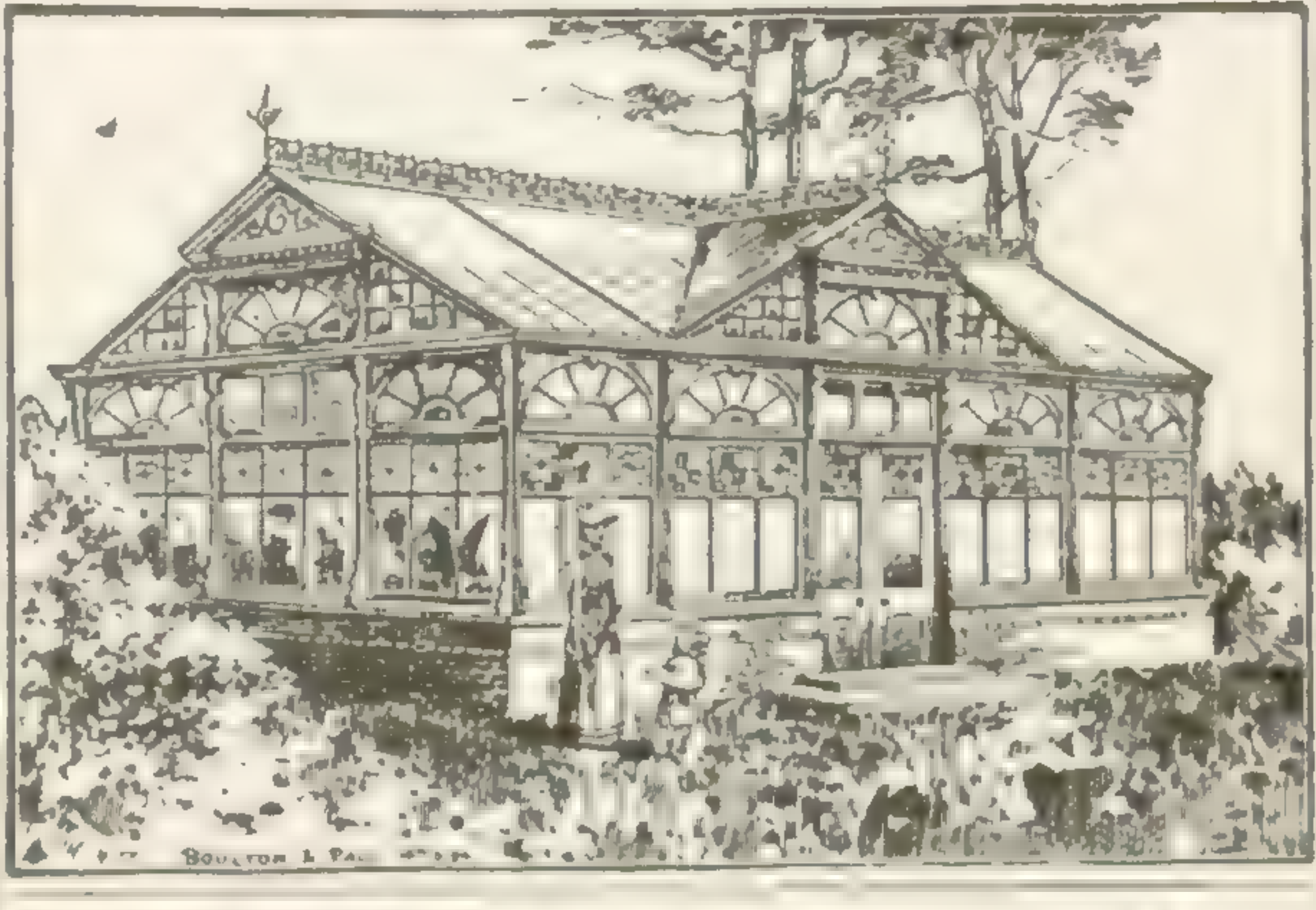
Horticultural Builders,

CONSERVATORIES

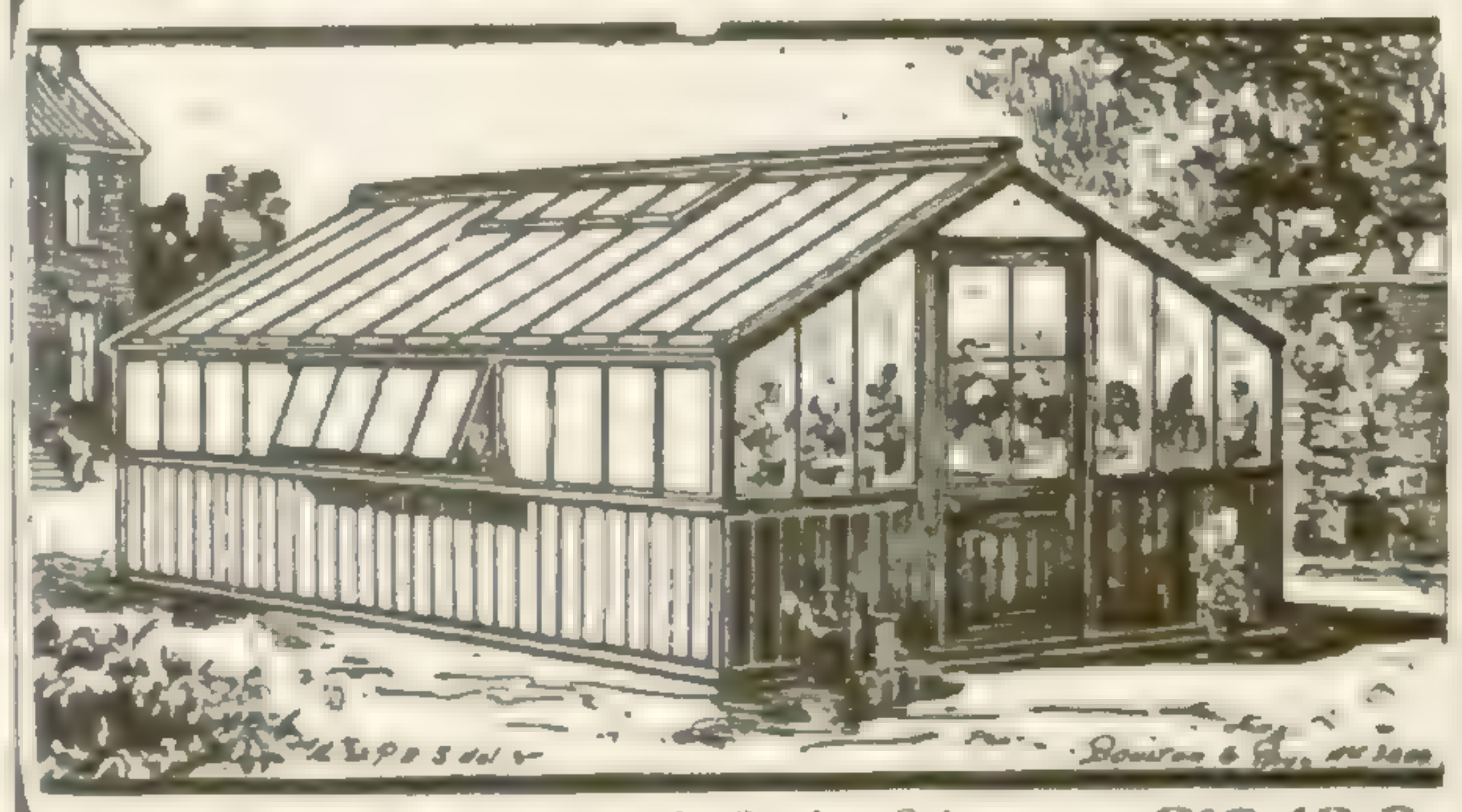
Designed to Suit any Situation.



ESTIMATES SUBMITTED.



No. 49A.—**SPAN-ROOF GREENHOUSE.**



No. 49A.—SPAN,	10 ft. by 8 ft. ...	£10 10 0
No. 47A.—LEAN-TO,	10 ft. by 7 ft. ...	8 10 0

These Houses are sent out well made, painted three coats, glazed 21-oz. glass, and carriage paid.

Boilers of all Makes and sizes.

GARDEN FRAMES in great variety. Large number always in stock.

CARRIAGE PAID on orders of **40/-** value to most Goods Stations in England and Wales.

AMERICAN CARNATIONS. — 60,000 feet of glass for plants, up-to-culture. NOVELTIES, reasonable prices, good quality, prompt delivery. Cash orders, 10s. free (United Kingdom). Sample plant, 1s. free. "A Treatise on the Cultivation of A.P.C's," by our Expert, C. H. Taudevin, F.R.H.S., 1s., free. Gratis with 20s. cash order. See CATALOGUES, Collections, and 1908 Testimonials. YOUNG and CO., Hatherly, CHELTENHAM. (Estab. 1890.)

HIGH QUALITY WOOD-SOLED BOOTS, 5s. 6d.; ladies or gentlemen's, sizes, 3's, 4's, 5's, 6's, 7's, 8's, 9's, 10's, 11's; post free. Lined white felt, uppers cut from nice soft leather, with wood soles. JOHN GREENLEES, 4, Wellington Street, Glasgow.

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Acme of Shading
GREENHOUSES and VERANDAHS.
HARROW NURSERY CO.,
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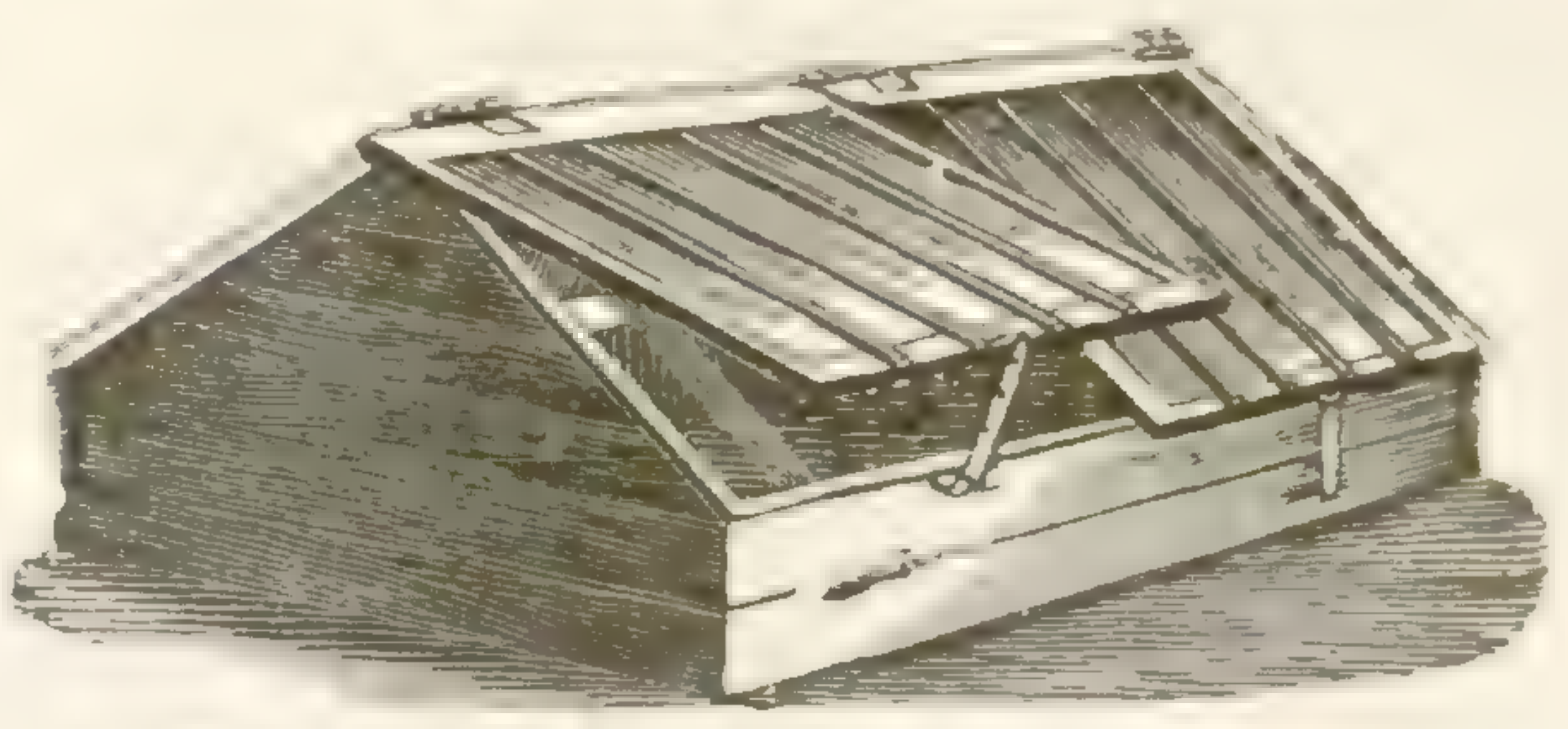
PROTECT YOUR FRUIT.—Tanned Garden Netting, only best quality supplied; 25 by 8 yards, 50 by 4 yards, 100 by 2 yards, 9s. each; prompt delivery.—L. WREN and SON, Net Merchants, 139, High Street, Lowestoft.

GARDEN NETTING (best tanned), any size made, 1s. per 20 sq. yards. Sizes in stock, 25 x 8 yds., 50 x 4 yds., 100 x 2 yds., each 9s.; 50 x 2 yds., 25 x 4 yds., 100 x 1 yd., each 4s. 6d. EVANS, 14, Beresford Road, Lowestoft.

GREAT REDUCTION IN FRAMES.

OUR WELL-KNOWN MAKE.



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These Frames are made of the best materials, and can be put together and taken apart in a few minutes by anyone.

Sizes and Prices, Glazed and Painted.

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6 ft. ,, 5 ft. ,,		2	15	0
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12 ft. ,, 6 ft. ,,		5	12	6

Larger sizes at proportionate prices.

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ROYAL HORTICULTURAL WORKS,
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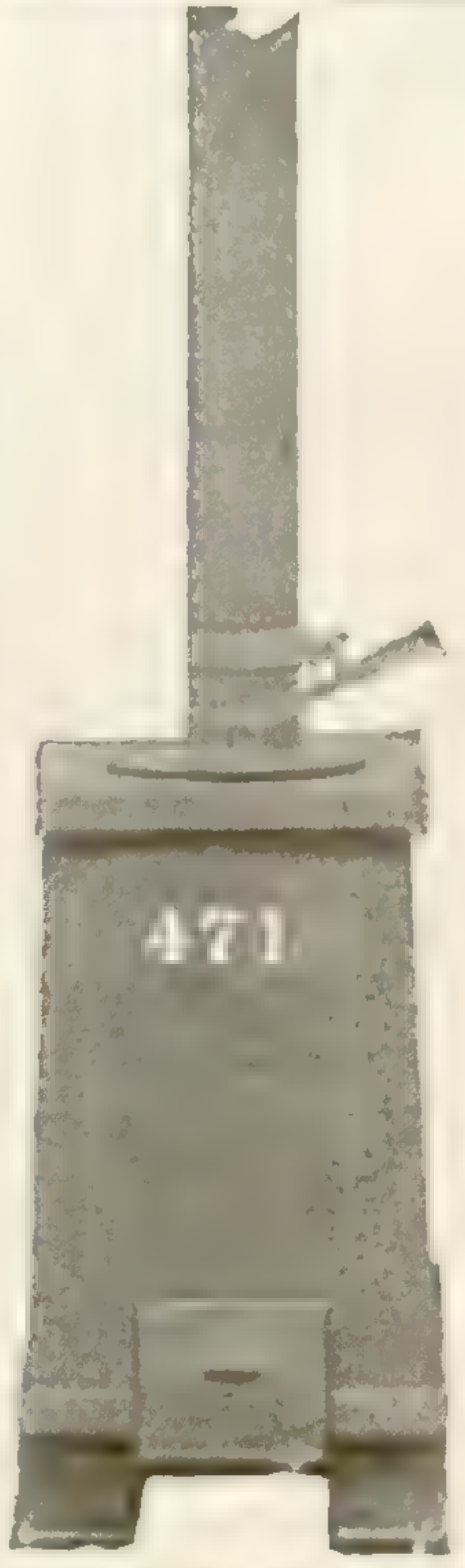
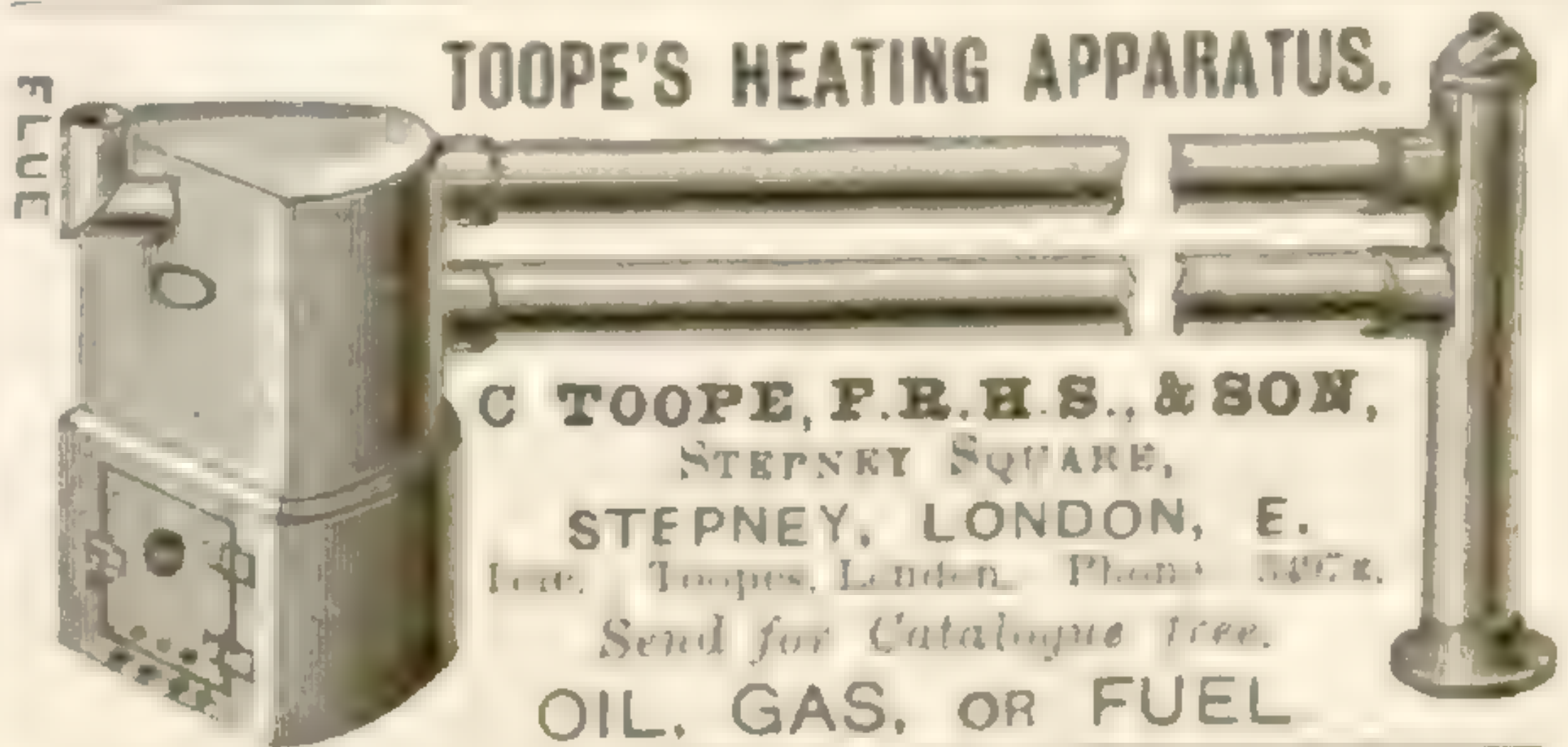


The "HORSFALL"
(Patent)
Garden Destructor

Destroys Garden and Household Rubbish quickly.

It is inexpensive and easily worked.

HORSFALL DESTRUCTOR CO., LIMITED,
Atlas Works,
PERSHORE.



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STEPNEY SQUARE,
STEPNEY, LONDON, E.
Tel. Toopes, London. Phone [illegible]
Send for Catalogue free.
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AMERICAN CARNATIONS. — GRAND stock, clean, healthy plants, in pots, make splendid Show specimens. Prompt delivery. See CATALOGUE, Prices, and 1908 Testimonials. SAMPLE PLANT, 1s. free. Cash orders 10s. free (United Kingdom). YOUNG and CO. (Specialists), Hatherly, CHELTENHAM. (Estab. 1890.)

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NICHOLLS & CLARKE, LTD.
SHOREDITCH, LONDON.

GLASS. When sending for Catalogue please cut out this advt.

Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

A LADY highly recommends a strong, active, middle-aged Man as HEAD WORKING GARDENER, who has had the entire management of an estate of 70 acres, gardens included; married, family grown up; 20 years' personal character; leaving through death. F. W., Triangle House, Taplow Common, Taplow, Bucks.

A LADY wishes to thoroughly recommend her HEAD WORKING GARDENER, where three or more are kept; life experience in all branches; splendid fruit grower; six years' excellent character; left, as establishment is reduced owing to death; age 39, married; no children at home. Apply to F. TOLLY, Sutton Courtenay, Abingdon, Berks.

GARDENER (Head Working), where two or more are kept; middle-aged; life experience Inside and Out; hard working; good references from last and previous employers. G. BURGESS, 17, Eversleigh Road, Lavender Hill, London, S.W.

GARDENER (Head Working), age 31, married; life experience in good places, including Syon House, Mereworth Castle, and Old Warden Park; 3½ years as Head; highest references. F. FRENCH, Covent Garden, Barming, Kent.

GARDENER (Head Working), life experience with glass, flowers, kitchen garden, and orchids; good character; married. W., 32, Eleanor Road, Bowes Park, N.

GARDENER (Head Working, where two or more are kept); thoroughly experienced in all branches; good refs.; middle-aged; disengaged June 16; wife would assist in house if required. D. S., Ewhurst Place Lodge, Ewhurst, Guildford.

GARDENER (Head Working, where several are kept); life experience in all branches; thorough knowledge of the culture of grapes, melons, peaches, cucumbers, stove and greenhouse plants, flower and kitchen garden; leaving through estate being given up; good references from present and previous employers; age 39, married. H. K., Sidmouth Grange, Earley, Reading.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

AS HEAD WORKING GARDENER; well up to all kinds of growing and forcing of flowers, fruit and vegetables, also forestry and general estate work; cricketer. G. W. BELL, The Gardens, Whelprigg, near Kirkby Lonsdale.

SITUATION WANTED. — GARDENER (Head Working or good Second); have had 4 years' experience as Head; thoroughly experienced in all branches; excellent references; age 30; single; abstainer. P. W. K., Office of this Paper.

GARDENER (Head of two or three); life experience Inside and Out; good references from last and previous employers; hard working; middle age, widower. G. BURGESS, 17, Eversleigh Road, Lavender Hill, London, S.W.

A GENTLEMAN can recommend his late GARDENER, aged 37; married, one girl, aged 9; 3 years' character; now disengaged; one or two under him, or good SINGLE-HANDED. Address W. STEVENS, Gardener, 2, Newlands, Salcombe Road, Newbury.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (Single-handed, or with help); 12 years' experience; good all-round; age 29, married. J. MOONEY, Ellesboro', Butlers Cross, Bucks.

GARDENER (good Single-handed or where help is given); age 35; married, no family; good experience Inside and Out; highly recommended by present employer; good references. J. SAUNDERS, The Lodge, Waratah, Chislehurst, Kent.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER, where one or two are kept, or good SINGLE-HANDED; well up in all branches, Land and Stock if desired; excellent testimonials. EDWARDS, 5, St. George's Terrace, Reading.

AS GARDENER (good Single-handed or with help); married; many years' experience, glass, pleasure grounds, herbaceous borders, and good kitchen gardener; good character; age 35. BALE, 12, East Street, Market Harboro.

MARRIED MAN as KITCHEN GARDENER or SINGLE-HANDED; life experience; 7 years in present situation; good references.—S. GEORGE, Woodside Gardens, Maidenhead, Berks.

MANAGER or FOREMAN; 20 years' experience; age 33; single; well up in Roses, Vines, Tomatoes, Cucumbers, Chrysanthemums, Stove Plants, and Forcing; good references. F. BARROWCLIFFE, 23, Church Lane, Lincoln.

FOREMAN (Inside) or SECOND GARDENER; 3 years as such; age 28. Mr. KIRKLAND, The Gardens, Brandon Park, Suffolk, wishes to recommend H. EMMERSON as above; disengaged; Bothy preferred. Address, Great Bealings, near Woodbridge, Suffolk.

FOREMAN (Inside), or good SECOND.—Mr. A. HENDERSON, Mabledon Park Gardens, Tonbridge, wishes to highly recommend his late Foreman to any Lady or Gentleman requiring a highly respectable and trustworthy man; life experience; age 27; married, no family; abstainer. Apply G. KEMP, South Street, Chailey, Lewes, Sussex.

FOREMAN or SECOND in good establishment; 12½ years good experience; age 26; well recommended; disengaged. E. MOORS, 1, Lewis Cottage, Franklyn Road, Haywards Heath, Sussex.

ORCHARD HAND, with practical experience of Fruit Culture (Outside), seeks SITUATION as WORKING FOREMAN; good Manager of Men, also Picking Gangs for Market or Factory; age 28; married; abstainer; good references.—TIMEWELL, Elsenham, Stansted, Essex.

GARDENER (Second or Leading Hand), Outside; previous at Hackwood and Buscot; 6 years present situation; excellent references; age 28. G. PRITCHARD, Wokefield Park Gardens, Mortimer, Reading.

GARDENER (Under) seeks SITUATION in the pleasure grounds and kitchen garden; used to duty; age 26. Bothy preferred. F. PALMER, Fen Place Gardens, Turner's Hill, Sussex.

GARDENER (Under) or JOURNEYMAN (Inside or Inside and Out); age 21; 5 years' experience; present Second of four; good references. Disengaged. H. HUTCHINS, 12, Fore Street, Babbacombe, Torquay, Devon.

GARDENER (Under), age 19, seeks SITUATION; five years' experience Inside and Out; three years' good character. A. WORSFOLD, Benenden, Cranbrook, Kent.

JOURNEYMAN (Second).—A. J. BOOKER, Gardener to the late W. Berkeley Monck, Esq., Coley Park, Reading, highly recommends W. HARRIS as above; two and a-half years' excellent character; age 18. Address W. HARRIS, 1, Elm Park Road, Reading.

JOURNEYMAN (Second or Third).—Mr. POWER, Wroxton Gardens, Banbury, strongly recommends A. GRANT in Fruit or Plant Houses; here 3 years; age 18; Bothy preferred.

GARDENER'S SON seeks SITUATION in Garden; been 2 years in Kitchen and Flower Garden; age 16. Apply J. DAVIS, Gardener, Wilford Manor, Salisbury.

GARDENER recommends strong, willing LAD, age 18, for Inside or Inside and Out; four years' experience; bothy preferred; abstainer. MURRELL, 54, Hill View Road, Tunbridge Wells.

IMPROVER (Inside or Out), age 17; 2½ years' good character. E. WETHERALL, [illegible] wood, Haughley, Suffolk.

RICHARD SMITH and CO., LTD., beg to announce that they are constantly receivi[illegible] plications from Gardeners seeking Situations, a[illegible] they will be able to supply any Lady or G[illegible] with particulars, etc. St. John's Nurseries, Worcester.

SITUATION wanted by HANDY MAN; can drive; understands bees, poultry, gardening; good references. Apply A. B., Office of this Paper.

SITUATION required by a middle-aged Scotsman who has had a life experience [illegible] branches of horticulture; has held important positions in Scotland, England, and Ireland, and can be highly recommended for a post as superviser of private or public gardens. Apply J. M., Office of this Paper.

YOUNG MAN wants SITUATION wi[illegible] gas engine and electric light plant; [illegible] garden. Good references can be had of both [illegible] JOHNSON, Pavenham, Bedford.

YOUNG MAN, age 23, Inside and Out; willing and obliging; good reference. A. [illegible] Parson's Green Lane, Fulham, S.W.

Situations Vacant.

WANTED, Single-handed GARDENER [illegible] vegetables, lawns, herbaceous borders [illegible] glass or bedding out; married man preferred [illegible] week. W., Hill Crest, Runcorn, Cheshire.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE,"
148 & 149, Aldersgate Street, London, E.C.

For JUNE 13, 1908.

Please Repeat my Advertisement.

Name..

Address..

....

Date..

THIS COUPON, duly filled up, should be forwarded not later than Tuesday for the next issue.

BENTLEY'S

(POISON)

WEED DESTROYERS.

The Most Powerful Weed Destroyers Manufactured.

SPECIAL CONCENTRATED STRENGTH, Liquid (1 gallon to 80 gallons of water). [illegible] 16s.; [illegible] gallons, **£1 8s. 6d.**; 12 gallons, **£2 10s.**; 24 gallons, **£4 17s. 6d.**

Drums Charged and returnable.

DOUBLE STRENGTH, Liquid (1 gallon to 50 gallons of water). [illegible] gallons, **10s.**; 6 gallons, **18s. 6d.**; 12 gallons, **£1 15s.**; [illegible] gallons, **£2 12s.**; 40 gallons, **£5.**

Drums and Barrels charged and returnable,

PATENT POWDER (1 tin to 25 gallons of water). [illegible] **8s. 9d.**; 8 tins, **12s. 6d.**; 12 tins, **17s. 6d.**; 20 tins, **£1 8s**; 40 tins, **£2 12s. 6d.**

Cases Charged and not returnable.

BENTLEY'S COMPOUND (Liquid)

The Original. **QUASSIA EXTRACT.**

[illegible] for Destroying Green, White, and [illegible] Fly, Celery, Carrot, Turnip, and Onion Fly and [illegible], and for General Spraying Purposes. One [illegible] 80 to 100 gallons ready for use. [illegible] gallons, **3s. 4d.** per gallon; 10 gallons, **3s. 5d.** per [illegible], **3s. 6d.** per gallon. Supplied in 5 gallon [illegible] charged half cost (9d. each), not returnable; 1 [illegible] **4s.**; [illegible] gallon, **2s. 4d.**; 1 quart, **1s. 5d.**; 1 pint, **11d.** [illegible] Carriage paid on **7/6** orders and upwards.

[illegible] Catalogue of Horticultural Specialities to the Sole Manufacturers—

JOSEPH BENTLEY, LIMITED,

Chemical Works, **BARROW-ON-HUMBER, HULL.**

PEARSON'S FRUIT TREES
50,000 APPLES ON PARADISE
TRAINED TREES A SPECIALITY.
CATALOGUE FROM J. R. PEARSON & SONS
LOWDHAM, NOTTS.

INDIAN

SPLIT-BAMBOO . .
. . SUN BLINDS.

For Shading all kinds of Greenhouses, Verandahs and Windows.

EXCEEDINGLY LIGHT and NEAT, and VERY EASY TO FIX.

THE ONLY THOROUGHLY DURABLE BAMBOO BLINDS ON THE MARKET.

Illustrative Catalogue and Price List free on application to the Sole Importers,

THE HARROW NURSERY CO.,

HARROW, MIDDLESEX.

SUN BLINDS
SHADINGS

OF EVERY DESCRIPTION FOR INDOORS & OUT.

All the newest designs. Made up complete by our own skilled workmen ready for fixing.

WM. WOOD & SON, Ltd.,
Wood Green, London, N.

A. P. JOHNSON, WILMINGTON, HULL.

	[illegible]ft.	[illegible]ft.	10ft.	12ft.	14ft. wide.
[illegible]	[illegible]	£11	£12	£13	£14
[illegible]	£12	£13	£14	£16	£17/10
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THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Dahlias in the Garden.

One of the most interesting points in gardening, as in other matters that are greatly influenced by fashion, is the manner in which history repeats itself; and another point hardly less remarkable is the difficulty which those immediately concerned with one class of flowers have in taking advantage of the lessons that other classes are so well able to afford. It would be possible to mention several plants that have been so changed as to be hardly recognisable as the result of the labours of those who have given them special attention, but have failed to maintain a firm hold upon the flower-loving community owing to a misapprehension of the primary object of flower culture. The cultivator who has achieved any considerable degree of success with some particular group of plants has very naturally a desire that others should have an opportunity of seeing the results of his skill, and in many instances contributes them to prominent horticultural exhibitions. The raiser is, perhaps, even more desirous of submitting his novelties to public notice, and very properly takes advantage of his opportunities for so doing. In each case a public service of considerable value is rendered, for well-grown specimens serve as object-lessons, and the exhibition of novelties helps to keep cultivators fully informed as to the advances that are being made. Unfortunately in some instances the fact is not so fully recognised as should be the case, that the primary object of flower culture is the beautifying of gardens and glasshouses, and the provision of cut flowers for the adornment of the home. As a consequence thereof the exhibition side of plant improvement has a greater influence upon raisers than should be the case. We are reminded of this by the immense numbers of dahlias that are now being bedded out, and by the fact that the largest proportion of the varieties belong to the cactus section. In the creation of new forms of these raisers have shown much activity, and they have been able to introduce varieties that are remarkable for the diversity in the form and colour of their blooms. Had cactus dahlias no other purpose than to provide boxes and vases of blooms for autumn exhibitions, we should be justified in bestowing unqualified praise upon the accomplishments of the raisers, for judged from the exhibition standpoint they have been of a very high order. It must, however, be remembered that of the thousands who plant cactus dahlias annually a very small proportion exhibit, and that others grow them wholly for garden embellishment. For this latter purpose cactus dahlias do not as a whole reach a very high standard. In many instances they are too robust in growth, and bear their flowers on stalks too short to admit of their carrying them above the foliage. The majority of the varieties are free in blooming, but it is not of much avail that large numbers of blooms be produced if they are hidden by too ample leafage. We mention this with the hope that raisers will recognise the fact that a race of cactus dahlias specially suitable for the production of striking colour effects in the garden is much needed, and that they will devote more of their time and attention to the habit of the plants than they have yet done. While raisers may with considerable advantage change somewhat in their method of procedure, there is plenty of room for improvement in the making of selections by the general body of cultivators. The majority plant almost exclusively cactus varieties for garden decoration, and this is done by not a few under the supposition that because the blooms are less formal than are those of the show varieties they are best adapted for the garden. As a matter of fact the latter when grown in deeply dug soil with but little, if any, manure, will produce a much finer colour display, for the blooms will be produced in large numbers, and will be borne on stalks of sufficient length and rigidity to carry them well above the foliage. On the other hand, if they are grown in heavily manured soil, as is so frequently recommended, they will be hardly less luxuriant than the strong growing cactus varieties, and the stalks will not be strong enough to hold the flowers erect. We mention this because many amateurs base their estimate of the show and fancy varieties on the liberally fed plants that may be seen in gardens and nurseries where these two sections are grown for the production of exhibition blooms. More attention should be given to the pompons, which are free in blooming, and the flowers are borne on long, rigid stalks, and admirably adapted to indoor arrangements. The pæony-flowered varieties have much to recommend them for large beds and spacious borders, but they should not be grown in a very rich soil because of their tendency to make a strong growth. Much may be said in favour of all the sections, but in effective-

ness of colour and elegance of form not one is equal to the cactus, and for that reason we are extremely anxious an endeavour should be made to improve their habit of growth and thereby increase their usefulness.

Mr. James Whytock, head gardener to the Duke of Buccleuch, at Dalkeith Park, Dalkeith, occupies a foremost position among British gardeners, and is well-known on both sides of the Tweed and also in the Sister Isle. It gives us great pleasure to give Mr. Whytock's portrait, especially as he is now president of the Scottish Horticultural Association, as well as an active and prominent member of the Royal Caledonian Horticultural Society. Born at Tullyallon Castle Gardens, Kincardine, Mr. Whytock took his first lessons in gardening from his father, and subsequently served his apprenticeship with Mr. Anderson, at Oxenford Castle. From Oxenford he went as journeyman under the late Mr. Thomson, at Dalkeith Park, and eventually became foreman there under the late Mr. Malcolm Dunn. From Scotland Mr. Whytock crossed over to Ireland, where he was head gardener to the late Count de Vesci at Abbeyleix, Queen's Co., and subsequently head gardener to Earl Fitzwilliam at Coollattin. At Coollattin Mr. Whytock was particularly successful, and became famous as an exhibitor. After the death of Mr. Dunn, Mr. Whytock returned to Dalkeith Park, and he has done much to enhance the horticultural fame of these fine old gardens during the eight years he has had entire charge of them. Of gentlemanly bearing, kindly disposition, and quiet manner, Mr. Whytock has many friends throughout the United Kingdom, and we trust he will long be spared to hold his present position and increase those friendships.

Damage to Trees in Bushey Park.—For a few moments, just before 10 p.m. on Monday, June 1, the wind blew furiously in the south-western district of London, then hail fell for a few moments, followed by a heavy downpour of rain, that continued at intervals and varied in intensity well on into the night. The storm was preceded by very vivid sheet lightning that lit up the heavens for miles round. The damage, and it was considerable in some few places, appears to have been all done during the few minutes before the rain fell. So tremendous was the force of the wind that about thirty of the big lime trees that form a background to the southern side of the fine old Chestnut Avenue in Bushey Park, were overturned with their heads to the north by west. Very few, probably only three of the chestnuts, were uprooted, but one other was smashed almost to pieces by the fall of a big lime tree. The damage was bad enough, but it is regrettable that some of our daily contemporaries should have so exaggerated the disaster, one paper stating that over four hundred trees were blown down. So far as we could gather about fifty trees suffered, and some of these were quite small ones. The damage to the avenue is confined—with the exception of a very few small broken branches—to the Teddington end, and all on the south side. The roof of the lodge was smashed in by the falling trees, but, fortunately, no one was hurt. For long years to come there will be a bad gap at the Teddington end of the avenue, in the comparatively narrow track of the most vicious portion of the storm, but we are glad to know that the Chestnut Avenue as a whole will lose little, very little of its beauty. Many of our readers are aware that behind the chestnuts, on each side of the avenue, there are three rows of giant trees, chiefly limes, and these have more than once sheltered the fine chestnuts. One of the curious features of the damage is that where the wreck is greatest there stands one lime tree, unharmed save for a few small branches torn from it by its falling neighbours.

Gardeners' Royal Benevolent Institution.—Lord Aldenham, who presides at the festival dinner of this invaluable charity, has issued a strong appeal for support in his endeavour to aid the institution. He states that he is most anxious to raise a sufficient sum to meet the deficiency in the ordinary income required to discharge the annual liabilities, which amount to £2,500, and we need hardly say that we earnestly hope he may accomplish the object he has in view. Lord Aldenham expresses the hope that all who sympathise with the object of the charity will, if they are not able to be present at the dinner, give practical expression thereto by contributing to his list of subscriptions.

National Rose Society.—The arrangements for the current year form, with the list of members, schedules of prizes, and bye-laws and regulations, a rather substantial volume. The long list of members is of interest, as showing the remarkable popularity the society is enjoying as the result of the vigorous policy initiated a few years since. The society, as already announced, will hold three exhibitions this season, the first in the gardens of the Royal Botanic Society, Regent's Park, the second at Manchester, and the third, which will be the autumn show, at the Horticultural Hall, Vincent Square. Several new classes have been added to the schedule of the Regent's Park show, and the more noteworthy of these are the three for representative groups of the roses that came out first, second, and third respectively in the ballot for the Nickerson Cups. In each class liberal cash prizes are offered. The inclusion in the schedule of the "plan showing position of the Royal Botanic Gardens," is extremely unfortunate, inasmuch as it suggests that the only railway anywhere near Regent's Park is the tube between Waterloo and Baker Street. There is, of course, the Metropolitan, which connects the termini of the Great Eastern, the Great Northern, the Midland, the London and North-Western, and the Great Western Railways with Regent's Park, and this should certainly have been shown. There is also the London Central, which connects with the Bakerloo Tube at Oxford Street, and both these should be shown on the plan.

Rhododendron Show at Regent's Park.—In accordance with their usual practice, Messrs John Waterer and Sons, Lim., of Bagshot, Surrey, are holding an exhibition of rhododendrons in the gardens of the Royal Botanic Society, Regent's Park. The display will be again a very large, and it promises to be a most beautiful one. The exhibition opens on Wednesday, June 10, and continues throughout the month.

Belgian Honours for Horticulturists.—Among honours and decorations recently accorded to continental horticulturists of note, we find that the order of Officer of the Order of Leopold has been awarded to Mr. Arthur de Smet, one of the best-known of Belgian horticulturists; and Mr. Romain de Smet, the president of the Circle van Houtte; and the order of Chevalier of the Order of Leopold has been conferred upon M. Firmin Lambeau, of Brussels; Mr. Chas. Vuylsteke, of Loochristy, the famous orchid raiser; and Mr. Louis Hartman, treasurer of the Royal Linnean Society of Belgium. Our young friend, Mr. Leon Pynaert, director of the Congo State Botanic Garden at Eala, has been appointed Chevalier of the Order of the Lion of the Congo.

Forestry in Ireland.—The Departmental Committee appointed for the purpose of considering the possibility of improving the present position of forestry in Ireland have now made their report, in which they deal with existing conditions, and recommend the adoption of a national scheme of afforestation. It is distinctly stated that, in the opinion of the committee, a comprehensive scheme of forestry, whether undertaken through local authorities, private owners, or directly through a Forestry Department, can only be carried out by or under the direction of the State. An exceptional opportunity for acquiring land suitable for forestry, and not so suitable for any other use now, the committee consider, presents itself in Ireland, in connection with the Land Purchase Acts; and such a scheme, including the preservation and extension of existing woods, and the creation of a new forest area, would be, the committee consider, a sound investment for the nation. As a result of certain surveys it is estimated that there is available a total possible forest area of at last 1,000,000 acres, made up in round numbers of 300,000 acres of existing woodlands; 200,000 acres of plantable land in large blocks; and 500,000 acres of plantable land in smaller blocks. Legislation is not necessary for the establishment of a forestry authority, as the Department of Agriculture is endowed with the necessary legal powers for the improvement and development of woodland, but funds will be required in the event of the proposed scheme being adopted. It is suggested that the scheme should provide for the acquisition of 200,000 acres of land in large blocks to be planted, managed and maintained in the interest of the country as State forest.

Prizes for Hyacinths.—The President and Council of the Royal Horticultural Society have accepted the offer of the Dutch Bulb Growers' Society at Haarlem of prizes for forced hyacinths, to be competed for at the R.H.S. exhibition to be held on March 9, 1909. The prizes are as follows: Division I., for amateurs and gentlemen's gardeners.—Eighteen hyacinths: 1st prize, £6 6s.; 2nd prize, £5 5s.; 3rd prize, £4 4s.; 4th prize, £3 3s.; 5th prize, £2 2s.; 6th prize, £1 1s. Twelve hyacinths: 1st prize, £5 5s.; 2nd prize, £4 4s.; 3rd prize, £3 3s.; 4th prize, £2 2s.; 5th prize, £1 1s. Four pans containing hyacinths (ten roots in one pan), the blooms of each pan to be of distinctly different colour: 1st prize, £4 4s.; 2nd prize, £3 3s.; 3rd prize, £2 2s.; 4th prize, £1 1s. Division II., for nurserymen.—The finest collection of hyacinths, either in pots or pans, or in glasses: prize, the gold medal of the Dutch Bulb Growers' Society at Haarlem. The regulations are that in the first two classes each bulb must be in a separate pot (size optional). In the three first classes all must be single flowers; no flowers may be tied together. An exhibit must not contain more than one specimen of any one variety. Exhibitors may show in not more than one class, except in the following: Competitors may enter the classes for twelve hyacinths and four pans or for eighteen hyacinths and four pans or singly in either one. In all the classes the bulbs shown must have been forced entirely in Great Britain or Ireland.

Successional Flowers in the Grass.—The facility with which a successional display of spring flowers may be had over a considerable period, has been admirably demonstrated on the Cumberland Mound, in the Royal Gardens, Kew, this season. For some years past it has been the practice to have two distinct displays of spring flowers on the mound, but this season there has been three. The first to yield of its large double yellow flowers was the bold growing Narcissus telemonius fl.-pl., and when the beauty of its flowers was passing, the buds of the Emperor and several other varieties were well advanced. These in due course attained full development, and produced an exceedingly rich display of colour. In their turn these were followed by the flowers of N. poeticus recurvus, the latest of the several forms of this species, and the bluebell in mixture. The brown withered flowers of the Emperor and its associates are rather more prominent than one could wish. but they are by no means sufficiently prominent to spoil the general effect, and, in fact, when the display is seen from a short distance they are not noticeable. This narciss and bluebells are used with excellent effect in an enclosure on the south side of the North Gallery, and as the enclosure is beyond the range of the waterfowl, the pure white and blue flowers springing from the bright green carpet of grass present a delightful appearance.

Ups and Downs of Sheffield Chrysanthemums. — At a recent monthly meeting of the Sheffield Society Mr. J. E. Newsham, the treasurer, briefly discussed its history. He showed that the society was begun in 1885, and the first exhibition was held in the Corn Exchange on November 20 and 21 of that year, and the exhibitions had continued to increase in size ever since. In 1893 the society had a financial set back and closed the year with a balance of nine shillings only. The most successful year was 1900, when a substantial balance accrued, chiefly as a consequence of the large attendance at the show, the door receipts totalling about £243.

Canadian Rock Maple for Mangle Rollers.—In his account of various timbers seen during a recent visit to the Liverpool docks, Mr. J. M. Hillier, curator of the Museums at Kew, observes that large consignments of Canadian Rock maple (Acer saccharinum) were coming in for the manufacture of mangle rollers. For this application the wood is imported shaped octagonally, and is immediately stored in the dark and packed in sawdust until required for conversion. This is done to prevent checking (surface cracks). These rollers are made chiefly at Keighley and Accrington, and one firm alone will produce as many as 300,000 rollers during the course of a year.

Compulsory Spraying. — In every State and in every farming community there is always one man at least who is behind the times, who neglects his trees and lets insect pests and fungus diseases run riot. His neighbours are progressive, up-to-date orchard men or nurserymen. They cultivate the ground, feed the trees and spray for insect pests and fungus diseases. The trees of the easy going farmer are infested with almost every kind of disease, yet he won't cultivate, he refuses to spray, and he won't cut his trees down. All that he will do is to grumble when his neighbours remonstrate with him. Now, in Oregon, says the "National Nurseryman," if a man fails to spray for San José scale, the authorities do it for him and tax him for the work. This is as it should be.

ARUM LILIES.

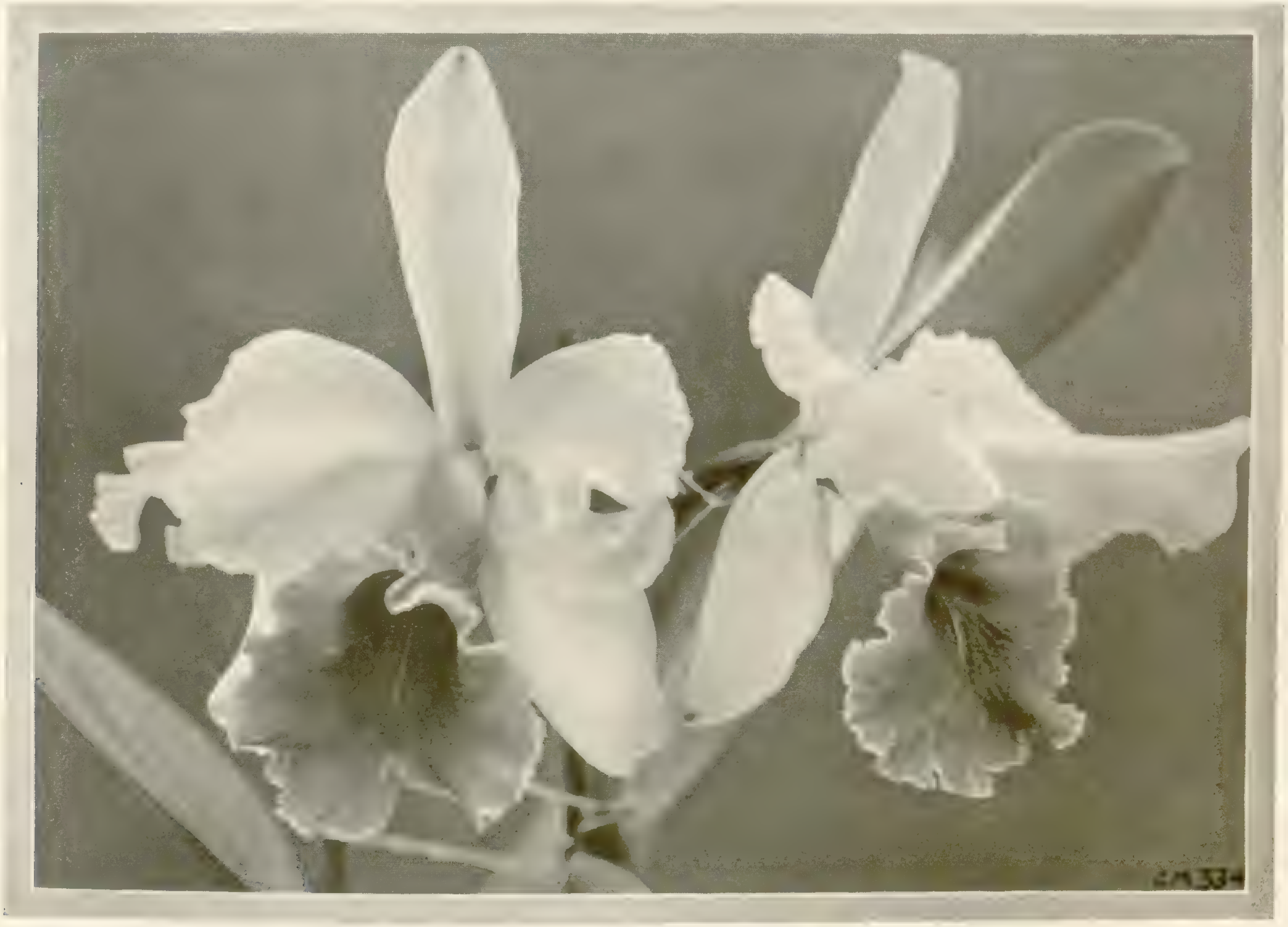
Within the last few years great strides have been made with the arum lilies or richardias, so that to-day we possess a number of fine forms that are extremely valuable for all decorative purposes. With the species Richardia africana, or, to give it the older designation, Calla ethiopica, every gardener is well acquainted, and when one realises that it is grown by the thousands to supply the flower markets, it will be apparent that the best of the varietal forms and the newer species are deserving of close attention.

One notes that the spathes of the arums almost always maintain a good regular market price, and there is every prospect that they will continue to do so. For wreaths and floral decorations in general they are almost indispensable, and help the floral artist to maintain a high-class tone in his productions.

Another notable phase is the culture of the type as a hardy aquatic, and where it succeeds (as it does in the more favoured districts) there is nothing which imparts a more tropical appearance to the waterside, or makes a more charming frame to a pretty water picture. By all means, let us advocate a still more extended use for these moisture-loving subjects, as there are doubtless many sheltered pieces of water in the southern counties where the richardia would thrive and luxuriate. The main thing is to plant the crowns deep enough to escape the frosts of winter, and if this is assured, the success of the plants should be a certainty.

Varieties of R. africana.

The varied forms of the white arum need something more than a superficial glance, many of them being sterling improvements on the type. Grandiflora, a selected, typi-



LÆLIO-CATTLEYA ELVA WESTONBIRT VARIETY.

Flowers purple, yellow, and gold. F.C.C., R.H.S., May 26. Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

cally giant form, is strong in growth, with massive spathes, but it is not free: consequently not of much value for the supply of cut spathes. Perle von Stuttgart is better; it is of moderate size, but its pearly whiteness and dwarfish habit make it a useful acquisition. The Godfrey is a fine form, and carries a good number of spathes which are unsurpassed for purity. Devoniensis is a dwarfish, compact plant, which is very free in flowering and excellent for pots. For a large conservatory, where imposing subjects are required for a background, the gigantic Nicolai, enormous alike in the spathe and foliage will be found most useful. A large-flowered, dwarf variety is Ladhami, raised by Mr. B. Ladhams, of Southampton. This is very free, and the spathes are broad and flat, and valuable for wreaths. Little Gem has not quite realised the expectations to which its introduction gave rise some years ago; true, it is dwarf and dainty in appearance, but it is not free enough to warrant anyone growing it on a large scale.

The Yellow Arums.

What are generally known as the "yellow arums" are usually represented in gardens by R. Elliottiana, which has golden yellow spathes and silvery spotted foliage. This is undoubtedly the best known, and it is gradually becoming popular for floral decorations, and here and there firms are working up large stocks in preparation for supplying the flower markets. For high-class decorations the yellow arums will provide a touch of refined colouring which will heighten the tone and improve the appearance of floral designs, and there is every reason to believe that good prices will attend the sales of these golden spathes. The form of R. Elliottiana, known as Rossi, is reputedly more free in flowering than the type.

The green-foliaged R. Pentlandi provides a charming shade of yellow, but is not so plentiful as Elliottiana, but we may see much of it in the near future, as it is finding its way into many gardens. The soft greenish-yellow Aurata, sometimes known as hastata, has a dwarf habit, and forms an interesting species for the conservatory.

Pink and Reddish Shades.

It is extremely probable that the charming rose-pink R. Rehmanni will, like the yellow arums, rapidly come to the front for the production of spathes for decorative purposes in a cut state. The pink spathes will be a boon to the florist, and anyone who has experienced the charming contrast to white flowers afforded by Crinum Powelli when used in floral designs will more than welcome Rehmanni for the self-same purpose. Compared with Rehmanni, the arums with reddish spathes are hardly worth growing, though doubtless they will some day be turned to account by the hybridists. P. S. Hayward.

Climbers.—Maintain a close watch on all growing climbers and prevent the growths from becoming unduly crowded, entangled, or passing behind supports. Tie all in their proper positions, though for anything approaching its flowering period it is best to allow the flowers to hang a little loosely. The well-known Clematis montana will now be assuming its most beautiful condition, and this and all similar plants must be allowed to ramble as naturally as possible. Attend to the staking of carnations and herbaceous plants. — E. F. Hazelton, Knowsley Gardens, Prescot.

A WEALTH OF GARDEN COLOUR.

"Bubbles we buy with a whole soul's tasking:
'Tis heaven alone that is given away,
'Tis only God may be had for the asking,
No price is set on the lavish summer:
June may be had by the poorest comer."

What is the moral of the poet's lines? Surely that every man should find his happiness out of doors in the season of soft winds and sunshine? The floriculturist, be he wealthy or poor, can add to the glory of June, and create beautiful scenery, to some extent, just outside his door; his whole life, and the lives of those who dwell under his roof, will be raised and sweetened, characters will be softened, hearts lightened, in proportion to the loveliness that is born at his bidding.

There are scientists nowadays who try to decide upon the physical influences of the different colours, doctors who experiment with the curative powers of hues, spiritual students who believe that souls are helped by pure tints in garb and home furniture; shall the man be called too great an idealist then, who feels that the colour masses he arranges in his garden are capable of altering the sensations, age, and even the sentiments of those who bask daily in their beauty?

"I believe," wrote a German author, "that colour is a force of which we are strangely doubtful; a blaze of sunshine on a whitewashed wall may teach a child more reverence than could be instilled into his breast by tedious book-lessons." For the joyfulness of gorgeous hues we are all ready to sing praise. So it is in our gardens that we should show forth the faith that is in ourselves; a pallid, neutral tinted flower bed or two may well serve to show up the vividness of others, but the whole appearance of the pleasure grounds, when a bird's-eye view can be taken of them, should be that of a wealth of colour.

In spring we prepare our triumphs, in the bedding-out months we produce them; the summer and autumn are spent in enjoying them, and winter, though it robs us, should find our memories so stored with exquisite harmonies that we are cheered still, and find new joy in looking forward to greater glories in another year.

"June may be had by the poorest
comer."

Yes, the cottager who can only afford to spend pennies may stock his garden with flowers that a prince might envy; there is, perhaps, no vermilion, orange, or amber to excel those provided by the homely nasturtium and Iceland and Tulip poppies, no carmine richer than that of candytuft, sweet peas, and godetias, no lovelier pinks than are shown by Shirley poppies, sweet peas, and Lavatera trimestris rosea.

In gardens, large or small, colours are wasted when dotted about in scanty portions, or mingled until their characteristic values are minimised. A bed of orange calendulas may be, for instance, a perfect feast for any eye, but these marigolds when sown from mixed seed, have a much subdued effect, cream, apricot, and lemon being also present. I consider that this "common" flower, especially in its deepest tint, is fit for any garden; place masses of it in front of crimson or brown-foliaged shrubs, or in the close neighbourhood of young copper beeches, and no artist could pass the spot by without feelings of gratitude.

What a comforting sight is a mass of scarlet! One small bed well filled with pelargoniums cultivated for flower and foliage can be a delight, so what may not be claimed for a long border given up to scarlet flowers of all kinds, against a southern white wall? The stately herbaceous lobelias, the cannas, dahlias, and lychnis alone will serve to banish much sadness from the neighbourhood; and are there no poppies, ranunculuses, zinnias, verbenas, begonias, Phlox Drummondi, tritomas, geums, carnations, as well as antirrhinums, zonal pelargoniums, and tropæolums?

Why, too, should blue be so ill-used a colour? We hedge it round with cold white, or give it the crude accompaniment of vermilion, when it ought to be left to itself, every plant being encouraged to give its best possible yield of blossom, and a variety of plants congregated together to keep the display as lasting as possible, and also as well diversified in height as may be.

Perhaps the most satisfactory of all methods of bed and border filling to show off colour is the pyramidal style; from the dwarfest of dwarfs at the edge there should rise a bank all of the same shade, until the blossoms of the tallest plant form the background. This is exceedingly easy to carry out in rose-pink; a Phlox Drummondi may cover the earth at the edge with the hue, saponaria will repeat it, so too will asters that begin with Liliputs and end in Giants; then pelargoniums, perennial phloxes, hollyhocks can carry it onwards and upwards.

No artist would paint a picture in which little points of many brilliant colours were dotted over the whole canvas; then I claim that the garden landscape should not either be so treated. The more we can learn to regard our lawns and other chief open spaces as pictures, to be built up with loving carefulness, aiming at harmonious wholes, the sooner will gardening be more recognised as art rather than as a series of isolated attempts at showing off varieties of florists' flowers, or the intricacy and elaborateness of the patterns that cramped and confined blossoms and leaves can make!

There are cold-looking gardens by the thousand in England that need only one rich-hued immense bed or border to redeem their sad appearance; the front grounds of moderate-sized houses are especially dreary as a rule, decorously shrubbed and enclosed, but showing none of the floral grandeur that the sowing of a packet of giant sunflower seed even could effect! It seems as though country-dwellers feared to be "vulgar" in displaying a love for reds and yellows; perhaps this is a state of opinion caused by the crude bedding out of red, rose, blue, and gold, which disfigured gardens generally a few years ago. Maybe the garishness of the modern builder's bricks and mortar has partly been to blame.

The brilliance that should lie outspread beneath summer sunshine may be produced by plants as rare and costly as the wealthy garden-owner may desire, while the humble cot can have set just as effective, though cheap, a carpet over the restricted area of its hired land; it is the colour sense alone that will create the beauty, and the grateful heart, most open to the influence of all things fair, will best enjoy it. My suggestion is merely this, that this year we should each endeavour not only to grow the best varieties of flowers in masterly manner, but also to display them at their greatest value, and this is only done by letting red prove what red can be, and blue its depth, and rose its warmth, and white its dazzling purity, when laid with a broad brush boldly upon the garden canvas. M. H.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

GREENHOUSE SUCCULENTS.

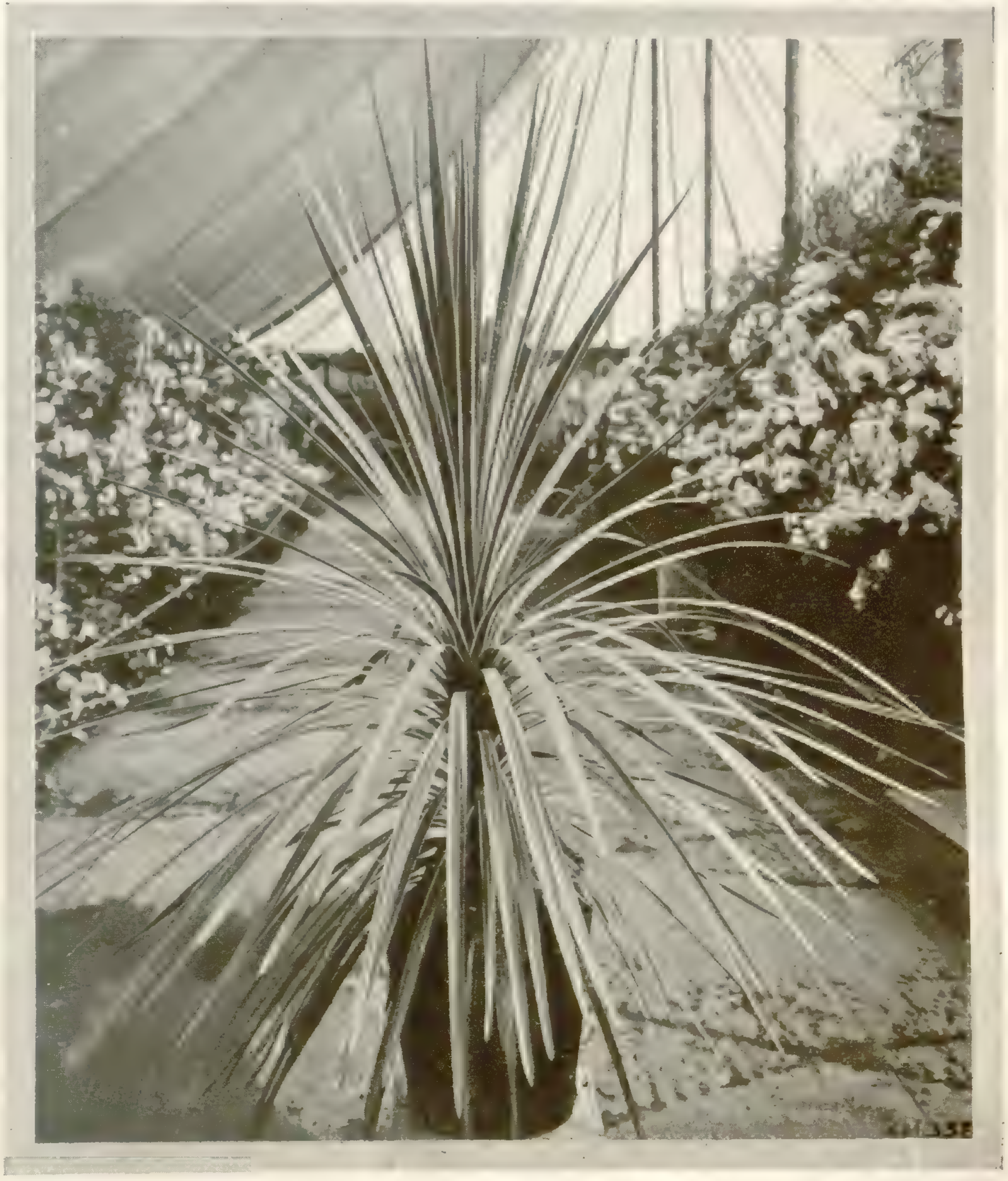
There are not many among this class of plants that can be recommended either for the production of cut flowers or for indoor decorations. Though in themselves the flowers of many are most beautiful, they either do not remain sufficiently long in bloom to render them of any value for cutting, or their stems are too short to admit of their being set up to advantage when placed in water. There are, however, a few that are most useful, and among them we may include the crassulas, kalosanthes, and rocheas, all closely allied to each other. At one time the old Crassula coccinea, as it was then called, was a great favourite with exhibitors, and was found in all good collections of flowering stove and greenhouse plants, and huge specimens from three to four feet in diameter, covered with fine trusses of bloom were frequently met with at our leading shows. Now, however, plants with two or three trusses on are more general, these being of greater service to the present generation of gardeners.

Grown in 48-sized pots these may be used with advantage in a variety of ways, either as dot plants in the flower beds, for grouping in the conservatory, or as single specimens for vases in the dwelling-rooms. Though some of the kinds may be readily grown from seed others are best propagated by cuttings, selecting the tips of the young growths for this purpose. Rochea falcata and some others produce seeds freely, and if these are sown either as soon as ripe, or early in spring, in shallow, well-drained pans, and placed in gentle heat, the young plants are not long in making their appearance. Being very succulent they are liable to damp off unless kept in a rather dry atmosphere.

The seedlings should be pricked off as soon as large enough to handle, into light porous soil, and when they have made four or five leaves they should be put singly into small pots, and afterwards placed on a shelf in the full sunlight to induce them to grow as sturdily as possible. During the hot weather they will need to be liberally supplied with water, but as cold weather approaches very little will suffice, especially during the dull winter days.

R. falcata may also be propagated by cuttings, and where a good stock of old plants is at hand this is the most easy way of keeping up a supply of young plants. Cuttings should be inserted in August, either singly in small pots or several near the edge of larger pots. They will readily root in a cold frame at that time of the year, and when rooted they should be shifted into pots of larger size, but care should be taken not to over-pot them, especially when small. R. falcata makes a loose terminal truss of flowers, and when in bloom it is very attractive. The old Crassula coccinea is so well-known it needs but little description, but as there is often some difficulty in inducing this to flower freely, special attention should be paid to getting the growths thoroughly ripened during the summer. The plants ought to be grown in the full sun, and if after flowering all the old flower stems are cut back and the pots stood where full sunlight will reach them, the growths will be short and sturdy, and the majority of them will flower the following summer. They must be kept rather dry through the winter, otherwise the wood will be too sappy to bloom. There is a neat little species known by the name of R. jasminea which does not grow more than six inches high, and this is a profuse bloomer, the flowers white, something like a jasmine. As a pot plant for decorative purposes this is very neat.

Kalanchoe flammea is a most useful plant either for decorative purposes or for the production of cut flowers. The seeds should be sown early in the year and treated in the same way as recommended for the crassula. Plants having one stem are preferable, as these, if well grown, will attain a height of from a foot to eighteen inches; the loose trusses of bright orange-scarlet flowers are produced at the ends of the growths, and the whole plant presents a neat and attractive appearance, and is very effective either for grouping or for single specimens for vases. When cut the flowers remain for a considerable time in a fresh state. A good batch of this ought to be grown in all gardens where a supply of cut-flowers is in demand.



NEW DRACÆNA DOUCETTI DE GROOTEI.
Leaves green, striped with greenish-yellow. F.C.C., R.H.S., May 26.
Messrs. Jas. Veitch and Sons, Lim., Royal Exotic Nursery, Chelsea.

One more subject worthy of attention, though not rightly belonging to this class, is Saxifraga pyramidalis. If strong plants of this are potted up in the autumn and kept in a cold frame through the winter, removing the lights altogether when the weather is favourable, it is astonishing what a wealth of blooms may be produced from so small a plant. During winter the pots may be stood close to each other, but as the flower spikes develop more room and light should be afforded them. This is one of those subjects that attracts so much attention in Covent Garden Market. When in bloom it is both light and graceful, and no plant that I am acquainted with is easier of cultivation and takes up less room.

With reference to Covent Garden I think it would be well if all gardeners who have any amount of decorating to do made themselves acquainted with this market, and I am quite sure that it would be to the advantage of many employers if they would send their gardeners to visit this market in the early morning, any time between the first of May and the middle of July. Having some little idea myself of what it means to grow plants by the thousands for decoration, and the short space of time one has to produce many of them, I am convinced that there are not many gardeners who have any idea of the quality and quantity of plants that find their way into this the finest and most flourishing market of the world's garden produce. It must, however, be borne in mind that private establishments cannot compete with this, for though in some places plants are done fairly well, it is impossible to devote a house to each and every class as is done by the market growers. The latter are not slow to understand what pays best, and having set themselves out to grow any particular class of plants they do it to perfection and leave all others alone. Gardeners in private places cannot do this. H. C. Prinsep.

THE BEST ROSES FOR GARDENS.

A short time since we gave the result of the ballot for the Nickerson cups offered for the best climbing and dwarf roses, and we now have the pleasure of giving some fuller particulars from the National Rose Society's book of arrangements for the current year. The list of varieties that obtained the first, second, and third places in the ballot has much value as a guide to those who grow a comparatively small number of roses for garden decoration.

In 1906, Mr. W. E. Nickerson, of Cambridge, Massachussets, U.S.A., presented the National Rose Society with three five-guinea silver cups, which were awarded respectively to the raisers of the best H.P., the best H.T., and the best T. for general cultivation which had been sent out in 1900 and subsequently.

With the same object in view, and in order to still further encourage the raising of roses which are especially suitable for general cultivation, and at the same time to assist the members of the society, and more particularly the smaller growers among them, in selecting the best varieties for different purposes for their own gardens, Mr. Nickerson last autumn offered to present the N.R.S. with twelve more five-guinea silver cups.

After a consultation with Mr. Nickerson as to his wishes, it was ultimately decided by the General Committee to invite the members of that committee and other leading rosarians, in this country and elsewhere, to underline in the voting papers sent them the variety in each of the twelve divisions, into which the competition had been arranged, which they considered best complied with the conditions laid down. There was no restriction as to the age of any variety or of the class to which it belonged. Eighty-three voting papers were in all received and the result of the ballot, which has only recently been decided, is as follows:

CLIMBING ROSES BLOOMING IN CLUSTERS.

Shades of Crimson.—1, Turner's Crimson Rambler, Cl. Poly. (33); 2, Gruss an Teplitz, H.T. (22); 3, Hiawatha, Wich. (16).

Shades of Pink. — 1, Dorothy Perkins, Wich. (52); 2, Blush Rambler, Cl. Poly. (8); 3, Minnehaha, Wich. (6).

White or Pale Blush.—1, Climbing Aimee Vibert T.N. (19); 2, Félicité-et-Perpétue, Evergreen (15); 3, Bennett's Seedling, Ayr. (10).

Shades of Yellow.—1, Alister Stella Gray, N. (40); 2, Claire Jacquier, Cl. Poly.. (13); 3, Aglaia, Cl. Poly. (12).

CLIMBING ROSES BLOOMING MORE OR LESS SINGLY.

Shades of Crimson.—1, Ards Rover, H.P. (22); 2, Reine Olga de Wurtemburg, H.T. (18); 3, Longworth Rambler, H.T. (16).

Shades of Pink.—1, Climbing Mrs. W. J. Grant, H.T. (20); 2, Climbing Caroline Testout, H.T. (17); 3, Papillon, T. (13).

White or Pale Blush.—1, Madame Alfred Carrière, H.N. (62); 2, Una, S. (11); 3, Macrantha, Species (6).

Shades of Yellow. — 1, William Allen Richardson, N. (23); 2, Gloire de Dijon, T. (13); 3, Madame Jules Gravereaux, T. (11).

DWARF ROSES.

Shades of Crimson. — 1, Hugh Dickson, H.P. (33); 2, Ulrich Brunner, H.P. (16); 3, Richmond, H.T. (8).

Shades of Pink. — 1, Caroline Testout, H.T. (24); 2, Madame Abel Chatenay, H.T. (21); 3, La France, H.T. (14).

White or Pale Blush. — 1, Frau Karl Druschki, H.P. (54); 2, White Maman Cochet, T. (10); 3, Viscountess Folkestone, H.T. (6).

Shades of Yellow.—1, Madame Ravary, H.T. (29); 2, Marie Van Houtte, T. (15); 3, Souvenir de Pierre Notting, T. (10).

N.B.—The figures in brackets indicate the number of votes given to each of the above thirty-six varieties.

At the society's exhibition in the Royal Botanic Gardens, Regent's Park, on July 3 next, a five-guinea cup, the gift of Mr. W. E. Nickerson, will, in accordance with the foregoing decisions, be awarded to each of the raisers, or their representatives, as the case may be, of the following roses, viz.: Turner's Crimson Rambler (Climbing Polyantha), Dorothy Perkins (Wichuraiana), Climbing Aimée Vibert (Noisette), Alister Stella Gray (Noisette), Ards Rover (Hybrid Perpetual), Climbing Mrs. W. J. Grant (Hybrid Tea), Madame Alfred Carrière (Hybrid Noisette), William Allen Richardson (Noisette), Hugh Dickson (Hybrid Perpetual), Caroline Testout (Hybrid Tea), Frau Karl Druschki (Hybrid Perpetual), Madame Ravary (Hybrid Tea).

At the same exhibition prizes will be offered for representative groups of the twelve roses which were at the head of the poll in their respective divisions, viz.: Turner's Crimson Rambler, Dorothy Perkins, Climbing Aimée Vibert, Alister Stella Gray, Ards Rover, Climbing Mrs. W. J. Grant, Madame Alfred Carrière, William Allen Richardson, Hugh Dickson, Caroline Testout, Frau Karl Druschki, and Madame Ravary.

There will be also another class for representative groups of the twelve roses which came out second in the ballot viz.: Gruss an Teplitz, Blush Rambler, Félicité et Perpétue, Claire Jacquier, Reine Olga de Wurtemburg, Climbing Caroline Testout, Una, Gloire de Dijon, Ulrich Brunner, Madame Abel Chatenay, White Maman Cochet, and Marie Van Houtte.

And a third class for representative groups of the twelve roses which occupied the third places in the ballot, viz.: Hiawatha, Minnehaha, Bennett's Seedling, Aglaia, Longworth Rambler, Papillon, Macrantha, Madame Jules Gravereaux, Richmond, La France, Viscountess Folkestone, and Souvenir de Pierre Notting.

Should the coming rose season be an early one the part of the exhibition in which these groups are shown should be one of special interest to a large number of the society's members, and especially those who are only able to find room for a small number of climbing roses in their gardens.

The names of the raisers of the foregoing cup roses and the years of introduction are, we would add, as follows.

Turner's Crimson Rambler (C. Turner, 1893).

Dorothy Perkins (Jackson and Perkins, 1901).

Climbing Aimée Vibert (Curtis, 1841). The only available record of the raiser and the year of introduction of this variety is contained in Mr. Gordon's comprehensive list contained in the last edition of the "Amateur's Rose Book." This variety was originally introduced as Aimée Vibert scandens.

Alister Stella Gray (A. Hill Gray. Introduced by Messrs. Paul and Son, in 1894).

Ard's Rover (Alex. Dickson and Sons, 1891).

Climbing Mrs. W. J. Grant (E. G. Hill and Co., 1899).

Madame Alfred Carrière (Schwartz, 1879).

William Allen Richardson (Veuve Ducher, 1878).

Hugh Dickson (Hugh Dickson, 1904).

Caroline Testout (Pernet fils-Ducher, 1890).

Frau Karl Druschki (P. Lambert, 1900).

Madame Ravary (Pernet-Ducher, 1899).

Asparagus. — This vegetable was a little later than usual this season in coming into bearing; but the crop is most satisfactory. Some fine heads have been cut, and there is at present a good supply coming forward. Gathering may be prolonged a little later than usual this season in consequence of it starting later. Some growers prefer to feed the roots while they are in active growth, which I firmly believe is the best practice. Salt and bonemeal are two good substances to apply. When the growths are well advanced they should be staked to keep the wind from breaking them down. — T. W. BIRKINSHAW.

SWEET PEA JOTTINGS.

On Easter Monday morning I called upon Mr. Clayton, The Butts, Brentford, to see his sweet peas. Now Mr. Clayton is an enthusiast. He obtained specially strongly-grown plants in pots, and planted them the day before Good Friday, when they were about ten inches high. The plants looked well, but my return home was through a blinding snowstorm, and there is no need to remind readers that subsequently there were other snowstorms, four inches of snow falling one day. I wondered how those sweet peas were faring, and rather fancied Mr. Clayton's ardour for early plants and early planting would be considerably cooled.

Late on Thursday evening, May 28, Mr. Clayton called round and expressed a very strong desire that I should go and see his sweet peas, then and there. So I went, and was astonished at the growth the peas had made. Of course, Mr. Clayton fully comprehends the value of trenching and manuring, but the daily and careful attention he gives his dozen rows is the real cause of his success. Some of the varieties, notably Mrs. Collier, Elsie Herbert, and Prince of Asturias, were about four feet high, and by the light of a couple of candles we found a dozen or so of expanded flowers on spikes about fifteen inches long, and crowds of spikes ready to burst into bloom in the course of a few fine days. Considering the weather experienced this struck me as being a very early date for the first flowers from seedlings of the present year.

Mr. Clayton limits his varieties to a dozen, but I hope to persuade him to grow half-rows of at least another half-dozen varieties. Roses and violas are other favourites with Mr. Clayton, and also with Mrs. Clayton, who takes a very keen and practical interest in the garden.

As a matter of course, we now expect sweet peas, and fine sweet peas, at the Temple Show, and we are not disappointed. Mr. Breadmore has staged larger exhibits, but it is doubtful whether he has ever staged a finer one than he had at the Inner Temple Gardens last week. He had spikes of H[illegible] Lewis from eighteen to twenty-two inches long, and carrying four and five fine blooms apiece and of glorious colour. He also [illegible] Mrs. Collier, very fine, while the white waved Etta Dyke was very beautiful.

Three varieties attracted my attention in Messrs. Dobbie and Co.'s group. These were The King, an almost scarlet waved variety of great beauty, not yet in commerce; Mrs. Andrew Ireland, a very [illegible]ing peach-pink waved variety that [illegible] quite distinct, and is certainly one of the prettiest of sweet peas; and Dobbies' [illegible] blue, a soft blue shade that deserves a place. With Burpee's White Spencer I was disappointed, because two-thirds of the flowers were not waved. It is too early to be [illegible]tive, but I fancy our English white [illegible], i.e., Etta Dyke, will take the lead in point of merit, just as it takes priority of [illegible]

Messrs. G. Stark and Son, Great Ry[illegible], again showed their scarlet seedling M[illegible] Stark, and it promises well, and they had splendid blooms of their re-selected [illegible] of Miss Willmott. I have several times [illegible] the last two or three years pointed out the [illegible]ger of this fine variety running out of [illegible]ter, and the need of very rigid and [illegible] selection to bring it back. Miss H[illegible] has, or had, a fine strain of Miss W[illegible] The bright pink Mrs. William King was [illegible] conspicuous feature of Messrs. E. W. [illegible] and Co.'s display.

Sweet peas are growing at a tre[illegible] pace just now, and it is evident they [illegible] taken a good grip of the soil. Thin[illegible] the growths, a tie here and there to [illegible] an even distribution of shoots, and [illegible] out the earliest flower buds are matters [illegible] constantly need attention. The flowers [illegible] may be left, but, as a rule, these very [illegible] blooms are not up to the high standard [illegible] keeps in view, and their production [illegible] check growth.

CHAS. H. C[illegible]

AMONG THE ALPINE FLOWERS.

Lithospermum purpureo-cæruleum.

This Gromwell is a great contrast to the one previously named, for while L. canescens is a neat, erect grower, L. purpureo-cæruleum is rampant in its way, and if left alone would soon ramble over a large space with its runners, rooting as it went. Then its colour is absolutely different, and is, to some degree, indicated by the most unwieldy specific name. It is also a British plant, and might thus not be thought worthy of special notice here. Yet it occurs in but few districts, and, like the native Pasque flower, is beautiful enough to deserve some care at our hands to find a fitting place for it in our gardens. Its rambling habit can also be restrained, much to its own advantage, as it flowers much more freely if its long, barren shoots are cut off or shortened, this inducing its flowering growths to bloom freely and to give their handsome clusters of magnificently coloured flowers. "Purple-blue," the English rendering of the specific name, is hardly descriptive enough of the fine colour, but it must pass for want of a better, and it is only when one compares it with the "divine blue" of the gentianella, as I have just done, that we can perceive how much of purple there is in the hue of this flower. It may be added that the flowering stems are erect and the barren ones prostrate. It is readily increased by means of the runners, and thrives all the better with a little limestone or old mortar in the soil.

A Black Pansy for the Rockery.

There is in cultivation in the hands of a few only, a singularly pretty little black pansy, or rather violet, which goes always by the name of "Mr. Bowles's Black Pansy," the Mr. Bowles being the accomplished flower-lover, who is at present the chairman of the Scientific Committee of the Royal Horticultural Society. It is dainty in size, is a free-grower of perennial habit, and the colouring is of the deepest velvety black, with the exception of a small, deep purple blotch and the golden eye so general in the pansy. On the rockery, it always draws notice to itself, notwithstanding its sombre colouring, which is more sombre at a first glance than after fuller observation, for this little velvety bloom is not by any means dull, and is not so "sooty" as the old black pansy some of us have known for many years. This one flowers freely, and the little blooms are quite charming in their way.

Other Flowers.

Flowers are many now, and we can wander long among them, pausing here and there to study the saxifrages, violas, cheiranthuses, erodiums, geraniums, gentians, anemones, trolliuses, erysimums, tiarellas, epimediums, spring phloxes, primulas, waldsteinias, ericas, aubrietias, arabises, mertensias, arenarias, dwarf rhododendrons, and the many more which have been induced by the fickle smiles of May to cheer us with their beauties.

S. Arnott.

HEMEROCALLIS CITRINA (BARONI).

From the number of day lilies available for cultivation it is possible to select six good garden plants, and from this six one that is superlatively good, and named H. citrina (Baroni), a true species, and very distinct from a hybrid day lily of the same name. It is a vigorous and floriferous plant, whose leafage is ornamental all the summer long, and whose flowers, of bold outline, are attractive 100 yards away. The foliage is in huge tufts a yard long, broad, and of graceful outline, and coloured dark glaucous green.

At midsummer a series of flower spikes, each exceeding a yard in height, are produced, and clustered at their summits are a series of prominent buds from ten to twenty in number, which develop into stout petalled flowers nine inches in extreme diameter, coloured canary yellow, with bronzed exteriors, and quaint-looking black tips to each petal.

My first impression of this plant, gleaned from a poor specimen, was not good, but last year I found several strong specimens thriving in various parts of Britain, and it is proving itself to be an excellent garden plant, entirely removed in point of quality of flower and general attractiveness from the rank and file of day lilies. Grouped by waterside, in the flower border or shrubbery's margin, where its graceful "lines" can have a perfect foil, it is a plant one can study indefinitely without tiring of it. Like most day lilies it is a gross feeder, appreciating a manurial mulch once or twice a year.

G. B. Mallett.

NEW TUBEROUS BEGONIA, EMPRESS MARIE.
Flowers pure white. A.M., R.H.S., May 26. Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath.

THE ROCK GARDEN AT MULLABODEN.

Our rockery was constructed a little over three years ago. The site, before commencing operations, was a flat, uninteresting piece of ground, but by excavating for the winding pathway, and also by carting a quantity of soil to the spot, an undulating surface was formed on which the rockwork was built. It was also found necessary to bring a quantity of large shrubs and trees from other parts of the grounds to form a shelter from the north and east winds. The trees were mostly limes, and the shrubs consisted of Portugal laurels, yews, cupressus, and aucubas; one of the illustrations shows what an effective screen they have made.

The stones used were procured from the Wicklow Mountains, from a natural outcrop, where they had lain for hundreds (probably thousands) of years, and were much weather beaten, so that they were ideal material for a rockwork. When building the attempt made was to place the stones so as that they should look like the natural strata cropping out in various places, and yet to have them so that they would convey moisture to the roots of the plants.

The soil is of a sandy nature and very suitable for the majority of rock plants, yet a further addition of prepared compost, and in some cases peat, was made; and that this was apparently labour well spent is evidenced by the remarkable growth the plants have made, as they have quite filled up their allotted spaces. The subsoil is limestone gravel to a great depth, so that it was not necessary to provide artificial drainage.

A very common error was made when we commenced planting—viz., that of dotting the plants about. However, we rectified this afterwards by making good patches of from three to six plants in each patch. On the higher parts we planted groups of helianthemums, Veronica Traversii, and V. roseifolia, and Wichuraiana roses; these latter we found much too rampant and hard to keep within bounds, so they will be replaced by more suitable subjects.

We have not attempted so far to grow any of the minute and difficult sorts of alpines, but have confined ourselves to the more easily grown ones that make a good show at different times of the year. The following are some of the subjects that are doing specially well: Phloxes, stellata, frondosa, G. F. Wilson, and grandiflora; saxifragas, apiculata, Wallacei, hypnoides, Rhei superba, oppositifolia, pyramidalis, longifolia hybrida, Macnabiana, etc.; aubrietias, Leichtlini, Hendersoni, and Dr. Mules; arenarias, montana and balearica, the latter growing with ramondias on the shady sides of the rocks; Lithospermum prostratum, Onosma taurica, and campanulas also make a good show, particularly C. carpathica blue and white, C. garganica, C. muralis, and C. pulla; Saponaria ocymoides also makes glorious masses.

We have been and still are engaged in enlarging the rockery, as we find it such an interesting branch of gardening.

W. Mitchison.

Mullaboden, co. Kildare.

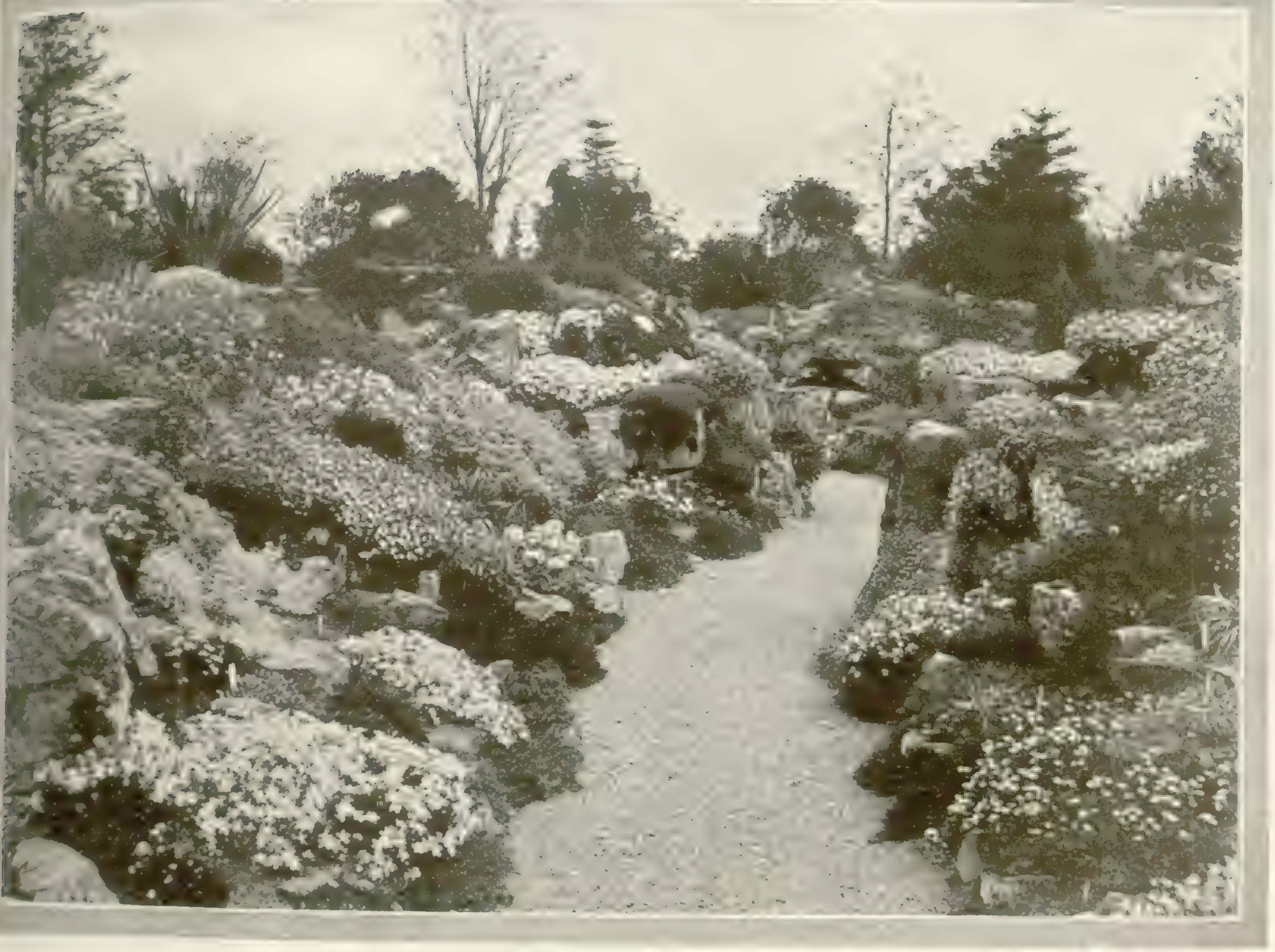
TEMPLE SHOW—MESSRS. JOHN WATERER AND SONS' EXHIBIT OF RHODODENDRONS, SPECIMEN HOLLIES AND KALMIAS IN THE OPEN.

THE ALTAIAN COLUMBINE.

There is still something for many gardeners to learn in the cultivation of the Altaian Columbine (Aquilegia glandulosa), as the thriving specimens one meets are few, and many flowerless plants which never "get on" represent the species in gardens. The late Mr. William Thompson, of Ipswich, reared beds of this handsome plant simply by sowing seeds in the beds in which they flowered. He held that transplanting adult plants always checked them, and that pot culture from infancy induced a restrictive growth throughout the life of the individual columbine, and it flowered less well accordingly. A singular instance supporting this view came under my notice last May, in which seeds of the Altaian columbine were sown in open borders, in the supposition that th were seeds of A. cœrulea. I have nev seen such plants as were then flower and the incident recalled Mr. Thompson observations.

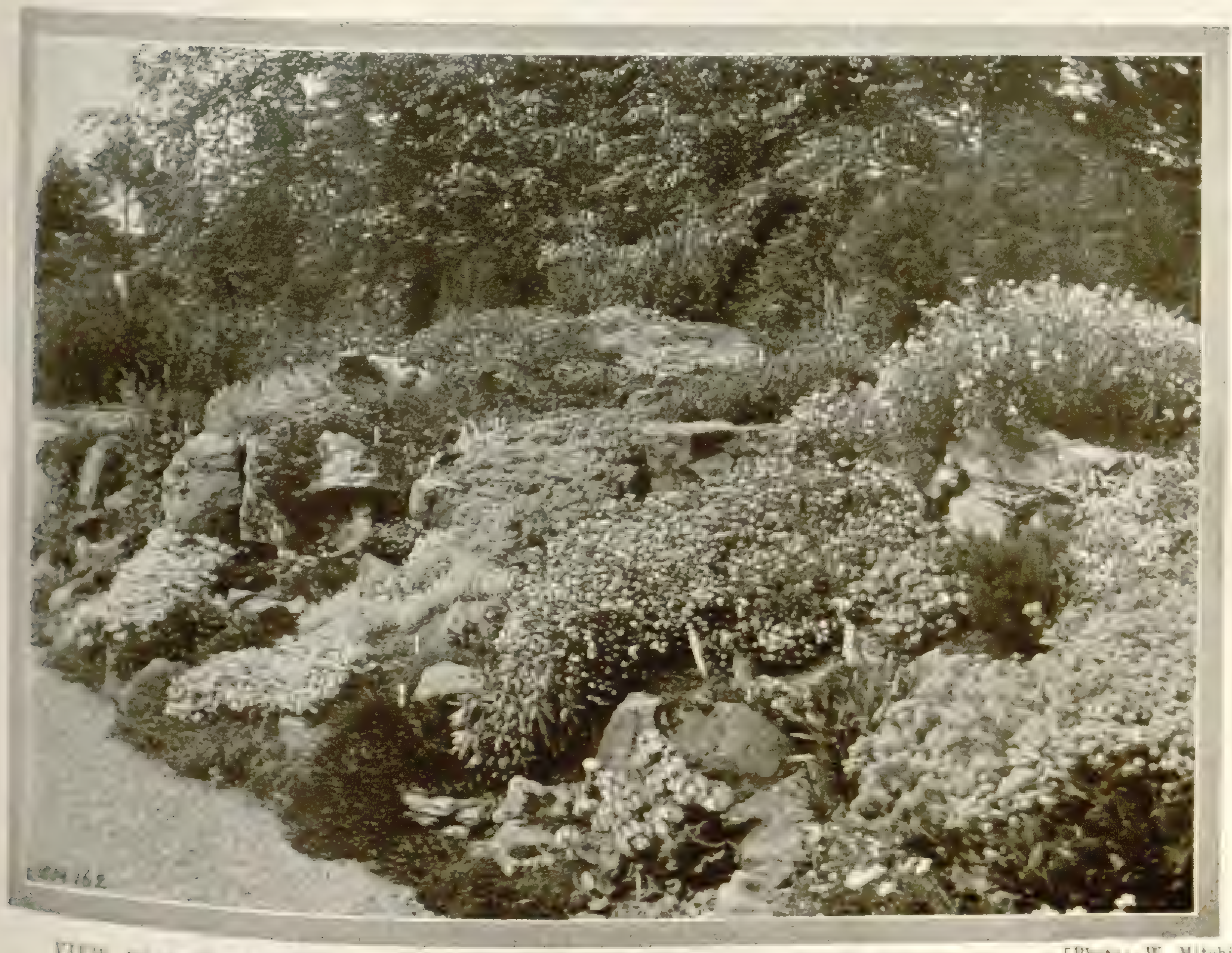
It is evidently not an alpine, as it quires the best soil of the garden and a room for development therein. Suc magnificent plant as this is worth a litt effort to secure it in goodly quantity, its widely expanded rich blue flowers, wi white collarettes elegantly lobed, produced in hundreds from healthy pla and they give one a note of colour the border needs at this season. The (and parent) stock of the Altaian co thrives in the black loam of Inverne hence there should be no fear as to hardiness, whilst frequent seed s should maintain vigour in the best p way.

G. B. Mall



[Photo: W. Mitchison.

THE ROCK GARDEN AT MULLABODEN, BALLYMORE EUSTACE, CO. KILDARE, THE RESIDENCE OF COL. THE HON. C. F. CRICHTON.



[Photo: W. Mitchison.

VIEW IN THE ROCK GARDEN AT MULLABODEN, BALLYMORE EUSTACE, CO. KILDARE.

SHOW AND POMPON DAHLIAS.

TEMPLE SHOW—A FINE WEEPING STANDARD OF THE PINK MINNEHAHA ROSE.
Messrs. F. Cant and Co., Braiswick, Colchester.

In these days of modern ideas and new fashions I am afraid the old double dahlia, as known and admired during the past century by our ancestors, has fallen somewhat upon bad times. Their rigid form and general stiffness do not appeal to our present-day garden decorators, and from many gardens they are rigorously expelled, ousted by the more modern forms. Yet there is a something charming about the double varieties, and this charm grows upon the cultivator, silently, but surely. It is only the general horticulturist who scorns the idea of their decorative value.

I maintain that there are spots in a garden where the double show dahlias reign supreme for decorative effect, for the majority are not tall growers, but they carry their flowers well above the leafage on strong, stiff stems, and where a mass of one variety is planted together the particular colour employed will be bright and attractive until the frost comes. In the late autumn days they retain their colour long after the cactus varieties have become washy and of little value in the garden. This section still appeals to a large body of the artisan class, and there are hundreds of growers who revel in their culture, those who watch the development of their flowers as tenderly as a fond parent watches over a child. They see beauty in the large globular flower, the perfect shell-like petal, etc., though these things do not appeal to the general public. One is also sorry to note that this section is not nearly so popular now at our dahlia exhibitions; we seem to keep the same showmen, but where are the recruits?

Pompon Section.

The pompones are certainly more popular, and where room is limited they appeal more to the general grower. Quite a variety can be grown in a small space. There is also a greater variety of colours than in the old double forms. They can also be grown in vases or large pots; in fact, last season, I grew about fifty varieties in lard pails that I had painted green; these were stood on a wide gravel path, where they flourished splendidly, each plant carrying scores of miniature flowers. The only point to remember in their culture under these conditions is to keep them well watered. Dryness at the roots will soon stop growth, and consequently a succession of flowers. Feeding should also be avoided, for it has a tendency to produce large flowers, which are totally out of character.

Show Varieties.

These do not advance very much; in fact, I am under the impression they have remained at the same level for the past twenty years. Occasionally we obtain a new colour, but very few new varieties are introduced, and the majority of sorts have been in cultivation many years. A popular dozen would be Mrs. Gladstone, blush; R. T. Rawlings, yellow; John Walker, white; Prince Bismarck, rich puce; John Rawlings, heliotrope; Mr. Chamberlain, rich crimson; Mrs. Langtry, cream, edged crimson; Mrs. D. Saunders, lilac, tipped white; W. H. Williams, scarlet; Daniel Cornish, terra cotta; Dr. Keynes, rich buff; and Harrison Weir, primrose. A selection of fancy varieties I shall leave for a future occasion.

Pompon Varieties.

The selection in this class is not easy to make, for it is difficult to know what to leave out, as nearly all the present-day sorts are so perfect in form and colour, yet withal so distinct, that I doubt very much if any two growers would name the same sorts. The following are all good and distinct: Adelaide, blush, edged lavender; Arthur West, rich crimson; Darkest of All, nearly black; Emily Hopper, deep yellow; Nerissa, rose-pink; Violet, white; Little Bugler, rosy-purple; Bacchus, scarlet; Nelly Broomhead, mauve on a lighter ground; Phœbe, orange and red; Tommy Keith, cardinal red, tipped white; and Rosebud, white, edged heliotrope.

J. B. RIDING.

Strawberries.—To obtain strong early runners for plants to fruit early the following year, a suitable quantity ought to be grown expressly for the work, and should not be allowed to fruit. These plants will supply some capital early runners, and if these are pegged into small pots filled with loam, as soon as they are large enough, a good batch will be ready to plant out by July, and, if carefully attended to, these will make grand fruiting plants for the following year.—H. MARKHAM.

NEW PLANTS, ETC.

PÆONIA DECORA ALBA.

A charming free-flowering single pæony, with large, rounded, white, pink-tinted flowers of beautiful shape. The central bunch of stamens is pale yellow, and it shows well against the very palest pink tint of the surrounding segments. The ample leafage is light green, with a dull instead of a shining surface. A.M., R.H.S., May 26. Messrs. R. Wallace and Co., Colchester.

ODONTIODA CHARLESWORTHI.

The most wonderful new orchid in the Temple Show. It is the result of crossing Odontoglossum Harryanum with Cochlioda Noetzliana. It was a small plant, carrying an erect spike of four flowers and two buds. The form was good, and each flower measured about an inch and a-half across. The colour is deep and brilliant crimson-scarlet of the most vivid hue. The lip is of similar hue, a little paler perhaps at the apex, and with a rich, broad, golden-yellow colour at the extreme base of each segment, where they join the column and pedicel is a tiny bit of yellow colour. F.C.C., R.H.S., May 26. Messrs. Charlesworth and Co., Heaton, Bradford.

CYPRIPEDIUM VENTRICOSUM.

A new and very beautiful dwarf hardy orchid of about the stature of C. macranthum, and also something like it in the form of its flowers. The blooms are deep and bright purplish-rose colour, with a whitish margin around the comparatively small opening to the very large inflated lip. F.C.C., R.H.S., May 26. Messrs. Cutbush and Son, Highgate.

LÆLIO-CATTLEYA ELVA, WESTONBIRT VAR.

This beautiful and richly-coloured orchid had its name altered from Aladdin to Elva. It bore two splendid blooms, each four or five inches across without spreading out the broad petals. Both sepals and petals are intense and brilliant mauve-purple, while the lip is exquisite crimson-purple, with a violet-purple margin, and a yellow blotch at either side of the entrance to the throat. There are also a few dull gold lines extending from the throat into the velvety purple of the apex. F.C.C., R.H.S., May 26. Mr. H. Alexander, orchid grower to Major Holford, Westonbirt, Gloucester.

CATTLEYA MENDELI HIS MAJESTY.

It is rarely that a varietal form of an old species now receives the high award of a First Class Certificate, but Cattleya Mendeli His Majesty has so many good qualities that it secured this coveted award. It is an exquisitely beautiful and truly majestic variety, the flowers of largest size and finely proportioned. Sepals and petals are of a lovely delicate blush tint, while the lip is pure white, with a deep yellow throat and a diffused purple blotch just within the white-rimmed apex. F.C.C., R.H.S., May 26. Mr. Hopkins, gardener to F. W. Wellesley, Esq., Westfield, Woking.

ODONTOGLOSSUM ILLUSTRE LUXURIOSUM.

A very wonderful, rather than a very beautiful, orchid. The flowers are of medium size, of fairly good form, and there were eight of them on the spike. They had rosy tips and bases to the segments, but the rest of the area is deep ruby-crimson, the latter almost obliterating the ground colour. F.C.C., R.H.S., May 26. Mr. Charles Vuylsteke, Loochristy, Ghent.

ODONTOGLOSSUM EXIMIUM QUEEN ALEXANDRA.

A wonderfully fine odontoglossum, and one in which Her Majesty the Queen took an interest when visiting the Temple Show. The fairly large flowers have a blush or rosy ground colour, but this is only seen at the margin and at the bases of the segments, the rest of the flower being entirely of a deep rosy-crimson colour that shows on both sides of the segments. The lip is of deeper blood-red colour, with a small white apex. F.C.C., R.H.S., May 26. Mons. Charles Vuylsteke, Loochristy, Ghent.

ODONTOGLOSSUM LINDENI.

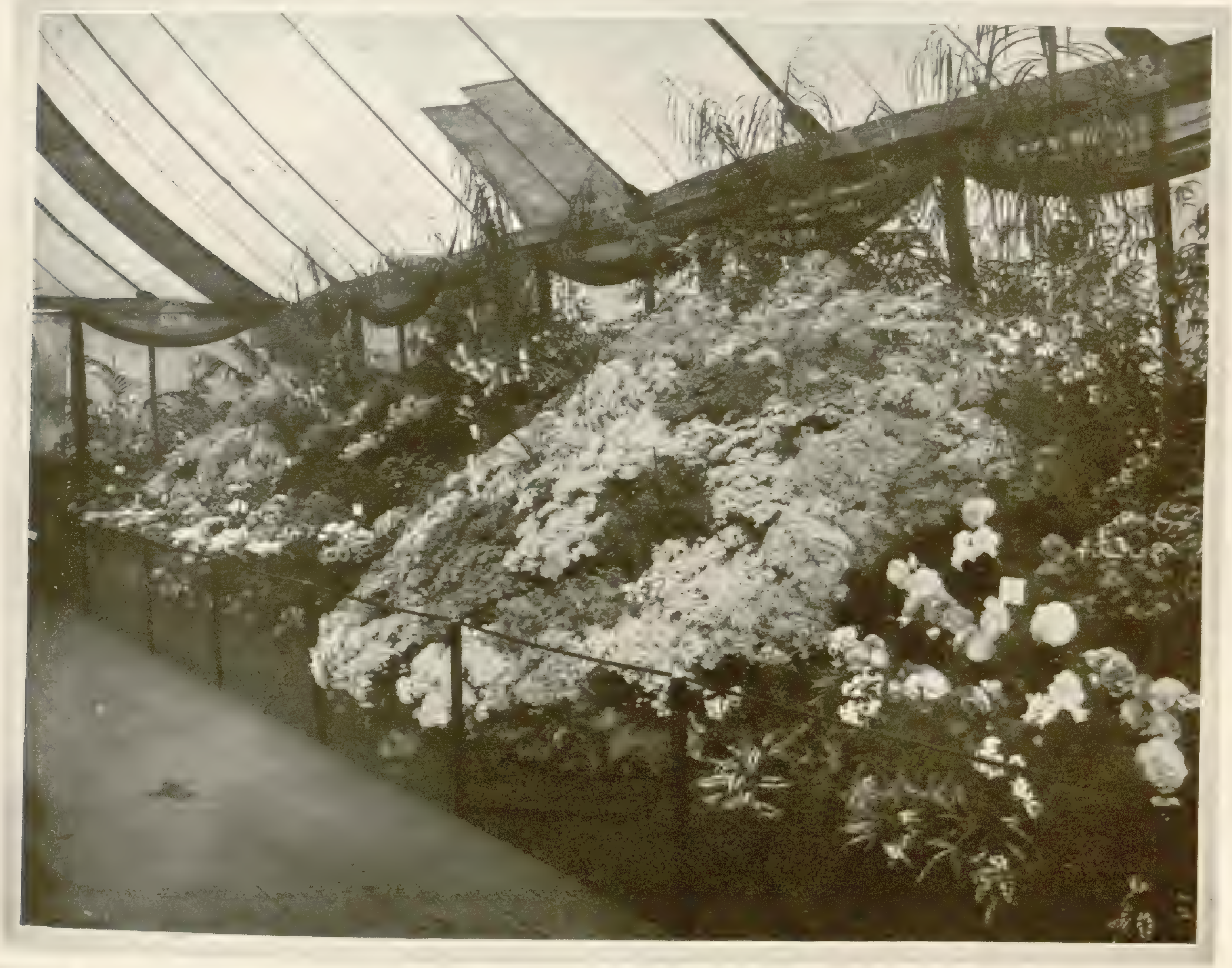
A rarely seen and old species. It produces a yard-long arching spike that carries its flowers towards the end often in short side branches. The flowers are about an inch across, and all the segments bend forward stiffly. The colour is wholly clear bright yellow. The short branchlets carry four or five blooms, the whole spike carrying over forty flowers. A.M., R.H.S., May 26. Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate.

CIRRHOPETALUM PULCHRUM.

A curious and pretty little orchid, that bears its buff, pink-spotted flowers in a sort of semi-circular umbel. The joined lateral sepals make up the most prominent part of the flower, about an inch and a-half long. The small petals and dorsal sepal and the lip are all soft red. A.M., R.H.S., May 26. Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart, Gatton Park, Reigate.

ODONTIODA ST. FUSCIEN.

A charming new hybrid derived from the intercrossing of Cochlioda Noetzliana and Odontoglossum Adrianæ. The flowers are small, an inch and a-quarter across, deep



TEMPLE SHOW—MESSRS. SUTTON AND SONS' FINE EXHIBIT OF STELLATE CINERARIAS, CALCEOLARIAS, NEMESIAS, GLOXINIAS, BEGONIAS, ETC.

buff ground colour, freely spotted with light scarlet, except at the margin, where the colour is rosy-crimson. The fiddle-shaped lip is pink, with scarlet shading at the base, and scarlet spots towards the apex. The bright yellow disc adds to the beauty of this little orchid. The spike carried ten expanded flowers. A.M., R.H.S., May 26. Mons. Henri Graire (gardener, Mr. Devos), St. Fuscien, Amiens.

ODONTOGLOSSUM LAUDATUM.

A handsome and beautiful odontoglossum, with large flowers, that have waved margins. The tips of the sepals and petals are rich rose-pink, and this colour runs in irregular lines through the greater area of bright reddish-rose colour. The lip is pure white, except for pink shading at the base, but it has a few deep red spots. A.M., R.H.S., May 26. Mr. Chas. Vuylsteke, Loochristy, Ghent.

ODONTOGLOSSUM CRISPUM KENNETH.

A finely formed and very beautifully marked variety. The spike carried five large blooms, with a blush groundwork, heavily and irregularly blotched and spotted with light bright red-brown. Lip and petals had fringed margins. One of the prettiest of blotched varieties. A.M., R.H.S., May 26. Mr. H. J. Chapman, gardener to Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne.

ODONTOGLOSSUM HIBERNICUM.

Though not an extraordinary odontoglossum, this is a hybrid well worth a place in a collection. It is the result of crossing O. Halli with O. hastilabium. The flowers are about three inches across, and have narrow segments. Sepals and petals alike are of a bright chestnut-brown colour, over a ground of light yellow, the latter showing in irregular lines through the brown, and also at the tips. The lip has a red-brown base and a wide, curiously-curled white apex. A.M., R.H.S., May 26. Messrs. Charlesworth and Co., Heaton, Bradford.

CATTLEYA MOSSIÆ LE PRESIDENT.

A fine and handsome form of a beautiful old species. It has very broad, fringed petals, and these and the sepals are rich rose-purple. The very large lip is soft purple with a golden throat, and gold veinings running out into the darker violet purple colour that is seen in the elongated frilled apex. A.M., R.H.S., May 26. Messrs. Hugh Low and Co., Bush Hill Park, Enfield.

DRACÆNA DOUCETTI DE GROOTEI.

This is unquestionably a very fine form of the beautifully variegated variety of D. indivisa. D. Doucetti has now been before the public for several years, and its narrow, yellow-striped leaves, and light graceful appearance have made it a desirable, though still a comparatively rare plant. D. Doucetti de Grootei has rather broader and longer leaves than D. Doucetti, and the marginal stripe is a deeper yellow. It is a very fine dracæna for grouping or for large vases and hall decoration. F.C.C., R.H.S., May 26. Messrs. J. Veitch and Sons, Chelsea.

BEGONIA EMPRESS MARIE.

A superb double tuberous begonia, and the only one that secured an award at the Temple Show. The plant is of good habit and free flowering, and it has substantial blooms of the purest white, measuring about five inches across. Each bloom is perfect in form, like a big open rose, or a deep, broad-petalled water lily with a rosebud centre. A very fine thing. A.M., R.H.S., May 26. Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath.

TULIPS.

Walter T. Ware.—A grand tulip of fine size and shape, and with rounded segments. The colour is intensely deep golden-yellow, and as the blooms are very solid the colour has unusual depth. It is a late-flowering tulip of the highest merit. F.C.C., R.H.S., May 26. Messrs. Walter T. Ware, Lim., Inglescombe, Bath.

Duchess of Westminster.—A splendid large cup-shaped Darwin tulip of the most brilliant pink, salmon-tinted hue. The interior is brighter, the flushing almost reaching a scarlet shade. There is a faint purple blotch near the base of each segment, but the base of the flower is yellow, and the anthers are purplish-blue. A.M., R.H.S., May 26. Messrs. Alex. Dickson and Sons, Lim., Newtownards, Co. Down, Ireland.

CROTON FRED SANDER.

A handsome, elegant, and effective croton, a little too dense perhaps for a table plant, but of great beauty for general decoration. The three-lobed leaves are very closely set on a yellow stem, and they have yellow footstalks. The ends of the three lobes and the margin of the narrowing basal portion of the leaf are all deep green, and within this colour the whole area is bright, but not very deep, yellow. A.M., R.H.S., May 26. Messrs. Sander and Sons, St. Albans.

DIMORPHOTHECA AURANTIACA.

A beautiful half-hardy annual from Namaqualand, and one suitable alike for greenhouse and conservatory decoration. It is of slender growth, about a foot or fifteen inches high, with elongated, entire, broadly-toothed leaves. The flowers, borne on footstalks about six inches long, are from two to three inches or more across, and the colour is brilliant yellowish-orange, shining as though polished. The bases of the petals are purple, forming a pretty ring round the blackish disc. A.M., R.H.S., May 26. Messrs. Barr and Sons, Covent Garden.

ROSES.

Tausendschon.—One of the most glorious and beautiful of rambling roses yet introduced. It is of strong growth, and its flowering shoots are long, bearing big terminal clusters of delightful and brilliant pink flowers. Each bloom is two inches or more across, and fairly double, the paler pink bases of the petals and the soft-yellow stamens showing in the centre. The variety is certain to become popular. A.M., R.H.S., May 26. Messrs. Wm. Paul and Son, Waltham Cross, and Messrs. Hobbies, Lim., Dereham. (See page 415).

Elaine.—A lovely new hybrid tea rose, with very broad solid petals of a lovely soft, clear, creamy-white colour. It makes up a large and very full bloom, and appears to be a good grower, free bloomer, and a very lasting variety. A.M., R.H.S., May 26. Messrs. Wm. Paul and Son, Waltham Cross.

White Dorothy.—This is a fine addition to the now very numerous and floriferous rambling and pillar roses of R. Wichuraiana origin. It is a white sport from and counterpart of the well-known, popular, and beautiful Dorothy Perkins. It is free and beautiful, and will make a fine companion to either Dorothy Perkins or Lady Gay. A.M., R.H.S., May 26. Messrs. B. R. Cant and Sons, Colchester (see page 421); and Messrs. Paul and Son, Cheshunt.

AZALEA OCCIDENTALIS GRACIOSA.

A very fine new variety that blooms with the greatest freedom, bearing large trusses of white flowers that are marked with yellow on the two upper segments. The unexpanded flowers are also very pretty, as the outside is palest pink with the yellow interior markings showing through. The variety appears to be of shapely growth, and is quite hardy, and as the flowers are sweetly scented, the plant is a very desirable one. A.M., R.H.S., May 26. Messrs. R. and G. Cuthbert, Southgate, N.

BULBOPHYLLUM MIRUM.

A very curious little plant with a still more curious, small boat-shaped flower, buff, heavily specked with crimson-brown. The species was exhibited as B. vibrans and so given in the official list of awards, but we understand it was subsequently identified as B. mirum, from Sumatra. B.C., R.H.S., May 26. Mr. Bound, gardener to Sir J. Colman, Bart., Gatton Park, Reigate.

THE PROFESSION OF LANDSCAPE GARDENING.

(Concluded from page 415.)

The professional course in this school is open to graduates of any college or scientific school of good standing as candidates for the degree of "Master in Landscape Architecture." The object of this course, to quote the official register, is to give the students a broad knowledge of many types of landscape and garden forms, of the elements which make up the quality of each, of the motives which underlie them when of artificial creation, of their limitations, and of the constant adaptation of means to ends in all good work. The instruction is in the form of lectures, supplemented by collateral reading, by informal conferences, and by frequent exercises in writing or drawing. The types of landscape and garden design are severally taken up in the historical order of their highest development, but in addition to the critical description of historical examples, with the aid of plans, drawings, and photographs, reference is made whenever possible to actual examples, illustrative of the same principles, to be found in the vicinity of Boston, which students may readily visit.

During the year each student is required to make a study of one example of formal and one of informal landscape work, one special type of landscape design, and one example of natural landscape, and to submit a report in each case. The length of the period of study necessary will depend upon the candidate's previous preparation. Two years will ordinarily be required by a capable student properly prepared. Any deficiencies in preparation can be made good after entering the school. Opportunities for advanced special study are open to students not candidates for a degree.

With the best technical training, the professional success of a landscape gardener must depend largely upon his ability to understand the wide range of purposes and ideals which he is sure to find among his clients, and in no way can this ability be fostered more effectively than by the broadening influence of a college education.

In addition to these studies, which form reasonable parts of a general college education, the undergraduate who looks forward to becoming a landscape gardener is advised to take the summer course in topographical and railroad surveying at the Harvard Camp, or its equivalent, and should become well acquainted with the common trees and shrubs. If he has had the opportunity of getting a first-hand acquaintance with the soil and plants through the common work of practical farming or some kindred occupation, he will find it, in the long run, helpful to a remarkable degree.

Any intelligent student will appreciate that he must have a good command of English, since an essential part of a landscape gardener's duties must be to explain clearly and convincingly to others the reasons for his advice to them. In addition it is very desirable that the student should be able to use French and German books with tolerable facility.

What is not so generally realised by students, in advance, is the vital importance to the landscape gardener of facility in graphic expression. He must be able to draw readily a simple, straightforward, and accurate representation of the forms which he sees or wishes to describe, whether by sketches, plan, or section, and the alphabet of this graphic language, which he must use all his life, ought to be learned early and practised constantly.

On the basis of such preparation a student can obtain a good professional equipment by three or even two years devoted solidly to technical work. No definite programme is here laid down for such a post-graduate course, because it can best be fitted to the needs of the individual; but it would always include two years of practice in general landscape design and details of construction, continued study of plants and planting design.

and, so far as not already studied, elementary architectural design, water supply, and sanitary engineering, masonry, and foundations, contracts and specifications, and such additional work in engineering, horticulture, and general landscape design as time and capacity permit.

It should further be said that while the training above discussed should make a student a useful assistant to a landscape gardener, it is not expected to turn him out competent to practice, and should be followed by at least two or three years of practical experience in the employment of an established landscape gardener, and, if possible, by travel for the study of professional subjects in this country and in Europe.

It may be recalled that a scheme of instruction was started at the Crystal Palace as long ago as 1881, under seemingly encouraging auspices. I have in my possession a book full of press eulogies and predictions published at its initiation, which make interesting and instructive reading. The scheme failed eventually, but, since the conditions attending its rise and fall are not likely to recur, it is unnecessary to consider it as an unfortunate precedent. It would be scarcely correct at this moment to call by name upon any educational body to take the matter into consideration. A necessary preliminary would be an expression of opinion favourable to the idea from the most influential bodies of the gardening world. If this were forthcoming one might hope to find in the City of London an institution with sufficient prestige, enlightenment, and resources to contemplate a serious handling of the question.

An influence of great weight with the managers, governors, or senate—whatever they might be—of such an institution would be the knowledge that any action taken by them in this direction would receive the cordial support of the Royal Horticultural Society.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

PHAIUS.—The hybrids of the so-called P. tuberculosus section, such as P. Cooksoni, P. Norman, in its varied forms, and the secondary hybrid, P. Clive, are producing their young growths. As soon as the roots appear at the base of the new growths any repotting requirements should be attended to. The plants must be carefully turned out of their pots, avoiding, as far as possible, damaging the roots that have attached themselves to the sides of the pots. The whole of the old potting compost must then be removed; cut away any dead roots, and the leafless back bulbs should be separated. If it is intended to grow large specimens, the pseudo-bulbs thus separated may be potted with the plants, but where it is desired to increase the stock they may be potted separately. Although the breaks from divided back pseudo-bulbs are not always strong, it is rarely indeed they fail to produce growths with us when placed in small pots. Being robust rooting when in good condition, liberal pot room should be afforded, especially so where large specimens are being dealt with. I consider every second year's disturbing for repotting purposes quite often enough. The pots used should be clean, and filled to about one-third of their depth with clean broken crocks. The potting compost we find suitable is two parts fibrous loam, the remaining portion consisting of peat and sphagnum moss, with sufficient finely broken crocks and coarse sand added to render the compost porous. In repotting take care to spread the roots out evenly, so that the compost may be worked well amongst them. Make the compost firm, and when potting is completed the surface may be covered with a layer of chopped sphagnum moss. Before setting the plants in position they should be watered with rain water, wetting the compost through. The conditions under which the plants are grown has but little effect on them here. We have tried them under practically all the different conditions we have, from the plant stove to the cool intermediate house. The only advantage, I think, to be claimed under cooler conditions is that the flowering season is retarded, and, the flowers being of greater substance, they are certainly more durable and last longer when used for decorations in a cut state. I would advise that the plants be grown under the same treatment as that usually found successful in the cultivation of the cool or winter-flowering section of cypripediums. Plants that have been repotted should be carefully shaded until the roots become established in the fresh potting compost. The atmosphere about them should also be reasonably humid, or the foliage is liable to attacks from red spider. Syringing overhead in bright warm weather will be found beneficial. The principal insect pests are thrips and scale; the latter are best removed by sponging the leaves, which must be done with care, for the leaves readily split where carelessly handled. The plants should also be sprayed and fumigated with vaporiser at regular intervals, which we find the best means of keeping thrips in check. The evergreen species, such as P. grandifolius, P. Wallichi, and their allies, may also be potted where they require it at the present season. We find that the conditions given above also suit these more robust kinds. Under the cooler conditions the growth is dwarfer and the flower scapes are also shorter, but the colours of the flowers are more brilliant. —H. J. Chapman, Oakwood Gardens, Wylam-on-Tyne.

TEMPLE SHOW—MESSRS. JAS. CARTER AND CO.'S EXHIBIT OF SCHIZANTHUSES, ETC.

STOVE PLANTS.

EUCHARIS. — Plants of eucharis that have now completed their growth should be placed where they will have a somewhat lower temperature of about 50 degrees. Here they may remain for two months, or a little longer if it is desirable to prolong their season of autumn flowering. During this period of rest they will require careful attention by reducing the supply of water at the roots, and the overhead syringing may be dispensed with altogether. This will assist the ripening up of the bulbs; the plants may also be subjected to more light, and gradually cease shading altogether. If thrips or aphis make their appearance on the foliage they may be quickly eradicated by fumigating with a nicotine compound. The leaves ought to be occasionally sponged with insecticide to destroy mealy bug or scale, which will often attack these plants.

GLOXINIAS.—These, as they finish flowering, ought to be placed upon a shelf near the glass, and have the supply of water gradually reduced until the tubers have become thoroughly ripened, after which the decayed leaves may be cleaned away and the tubers stored in some dry position until required again. Successional batches will also require attention; those showing flower buds will benefit considerably from applications of weak liquid manure. If this is given regularly it will greatly assist in prolonging their flowering season. The plants intended for autumn flowering ought to be now ready for their final shift. In most cases pots four to five inches in diameter will be found large enough.

POINSETTIAS which are now rooted in thumbs may be shifted into four-inch pots without delay, and if carefully sprayed a few times during the day, and also well shaded from the hot sun, very little damage will be done to the foliage. As soon as the plants become rooted again transfer them into cooler pits or frames, where they may be grown near the glass, and given abundance of light and air on all favourable occasions. Under these conditions the plants are kept more dwarf, and better ripened wood.

CREEPERS.—These plants continue to demand careful attention in the matter of training. Those which are grown for exhibition will require to be trained on the desired shapes as soon as the flower buds are formed. Those remaining in their permanent positions in the stove ought not to be allowed to ramble at will, or the plants underneath will suffer.

EDGING PLANTS.—A further supply of edging plants for the stove may now be raised from cuttings, such as Panicum variegatum, fittonias, and tradescantias. Place from four to six cuttings in three-inch pots, and keep them close for a few days. They will root very easily, and will develop into useful stock plants for autumn decoration.

GENERAL REMARKS.—The temperature of the stove houses ought to be kept at from 70 degrees to 75 degrees during the night, with an advance of 5 degrees to 10 degrees during the day. Continue damping down regularly during the day, and occasionally in the evening, with farmyard liquid water. An occasional rearrangement of plants is also much appreciated, and should be carried out at intervals as time at one's disposal permits of the work being done.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

EARLY VINES.—The crop of these being now fully ripe may have less fire heat, or only sufficient to keep the house somewhat drier. Plants are best removed from under these, except such as require little water. If the grapes are required to be kept a few weeks a light shading will be necessary. If the weather is hot this will also help to prevent red spider spreading. Carefully look over the bunches for any decayed or shanked berries, and do not allow the border to become dry. A liberal mulching of fresh horse manure will be beneficial to these, and syringe vines that have had the crop removed in the afternoon of a bright day, and allow the laterals to run.

MELONS.—As the fruits of the earliest plants are cut take out the old stems. Hero of Lockinge still continues one of the best for early supplies. Plants bearing fruits showing signs of cracking should be kept drier, but not so dry as to prevent their properly finishing. Sudden bursts of hot sunshine will very often cause the leaves to flag when the plant is healthy and vigorous. Especially is this likely to occur when the growths have been thinned out too severely. A thin piece of tiffany should be laid on the glass during the hottest part of the day. When the earliest crop is over it is advisable to clean the house right out and prepare it for a late crop. The plants for furnishing the second crop will be in full growth by this, and probably be in flower. They will at this time set more freely, and more frequently damping down may be given. As soon as the fruits are set copious supplies of water may be given, providing the drainage is in good order. If this crop is grown in frames, the linings must be renewed immediately the heat declines. During dull cold weather watering and ventilating must have careful attention. Close the frames early in the afternoon. Another batch of plants should be raised for the production of a late crop. Keep young stock away from old plants, and do not restrict the pot room or the water supply.

EARLY PEACHES AND NECTARINES.—The house containing fruits that are ripe or ripening should be kept drier, but not so dry as to affect the finishing of the fruit. Air, both at the top and bottom, should be admitted at night, and the pipes warmed to dry up moisture. If the fruits are ripening too fast a little shading may be used. Great case must be taken in gathering the fruits; they should be looked over in the early morning, as then the fruits are cool, and not so likely to be bruised. The border should not be allowed to become at all dry or they will finish prematurely and be of indifferent flavour. Clear water is best given at this stage. As trees are cleared of their fruits syringe them twice a day to induce them to grow freely. Liquid manure may be given after the crop is gathered.

MIDSEASON PEACHES.—Tie all shoots down that are to be left for fruiting next season, and cut out any useless or badly placed shoots. Stop the shoots against the fruits as soon as they are swelling. If the trees are healthy and the roots are in a well-drained border, plenty of water may be given. Weak liquid manure may also be applied, but till the stoneing period is over it is well to be careful with stimulants. Syringe them freely in dry warm weather, but remember that mildew will appear if the atmosphere is too humid. Water should not stand about in the house, and the pipes should be well warmed on dull days and nights, and a little air should be admitted at the top of the house.

STRAWBERRIES.—The late batch of these may be fruited in the cold frame. Give copious supplies of both liquid and clear water. Thin the fruits down to six or seven, according to the strength of the plants. Where no fire heat is given for these damping very often occurs owing to the bottom of the frame being hard and watertight. Water should be able to pass away,and traps should be put down. This is frequently one of the most important batches, especially if the season is late. Place, if possible, a few handlights over some plants in the beds outside. If this is done it will forward them considerably.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

EARLY CAULIFLOWERS.—Plants that were put into pots early will now be yielding heads, and those in cold frames are advancing rapidly. Give the latter plenty of water, with supplies of liquid manure two or three times a week, which will increase the size of the heads. When these are seen protect by bending the leaves over them. The earliest plants growing outside should be encouraged by frequently stirring the soil, and watering them when necessary. Those forming the successional batch have become a trifle blue in the foliage, owing to the cold winds experienced since they were planted out. But by attention to watering and keeping them clean they will soon recover.

THINNING OUT.—The thinning of such crops as parsnips, carrots, onions, and beet should now have close attention. By doing this work early the plants that are left will have a much better chance of becoming strong. Parsnips should be left fifteen inches apart in the rows, carrots eight, beet eighteen, onions nine. In some gardens the soil cracks badly when the weather is dry, therefore it is most beneficial to keep the surface soil loose by frequently hoeing between the rows. Onions that were planted out from pots and boxes early in last month should be given occasional waterings with liquid manure, and also dustings of soot.

EARLY POTATOES.—Those planted at the foot of south, east, and west walls should be well watered to assist them in swelling up the tubers. By this method of planting much earlier supplies are obtainable than from the open, and they are much easier to protect from frost if necessary. The main and late crops should be earthed up as soon as the tops are sufficiently advanced. Keep the weeds well down so as not to deprive them of the full advantage derivable from exposure to light and air.

TOMATOES FOR OUTSIDE.—If these have not already been planted, no time should be lost in bedding them out. They do extremely well at the foot of south walls, if such a valuable position can be allotted to them. They can also be grown with success in the open quarters and trained up stakes. Make the soil firm when planting out, adding a little bonemeal in the soil as the work proceeds. Should the weather be dry they will require copious supplies of water when they have become established. Train to a single stem, and keep all sub-laterals pinched back. If the season is suitable, it is astonishing what a large quantity of fruit these plants give, the fruit coming in most useful for culinary purposes for the early shooting parties.

LEEKS.—The first batch that was raised under glass, and pricked off into boxes or frames, should now be planted out in rows in the same manner as celery plants. Choose a quarter which has been deeply trenched and liberally manured, and if they can have plenty of stimulants through the growing season they will be most satisfactory. When they are wanted for exhibition suitable paper collars should be put on early, so that a good length of blanched stem may be obtained.—T. W. Birkinshaw, Hatley Park, Sandy.

Cucumbers.—Almost daily attention must be paid to stopping, thinning, and tying in the young growths. Maintain a moist atmosphere, and give copious applications of tepid liquid manure. Whenever the roots are seen on the surface give the plants light dressings of loam, half-decayed leaves and horse manure, and occasionally a little soot. Remove any old discoloured leaves, and do not overheat the water-pipes, or admit air on cold windy days, as this would favour red-spider. The night temperature should be from 65 to 70 degrees, while by day it may rise with sunheat 10 or 15 degrees higher. Admit air when the temperature reaches 75 degrees, and increase the amount gradually as the heat rises. Close the house early, and syringe with tepid water. Cucumbers are not only valuable for the salad bowl, but they are frequently boiled, and served as a separate vegetable. When cucumbers are planted out on fermenting material, and trained upon wires, it is most important to keep all ties loose, for if the material sinks down the plants are liable to be hung. [illegible] Ideal is an excellent cucumber for flavour.—T. W. B.

NEW BOOKS.

THE SUMMER GARDEN OF PLEASURE.

By Mrs. Stephen Batson. (Methuen and Co., 36, Essex Street, W.C.) Price 15s. net.

The appearance of this brightly written and charmingly illustrated book is most opportune at the present time, for it deals chiefly with the most important question of beautifying the flower garden during the season on which we are just entering, and while teeming with information of a practical character, it is a work that one can enjoy in the open air. The author, in giving the reasons which induced her to add another to the many books on gardening, states that her chief object is to assist the amateur with but limited resources. She writes: "In these days when specialist literature abounds we have many volumes, each on some particular phase of flower gardening—whether of rock, water, Italian, or other—and the 'common or border' gardener possessing but a limited patch of flat glebe seems likely to have his wants ignored. Yet the amateur who gardens on the level is trying to move with the times, although his field is only the old conventional strip of border ground. He longs after colour schemes as ardently as do his brethren with larger powers; he resents the hateful rout of August when, despite all his efforts, Nature seems to have ceased to support him in his labours, so that his borders in late summer are almost as bare as they were in March. And, as the humble border gardener is a member of the very largest class of flower cultivators, he should have attention paid to his needs in the light of the evolution of gardening." We do not share the views of Mrs. Batson with regard to the neglect to provide the amateur gardener with horticultural literature, but with her charming book before us we do not regret that she holds them.

The opening chapter is devoted to the wild garden, and we are in full agreement with the opinions to which she gives expression on this aspect of gardening. She avoids the mistake made by so many writers of describing wild gardening as so simple a matter that it may be engaged in by almost anyone with the full assurance of success. On the contrary, she states very plainly that there is "no more difficult problem than that of wild gardening," and that "it is certainly not a pursuit for the inexperienced." We are also told, "there is no ideal in gardening that so powerfully holds the imagination of the indolent as that of the wild garden. There is no subject on which more impracticable advice has been given, none in which more grievous mistakes have been made. Nothing would seem more easier than to plant a wild garden and to reap its fruits in a long succession of years, wherein little or no labour is involved. Yet this result is far removed from that which the idealist discovers for himself when he puts his faith to the test."

Having thus obtained the best possible proof of Mrs. Batson's practical acquaintance with the cultivation of hardy plants, in a manner as closely approaching nature as is possible in the garden, we proceeded to read the chapter with special interest, and we derived much pleasure, and it is to be hoped, some profit from its perusal. She appreciates the possibilities of the wild garden, and enjoys to the full the flower-bedecked meadow, woodland, and orchard, but she is anxious that those who are desirous of engaging in wild gardening should understand something of its difficulties, and be prepared for the exercise of some thought and skill. The advice given on the making and management of the wild garden is thoroughly sound, and especially deserving of the most careful study on the part of those who are desirous of beautifying the grounds beyond the boundary of what is regarded as the garden proper.

The chapter entitled "Incoming Summer" is especially interesting, for therein Mrs. Batson endeavours, and with much success, to show the difficulties inseparable from efforts made to maintain a continuous display of flowers during the greater part of the year, and to explain the means by which these can be overcome. We have on many occasions directed attention to the desirability of supplementing the hardy perennials, both in beds and borders, with a few of the best of the half-hardy plants that grow and bloom freely in the open during the summer months, and with hardy and half-hardy annuals. It is therefore of interest to us to read that, in the opinion of the author, "there is a lesson in gardening that many of us are either unable or unwilling to learn while we are yet beginners, and, indeed, in some cases, even when we are comparatively experienced growers of flowers, and this lesson is that it is impossible to make a single plot of ground to look gay all the year through." As the author subsequently points out, we begin in April with a brave show of daffodils, wallflowers, and representatives of a dozen other genera. There may be a slight bareness in May, but in June there is a satisfactory display, for, observes Mrs. Batson, "it is a poor gardener who cannot have his borders gay at midsummer." The plethora in June continues into July, but by the middle of the month there is so great a falling off as to suggest that in a few weeks there will be but few flowers in the borders. In the following month there is what is described as "the rout of August." Therefore it is essential that an endeavour should be made to associate with the herbaceous plants a sufficient number of plants that bloom in August to produce an attractive display of flowers during that month—and, indeed, until the Michaelmas daisies and other plants blooming in September are yielding freely of their floral beauty. The inclusion of the finest of the annuals is strongly advised, and these and other suitable subjects are dealt with at some length in the two chapters entitled "The Rout of August," and "Waning Summer."

There are, in addition to those mentioned, chapters on "Hardy Primroses," "Border Irises," "Herbaceous Pæonies," "High Summer," "Larkspurs," and "Border Lilies," and these are not less remarkable for the admirable manner in which they are written than for the information they contain. The work is embellished with thirty-six full-page illustrations in colour from drawings by Mr. Osmund Pittman, who has been especially successful in his treatment of garden scenery.

"The Summer Garden of Pleasure" is written in so entertaining a style, so rich in information on matters relating to beautifying the flower garden during the summer months, so thoroughly sound in its teaching, so freely illustrated in colour with beautiful garden scenes, that we strongly recommend it to the notice of garden lovers, and especially to those who prefer to acquire knowledge in the most pleasant manner possible.

LA MOSAICULTURE PRATIQUE.

By Albert Maumené (Librairie et Imprimerie Horticole, 84bis, Rue de Grenelle, Paris). Price, 3.50 francs.

An admirably written and profusely illustrated book on what is commonly known as "carpet bedding" in this country. M. Maumené is a past master in the art of garden decoration, and his work can hardly fail to be of much value in France, where this form of flower garden decoration still obtains. Mosaiculture, or carpet bedding, has practically been banished from gardens in this country, otherwise we should suggest to those of our readers in need of information, and able to read French, that they could not well have a more trustworthy guide. There are two hundred and fifty illustrations in black and white, and four coloured plates of arrangements of carpet bedders.

A BOOK ABOUT SALADS.

By Albert Broadbent, F.R.H.S. (Albert Broadbent, 257, Deansgate, Manchester.) Price, 3d.

An interesting brochure, containing much useful information on salad plants, salad-making, and salad dressings.

PANSIES AND VIOLETS.

By D. B. Crane, F.R.H.S. (W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.). Price, 1s. net.

Although there is no lack of works on pansies and violets, the most recent contribution to the literature of these flowers has so much to recommend it to the consideration of cultivators that it is especially welcome, and should attain to a high degree of popularity. The author has long given much attention to the tufted and other pansies, and has achieved much success as a cultivator, exhibitor, and raiser, his greatest achievement being, perhaps, the development of a race of compact-growing and free and continuous blooming violas that are of special value for garden decoration. We mention this as proof of the fullness of his knowledge of the flowers, and we would add that he possesses in a marked degree the ability to convey his knowledge to others.

The book, while written for amateurs, will be found not less useful to practical gardeners, for every phase of culture is fully dealt with, and full directions are given for staging the flowers at exhibitions and for dealing with insect and fungoid pests that prey upon the several classes of pansies and sweet violets. Classified lists are given of the varieties best adapted for the decorative and other purposes, and these have been so carefully prepared as to contribute very materially to the value of the book.

THE NATURE BOOK.

(Cassell and Co., Lim., London.) Part I., price, 7d.

The first part of "The Nature Book" gives excellent promise of the completed work, being one of the most interesting and beautiful books relating to the varied delights of the open air that has yet been published. There is a plentiful supply of literature that makes constant appeal to the lover of Nature as well as to the desire for a more intimate knowledge of country life, but there is no work with which we are acquainted so comprehensive in scope, or that can compare with it in general interest, or in the wealth of its illustrations. The part before us gives evidence of the work having been planned on generous lines, and shows that birds, clouds, flowers in field and garden, animal and insect life, the sea-shore and its wonders, mountain, rock, river scenery, and trees will in their turn receive ample attention. The subjects dealt with in the part include: "Mice of the Field," "How to Know the Clouds," "How to Know the Wild Flowers," "How to Know the Birds," and "The Beech and the Oak."

Each subject is profusely illustrated with photographic reproductions, and for the most part these are decidedly good, but, as so frequently happens, some fail to reach a high standard. To photograph wild flowers in situ is extremely difficult, and in the photographs used to illustrate the Rev. H. Puretoy Fitzgerald's article Mr. H. Irving has been very successful, excepting with the lesser celandine. This was evidently taken with the lens pointed almost vertically upon the plants, with the result of the illustration, although technically good, failing to convey any idea of their manner of growth. It rather suggests a plant trained to a trellis. The other reproductions of wild flowers are as near perfection as we can hope to see them. The illustration that will probably the most strongly appeal to Nature lovers is the reproduction of Mr. C. Kearton's photograph of the sedge warbler feeding a young cuckoo. In addition to the illustrations in black and white, there is a reproduction of Mrs. Allingham's beautiful water-colour drawing of a Kentish garden.

OBITUARY.

MRS. S. ARNOTT.

It is with deep regret that we record the death of Mrs. S. Arnott, which occurred at Sunnymead, Maxwelltown, Dumfries, on Saturday, the 30th ult., after a long illness.

CARDIFF AND COUNTY HORTICULTURAL SOCIETY.—TWENTIETH ANNUAL SHOW, SOPHIA GARDENS, CARDIFF, Wednesday and Thursday, July 22nd and 23rd, 1908.
Liberal Prizes for all sections.
Silver Plate, Cups, and Medals.
Every facility given to the Trade. Schedules free.
Mr. A. MAURICE BAILEY, Secretary,
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RICHMOND HORTICULTURAL SOCIETY.
The 34th ANNUAL SHOW
Will be held in
THE OLD DEER PARK, RICHMOND, SURREY,
on
WEDNESDAY, 24th June 1908 (Entries close 17th).
Schedules and all particulars from
W. J. COOK, Hon. Sec., Holmsley House, Richmond, Surrey.

SHREWSBURY GREAT FLORAL FETE.
Aug. 19th and 20th, 1908.
Cash Prizes are offered amounting to above £1,200, with Cups, Medals, etc.
Schedules may be had, post free, on application to the Hon. Secs.
Messrs. ADNITT and NAUNTON, Shrewsbury.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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The Temple Show.

We now give the report on the miscellaneous subjects, and the outdoor groups at this great exhibition, which was unavoidably left over last week.

MISCELLANEOUS.

Somehow dahlias in May do not seem to be quite in place, but nevertheless the crowd of visitors did not fail to approve of the flowers set up by Messrs. Carter, Page, and Co., London Wall. Amongst the varieties were Premier, crimson; Daisy Easton, yellow; Ibis, scarlet; Decima, orange; and Alexander, deep crimson. On the whole the exhibit was a good demonstration of what is possible in the way of forcing dahlias.

Messrs. Kelway and Son, Langport, contributed a collection of beautiful single and double pyrethrums, and tree and herbaceous pæonies, these latter including Mrs. W. Kelway, Queen Alexandra, Miss B. Jones, Louise Michelet, and Henry Irving.

Mr. H. H. Crane, Highgate, staged a very complete collection of viola blooms in distinct varieties. Lark, Admiral of the Blues, Hawke, Mabel, and Peace were amongst the varieties which were much admired.

Mr. John Forbes, of Hawick, sent a lot of large-flowered pansies, with pentstemons forming a background, and the scarlet zonal Black Vesuvius in front. Messrs. Lister and Son, Rothesay, had a very nice collection of violas, amongst which a number of good varieties were represented.

Messrs. Dobbie and Co., Rothesay, made a very fine display with their violas and pansies, and there was something very novel about the collection of chrysanthemums set up, though expressions of opinion were heard that these flowers were somewhat out of season in May. Crimson Marie Masse, Horace Martin, and Tuckswood Early were amongst the chief varieties.

OUTSIDE GROUPS.

Every year more space seems to be taken up by exhibits in the open air, and we have never seen a finer lot of groups than those displayed at the show we are reporting. Messrs. James Veitch and Son deservedly won a gold medal with a fine collection of plants, mostly of a flowering character. Azaleas were very beautiful, and we heard many expressions of approbation respecting the clematises, schizanthuses, rambler roses, hydrangeas, laburnums, and other plants. Myosotidium nobile in tubs was exhibited by J. D. Enys, Esq., of Enys, Cornwall.

A big collection of red and white bottle brush plants, Metrosideros, was exhibited by Messrs. Hugh Low and Co., Bush Hill Park, and the novelty of these things was the subject of frequent comment. A grand bank of stuff was set up by Messrs. D. Russell and Co., Brentwood. Flowering trees and shrubs and foliage plants formed the group, and in the arrangement of the above much taste was displayed. A very effective group of Malmaison carnations was set up by Messrs. Hugh Low and Co. on the turf outside the tents. The same firm also had a group of rambler roses, including finely-flowered specimens of Lady Gay, Hiawatha, Crimson Rambler, and the diminutive Baby Dorothy. The group from Messrs. Cutbush's nursery at Highgate was a work of art. In temporary pools, made for the purpose, aquatic plants were shown. Azaleas and eremuri figured in the background, and in front were groups of Primula japonica, incarvilleas, lupins, Phlox Laphami, dainty cypripediums, verbenas, daisies, and a host of other plants. This group came in for much well-deserved praise.

It is not usual to exhibit alpines in the open at the Temple, but Mr. W. P. Horton had a tasty little exhibit of this kind. Age and veneration were represented in the collection of pigmy trees set up by Messrs. Carter, and, judging from the remarks overheard, it was the curiosity of the pigmies that attracted most attention.

Acers figured largely in the group set up by Mr. L. R. Russell, of Richmond, and they were certainly very effective, but plants that also came in for admiration were plants of Vitises Henryana and Coignetiæ, while the ivies, cornuses, and aralias were very effective.

Messrs. J. Cheal and Sons had a big group of foliage and flowering trees and shrubs, in which acers, clematises, rhododendrons, and azaleas were well represented. Very showy indeed was Messrs. Richard Smith and Co.'s group, in which the beautiful Rhododendron Pink Pearl figured with great effect. Messrs. W. Fromow and Sons, of Chiswick, were represented outside by a large and comprehensive group of acers. Rhododendrons were the feature of the group set up by Messrs. John Waterer and Sons, Lim., Bagshot, though the standard hollies and laurels were also attractive. A very nice border was made to the group by a line of the yellow Spanish furze in pots. Messrs. Thomas Cripps and Sons, Tunbridge Wells, had a grand collection of acers and other plants, in which a large number of varieties were represented. Messrs. Pulham and Son, Broxbourne, succeeded admirably in their hastily-made representation of a rock garden, and the rock, pool, stone paths and plants looked as if they were quite permanent fixtures. It is hard to say whether topiary work is admired in these days, but whether this is so or not, quite an interest was displayed in the fantastically cut box trees shown by Messrs. W. Cutbush and Sons, many of which were undoubtedly quite unique. Mr. Maurice Prichard, of Christchurch, exhibited a very pretty collection of alpine and hardy herbaceous plants and flowers that came in for favourable comments.

Messrs. Barr's pigmy trees were closely inspected by a host of people who were much interested in the small but ancient specimens, many of which were trained in peculiar if unnatural forms and shapes.

British ferns formed the background of Messrs. H. B. May and Sons' interesting exhibit, and in the front were baskets containing verbenas in variety, Lobelia Waverley Blue, coleuses, ivy-leaved pelargoniums, pansies, and dwarf roses. This was a highly interesting exhibit.

Messrs. Castle, Westminster, S.W., sent specimens of their garden furniture in the shape of teak wood tables and seats, and, needless to say, the latter were taken full advantage of by people who sought rest after the somewhat tiring walk through the tents.

Paris Spring Show.

The annual spring show of the National Horticultural Society of France was opened on May 22, and continued till the 29th. There was a large and representative gathering of all branches of French horticulture, and most of the well-known nurserymen were exhibitors in their various specialties.

On entering the grounds there is a fine promenade leading to the two large greenhouses, in which the shows of the society have been held since 1900, but in which they will cease to be held after next November, the municipal authorities having decided on the demolition of these fine glass structures. It is only to be hoped that some other suitable provision will be made for these important displays. Along the promenade we noticed groups of hardy plants and flowers by various exhibitors, and a fine collection of trained fruit trees by M. Nomblot-Bruneau, and another by Messrs. Croux et Fils.

As the visitor entered the first large greenhouse a blaze of colour greeted him. Roses, begonias, and zonal pelargoniums, besides other showy subjects, were here in great profusion. Messrs. Leveque et Fils had a large and distinctly imposing array of the flower with which their name is inseparably connected, and there was a large collection of standard roses. M. George Boucher was also an exhibitor of roses. M. Ad. [illegible] is another who set up standards in a long row alongside the greenhouse. We [illegible] our old friend M. Aug. Nonin had several interesting groups, one of roses, including Robert Levavasseur, Hiawatha, [illegible] Dorothy Perkins, Blush Rambler, and many more in the different sections.

There were two rooms set apart in the greenhouse for the orchid collections, [illegible] and various in the productions of such well-known growers as Messrs. Beranek, [illegible] A. Regnier, Maron et Fils, and R. [illegible] Passing onwards we noted the magnificent sheets of colour produced by the different displays of zonal pelargoniums arranged, as is usual here, in beds on the ground [illegible] M. E. Poirier had several composed of varieties essentially French, all with big trusses and arranged in masses of white, salmon, pink, and crimson. Standard zonals were [illegible] staged by the same exhibitor. M. [illegible] Charmet and M. Paul Feron exhibited each a fine batch of novelties. In fancy pelargoniums M. Barillet is an important exhibitor.

Tuberous begonias and the Rex varieties were strongly in evidence. M. Billard always makes a fine display of his single and double-flowered varieties. M. E. [illegible] Ferard, and M. Guillois entered in the [illegible] class. There was a magnificent display of Gloire de Lorraine by M. Rob. [illegible] whose huge pots of well-flowered plants [illegible] visible all over the show.

In the large corridor uniting the two greenhouses there was a large square [illegible] entirely with rhododendrons and azaleas from Messrs. Croux et Fils. Some of the specimens were giants in size, and [illegible] in profusion. Messrs. Moser et Fils [illegible] an excellent show of the same kind and dimensions.

Here also was the enormous display from Messrs. Vilmorin Andrieux and Co., comprising a collection of hardy plants and flowers arranged in numerous beds of every-varying design. Large numbers of stocks, lupins, verbenas, ageratum, poppies, columbines, petunias, mignonette, asperula, sweet peas, etc., were displayed, but the piece de resistance was certainly the charmingly arranged water scene, which evoked the keenest interest. In the distance was a rockwork, with water falling over the rough masses of rock into a winding stream beneath. On each side was a green turf lawn, dotted here and there with numerous plants, aquatic and otherwise, the whole occupying a considerable space, and forming a work of art in artificial garden construction.

We can only briefly notice a few of the other exhibits. M. Geo. Truffaut staged on a neatly arranged little grass lawn a handsome display of roses in vases, and a huge central exhibit of carnations. Oriental and other poppies were staged by Messrs. Cayeux and Leclerc, Toreador, Proserpine, Olga, Mahony, Leandre, and Hy. Cayeux were fine examples. The same firm had hardy flowers in another group. A large batch of Anchusa italica, edged with yellow calceolarias, pyrethrums, funkia, heuchera, centaurea, in variety, etc. M. Ch. Molin had tulips in great variety, pæonies, lilacs, iris, etc., also an exhibit of nymphæas in tanks. M. Dessert showed pæonies in over 100 varieties. M. René Guillois had gloxinias, M. Aubert Maille a fine batch of a new white anthemis called Perfection. M. Thiebaut Legendre hardy plants, M. Jobert Maxime put up a big group of Primula obconica, and M. Férard had quite a number of groups of hardy plants in various parts of the show. Pansies came from M. E. Falaise, tulips ard anemones from Messrs. Angel et Fils. In a miscellaneous group M. Aug. Nonin showed some fine specimen begonias, viz., Deliciosa, Lucerna, Gigantea, Jean Lotte, General Lianley, and Alleryi. Cactus, amaryllis, hydrangeas, and bougainvilleas also figured in quantity. An interesting group of Iris Kæmpferi was sent by M. Tabar.

Fruit was, of course, less plentiful than at the autumn show, but there were several interesting lots staged. The Forceries de la Seine sent peaches and nectarines. The Grapperies de Somain had, in neatly arranged baskets, some grapes, such as Frankenthal, Foster's Seedling, and Gros Colman. Another grape exhibitor was M. A. Mercier. An imposing display, artistically arranged in six handsomely constructed glass cases was staged by Messrs. Cordonnier et Fils. Some fine examples of plum The Czar were sent. Grapes comprised Black Alicante, Madresfield Muscat, Foster's White Seedling, Frankenthal, etc.

Vegetables in season were largely shown by Messrs. Vilmorin, Andrieux and Co. Beans, peas, lettuces, radishes, celery, leeks, onions, carrots, endives, artichokes, asparagus, tomatoes, etc., were displayed in endless variety in four large beds arranged on the steps leading down to the banks of the Seine, and at the bottom was another large display of the same kind from the Société Mutuelle des Jardiniers et Horticulteurs.

Bristol Gardeners' Association.

The first meeting of the summer session was held on Thursday, May 28, at St. John's Parish Rooms. Mr. A. O. Shelton presided over a very good attendance.

"Herbaceous Plants for Small Gardens" was the subject of the address by Mr. J. C. House, who said there are many disadvantages with small gardens, but better times were, he believed, coming, as many things point to the provision of larger gardens. Mr. House gave much useful advice on the formation and arrangement of gardens, and also a list of suitable plants, these including doronicums, trollius, geums, centaureas, heucheras, iris, poppies, pyrethrums, aquilegias, pæonies, delphiniums, gaillardias, and phloxes. With a little management the flowering season could, he said, be considerably extended.

Mr. House was awarded a special certificate for a splendid collection of cut flowers, which included some of the newer varieties of oriental poppies. A medal and three framed certificates were presented to the four under gardeners making the best attendance during the past session. For two pots of schizanthus, Mr. Morse, gardener to Sidney Humphries, Esq., was first, and Mr. Perry second.

H. W.

The Royal National Tulip Society.

The fifteenth annual Southern Exhibition of this society was held on Tuesday, May 26, in the Lecture Room of the Royal Horticultural Society's hall, Vincent Square, Westminster, and, owing to the great show at the Temple Gardens absorbing the attention of visitors, the gathering was almost completely forgotten by many who are interested in the tulip. The exhibits were just sufficient to fill the tables placed round the sides of the room named, and there were entries in all the classes, some of the competitors travelling long distances to bring their productions to the show.

The flowers shown were generally bright and clean, but in several cases somewhat lacking in size and substance, but, taking the exhibits as a whole, they made a beautifully varied display, with both brilliant and soft tints in due proportion.

Taking the classes in the order of the schedule, the following were the winners of the prizes, and the principal blooms staged. With twelve dissimilar rectified tulips, two feathered and two flamed of each class, there were four competitors, Mr. C. W. Needham, Kelmscott, Hale, Cheshire, the hon. treasurer of the society, won the first prize—a silver cup—with handsome examples of these varieties arranged in the following order: Back row, Sir J. Paxton, Stockport (the premier feathered flower), Annie McGregor, and Samuel Barlow; middle row, Talisman, Mabel, Royal Sovereign, and Nimbus; front row, Mrs. Lea, Masterpiece, Talisman, and Sarah Ann. The second prize—a silver medal, went to Miss Willmott, Great Warley, Essex, whose blooms were very close in merit to the first, and the colours excellent. Mr. J. W. Bentley, Stakehill, Middleton, and Mr. Peters, Cambridge, were third and fourth respectively.

In the corresponding class for six tulips, one feather and one flamed in each class, Mr. Bentley took the lead, his flowers comprising Talisman (two blooms), Sir J. Paxton, Aglaia, Garabaldi, and Julia Farnese. Again Miss Willmott was second with good flowers, followed by Messrs. Needham and Peters. With three feathered blooms the prizewinners were Messrs. Needham and Bentley, Miss Willmott, and the Hon. A. H. T. de Montmorency, Carrickmines, in the order named; while in the corresponding class for three flamed flowers Mr. Bentley and Miss Willmott were first and second, Messrs. Needham and Peters being third and fourth.

Breeder tulips were represented in two classes, and constituted a very beautiful portion of the show. Miss Willmott won the chief award—a large silver medal—for the best six breeder blooms, two in each class, and her exhibits were the following: Annie McGregor (premier breeder bloom), Alfred Lloyd, Goldfinder, Talisman, Leach's No. 1, and Mrs. Barlow, a grand lot of flowers of the richest and most charming colours. The remaining prizes went to Messrs. Bentley, Needham, Peters, and A. D. Hall, Harpenden, all showing extremely well. For three breeder tulips Miss Willmott was again first, followed by Messrs. Bentley, Needham, and Peters.

In single bloom classes the exhibits were numerous and good, the prizes going in this order, the varieties following each name. Feathered Rose.—Mr. Needham, first with Alcestes, and third with Andromeda; Miss Willmott, second with Mrs. Collier, fourth with Sarah Headley, and fifth with Miss Nightingale.

Flamed Rose.—Mr. Bentley, first with Annie McGregor; Mr. Peters, second with Mabel, and fourth with Heroine; and Miss Willmott, fifth with Sarah Headley.

Feathered Bizarres.—Mr. Needham, first with William Annibal, second with W. Wilson, and fourth with Attraction; Mr. Bentley being third with Masterpiece, and Mr. Hall fifth with Richard Headley.

Feathered Byblœmens.—Mr. Needham was first with Mrs. Hepworth, second with Stockport, third with Bertha, and fifth with Mary Agnes, Miss Willmott being fourth with Bessie.

Flamed Byblœmens.—Mr. Bentley took the first four prizes with these varieties in the order named: Adonis, George Edward, Talisman, and Chancellor, Miss Willmott being fifth for Miss Jackson.

Flamed Bizarres.—Mr. R. W. Hall, Cambridge, was first with Samuel Barlow, Mr. Needham second for the same variety, Mr. Peters third with Sir Joseph Paxton, and Miss Willmott fourth and fifth with Dr. Harvy and Lord Stanley.

Bizarre Breeders.—Mr. Needham, first and fourth with Alfred Lloyd, and Samuel Barlow, Miss Willmott taking the second, third, and fifth prize with Cyrano, Goldfinder, and Sulphur.

Byblœmen Breeder.—Miss Willmott secured the first, fourth, and fifth prizes with Northern Light, Grania, and Leach's No. 1; Mr. Peters was second with Diarmid, and no name was attached to the third prize flower. In the rose breeder class Mr. Peters was first for a seedling, and Miss Willmott fifth for Rose Hill, no other names being given.

The Samuel Barlow prizes for the best pair of rectified tulips, one feathered and one flamed of any class, were awarded in this order. Silver-gilt medal to Mr. Bentley for William Annibal; a silver medal to the Hon. Montmorency for Julia Farnese, a neat bright bloom; the third and fourth prizes going to Miss Willmott for Sir J. Paxton, and to Mr. Needham for G. Hayward.

Five classes were appropriated to growers of less than 400 flowering bulbs of English tulips, and the exhibits were of considerable merit throughout, the chief honours being adjudged to Mr. R. W. Hall; Mr. J. F. Kew, Southend; the Hon. Montmorency; Mr. Leonard S. Loat, Oxford; and Mr. H. P. Bartleet, Shooter's Hill.

A delightful part of the show was that devoted to the classes for garden tulips, and for twelve varieties Mr. Loat won first honours with handsome flowers, the most notable varieties being Rosette, large rose; Picotee, white, edged pink; Parisian Yellow, Primrose Beauty, Gesneriana major, Leghorn Bonnet, yellow; Emerald Gem, La Merveille, and Gesneriana lutea. Darwin tulips were also well shown by Messrs. Bartleet, Loat, and Montmorency, and Mr. Loat had a beautiful mixed collection of species and varieties.

Altogether the exhibition was a satisfactory one, and the arrangements were well managed by the hon. secretary, Mr. W. Peters.

The British Gardeners' Association.

The annual meeting of the above society was held on May 27 in the Essex Hall, Essex Street, Strand, when Mr. Chas. Foster presided over a gathering of about 100 members. These, with a few exceptions, were residents in the Metropolitan district, and it was a subject of regret that provincial members were not more numerously represented, since the latter constitute a large majority of the total list.

After the secretary had read the minutes of the previous annual general meeting, the report for 1908 was taken as read, and the Chairman proceeded to move its adoption by the members in an exceptionally able, calmly-reasoned speech. He congratulated the association on the remarkable progress made in the past four years, but especially in that dealt with by the report. To obtain a membership of nearly 1,300 in so short a time was an exceptional result, and few horticultural bodies could point to so conspicuous an advance. The B.G.A. desired to prove that it was not only their object to benefit their members, but it was also thought that the interests of employers would be best studied by providing them with qualified men. It was hoped that better understanding would be promoted between employer and employed by keeping to a quiet, reasonable policy. No more striking proof could be afforded that the course adopted was regarded as satisfactory by a large number of gardeners, than by what occurred at the last meeting of the Executive Council, when 78 new members were elected.

Referring to the "B.G.A. Journal," the Chairman remarked that it was now well established as a monthly organ of the association, and it had already done a great amount of good in helping forward the work in hand. The pages were open to all members to express their views, and it had helped to bring those in widely-separated districts in closer touch and sympathy with each other. In one point particularly it had done useful work, for the subscriptions had certainly been paid more promptly since the issue of the paper.

Mr. Foster proceeded to refer to the educational matters the B.G.A. have in view, and especially to the provisional scheme of examination which had been brought forward. He was of opinion that when this had been thoroughly discussed, it would, in an amended form, prove of great service, if carried out carefully. Some expense must be incurred to do so, but the status of gardeners would be raised, all the younger men encouraged to improve their knowledge, thus demonstrating their fitness for more ample consideration in wages and other matters.

In referring to the work of the B.G.A. provincial and Metropolitan branches, Mr. Foster commented on the fact with marked approval that some of these, particularly the more recently-formed ones, were applying themselves to the educational requirements of gardeners with excellent effects. If, as the branches increase in numbers, the same feeling is carried out generally, the association as a whole, and members individually, will be substantially strengthened.

The question of appointing a permanent paid secretary, the Chairman said, had been thoroughly considered, and the conclusion was that, in view of the work before the Executive Council, the present state of the finances would not admit of the suggested expenditure. Excellent work had been done under the present system upon most economical terms, and it was impossible to see how any plan could be substituted that would be more advantageous to the association.

The adoption of the report was seconded by Mr. E. F. Hawes, who entered fully into an explanation of the financial statement, and emphasised the fact that the work had been conducted upon a satisfactory and economical basis. The expenses had amounted to £209 6s. 3d., leaving a balance of £260 12s. 10d., only £1 of which was owing to the association, and the liabilities were nil. The income from members' subscriptions during the past year had been £141 1s. 6d. The secretary's honorarium for 1906 and 1907, the payment of which came within the financial year just closed, amounted to £47, and the payment to the editor of the "B.G.A. Journal" was £8 12s. 1d.

After several questions had been asked and answered, Mr. W. Watson (Kew) opposed the adoption of the report, as he did not consider the B.G.A. was carrying out the programme set down in "the plea" originally distributed, and which he proceeded to read. This led to some interruption, and criticism from several members, and as the general opinion appeared to be against any prolonged discussion, it was decided to put the adoption of the report to the meeting, when it was carried by a large majority, only four voting against it.

The scrutineers—Messrs. R. L. Castle and E. F. Hawes—next presented their report of the ballot for the election of members of the Executive Council, from which it appeared that the eight who had secured the highest number of votes were: Messrs. Chas. Hill (211), Donald Campbell (201), E. Skelton (198), T. W. Sanders (172), A. Lampard (157), A. T. Little (153), W. C. Modral (147), and C. P. Raffill (138). The ratification of the ballot was then carried by a large majority.

The Chairman stated that Mr. E. F. Hawes had resigned the office of treasurer, which all would regret, and he expressed the thanks of the members for the services he had rendered. Mr. Thomas Winter was then duly proposed and seconded as treasurer, and the motion was carried unanimously, Mr. Winter acknowledging the compliment in a few appropriate words.

Mr. Foster referred to the appointment of secretary, and recommended the re-election of Mr. J. Weathers, who had had experience and had performed much useful work in an admirable manner. Mr. Witty seconded the proposition, which was also supported by Mr. Brown, of Chertsey, and others. Mr. W. Watson nominated Mr. Little, of Kew. In the result, Mr. J. Weathers was re-elected by a large majority. Mr. J. Harrison Dick was elected one of the auditors, in the place of Mr. Tinley, who retires in accordance with the rules, and after some minor business had been transacted, the meeting concluded with a unanimous vote of thanks to the chairman.

Kew Guild.

The annual meeting of the Kew Guild is always held on the eve of the Temple Show, and the venue is the Holborn Restaurant. There was a moderate attendance, presided over by Mr. W. Watson. The report presented gave ample evidence of the prosperity of the Guild, as the life members now number 254. The chief feature of the report was the recommendation of the sub-committee that the policy of the guild should be changed, and that one of the objects of the body should be the advancement of its members. It was suggested that this recommendation should be submitted by circular letter to every member of the guild, and should only become operative if two-thirds of the members voted for it.

Several speakers evinced some anxiety as to the scope of the recommendations, and strongly urged that nothing approaching trades unionism should be adopted. Rash statements by young men newly arrived in India and the colonies were deprecated, and so, later in the evening, were the statements issued at the instance of the Kew branch of the Government Employees' Union, statements regarded by many as tending to belittle the influence of Kew as a horticultural educational establishment, and, consequently, tending to depreciate Kewites.

The balance-sheet showed income amounting to £64 5s. 2d., and a balance in hand on the year's working of £20 9s. 2d. It may be added that Mr. Watson and Mr. W. J. Bean become vice-presidents, Mr. W. W. Pettigrew, of Cardiff, president for the ensuing year, and it was hoped that Mr. H. H. Thomas would accept the post of treasurer.

The annual dinner was presided over by Mr. W. W. Pettigrew, who was supported by the officers of the guild, a number of old Kewites, including Mr. Lane from Calcutta, and Mr. Derry from Singapore, and most of the present Kewites.

After dinner the loyal toast was duly honoured, and the President proposed the toast of "Success to the Kew Guild," and in doing so he strongly urged present Kewites to cultivate each other's friendship while at Kew, as he had found that such friendships were helpful in after life, and by them old memories could be easily revived. He also paid tribute to the great educational value of the Kew lectures, and of a stay at Kew, but he suggested that the certificates should be granted after an examination if they were to be of any real value. He further strongly urged that the guild should use its influence upon Kew and other authorities for the purpose of securing State and University recognition of horticulture, just as agriculture is recognised, as he believed such recognition was deserved, and would aid horticulture materially and raise the status of horticulturists.

The response to the toast was from Mr. Daydon Jackson, in the unavoidable absence of Mr. W. Botting Hemsley, F.R.S. Mr. Jackson agreed with the President's remarks anent the cultivation of friendships by the young men at Kew, and also the educational value of Kew, and State recognition of horticulture.

In proposing the toast of "The Chairman," Mr. R. Hooper Pearson pointed out Mr. Pettigrew's capabilities as a landscape gardener in the construction of Roath Park, Cardiff; as a good gardener, as seen in the splendid upkeep of the Cardiff parks under his superintendence; as an educationalist in his efforts to instruct those under him in all pertaining to their profession, and he urged that these virtues well qualified Mr. Pettigrew, as a good guilder, to occupy the chair, and become president for the year.

The toast was most heartily received and accorded with musical honours, and Mr. Pettigrew modestly responded.

During the evening Mr. Watson referred to several notable absentees, especially alluding to the unavoidable absence of Mr. Hemsley, and of their good old friend Mr. G. Nicholson, who, the members were glad to hear, was a little better, and could be taken out into his beloved Kew Gardens in a bath chair. The musical part of the programme was efficiently rendered by Miss Isabel Watson, Mr. Watson's elder daughter, who played and sang admirably; Miss Walter and Mr. Briscoe, the latter an old Kewite. Many old friendships were renewed and new ones made during the half-hour interval or "half-time" always allowed after dinner, when those present rise from the tables and mingle with each other.

Dutch Bulb Growers' Society.

At the meetings of May 4 and 11 the following awards were made by the Narcissus Committee:

First-class Certificates to: Narcissus Alaska, broadly opened trumpet, deep yellow and deep yellow perianth; narcissus Van Waveren's Giant, an enormous flower with deep yellow trumpet and pale sulphur perianth; narcissus John Pope, with deep yellow trumpet and clear yellow perianth; narcissus President Wentholt, broadly opened trumpet, deep yellow, and yellow perianth; narcissus Robert Sydenham, a strong grower with deep yellow trumpet and yellowish perianth; and narcissus Incomparabilis Winifred, with broad, elegant cup and white perianth.

Awards of Merit were given to: Narcissus Harry Veitch, a clear yellow trumpet daffodil in the way of Emperor, but larger; narcissus Cornelia, a self-coloured yellow trumpet daffodil; narcissus Theba, a deep-yellow trumpet daffodil of fine form and great substance; narcissus White Pioneer, pure white trumpet, narrow tube-shaped and starry perianth; narcissus Incomparabilis Louise, pure white perianth and lemon-yellow cup, a distinct flower of medium size; narcissus Incomparabilis cristata with peculiarly crested cup of yellow colour, perianth cream-white; narcissus poeticus Bianca, pure white, very fine round flower; narcissus poeticus Glory of Lisse, a fine round flower with rather large cup; and narcissus poeticus Verdi, with large crown, broadly bordered deep orange.

In addition to the awards mentioned above, a gold and a silver-gilt medal were given to collections of new narcissi.

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FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (June 6) contains the following:

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Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for [illegible] in the GARDENERS' MAGAZINE. He will be greatly obliged by correspondents sending [illegible] of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

ARUMS AND HEDYCHIUMS.—J. C., Southampton: The arums that remain dormant during the winter should be potted up directly they show signs of growth. They need warm greenhouse treatment at this period, and great care must be taken not to overwater them until root action is brisk. Hedychiums love a moist atmosphere, brisk heat, and bright sunshine in their earlier stages of growth, if they are to attain the largest size, and flower abundantly. They are not really hardy, although they will survive an ordinary winter if protected, and in a warm locality. Give the plants the warmest and brightest corner of the house, and if the pots are well filled with roots give frequent doses of liquid manure. After they have flowered they may be placed out of doors in a sunny spot to ripen up. Repotting is best done as new growth commences.

CUCUMBERS.—H. G., Hereford: The cultivation of cucumbers for market is dealt with in "Mushrooms, Cucumbers, and Tomatoes," the fourth of the "Farm and Garden" series of handbooks. The book is 1s. 2d. post free in paper boards, and 1s. 9d. post free in cloth binding, from the GARDENERS' MAGAZINE Office, 148, 149, Aldersgate Street, E.C.

SUMMER BEDDING.—G., Kent: It would be possible to produce a very fine effect with the seven large beds, provided one prepared a design at the end of the summer, and made arrangements for propagating a stock of plants especially for the design. A day in the London parks would give you many ideas suitable for carrying into effect at home. We do not know what the surroundings are like, but unless there is some very strong reason against it we should alter the arrangement of the beds. Seven huge circular beds in a row do not appeal to us. If the central bed were a [illegible] one, with square ends, and the second bed from each end of the same shape, the general effect would be better, and you would have more scope in planting. However, the thing to do at present is to make the best of the conditions and materials. A few of the largest pyramidal fuchsias would do for the central bed, with Calceolaria amplexicaulis planted thinly among them, and with heliotrope for a groundwork. The beds on either side of this might well be of Plumbago capensis, ivy-leaved pelargoniums, and Hyacinthus candicans. For the two end beds we suggest the standard fuchsias rising over the dwarf calceolaria, with ivy-leaved pelargoniums alternating with the fuchsias, and kept at about half their height. The remaining two beds should be reserved for the [illegible] with the herbaceous lobelias rising [illegible] and above them. A few of the eulalias, if they are very light plants, and not dense [illegible], could also be used here. If you need an edging to any of these beds, then use a [illegible] that contrasts rather sharply with the general tone of the bed. The two raised beds should, if we understand the conditions rightly, be filled with plants with light and [illegible] foliage, or those bearing bright flowers, because of their proximity to the [illegible] and the not far distant shrubs. [illegible] marguerites, variegated abutilons, eulalias, cannas, Streptosolon Jamesoni, and Calceolaria amplexicaulis, suggest themselves as suitable, but we do not know what your stock of plants is for this purpose. It is essential in the case of raised beds that the groundwork be well chosen and well grown, otherwise the soil surface, being nearer the eye than usual, will be unpleasant.

FAILURE WITH STRAWBERRIES.—A., Sussex: There is a considerable difference of opinion as to whether galvanised wire-netting is injurious to crops beneath it or trained upon it, or not. If the wire is painted no evil results follow its use; but where it is unpainted there are, sometimes, failures that can only be attributed to the wire which becomes oxidised, and an oxide is carried to the plants below by the rain, to their injury. We cannot say whether your strawberries are suffering as a result of the wire covering or not; but we hardly think the wire is the real cause of failure, because we know of plantations of gooseberries, etc., and also of bush apples, covered in with galvanised wire, and without any evil consequences. Soil, climate, and cultivation may all be more or less responsible for the failure, but as you give us no information in regard to those matters we cannot help you as we could wish; nor do you say how high the netting is. Try a few strawberries without the net covering, and closely observe the difference between them and those under cover.

PREPARING FOR ROSES.—R., Walsall: Trench the ground two spits deep, and place a good layer of cow manure in the bottom of the trench, and a layer of older cow manure between the two spits of soil. Leave the surface rough, and do not permit weeds to grow. In the autumn, a little while before planting, choose a fine day for forking the soil over, previously adding a good dressing of wood ashes and burnt earth—not ballast—as these will supply the potash, of which your soil is deficient. The other materials you suggest had better be left alone for the present. Order your plants early, and plant as early in October as possible. Write us again at planting time, and remind us of the page in which this reply appears.

FLOWERS FOR MARKET.—D. A. S., Abbeyleix: A very large number of flowers sent to market are put up in dozens, and the flowers are arranged to all face one way. The bunches are tied firmly but not sufficiently tight to cut or bruise the stems. The blooms are all arranged to face one way, as packing is thereby rendered easy, and there is little injury. Firm packing is necessary, and a little practice will show how closely flowers in bunches may be packed in the shallow wooden boxes now so largely used for them. In the majority of cases the only packing material used is white, or whitey-brown paper. Most of the salesmen supply boxes to those who forward flowers to them, but the large growers use their own boxes, either returnable or non-returnable. So far as we are aware there is no book dealing with the packing of flowers for market. You would find it well worth your while to attend a flower market very early in the morning to see how flowers are packed, handled, and sold; indeed, a visit to Covent Garden Flower Market would, in your case, fully repay the cost incurred. Write to Mr. D. Ingamells, Flower Market, Covent Garden, London, W.C., who will gladly send particulars.

CLUB ROOT.—F. G., Southampton: It will be quite safe to plant out next month on ground that was gas-limed in March. If the gas-lime was fresh and used freely it should have killed every bit of vegetable life, and all the pests it came into contact with, consequently the club infestation should be materially reduced. It would have been far better could you have given the plot a rest from greenstuffs for at least a clear year. Before planting dip the roots of each plant in a mixture of soot and lime in equal parts, mixed with water to the consistency of thin mortar, and with a little flowers of sulphur added. Reject every plant that shows the slightest tendency to swell at the roots. Afford ample room, plant firmly, and hoe freely.

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SOME SPECIAL FEATURES
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THE GARDENERS' MAGAZINE.

1908.

Jan. 4.—ISLES OF SCILLY (Illustrated).
11.— " " Bulb Industry.
Feb. 8.—HORSHAM GARDENS (Illustrated).—Denne Park, Leonardslee, Holbrook Park.
15.—HORSHAM GARDENS (Illustrated).—Warnham Court, Warnham Lodge, South Lodge, Wimblehurst.
March 7.—THE GARDENS OF CORNWALL (Illustrated).—Tremough, Trelissick, Rosehill, Penjerrick.
14.—THE GARDENS OF CORNWALL (Illustrated).—Carclew, Trebah, Enys, Penmorvah.
April 11.—NORWICH GARDENS (Illustrated).—Gunton Park, Blickling Hall, Westwick Hall, Shotesham Hall.
18.—NORWICH GARDENS (Illustrated).—Dunston Hall, Crown Point, Town Close House, Ashwellthorpe Hall, Oakland House, Boyland House,
May 2.—GHENT CENTENARY FLOWER SHOW.
16.—BRISTOL GARDENS (Illustrated).—Barrow Court, Ashton Court, Downside, [illegible]field.
23.—BRISTOL GARDENS (Illustrated).—[illegible] House, Down House, The Priory, Old Sneed Park.

Copies of the above, price 2d. each, or by post 2½d. may be obtained from the Publishers, 148 and 149 Aldersgate Street, London.

NAMES OF PLANTS.

E. H., Cottingham.—Berberis Darwini.

M. B., Ticehurst.—1, Cytisus hispanica; 2, Ceanothus thyrsiflorus; 3, Piptanthus nepalensis.

W. M. C., Hanley.—1, Dianthus alpinus; 2, Opuntia ficus-indica; 3, Sparmannia africana; 4, a garden form of Iris Germanica.

O. R. G., King's Lynn.—1, Hemerocallis fulva; 2, Berberis Darwini; 3, Pelargonium crispum; 4, probably Pelargonium pumilum.

J. W., Winchester.—1, Maianthemum convallarioides; 2, Orchis maculata; 3, Anemone sylvestris; 4, Achillea ageratifolia; 5, Rubus deliciosus.

R. E. S., Somerset.—1, Magnolia grandiflora; 2, Euonymus japonicus latifolius albus; 3, Cytisus monspessulanus; 4, Viburnum tomentosum; 5, Pittosporum undulatum; 6, not recognised, send when in flower.

H. W., Shepherd's Bush.—The small piece sent is insufficient for identification, but we feel almost certain it is a tiny shoot of an anthericum. As it is impossible to say what species it is, until we see flowers, we suggest you keep it in the greenhouse. So far as we are aware, there is no red-flowered anthericum, and we fancy your friend has made a mistake. Give the plant fairly rich, light soil, and a sunny place, in an airy greenhouse, and let us have a piece of the spike when it flowers.

TRADE NOTE.

At the Bath and West of England Show, held at Dorchester, Messrs. E. Webb and Sons, Stourbridge, had a very large exhibit of the wheats and barleys for which they have become famous. Grasses and potatoes were largely staged, and fine strains of cinerarias, calceolarias, schizanthuses, and gloxinias added much to the effectiveness and brilliance of the display.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. MAY 24 TO MAY 30.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 24—Sunday	8 35	53	49	63	37
,, 25—Monday	1 25	55	50	59	48
,, 26—Tuesday ...	0 20	58	54	64	50
,, 27—Wednesday.	12 30	64	57	73	48
,, 28—Thursday ...	12 50	64	56	70	43
,, 29—Friday	7 55	62	55	72	50
,, 30—Saturday ...	6 30	56	55	68	52
Means	7 10	59	54	67	47

DATE. 1908. MAY 24 TO MAY 30.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
May 24—Sunday	—	54	55	52	33
,, 25—Monday	0·02	55	55	52	45
,, 26—Tuesday ...	—	55	55	52	47
,, 27—Wednesday.	—	55	55	52	42
,, 28—Thursday ...	—	57	56	52	37
,, 29—Friday	0·24	58	57	53	47
,, 30—Saturday ...	—	58	57	53	52
Means ...	(total) 0·26	56	56	52	43

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		s.	d.		s.	d.
Acacia	per doz. bun.	6	0	to	8	0
Adiantum cuneatum	per doz. bun.	5	0		9	0
Anemones	per doz. bun.	1	0		3	0
Arums	per doz.	2	6		4	0
Asparagus	per doz. bun.	1	6		6	0
Azalea, white	per doz. bun.	3	0		5	0
,, mollis	per bun.	0	9		1	6
Berberis leaves	per doz. bun.	1	6		2	6
Carnations	per doz. blms.	1	6		3	0
,,	per doz. bun.	8	0		12	0
,, Malmaison	per doz. blms.	8	0		12	0
Cattleyas	per doz.	8	0		10	0
Croton leaves	per bun.	1	0		1	6
Cyclamens	per doz. bun.	6	0		8	0
Cypripediums	per doz. blms.	2	0		3	0
Eucharis	per doz.	4	0		5	0
Forget-me-not	per doz. bun.	2	0		3	0
French fern	per doz. bun.	1	0		3	0
Freesias	per doz. bun.	2	0		3	0
Gardenias	per doz.	1	6		3	0
Gladiolus Colvillei	per doz. bun.	7	0		10	0
Gypsophila	per doz. bun.	3	0		5	0
Iris, Spanish	per doz. bun.	3	0		6	0
Ixias	per doz. bun.	3	0		6	0
Lapagerias	per doz.	1	0		2	6
Lilac	per bun.	2	0		3	0
Lilium auratum	per bun.	2	0		3	0
,, speciosum	per bun.	2	0		3	0
,, longiflorum	per bun.	2	6		5	0
Lily of the Valley	per doz.	6	0		12	0
Marguerites, white	per doz. bun.	3	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	3	0		6	0
Narcissus	per doz. bun.	1	0		3	0
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	5	0		8	0
Ranunculus	per doz. bun.	5	0		7	6
Roses	per doz.	1	0		6	0
Smilax	per doz. trails	3	0		5	0
Spiræa	per doz. bun.	5	0		8	0
Statice	per doz. bun.	5	0		6	0
Stocks	per doz. bun.	3	0		4	0
Sweet Peas	per doz. bun.	2	6		5	0
Tuberoses	per doz. blms.	0	4		0	6
Tulips	per doz. bun.	5	0		12	0
Violets	per doz. bun.	2	0		4	0
Wallflowers	per doz. bun.	1	0		2	0

Vegetables.

Good supplies are now coming in, and there is a regular and brisk demand.

		s.	d.		s.	d.
Artichokes	per doz.	2	0	to	3	0
Asparagus, Paris green	per bun.	1	3		2	0
,, English	per bun.	1	0		1	6
,, Spanish	per bun.	0	6		1	0
,, Sprue	per bun.	0	6		0	9
Beans, Guernsey	per lb.	0	4		0	6
Beet	per bush.	1	3		2	0
Cabbage	per tally	2	6		4	6
Carrots	per doz. bun.	1	0		1	6
,,	per bag	2	6		3	0
,, French (new)	per doz. bun.	5	0		7	6
Cauliflowers	per doz.	1	0		2	0
Cucumbers	per doz.	1	6		3	0
Greens	per bag	1	0		2	6
Horseradish	per doz. bun.	9	0		12	0
Lettuce, cabbage	per doz.	0	9		1	0
Lettuce, cos	per doz.	3	0		4	0
Mint	per doz. bun.	1	0		2	6
Mushrooms	per doz. lb.	8	0		10	0
Onions, spring	per doz. bun.	1	0		2	0
,, Spanish	per case	5	0		7	6
Parsley	per doz.	1	6		3	0
Peas, Guernsey	per lb.	0	6		0	8
Radishes	per doz. bun.	0	10		1	0
Turnips, French (new)	per doz. bun.	5	0		8	0
Vegetable Marrows	per doz.	3	0		5	0

Fruits.

Oranges, strawberries, gooseberries, French cherr and grapes are in great request.

		s.	d.		s.	d.
Apples, Australian	per case	7	0	to	12	[illegible]
,, Canadian	per barrel	10	0		[illegible]	0
,, Tasmanian	per box	7	0		14	0
Bananas	per bun.	3	0		[illegible]	6
Cherries, French	per box	0	9		[illegible]	6
Figs	per doz.	3	0		[illegible]	0
Gooseberries	per ½ sieve	5	0		7	0
Grapes, English (new)	per lb.	2	0		[illegible]	0
,, Australian	per case	6	0		14	0
Lemons	per case	8	0		[illegible]	0
Melons, Guernsey	each	1	3		[illegible]	0
Nectarines	per doz.	5	0		21	0
Oranges	per case	7	0		[illegible]	[illegible]
Peaches	per doz.	6	0		[illegible]	[illegible]
Pears, Australian	per box	4	0		[illegible]	[illegible]
Pineapples	each	2	0		5	0
Strawberries	per lb.	1	3		[illegible]	[illegible]
,, French	per basket	2	0		[illegible]	[illegible]

LONDON POTATO MARKETS.

New Potatoes are now rapidly superseding the produce of last year's crop.

		s.	d.		s.	d.
Old potatoes	per ton	85	0	to	[illegible]	[illegible]
Teneriffe	per cwt.	13	0		[illegible]	[illegible]
Lisbon	per box	4	0		4	6
Jerseys	per cwt.	14	0		15	0

FORTHCOMING ENGAGEMENTS.

MONDAY, June 8.—Whit-Monday.

TUESDAY, June 9.—Royal Horticultural Committees meet at 12 o'clock; Lecture at 3 p by Sir George Birdwood, K.C.I.E., C.S.I. "Wild Flowers, Wild Shrubs, etc."; Committee at 4 o'clock.

National Rose Society; meeting of General Committee at the Westminster Palace Hotel, 3 p.m.

WEDNESDAY, June 10.—Royal Society of Arts

Royal Botanic Society; Opening of Messrs. J. Waterer and Sons' Rhododendron Exhibition.

Royal Horticultural Society; Committees Royal Gardens, Windsor.

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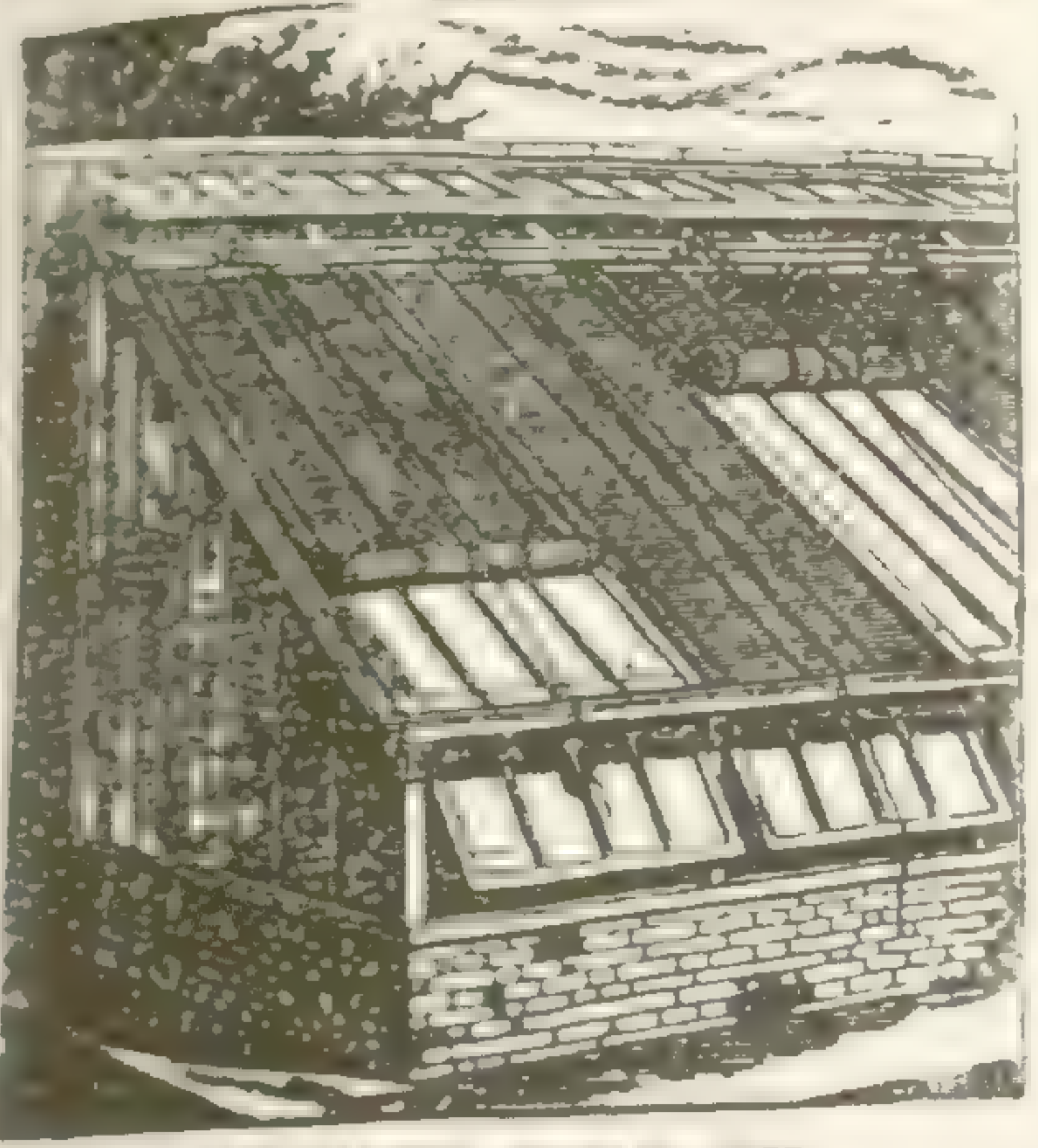

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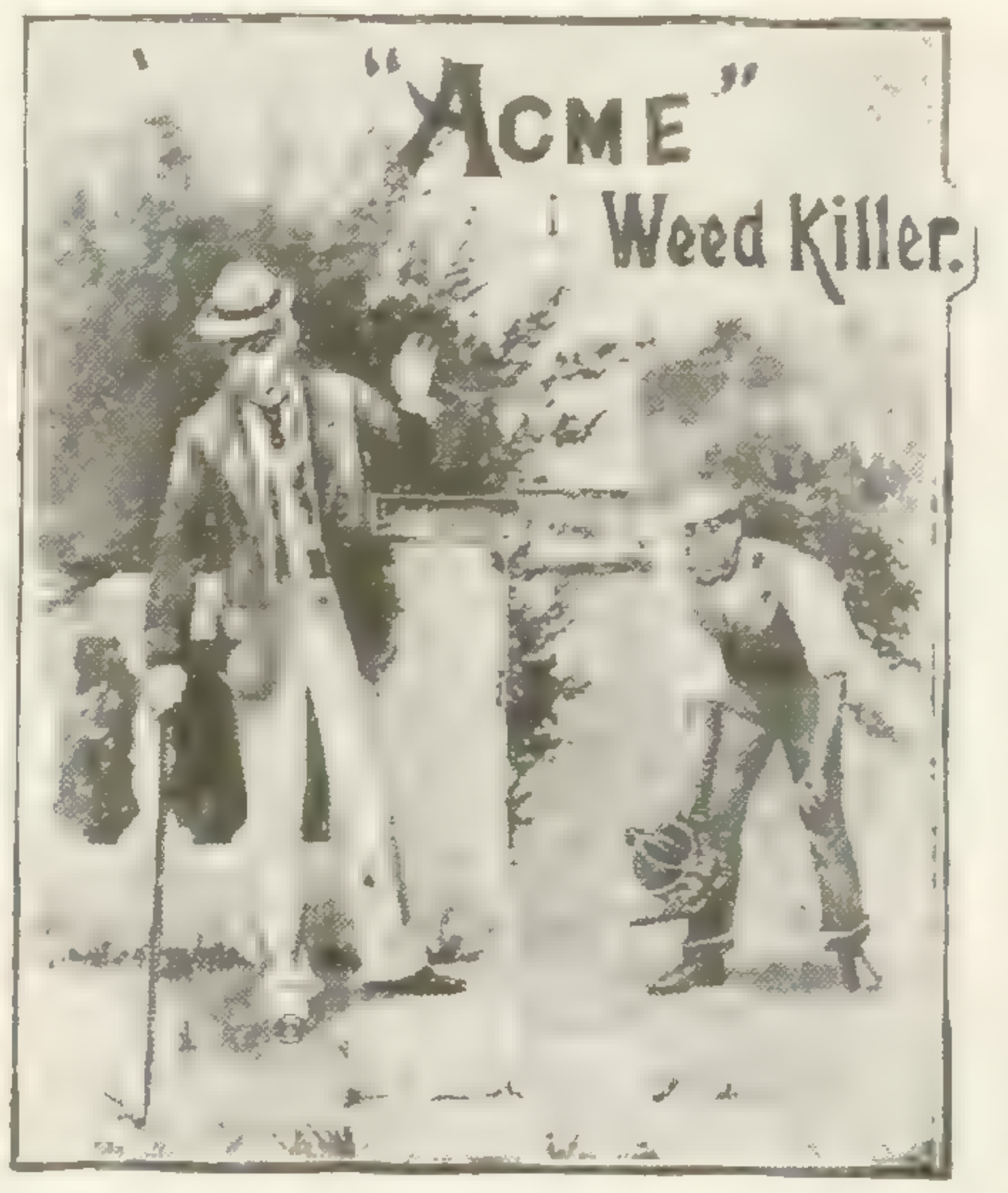
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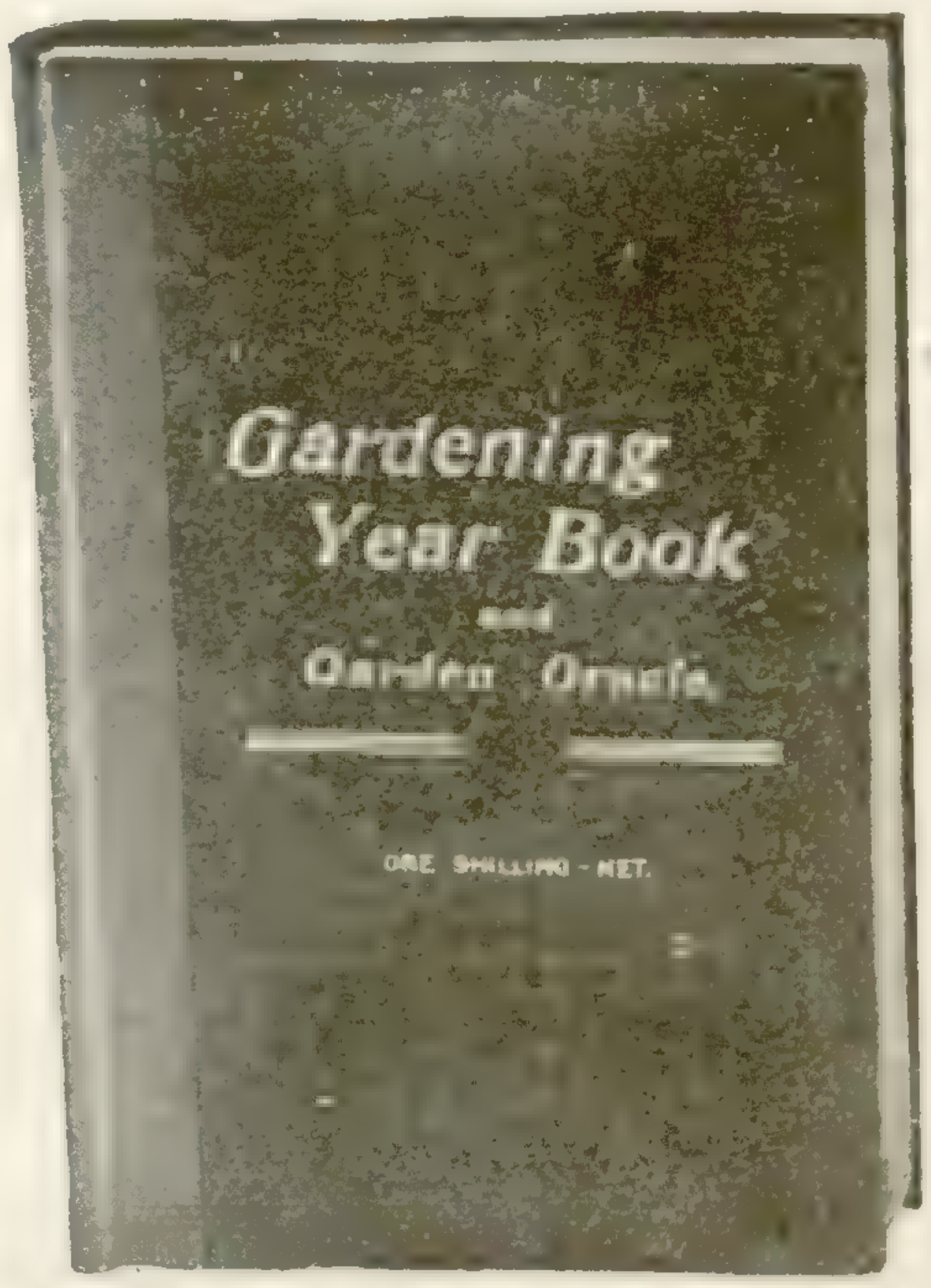

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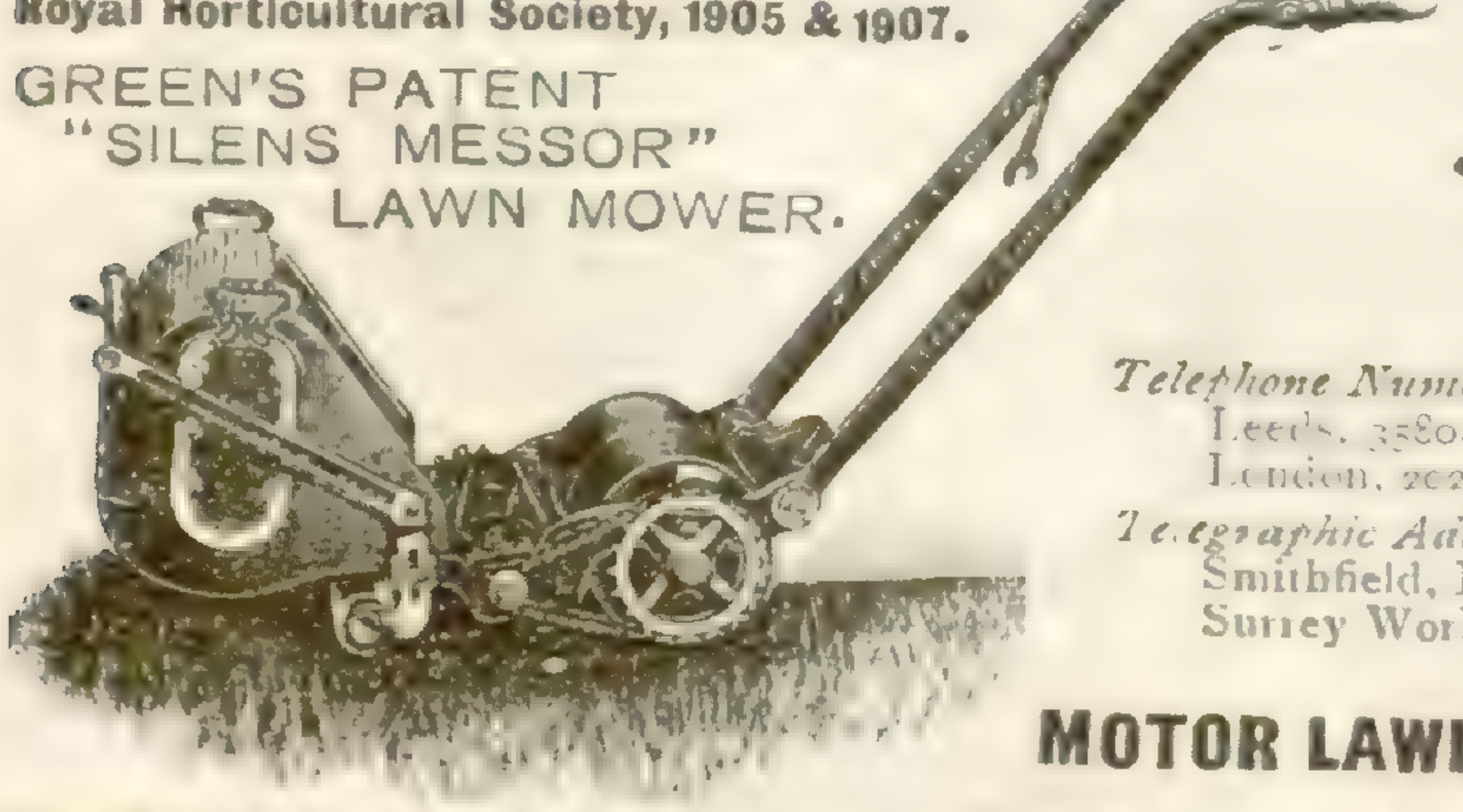

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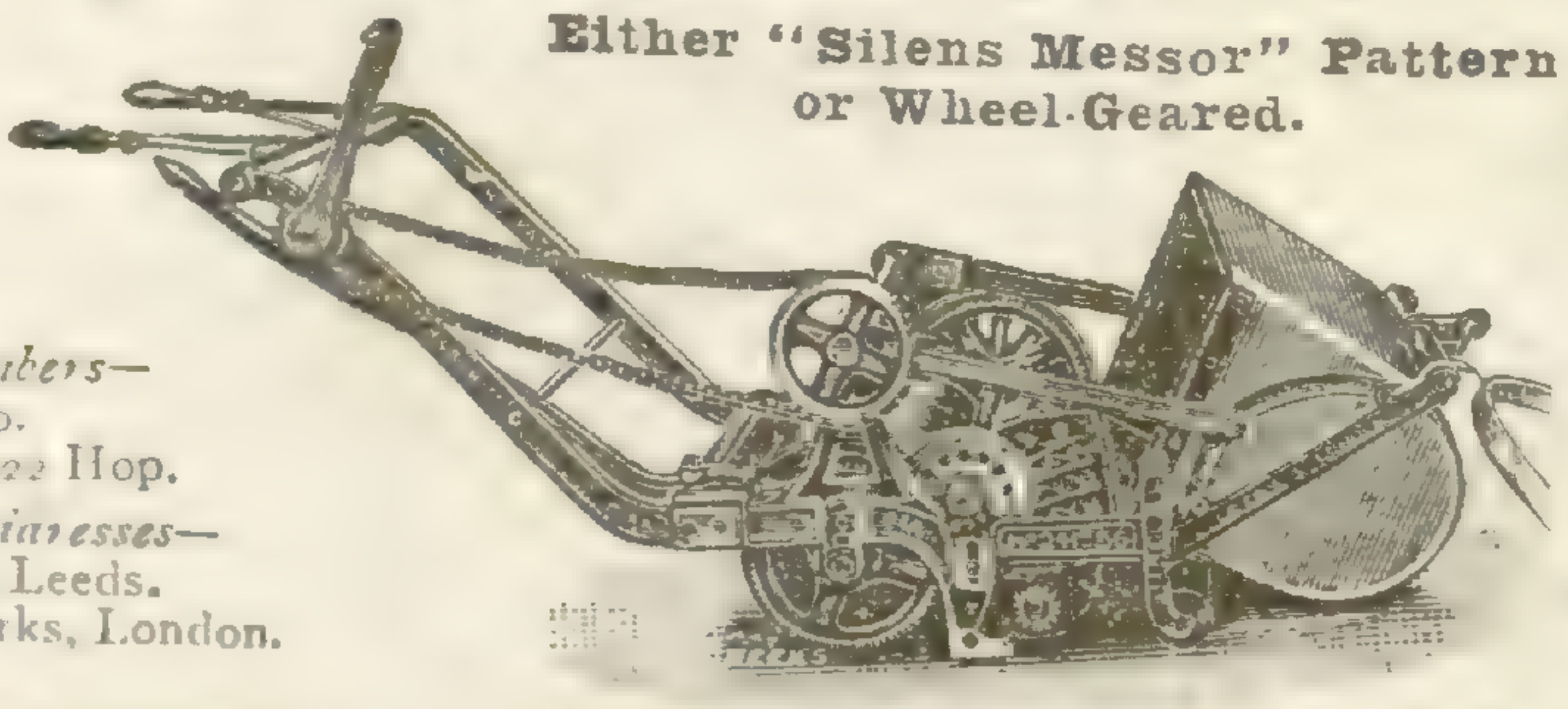

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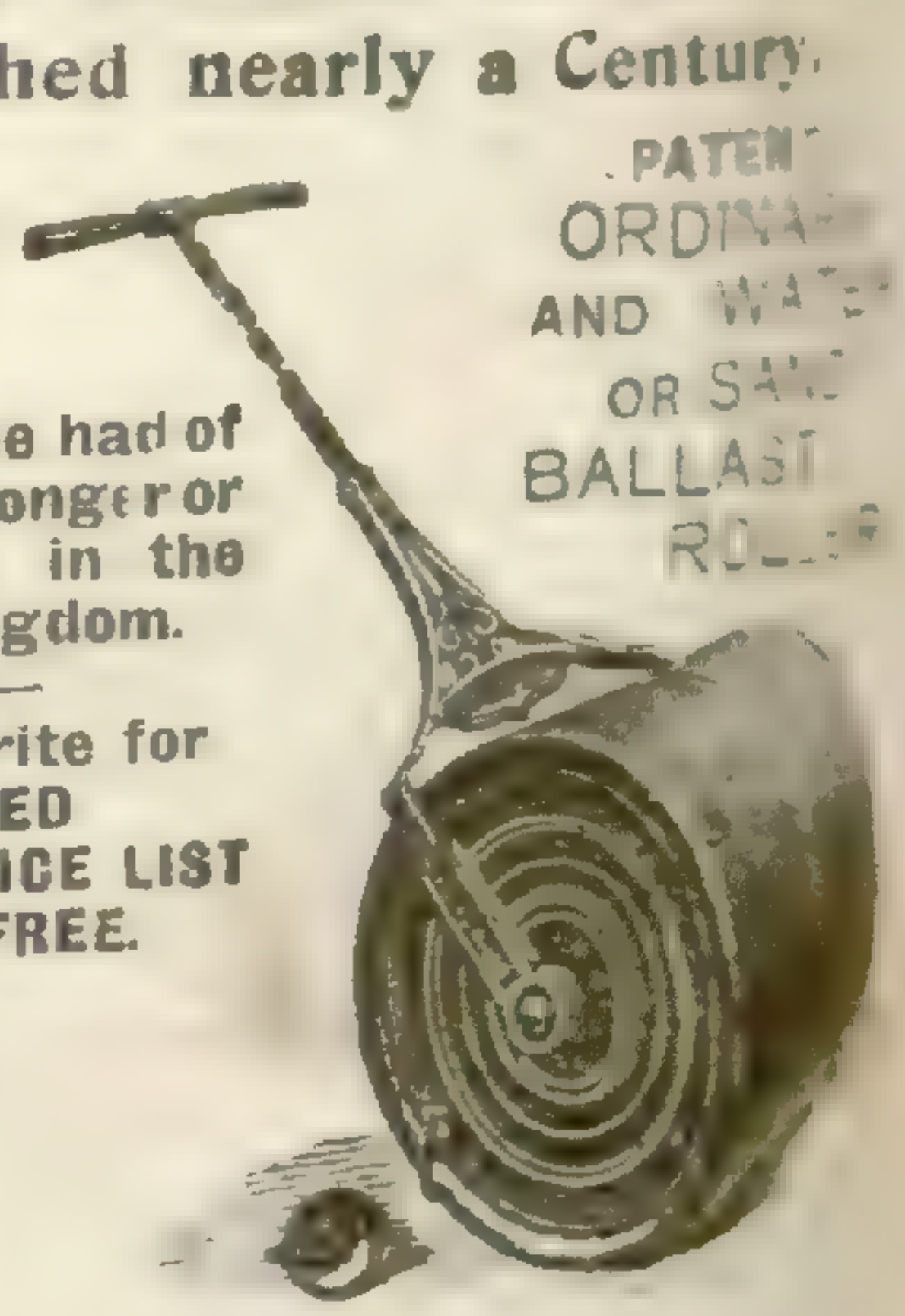

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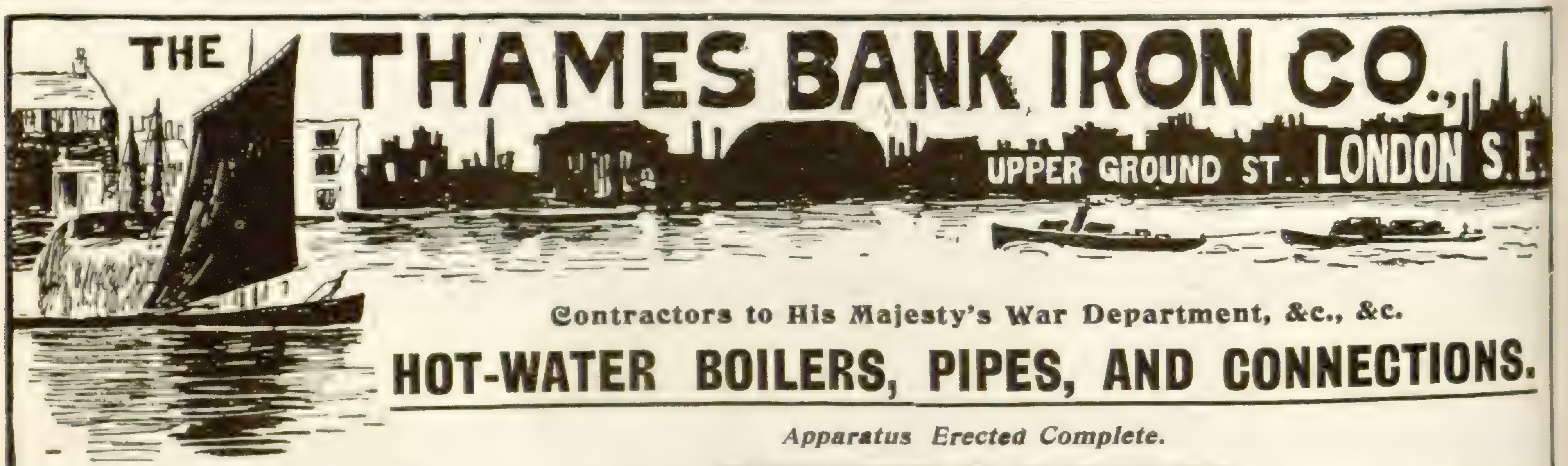
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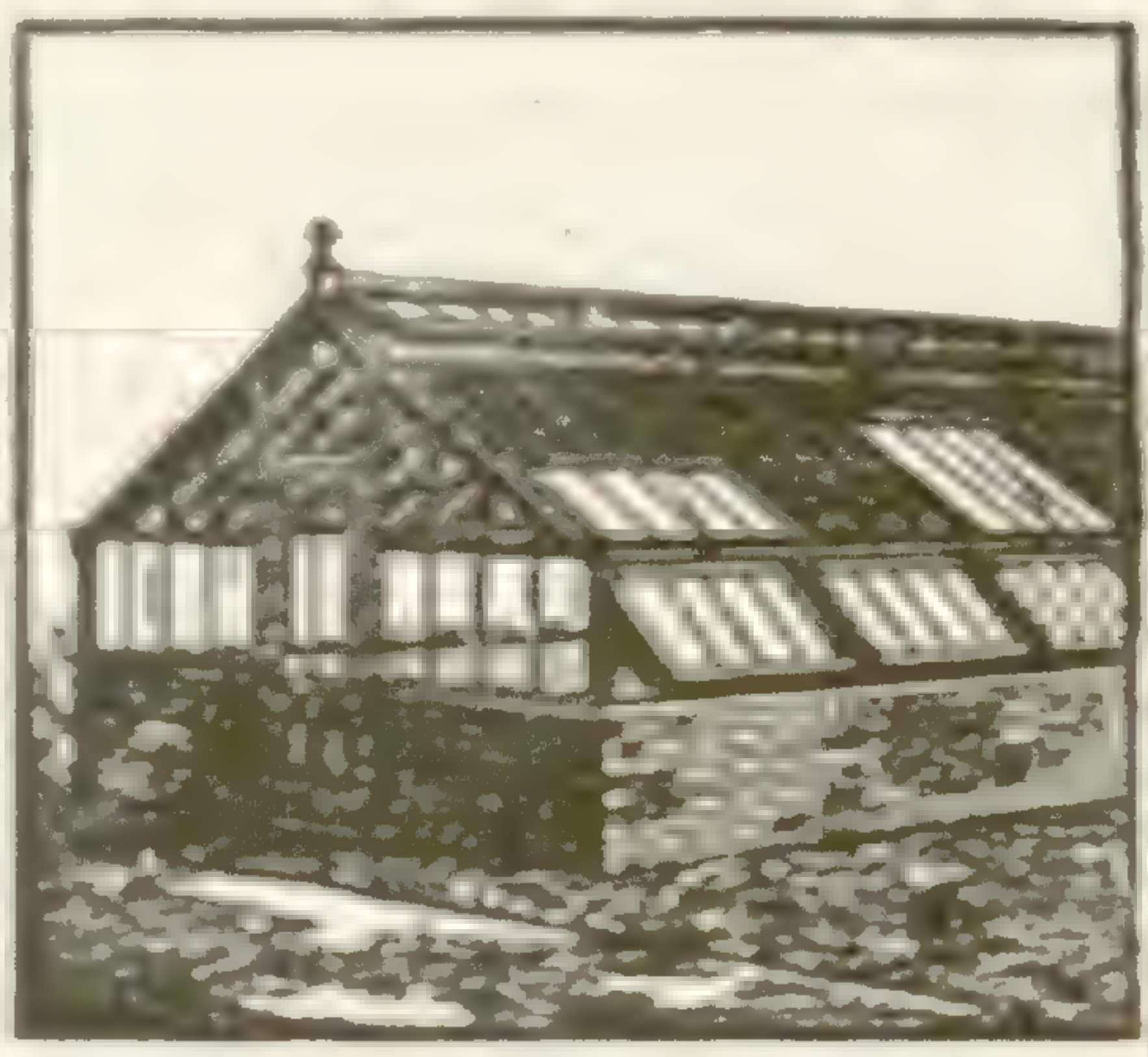

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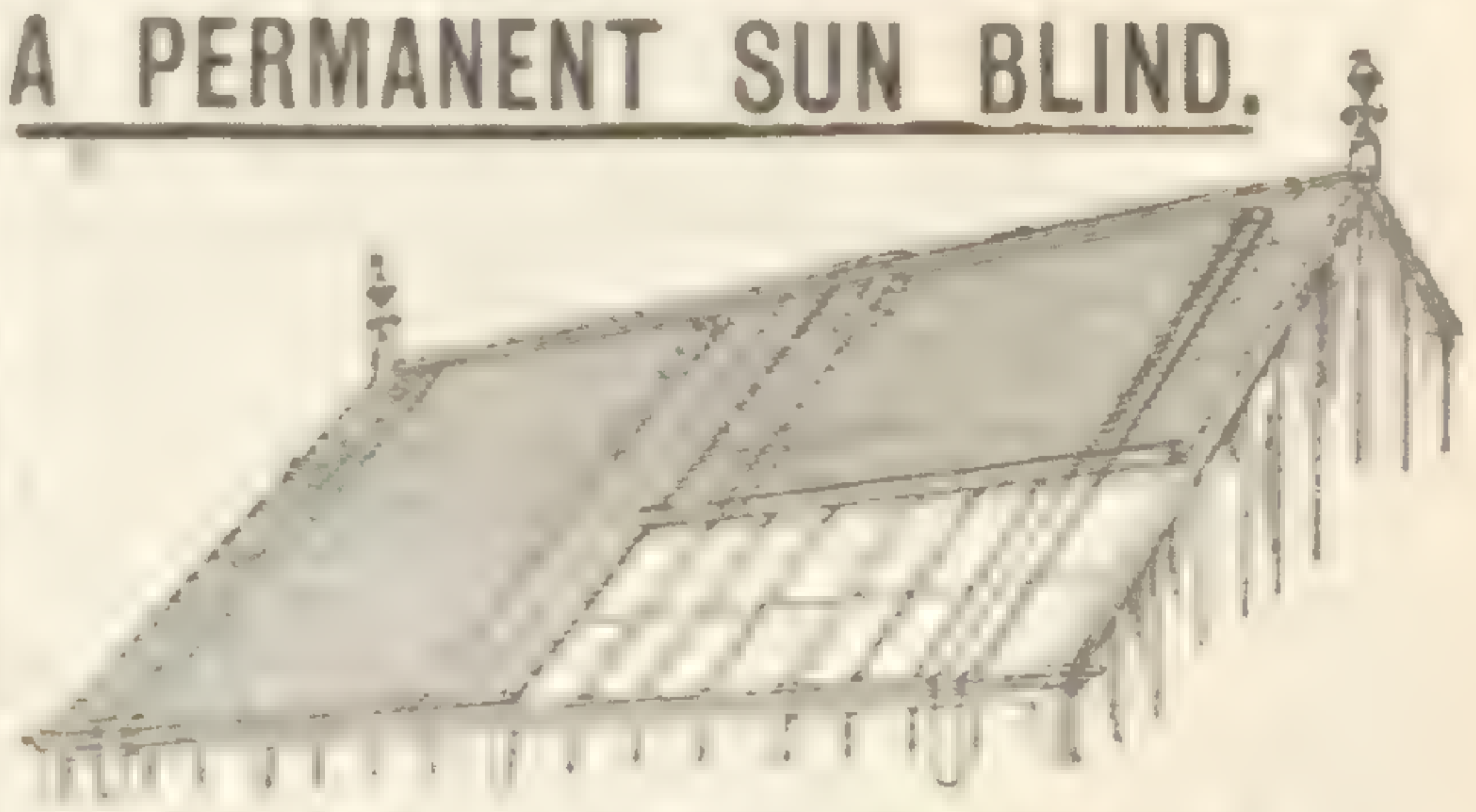

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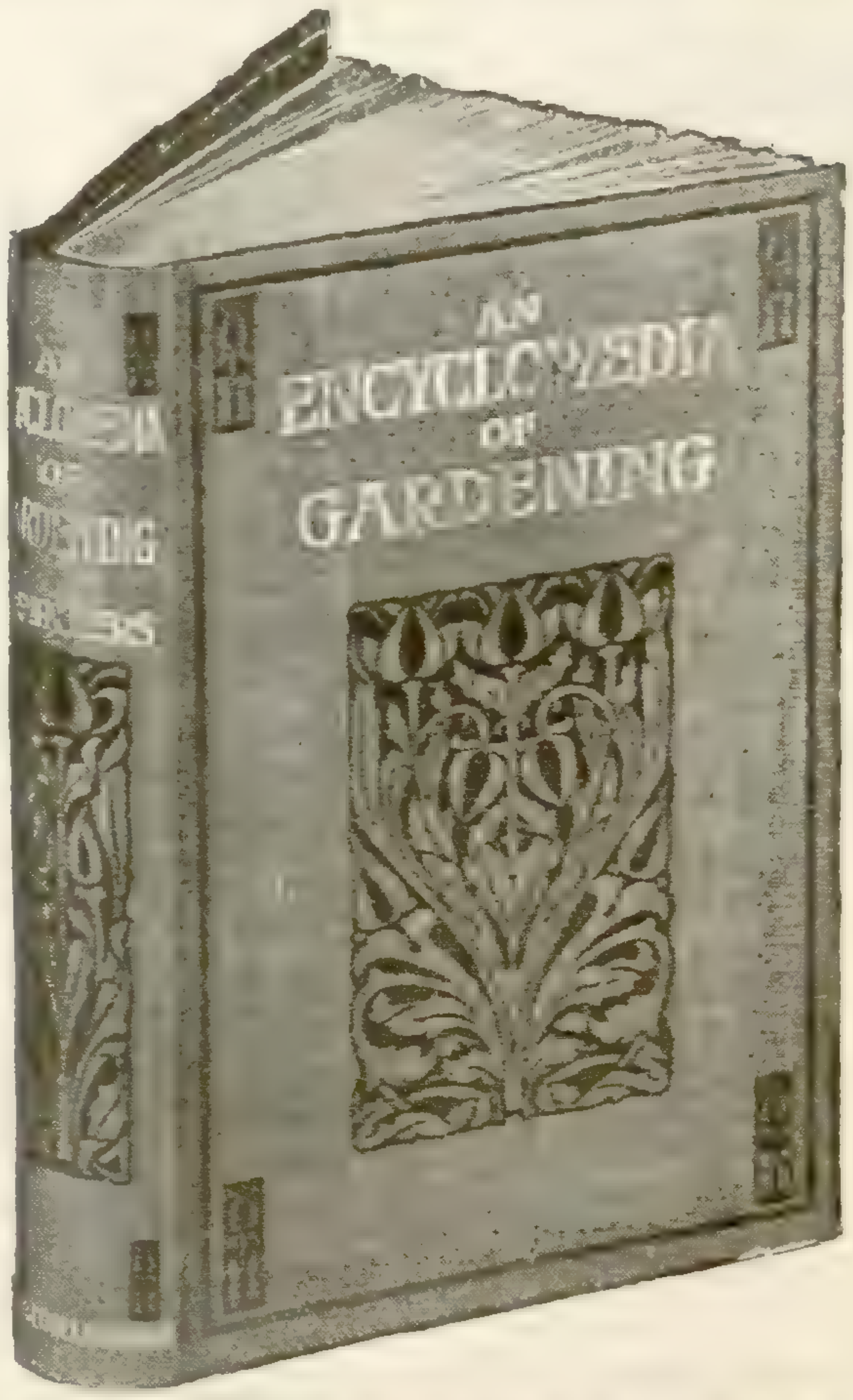

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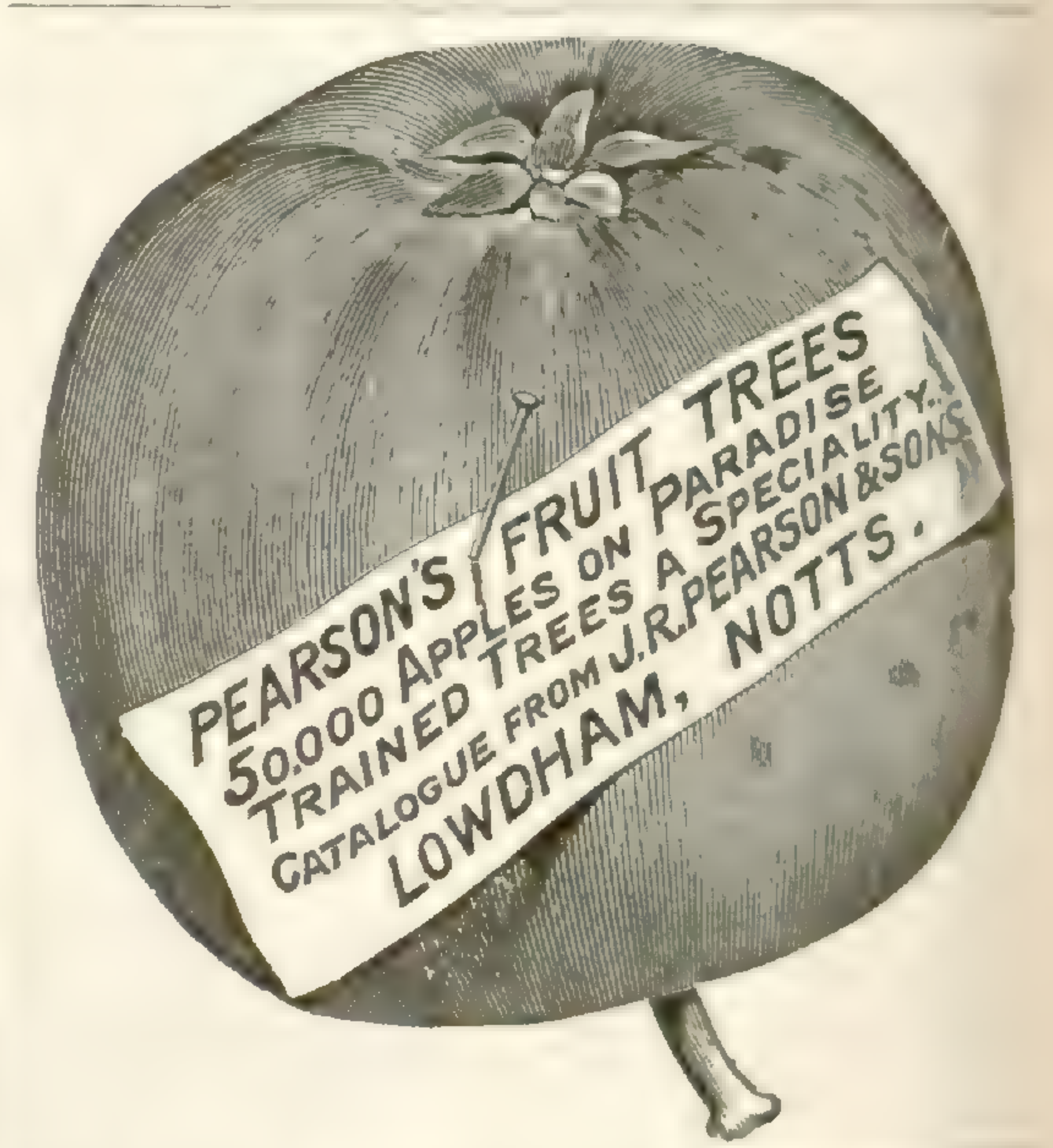
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VOL. LI.—No. 2,850.

SATURDAY, JUNE 13, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Tornadoes.

Fortunately for Great Britain it is but seldom visited by those terrific aerial vortices of which we so often hear in the United States, but that we are not quite immune from them is obvious by the havoc caused recently in Bushey Park by what was evidently nothing other than a true tornado. The cause of these phenomena appears to be but little understood. They differ essentially from ordinary gales or hurricanes by being much more restricted in area and by their even greater violence due to concentration. They occur, too, entirely without warning, sweeping across the country at a great speed, and commencing apparently by an eagle-like swoop from above, a veritable "bolt from the blue." A peculiar feature is that they usually occur during an otherwise dead calm, and in hot weather, and this fact possibly gives a clue to their genesis. We may, for instance, assume on a perfectly still day that an enormous layer of hot air is formed over the sunlit soil, and that this layer being lighter than the cooler atmosphere above, a gradual strain is set up until at some point in the upper atmosphere the heated air finds a vent and pours upwards, while simultaneously an equal body of cooler and heavier air rushes down to take its place. The result is inevitably that a vortex is produced, at first high up, producing a dense cloud by the condensation of moisture due to the cooling of the heated air, and then from this cloud the vortex as it increases in power descends until it reaches the earth, across which it whirls with irresistible force, sucking up and shattering every obstacle in its path. All the phenomena of a tornado proper point to some such cause as we have indicated. Waterspouts may be likened to small tornadoes bred by inequality of aerial tension over the surface of the sea, the results being again a spiral whirl of air within which the velocity of rotation breeds a vacuum which the sea water rushes in to fill, and is thus sucked up aloft to be distributed in showers elsewhere. In the centre of a tornado there is obviously also a vacuum formed, for it has been noticed that houses struck by one are not merely blown down, but actually exploded, doors and windows being driven outwards by the sudden expansion of contained air when the ordinary pressure is removed. It is in fact sucked out instantaneously with shattering results to the edifice. Cyclones and hurricanes differ, as we have said, from tornadoes, in their wider range, and may, indeed, be classed as mere gradations of ordinary wind, though the causes which underlie them are still mysterious. We have to imagine a vast ocean of air enveloping a globe whose surface is greatly varied, large areas of ocean alternating with land masses great and small, and these land masses varying greatly in superficial character, mountainous and flat, forest clad or desert, and so on. This globe is also constantly revolving and being alternately exposed to the sun and deprived of its light and heat. Air varies in volume, and consequently in weight according to its temperature, and the warmer it is the more water it can hold in invisible suspension as vapour. The nature of the land surface determines absorption or radiation of the solar heat and cools or warms the air accordingly. Water and land generally differ greatly in their susceptibility to heating. We see, therefore, that there are a vast number of factors at work tending to keep the air in motion by unequal warming, and in this way currents are bred which vary from gentle zephyrs to strong winds, all of which tend to restore disturbed equilibrium. Given, however, vast level plains such as the American prairies, and, as we have suggested, the absence of any local cause of disturbance permits a strain to increase, and the catastrophic tornado is the final result Outside all these terrestrial conditions, however, we have what we may term cosmic ones, solar, and electric, and these lead to colossal atmospheric disturbances which find expression in the cyclone and hurricane aforesaid and invade enormous areas of land and sea with their immeasurable aerial whirlpools, whose formation and movements we are happily enabled to some extent to measure and anticipate by means of the barometer.

MR. W. H. MORTER,

Superintendent of the Birmingham Public Parks and Gardens.

Mr. William H. Morter is one of the most genial and one of the best known of the Parks Superintendents in the Midlands. He has for several years been superintendent of the Parks and Open Spaces belonging to the city of Birmingham, and Canon Hill Park has received his special and personal attention. Mr. Morter is still a young man and, therefore well able to put abundant energy into his very large task. Spring and summer bedding are carried out on a large scale, and most successfully, as our columns have testified, at Birmingham; and enormous quantities of bulbs are planted each year, and extensive stocks of bedding plants propagated. In round figures the area under Mr. Morter's supervision runs to about 450 acres, the largest parks being Canon Hill, Victoria, Aston, Calthorpe, Adderley, Summerfield, Lightwoods, Highgate, Queen's, and Ward End, and the Rednar and Bilberry Hills. There are eight small parks and open spaces, besides those mentioned. Mr. Morter brings experience and skill to bear upon his work, and with these he combines good taste and organising ability, and an urbanity that has made him exceedingly popular in the great Midland city.

The Whitsuntide Holidays were spent in the open-air by millions of holiday folk. The earlier part of Whit Monday was dull, and in many parts of the Metropolis a little rain fell towards midday, but scarcely enough to lay the dust, while during the afternoon and evening the weather was beautiful, and altogether the day was one of the most enjoyable Whit Mondays known for many years. Kew Gardens were visited by no fewer than 85,000 people, Hampton Court had 18,374 visitors; Finsbury Park, 14,000; Clissoid Park, 12,000; Windsor Castle, 10,000; Waterlow Park, 10,000; Barnet Woods, 8,000; Highgate Woods, 3,000; Highbury Fields, 5,000; Alexandra Palace, 45,000; and Wimbledon Common and Putney Heath about 20,000. It is estimated that about half a million people visited the Franco-British Exhibition.

Lieut. - Colonel Holford.—The gentleman whose collections of orchids at Westonbirt, Tetbury, Gloucester, are the admiration of all horticulturists, was gazetted on Tuesday last as Lieut.-Colonel of the 1st Life Guards. Major, now Lieut.-Colonel G. Holford, C.V.O., C.I.E., is one of the most popular of British horticulturists, but he does not confine his attention to orchids. He has a magnificent arboretum at Westonbirt, and he has the finest amateur's collection of amaryllis in the country.

The Scottish Fruit Crop.—Our Aberdeen correspondent writes: With the advance of the warm weather Scottish fruit growers are now estimating the season's crop. Since the middle of May fruits have made rapid growth. The result is that the fruit crop promises to be an early and heavy one. The strawberry crop is looking extremely well, and a good yield is anticipated. Red currants—the best disease-resisting fruit we have—promise to be specially good, but black currants will be scarce. The latter is very subject to the black currant mite, and the loss and damage to this crop in recent years in Scotland has been so great that many growers are grubbing up their bushes of this particular fruit. Last year the crop of gooseberries in Scotland was so great that it was with the greatest difficulty a market was found for the fruit, and, from the growers' point of view, it would be a blessing in disguise if this year's crop were not so heavy. At present the prospects are that there will again be an abundance.

Poisonous Compounds for Horticultural and Agricultural Purposes.—Mr. G. H. Richards writes: The horticultural trade should now bestir themselves and approach their Members of Parliament and obtain support to Clause 2 of the Poisons and Pharmacy Bill when it reaches the House of Commons. The final issue between the Traders in Poisons Society and the chemists monopoly is fast approaching, and every effort should be made to secure a victory for fair trade. The Bill has this season passed its second reading in the House of Lords, and Clause 2, which will make it lawful for nurserymen, florists, and agricultural agents to stock and retail insecticides, weed killers, sheep dips, etc., has been recommended by a Joint Committee to go forward. It is anticipated that the Bill will reach the House of Commons, from the House of Lords, within the next few weeks, and it is most important that support for the Bill should be obtained at once by the horticultural trade by writing to their Members of Parliament, claiming support of Clause 2, as the chemists are opposing most strenuously and canvassing Members of Parliament. All information as to the way to go to work can be obtained from Mr. T. G. Dobbs, solicitor, Worcester (secretary of the Traders in Poisons Society).

French Horticulturists Visit to London.—A party of horticulturists, members of the National Horticultural Society of France, will pay a visit to London on the 22nd inst. for a week. They will visit the Franco-British Exhibition, Kew Gardens, Windsor, the leading sights of London, the parks, nurseries, etc. The party is limited to 200 persons.

Horticultural Club.—The next house dinner of the club will take place on Tuesday, June 23, 1908, at six p.m., at the Hotel Windsor. After dinner Mr. H. Hitchcock, of Victoria, Australia, has promised to lecture on "The Development of Gardening in Victoria during Recent Years."

Gardens Round Perth.—In the issues of the GARDENERS' MAGAZINE for June 27 and July 4 we shall give a fully illustrated account of some of the more noteworthy gardens in the vicinity of Perth. The gardens that will be dealt with include those of Dupplin Castle, Freelands, Moncreiffe House, Dunkeld House, Kinfauns Castle, Seggieden, Pitfour Castle, Meikleour House, Ballathie, and Murthly Castle.

A New Rose.—It is not often that we have to chronicle the appearance of a new species of rose, although garden varieties come in dozens yearly. On Tuesday last, however, Messrs. J. Veitch and Sons, exhibited a new species named Rosa Moysi, a very spiny kind, with elongated pinnate leaves that are spiny along the main rib. It is from China, and has rounded blooms of a deep rich rose-red hue, the shape and substance of the blooms being especially notable. Although as a garden plant it may not make hosts of friends, there is little doubt that its capabilities as a parent of new roses will soon be put to the test.

British Gardeners' Association Outing.—The members of the London branch of the B.G.A. will meet to-day, Saturday, June 13, at Portland Road Station, N.W., at three p.m., when Regent's Park, and the Royal Botanic Society's Gardens will be inspected under the guidance of Mr. E. F. Hawes. Members are requested to bring friends with them, whether members of the B.G.A. or not.

Ealing's Garden Suburb.—In connection with the garden suburb of about forty acres extent, formed at Ealing by a co-partnership society known as the Ealing Tenants, Lim., there were great doings on Whit Monday when the Right Hon. John Burns, M.P., President of the Local Government Board, accompanied by Mrs. Burns, paid the estate a visit for the purpose of opening the recreation ground of 4½ acres set apart for ever for the use of the tenants. In opening the ground and congratulating the tenants Mr. Burns pointed out that each season the London County Council provided 500 cricket pitches on which 25,000 matches were played, and 500 tennis courts on which no fewer than 60,000 games were played.

Orchard Pruning Competition.—The Gloucester Root, Fruit, and Grain Society instituted an orchard pruning competition a few years ago and offered prizes for the best managed orchards, with a view of improving hardy fruit culture in the county of Gloucester, especially in orchards attached to farms. Mr. G. H. Hollingworth, the County Council lecturer in horticulture, has acted as judge during the past three years, and though he has to deplore the comparatively small number of entries, he reports that the improvement shown during the three years has been most marked, and is, therefore, an encouragement to the society and the donors of special prizes. Sir William Marling, Bart., presented the prizes to the successful competitors a few days ago, in the presence of a company of influential gentlemen who are doing all they can to improve agriculture and horticulture in the county.

Exhibition of Forced Bulbs in 1909.—In connection with the special prizes for hyacinths and tulips to be competed for on Tuesday, March 9, 1909, at the Royal Horticultural Society, the Council have expressed a wish that this date might be made a general one for the exhibition of collections of forced spring bulbs, specially with a view to showing which varieties (of daffodils for instance) are best suited for forcing. The Council invite the exhibition of small collections from amateurs as well as from the trade.

Prizes for Orchids at Manchester.—For the session 1908-9 the Manchester Orchid Society has been offered some handsome prizes, open to amateur members. Messrs. Charlesworth and Co., Heaton, offer a fifty guinea cup to the amateur who makes the highest number of points with plants not previously dealt with by the society. Messrs. Sander and Co., St. Albans, offer a fifty guinea cup for cypripediums, but this has to be won three times ere it becomes the competitor's property. Messrs. Hugh Low and Co., Enfield; Mr. Z. A. Ward, Northenden; and Mr. H. J. Bromilow, Rainhill, Liverpool, all offer special prizes. Full information can be obtained from Mr. P. Weathers, White City, Manchester.

"The Botanical Magazine" for June contains illustrations and descriptions of the following interesting plants: Pandanus Houlleti, a strong growing Screw Pine that grows thickly in the southern part of the Malayan Peninsular, and was first introduced in 1865, and flowered at the Jardin des Plantes in 1868; Rhododendron micranthum, a small growing Chinese species with creamy-white flowers borne in racemes; Bulbophyllum Fascinator, a curious species collected by Micholitz in Annan, with crimson and green flowers; Chirita barbata, a gesneraceous stove plant, that is treated as a biennial at Kew; and Genista glabrescens, an alpine shrub from the Lake Como district, quite hardy, and yellow flowered.

Honour to M. P. de Vilmorin.—We are pleased to observe that the well-known French horticulturist, M. Ph. de Vilmorin, who has many friends here in England, has just been honoured with the cross of Chevalier of the Legion of Honour. Ever since the death of the late M. Henri de Vilmorin, M. Philippe has everywhere endeavoured to fill the gap created by the sudden death of his much-respected father.

The International Botanical Congress to be held in Brussels during 1910 promises to be a big affair. Baron de Moreau has been appointed president of the Organising Committee, with Dr. E. Wildman as general secretary. The congress will be sectionalised, the various committees dealing with particular subjects.

The Pollination of the Olive. It appears that no one has very closely observed the method by which the olive is pollinated. Professor Cockerell, of the Colorado University, writing to "Nature," says: As Knuth's great work on flower pollination, compiled from all available sources, says nothing whatever about the olive, I recently asked Professor J. E. Coit, of Arizona, to look out for insects upon the flowers. He carefully examined many olive trees in flower at Tucson, and did not find a single insect at the flowers, with the exception of a thrips (apparently Euthrips occidentalis, Pergande), which occurred in great numbers. He kindly sent me some twigs with the euthrips upon them, and I was able to observe that these insects were profusely dusted with pollen. No bees were seen at all. Professor Coit adds: "Olive pollen is formed and shed in such enormous quantities that I think the wind among the branches is the chief agent in pollination. If you jar a large branch of olive while it is in full bloom, a perfect cloud of green pollen will be seen to float away on the breeze." Arizona, however, is not the original home of the olive, and the purpose of this note is to suggest that those who have an opportunity to see the plant in bloom in Mediterranean and other countries should make some observations.

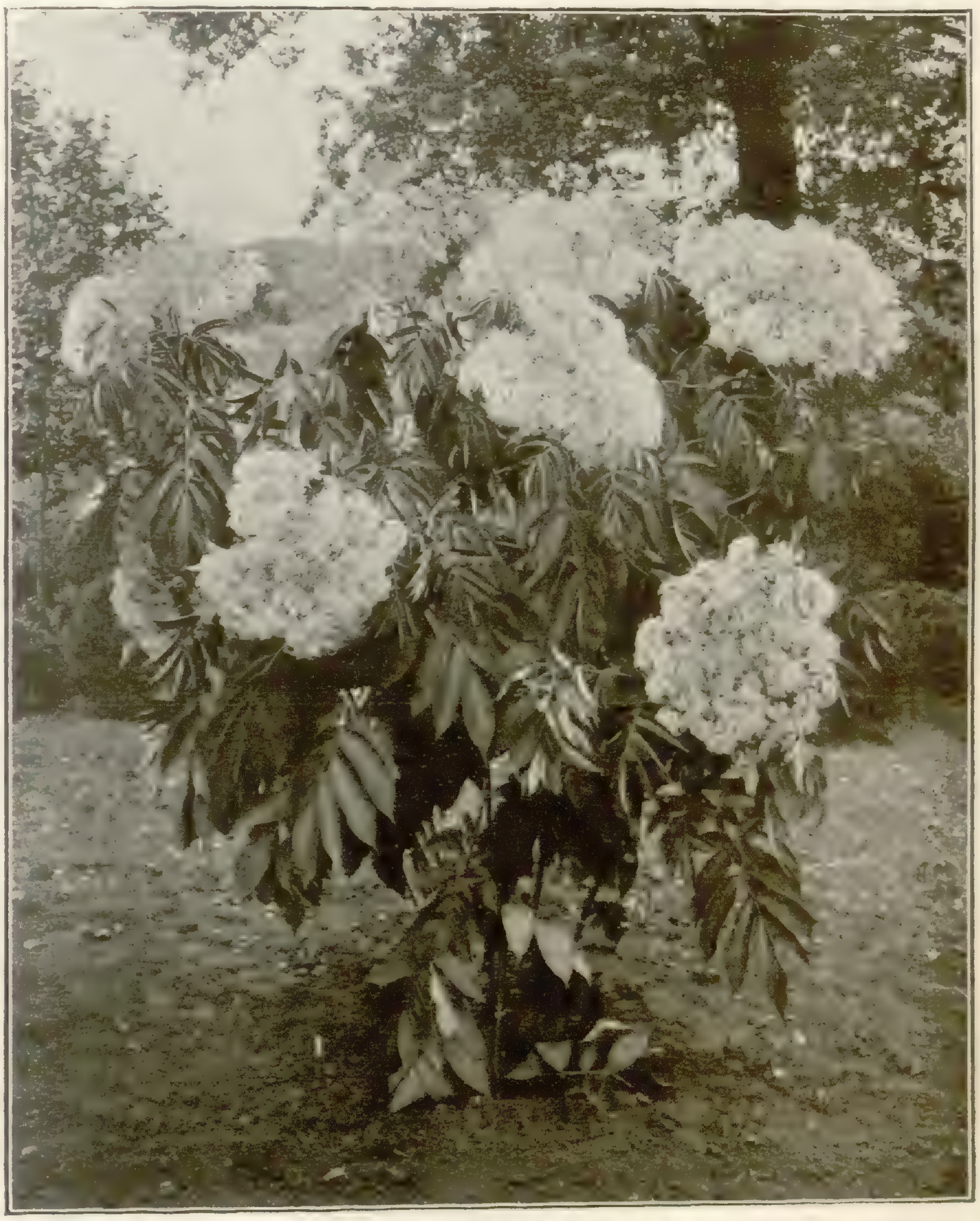
Nitrate of Soda and Sugar Production.—One result of the manurial experiments conducted on sugar plantations in the West Indies is the discovery that nitrate of soda gives a larger yield of sugar than the more popular sulphate of ammonia. Another and even more important discovery, though one that was fully anticipated, is that one of the newly-raised varieties of sugar-cane has yielded 2,000lbs. more saccharose per acre than the commonly grown White Transparent variety.

Enemies of Fruit. — At the monthly meeting of the Farmers' Club, Mr. E. S. Salmon, F.L.S., gave a lecture on the fungoid diseases with which fruit growers for market and home supplies have to contend. The lecturer said the subject of fruit growing was so wide in its scope that he found it necessary to confine his lecture to the fungi injurious to fruit trees, which, in so many instances, inflicted heavy losses upon growers. Mr. Salmon then proceeded, with the aid of lantern slides, to describe the "black spot" or "scab" in apples and pears, "brown rot" in cherries, plums, apples, and pears, and "cherry-leaf scorch" in cherries. Following his description he gave particulars of the measures that in his opinion should be taken to ward off the attacks of the diseases and prevent their spread should they make an attack. Spraying the trees with Bordeaux mixture was, he said, the most inexpensive and efficient remedy, and instances were quoted of the benefit that had accrued from its use. Every fruit grower was urged to carry out systematic spraying operations regularly, but, in order to eradicate the various diseases, co-operation amongst growers and legislative assistance from the State were both urgently needed. In Mr Salmon's opinion there should be a special sub-department created at the Board of Agriculture to deal with all matters connected with the fruit-growing industry. When once fungoid and insect pests had been eradicated, it lay with the growers themselves to adopt methods of grading, packing, and marketing their fruit in order to compete with equality with those countries from which the fruit supply was mainly drawn at the present time. In the discussion, Mr. W. W. Berry cordially supported the suggestion that a special sub-department for the fruit industry should be formed at the Board of Agriculture, and he emphasised the importance of the most careful attention being paid to grading, packing, and marketing. Mr. W. G. Lobjoit directed attention to the importance of good cultivation as a means of keeping fruit trees free from diseases of fungoid origin: and he expressed the hope that scientific men had not said the last word to fruit growers when they spoke of spraying, which he regarded as an expensive process.

New Park for Aberdeen.—Active steps are being taken by a number of leading citizens of Aberdeen to urge on the City Council the advisability of establishing a park in the west end of Aberdeen, and the movement is being followed with much enthusiasm in the districts more immediately concerned. A remit on the subject is at present under the consideration of the Links and Parks Committee of the Town Council. The proposal is to acquire from the City of Aberdeen Land Association ground at the Rubislaw Beachfield, extending to about 25 acres. The terms offered by the association are regarded as exceedingly favourable. The stipulation is that not less than 15 acres must be acquired at £400 per acre. The ground is delightfully situated, is supplied with an abundance of running water, and could at comparatively little cost be made suitable in every way for the purpose of a park.

SAMBUCUS CANADENSIS VAR. MAXIMA.

The accompanying illustration gives a good idea of this plant when growing under satisfactory conditions. Its principal attractions are its handsome foliage and enormous inflorescences, which quite eclipse in size, not only those of the type, but those of all other hardy elderberries also. The species is a native of North America, where it is known as the Canadian elder. It has been in cultivation for about 150 years, but it is only within recent years that the variety under notice has become generally known. As will be seen in the picture, the pinnate leaves are large, and usually composed of from nine to eleven leaflets. The flowers are white, and produced in enormous inflorescences, often a foot or more across. The blossoming period is later than that of most elderberries, the blossoms being at their best during July and August.



SAMBUCUS CANADENSIS MAXIMA.
In the Coombe Wood Nurseries.

The common golden elder of gardens, though often included under Sambucus nigra, appears to correspond much more closely with the Canadian plant. Like other elders, the one under notice thrives most successfully in good loamy soil, in a rather moist situation, where it is shaded from the full glare of the sun.

W. Dallimore.

ROSE MARECHAL NIEL UNDER GLASS.

Those who have never seen the Maréchal Niel growing under the best conditions can hardly be aware of the possibilities of this splendid rose. It is, of course, the most favourite variety with all who try to cultivate roses for cut bloom under glass, although with some the Niphetos is equally popular. But it would be safe to assert that the Maréchal Niel has never yet been surpassed as an all-round rose for greenhouse culture, and it is very doubtful if there is another which can really be said to equal it. In the hands of many people, however, the Maréchal Niel is by no means so great a success as it should be, simply because its requirements are not properly understood.

This rose is not really fastidious in its tastes, but it must have one or two things to make it thrive. The most important of these is depth of soil, and the next plenty of room for its branches. Those who cannot supply these two essential requirements should not attempt to grow under glass a rose that is so free in habit as the Maréchal Niel. There are many others which are better suited to confined spaces, and it is much better to have one of them, even if not quite so good, rather than court failure and disappointment by attempting things that are beyond one's facilities.

For Maréchal Niel cultivation any ordinary greenhouse will suffice if it be roomy and not crowded with a host of other things. It need not be of any particular dimensions, but the longer that it is in proportion to its width the better. The border may be inside or out so long as it is not occupied with plants which will interfere in any way with the treatment of the roses. Most people want to make the best of the inside space at their disposal, and the outside border is, perhaps, therefore the best. A span-roofed house is much the most suitable, but a lean-to will do if the roses are planted, as in the span-roof house, so that they can be trained near the glass and not against the wall. In the latter position they seldom do so well, and it is difficult to provide them with all the light and air that they need. A span-roof greenhouse should run north and south, and a lean-to east and west, especially for rose-growing, although, of course, fairly satisfactory results can be obtained with other aspects.

It is quite possible to grow other things in conjunction with roses—tomatoes in the summer, for instance, and chrysanthemums in the winter—but the best success will be attained by those who are able to devote their house entirely to the roses. Some people grow ferns and arum lilies, or some such moisture-loving things, under their roses, but the practice is not to be recommended for several reasons. It is impossible under such conditions to give the trees the periodical rest that they require; and secondly, the state of the atmosphere is difficult to regulate so that it may be suitable to each kind of plant. There is nothing more easily spoilt than a good crop of roses, and the question of temperature and atmosphere are very important when the trees are coming into bloom.

A rose border need not necessarily consist of clay, either wholly or in part, as so many people seem to imagine, a good fibrous loam being quite satisfactory for the purpose. If a little red clay can be procured it will help to give substance to a light soil and the roses will benefit thereby, but they will thrive perfectly well without it if the soil employed is already compact and firm. Previous to making up the bed, which must be not less than eighteen inches in depth, and preferably deeper, the subsoil should be roughly broken up to the depth of a foot or so, and suitable drainage provided. This is best supplied by laying down a quantity of old brickbats, large stones, or clinkers from the furnace. Upon these the soil can be laid, placing the roughest of it underneath, and filling up with the loam and some old rotten cow manure in the proportion of five to one.

The trees should then be planted at the same depth as when they were growing in their previous quarters, and the soil rammed firmly round them. In the case of a house of very wide span the trees can be set much closer than in a narrow one, because in the former case the long shoots can be trained straight up the roof to the apex instead of towards each end of the house. It is a good plan to have wires fixed in both directions, so that in order to economise space and fill the roof with strong young wood the shoots can be trained either way as occasion requires. The wires should not be fixed direct to the rafters, but to supports which project from the glass to a distance of six or eight inches.

In purchasing Maréchal Niels one should be very careful to select only those which show signs of active growth, for stunted and pot-bound trees will not be satisfactory, and these are a bad bargain at a gift. Once planted, attention to temperature, ventilation, watering, and pruning covers the chief points of cultivation. Placed in their permanent quarters, the trees should not be allowed to put out growth of any consequence till early in the following year, and if all artificial heat can be dispensed with till then so much the better. The thermometer, with fire heat only, should not rise beyond 60 degrees Fahr. at first, or above 70 degrees later on.

As soon as the young dark-coloured growth begins and the spring sunshine raises the temperature of the house, the fire must be damped down during the middle of the day, and a light shading of tiffany provided on bright days. Plenty of air must be given whenever the outside temperature is not too low, but direct draughts must be avoided, or mildew—the most troublesome of rose ailments—will surely make its appearance. If this occurs remove the affected parts and paint the pipes with a sulphur wash towards evening once or twice a week, but prevention is better than cure, and mildew is a difficult thing to get rid of once it has established itself.

Watering, whenever needed, must be done with tepid water, and the roots should be mulched with rough manure during the summer. Syringing is a most important operation, and must be carried out assiduously in the early morning and again at night from the moment that the sap begins to rise. Water of the same temperature as that of the house itself must be used, and if the work is carried out regularly, blight should give no trouble. When the colour of the first blossoms begins to show syringing may be discontinued and a drier temperature maintained, with plenty of air. No pruning will be required beyond the removal of superfluous or weakly shoots until the trees have bloomed, when the flowering stems should be cut back to within a couple of eyes of the main rods. The latter must not be shortened except when it is absolutely necessary for want of space, and they will sometimes extend to the length of 20ft. or 30ft. in the course of a season or two.

Marked evidence of falling off in powers of blossoming should be the signal for the removal of a main rod, but if the tree is in good health there will very soon be another to take its place. One should also have in reserve a few plants to replace those which show any signs of canker, to which dread malady nearly every Maréchal Niel that ever grew has fallen a victim sooner or later. But disease is not much to be feared so long as the trees are kept growing by proper treatment and sufficient feeding from the surface, and if the foregoing directions are carried out no one should have much difficulty in securing a profusion of bloom from February to April every year.

F. B.

SUMMER TREATMENT OF STOVE AND GREENHOUSE PLANTS.

A large number of plants thriving in the conservatory and greenhouse benefit very considerably by living an out-of-door life from the middle of June until the end of September, and nothing but good can accrue from it, provided they are placed in suitable positions. We have distinct proof that it tends to the longevity and general all round improvement of plants. The growth made in the open is robust and hard, which fits them to undergo and withstand the adverse conditions of the dull season.

Many amateurs possess tree ferns, large palms, and musas, and a secluded, sheltered and somewhat shady spot should be found for them. Direct sunshine affects palms by turning the leaves a dull yellow, and while in some instances they revert to their original colour when shaded, it is not advisable to render them unhappy. Great care must be exercised in the selection of a site for the tree ferns, somewhere between belts of shrubbery, which will effectually break the force of winds and south-western gales; and, further, the plants must be securely guyed or fastened to prevent them being blown over. It is hardly necessary to say that due attention must be paid to watering, not forgetting that evaporation is much more rapid in the open than under glass. The stems, too, must be well syringed once a day at least, and in very hot weather, morning and evening. Many ferns of comparatively small growth, too, find a place underneath them, such as Asplenium bulbiferum, a large number of the pterises, the Elk's Horn fern, and many others, and I have seen them utilised to render the hardy fernery still more pleasing and attractive, the pots being plunged to the rim.

Eucharises are usually given a rest of three or four months after flowering, and full exposure to the sun will strengthen them considerably, and the same applies to clerodendrons and stephanotis after the growth is completed, thoroughly matured and ripened wood being the result. The Indian azaleas, vallotas, ericas, camellias and oleanders should have a position of doors for some time, and last-named utilised in the decorative portion of the garden, as they profusely in a sun-bathed situation. Further, many orchids revel in the during the period mentioned, and some species of oncidiums, vandas, dendrobiums and lælias may be arranged suspended the summer house or trees of thin growth, such as laburnums, etc.

WALTER H. AGGETT.

HARDY PRIMULAS—No. I.

Hardy primulas are a generous race of plants, for the most part neat and orderly in growth. They consist of many species, with several varieties of distinguished merit that collectively form one of the brightest groups of plants that we can employ for furnishing borders or rock gardens, and in some instances they are singularly at home on the margins of lake and stream, or in the swampy marsh.

It is worthy of passing notice that five species of primulas are indigenous to Britain; our earliest recollections are indelibly associated with the primrose of childhood, and though wider knowledge teaches us that other lands yield species to an extent we little dreamt of, our reverence for the humble harbinger of spring still remains. To the wild primroses we are indebted for that floral wealth which adorns our gardens in spring with the highly-developed forms of primrose and polyanthus, and which are now indispensable in all well-conceived spring gardening; and what conscious pride we exhibit when pointing to P. farinosa as a genuine native, whose dainty form and bewitching flowers are in no way inferior to those Chinese and Himalayan kinds.

Primulas have a wide geographical distribution, scattered representatives occur in North and South America, but their central headquarters in the East appears to be the Himalayas, passing into China. From this latter country, P. Cockburniana, with its fiery orange flowers, has but recently been given us, and it has already exercised a potent influence in cross-fertilisation which augurs well for the continued interest and prosperity of the genus.

Outside the Asiatic species those common to Europe occupy the position of greatest prominence in rock gardens, as it is scarcely possible to accommodate such a dwarf as P. minima unless some special provision is made for it, and in like manner P. Allioni is a continual source of disappointment unless we comply with the exacting nature of the plant, insisting as it does upon root moisture in abundance, yet abhorring water upon the leaves. These are extreme instances which can scarcely be accepted as typical of the genus, for the cultural requirements of the majority of primulas are simple in the extreme. Briefly, they require rich soil, largely composed of humus and having plenty of grit added, which ensures perfect drainage and a cool rooting medium, for, although delighting in abundant supplies of moisture in summer, most of the rock species are impatient of saturated conditions in winter, and I have frequently observed the crowns of P. japonica rot out before spring when planted in too close proximity to water, yet they invariably winter safely when the crowns are well above the water level, though the roots may be largely submerged.

Bogs and marshy ground form ideal positions for such species as P. denticulata, P. japonica, P. Sieboldi, P. sikkimensis, and P. rosea, and under such conditions, and where the surroundings prove acceptable, they often colonise themselves from self-sown seed. These are all Asiatics of unquestioned beauty. P. denticulata is the earliest to flower, and produces closely packed globular heads of flowers, carried on 15in. stems; P. Cashmeriana is a splendid form, having deeply crinkled leaves which are densely covered with a yellow powder on the under side of the leaves, the flowers are bright lilac, several shades clearer than in the type. There is also an albino form which is strikingly effective in a colony.

Closely related to P. denticulata is a fine violet primula named P. capitata. It closely resembles P. denticulata in the form and build of the flower, though it appears to prefer the driest part when grown in a bog, and it is valuable on account of flowering in late summer. Primula rosea is the brightest jewel in the bog in spring, the clear rosy-red flowers impart a charming and refreshing patch of colour which is welcome at this season; try as you like you cannot resist the charm of this pure colour, and can only wonder how such a lovely thing comes to grace our gardens and endure our climate in spring; yet travellers tell us how these fragile stems burst up from the snow and ice on the Himalayas and greet the earliest spring days with that luminous colour which, seen under conditions such as these, must be greatly intensified. However, P. rosea grows strongly and increases, and is quite one of the easiest to deal with, sending up sheaves of its lovely flowers every year during March and April.

Walmsgate. **Thomas Smith.**

CHRYSANTHEMUM ULIGINOSUM.

As Pyrethrum uliginosum this chrysanthemum has long been known as a useful border plant. Nor has the change of appelation affected its good qualities, for, all things considered, there is not a better or showier subject in the herbaceous border in September and October.

Not one whit particular where or in what it is planted, this good old perennial thrives in town as in country, in sand as in clay, though it prefers a medium loam to either. The single plant of this autumn may well be a dozen plants next flowering season, for every lead, every flowering stem, will make a good plant in a single year if at all liberally treated.

A rough and ready way of increase is to chop an old plant up with a spade, but this is inartistic and bordering on unkindness to so good a servant. Far better pull it carefully to pieces with the hands, reject weak or sickly central growths, and plant the strong outside ones nine inches to one foot apart in a large clump. If the site is double dug and some manure finds its way between the upper and lower spits then the appearance of that clump in autumn will be a revelation.

From such newly-formed clumps one may cut sprays of flowers four feet or five feet long, the flowers large as crown pieces, and of the purest white. For church decoration, harvest festivals, etc., it has no rival as a cut flower, a few fronds of dead bracken, a few boughs of early yellowing beech, and, above all, some nicely coloured sprays of Virginian creeper, completing an arrangement as effective as it is easily arranged. Plants may be bought and put in at any time up till March.

E. J. K.

CHRYSANTHEMUM ULIGINOSUM.

A handsome late-flowering hardy perennial of tall growth and bearing pure white flowers.

APPLE FRENCH CRAB.

With reference to the remarks made by Messrs. W. Seabrook and Sons, relating to the above apple (page 403), I fear they have not read up Dr. Hogg on Northern Greening, for if their apple is the same as ours it is not Northern Greening at all, but Winter Greening—(French Crab, of Hogg's "Fruit Manual," fifth edition, page 244). Any novice may recognise Northern Greening by the fleshy swelling on one side of the stalk (see "Fruit Manual.") I send you fruits from our tree, but they are only half their usual size owing to the cold, dull season here. I trust your correspondents will also send you fruits for comparison.

Straffan. **Fredk. Bedford.**

THE PRIVATE GARDENER.

We found ourselves reading the following essay with such great interest that we feel sure, while it was written for American gardeners, it cannot fail to interest and help our British readers. It is from the pen of Mr. Robert Craig, one of the foremost of America's horticulturists, and it was read by him before the Massachusetts Horticultural Society in February of the present year:—

I choose the subject because I conceive that it is one of more importance than is generally assigned to it, and that the private gardener is likely to play a part of continually growing importance in American life. His influence on the future of horticulture is powerful for good or for evil. If he be a capable, energetic, and honest man, he will do such work as will make his employer a patron of gardening, and if he be ignorant, careless, and dishonest he will not only ruin himself, but will damage the cause he misrepresents. Allow me to recite a couple of instances occurring in my own neighbourhood which illustrate this point:—

Success Stimulates Interest.

I was well acquainted with a wealthy gentleman who built new greenhouses and started to improve the grounds surrounding his fine mansion. He was fortunate in securing a fine English gardener, newly arrived in this country; his place rapidly improved under the new gardener's care, and after two years' work, when the owner saw he was getting good results, he became greatly interested, and invested freely large sums to carry on the improvements. Everything prospered and was a source of great pleasure to the owner and his friends, when suddenly the good gardener was stricken with an incurable disease and had to give up work. The place was then put in charge of his first assistant, a young man about 26 years old, who was given a fine opportunity to make a name for himself, but he could not stand even a little prosperity! and, during a spree, an accident to the boilers resulted in the entire stock of plants being frozen. The owner, who had plenty of money to spend in gratifying his tastes, lost all interest in gardening, and became a liberal patron of other fine arts. His collection of paintings and sculpture are known far and wide, but the greenhouses are empty, the garden neglected, and it is not likely the owner's interest in these will ever be revived.

Another instance coming under my immediate observation interested me still more. One of the wealthiest men in the neighbourhood of Philadelphia built one of the finest mansions in the State, employed the highest talent in landscape gardening, and in a couple of years had the new place greatly improved. He employed a young German gardener who had previously, at a salary of only 60 dollars per month, made a good name for himself, gave him entire charge, and he worked with such intelligence, industry, and honesty, that the employer built for him additional ranges of glass at a cost of 50,000 dollars, and allows him to spend annually a large sum in improving the place. Only last summer he took a trip to Europe at his employer's expense, with power to purchase such rare plants as he might select. His salary is now quite satisfactory to him. Oh, but you say, this was a rare case. Perhaps it was, but I am sure at the rate wealth is increasing in this country the number of such places will steadily increase. I like to quote Lord Bacon on this point: "When ages grow to civility and elegancy men come to build stately, sooner than to garden finely, as if gardening were the greater perfection."

The Gardener's Education.

The problem of how a gardener should set about preparing himself for his life work is, in this country, a serious one. In the older countries of Europe, opportunities to acquire a thorough knowledge of all departments are plentiful. There are so many estates on which the grounds are admirably planned and planted, and where there are numerous houses adapted for propagating and growing everything for the garden, that a man may get a thorough knowledge of gardening in all branches; and there are many commercial places which carry on all lines and where boys may go and learn the business as they grow to manhood. There are only a few such commercial places in America. In this country almost all the trade establishments cultivate specialities, as roses, carnations, or palms. Nearly all of our good, all-round gardeners get their training abroad, and it is well for any young man who can get a chance to learn gardening under such a man, either on a large private place or in a park.

Some of our colleges now have facilities for teaching gardening. I wish that all of the colleges would follow the example of Cornell, where they have six greenhouses, in which students may gain a practical knowledge of plant growth, learn how to prepare soil and manure, and have opportunity to gain a general knowledge of advanced gardening. Many of the colleges have now a course in forestry, and I understand that young men getting diplomas, if otherwise fitted, can readily procure employment at fair salaries. It seems to me that the time is now ripe for all the leading colleges to build ranges of glass and have courses in practical horticulture. Graduates from these classes would have an advantage over uneducated men in securing the best positions. The recent establishment of classes in landscape gardening by the Florists' Club of Boston is of great value to those near enough to take advantage, and is an example for all similar institutions everywhere to imitate.

Be a Reader.

To the gardener who wants to improve himself, books are a paramount necessity. Nicholson's "Dictionary of Gardening" and Bailey's "Cyclopedia of American Horticulture" should be in the possession of every gardener; they describe nearly every plant in cultivation, and their cultural notes are of great value. I will not attempt naming all the good books, but cannot refrain from mentioning Jenkin's "Art of Propagation and Improvement of Cultivated Plants"; Taft's "Greenhouse Construction"; Hunt's "How to Grow Cut Flowers"; Henderson's "Practical Floriculture"; Falconer's "Mushrooms"; Ellwanger and Reynolds Hole on "Roses"; "Downing's "Fruits and Fruit Trees"; Peter Henderson's "Gardening for Profit"; Mrs. Van Rensselaer's "Art Out of Doors"; "The Principles of the Harmony and Contrast of Colours," by M. E. Chevreul; Herrington and Smith on "Chystanthemums."

Cultivate a love for books; it is a habit that grows by indulgence. Subscribe for one or more of the trade papers, and get your names on the lists of the agricultural stations, so as to get up-to-date information, the results of the latest experiments along all lines. The seedsmen's catalogues are great educational factors; I know of no greater improvement horticulturally than in the character and contents of these valuable publications.

Every garden may be made more interesting by excelling in some speciality. Every gardener should have a hobby. By saving your own seed, carefully selecting, year after year, the finest, it is astonishing how you can improve the varieties in any species. You will find in a few years your constant and careful pursuit of your hobby will result in making you, and the place you represent, more or less famous. As Emerson says, "If you make shoes better than anyone else you will have a path beaten to your cottage door."

How New Varieties Come.

It is profoundly interesting to study how new varieties come. Nature works, often we know not how, in bringing new varieties. The influence of heredity undoubtedly prevails to some extent, and instances are not wanting to show that it does. Let me give you just one in own experience. Three years ago we made a number of crosses in carnations, using Harlowarden as one of the parents. You will recollect that this sort had a long, desirable stem, and we noticed about one-fifth of these seedlings had Harlowarden stem, but there were teristics developed in a number of lings which had no visible connection either of the parents. Sometimes, ever, the influence of both parents can distinctly traced. Many of you will lect the introduction of the Daybreak nation, a charming variety which had many stems, but these were long and stiff and every shoot produced a flower. the same time was introduced Tidal Wave which produced many stems, but lacking in length. The crossing of these varieties produced the famous Lawson which inherited the good points of varieties. Among the seedlings with son blood has been found Enchantress, which I think has more good qualities than any other variety, and following along this line has resulted in producing a free blooming, vigorous type, which made Mr. Fisher famous.

The results of Mr. Walsh's work roses of the Wichuraiana type are little short of marvellous; the man who does such things is a public benefactor.

But, while man can do something in breeding from types, Nature is always at work and often produces, we know how, valuable breaks in seedlings sports, which are frequently lost because the gardener fails to recognise merits, and propagate and perpetuate them. Private gardeners have done much in the past to preserve and propagate good new things, and should be ever the alert to take advantage of any tunities along this line which kind Nature may afford.

Importance of Vegetables.

One of the main branches of work the private gardener is the growing vegetables. There should be an abundance of vegetables for spring, summer and fall, and where the facilities for their culture, in winter also. dinner is complete without fresh tables, and many of the finest, most cious and delicately flavoured, cannot purchased in the markets, because do not pay to grow commercially. If can furnish your employer a regular ply of these dainties, you will find self in close touch with him, and likely to help you in any of your plans.

Industry and Courage.

Now, a few words on the importance industry. From the earliest times, great men have extolled the value of dustry. "Go to the ant, thou slug- consider her ways, and be wise," served for the text of many a power sermon. The expression that "ge only an infinite capacity for work" been endorsed by many thinkers. N leon said: "I have never found the of my capacity for work." In short men who have made their mark world have been at a loss for wo express themselves strongly enough the subject. Don't be afraid of work don't forget that "folks who nev more than they are paid for, nev paid for more than they do." Let amount of pay be your main con- tion; rather see how much and how you can do the work. The real [illegible] holds out for work is the increased capacity to do more and better work, and consequently greater satisfaction and enjoyment. The man who wants an easy life is not fitted for a gardener. Many good men fail to do their best for want of courage and faith in themselves, and from lack of energy and ambition; there are not so many failures from want of capacity. Herrick says: "The great man is not so great as folks think, nor the dull man so stupid as he seems."

The late Peter Henderson, a great gardener, close observer, and successful business man, often said that he did not think there was so much difference in the mental capacity of men as in their energy, ambition, and industry. Have faith in yourselves and loyalty to your employer. I am fond of the saying of Fra Elbertus: "If put to the point, an ounce of loyalty is worth a pound of cleverness." Don't be afraid to undertake all the time bigger things; your ability will grow in your earnest attempts to accomplish; and don't be afraid of manual labour if occasion require; it will not lessen, but increase your mental power. A stiffening and strengthening of the spinal column begets no weakness in the mind: "A sound mind in a sound body." The advantage of outdoor exercise is recognised everywhere. The orator in the English Parliament exclaimed: "The battlefields of England were won on the cricket fields of Eton," and there was much force in the rejoinder of the Irish member: "They were won on the bogs of Ireland."

Compensation for Gardeners.

The problem of compensation for gardeners is an interesting one. Most gardeners think it is a poorly-paid work, and perhaps it is, considering how much has to be learned. I think, however, the money reward rests largely with the individual. There can be nothing like a uniform scale of wages. I had, for instance, paid my foreman about 1,200 dollars a year, but I must say that one to whom I paid 2,000 dollars per annum was the most profitable one to me.

I think, on the whole, the outlook for first-class gardeners is good. Never in the history of nations has wealth increased so fast as in the United States during the last quarter of a century, and a majority of the wealthy men will, in the future, I venture to say, find their highest pleasure in developing their gardens and country estates. Gardening is the most healthful of all occupations; it is one of the fine arts. Ruskin has defined fine art as any occupation in which the head, hand and heart work together. I cannot see why the gardener cannot take as much pleasure as the owner. "He who admires is the real possessor." "There is no ancient gentlemen, but gardeners."

"Let fools their gold and knaves their
  power,
Let fortune's bubble rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all."

Hedera dentata variegata.—Last year at Holland Park Show an Award of Merit was given to this beautiful variety of the well-known large-leaved Hedera dentata. It has the handsome foliage of the typical kind, but, instead of the uniform rich green of the ordinary form, the leaves are very freely variegated with white. As it is of free growth with ample leafage, this ivy should ere long become very popular. Much as ivies are grown, we scarcely recognise to the full their various possibilities, for, apart from their value for covering walls, pillars, stumps of old trees, etc., they form admirable screen plants if grown in large pots or tubs and trained on a trellis. Ivies grown in this way may be employed as screens in cold, draughty corridors, and for similar positions where more tender subjects would be liable to injury.—W. T.

CROCUS MALYI.

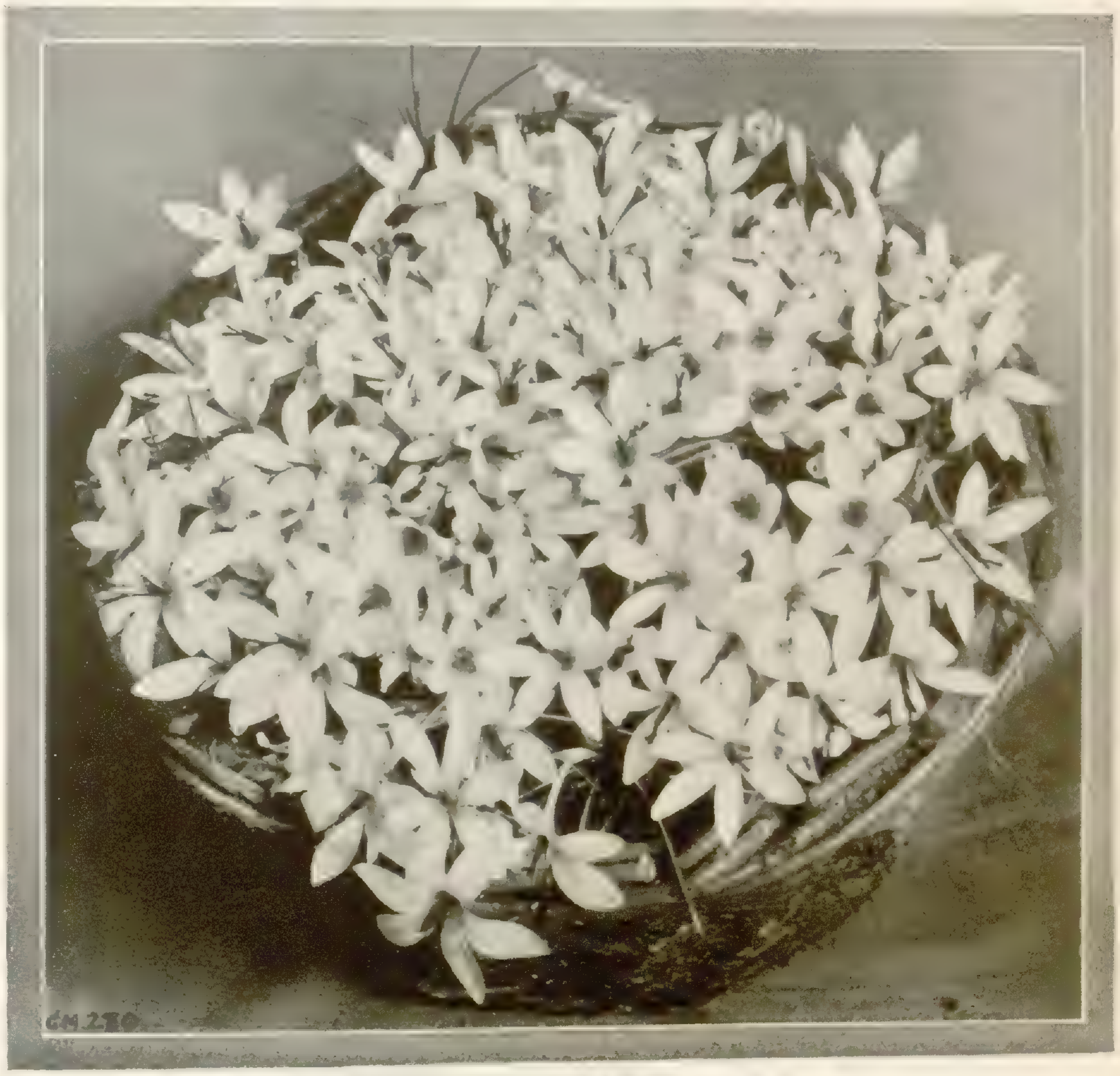
Spring without the crocus would be deprived of one of its most beautiful flowers, and it is little wonder that year by year this typical plant of the season increases in favour, and becomes more appreciated by the lover of gardens and flowers. This increasing favour is displayed not only in the greater quantity of the ever-popular Dutch and golden yellow crocuses which are cultivated, but also in the additional appreciation with which the species of crocus are being viewed. The autumnal species are in greater favour than ever before, and even the opulent charms of the best-known varieties of Crocus vernus cannot well restrain the advance of the other species.

One of the prettiest of the spring-flowering species of crocus is that named C. Malyi, a beautiful little flower, which, although moderate in price as prices go for such flowers, is but little cultivated, save by a few. The illustration gives an idea of the beauty of a mass of this flower when open in the sun. It is that of an exhibit made by Messrs. Barr and Sons, London, at one of the meetings of the Royal Horticultural Society last spring; this firm making a special feature of these crocus species.

Although a coloured plate would be required to do justice to this basket of flowers, it is easy to realise the effect of this mass of pretty white blooms, with a yellow throat, opened wide as they appear in the photograph. The exterior of the segments is also white, occasionally with a few purple markings, yellow at base, and with a yellow tube.

Crocus Malyi was first discovered by Herr Maly—in honour of whom it was named—on Monte Vermaz and Monte Orjen, above the Bocco de Cattaro, Dalmatia, at an altitude on Monte Orjen of 7,260 feet; and it is perfectly hardy with us. It was described by Professor Visiani in the supplement to his "Flora Dalmatica," and is figured and described in Mr. George Maw's magnificent monograph, "The Genus Crocus," pp., 127-8, plate xviii. It belongs to the section Involucrati, and to the division with parallel fibres on the corm tunic, the yellow throat and the parallel fibres distinguishing it from C. vernus. It is a good doer in this country and can be successfully grown in ordinary soil, not too heavy. It flowers with us in March. This beautiful crocus ought to be noted by those who admire these lovely flowers of the spring months.

S. Arnott.



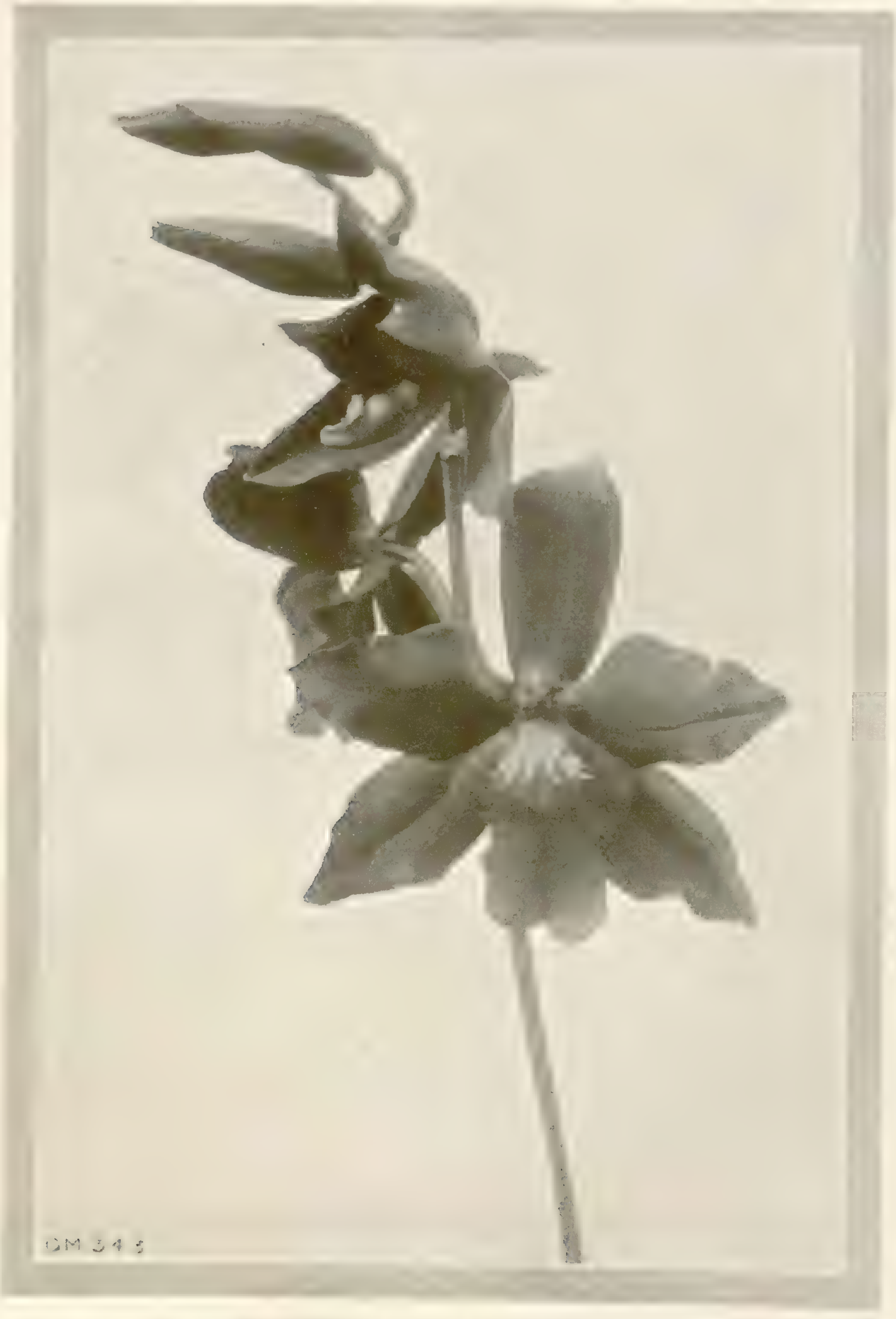
CROCUS MALYI.
As shown at a R.H.S. meeting by Messrs. Barr and Sons.
Flowers white, with yellow throat and tube; exterior sometimes marked with purple.

Cœlogyne Dayana has, perhaps, more attractions for those not used to orchid culture than for orchid specialists, but when grown in the manner we used to see it in Baron Schroder's group at the Temple Show, is a subject worthy of every consideration. Later than usual this season, the plants are now advancing their flower scapes. I consider that when in this state every encouragement should be afforded them. The temperature of the East Indian house or plant stove suits the species well at this period. If removed to cooler conditions as soon as the spikes have fully developed the flowers last in perfection for some weeks. Repotting is best attended to immediately after the plants have passed out of flower. They should not be disturbed unless the compost is decayed or more space is needed. Annual top-dressing will often serve for several seasons. The plants are best accommodated in baskets, and the potting compost should consist of equal portions of fibrous peat and sphagnum moss. — H. J. Chapman, Oakwood Gardens.

ESHER PLACE, SURREY.

This delightful place, the residence of Sir Edgar Vincent, is situated in one of the prettiest parts of Surrey. Though only about 14 miles from town, and near the main Portsmouth road, it is well secluded, and quite free from all the motor traffic nuisance which now does so much to spoil roadside residences.

The mansion, which is a fine one, is reached by two drives, the one leading from the village of Esher, and a new one of considerable length, near the station. The park is of some magnitude, and beautifully timbered with very fine specimens, notably of beech, oak, and Spanish chestnut. The fine grove of Scots firs, which is known to many who visit Sandown Park, stands out conspicuously, and adds much beauty to the landscape. Some charming views are to be had from near the house. With the naked eye one can see Harrow-on-the-Hill, Windsor Castle, Southall, and Elstree.



ODONTIODA CHARLESWORTHI.

The most remarkable orchid exhibit at the recent Temple Show. It was a baby plant flowering for the first time, and it carried four flowers and two buds. The brilliant, solid, crimson-scarlet hue attracted general attention, and the rumour that the specimen had been sold for £1,000 lent it additional interest. It was exhibited by the raisers, Messrs. Charlesworth and Co., Heaton, Bradford, and is described in detail on p. 439.

The River Mole winds its way sinuously through the grounds, and much has been done to encourage the naturalisation of many beautiful spring-flowering plants along its banks. The historic Wolsey Tower is still preserved in the grounds, and forms an object of much interest to visitors. Tradition says—and it is generally believed in by the villagers—that an underground passage used to exist between the tower and Hampton Court.

Sir Edgar Vincent has largely extended and beautified the pleasure grounds near the house, the work being carried out by Mr. Thomas Gibbons, who has had charge of the gardens for some years, in a most pleasing and satisfactory manner. The Dutch garden is well thought out and tastefully arranged; there is a fine terrace and croquet lawn, and during the past winter quite a novelty has been carried out in the form of an amphitheatre. Several tiers of seats have been cut out, and formed with turf.

Large quantities of roses have been planted in masses, and were looking remarkably well. A wonderfully fine tulip tree, Liriodendron tulipiferum, the finest specimen I have yet seen, stands near the house, and, judging from its size, must have been planted soon after its introduction. The girth of the bole four feet from the ground is 23 feet, the spreading branches have a circumference of 300 feet, and the height of the tree is 90 feet to 100 feet. It is in splendid condition, and has apparently never been damaged by severe weather.

The glass department is not extensive, but it is well managed, and fully occupied. Large quantities of such plants as Plumbago capensis, Hydrangea hortensis, and the better varieties of cannas are finely grown for the ornamental vases and tubs in various parts of the grounds.

The kitchen garden is clean, and well stocked, and the fruit trees give great promise of an abundant supply. My visit, which was a brief one, was extremely interesting, owing to the courtesy of Mr. Gibbons, and not having seen these gardens for over 30 years, I can testify to the great improvement which has been brought about during that period in every department, and, with the keen interest which Sir Edgar and Lady Vincent take in the gardens and estate, and the energy displayed by their able gardener, one expects these charming gardens to develop in the future as in the past.

E. Beckett.

PEACH AND NECTARINE FLOWERS.

Once more the flowering of the peaches and nectarines is over, and each recurring season I am asked by different people why some of the varieties have such large beautiful flowers and others such small ones with no beauty in them.

This raises a very interesting subject, and it is about as easy to reply to as to determine the cause of some varieties of lettuce producing black seeds and other varieties white seeds. Of course, we do not know the cause, but the fact is there nevertheless.

Among peaches and nectarines some of the best varieties produce small flowers, for instance, Royal George peach and Elruge nectarine; though, on the other hand, some, perhaps equally excellent varieties produce large beautiful flowers, such as Noblesse peach and Pitmaston Orange nectarine. By some people considered to be the finest peach grown, Gros Mignonne also produces beautiful large flowers. It has been suggested to me that it would be better to grow all large-flowered varieties, as they are such a lovely sight when in full bloom. There is reason in the suggestion, as we find from experience the large-flowered varieties set equally as well as the small-flowered, the fruit is just as good when ripe, the trees require exactly the same kind of culture, and, moreover, give us such a feast of colour when in flower.

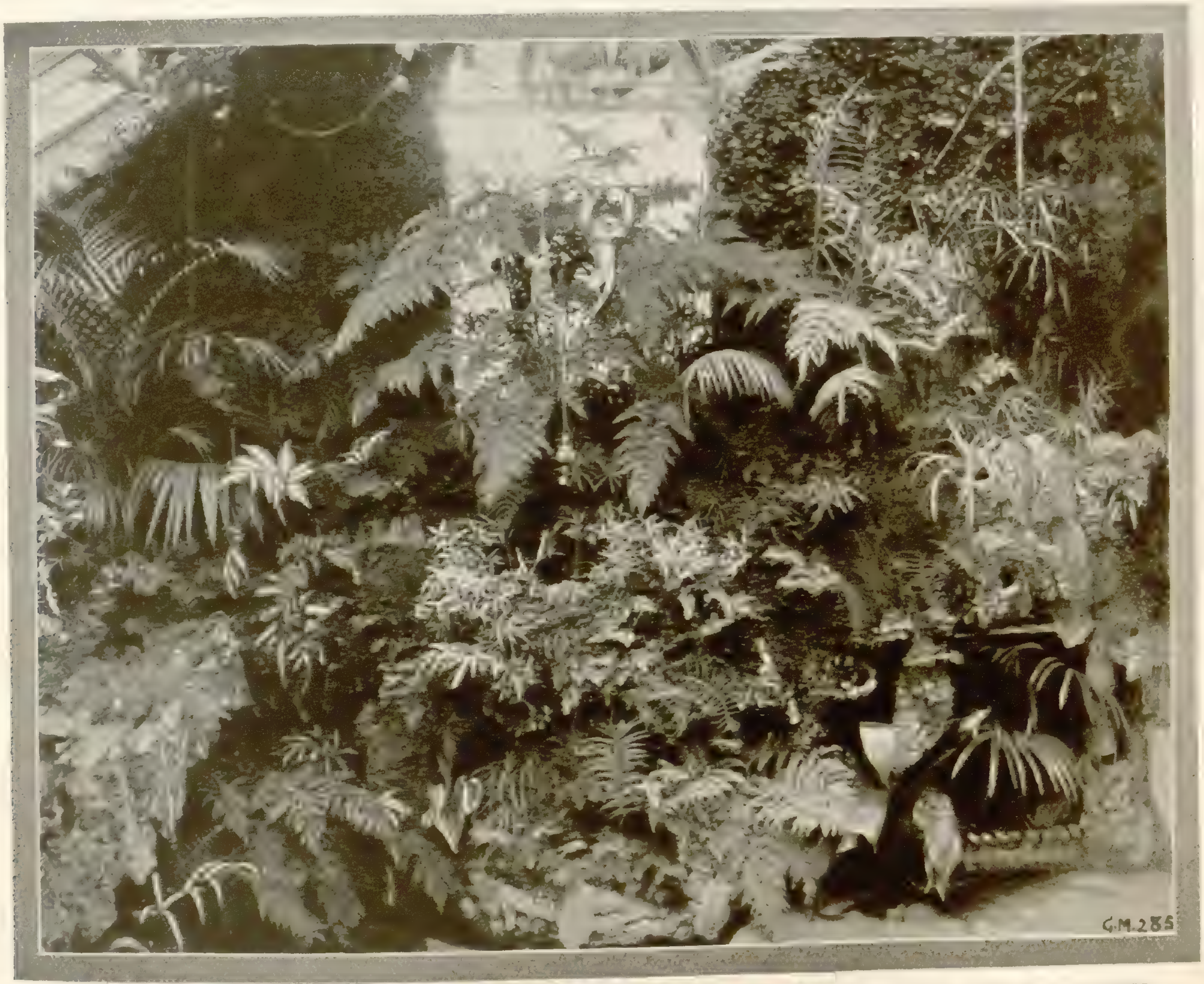
I would suggest that when nurserymen are compiling their descriptive catalogues of fruit trees they indicate whether the peaches and nectarines they include in their list bear large or small flowers. In the old gardening books peaches and nectarines were sub-divided into three classes—large-flowered, medium-flowered, and small-flowered, but for all practical purposes two classes, large and small-flowered, are sufficient.

Cheshire. W M

Colewort Cabbage.—If a sowing is made now of seeds of coleworts the resulting plants will be just large enough for planting out on ground that has been occupied by early potatoes. The plants should be put out about twelve inches apart each way.—T. W. B.

SHADY CORNERS OF CONSERVATORIES.

Where space under glass is too limited to admit of devoting a house or houses to ferns and other shade-loving plants, many of these latter may be well and effectively grown in the shady portions of conservatories or other houses in which a greenhouse temperature is kept up. There is no doubt that many ferneries are kept too hot and close for the majority of ferns in order to suit those species which require a higher temperature, much to the detriment of the cool species which, under the more forcing conditions, keep on growing when they should be resting, and make soft fronds which are easily injured and without stamina.



A SHADY CONSERVATORY CORNER PRETTILY PLANTED IN A TEIGNMOUTH GARDEN.

The cool species generally enjoy a plentiful supply of fresh air, and they can be well accommodated in the ordinary conservatory, provided they get the requisite shade. In such a structure general effect has to be studied, and to my thinking ferns never look so well as when planted out in rockeries, which, if built with an eye to providing suitable pockets for the plants, can be rendered very effective. It is not my province here to go into cultural details, but I may say generally that in rockeries built for ferns the pockets are frequently made too deep, and that the foundation of the structure is generally a mound of soil, which has a tendency to become sour, instead of broken stone or brick ends which have an absorbent nature, and which provide just what is wanted for any roots that may find their way beyond the pockets proper. The latter, too, should generally be shallow, the soil peaty, and well incorporated with broken bricks, etc., to render it and keep it sweet and open. When we consider the great number of ferns, including all the adiantums, which have rhizomatous and surface loving roots we may readily see that depth of soil is not what they want, and that deep pockets are a mistake.

I have under my charge a corridor planted with ferns in tufa rockwork, and where the temperature is low and the circulation of air is ample. In this corridor we find Cyrtomium falcatum the fern which can be depended on to do well in all positions, and it is the one used for portions where others refuse to grow, and I may say that no position comes amiss to it. Many of the adiantums do well here, notably A. Mariesi and A. fragrantissimum, as also do the Aspleniums, of the A. flaccidum type, Davallia canariense, most of the Nephrolepis, including the two beautiful additions to this family, N. todeaoides and N. Whittmanniana; Phlebodium Mayii, Balantium culcita, and Osmunda palustris, one of the most beautiful cool house ferns imaginable, which, unlike the better known but less beautiful (under glass), O. regalis, is evergreen, the young fronds being of a beautiful rosy hue, and in form they are much like those of a strong growing adiantum. I must not overlook the Stag's-horn fern, Platycerium grande, which, as grown on the face of the tufa, is very attractive. Many of the stronger growing pteris formerly did well, but I would suggest these being used with great caution, and only when one is thoroughly satisfied they are free from the wretched little begonia mite which, from the havoc it makes among the pteris, might well have its name changed to that of pteris mite.

In the fernery proper, where the conditions are more those generally chosen for ferns, i.e., warmer and closer, we are able to grow greater variety. Here, too, the ferns are planted out in tufa rockery, and in addition to those already mentioned Adiantum formosum, A. digitatum, A. cardiochlœna, and A. concinnum are excellent as well as Blechnum brasiliense, Didymochlœna lunulata, Asplenium erectum, and A. longissimum, and the very pretty, small growing Lomaria Herminieri, with its rose-tinted fronds. All these are in the first-class for decorative purposes, but perhaps scarcely suited to the airy conditions of the conservatory.

One need hardly point out the value of begonias of the Rex type for use among ferns and palms for these shady nooks, especially where the subjects may be planted out in rock work. Among foliage subjects entirely adapted to the purpose, and most decorative where plants of a larger type cannot be planted, is the beautifully marbled Peperomia Saundersii, one of the cleanest and most attractive plants that can be grown as a sub-setting to most of the subjects mentioned earlier.

Another valuable set of plants requiring very little soil or attention are the creeping ficus in variety. These have a habit, though, of encroaching on their neighbours root and branch, and should be carefully watched and cut within bounds at least once a year.

In the illustration given it will be seen that many other subjects beyond those I have mentioned have been introduced to form an attractive group under conditions not suited for the majority of flowering plants, but which can vie with their gayer neighbours in grace of form, habit, and general attractiveness. J. C. Tallack.

Shipley Hall Gardens.

FRAGRANCE OR SCENT IN THE GARDEN.

All the senses are rich in the power of association, and none of them is more so than that of smell. A writer in "Scribner's Magazine" some time ago said: "A few notes of a buried song, a perfume of trodden grass, the odour of a flower, an old familiar word or two, even commoner things have at times enough magic in them to uncover long-forgotten faces, disclose distant lands or vanished scenes, although in one's memory a mould has covered them for years."

That is a good description of the association of ideas. Some may not have thought of it before, but having it brought to notice everyone will think of instances of it in his own experience—how the smell of box in spring, that box which Oliver Wendell Holmes tells us "breathes the fragrance of eternity," carries him back to the box edgings of some old-fashioned garden he was familiar with in his boyhood, or how the sweet freshness arising from the transplanting or dividing of primrose roots recalls the getting of primrose roots from the woods and ditches. So Thackeray, in "Esmond," says: "Esmond's mistress knew he would like to sleep in the little room he used to occupy; and it was made ready for him, and wallflowers and sweet herbs set in the adjoining room." Miss Gertrude Jekyll speaks in "Wood and Garden," apropos of dividing primrose roots, of "the luxuriously fragrant heap of refuse leaf and flower stem, and old stocky root" which rises in front of her as she sits on a stool in her copse pursuing her idyllic occupation.

Mr. Harry Roberts, in his "Book of Old-Fashioned Flowers," says that there is probably no pleasure so democratic as that yielded by the fragrance of flowers and leaves, for whereas the colour and form of plants require a little attention for their appreciation, their odour overwhelms our senses whether we attend or no. The power of smell can be cultivated, and there is no doubt that we miss pleasure in our lives which—like other gifts of nature—lies ready to hand and only awaits our fitting ourselves to receive it. Browning says:

> "There is a world of capability
> For joy spread round about us,
> Meant for us, inviting us."

One would almost feel inclined to say that the rule "degustibus non disputandum" (tastes barred from discussion) might be suspended when discussing the odours of flowers, taking it for granted that every one enjoys the smell of sweet flowers. Yet one comes across amazing instances of divergence of opinion on this matter. The scent from a field of beans in flower, when wafted across the country, is to many one of the sweetest odours in nature, and yet some dislike it, while sweet peas are positively objectionable to some. Perhaps it is more intelligible that some dislike the scent of May and pear blossom. The smell of violets is found by some professional vocalists to be harmful to the voice, while a momentary smell of tulips gives some a headache. Lilies of the valley are said to be harmful to the sick, and perhaps the scent of many flowers is so when in too concentrated a form. The world of animals and insects has similar likes and dislikes, for while cats love Nepeta cataria (Cat Mint) and Valeriana officinalis, the latter producing an effect almost akin to intoxication, the smell of cloves, rosemary, and lavender is a useful deterrent to moths. Mr. William Robinson, in his "English Flower Garden," says that "a man who makes a garden should have a heart for plants that have the gift of sweetness as well as beauty of form or colour." We do not realise how bountiful Nature has been in endowing plants with sweetness, some mainly giving off their scent by night, such as Nicotiana affinis, night-scented stock, and œnothera, and others by day; some through their flowers and others through their leaves; some only at the time of early spring growth, as in the budding larch, and some of the pines, some only when decaying, as in the case of strawberry leaves, and some, with a little provocation the whole year round, such as lavender, bay, and the herbs. We are apt to set so much value on mere display in our gardens that we neglect plants which only provide us with fragrant foliage, which is there all the year round, to be enjoyed alike at Christmas and at midsummer.

There are many flowers which are not generally recognised as sweet-scented because the scent is so delicate, but if we take a number of blossoms together the scent is very apparent, and all the more ethereal. Pansies are an instance, though some are sufficiently strong for one flower alone to give a rich fragrance. Wild hyacinths, wood anemones, and even primroses, only smell collectively, while heather and furze, which have no noticeable smell in a small piece, yet, on the moors, especially in Cornwall, where the dwarf autumn-flowering furze is common, they give that incomparable wildflower air which, once smelt, is always remembered.

To the garden lover it is a bountiful provision of Nature that there are so many sweet-scented things in every class of plant. If he makes a speciality of shrubs and shrubbery plants he has lilac, mock orange, weigela, roses, may, honeysuckle, sweet bay, winter sweet, lavender, sweet gale, rosemary, southern wood, white jasmine, myrtle, and many others. If he devotes himself to annuals, the choice of fragrant plants is as great, and we need only mention sweet peas, stocks, mignonette three things no garden should be without—sweet sultan, scabious, Nicotiana affinis, rockets, and so on. And when we come to perennials, then surely we have the sweet-scented garden in its highest perfection, and so full of sweetness is it that its fragrance overflows its boundaries and gives pleasure not only to the neighbours, but to those who pass by. It is these which make the delight of the old-fashioned garden with their borders of pinks, carnations, and lilies of the valley, their primroses and auriculas, white lilies and sweet-scented day lilies (Hemerocallis flava), violets (the wild wood violet, sweetest of all), iris, pæonies, arabis, and aubrietia in the early spring sun, and, perhaps sweetest of all, a "sun-baked bank of wallflowers." The flora of warmer climates has of late years added to our immense selection of sweet-scented flowers, but it has given us nothing sweeter than these.

Having then such wealth let us make up our minds not only to have abundance of fragrant foliage in our gardens, but to have some sweet-scented flowers all the year round. This is quite possible, for the winter heliotrope, winter sweet, daphne, Czar violets, Iris stylosa, and I. reticulata last long enough to see the first primroses and pansies take up the succession, and even before these we have the delicate freshness of the snowdrop and the crocus, while wallflowers may with a little trouble be had in flower from October to May.

The more we enjoy the sweet scents of the garden the more enjoyment they will be capable of affording us, and thus we shall be laying up a store of enjoyment for our old age. I may fitly conclude this article by a quotation from the English classics, and that from no less a writer than Lord Bacon, in his essay entitled "Of Gardens": "Because the breath of flowers is far sweeter in the air (where it comes and goes, like the warbling of music), than in the hand, therefore nothing is more fit for that delight, than to know what be the flowers and plants that do best perfume the air. . . . That, which above all others, yields the sweeter smell in the air, is the violet, especially the white double violet. . . . Next to that is the musk rose, then the strawberry leaves dying, with a most excellent cordial smell. Then the flower of the vines . . . Then sweet briar, then wallflowers, which are very delightful to be set under a parlour or lower chamber window. Then pinks, especially the matted pink, and clove gilly-flower. Then the flowers of the lime tree. Then the honeysuckles, so they be somewhat afar off. Of bean flowers I speak not, because they are field flowers. But those which perfume the air most delightfully, not passed by as the rest, but being trodden upon and crushed, are three, that is, burnet, wild thyme, and water mint. Therefore you are to set whole alleys of them to have the pleasure when you walk or tread."

Alger Petts

SEDUM KAMTSCHATICUM VARIEGATUM.

The stonecrops of Easternmost Asia are generally better garden plants than European ones, thriving apace in the ordinary soil of borders, and giving a dis in late summer and early autumn w most species have passed their b Typical S. Kamtschaticum has been w us for a long time, and did not make h way, but the variegated form leaped popularity at once, and is now rega as a model rock plant, ever present and in summer and autumn capable forming the prettiest group in the garden. Like most stonecrops it pos a strong, almost unkillable cons tion, and in a light free soil it qu grows into patches 2ft. or 3ft. square leaves and flowers combining in a scheme of white, green, and gold that cannot fail to please.

The lengthy trails are thickly studded with oval leaves whose colouring varies from grey-green to white and yell growths terminating in a flattened of bronze-gold buds that are in the s superlatively attractive. The tra from buds to flowers and from flowe seed capsules is slow, and almost i ceptible, for all retain the bron colouring, but there is more gold bronze when the flowers are fully op plant of this description deserves a pe nent place in the rock garden, and one can suggest further uses, that of furnishing the bases of sun-dials, pillars, vases, and other ornaments of stone or ware. It readily grows in gravel, and the growths root as they lengthen. The plant has received the Royal Horticultural Society's Award of Merit, and I think everyone w it in good condition invariably ad

G. B. M

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THE VALUE OF WHITE FLOWERS.

"Blossoms white as driven snow
Blush beneath the sunset glow,
Spread, and drape in fashion grand,
Cloaks of silver o'er the land."

The garden that lacks sufficient white flowers will never be satisfactory, and it is the absence of this colourless colour, which is a combination of all colours, that makes many a home landscape perplexingly unpleasing. This age of red brick demands more white blossom than did former times, when houses were mostly cream or grey; the white-painted woodwork that adorns modern villas is the architect's attempt to subdue the brilliance of scarlet, but the gardener must further carry out the effort in beds, borders, and shrubberies if the appearance of the dwelling is to be artistic.

Nature always gives white bloom as well as coloured, whether in woods, fields, or hedgerows, cornfields or commons, at all the floral seasons of the year; the anemones of spring, and daisies among autumn's wear being noteworthy instances.

In our gardens arabis is a great boon early in the year, with the white varieties of narcissi, tulips, and hyacinths: it is as summer brings a wealth of gorgeous hues that white becomes more rare, and then it is that by bedding out we should introduce it in considerable quantity. Marguerites, stocks, asters, pelargoniums, and nicotianas are the ordinary plants ready to hand, with candytuft and sweet alyssum among the popular annuals. Seldom are the giant candytufts grown to perfection, so it is not too much to say that their beauty and size will astonish all who treat them well. The Empress variety is perhaps most effective, the Spiral being more elegant.

By a little care we can arrange exquisite beds of all white flowers, without using any of these invariably-patronised subjects however: the white giant verbenas can scarcely be surpassed for loveliness, and if plants of white single cactus dahlias are set at wide intervals over this carpet of pegged-down verbena there will be plenty of flowers on a high as well as a low level.

Other first-class bedding plants obtainable in white are begonias, clematises, lobelias, petunias, violas, zinnias, sweet sultan, and giant centaureas, poppies, cornflowers, Phlox Drummondi, dianthus, godetias, cosmeas, balsams, scabious, carnations, campanulas, hydrangeas, zonal pelargoniums, lupins, Lavatera trimestris, linarias, gilias, daturas, cerastiums, clarkias, collinsias, annual chrysanthemums and antirrhinums.

It should be remembered, too, that white variegated or silvery foliaged plants give the same cool effect as white flowers, and ought to be well represented. Perpetual white masses are, of course, of yet more value in the garden, but though they cannot be added until autumn, it is during summer that the zealous gardener will make notes as to the exact localities thus to be cooled, and at the same time lightened in appearance, while visits to shows and to florists' grounds will suggest numerous novelties and reminders of old forgotten favourites.

For sunny places pinks, Chrysanthemum maximum, Japanese anemones, and early chrysanthemums prove successionally attractive; for shady ones the summer and autumn phloxes thrive best, though chrysanthemums, Japanese anemones, hollyhocks, campanulas, and Michaelmas daisies often do very well. Perhaps the chief shady garden beauty of spring is the aquilegia, and of early summer the spiræa, dwarf as well as shrubby.

Window boxes in full sunshine can be admirably filled with miniature polyantha roses, such as White Pet, a fact of which enough use is never made. Verbenas again prove useful, with the marguerite as an unfailing standby.

A lawn bed that is to be seen from a good distance, across park land, for instance, shines out best of all if massed with white flowers; indeed, a hill-top bed of white is visible, like a snow cap, beyond many an acre.

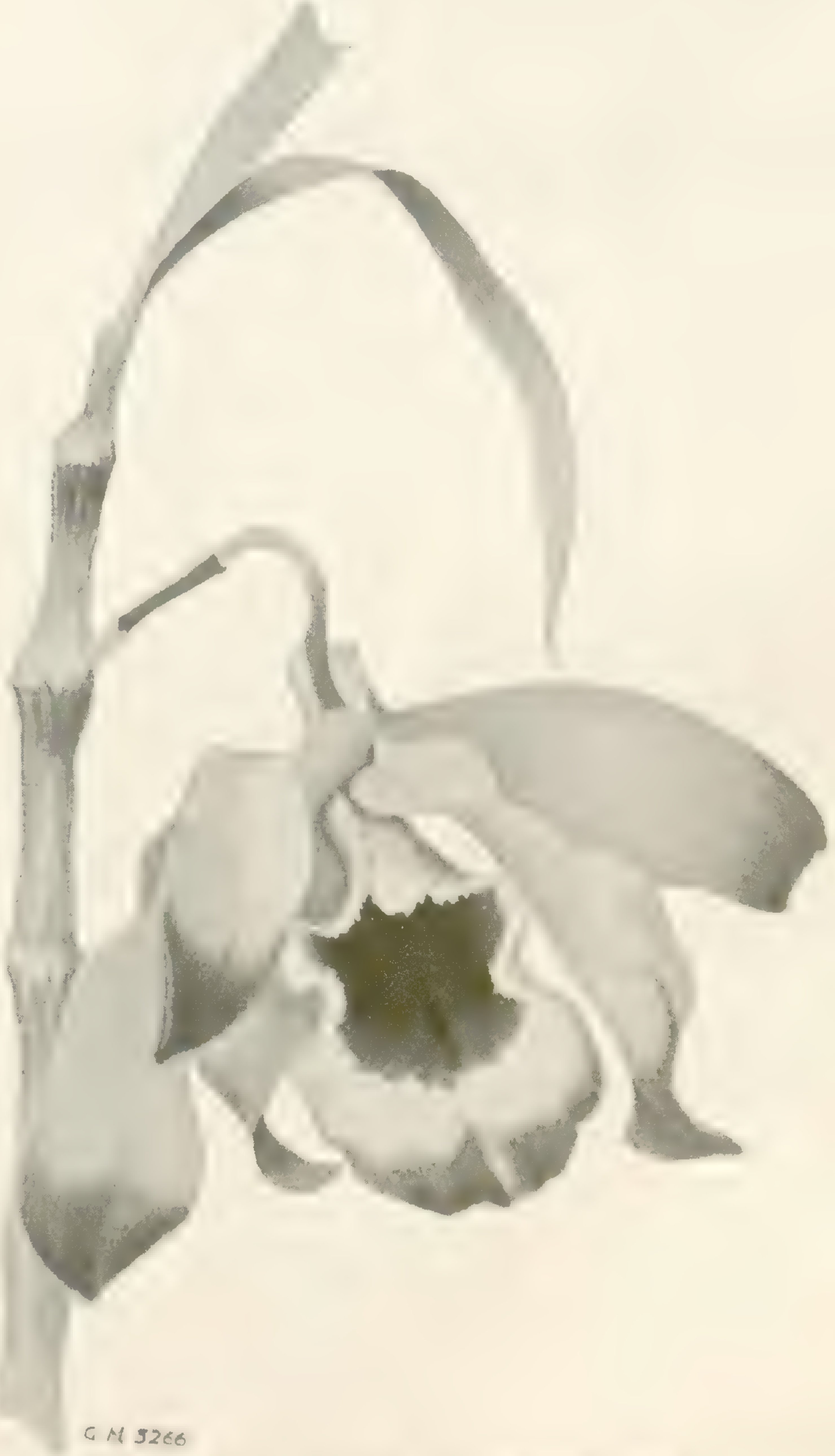
White roses up red walls are perfect, but it is wise to plant white-variegated ivies as well, in order to keep up the effect when rose blooms are absent; any time during summer I have planted ivies successfully, giving copious supplies of water and a mulch of leaf-mould to keep the roots cool. White lilies cannot be too highly praised, and should be divided and replanted after blooming if the clumps are too thick, so the gardener has another summer chance to increase the living snow of the beds and borders. M. H.

Autumn Displays. — Where an autumn effect only is required, and borders are suitable, pleasing displays can be made by planting annuals and herbaceous plants in clumps or masses rather than mixing them. Select the autumn bloomers of both sections, and arrange them according to height. A further sowing of mignonette may yet be made, and should there be any biennials not sown no further time should be lost in sowing them.—E. F. H.

DENDROBIUM VENUS GRANDIFLORUM.

Among the many hybrid dendrobiums which Mr. Norman Cookson has been successful in raising and introducing, D. Venus (Falconeri and nobile) is undoubtedly one of the finest. The typical D. Venus was exhibited by Mr. Cookson on April 14, 1891, at the Royal Horticultural Society's meeting, and received a F.C.C. The subject of the accompanying illustration, D. Venus grandiflorum, was raised among the original batch of seedlings. It is to D. Venus what the best forms of D. nobile nobilius are to the typical D. nobile, altogether larger, finer in substance, and the deep rosy-purple of the tips of the sepals and petals is extended almost to the base of these segments. In growth also it is much stronger, and flowers annually in profusion. It was exhibited at the R.H.S. meeting on April 21, 1903, and was awarded a First Class Certificate. Dendrobium Venus does best when grown under stove conditions, with a cool rest, and only sufficient moisture is required during the dormant season to keep the pseudobulbs plump. It is advisable not to remove the plants after the flower buds are formed until the whole have become fully expanded. Like its parent D. Falconeri, the flower buds usually damp and fail to expand when the plant is moved before the blooms have become expanded.

H. J. C.



DENDROBIUM VENUS GRANDIFLORUM.

Flowers rose, with rose-purple tips to sepals and petals, and dark blotch on the lip.

THEORY VERSUS PRACTICE.

At some time in his career every gardener encounters this controversy. It is frequently debated with much warmth and less benefit. Although at first sight the two may seem to be diametrically opposed they really are not. It is supposed that the theorist cannot do practical work, and the really practical man scorns theory. In point of fact, we do not find such men. We do find men differently endowed with a love of practical work or theoretic study, and, to a large extent, this is a matter of temperament and environment.

Theory here means that portion of experience or knowledge which is gained by means other than actual work. Reading garden literature, attending lectures, and studying sciences may be regarded as coming under theory. How any of these can disqualify a man for ability and success in actual work I cannot conceive. The theorist is regarded among gardeners much as is the idealist in social life. Yet all reforms have been inspired by idealists. Paradoxical as it may seem, only the idealist is a practical man, for until a person has an aim and destination there can be no purposeful progress. As in real life the idealist is often half a century ahead of his fellows, so is the garden theorist, for theory often begets practice. In men of horticultural repute it will be found that a due blending of theory and practice form the basis of success.

Practice is the actual work of gardening, but how this will ensure progress without the stimulant—theory—I cannot understand. The man who believes only what he finds by actual experience to be true will find himself scantily furnished with knowledge. Theory and practice represent the mind and matter—one might well say the soul and body—of gardening.

The arguments which can be adduced to show how irrational it is to despise theory possess force and solidity sufficient to break the bottom of an ironclad.

How can a man take an intelligent interest in his work if he is not conversant with the elementary principles of gardening, and how is he to obtain that knowledge in a clear, concise form unless he consults some recognised text book or attends lectures? Nor let it be imagined that the study of these principles is of no importance—that a man can become a good gardener without "all this rot." No man can become a good gardener who is unacquainted with the principles which govern his practice. He may have gained his knowledge in an unorthodox way, but possess it he must, or success can never be his. A knowledge of the bedrock principles of the profession is imperative, and I have yet to discover a simpler method of acquiring it than by reading, study, and observation.

The matter may be better explained by illustration. As a young gardener changes places he will have to take charge of fruit and plant houses with ventilating gear and heating apparatus of various kinds. Now if he has accustomed himself to act as a mere machine, to give a certain amount of ventilation at a certain time, and to be very chary of using his brains as if fearful of exhausting the supply, he will find himself in difficulties. If, however, he has made himself master of the fundamental principles, he will experience no difficulty in applying them in these varying circumstances.

Again, let a young man of the mechanical type, who has been trained in places fortunately free from certain pests, obtain a situation as foreman where the plants are a prey to many insect and fungoid pests. Imagine his difficulty, and think how much more confidence he would have if some portion of his spare time had been spent in reading the experiences of others.

We will suppose that a vinery is to be cleaned and started. At about the same time other gardeners will be starting theirs, and an article on the subject will probably appear in the garden papers. What possible harm can be done to a young man by reading such an article and comparing the writer's method with that prevalent in the place he works at? It is this power of comparison which stimulates reflection and favours progress. The very process of comparison sets the thinking apparatus in motion, prevents it becoming rusty, and favours the development of sound judgment which is an attribute of unparalleled usefulness.

Let me, however, warn readers not to imbibe all that is written as if it were established truth. I have no wish for them to do so in the present case. No writer has yet given proof of infallibility, and however true his statements and correct his methods, the dissimilarity of circumstances must be considered. Scientists recognise as an axiom that the like conditions will give the like results, but there is often a difficulty in ensuring precisely the same conditions. "Slowness of belief and mistrust are the sinews of wisdom," is an aphorism I would commend. To follow the methods of another implicitly is folly, but to experiment cautiously in that direction is the height of wisdom.

That is undoubtedly the safest attitude to adopt on the question of theory and practice—to learn as much as possible by theory, and at the earliest opportunity verify it by practice. It is by carefully blending the two that successful gardening is evolved. The man who loads his mind with theory without proving it by practice will find himself in a deplorable muddle. The dreamy theorists and the severe practitioners are the two extremes between whom lies virtue—and horticultural success.

William F. Rowles.

Rock Garden.—This, where it is a success, will continue beautiful and interesting. Primulas, ramondias, saxifragas, achilleas, potentillas, geraniums, dianthuses, and a host of other flowers follow each other in good succession. Keep a close watch on all, so that nothing becomes damaged or killed by its stronger-growing neighbours, or is allowed to suffer through droughts. The meconopsis are not proving quite so robust as we had hoped. Of M. integrifolia we have lost all our stock.—E. F. H.

Tulipa biflora major.—One of the earliest of my tulips this season has been the one known as Tulipa biflora major, a many-flowered variety of the Two-flowered Tulip, T. biflora. It came into flower very shortly after T. Kaufmanniana, and this, though it was established in a half-shaded position, while the other was in a more open and sunny part of the garden. Indeed, I was quite surprised when I came upon it rather unexpectedly towards the end of March, as I little expected it quite so early after such a cheerless and wet winter. No one can call this a showy tulip, as its flowers are small, white, with a yellow eye in the interior, and of a greenish-brown outside. The number of flowers on the stalk varies from two to four, and it is a most interesting plant in many ways, not the least because it, and the typical T. biflora, are said to be the connecting link between two classes of tulips, the true Tulipa and the section Orithyia. This variety has not been long in cultivation, but the type was introduced in 1806 from the Caucasus.—S. Arnott.

TULIPS AT COLCHESTER.

To those who visit the exhibitions and meetings held in May, or who read our reports on these gatherings, it is a matter of common knowledge that Messrs. R. Wallace and Co., of Colchester, have for many years past devoted special attention to the tulips flowering during that month, and contributed materially to the high degree of popularity to which they have so worthily attained. It will, therefore, not be necessary in recording our impressions of the magnificent display in the nurseries and grounds of the firm when we had an opportunity of visiting them just previous to the Temple Show, to refer to the work Messrs. Wallace have accomplished in connection with the popularisation of the cottage and other tulips that bloom at the same time. It will suffice to say that they have constantly kept a sharp look-out for varieties possessing a high order of merit, they have added them in liberal numbers to their comprehensive collection, and grown them successfully, and presented them to public notice in such manner as to enable visitors to form a correct estimate of their merits, as compared with well-known varieties in similar lines of colour. In this way they have rendered services of much value in connection with garden tulips. With a clear impression of the large collection of finely-grown tulips the firm has shown during the past season, as in previous years, we are disposed to place a very high value on the work they have accomplished in bringing before cultivators the many beautiful tulips that are now in cultivation.

The comprehensive collections that annually form such conspicuous features at the spring shows will have given the proof of Messrs. R. Wallace and Co. as large cultivators of tulips; but one can only obtain an adequate idea of the extent of the culture by a walk through those parts of their extensive grounds that are devoted to tulips. We shall not enter into details as to the numbers grown, but as the collection comprises several hundred varieties, and the majority of these are represented by thousands of bulbs, it will not be difficult to understand that many acres are occupied, and that the display during the is remarkable for its effectiveness. May-flowered tulips may, for convenience of reference, be divided into three sections, the first to comprise the cottage, the second the Darwins, and the third the species which, broadly speaking, bloom during March and the two following months.

The most important of the three sections is that comprising the cottage, or May-flowering varieties, and as one walks through the quarters, notebook in hand, it is easy to resist the temptation to make somewhat lengthy selection. Possibly may have made note of more varieties may be considered necessary for any garden. To those who may be of opinion we would say they are all highest merit, and that a selection readily made from those enumerated ing those giving the colours for which is the greatest preference. Highly tive in the collection was Afterglow, a of the largest size and of fine form, and colour deep golden-yellow, passing to son-bronze with age; Cardinal Manning handsome flower of a rose-violet hue, valuable for its distinct colour; Coronation Scarlet, a strong-growing variety, with elegantly shaped rich scarlet flowers; Don Pedro is a handsome dark flower, the colour purple-maroon, shaded bronze, and valuable for the fine contrast it gives to the brighter shades; Eurasian, a tall grower, bearing elegant flowers, attractively coloured reddish-pink, shading at the margin with yellow, is at once distinct and good; Flame well deserves its name; the flowers are large and the colour orange-scarlet, brilliant in hue, and very effective; Glaucopis is a charming little tulip, the colour bright rose with blue base; Hammer Hales is one of the most effective varieties in the section, the flowers are large, and the colour bronze-yellow; Inglescombe Pink, Inglescombe Scarlet, and Inglescombe Yellow form a trio of quite exceptional value; they all have flowers remarkable for their large size and fine shape, and the colours are indicated by the names. Very distinct and pleasing is Innovation, the flowers large and finely formed, lightly flecked with carmine on a cream-coloured ground: John Ruskin, apricot, flushed with rose, is worthy of the distinguished name it bears: Kathleen is a lovely pale yellow flower: La Merveille has large flowers with petals that elegantly reflex, as in Tulipa retroflexa, and the colour is bright coral-red, shaded rich apricot; Mrs. Moon, rich yellow; Orange Beauty, deep red-bronze; Primrose Beauty, pale yellow, are of much merit in their respective lines of colour. Scarlet Emperor must be mentioned as one of the very finest of the scarlet tulips flowering in May: The Fawn, a distinct variety, the flowers of large size and superb form, and the colour fawn with deep yellow shading; and Walter T. Ware, a superb flower of a rich golden hue. The last-named received the distinction of a F.C.C. from the Royal Horticultural Society at the last Temple Show.

The Darwins now constitute a large group, and it is satisfactory to have evidence of their continuously increasing popularity. There is in all of them some formality in shape, a characteristic that strongly appeals to those who have a proper appreciation of perfection of form, but in no case is the formality such as to detract from their charms, even in the eyes of the most æsthetic of the admirers of the tulip. The large, finely formed flowers of the Darwins produce a fine effect in the garden, and are extremely beautiful when lightly arranged in rather tall vases for indoor decoration. Anthony Roozen, one of the earliest of the section, has deep rose-coloured flowers, with a blush margin to the petals; Clara Butt, rich rose-pink, may be described as the finest in its colour in the section; Claude Gillot, glowing vermilion, is very effective; Mr. Farncombe Sandars is the finest of the crimson Darwins, and is well shown in the foreground of the illustration of tulips at Colchester; Fra Angelico, dark maroon, is remarkable for its depth of colouring and fine form; Hippolyte, bright lilac, is valuable for its distinct and pleasing shade; King Harold, rich ruby-crimson, has flowers of superb form and exceptional size, and must be described as one of the very best; La Tulipe Noire also has flowers of fine form, and the dark black-maroon is valuable for contrasting with lighter shades; Margaret is a medium-sized flower, of a soft rose colour, and exquisitely beautiful; Mellicette, lilac; Millet, deep crimson; Professor Rawenhoff, cherry-red; Suzon, pale pink, Van Poortvleit, rich rose; and Zulu, purple-black, are also exceptionally meritorious.

Messrs. R. Wallace and Co. grow the major portion of their tulips in their extensive grounds on the east side of the railway, and therefore in the direction of the town of Colchester. They also grow a comprehensive collection in an enclosed garden near the offices on the west side of the railway, for the convenience of visitors who may wish to see the varieties with as small an expenditure of time as possible. We give herewith an illustration of a corner of the garden, and in this the variety in the foreground is the handsome Mr. Farncombe Sandars. We might add that the cultivation of tulips, as carried out by Messrs. Wallace, is of the very best, and as one result the plants did not suffer from the adverse influences to which these flowers were this year subject until within a short period of their reaching the flowering stage.

A CORNER OF MESSRS R. WALLACE AND CO.'S GARDEN OF CHOICE TULIPS.

The variety in the foreground is Mr. Farncombe Sandars.

SWEET PEAS TO PERFECTION.—The new work, Sweet Peas and their Cultivation for Home and Exhibition, by C. H. Curtis, hon. secretary, National Sweet Pea Society, contains full information as to the selection, planting, and general management of sweet peas. The price is 1s. net (by post, 1s. 2d.), or bound in cloth, 1s. 6d. (by post, 1s. 8d.), from W. H. and L. Collingridge, 148, Aldersgate Street, London.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

GENERAL REMARKS.—The more favourable weather of the past two or three weeks has been most beneficial to growth in all divisions of the orchid houses. The warmer divisions have undoubtedly benefited to the greatest extent, and the rapidity of growth has been the more pronounced, perhaps, because growth was more or less retarded by previous unfavourable climatic conditions. Where growths are advancing rapidly there is always a danger of their becoming drawn and weakly. Care must therefore be taken to afford ample ventilation, and all the available light should be given, taking care that the old foliage does not become discoloured or scorched by excess of sunlight. In fine, bright weather, the cattleyas and allied genera will be benefited by being sprayed overhead once or twice a day.

DENDROBIUMS, especially where grown under strong light, should be freely syringed overhead, but care must be observed to see that the foliage is permitted to become dry before the cool evening temperature is reached. Care should be taken to use rain water for syringing purposes, as hard water will be found to leave a white deposit on the leaves, which gives an unsightly appearance to the plants.

VENTILATION.—I have for years advocated ventilation early in the morning whenever there is a prospect of a bright day. There can be no doubt that early ventilation has a considerable effect on the inside temperature during the hottest parts of the day. There is an equal advantage derived also from closing early, and damping should be done at the time of closing the ventilators, and by removing the roof blinds at the earliest possible moment the humidity and light thus obtainable are not only beneficial to the plants but the heat thus obtained dispenses with a considerable amount of artificial heat. Only sufficient fire-heat should now be used to keep the temperature about normal; a warm circulation in the pipes the last thing at night is desirable, as it affords opportunities of opening the ventilators, and thus changing the atmosphere.

IN THE COOL DIVISIONS the greatest difficulty is in keeping the temperature low. I think most present-day growers have departed from the hard and fast lines of cold treatment for odontoglossums, and we are thus perhaps not so precise about the temperature rising above the normal as we used to be. In fact, where the more robust growths and larger pseudo-bulbs are found, it is impossible to produce satisfactory results at the flowering season unless more light is given to mature the greater bulk of growth, and with more light there must naturally be warmer conditions. It is a good plan during the warmest part of the year to whiten the roof with a thin permanent shading, in all cool houses excepting those with a northern aspect: This permits the blinds being taken off earlier in the afternoon, and their use later in the morning, and the plants are thus able to obtain considerable advantage from light. I find considerable benefit from syringing lightly overhead once or twice a day in bright weather; ample moisture must also be maintained in the atmosphere at all times, with a free circulation of air through the lower ventilators whenever the outside conditions permits.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PELARGONIUMS AND HELIOTROPES. —It is sometimes very difficult to know with what to clothe the back wall of a vinery or peach house, and it is not too much to say that in two or three years such a position can be made of much interest and beauty by planting pelargoniums and heliotropes. The present is a capital time to plant, and the border which the plants are to occupy should be drained well, and be filled with good turfy soil. To this add some old mortar rubble. With good plants and a little attention a fair amount of the wall space will be covered by the autumn. Water well during the growing season. The only other thing necessary is to thin out a few of the weak shoots before growth commences early in the year. I find the old Pelargonium Vesuvius, and the pale blue Heliotropium peruvianum, answer well for this purpose.

GLOXINIAS.—Plants raised from seed sown early in the year should be well looked after. By the beginning of September they should be good flowering plants. These grow best in low-roofed houses, where they can be placed near the glass and obtain plenty of light. Weak applications of guano and soot water will encourage the development of large leaves, good crowns, and abundance of flowers.

FOLIAGE PLANTS, such as caladiums, will now be in fine condition, and there will also be plenty of flowers. Streptocarpus hybrids will make very pretty groups in a moderate temperature, and they are easily cultivated. Achimenes, again, make pretty specimens when well grown, and are charming for baskets, and when well established they should be taken to the conservatory. The training of the summer-flowering climbers must have frequent attention to bring their young shoots up to the light.

FREESIAS.—Those who wish to have a succession of these flowers from December onwards should soon make preparations for potting the first lot of bulbs. The earlier they are potted the better, and the longer will be the season of growth, and, therefore, better results may be expected. Freesias are not difficult to grow, provided they have cool treatment, a sandy soil, and well-drained pots. Take care to keep the bulbs in their respective sizes, otherwise when the plants are fully grown the results will be somewhat disappointing, tall and short growths will intermingle, and half the flowers will be hidden. If the same sized bulbs are placed together a much more uniform potful of plants will be obtained, and all the flowers will show to advantage. Freesias do not require much soil, therefore I would recomment their culture in four or five-inch pots, as they are not only more useful for decoration, but I find the plants grow better. It is necessary, however, to give them frequent supplies of liquid manure when growth is well advanced, and to continue to do so until the flowers open.—T. B. FIELD, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

COMPLETE THE SUMMER BEDDING as soon as possible, and do all that can be done to assist plants to become established, so as to obtain a long season of growth; anything transplanted from boxes will be greatly helped if a little shade from the fiercest rays of the sun can be given; if nothing else is procurable a few leafy boughs cut from large forest trees and stuck obliquely in the beds will give an appreciable amount of shade. See that nothing suffers through lack of moisture.

CARPET BEDDING.—Though not as popular in private gardens as it was a number of years ago, carpet bedding is still appreciated in some places, and where there are a sufficient number of beds one or two carpet beds make an agreeable change if in suitable positions. I never advocate the strictly flat or level surface, an undulating or broken one being much more pleasing, and even if all dwarf plants are used an uneven surface can be formed by mounding the soil up according to design. A level surface may also be relieved by a number of suitable dot or specimen plants; these may consist of agaves, yuccas, Grevillea robusta, dracænas, Acacia lophantha, Chamæpeuce diacantha, palms in variety, eucalyptus, acalyphas, and many others. Be careful in planting to adhere strictly to design, and lay the design down by accurate measurements, or the effect will be spoiled. Do not use a too intricate design, a bolder one being much more effective.

RAISED BEDS.—Where there are a number of raised beds in wire or other frames, of basket shape and pattern, very pleasing effects may be made by the use of trailing or creeping plants for the sides, such as ivy-leaved pelargoniums, lobelia, Phlox Drummondi, convolvulus, lysimachia, tropæolums, petunias, alyssums, etc., with freer-growing ones for climbing over the handles. Sometimes clematis are permanently planted for this purpose. The bed or basket may either be filled with mixed plants or only one or two varieties. If at a distance from the view point, and with a dark background, bright-coloured flowers should be used; if nearer to view, and in the open, mixed, or more subdued colours should be used. Where the frames of such beds are covered with ivy dig the soil away from the sides to sever small roots, or else the ivy will greatly impoverish the beds; add fresh soil, with an addition of well-decayed manure or bone-meal.

DAHLIAS.—If not already done these should be planted without further delay; if the ground has been prepared according to previous instructions, it should now be in good condition. Before planting drive a good strong stake into the ground, about six feet long, for tying the growths to; this will avoid damaging the plants later on; make the ground slightly saucer-shaped all round the plants for mulching and watering.

ROSES.—If there are any vacancies in the rose beds these, in many cases, may now be filled up by transplanting suitable plants from pots; make the soil firm all round each plant.

CLIMBERS.—Continue to pay strict attention to these, disbud where advisable or where growths are becoming too crowded; to ensure good strong flowering growths the following season I have found it advisable to disbud Magnolia grandiflora after the space has been sufficiently covered; gen two or three growths start together, and take away all but the stronger one each lead.—E. F. HAZELTON, Knowsley G dens.

HARDY FRUITS.

WORK AMONGST FRUIT TREES now require great care and attention, cially in the matter of keeping the clean and healthy, and the young gro neatly trained to the walls or wires. greenfly attacks the growth and leaves peach, use the syringe freely. A good ture of quassia extract will in most put matters right. On fine, sunny after use clean water, washing the undersi the leaves as well as the upper surfa thoroughly attended to, not much harm be done by insects. Train the leaders as be required; remove a few more useless taking care not to injure the bark. If hard to pinch, use the knife.

THINNING THE FRUIT. — This work most important, and should be taken in very early, at least as soon as it can be which of the fruits are safe, and likely wanted. I usually thin when they are the size of hazel nuts, removing a few intervals till only enough is left for the and this is made complete before the ston takes place. The crop should be regula according to the size of the variety and strength and vigour of the trees. In cases one fruit in ten square inches may left, and in others one to each square I am much against very heavy crops. A dium quantity of large, finely-flavoured f and a crop again the following year, sho be the aim.

PLUM TREES ON WALLS. — Like the peach, with us these crops are, on the m favourable aspects, very satisfactory plentifully set. The trees should be exami and all the leading shoots be made sec so that they do not get blown about storms. Greengages, as a rule, do not so freely as some other kinds. I have many years been a great advocate for ret ing plenty of young shoots at intervals all the trees, as these young growths usually duce the best fruits. These shoots may trained wherever there is room between main branches, so long as they are not crowded; some of them, after fruiting, be pruned back, and others retained.

CHERRIES.—Of these the crops are fair, and the sweet kinds will do well if get safely over the stoning period. The rellos are very promising at the present Keep a sharp look out for black fly, should this put in an appearance lose time in ridding the trees of it. To water or quassia extract will be safe very effectual if applied at the right Cherries, like the peach, fruit freely on wood, so that careful attention is nec to preserve suitable growths. The varieties fruit freely on the spurs, but year-old wood, neatly secured to the wa usually produces the finest cherries.

STRAWBERRIES.—The earliest of will now require netting, otherwise the thered tribe will quickly spoil the best I have found it a good plan to put wire ting round the beds and then fish ting over the top, this resting on a su framework that keeps the nets about above the plants. Blackbirds do not, rule, attempt to put their heads through hard wire, and, although a little costly the time, the wire will last for many if carefully rolled up and put away in convenient place till again wanted. See the strawy material is put right to the fruit from grit. Mice are sometimes destructive and troublesome; the little back traps are very useful and conven and, as a rule, if set nightly, the plague soon be reduced. The crop this year exceptionally promising, notwithstanding at one time the foliage of some sorts very brown and scorched appearance, and frosty weather catching Water several others.—H. MARKHAM, Wrotham P Gardens.

ATMOSPHERIC NITROGEN AS A FUTURE COMMERCIAL SOURCE OF PLANT FOOD.

The following admirable paper, by Mr. L. L. Van Slyke, chemist at the New York Agricultural Experiment Station, we reprint from "The Proceedings of the Western New York Horticultural Society":

You remember how in 1898 Sir William Crookes startled us all for a brief time by predicting the exhaustion of the nitrate supply of the world in about thirty years, and a prospective world famine, consequent upon the increase of population, and, sooner or later, a gradual decrease of the world's necessary food supply, unless new and abundant sources of nitrogenous plant food should be found. It was held that a cheap source of nitrogen, directly available as plant food, must be discovered in quantities sufficient to accomplish two things: (1st) To supply the place of the nitrogen taken from the soil by crops; and (2nd) to increase the power of the soil to grow a larger amount of nitrogenous food per acre than is now done.

Before that time chemists had busied themselves with the problem of obtaining nitrogen from the air for agricultural and manufacturing purposes, but without success. Modern chemistry is heir to the alchemy of olden times, when men were searching for the elixir of life, by means of which the human race could be kept perpetually young. In consequence of the transformation of alchemy into chemistry, it may be said that we have been continuing the search for an elixir of life, somewhat modified to be sure. The modern elixir of life has been sought in the atmosphere as something that would make more abundant our sources of sustenance and keep perpetual our annual harvests. Happily, the developments of the past few years indicate that the elixir of plant life can be obtained from the air, and that new commercial supplies of nitrogen are thus becoming rapidly available.

Questions are constantly being asked about these materials, and it is desirable that you should be in possession of some reliable facts regarding this important subject, instead of relying upon such accounts as may appear in newspaper and magazine pseudo-scientific articles, so often distinguished for high literary polish and statements that too often are not so.

It will be a matter of interest to consider briefly our usual sources of inorganic nitrogen compounds available for agricultural purposes, in order that we may appreciate more fully our urgent need in the near future of new sources of supply. The discussion is limited to what may be called inorganic nitrogenous compounds, because we are considering only those sources of supply that do not come from the soil itself. We do not need to consider the animal and vegetable materials that are sources of nitrogen used in agriculture, because they come from the soil itself.

The two main sources of supply of commercial inorganic nitrogen compounds used in feeding crops are nitrate of soda from Chili, and sulphate of ammonia.

Nitrate of Soda.

The present annual output of nitrate of soda is about 1,600,000 tons, of which agriculture uses about four-fifths, or 1,300,000 tons, and agricultural requirements have steadily increased rather than otherwise. The amount of nitrogen in the entire annual output of the nitrate of Chili is only about one-fifth the amount of nitrogen used by one wheat crop in the United States. Recent calculations indicate that the Chili beds will be practically exhausted by 1923, or in about fifteen years, somewhat sooner even than Sir William Crookes calculated. There has been thorough and extensive searching for other deposits like those in Chili, but none has yet been found. Deposits are known to exist in California, but they are not sufficiently rich in nitrate to pay for working, and thus far have proved profitable only to gifted promoters, who are skilful in catching human suckers desiring to reap enormous profits, while at the same time helping out agriculture. We can thus see that, so far as we now know, natural nitrate deposits hold out little encouragement for long-continued future supplies.

Sulphate of Ammonia.

Ammonium sulphate is produced as a by-product in the manufacture of illuminating gas and coke. In the past, large amounts of ammonia have been allowed to go to waste, especially in the manufacture of coke, but the present tendency is to save it. The amount of sulphate of ammonia now produced in the United States is about 60,000 tons a year, and only a small proportion of this is available for agriculture. Of the total nitrogen contained in coal, only 10 to 15 per cent. is obtained in the form of ammonia. Expressed in another form, one ton of coal produces from eight to twenty-five pounds of sulphate of ammonia, equivalent to 1.6 to 5 pounds of nitrogen. The amount of ammonia that we may hope to obtain from this source can hardly be regarded as extensive or permanent for future supplies.

Some years ago experiments were made in obtaining ammonia from the garbage of large cities, and considerable hope was felt that ammonia might thus be abundantly and cheaply produced; but the attempt appears to have been a failure, at least from a commercial standpoint.

Atmospheric Nitrogen.

It has been recognised for some time that in the future we must come more and more to depend for the nitrogen compounds required for agricultural purposes upon the inexhaustible supply of nitrogen contained in air.

The element nitrogen is chiefly distinguished for its chemical indifference and inactivity; it prefers to maintain its individuality apart from other elements and remain as free nitrogen, rather than tie up with other elements in the form of compounds. In other words, humanly speaking, nitrogen has strong tendencies to bachelorhood, and it can be enticed out of this condition only by unusual attractions or special affinities. In its uncombined state, as it exists in the air, nitrogen is useless as a plant food; at least so far as we now know. The problem is, therefore, to cause atmospheric nitrogen to combine with other elements and form compounds in which the nitrogen can be utilised by plants as food. In order to be of commercial value, a process which successfully solves this problem must produce nitrogen compounds cheaply and in large amounts.

(To be continued.)

Coccoloba grandiflora. — This, known also as Coccoloba pubescens, was admirably shown at the Ghent Exhibition, and was awarded the first prize for a specimen fine foliage plant, for which a special class had not been provided. The specimen shown was five feet high or thereabouts, and consisted of a single stout erect stem clothed with massive leaves, roundish in outline, but cordate at the base. The leaves, nearly a yard across, are of a stout, leathery texture, and disposed in an almost horizontal manner. They are set very closely to the stem, that is, without the interposition of any pronounced stalk. This coccoloba, which is botanically a member of the polygonum family, attains quite tree-like dimensions, and, though a striking plant for a large structure, will soon grow too tall for a small house. It is a native of Tropical America, hence the temperature of a stove is necessary to its well doing. Though so striking a foliage plant, and the fact that according to the books it was introduced as long ago as 1690, it is very rarely met with in gardens. The genus coccoloba is a fairly extensive one, but very few are in cultivation in this country; indeed, the ornamental qualities of most are by no means of a high order. One species, C. uvifera, is the Sea-side Grape of the West Indies.—K.

SWEET PEA JOTTINGS.

Mr. John Collingridge writes: "The notes on early sweet peas (page 434) suggest to me a note in regard to those varieties now flowering in my garden at Brentwood. On December 9 we sowed Dora Breadmore, Miss Willmott, Prima Donna, and Gladys Unwin. During the next two or three months the pots remained in a cold frame, and in the frosty weather they were removed to the greenhouse. Later they were placed in an unheated glass structure, and light twigs, about four feet in height, were inserted in the soil. On the 23rd April the plants were carefully turned out of the pots, without disturbing the sticks, and planted in the open garden; they were then about 3ft. 6in. in height.

"Hail, snow, bright sunshine, and a keen frost at night made them look very sad during the following week, but on May 27 the first flowers of Gladys Unwin opened, those of Prima Donna on the following day, and of Dora Breadmore on the 31st. The plants are now (June 5) about five feet six inches in height, and carry a goodly array of flowers, many of the stems having five blooms."

The first flowers to open in my own garden were Burpee's Primrose Spencer, Helen Lewis, Dorothy Eckford, and The Marquis. The first-named opened on June 2, from spring-sown plants, and the flowers were quite smooth; later flowers show the same smoothness, and the primrose colouring is pale.

The tornado that visited the south-western portion of the Metropolitan area, and which overturned huge lime trees, and cut a hole through the famous Chestnut Avenue at Bushey Park, paid me a visit, but its fury was somewhat abated ere Brentford was reached. I quite expected to find my sweet peas all laid out flat upon the ground, but so tightly do the tendrils grip the twigs, and so useful is the support that a few ties of raffia afford, that no harm was done. And yet I am not quite sure that the sweet peas were all unharmed, because unless I attribute the failure of a clump of Mrs. Collier to the action of the storm, I am left without explanation of the behaviour of the variety since then. I fancy the growths were so strained by the wind that they have not yet recovered; anyhow, the plants look so unhappy that I shall most likely pull them up and plant later seedlings of another variety.

A tale of woe reaches me from Lincolnshire and Cambridgeshire, where there seems to have been a perfect plague of slugs. Two well-known growers settled the account of 2,000 slugs one evening on about 40 yards' run of choice sweet peas, and the following evening 1,000 slugs were caught on the same row. In another garden women have been specially employed catching slugs on the sweet pea plots, and, in spite of these and other precautions, the loss of several seedlings that promised well last year, has to be deplored.

In Essex the sweet pea enthusiasts are looking eagerly for the small cloud—like unto a man's hand—that gives promise of abundance of rain. In the south, in those districts where little or no rain has fallen lately, sweet peas are rushing into bloom, and consequently free growth has been checked. Watering, surface hoeing, or mulching, and feeding with nitrate of soda, are matters occupying the attention of those who have not been visited by Jupiter Pluvius.

Mr. Chas. Foster tells me that unless they have a good rain at Reading, and very soon, the sweet peas will not be so tall or fine as in 1907, and, notwithstanding the late spring, the chief display of bloom will be earlier this year than last.

Welsh and Scottish growers are keeping very quiet. Perhaps they are chuckling over the difficulties of the Southerners, and quietly making stands and cases for the Eckford, Sutton, Burpee, and Edwards Cups.

Respecting the Colour Chart for sweet peas, my recent letter in reply to the one from Mr. Stanley Brook has given rise to a great deal of comment. I am not at liberty to write further on this subject now than to ask those who are specially interested in the matter to "bide a wee." Chas. H. Curtis.

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CARDIFF AND COUNTY HORTICULTURAL SOCIETY.—TWENTIETH ANNUAL SHOW, SOPHIA GARDENS, CARDIFF, Wednesday and Thursday, July 22nd and 23rd, 1908.
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RICHMOND HORTICULTURAL SOCIETY.
The 34th ANNUAL SHOW
Will be held in
THE OLD DEER PARK, RICHMOND, SURREY,
on
WEDNESDAY, 24th June 1908 (Entries close 17th).
Schedules and all particulars from
W. J. COOK, Hon. Sec., Holmsley House, Richmond, Surrey.

SOUTHEND HORTICULTURAL SOCIETY ANNUAL EXHIBITION in the WINTER GARDENS, PALACE HOTEL, SOUTHEND-ON-SEA, on TUESDAY and WEDNESDAY, July 7th and 8th, 1908.
Entries close July 1st. For Spaces, Schedules, and all particulars, from E. A. WATTS, 12, St. Vincent's Road, Westcliff-on-Sea.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

JUNE 9.

Although the above date was only a fortnight after the Temple Show, and was also the day after Whit Monday, there was little or no falling off in the extent of the exhibition held at the Royal Horticultural Hall. The display was a trifle monotonous, however, as so many exhibitors staged pyrethrums, poppies, and aquilegias. Orchids were fairly good, and included some choice novelties.

FLORAL COMMITTEE.

Mr. Amos Perry's contribution of hardy flowers, from Enfield, was a fairly large one; the display was an effective one, and Oriental poppies were a leading feature; there were groups of hardy geraniums in variety, and also of irises, the latter including the handsome I. Susiana. Mr. Perry also showed an interesting collection of hemerocallis. Verbenas were finely shown by Messrs. H. B. May and Sons, Edmonton, the glowing salmon-red Juno, the blue Princess of Wales, the pink Miss Willmott, the blue, white-eyed Florence, and the white Queen of Whites, were all finely represented, and associated with standard heliotropes, abutilons, and the newer nephrolepis. In the group we noticed a plant of the old and interesting Combretum purpureum. Single and double pyrethrums, arranged by Mr. Maurice Prichard, Christchurch, made a brave show in association with heuchera and gypsophila. Other things well shown by Mr. Prichard were Incarvillea Delavayi, some beautifully spotted foxgloves, poppies, and German and Siberian irises. The Misses Hopkins, Mere Gardens, Shepperton, had a small rockwork display, in which saxifragas and dianthuses figured largely.

A group of elegant and large examples of a good strain of schizanthuses was set up by Mr. H. Prime, gardener to the Marquis of Salisbury, Hatfield, and with these were set up a dozen very large plants of Rehmannia angulata, one carrying over a dozen spikes. Long-spurred aquilegias in variety were contributed by the King's Acre Nursery Company, Hereford, and their group of these elegant flowers was flanked by smaller groups of lupins, dianthuses, hemerocallis, and other hardy flowers.

Pyrethrums, both single and double, were largely shown by Messrs. R. H. Bath, Lim., Wisbech; their bright flowers were very attractive, especially the new bright pink single variety named Favourite. Messrs. Gilbert and Son, Dyke, Bourne, Lincs, brought up bunches of the lovely King of Scarlets anemone, some St. Brigid varieties, and a few aquilegias. Messrs. Dobbie and Co., Rothesay, submitted a very fine lot of fancy pansies, beautiful blooms of perfect form and rich colouring; and a beautiful set of violas. Of the latter we feel constrained to say that the blooms were too large, approaching too nearly to the pansies.

A lovely lot of carnations, gracefully set up in tall glasses with Asparagus Sprengeri, by Mr. C. F. Waters, Balcombe, Sussex, was greatly admired; Mrs. H. Burnett, Helen Goddard, Britannia, Mrs. T. W. Lawson, Robt. Craig, Floriana, and Enchantress, were the leading varieties. Messrs. Carter, Page, and Co., London Wall, E.C., had a pretty display of early and bright cactus dahlias, a few annuals, and a good strain of antirrhinums. A group of gorgeous cannas, all superbly grown single-stemmed plants, carrying grand spikes of large and brilliant flowers, was set up by Messrs. H. Cannell and Sons, Swanley, Kent. Such varieties as Niagara, Elizabeth Hoss, Frau Moritz, M. de Raynal, Wm. Tell, and Oscar Dannecker, were grand, and attracted a great deal of attention.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, had a large exhibit of cut perpetual carnations, Malmaison carnations in pots and carrying good blooms, blue and white hydrangeas, gerberas, very handsome specimens of Metrosideros floribundus, and the pink Spiræa Queen Alexandra. Another large display of hardy flowers was the one made by Messrs. G. and A. Clark, Dover, who showed pyrethrums extensively; they also had Eremurus robustus, handsome Oriental poppies, and a very bright lot of German, Siberian, and Spanish irises. Mr. S. H. Street, gardener to J. A. Young, Esq., Stone House, West Hill, Putney, showed some well-grown gloxinias, some of the plants carrying over two dozen blooms; a batch of dwarf, freely flowered calceolarias was also shown by Mr. Street.

The lovely hardy calceolaria Golden Glory was well shown by Messrs. Robert Veitch and Sons, Exeter, who are the distributors of this fine novelty; they also showed spikes of Buddleia Colvillei and Lathyrus pubescens, and plants of Rehmannia angulata Pink Perfection; a grand strain of the old English Brompton stock, of crimson hue, named Veitch's Magenta (A.M.), was also shown by the Exeter firm. Mr. Jas. Hudson, V.M.H., gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, also showed Calceolaria Golden Glory, bringing up half a dozen beautiful plants in pots, covered with rich golden blooms.

Messrs. J. Kelway and Son, Langport, contributed a glowing display of their pæonies, pyrethrums, and delphiniums, and among the pyrethrums their new and brilliant Langport Crimson (A.M.) arrested attention. The lovely pink-tinted spiræas, Queen Alexandra and Peach Blossom, were exhibited by Messrs. G. van Waveren and Kruyff, Sassenheim, Holland.

Messrs. Jas. Veitch and Sons, Chelsea, were extensive exhibitors, staging a beautiful lot of very fine gloxinias, both self and spotted and shaded varieties, Cypripedium spectabile, Meconopsis aculeata, and Primula Cockburniana. In another group the Chelsea firm had a selection of long-spurred aquilegias, beautiful plants of the brilliant blue chusa italica Opal, and A. i. Dropm a batch of schizanthuses, beautiful tufts, and other annuals. Some giant standing about 8ft. high, and clothed flowers, were set up opposite the ent Messrs. Jas. Veitch and Sons; Brilliant, Bright, Clipper, Charming, Lye's Fav and Lady Jane Wilson were the var staged. Rosa Moysi (A.M.), from Chi very spiny species, with rounded, deep red substantial flowers; and Deutzia W (A.M.), with large white flowers freely produced in short-branched spikes, were also shown by the Messrs. Veitch.

Mr. G. Reuthe, Keston, Kent, was a exhibitor of hardy flowers, irises, lupins, poppies; Rhodothamnus kamtschaticus (A. and rhododendrons, with Embothrium cineum showed up well. Mr. R. C. Notcutt, Woodbridge, submitted a goodly lot of hardy flowers, but rather crowded his bunch Messrs. Paul and Son, Cheshunt, pretty pillar plants of Goldfinch, Tr other rambling roses, as well as an ment of flowering shrubs and a group roses, the latter including several newer varieties. Mr. F. T. Patmore, ington, showed German irises and Messrs. Wm. Bull and Sons, Chelsea, group of stove and greenhouse foliag

Rockery and alpine plants were s Messrs. J. Peed and Sons, West Norwood; the same firm had a very fine lot of sing double pyrethrums, and a brilliant Oriental poppies, lupins, and German A very showy group of hardy flowers ranged by Messrs. George Bunyard and Maidstone; the German irises were very and the pyrethrums excellent, but pink spiræas, the lupins, and the Or poppies were the chief features.

In Messrs. Wm. Cutbush and Son's from Highgate, the new pink spiræa well shown, as were the new and handsome Coleus Cordelia, Rhododendron Pink Pearl, and perpetual carnations, such as White Perfection, Enchantress, Mrs. T. W. Lawson, The President, The Pasha, and Cecilia

The beautiful new pink Lupin polyp roseus was finely shown by Messrs. J Cheal and Sons, Crawley; this is a hardy plant. Some beautiful carn blooms, notably Enchantress, Robt. C Marmion, and Britannia were shown H. Burnett, Guernsey, who also had tw varieties, Vulcan and Snowball (A.M.), latter a fine white, obtained by cr border with a tree carnation.

A glorious new bearded iris, named I thusiana, bearing tall spikes of very pale-blue flowers, that are veined deeper blue, and have a yellow crest fall, as well as yellow-brown mark wards the base of each fall, was shown J. W. Marshall, Charterhouse, Godalming, and gained an A.M. Zephyranthes aurea (A.M.), with brilliant golden-yellow flowers, was shown by Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, and from the same source came Deutzia Lemoinei Rosace (A.M.), a very large semi-double, creamy-white variety of great beauty.

Messrs. Bakers, Codsall, Wolverhampton, set up a very showy group of Oriental poppies, together with aquilegias, pæonies pyrethrums. Messrs. G. Jackman and Woking, showed hardy flowers exten and Mr. R. Neal, Wandsworth, sent a moderately good sweet peas.

ORCHID COMMITTEE.

Mr. E. May, gardener to J. B. Jo Childwickbury, St. Albans, showed a plant of Cypripedium Rothschildeanum thaw House var., carrying five spikes, one carrying seven flowers, and others five and six flowers apiece. A commendation was worthily awarded Stables, gardener to De Barri Cr Esq., Sevenoaks, showed a group of odontoglossums, but O. Queen Alexandra Crawshayana, a round-flowered and richly-hued cross between O. Harryanum and O triumphans, gained a F.C.C., and was the gem of the collection; O. crispodenei, O. Tristan.

O. Astarte, and O. Crawshayanum were other beauties. Mr. C. J. Salter, gardener to W. Cobb, Esq., Rusper, Horsham, sent a fine plant of Cattleya Martineti Dulcotense, with seven lovely flowers. M. Maurice Mertens, Mt. St. Amand, Ghent, showed a small group of choice odontoglossums.

Mr. Stevens, gardener to W. Thompson, Esq., Stone, Staffs, exhibited a group of miltonias, and among them the light-coloured, free-flowering, and very pretty M. Stevensi was especially good; it gained a F.C.C. Another good Miltonia was M. St. Andre, derived from M. Roezli and M. Bleuana splendens (F.C.C.); it has bold flowers, white, with rosy bases to the petals, and a bright brown, radiating blotch at the base of the lip. This was shown by Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham, who also sent Odontoglossum Phœbe, The Dell variety (F.C.C.), a most beautiful form of the cross between O. cirrhosum and O. crispum. Messrs. J. and A. McBean, Cooksbridge, Sussex, showed some very fine odontoglossum spikes, O. gloriosum citrinum (A.M.), Cattleya Reineckiana, and C. Mossiæ Jaffa.

Messrs. Charlesworth and Co., Heaton, Bradford, set up a rather small group of choice orchids, and once again each plant was a good specimen. Here were Læliocattleya G. S. Ball, L.-c. Canhamiana, L.-c. C. alba, L.-c. Dominiana magnifica, L.-c. Bertha Fournier, Odontoglossum amabile Othello, and the brilliant Renanthera Imschootiana. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, had a large group of orchids, the whole making up an attractive display; the odontoglossums arching over the varieties of Cattleya Mossiæ, C. Mendeli, C. Skinneri, and various cypripediums, were very pretty.

In the orchid group submitted by Messrs. Sander and Sons, St. Albans, we noticed good plants of Lælio-cattleya Canhamiana, the quaint Habenaria Suzannæ, Renanthera Imschootiana, Lycaste lanipes, Cypripedium bellatulum, and Odontoglossum Loochristiense. Mr. A. W. Jensen, Lindfield, Haywards Heath, showed a small group of orchids that included some pretty forms of C. Mossiæ, Odontoglossum crispum, O. hastilabium, and Oncidium Kramerianum, the butterfly orchid.

A large group of varieties of the beautiful and useful and variable Cattleya Mossiæ was set up by Messrs. Stanley and Co., Southgate, N. Among the many varieties this group contained we were specially struck with C. M. Thompsoni, a pale peach-pink variety with prettily fringed lip and soft yellow, purple-marked throat; C. M. Mrs. Reginald Smith, with broad purple and gold lip; C. M. Aurora, with a curious purple, bronze-shaded lip; C. M. Lord Avebury, of lovely shape and open lip; C. M. Ophir, with a lot of yellow in the lip, C. M. Elaine, with a white frilled lip; C. M. eburneum, a pretty, light form; C. M. Lady Plowden, with open, rounded lip of bright gold and purple; and C. M. flammea and C. M. Niobe, both of excellent form, the former having a very dark lip. Messrs. Stanley and Co. also had a good batch of Cattleya Acklandiæ.

FRUIT AND VEGETABLE COMMITTEE.

Pot fruit trees were well shown by Messrs. Jas. Veitch and Sons, Chelsea, their figs being particularly well done, and carrying splendid crops; the peaches were also excellent and heavily fruited. Mr. S. Mortimer, Rowledge, Farnham, showed two good new cucumbers named Evergreen and Faultless, the latter a cross between Market Rival and Improved Telegraph.

CERTIFICATES AND AWARDS.

First-class Certificate. — Odontoglossum Phœbe, Dell var., and Miltonia St. Andre, from Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham; Odontoglossum Queen Alexandra Crawshayana, from Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks.

Award of Merit.—Miltonia Stevensi, from Mr. Stevens, gardener to W. Thompson, Esq., Walton Grange, Stone, Staffs; Zephyranthes aurea and Philadelphus Lemoinei Rosace, from Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking; Carnation Snowball, from Mr. H. Burnett, Guernsey; Rosa Moysi and Deutzia Wilsoni, from Messrs. Jas. Veitch and Sons, Chelsea; Rhodothamnus kamtschaticum, from Mr. G. Reuthe, Keston; Stock Veitch's Magenta strain, from Messrs. R. Veitch and Son, Exeter; Pyrethrum Langport Crimson, from Messrs. Kelway and Son, Langport, Somerset; and Iris Carthusiana, from Mr. J. W. Marshall, Godalming.

MEDALS.

Gold.—Messrs. Jas. Veitch and Sons, Chelsea.

Silver-gilt Flora.—Messrs. Wm. Cutbush and Son, Highgate.

Silver-gilt Knightian.—Messrs. J. Veitch and Sons, Chelsea (for pot fruit trees).

Silver-gilt Banksian.—Messrs. Kelway and Son, Langport; Mr. M. Prichard, Christchurch; Messrs. Paul and Son, Cheshunt; Messrs. G. Bunyard and Co., Maidstone.

Silver Flora.—Mr. G. Reuthe, Keston; Messrs. R. H. Bath, Lim., Wisbech; Messrs. H. Cannell and Sons, Swanley; Messrs. G. and A. Clark, Dover; Messrs. Hugh Low and Co., Bush Hill Park, Enfield (one for carnations and one for orchids); Messrs. H. B. May and Sons, Edmonton; Messrs. J. Peed and Son, West Norwood; Mr. A. Perry, Enfield; Messrs. Sander and Sons, St. Albans; and Messrs. Charlesworth and Co., Heaton, Bradford.

Silver Banksian. — Messrs. J. and A. McBean, Cooksbridge; Messrs. Stanley and Co., Southgate; Mr. A. Jensen, Lindfield; Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks; Messrs. Bakers, Codsall, Wolverhampton; Messrs. G. Jackman and Son, Woking; Mr. H. Burnett, Guernsey; King's Acre Nursery Company, Hereford; Mr. C. F. Waters, Balcombe.

Bronze Flora.—Messrs. J. Cheal and Sons, Crawley.

Manchester.

JUNE 3, 4, and 5.

The annual show of the Royal Botanical and Horticultural Society of Manchester was held at the White City, in the Skating Hall.

The exhibits showed a considerable falling off both in quantity and quality from previous years, many of the leading exhibitors of other times failing to put in an appearance. This is to be regretted when we remember the magnificent shows that have been held in these famous gardens.

For a collection of orchids in bloom Mr. J. Robson, Altrincham, was placed first with the only exhibit, a bright combination in which good dendrobiums, lælias, odontoglossums, and cypripediums were staged. For a collection of odontoglossums, amateurs, Mr. A. Dagleish, gardener to A. Warburton, Esq., was to the fore with good spikes of good types. For a large group of miscellaneous plants, arranged for effect, amateurs, Mr. J. W. Smith, gardener to James Brown, Esq., had the premier collection, in which lightness and variety were noticeable. Arches and pillars of roses, with good palms and crotons and well-grown verbenas, were staged in an effective manner. Mr. W. B. Upjohn, gardener to the Earl of Ellesmere, was second, his group including pyramids of Miltonias. For the smaller group of not less than 100 square feet, Mr. W. Jones, gardener to J. E. Williamson, Esq., was first.

Mr. W. J. Cookson, gardener to J. Duckworth, Esq., led for six foliage plants, and Mr. H. Brocklehurst, gardener to A. R. Kelly, Esq., was second. Mr. J. W. Smith had the best collection of roses, showing bush plants well. For six exotic ferns Mr. J. Holt, gardener to P. Smith, Esq., was first; Mr. W. Simons, gardener to F. M. Aitken, Esq., following. Mr. G. Doyle, gardener to Mrs. E. Wood, had the best eight dinner-table plants. Mr. J. Eaton, gardener to D. Pearson, Esq., led with cinerarias. Mr. J. W. Smith took the lead for twelve calceolarias, and for twelve gloxinias Mr. J. Holt scored.

For a collection of not less than thirty hardy herbaceous and alpine plants, Mr. J. Holt won with an interesting collection. Other leading prize-winners were Mr. A. Parr for hardy ferns; Mr. J. Holt for six adiantums; Mr. W. Cookson, gardener to John Duckworth, Esq., for begonias; Mr. J. Holt for pansies; Mr. S. Pearson for coleus; and Mr. W. Cookson for caladiums.

Mr. D. McLeod was awarded a first-class certificate for an odontoglossum. Messrs. Frank Dicks and Co. exhibited palms with other stove and greenhouse plants, and Mr. Thomas Darlington showed sweet peas, etc.

Gardening Competition in Fifeshire.

A most interesting gardening competition in Cupar, Fifeshire, held under the auspices of the Edinburgh and East of Scotland College of Agriculture, and the Fifeshire Education Committee, has just been completed by the issue of the prize list. Mr. G. P. Berry, County Council Lecturer, conducted a large and intelligent class during the past season, and at the close elaborate and exhaustive papers were set. The competition was divided into three sections—one for professional and market gardeners, another for amateurs and cottagers, and a third for ladies.

In the professional section the competitors were asked to describe the best methods of laying down in the open an acre of fruit—apple, pear, and plum—with under-planted small fruit, giving the most up-to-date cultural treatment over a period of six years. Also, the most approved cultural details in the growing of first early potatoes, early and late cauliflowers, and onions for bulbing purposes, in a private garden. The amateurs and cottagers were asked how they would lay out a small piece of ground as a cottage garden taken in from old pasture land, including soil working, manuring, cropping, propagating, planting, and pruning; also the best method of cultivating roses in a small garden.

The problem set the ladies was to give their views on the history and culture of the sweet pea, emphasising its adaptability for decorative purposes inside the villa and mansion; also to give their ideas with regard to arrangement of flower foliage in vases and for table decoration.

The competition was entered into most enthusiastically, and a large number of most excellent papers was the result. The chief awards were made as follows:

Professional and Market Gardeners.—1 (silver medal), Mr. David Dalrymple, Dura House: 2, Mr. Peter Walker, Cairnie; 3, Mr. Robert Thomson, Clatto; 4, Mr. Daniel McGregor, Floxton.

Amateurs and Cottagers.—1 (silver medal), Mr. W. Oliphant, Bonnygate; 2, Mr. Charles Storar, architect, East End Park; 3, Mr. R. Halley Robertson, bank accountant, Hope Cottage; 4, Mr. Robert Dalgleish, architect, Bonnygate.

Ladies.—1, Miss Innes, Rosemount; 2, Mrs. E. M. Lennox, Castlefield; 3, Miss Mary Honeyman, Eden Villa; 4, Miss Honeyman, Eden Villa.

— SOME —
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ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

GOOSEBERRY MILDEW.—M. R. C., Gloucester: The present month is one in which the summer stage of the American gooseberry mildew may appear, though the season of infection is from May until October. On the first sign of infection spray with sulphide of potassium at the rate of ½lb. to 16 gallons of water. Write us again when the leaves fall. By the way, the sulphide of potassium solution should be used every ten days after the infection is noticed.

LAWN MOWINGS AS PLANT FOOD.—Cornishman: The conversion of lawn mowings into plant food on the lines of leaves being converted into leaf-soil is practically impossible owing to the great heat the grass generates when in bulk. In the case of the leaves the moisture has largely gone ere they fall, and so decay is steady, and fierce heat is not generated in the process of decay. In the form of mulchings lawn mowings may be used advantageously for many crops, as it reduces evaporation from the soil and keeps the roots cool, and in due course is incorporated with the soil, adding humus to it. Failing its use this way, and also the usual method of decay in the rubbish heap, we recommend it be burnt in a slow fire with thin layers of soil, to form burnt earth that is valuable for many purposes where a potassic fertiliser is needed.

ASPARAGUS.—"E. A. L., Farnham," asks what is the best time of day for gathering asparagus. He is under the impression that the flavour of the produce varies somewhat, according to the time of the day in which it is cut. It is so usual to serve the kitchen as soon after breakfast as possible that few, perhaps, have taken special notice of how asparagus tastes that is cut, say, in the afternoon, after the sun has been shining for several hours on the bed. If any of our readers have made observations relative to this question we shall be glad if they will send us the results of such observations.

EARLY STRAWBERRY LAYERS.—G. R. N., Cirencester: Now that the plants set out for the production of early runners have shown flower, remove the flower spikes, and if any specimens have not shown flower spikes dig them up and burn them at once. Have the requisite number of sixty-sized pots made ready, and filled with moderately light rich soil, made firm, and then peg one layer into each pot as soon as the opportunity for doing so presents itself.

LILIUM CHALCEDONICUM.—T. S. B., Torquay: This useful lily, like many others of its particular group, loves good soil that is enriched with leaf-mould; a position that is well drained, but never really dry; and a site where the plants are slightly shaded from the midday sun. The bulbs should be planted six inches deep, and a foot apart. Under such favourable conditions they grow readily, multiply freely, and bloom finely. Your non-success is due, perhaps, to poor position or soil, or to damage received during the autumn clearing-up process; all too many bulbs are damaged at such occasions. We may help you better if you let us know the conditions under which you have endeavoured to grow L. chalcedonicum.

DARK-COLOURED LILACS.—T. S. B., Torquay: Charles X. is a very fine lilac for many purposes, and one difficult to beat. We are fond of the bold Souv. de Leon Spathe, which bears big spikes of deep red-purple flowers. Other good dark single lilacs are Louis Van Houtte, deep red; Ville de Troyes, purple-red; Madame Briot, rose-purple; Rubra de Marley, rose-purple; and Charles Joly, red.

ASPIDISTRAS.—A. J. F., Muswell Hill: The specimen has been newly made up and subjected to strong heat, and hence was not a suitable one for you to use in a room. Placed in a stove it would have become well rooted, and then, after a little hardening off, would have been very useful and serviceable. It is not usual to send out specimens so newly made up, nor is it usual to cut up the rhizomes into quite such short lengths as in your case. A contributing cause of failure is the use of too much water while the plant was so poorly rooted. Remove all the soil, wash the roots and rhizomes clean in soapy water, cut away diseased portions, and then repot in small, well-drained pots, in a light sandy compost. Place the newly-potted plants in a stove or warm house, in a moderately shaded spot, and give only sufficient water to keep the soil moist until new roots have formed, when more water will be needed. The next time you buy a plant turn it out of its pot first to see whether or not it is well rooted.

SWEET PEA CELESTIAL.—M. S. H., Devon: The name Celestial was given to a sweet pea sent out some years ago by Mr. Charles Lorenz, a German seedsman. It had a light mauve standard and lavender wings. The variety has now gone practically out of cultivation, if not absolutely so; and, in any case, it is not considered to be of sufficient merit for modern growers. In the National Sweet Pea Society's Catalogue of Sweet Pea Names Celestial is given as an old variety. However, you should not use the name for a new variety, as this would, in all probability, lead to confusion.

SEED PODS ON AZALEAS AND RHODODENDRONS.—M. W. B., Tavistock: The formation of seed pods and the ripening of seeds does most certainly tend to reduce the vigour of rhododendrons and azaleas, and this is more noticeable on some kinds than others. In the case of great masses of the ponticum and common garden forms, where general effect only is desired, there is no real need to remove the seed pods, but in the case of choice varieties as specimens or in beds near the mansion, the removal of seed pods at as early a date as possible should always be practised. This removal allows the growths that rise close to the old flower truss to develop strongly, and form flower buds that will give a fine display the following year. A smart lad, if shown exactly what to do, and how to do it, will be able to do a large amount of work of this kind in a few days. It is worth while explaining to him how much good his work will accomplish, and also how much harm he may do if careless.

INSECT PESTS ON ROSES.—W. T., Southend: You can have nothing better than the little book entitled "The Enemies of the Rose," published by the National Rose Society. It is obtainable only through a member of the society, and its price is 2s. 6d. There are numerous illustrations, coloured and half-tone, of diseases and insects. Remedies and preventives are given in each case.

COLOURED FLIES.—G. W. Fakenham: The pretty flies sent are known as Hover flies, because of the curious manner in which they hang in the air, "hover," over a leaf, flower, or colony of green or black fly. They should not be destroyed, as they are friends, and not enemies. Hover flies deposit their white eggs in the colonies of aphides, and when the unpleasant greenish-grey maggots have hatched out they at once attack the aphides, and, as they have enormous appetites, the way they dispose of the gardener's enemies is a real treat to watch. No; don't kill the hover flies, except it may be a specimen or two for preserving in an air-tight case, so that they may be shown to growers who do not know friends from foes.

PACKING FRUIT FOR MARKET.—H. H. J., Cambridge: The Gold Medal Essay written by Mr. R. L. Castle for the Worshipful Company of Fruiterers, appears to us to be just the sort of work you want. It conveys the desired information in an admirable manner, and it is illustrated. It also deals with packing vegetables. The book is 1s. 3d., post free, from W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.

NAMES OF PLANTS.

C. O. H., Leek.—Trachelium cœruleum.

D. H. A., Ashby.—1, Incarvillea Delavayi, 2, I. grandiflora.

F. E. G., Truro.—Gaylussacia (or Vaccinium) frondosa.

S. N., Barnet.—1, Oncidium Marshallianum; 2, O. concolor.

J. F., Suffolk.—The pretty double yellow Rocket, Barbarea vulgaris fl.-pl.

D. W., Hayes.—1, Pæonia decora; 2, Caragana arborescens; 3, Cytisus nigricans.

K. F., Great Malvern.—1, Iris graminea; 2, Abies nobilis; 3, Cyperus alternifolius variegatus.

L. S., Bristol.—1, Tilia heterophylla; 2, Cratægus Lelandi; 3, insufficient for determination.

S. M. C., Rutland.—The shrub is Piptanthus nepalensis, and the small plant is probably Sedum acre elegans.

C. C. B., Keighley.—1, Polygonum cuspidatum; 2, Primula marginata; 3, P. farinosa; 4, Schizanthus retusus.

P. B., Salisbury.—1, Thalictrum aquilegifolium; 2, T. a. atropurpureum; 3, Pavia macrostachya; 4, Aristolochia Sipho; 5, Clematis montana.

R. H. C., Chelsfield.—1, Cytisus monspessulanus; 2, Viburnum Opulus; 3, Abutilon megapotamicum; 4, Circis siliquastrum; 5, Cuphea Roezli; 6, Strelitzia Regina.

The Jubilee Celebration of the Grand Yorkshire Gala, which takes place on June 17 to 19, promises to be an event of exceptional interest to horticulturists. Many of our readers will no doubt take advantage of the opportunity the Great Northern Railway Company affords them of travelling to the show at a trifling cost. Cheap excursions are arranged from a large number of stations throughout the surrounding country, particulars of which may be obtained at the booking offices.

SOME SPECIAL FEATURES

. . IN . .

THE GARDENERS' MAGAZINE.

1908.

Jan. 4.—**ISLES OF SCILLY** (Illustrated).
11.— " " Bulb Industry.
Feb. 8.—**HORSHAM GARDENS** (Illustrated).—Den Park, Leonardslee, Holbrook Park.
15.—**HORSHAM GARDENS** (Illustrated)—Warnham Court, Warnham Lodge, South Lodge, Wimblehurst.
March 7.—**THE GARDENS OF CORNWALL** (Illustrated).—Tremough, Trelissick, Rosehill, Penjerrick.
14.—**THE GARDENS OF CORNWALL** (Illustrated).—Carclew, Trebah, Enys, Penmorva.
April 11—**NORWICH GARDENS** (Illustrated).—Gunt Park, Blickling Hall, Westwick Hall, Shotesham Hall.
18.—**NORWICH GARDENS** (Illustrated).—Duns'on Hall, Crown Point, Town Close House, Ashwellthorpe Hall, Oakland House, Boyland House,
May 2.—**GHENT CENTENARY FLOWER SHOW.**
16.—**BRISTOL GARDENS** (Illustrated).—Barro Court, Ashton Court, Downside, [illegible]field.
23.—**BRISTOL GARDENS** (Illustrated).—[illegible] House, Down House, The Priory, Old Sneed Park.
30 } June 6 } **THE TEMPLE SHOW** (Illustrated Report).

Copies of the above, price 2d. each, or by post [illegible] may be obtained from the Publishers, 148 and [illegible] Aldersgate Street, London.

ABOL KILLS MILDEW.

NON-POISONOUS WHITE'S SUPERIOR The Best Plant Wash for Garden and [illegible]

It absolutely ABOLISHES APHIS

Green and Black Fly, American Blight, Caterpillars, and all kinds of

Manufactured under a New Patent.

TRY IT and you will agree. IT ACTS LIKE A CHARM. ALSO AN EXCELLENT REMEDY FOR MILDEW, A LITTLE GOES A LONG WAY.

Pint, 1/6; Quart, 2/6; Half Gall., 4/-; Gall., 7/6

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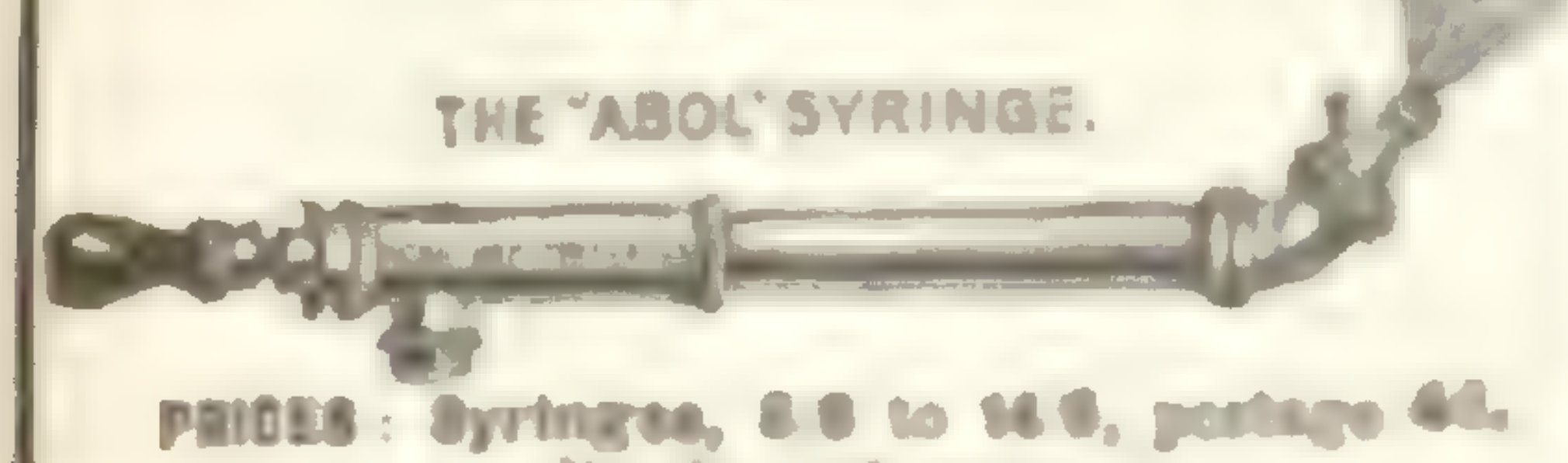

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SOLE MANUFACTURERS—E. A. WHITE, LTD., Hop and Fruit Growers, Paddock Wood KENT.

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BEST and CHEAPEST MANURE for VEGETABLES, FRUITS and FLOWERS

Price £3 10s. per ton in bags. Lots under 10 cwt. 4s. per cwt. at works; or 5s. per cwt., carriage paid to any station in England.

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J. HAYDON, Hampton: "Potatoes, excellent crop, none diseased. Grand for keeping away slugs."

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A. W. BRINKHAM, Hull: "Cucumbers, tomatoes, and chrysanthemums highly satisfactory." G. ACCLETON, Carlisle: "Finest manure ever used for vines, peaches, roses, carnations, etc." W. COOPER, Shoeburyness: "Most excellent for roses."

Orders to the NATIVE GUANO CO. (LIMITED), 29, New Bridge Street, London, E.C., where 32nd year's testimonials, etc., may be obtained. Agents Wanted.

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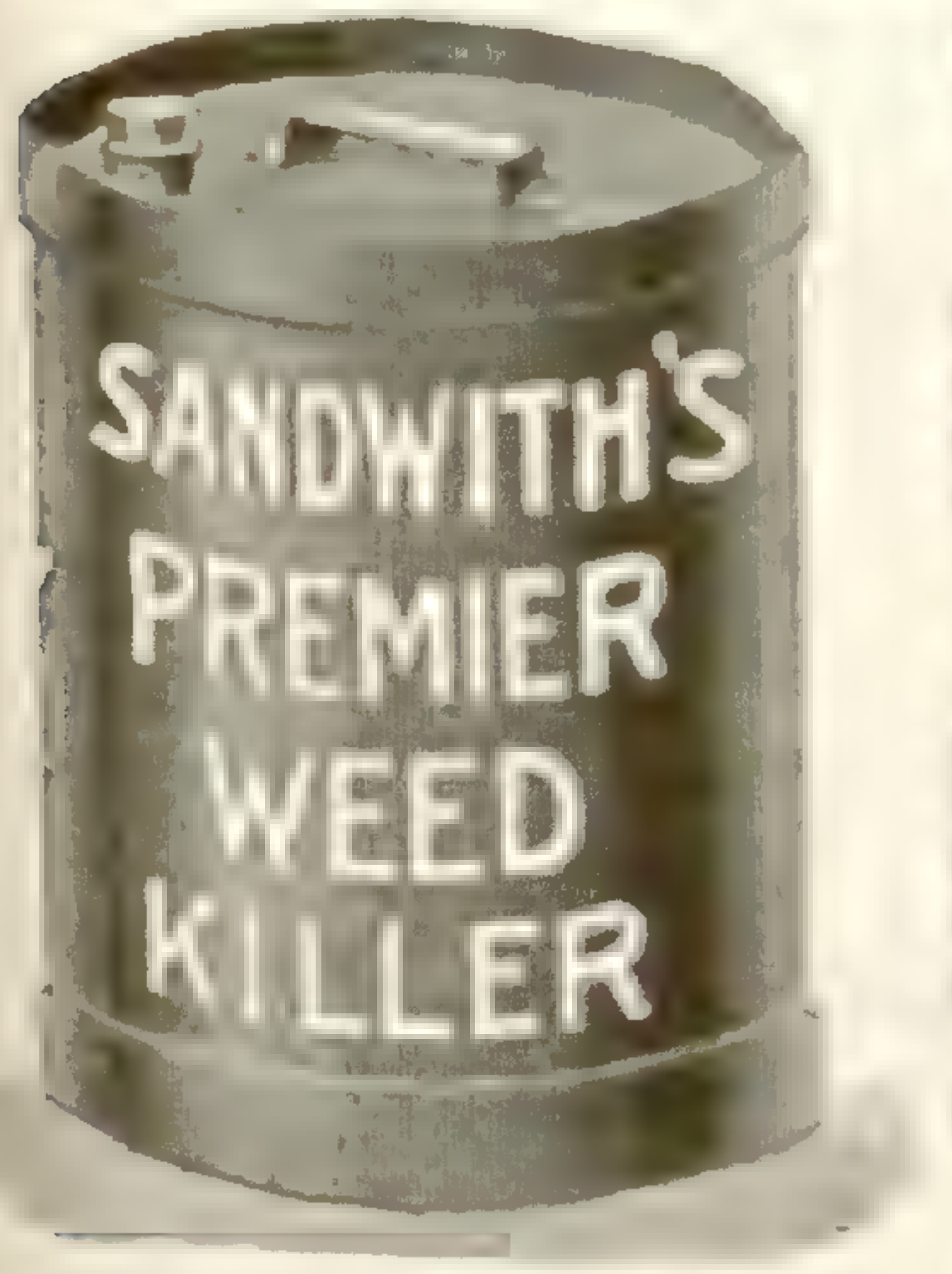

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Use once a year, and your garden paths will be always clean and bright

[illegible] 2 [illegible] 10 [illegible] 6 [illegible] 28 [illegible] 10 [illegible] 52 [illegible] 20

EITHER LIQUID OR POWDER

Carriage Paid

If cash is sent cost of drum must be included which amount will be refunded when drum is returned.

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The Horticultural Specialists, BRACKNELL, BERKS.

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RAPID IN ACTION
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CONCENTRATED
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8/6
PER GALLON

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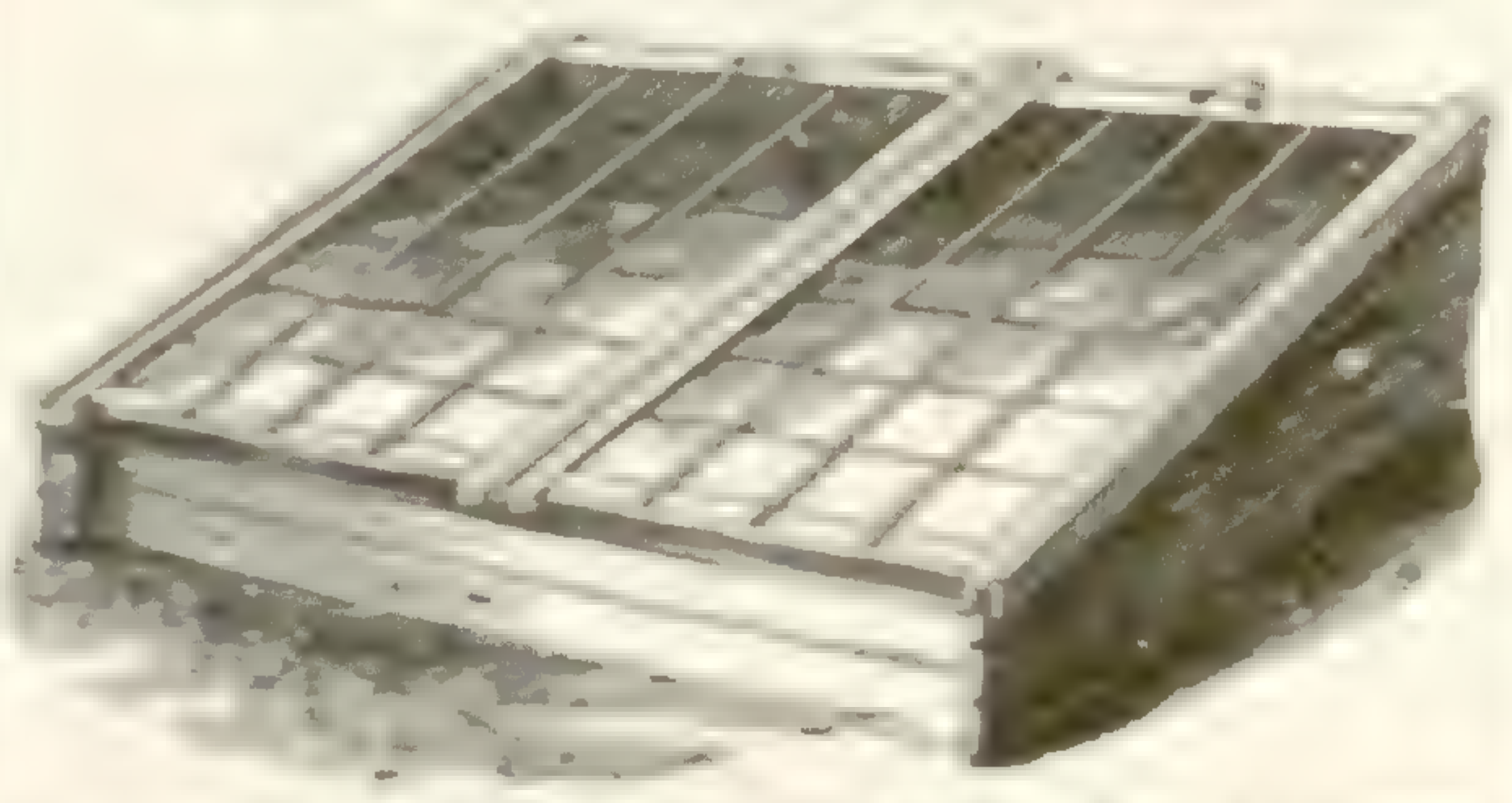

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Sizes and Prices, Glazed and Painted.			£	s.	d.
1-light	4 ft. by 6 ft.	CASH PRICES. CARRIAGE PAID.	2	0	0
2-light	8 ft. by 6 ft.		3	0	0
3-light	12 ft. by 6 ft.		4	2	6
4-light	16 ft. by 6 ft.		5	5	0
5-light	20 ft. by 6 ft.		6	7	6
6-light	24 ft. by 6 ft.		7	10	0

Larger sizes at proportionate prices.

R. HALLIDAY and CO.,
ROYAL HORTICULTURAL WORKS,
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Tweed Vineyard, Clovenfords, Galashiels, N.B.

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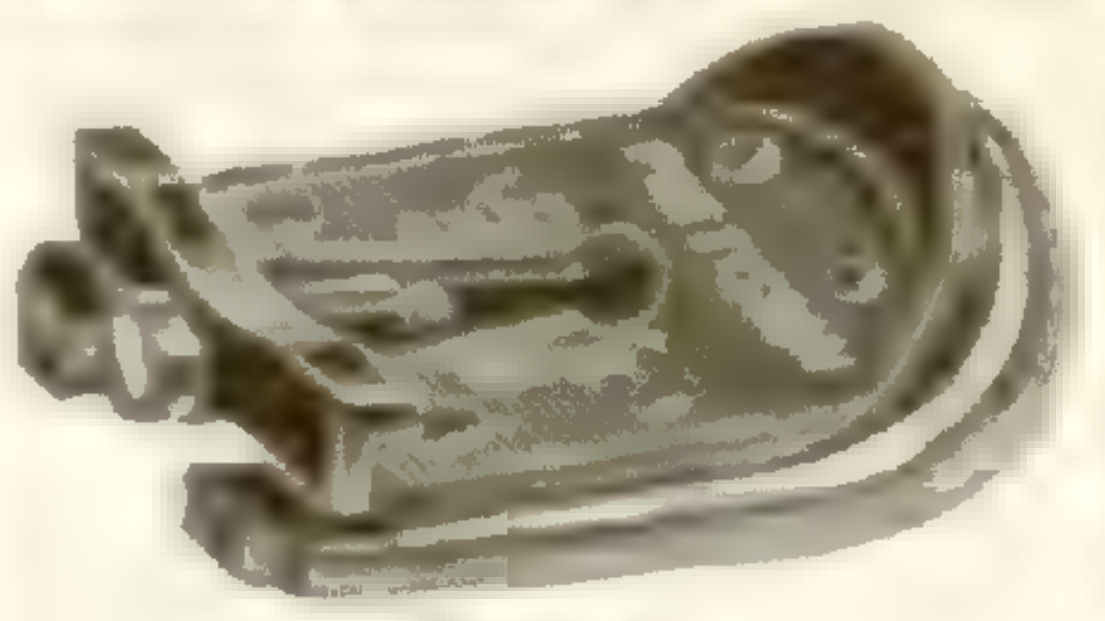

FIG. 1.

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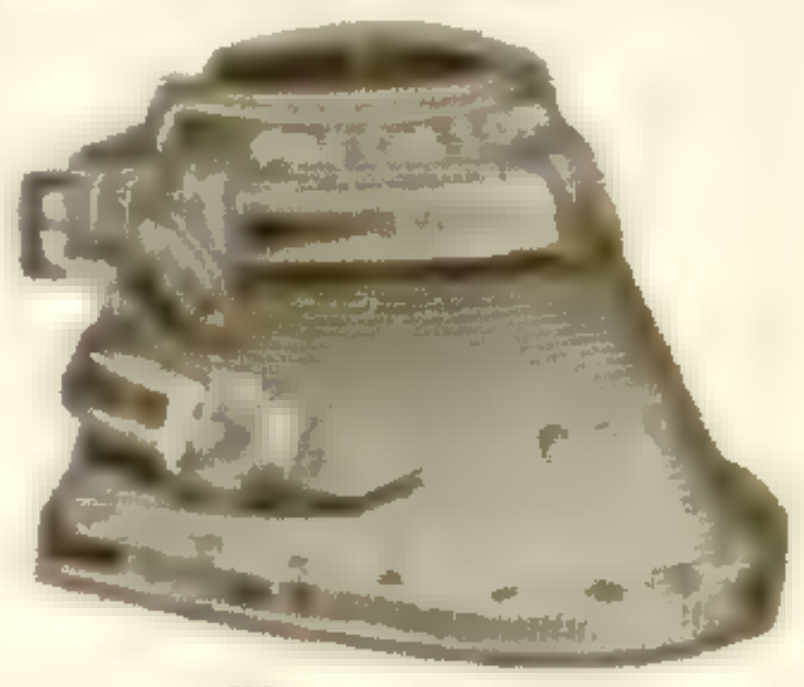

FIG. 2.

Illustrated Price List from—

H. PATTISSON & CO., 4, GREYHOUND LANE, STREATHAM, S.W.

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Every Saturday. THE GARDENERS' MAGAZINE. Twopence.

To W. H. AND L. COLLINGRIDGE,
148 AND 149, ALDERSGATE STREET, LONDON, E.C.

I request you to send me the GARDENERS' MAGAZINE by post every week until countermanded, and I enclose ________ for ________ months in advance.

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⁂ If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand is quiet, as it usually is directly after the holidays.

		s. d.		s. d.
Acacia	per doz. bun.	6 0	to	8 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Anemones	per doz. bun.	1 0		3 0
Arums	per doz.	2 6		4 0
Asparagus	per doz. bun.	1 6		6 0
Azalea, white	per doz. bun.	3 0		5 0
,, mollis	per bun.	0 9		1 6
Berberis leaves	per doz. bun.	1 6		2 6
Carnations	per doz. blms.	1 6		3 0
,,	per doz. bun.	8 0		12 0
,, Malmaison	per doz. blms.	8 0		12 0
Cattleyas	per doz.	8 0		10 0
Croton leaves	per bun.	1 0		1 6
Cyclamens	per doz. bun.	6 0		8 0
Cypripediums	per doz. blms.	2 0		3 0
Eucharis	per doz.	4 0		5 0
Forget-me-not	per doz. bun.	2 0		3 0
French fern	per doz. bun.	1 0		3 0
Freesias	per doz. bun.	2 0		3 0
Gardenias	per doz.	1 6		3 0
Gladiolus Colvillei	per doz. bun.	7 0		10 0
Gypsophila	per doz. bun.	3 0		5 0
Iris, Spanish	per doz. bun.	3 0		6 0
Ixias	per doz. bun.	3 0		6 0
Lapagerias	per doz.	1 0		2 6
Lilac	per bun.	2 0		3 0
Lilium auratum	per bun.	2 0		3 0
,, speciosum	per bun.	2 0		3 0
,, longiflorum	per bun.	2 6		5 0
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	3 0		6 0
Narcissus	per doz. bun.	1 0		3 0
Odontoglossums	per doz. blms.	2 0		3 0
Pelargoniums	per doz. bun.	5 0		8 0
Ranunculus	per doz. bun.	5 0		7 6
Roses	per doz.	1 0		6 0
Smilax	per doz. trails	3 0		5 0
Spiræa	per doz. bun.	5 0		8 0
Statice	per doz. bun.	5 0		6 0
Stocks	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	2 6		5 0
Tuberoses	per doz. blms.	0 4		0 6
Tulips	per doz. bun.	5 0		12 0
Violets	per doz. bun.	2 0		4 0
Wallflowers	per doz. bun.	1 0	to	2 0

Fruits.

Supplies are fairly good and the demand steady.

		s. d.		s. d.
Apples, Australian	per case	7 0	to	12 0
,, Canadian	per barrel	10 0		19 0
,, Tasmanian	per box	7 0		14 0
Bananas	per bun.	3 0		10 6
Cherries, French	per box	0 9		1 6
Figs	per doz.	3 0		10 0
Gooseberries	per ½-sieve	5 0		7 0
Grapes, English (new)	per lb.	2 0		10 0
,, Australian	per case	6 0		14 0
Lemons	per case	8 0		10 0
Melons, Guernsey	each	1 3		3 0
Nectarines	per doz.	5 0		21 0
Oranges	per case	7 0		30 0
Peaches	per doz.	6 0		16 0
Pears, Australian	per box	4 0		8 6
Pineapples	each	2 0		5 0
Strawberries	per lb.	0 9		2 0
,, French	per basket	1 0		3 0

Vegetables.

Business is moderately good; salading is in great demand.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	3 0
Asparagus, Paris green	per bun.	1 3		2 0
,, English	per bun.	1 0		1 6
,, Spanish	per bun.	0 6		1 0
,, Sprue	per bun.	0 6		0 9
Beans, Guernsey	per lb.	0 4		0 6
Beet	per bush.	1 3		2 0
Cabbage	per tally	2 6		4 6
Carrots	per doz. bun.	1 0		1 6
,,	per bag	2 6		3 0
,, French (new)	per doz. bun.	5 0		7 6
Cauliflowers	per doz.	1 0		2 0
Cucumbers	per doz.	1 6		3 0
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	9 0		12 0
Lettuce, cabbage	per doz.	0 9		1 0
Lettuce, cos	per doz.	3 0		4 0
Mint	per doz. bun.	1 0		2 6
Mushrooms	per doz. lb.	8 0		10 0
Onions, spring	per doz. bun.	1 0		2 0
,, Spanish	per case	5 0		7 6
Parsley	per doz.	1 6		3 0
Peas, Guernsey	per lb.	0 6		0 8
Radishes	per doz. bun.	0 10		1 0
Turnips, French (new)	per doz. bun.	5 0		8 0
Vegetable Marrows	per doz.	3 0		5 0

LONDON POTATO MARKETS.

There is now a good supply of new potatoes and prices are moderate.

		s. d.		s. d.
Old potatoes	per ton	85 0	to	110 0
Teneriffe	per cwt.	13 0		16 0
Lisbon	per box	4 0		4 6
Jerseys	per cwt.	12 0		14 0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE.	SUNSHINE.	TEMPERATURE OF THE AIR.			
1908. MAY 31 TO JUNE 6.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
May 31—Sunday	8 5	61	59	76	50
June 1—Monday	10 10	69	65	76	58
,, 2—Tuesday	7 35	64	61	72	59
,, 3—Wednesday	7 0	72	66	78	50
,, 4—Thursday	9 10	67	64	81	57
,, 5—Friday	10 25	56	52	64	52
,, 6—Saturday	11 25	53	47	57	49
Means	9 5	63	59	72	54

DATE.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
1908. MAY 31 TO JUNE 6.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
May 31—Sunday	0·05	59	57	53	46
June 1—Monday	0·71	61	58	54	55
,, 2—Tuesday	—	62	59	54	58
,, 3—Wednesday	0·15	61	60	54	46
,, 4—Thursday	0·29	63	60	55	52
,, 5—Friday	—	64	61	55	49
,, 6—Saturday	—	62	61	56	43
Means	(total) 1·20	62	59	54	50

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, June 17.—York Gala; three days.
Royal Society of Arts.
Royal Botanic Society's Summer Show.
Croydon Gardeners' Association visit to Mr. Bause's Nursery, Norwood.
Hayward's Heath Gardeners' Visit to Paddockhurst.

THURSDAY, June 18.—Linnean Society Meeting.

TUESDAY, June 23.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. by the Rev. Prof. G. Henslow, V.M.H., on "The Absorption of Rain and Dew, by the Green Parts of Plants"; Scientific Committee at 4 o'clock.
Horticultural Club, Hotel Windsor; Dinner at 6 p.m.; lecture on "Development of Gardening in Victoria during Recent Years," by Mr. H. Hitchcock.

WEDNESDAY, June 24.—Royal Society of Arts.
Horticultural Exhibition at the Franco-British Exhibition; three days.

SATURDAY, June 27.—Reigate Rose Show.
Windsor Rose Show.

MONDAY, June 29.—Isle of Wight Rose Show at Ryde.

TUESDAY, June 30.—Canterbury Rose Show.
Southampton Horticultural Society's Rose Show; two days.

CATALOGUES RECEIVED.

H. B. MAY AND SONS, DYSON'S LANE, EDMONTON.—A very fine and comprehensive catalogue of exotic and British ferns. There are cultural hints and the average height of the species or variety is given. There are over a hundred and fifty illustrations. A charge of 2s. is made.

HUGH LOW AND CO., BUSH HILL PARK, ENFIELD.—The new list of perpetual-flowering carnations includes illustrations of the capacity of plants at various ages, as well as descriptions of new varieties, and a coloured plate.

JOHN PINCHES, CROWN BUILDINGS, CROWN STREET, CAMBERWELL.—A useful list of goods that appeal to the flower exhibitor. It deals with cups and tubes, exhibition boxes, bloom protectors, etc.

G. COOLING AND SONS, BATH.—A handy, descriptive catalogue of pot roses, climbing plants, carnations and cactus dahlias.

WM. ARTINDALE AND SON, SHEFFIELD.—This catalogue of carnations, chrysanthemums, dahlias, and violas will appeal to many as the alternate pages are ruled for garden notes.

FRANTZ DE LAET, CONTICH, near ANTWERP, BELGIUM.—This is the best catalogue of cacti and succulents we have seen. It is well got up, splendidly illustrated, and the descriptions are in French, German, and English. One shilling per copy is charged.

SKINNER, BOARD, AND CO., BEDMINSTER, BRISTOL.—An abridged catalogue of "wire tension," greenhouses, and heating apparatus, with illustrations of houses recently erected.

ALEX. DICKSON AND SONS, LTD., NEWTOWNARDS, CO. DOWN.—An especially interesting list of new pedigree seedling roses raised by this firm and offered by them for the first time. One H.T., Mrs. David Jardine, has been tested in America and received the highest possible awards.

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Mr. A. MITCHELL, Corrour R.S.O., writes us Mar. 5th, 1908:—

"Kindly send on another pair of your splendid Boots. The last pair has worn me over two years, and when I mention my house stands 1,350 feet above Sea level, you can imagine the awful weather, we have nothing but snow and slush the greater part of the year. When I state I never had a wet foot it speaks well for your Boots. Enclosed P.O. 16/-.

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PERTH BOOTS
Stand the wear and tear of Gardeners.

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Your wife and family have our special attention also.

Gardener's Boots 10/6, 12/6, 13/6, 15/6.

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NORWELL'S PERTH To-day.
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Established over 100 years.

ONE PENNY WEEKLY, by post 1½d.

FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (June 13) contains the following:

COWS FOR SMALL HOLDINGS.
BUTTER MAKING COMPETITIONS.
COW'S MILK FOR FOALS.
HAYMAKING.
CHARLOCK-SPRAYING.
POULTRY IN HOT WEATHER.
POULTRY FOR SHOW.
AMERICAN GOOSEBERRY MILDEW.
OUTDOOR STRAWBERRIES.
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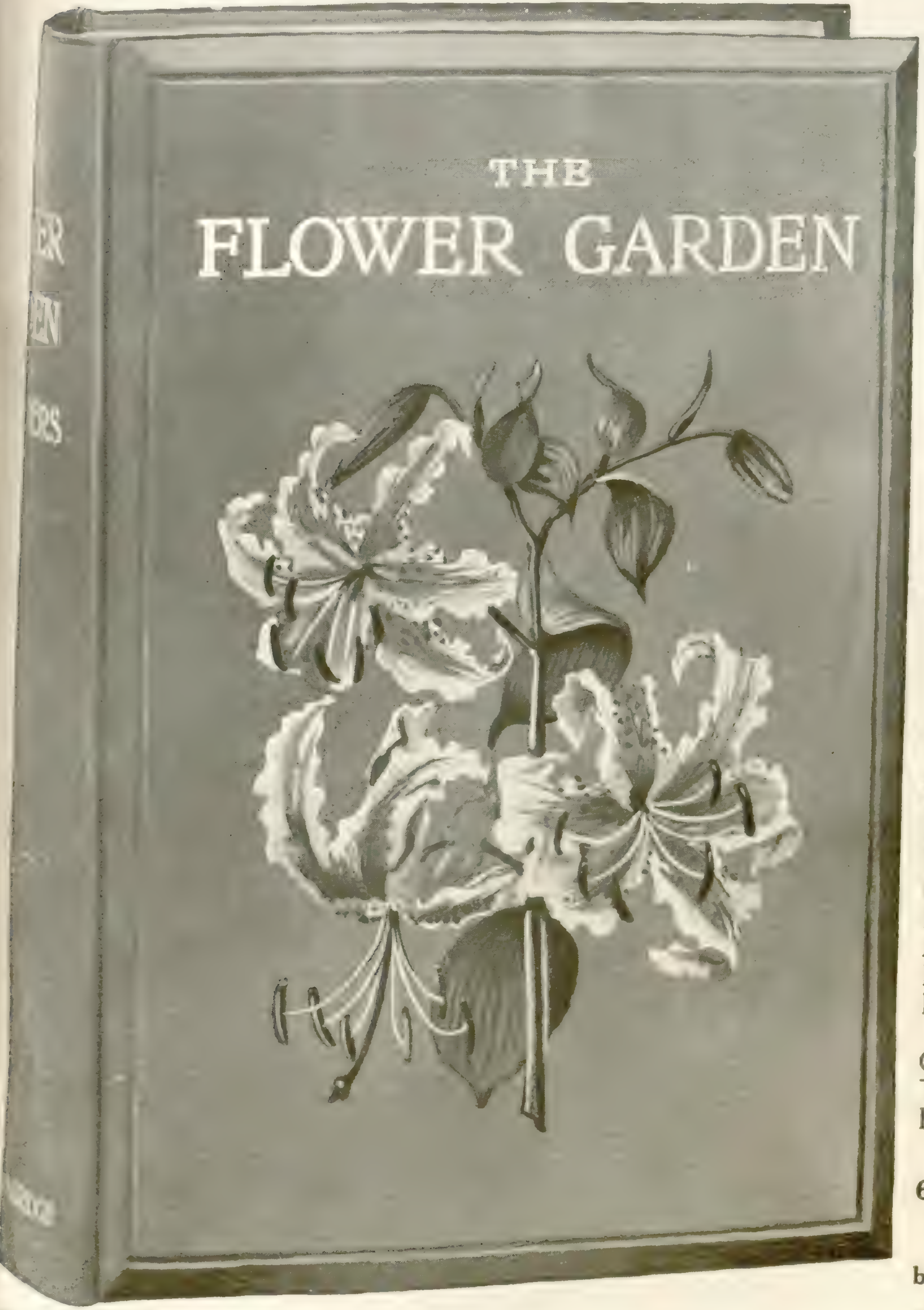

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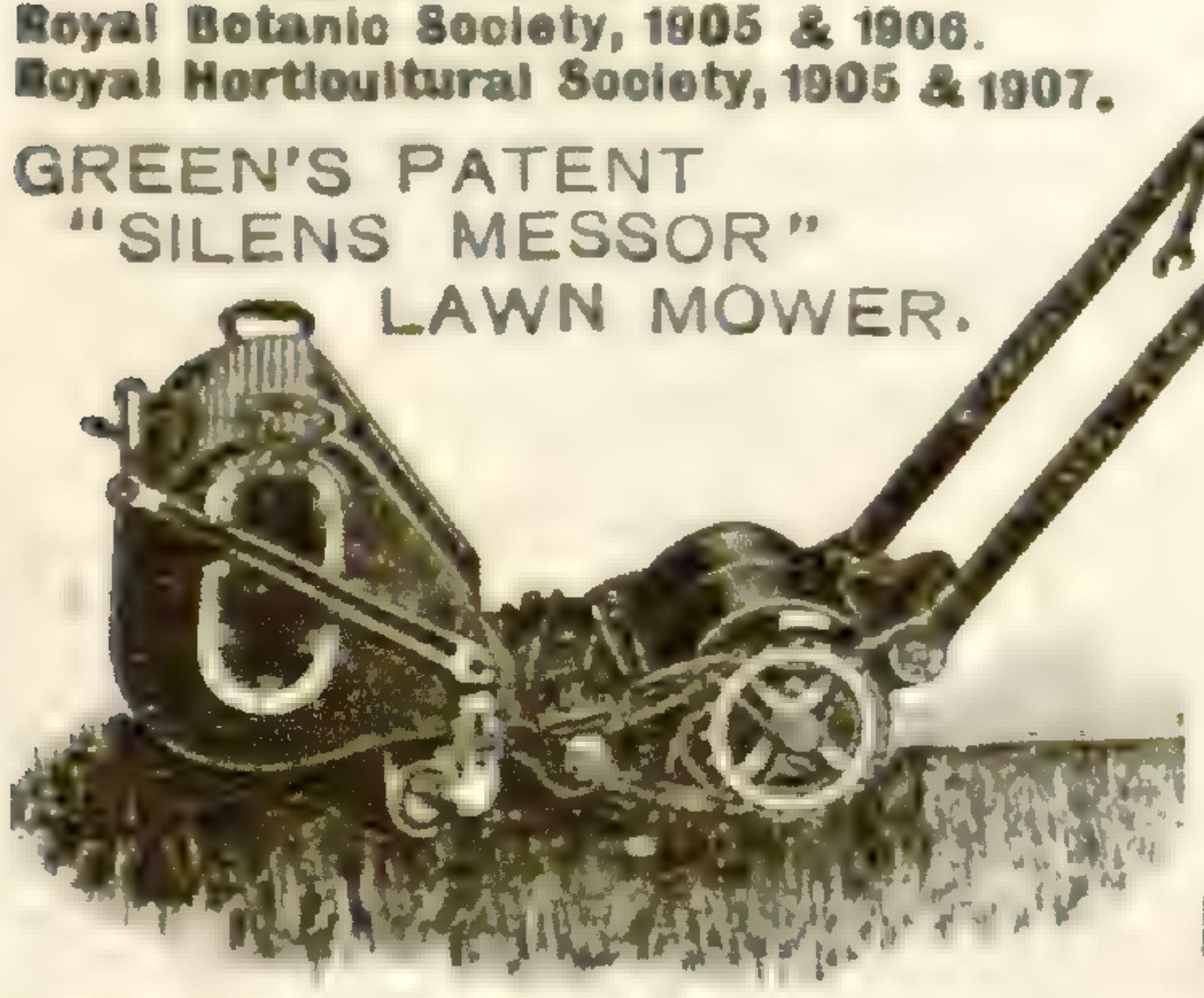

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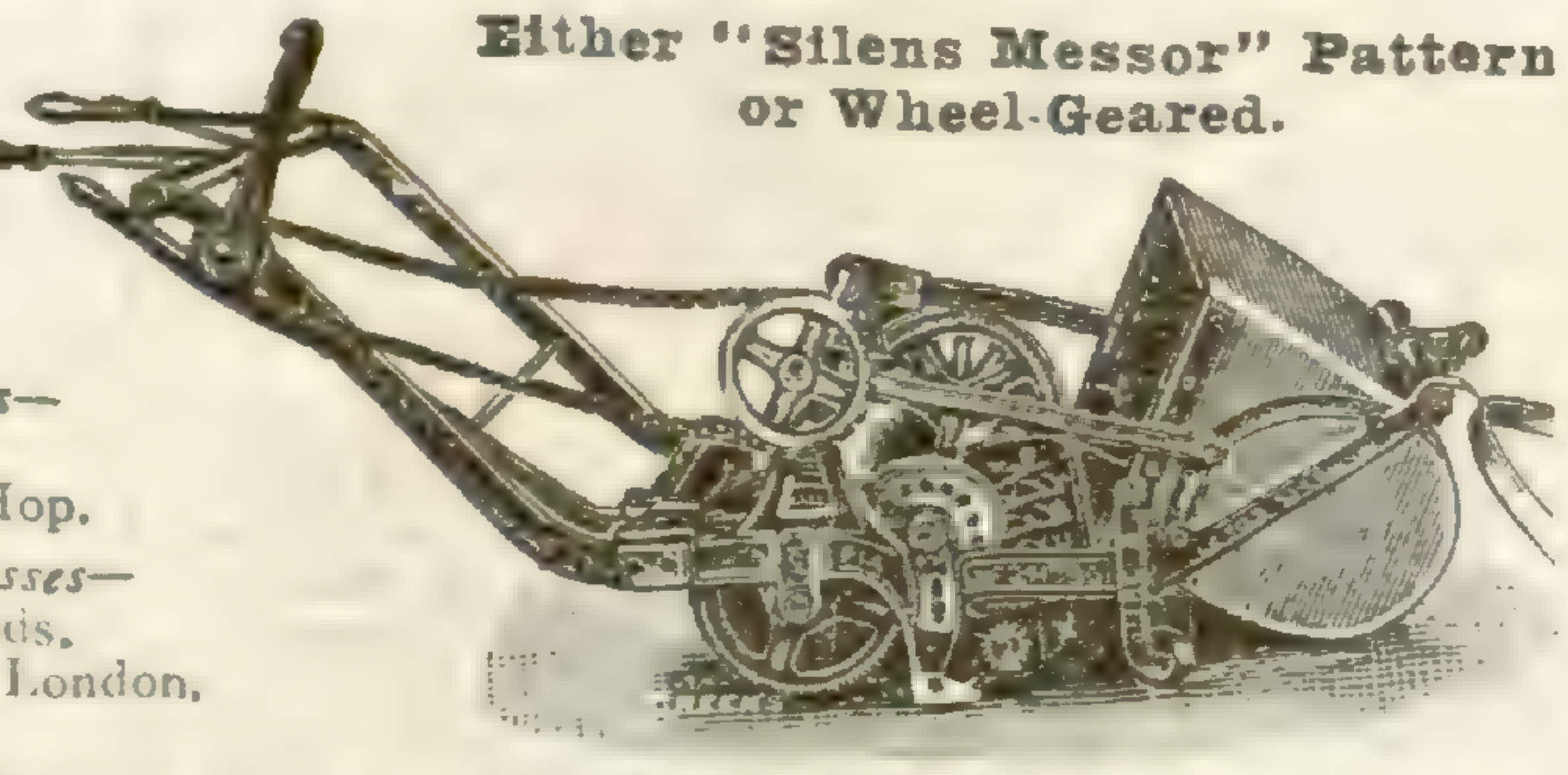

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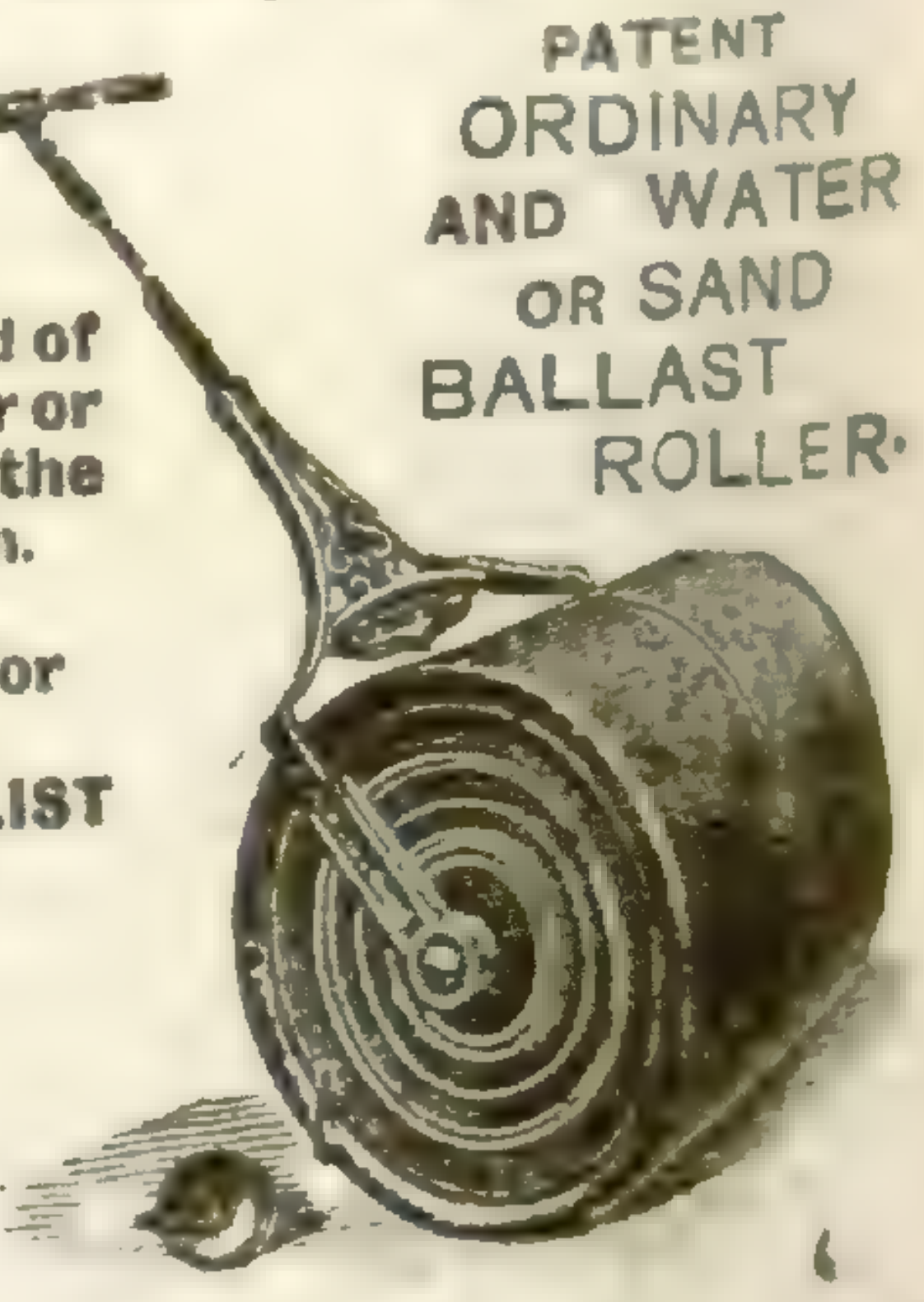

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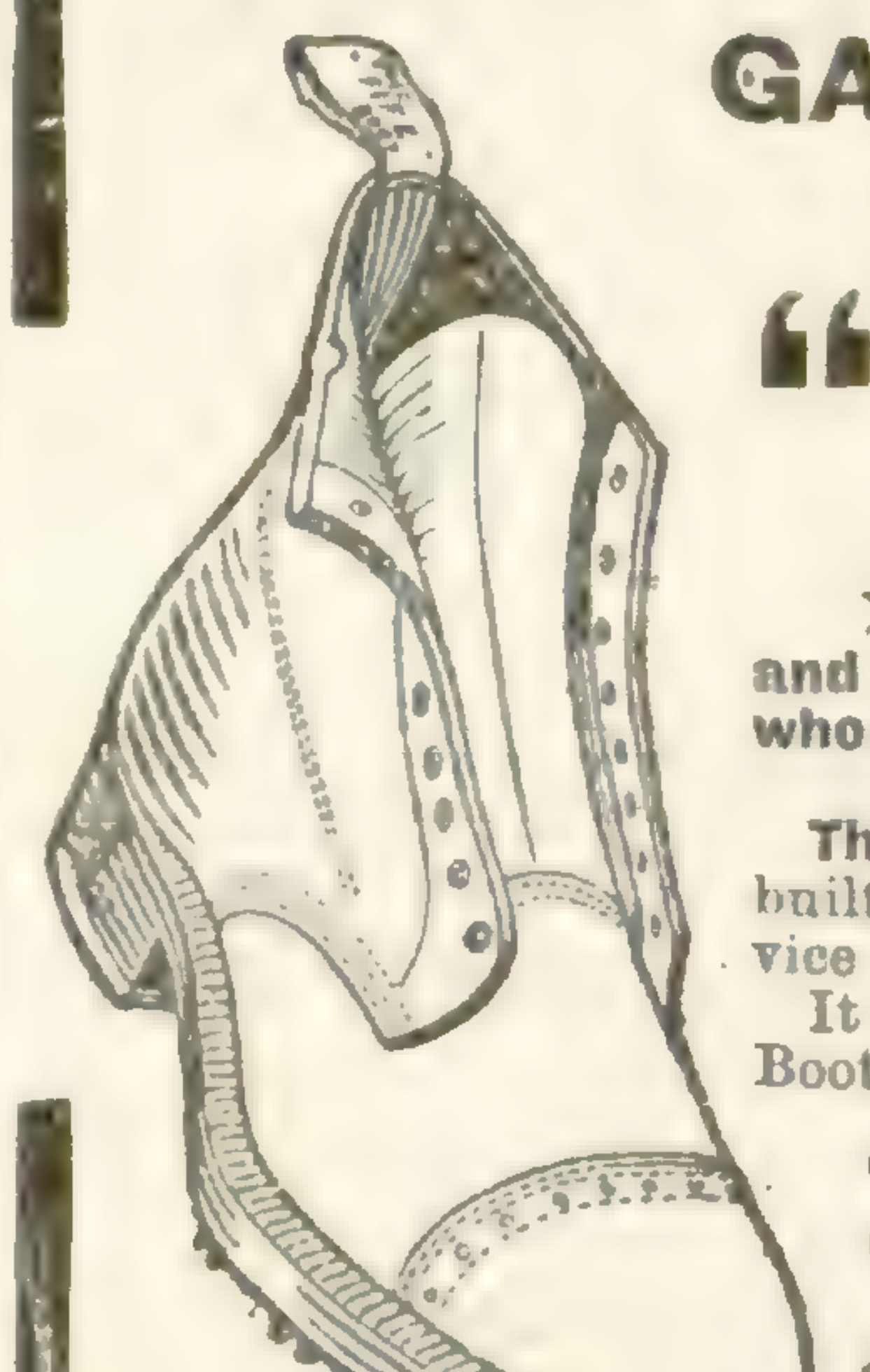

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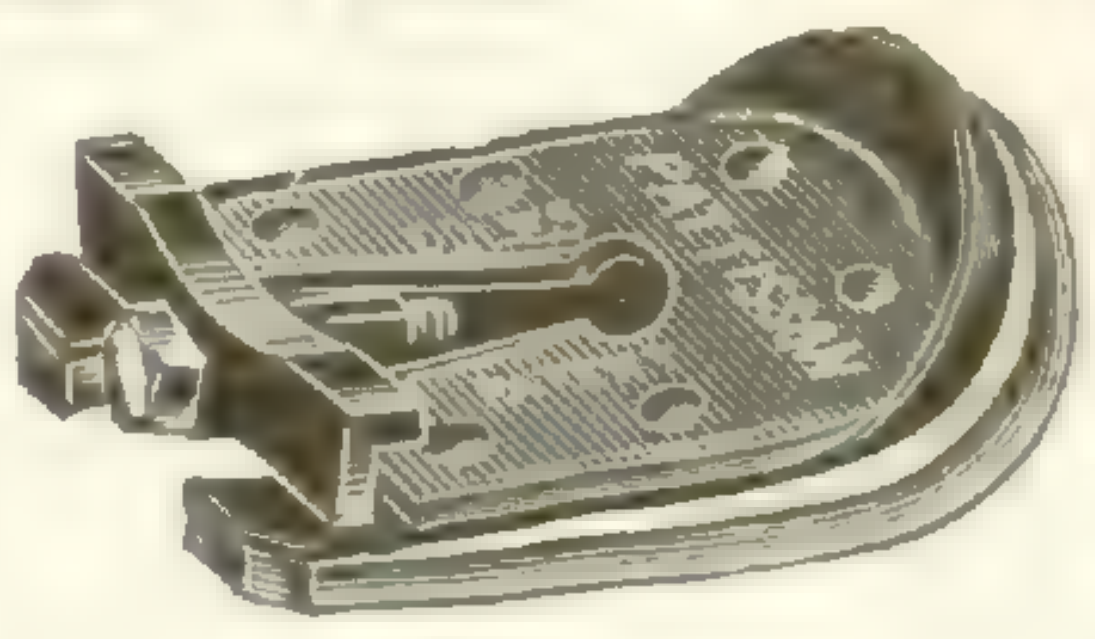

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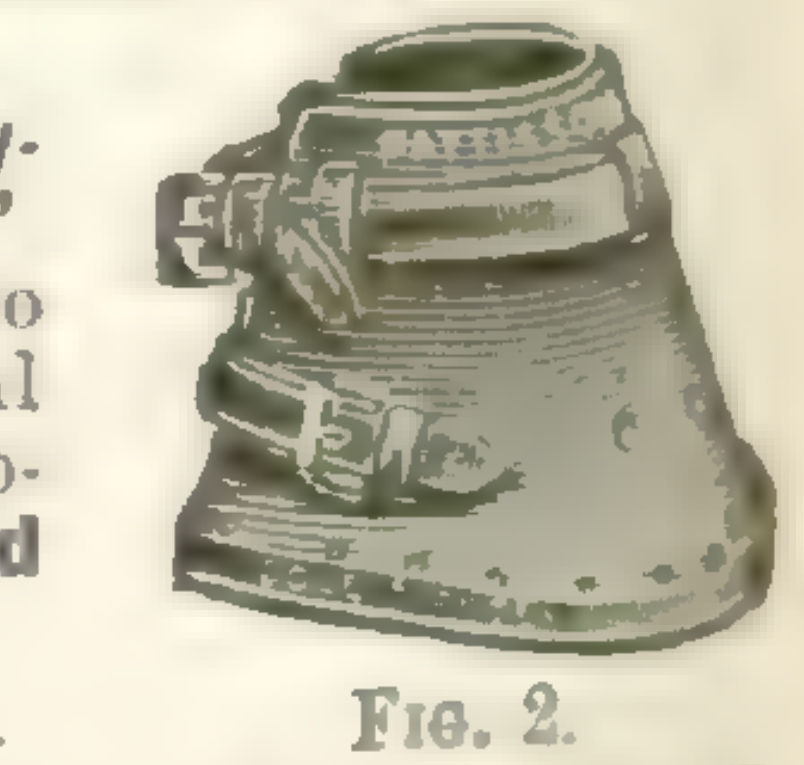

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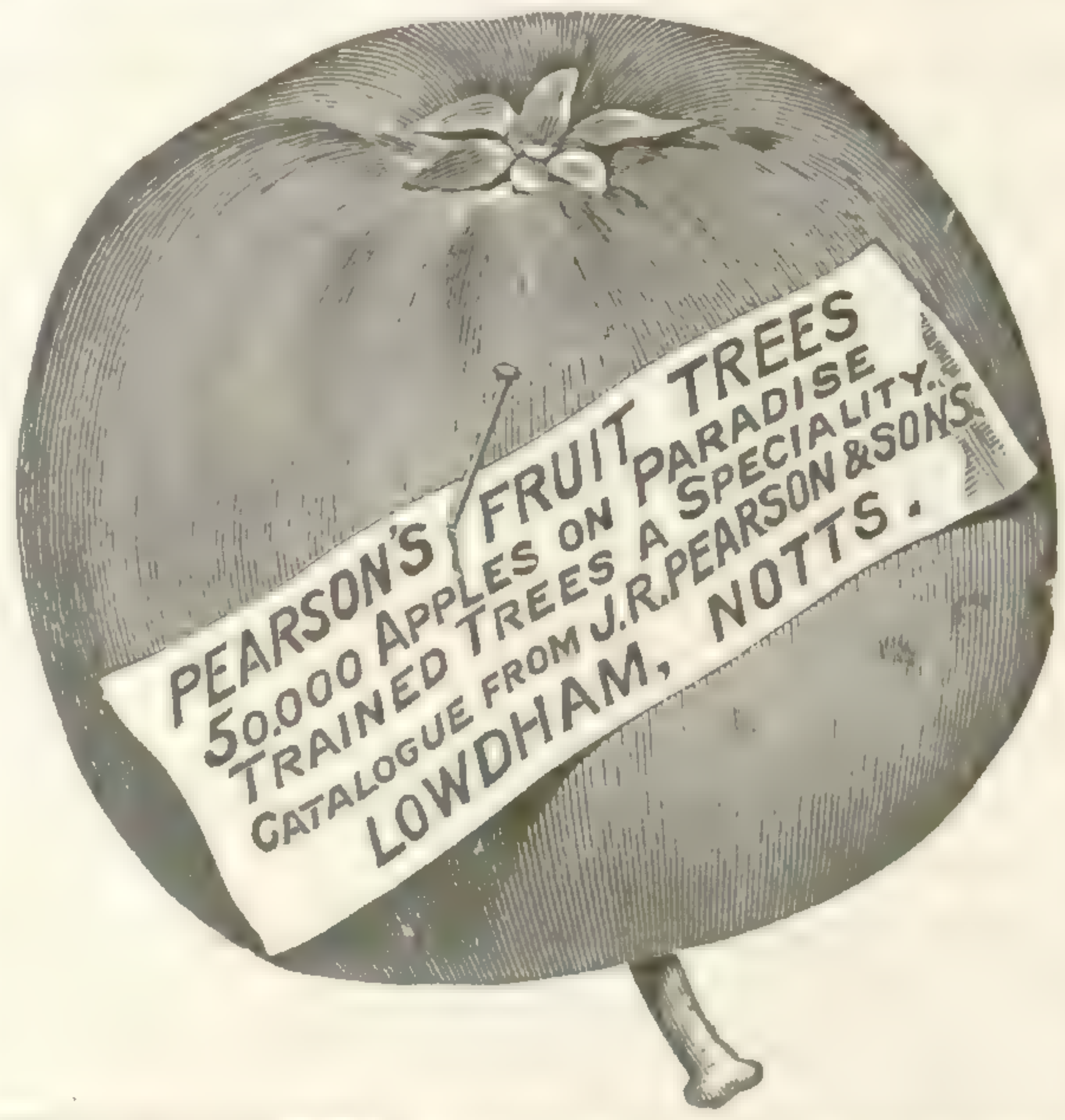
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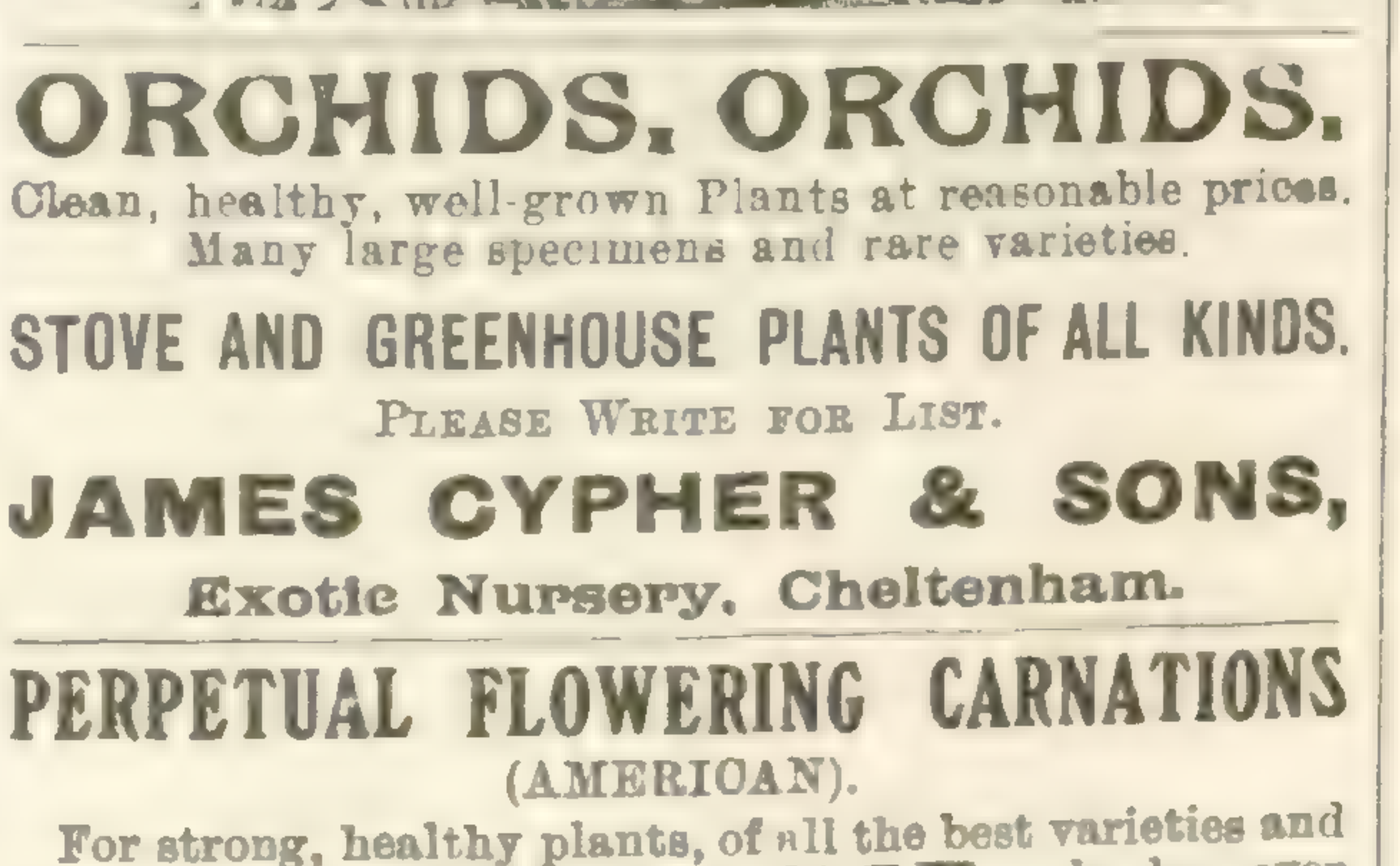

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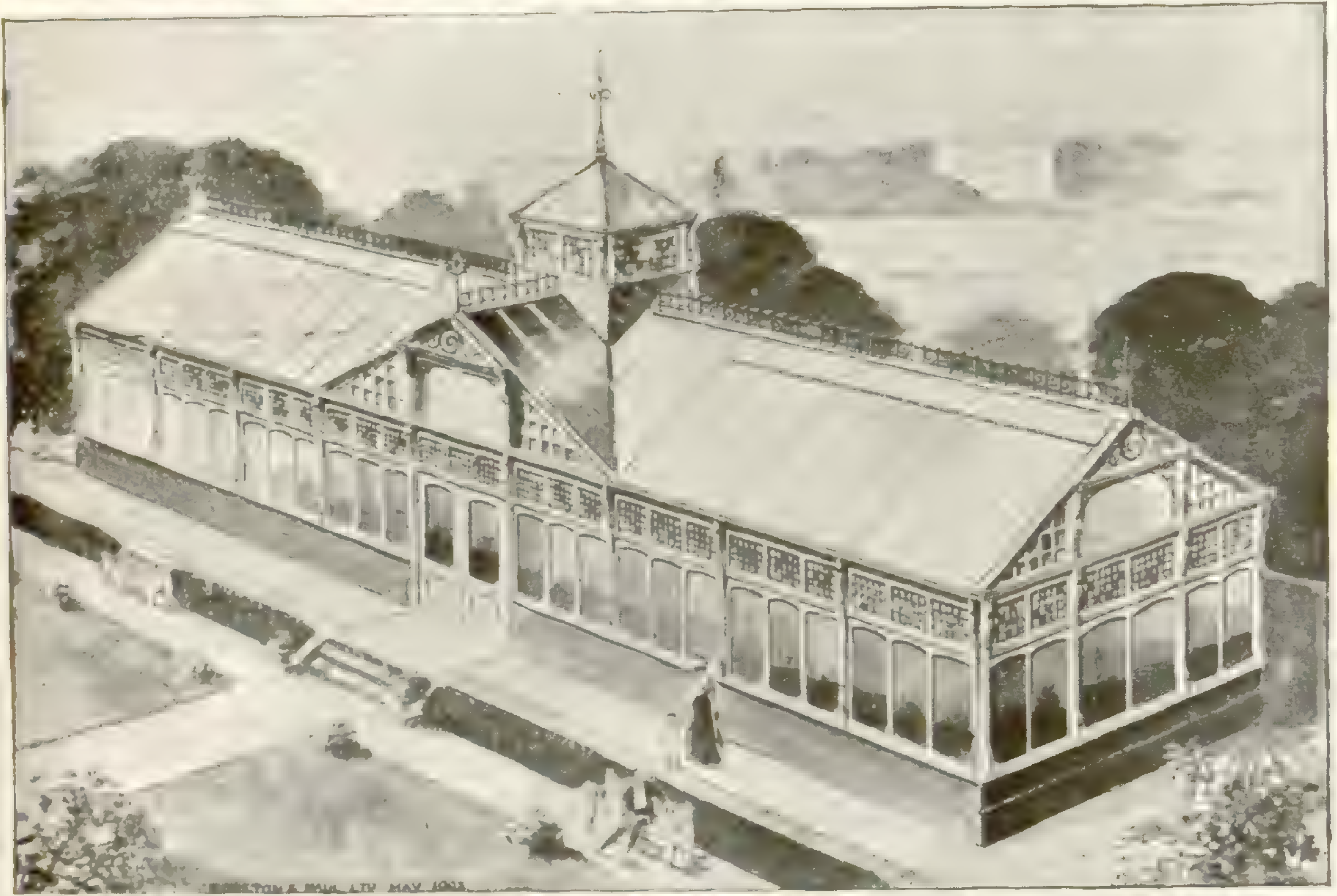

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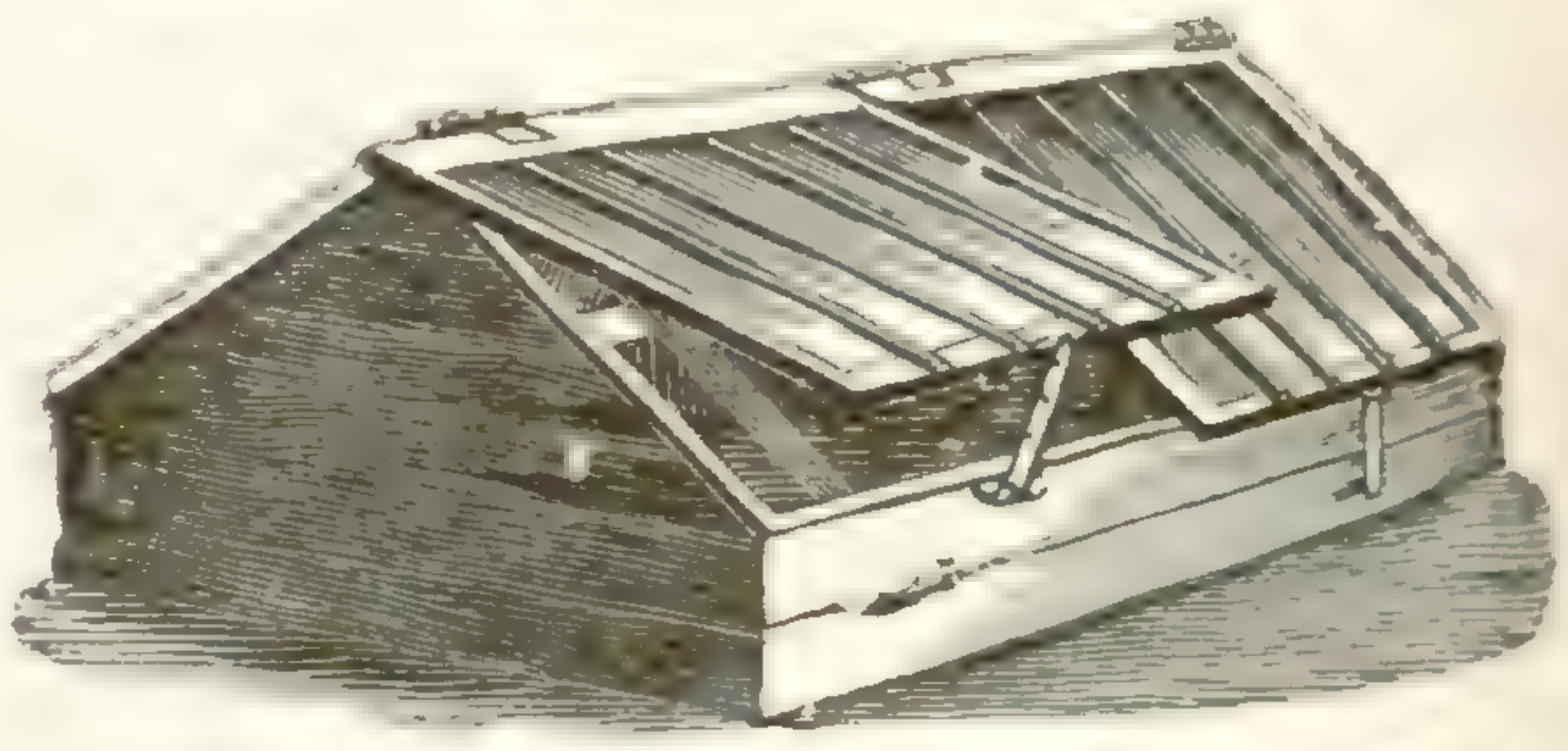

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VOL. LI.—No. 2,851. SATURDAY, JUNE 20, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Beautiful Garden Trees.

Although an immense advance has within recent years been made both in the appreciation and the utilisation of ornamental trees in the creation of garden scenery, there remains much to be accomplished before they can contribute so liberally as one might wish to the interest and beauty of gardens generally. We have, therefore, thought it well to call attention to them now, and suggest that those of our readers who are specially interested in the arboreal features of their gardens take full advantage of any opportunities they may have for becoming acquainted with the finer forms. There is, speaking in a general way, no period of the year in which tree life can be studied with greater advantage than during the next eight or ten weeks, as when in full leafage their distinctive characteristics can at once be seen, and the effect they produce be readily determined. No longer do trees that properly belong to the park and woodland occupy the greater portion of the space available, but there is still a tendency on the part of some planters to select them rather than those kinds which are variously known as pictorial and garden trees. The great variety of bold, graceful, and other forms available; the remarkable diversity in the colours of flowers and foliage; the varying aspects of those that present us now with tender green leafage, now with beautiful displays of flowers, and anon with the rich hues that precede the fall of the leaf, afford a succession of charming effects, where, in the creation of the scenery of the garden, a proper distinction in the selection of the trees has been made between the park and the garden, or it may be between the woodland and the pleasure grounds. We have not a word to say in depreciation of the stately oak, the wide-spreading beech, or the densely-growing elm. On the contrary, we have so full an appreciation of these noble trees as not to tire of them at any season of the year. We do not suggest they should be banished from gardens, or that they are not desirable in gardens that afford sufficient space for the creation of bold effects; but we do submit that they are not the trees which should be first thought of when the all-important question arises as to the selection of trees for a garden that is being newly made or undergoing improvement. For the creation of garden scenery pictorial trees abound, and advantage should be taken of the wealth of material at command. There are trees of large growth, of moderate stature, and of small size. We have erect-growing trees and weeping trees; we have trees with bronze and crimson leafage that in a well-devised scheme produce a deep tone of colour, and variegated trees that light up the scene with their silvery and golden hues. There is indeed no dearth of trees of the most distinct and beautiful description, or of trees that by reason of the striking contrasts produced are of the highest value for the production of pictorial effects. It is for the purpose of increasing the interest of our readers in garden trees, and of assisting them to become acquainted with their peculiarities of habit, and of leafage and flowers, that we advise their being studied when the study can be made under the most pleasant conditions, and to the greatest advantage. We shall not fail to refer to this question during the planting season, and those who have acted upon our suggestion as far as their opportunities will allow, will be in a better position to take advantage of the advice given them. Those who turn their attention to the subject will naturally have a tendency to pay special attention to those kinds for which they have a preference, but it would be well were those interested to take a broad view in the study of garden trees, and make themselves acquainted with as many kinds as possible. If this be done a much wider selection will be made by the general body of planters, and an adequate representation of tree life be obtained in gardens. We need not particularise here, but it may be useful to suggest that special attention should be given to weeping trees, to trees with finely cut leaves, and to trees with variegated foliage, for there are forms in each of these groups that are not as yet so well represented as they should be. In the case of the third of these groups it is essential to remember that, while they are of much value for lighting up the garden with their bright colours, they must not be too freely used, and their study during the summer is therefore especially desirable. Especially would we commend to the notice of all concerned the Japanese maples, of which there is a multiplicity of forms, because of their

MR. H. E. GRIBBLE.

elegance of habit and leafage, and their extreme usefulness for gardens of comparatively limited dimensions, as under the conditions most favourable to growth they do not soon extend beyond their allotted space.

Mr. H. E. Gribble, whose portrait we have much pleasure in giving in this issue, has for nearly twenty-four years had charge of the magnificent gardens of Wynyard Park, the Durham seat of the Marquis and Marchioness of Londonderry, and during that period has fully justified the high position he occupies among the foremost practical horticulturists at the present time, as indeed for many years past. Of Mr. Gribble's work at Wynyard Park there is no occasion to write at length, for in the Gardeners' Magazine of January 5, 1907, we gave a fully-illustrated account of the gardens there, and from this it will be gathered that in giving practical expression to the views of his noble employers on questions relating to their improvement he has shown remarkable taste and judgment. An eminently successful cultivator of fruits and vegetables, Mr. Gribble has devoted close attention to the ornamental aspects of gardening, and, possessing great natural taste, he has achieved a high degree of success in the maintenance of the older features of these famous gardens and the creation of new ones. Withal Mr. Gribble is the most modest of men, and in proof thereof we would mention that in a walk through the gardens one would fail to hear him taking to himself credit for any of the improvements that have been effected during the period in which he has been in charge. One of the great features of the Wynyard Park Gardens is the geometric flower garden, in which colour schemes of great beauty are annually carried out, but there are others hardly less noteworthy, especially the large area devoted to natural or wild gardening, the rose garden, and the garden of hardy flowers, which have been formed within quite recent years.

Famous Scottish Gardens.—In the issues of the Gardeners' Magazine for June 27 and July 4 we shall give a fully illustrated account of some of the more noteworthy gardens in the vicinity of Perth. The gardens that will be dealt with include those of Dupplin Castle, Freelands, Moncreiffe House, Dunkeld House, Kinfauns Castle, Seggieden, Pitfour Castle, Meikleour House, Ballathie, and Murthly Castle.

Fruits of Foreign Growth were imported in large quantities in May, as indicated by the fact that their value was £777,831, or an increase of £18,824 on the corresponding month of last year. In the imports of apples there was again a large increase, the total having been 193,889 cwt., of the value of £177,593, these figures representing an increase in quantity of 74,746 cwt., and in value of £43,200. Of apricots and peaches 1 cwt. only was received, and this was returned as of the value of £8. In the corresponding month of last year 17 cwt. were imported. There were big increases in the imports of bananas and cherries, and of the last-named fruits the total was 5,826 cwt., of the value of £15,193. Gooseberries, on the other hand, were imported in smaller quantities, the total having been 457 cwt., of the value of £875. Of grapes the imports amounted to 1,168 cwt., of the value of £5,089, these figures representing a decrease as compared with the corresponding month of last year, and a large increase upon the grape imports in May, 1906. Pear imports dropped from 2,896 cwt., of the value of £9,625 in May, 1907, to 2,898 cwt., of the value of £3,669 last month. No plums were imported, but the imports of strawberries amounted to 3,632 cwt., of the value of £8,650.

Strawberries are now being sent to the Metropolitan and other markets in immense quantities from the Hampshire strawberry fields, and both the shops and the costers' barrows are well supplied with the brightly-coloured fruit. In the streets excellent fruit is selling at fourpence per pound, and in the shops the prices range from sixpence per pound upwards. The first of the special trains dispatched from Botley with strawberries brought to London about 15,000 cross-handled baskets, containing between four and five pounds of fruit each.

The Neill Prize which, under the will of the late Dr. Patrick Neill, is awarded every second year by the Royal Caledonian Horticultural Society to a distinguished Scotch botanist or horticulturist, has this year been awarded to John H. Wilson, D.Sc., F.R.S.E., lecturer in Agriculture and Rural Economy, St. Andrew's University. Dr. Wilson has rendered such splendid service in the cause of horticulture and agriculture, more especially in connection with the hybridisation of plants, that we congratulate the Council of the Royal Caledonian Horticultural Society on the award, and Dr. Wilson on the well-deserved honour that has been done him.

The Gardeners' Royal Benevolent Institution.—We are asked to again remind our readers of the 69th anniversary festival dinner in aid of the funds of the Gardeners' Royal Benevolent Institution, which will take place on Wednesday next, the 24th inst., at the Hotel Metropole, under the presidency of Lord Aldenham, who will be supported by an influential and distinguished company on that occasion. Donations to be placed on the chairman's list are earnestly solicited, and may be sent direct to Lord Aldenham, to Harry J. Veitch, Esq., the treasurer, Chelsea, S.W., or to the secretary, Mr. G. J. Ingram, at the offices, 175, Victoria Street, Westminster.

Souvenir of the Grand Yorkshire Gala.—One of the ways in which the Council of the Grand Yorkshire Gala is commemorating its fiftieth annual meeting is by the issue of a very interesting souvenir, consisting of a hundred and thirty-two pages of illustrations, text, and advertisements. The history of the Gala is the most interesting part of the souvenir, and it commences with the inauguration of the Gala in 1858, and the first exhibition in 1859, and tells of the successes and the vicissitudes of the undertaking down to the year 1907. With but three exceptions, the president of the fête has been the Lord Mayor of York for the year. We gather that the fête has always been held in the Bootham Fields. Some of the earlier meetings were not a success, consequently a reserve fund was raised, and this reached £1,000 in 1870. The year 1897 was a most disastrous one for the fête, and we well remember watching the furious gale that swept over York, tearing the tents to pieces, snapping the poles like tinder, and strewing the ground with the choicest plants and flowers that had been gathered together; the financial loss that year was £500. The services of Sir J. Terry and Sir Christopher Milward are acknowledged, and we read how, when Mr. Simmons, who was secretary for [illegible] years, retired in 1902, he was made a [illegible] member, and the present secretary, Mr. [illegible] Arey, was appointed to the office. No fewer than 1,844,817 persons have paid to see the York Gala, and the record attendance was 57,383 in 1899. As prizes for flowers and plants the Gala has expended £26,000, and this year it has a schedule valued at 1,000 guineas. One fine feature of the work of the Council is found in the list of contributions to the York charities, the amount totalling to £2,682 5s., including £62 10s. to the Gardeners' Orphan Fund. We should add that the souvenir is freely illustrated with views of various Gala meetings, of York, and of Messrs. J. Backhouse and Son's nurseries at York.

R.H.S. Gardens Guild.—The [illegible] annual general meeting of the Guild will be held on Wednesday, July 8, the second day of the Holland House Show, at 7 p.m., in the Charles Dickens Room, Carr's Restaurant, Strand. It is particularly hoped that all who have at any time been students or employees in the R.H.S. Gardens at Chiswick or Wisley will endeavour to be present, and will give early notice of their intention to the acting hon. secretary, Mr. R. Wallis, R.H.S. Gardens, Wisley, Ripley, Surrey.

Gardeners' Wages at Kew.—When the vote of £83,124 for salaries and expenses of the Board of Agriculture was before the House of Commons the other day, Mr. Summerbell moved the reduction of the vote by £100 in order to call attention to the wages paid to the gardeners in the Royal Gardens, Kew. He urged that the wages paid to the gardeners should be raised from one guinea to 24s. weekly. It was, in his opinion, begging the question to say that the gardeners were improvers. Dr. Rutherford thought the wages should be raised to the level of those paid in the London parks. In reply, Sir E. Strachey said the gardeners at Kew were young unmarried men, who came under special conditions with a view to obtain experience, and that they could only remain two years. The guinea paid them weekly was more in the nature of a subsistence than a wage, and the advantages they received through being at Kew for the two years had to be taken into account.

Vegetable Imports in May comprised 1,262,032 cwt. of potatoes, of which 257,853 cwt. came from Germany, 222,415 cwt. from France, 159,211 cwt. from the Channel Islands, and 622,533 cwt. from other countries; 883,819 bushels of onions, and 88,901 cwt. of tomatoes.

A Link with the Past.—We are reminded by the death of Mr. Barclay Phillips, at Bedford, on May 9, that his family had a long connection with horticulture. In his earlier years Mr. Barclay Phillips was a reporter in the old House of Commons, and as he died at the advanced age of 94 years, he must have remembered his father's horticultural and botanical tendencies. Mr. Henry Phillips, the father of Mr. B. Phillips, is best known to modern horticulturists through his two-volume works, "Flora Historica," "Sylva Florifera," and "History of Cultivated Vegetables." He was also the author of "Pomarium Britanicum," and other works. At Brighton he designed a large glass house, named the Athenæum; this had a ridge and furrow roof and from it Sir Joseph Paxton took the idea that subsequently materialised in the Chatsworth conservatory, the Great Exhibition, and the Crystal Palace. Mr. H. Phillips died in 1831.

YORK JUBILEE FÊTE AND GALA.

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For the fiftieth successive year the grand Yorkshire Gale was held, on June 17, 18, and 19, in the Bootham Fields, York. Special efforts were made to make this jubilee celebration a great success, and a sum of one thousand guineas was set apart for prizes for plants, flowers, fruits, and vegetables, and the schedule was reorganised. In the matter of extent, the show was not so very much larger than on previous occasions; at least, so it seemed to us, but in matters of quality and novelty the exhibition stood out as an unqualified success; indeed, we can hardly remember so large a provincial show where such high quality prevailed in every department.

All the arrangements were excellent, and the tents were lighted with electric light at night. All the officers of the Gala Committee are to be heartily congratulated upon the horticultural success of the jubilee show, but once again they had failed to settle with the Clerk of the Weather. The eve of the show was dull, but early on the first morning rain began to fall, and continued steadily until about one o'clock, and consequently the approaches to the tents soon became quagmires. The committee, however, procured railway sleepers and made a solid road from the chief entrance up to the tents, and cartloads of straw were soon brought to make a dry pathway at each tent entrance. As we write we can but hope that better weather prevailed during the second and third day, so that the financial success may be as great as the horticultural one. The show was held in what were practically four huge and broad tents, arranged gridiron fashion, so that once inside there was no need for a visitor to go out again until he or she had inspected the whole of the exhibits.

The special jubilee classes, four in number, were not entered into with the keenness we had anticipated, and in two of them but one exhibitor entered. The rockwork and alpine class was the great success of the show, and in this Messrs. J. Backhouse and Son, Lim., York, not only won first place, but also the jubilee medal for the best exhibit in the show, and one of the special gold medals offered this season. The Royal Horticultural Society sent down a deputation, consisting of Sir Trevor Lawrence, Bart., Sir Albert Rollit, Rev. W. Wilks, Mr. J. Gurney Fowler, Mr. H. B. May, and Mr. Harry J. Veitch. These gentlemen made numerous awards, as our award list shows, and these gave great pleasure to the exhibitors.

JUBILEE CLASSES.

The leading jubilee commemoration class was one for the most meritorious and imposing festal display of plants and flowers arranged on a space of 30ft. by 14ft., one frontage, all kinds of flowers and plants admitted. There were three competitors, and the premier award of £40 was awarded to Mr. W. A. Holmes, West End Nurseries, Chesterfield, for a very beautiful exhibit, in which tall, brilliant single-stemmed crotons were a leading feature. The background was of fine kentias, silver acers, and handsome crotons, and in front of these the various well-grown plants were arranged with great care and taste, smaller plants, chiefly bright-foliaged ones, filling in the groundwork. Pillar roses were effectively and gracefully used, and a big sheaf of white and pink liliums made a lovely centrepiece, while tall arrangements of cut carnations occupied positions near the front corners, and a few orchid spikes rose from small mounds of asparagus and crotons. Second prize fell to our coadjutor, Mr. J. Donoghue, gardener to J. Pickersgill, Esq., Bardon Hill, Westwood, Leeds, who had an excellent display that needed a little brightening towards the back centre. His crotons were very fine, and the groundwork of miltonias towards the front was very effective; while the tall arched rods of Vitis Henryana, each with a basket of odontoglossum spikes suspended from it, made a novel feature. Mr. W. Vause, Leamington, was placed third, and he, too, had a good group, but it needed taller light plants to lend it the grace seen in the other displays.

Messrs. Walshaw and Son, Scarborough, were awarded a fourth prize for a small exhibit of irises, liliums, lilac, arums, spiræas, ranunculuses, etc., in the class that was intended to show the advancement of the horticulturists' skill in recent methods of retarding plants and flowers, but the season was hardly suitable for such an object.

In the county class for garden produce Mr. J. C. McPherson, gardener to Lord Londesborough, Londesborough, Market Weighton, was granted the second award for a moderate exhibit, in which schizanthuses and sweet peas figured as flowers. There were fair peaches, nectarines, melons, figs, grapes, and cherries, and a fair collection of vegetables.

In the other jubilee class for the most meritorious combination display of horticultural products, there were three competitors, and the premier prize fell to Mr. Charles E. Simpson, 24, Spurriergate, York (gardener, Mr. F. Nutbrown). The chief features of the exhibit were various floral designs, notably a font of white and purple pinks, with a fountain in the centre; a cushion in mauve pinks, with odontoglossums; a Prince of Wales' feathers; a chaplet in white and crimson pyrethrums; and a huge circular wreath in white stocks and pink carnations. Bouquets of dark roses and of odontoglossums were also interspersed, while the front portion of the table was filled with high-class melons, lemons, peaches, bananas, pineapples, strawberries, and apples. The whole scheme was tasteful, good, and well carried out. Messrs. W. Artindale and Son, of Sheffield, were second, with a huge harp in lavender sweet peas, liliums, and orchids; "gates ajar," done in white stocks, with a frame of pink roses; also a bay-leaf wreath, vases and baskets of flowers, but no fruit. Messrs. J. Backhouse and Son, Lim., were third, having a lady's hat and muff in flowers, and other handsome designs, specially a harp in white roses, with the corners in crimson roses; another big wreath in lilies of the valley, with pink roses at the top, was fine. They also had some dishes of good fresh fruits.

ORCHIDS.

A beautiful set of twelve orchids, arranged by Mr. H. Alexander, orchid grower to Lieut.-Colonel Holford, C.I.E., Westonbirt, Tetbury, Gloucester, was one of the great attractions of the show. It worthily won the first prize in its class—i.e., the Veitch Memorial Gold Medal; the plants shown were Miltonia vexillaria chelsiensis, with thirteen spikes and fifty-three flowers; Miltonia vexillaria Augusta Victoria, with thirty-one flowers; Cypripedium callosum Sanderæ, with seven flowers; Cattleya gigas, C. fulvescens, C. Whitei splendidissimum, C. Mossiæ Wagneri Westonbirt var., C. Dusseldorfi, Lælio-cattleya Canhamiana, Dendrobium Dalhou-nobile, L.-c. Martinetti Flambeau, and Odontoglossum crispum Erebus.

The dozen orchids so well shown by Lieut.-Colonel Holford formed the centrepiece of a magnificent group of these aristocratic flowers, put up in a most tasteful manner by Mr. H. Alexander, who, we regret to learn, slipped on a box during the eve of the show and badly bruised and hurt himself by the fall; he was, fortunately, able to come to the show the next morning. Venda teres, Brasso-cattleya Digbyano-Mossiæ, Lælio-cattleya Canhamiana, Miltonia vexillaria in variety, including the beautiful Cattleya Dusseldorfi var. Undine, Odontoglossum crispum in variety, and a fine O. citrosmum, with two hundred flowers, were included. There were in this beautiful and bright display no fewer than a hundred spikes of O. crispum, two hundred and fifty flowers of Lælia-cattleya Canhamiana—all of Westonbirt raising; a hundred and thirty Miltonia vexillaria spikes, etc.

First prize for six orchids was won by Messrs. James Cypher and Sons, Cheltenham, who scored with Cattleya Mossiæ, Lælio-cattleya Aphrodite, Epidendrum prismatocarpum, L.-c. Canhamiana, L. purpurata, and Odontoglossum crispum; this firm also led for three orchids, showing a fine Odontoglossum percultum in this set. For ten orchids Messrs. J. Cypher and Sons were again first, and their best plants in this set were Vanda teres gigantea, Oncidium macranthum, L.-c. Canhamiana magnifica, and Cattleya Dusseldorfi.

In the class for a group of orchids, 15ft. by 5ft., arranged for effect, Messrs. J. Cypher and Sons, Cheltenham, were again to the front, winning first prize with a graceful, beautiful, and bright display. The background consisted of tall oncidiums and odontoglossums, with arches of cut blooms above them and a few palms behind. Asparagus sprays were freely used, and ferns were used as a groundwork for the miltonias, cattleyas, lælio-cattleyas, etc., that formed the body of the group. In this class Messrs. J. W. Moore, Lim., Rawdon, Leeds, secured second place with a very bold and effective exhibit that must have run Messrs. Cypher and Sons, closely. Here the background was of three bold erections of virgin cork, asparagus, and orchids, the drooping spikes of odontoglossums looking well under these conditions. Lælio-cattleyas were a great feature of this group, and Cypripedium bellatulum figured well also. Third prize fell to Mr. J. Robson, Altrincham.

Mr. Robson was second for three orchids; Mr. W. P. Burkinshaw, West Hill, Hessle, second for six, and also for ten orchids, and also for six orchids, and he won the Veitch Memorial Bronze Medal for a dozen orchids. Mr. Burkinshaw led for three orchids, and Mr. F. J. Montagu, Melton Park, Doncaster (gardener, Mr. E. Hill), was placed second for six orchids, and second for three orchids in the amateurs' section.

GROUPS.

The large group class is usually a popular one at York, and each display has to occupy 300 square feet, but on this occasion, though there were five competitors, the strongest exhibtors had succumbed to the greater attractions of the Jubilee Festal display class, and consequently the group class lacked something in quality. The first prize was awarded to Mr. Skinner, gardener to J. W. Coulthurst, Esq., Gargrave House, Leeds; Humea elegans, crotons, a pair of big roses—Hiawatha and Dorothy Perkins—were the leading features, but the foreground of dark moss, with its pool of dirty water, in which were rotting moss-covered tree branches, did not appeal to us at all; it was carrying realism too far. Second place was accorded to Mr. J. Sharp, Valley Nurseries, Almondbury, Huddersfield, for an arrangement that had nothing striking about it, either in design or colour effect, the pillar roses being the best part of the display. Mr. W. Curtis, gardener to J. Blacker, Esq., Thorpe Villas, Selby, gained third place for a display in which white flowers—liliums and odontoglossums—were good, but too freely used. Messrs. R. Simpson and Son, Brook Street, Selby, fourth.

FRUIT AND VEGETABLES.

Mr. J. Gibson, gardener to the Duke of Portland, Welbeck Abbey, Worksop, was awarded first prize for a decorated dessert table, winning with a fine and handsome display that gained 89 out of a possible 108 points, and showed good white and black grapes, splendid Negro Largo figs, Grosse Mignonne peaches, Cardinal nectarines, Royal Jubilee melons, and Kentish Favourite strawberries. Oncidium spikes were used for decorating the table. Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, came second with 88 points, showing good fruit as usual, and a decoration of francoa and Schizanthus retusus; third prize fell to Mr. A. R. Searle, gardener to the Marquis of Northampton, Castle Ashby, Northampton, who had 82 points, and Mr. T. Patteson, gardener to W. C. Gray, Esq., Tunstall Manor, West Hartlepool, was fourth with 73 points; there were seven competitors.

The best collection of ten kinds of fruits was the one from Mr. J. C. McPherson, gardener to Lord Londesborough, Market Weighton; he had finely-berried Muscat and Black Hamburgh grapes, Royal Sovereign strawberries, Lord Napier nectarines, Early Rivers cherries, oranges, Brown Turkey figs, Ringleader melons, and Royal George peaches; Mr. J. H. Goodacre came second, and Messrs. Colebrook Brothers, Burton-on-Trent, were third. Mr. McPherson was also to the fore in the class for six kinds of fruits, winning with grapes, melons, nectarines, and a splendid dish of Leader strawberries; Mr. W. Nicholls, gardener to the Right Hon. Lady Beaumont, Carlton Towers, Yorks, second; and Messrs. Colebrook Brothers third.

Mr. C. Lawton, gardener to Colonel Harrison Broadley, M.P., Welton House, East Yorks, led for peaches with Grosse Mignonne, and Mr. Goodacre led for nectarines with Early Rivers, finely coloured. For Black Hamburgh grapes, Mr. J. Bray, gardener to Lady Hawke, Wighill Park, Tadcaster, led with good clusters, and Mr. W. Nichols led for white grapes with Buckland Sweetwater in fine condition. Mr. Searle had the best dish of figs, and Mr. Brotherson, gardener to F. Samuelson, Esq., Breckenbrough Hall, Thirsk, had the best dish of strawberries—a grand dish of Royal Sovereign.

First prize in Messrs. Webb and Sons' class for six kinds of vegetables was well won by Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, with grand dishes of Stourbridge Marrow peas, Wordsley Pride potatoes, Moore's Cream marrows, Sensation tomatoes, Early Mammoth cauliflowers, and Prizewinner carrots; Mr. A. R. Searle, Castle Ashby Gardens, second; and Mr. B. Ashton, gardener to the Earl of Lathom, Lathom House, Ormskirk, third.

ROSES.

These made a most imposing display, and the competition in the cut flower classes was very much better than we had expected. In the premier class for seventy-two blooms, in not less than three dozen varieties, Messrs. D. Prior and Sons, Colchester, led the way with a bright set of clean blooms that included good specimens of Liberty, Comtesse de Nadaillac, Marechal Niel, Frau Karl Druschki, General Jacqueminot, Marie Verdier, Madame Jules Gravereaux, Mrs. J. Laing, and Queen of Spain. Mr. George Mount, Canterbury, was a good second in this class, and he had grand flowers of Ulrich Brunner, Frau Karl Druschki, and Mrs. J. Laing, but his boxes lacked yellow colouring; Messrs. B. R. Cant and Sons, Colchester, were placed third, and Messrs. Harkness and Sons, Hitchin, fourth.

There were four entrants in the class for forty-eight roses, not fewer than twenty-four varieties, and here Mr. George Mount was the victor, leading with a well-balanced set, in which Richmond, Captain Hayward, Golden Gate, and Frau Karl Druschki were finely represented. Messrs. D. Prior and Sons, Colchester, came second, Messrs. B. R. Cant and Sons third, and Messrs. Harkness and Sons fourth.

Five competitors entered in the class for thirty-six roses in not fewer than eighteen varieties, and here the awards in order of merit were made in favour of Messrs. Harkness and Sons—whose blooms were good but a trifle overdressed; Mr. George Mount, Messrs. D. Prior and Sons, and Messrs. B. R. Cant and Sons.

There were five entries of twenty-four distinct roses, and Mr. E. J. Hicks, The Rose Gardens, Twyford, Berks, led easily in this competition, and was followed in order by Messrs. D. Prior and Sons, and Mr. George Mount. Mr. W. Hutchinson, Kirbymoorside, led for eighteen roses in the amateur class; while in the trade class for a similar number of blooms Mr. E. J. Hicks, Twyford, was a fine first, the judges quite passing over a box of good flowers that had been spoiled by overdressing; Mr. George Mount second, and Messrs. B. R. Cant and Sons third. In the class for a dozen white or yellow roses Mr. George Prince, Longworth, Berks, worthily won first place with very bold examples of Marechal Niel, Comtesse de Nadaillac, Medea, and Souv. de S. A. Prince. Messrs. D. Prior and Sons, Colchester, came second, and Mr. E. J. Hicks third.

For a group of twenty pots of roses, Mr. W. Longstaff scored with a pretty arangement of rambling and bush roses, the Frau Karl Druschkis being notably good; Mr. J. E. Skaife was second, and Mr. H. Pybus was third. For a group of roses in pots, arranged for effect, Mr. Skaife secured premier place with a really good display, and Mr. W. Todd, Vyner Street, Haxby Road, York, was second. There was a keen competition in the class for a collection of pot and cut roses, arranged for effect, and Mr. George Prince, Longworth, scored with a beautiful display, in which lovely bunches of garden roses and exquisite and fragrant tea and hybrid tea roses were charmingly disposed. Messrs. W. and J. Brown, Stamford, came second, and Mr. G. Mount, with some very fine flowers, was third.

ROCK AND ALPINE GARDENS.

The class for a group of hardy herbaceous and alpine plants and flowers was an unqualified success, and it resolved itself into a rockwork and alpine garden competition, and a fine competition at that. The premier award, and also the Jubilee Gold Medal for the best exhibit in the show, was awarded to Messrs. J. Backhouse and Son, Lim., The Nurseries, York, to whom we tender our heartiest congratulations.

It is difficult to describe the exhibit, but we may say that there was an irregular background of rockwork, with a tiny alpine path running along its base, and skirting a stream and little pools of water, the latter having a foreground of irregular rock masses. Eremurus and roses provided the floral background, and the rockwork was topped with rhododendrons and small conifers, while, lower down, were patches of dianthuses, saxifrages, incarvilleas, and hardy orchids. In the end recess a miniature waterfall lent life to the display, and the rocks on either side provided a home for a few beautiful hardy ferns. In the water were water lilies and arums, and in the boggy sides of the pool were colonies of spiræas, hardy cypripediums, Primula sikkimensis, etc. In the front, again, were dianthuses, sedums, tiny conifers, Saracenia purpurea, etc. The whole was beautifully arranged, and showed evidence of unusual skill and patience.

Messrs. W. Artindale and Son, Sheffield, gained the second place, and they also had a very fine exhibit, boldly planted and designed. Spiræas, Primula japonica, and P. Sikkimensis, incarvilleas, rhododendrons, eremuri, and saxifrages in variety were the leading features of a very bright and attractive exhibit. Mr. J. Wood, Boston Spa, Yorks, had a very interesting rockwork exhibit that was charmingly designed and carefully planted, but it needed a little more finish over the bolder central rocks, and also a prettier background. Mr. J. Cottam, Alma Gardens, Cottingham, fourth.

SPECIMEN PLANTS.

Messrs. J. Cypher and Sons, Cheltenham, secured the leading place for six stove and greenhouse plants, with giant examples of Ixora Williamsi, Statice intermedia, Franciscea eximia, Erica Cavendishiana, and Bougainvillea Cypheri, the latter particularly fine. The best nine stove or greenhouse plants were those contributed by the famous Cheltenham firm of Messrs. J. Cypher and Sons, who had splendid examples of Erica ventricosa magnifica, Franciscea eximia, Ixora Pilgrimi, I. Fraseri, Clerodendron Balfouri, Anthurium Scherzerianum, Bougainvillea Sanderiana, Pimelia diosmæfolia, and a huge Erica Cavendishiana, all splendidly flowered.

Messrs. Cypher and Sons had the best single greenhouse plant—a good Erica ventricosa magnifica—but they were second for a stove plant with Ixora Pilgrimi. The first prize for three crotons, huge, brilliant bushes, fell to Messrs. Cypher and Sons, and this firm came second for one croton with C. angustifolium, no first prize being awarded. Mr. W. J. E. Sharpe led for a fine foliage plant with a very good Cycas revoluta; Mr. W. Vause, Leamington, was second for three crotons, but was first for three stove and greenhouse plants, the latter including good specimens of Erica Cavendishiana and E. ventricosa. Mr. Vause was second for six stove and greenhouse plants, his set including a good Anthurium Scherzerianum; he was also second for nine stove and greenhouse plants, first for three fine foliage plants, and first for a single specimen stove plant.

HARDY FLOWERS.

There were four fine exhibits of hardy flowers in the principal class for these, and here Messrs. G. Gibson and Sons, Leeming Bar, Bedale, were placed first for a grand lot of blooms in fine bunches, but all too flatly arranged; the colours of the poppies, pyrethrums, irises, lupins, heucheras, and kniphofias, were gorgeous, and the flowers were well grown. Messrs. Harkness and Sons, Bedale, came second, and here the spikes of eremurus relieved the general flatness. Messrs. W. Artindale and Son, Sheffield, had the most imposing exhibit, their tall vases of poppies, gladioli, liliums, spiræas, and lupins standing up boldly from the lower bunches; Mr. G. Cottam, Alma Gardens, Cottingham, fourth.

Messrs. G. Gibson and Co., Leeming Bar, scored for twenty-four bunches of hardy border flowers, and here their anemone-flowered pink pyrethrum Madame Munier was very beautiful; Messrs. Harkness and Sons, second; Mr. W. Hutchinson, third; and Mr. G. Cottam fourth.

MEDALS AND CUPS.

Gold Medals.—Mr. J. Coulthurst, for group of plants; Messrs. William Cutbush and Son, Highgate; Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester; Messrs. J. Backhouse and Son, Lim., York; and Messrs. J. Veitch and Sons, Chelsea.

York Jubilee Medal.—Messrs. J. Backhouse and Son Lim., York, for their alpine exhibit.

Silver Cups.—Mr. Donoghue, gardener to J. Pickersgill, Esq., Leeds; Mr. Joe S. Sharp, Almondbury, Huddersfield; Mr. W. Curtis, gardener to J. Blacker, Esq., Thorpe Villas, Selby; Mr. George Prince, Longworth; Messrs. J. Cypher and Sons, Cheltenham; Mr. J. Gibson, gardener to the Duke of Portland, Welbeck Abbey, Worksop; Mr. J. Goodacre, gardener to the Earl of Harrington, Elvaston; Messrs. R. Smith and Co., Worcester; Messrs. R. H. Bath, Lim., Wisbech; Messrs. G. Bunyard and Co., Maidstone; Messrs. Hugh Low and Co., Enfield; Messrs. Kelway and Son, Langport, Somerset; Messrs. Ker and Sons, Liverpool; Messrs. Dicksons, Lim., Chester; and Messrs. W. Artindale and Son, Sheffield.

Hogg Medal.—Messrs. Laxton Brothers, Bedford.

Silver-Gilt Knightian.—Messrs. Sutton and Sons, Reading.

Silver-Gilt Flora Medal.—Messrs. J. Peed and Son, West Norwood; Mr. W. Vause, Leamington; Mr. J. Wood, Boston Spa, York; Messrs. W and J. Brown, Peterborough; Mr. G. Mount, Canterbury; Mr. W. P. Burkinshaw, Hessle; Messrs. J. W. Moore, Lim., Rawdon, Leeds; Messrs. G. Gibson and Co., Leeming Bar; Messrs. Harkness and Sons, Bedale.

Silver Flora Medal.—Mr. John Forbes, Hawick; Mr. C. W. Breadmore, Winchester; Mr. W. Kettlewell, Horner Street, York; Mr. W. F. Crowther, Wigginton Terrace, York; Messrs. Kent and Brydon, Darlington.

Silver Banksian.—Messrs. Batchelor and Sons, Harlow Heath, Harrogate; Mr. J. E. Skaife, Burton Lane, York.

Award of Merit.—To Nepenthes excelsa, from Messrs. James Veitch and Sons; and to Marguerite Pink Alexandra, from Messrs. Ker and Sons, Liverpool.

⁂ We regret that extreme pressure upon our space this week compels us to hold over our description of the Non-competitive exhibits at York.

FERN FRONDS.

Although superficially there is a great resemblance between some forms of fern fronds and the foliage of some kinds of flowering plants, especially those which assume pinnate and decomposite characters, there is always existent the fundamental difference that it is the fern frond which bears the fruits, while leaves proper never do so.

The fern fruit, too, differs in character from that of flowering plants, consisting as [illegible] not of fertilised seeds with various [illegible], such as attractive pulp or other [illegible] adapted to assist their dissemination or protection, but of nonfertilised [illegible] spores whose function it is eventually to produce a preliminary growth capable of bearing the equivalents of flowers, and of eventually, by their interaction, reproducing a fern of the parental type. A seed differs furthermore from a spore in being provided with a store of [illegible] capable of assisting the young plant in its start in life, while the spore appears to be nothing more than a single [illegible] cell provided only with a protective husk, which, under congenial conditions of moisture, bursts and permits this cell to [illegible] protrude, and by the immediate formation of feeding rootlets to multiply itself and build up the preliminary growth aforesaid.

The minutiæ of this process, however, we will not here enter into, as it is the frond itself with which we have chosen to deal. A fern frond resembles ordinary leaves in one essential respect, viz., it is composed of a stalk, which becoming a midrib, bears on either side a divided or undivided cellular tissue which fills up, and is supported by a system of minor midribs or veins according to its structure. In the common Hartstongue we have the simplest example of undivided fronds, a stout stalk at the base, and then a midrib or rhachis bearing on either side a flat cellular tissue [illegible] sustained by a succession of veins which, starting singly from the midrib, fork into pairs and continue to the extreme edge of the frond, the only prominent support being the midrib itself.

Turn we now to a divided form, say the common Polypodium vulgare, and we find that the rhachis is flanked for the greater part of its length by a series of separated [illegible] or pinnæ, whose broadened bases touch each other, and each of which has a [illegible] midrib of its own springing from the main one, while the cellular tissue is borne upon a characteristic vein system, which forks repeatedly as a rule, but occasionally stops short at points where these veins are destined to act as feeders to the spore heaps.

These two examples may be taken as typical of all undivided and divided fern fronds, though each species has its own characteristic form of vein system or venation as it has of that in which it bears its spores. In some the venation is simple, as in the Hartstongue, and in others, it may be netted and varied in many ways, but in the normal types it may be relied upon to adhere as to plan, if not in detail, to the specific or generic type. In abnormal forms, or "sports," however, where the form of the frond is greatly altered, the venation is naturally altered too, since in point of fact it is this which determines the outline and general make; it forms as it were the ground plan upon which the cellular tissue is distributed. In the Hartstongue for instance, when it assumes the crispum or frilled forms, in which the outer edge of the frond may be fully twice as long as the midrib, and consequently becomes perforce frilled or folded, we see the normally once forked veins fork and fork again, thus preserving their normal distance from each other instead of spreading out wider and wider apart as they would otherwise inevitably do. The presumption, therefore, is that this "sport" is determined by an abnormal tendency to multiplication of the veins by furcation on otherwise normal lines, just as in the crested or tasselled ferns we find this due to a tendency of the primary, secondary, or even tertiary midribs to multiply themselves by fission on multiform lines, thus producing many terminal growths instead of only one.

In the divided ferns, taking the pinnate Polypodium vulgare again as a type of many, we see in the normal pinna, a smooth or faintly crenate edge where the bulk of the veins terminate evenly. Given, however, very robust growth, we may perceive a tendency to form a serrate or sawtoothed edge due to the veins carrying the tissue with them a little farther, and on this principle, availing ourselves of numerous wild "sports," we can form a series ranging through crenate, serrate, sub-bipinnate, bipinnate, up even to tripinnate, or quite decomposite varieties. This is due to the fact that the more the terminal veins tend to project beyond the normal outline, the greater the tendency they show to deepen the interstices and assume on their own account the characteristic venation of the pinna whence they sprang, so that decompound forms result in extreme cases instead of long, thready projections.

In the Polystichums, and more recently in the Nephrolepis, we have examples of this; in P. lonchitis, the Holly fern, the specific form is pinnate with markedly serrate lobes; in P. aculeatum and P. angulare, it is bipinnate on similar lines, but in the last-named species, as varieties, we have actually quinquepinnate forms, the final divisions, though extremely fine and slender, nevertheless showing the characteristic structure of the normal pinna. In Nephrolepis exaltata, N. e. Piersonii affords a parallel example but of less development, so far being only tripinnate. As a general rule the form of the frond and that of its divisions is correlative, so that with crested ferns, a heavy terminal crest to the frond means smaller but still heavy ones to the pinnæ and obvious ones in the pinnules, the terminal cells being similarly affected throughout, and showing the effect, as it were, to the best of their capacity.

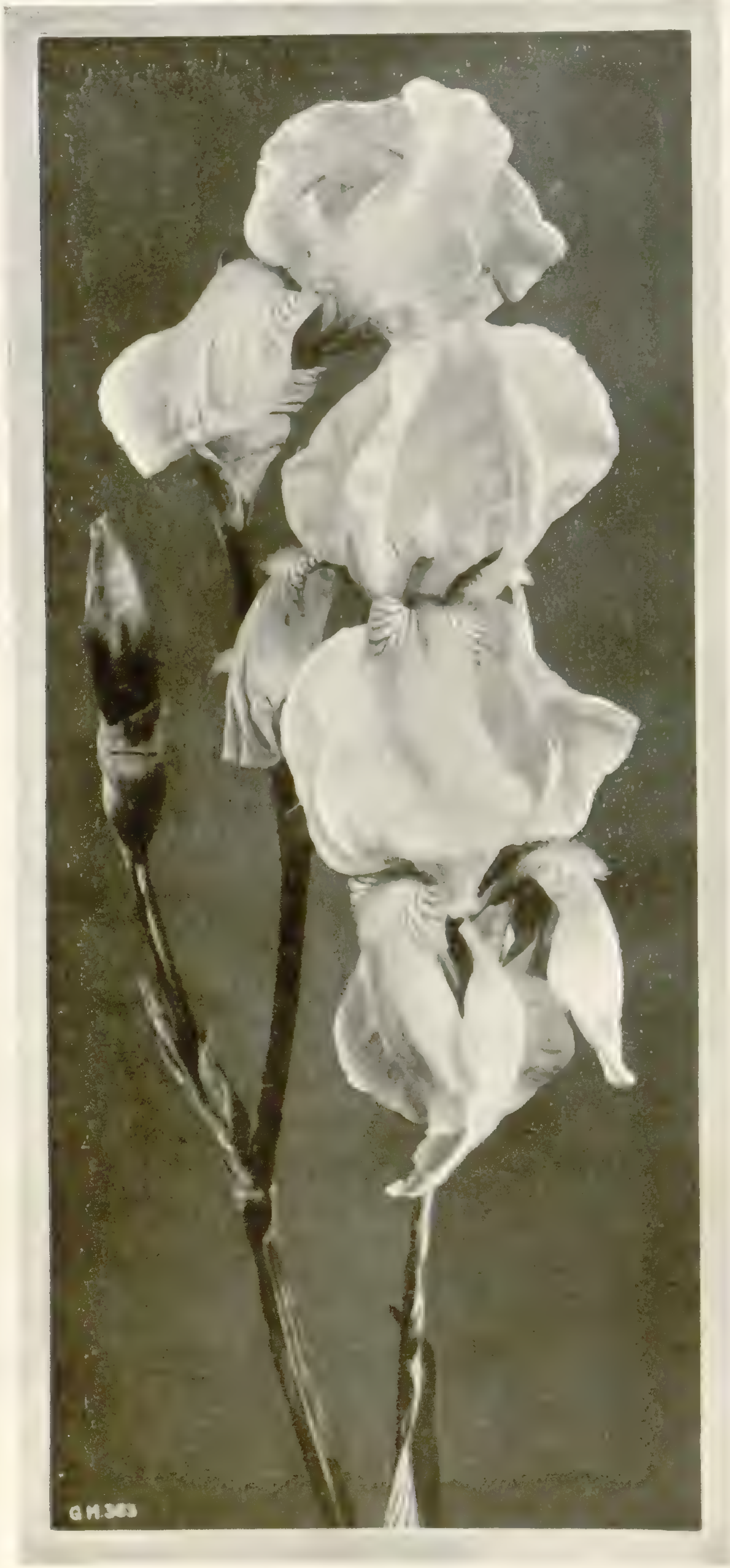
There are exceptions, but they are very few. Some ostensibly terminal cells appear to be incapable of building up the final wall or skin which forms a normal

DEUTZIA WILSONI.

Flowers pure white. A.M., R.H.S., June 9; Messrs. Jas. Veitch and Sons, Chelsea.

frond tip or edge, and this incapacity leads sometimes to very curious and interesting results. Ordinarily, for instance, a tasselled fern shows when its fronds uncoil the complete tassel with all its strands, and this simply enlarges and perfects itself, but in some cases the tassel is only visible as a rudimentary one, a sort of woolly-looking tip, and this subsequently grows and divides and subdivides almost ad infinitum until the frond in due course actually perishes. In Pteris serrulata var Applebyanum, we once had a frond which formed a small tassel all of which died in the winter but one strand, and in the following season this grew as described, producing an immense ball of crestings. In Athyrium Filex-fœmina var. unco-glomeratum, which is practically all crest, although it is a deciduous fern, Dr. Mansfield found that this incapacity of ceasing terminal growth actually prevented terminal decay if the tips were severed and layered when the rest of the frond perished. These resumed growth the following spring by producing rooting bulbils and also aposporous prothalli, so that practically the growth is endless. In some forms of fringed Hartstongues the lateral veins are of this character, and grow out first into long slender threads and then into prothalli which breed another generation of plants. In this respect, therefore, as in others, the frond differs essentially from the leaf.

Chas. T. Druery, V.M.H., F.L.S.



IRIS CARTHUSIANA.

Flowers pale blue, veined deeper blue, and marked with yellow and yellow-brown on the falls. A.M., R.H.S., June 9; Mr. J. W. Marshall, Charterhouse, Godalming.

LAWNS AND PADDOCKS.

The subject of lawns and paddocks often gives the gardener a considerable amount of anxiety.

Lawns.

A lawn once established should not be neglected, because if left to itself it will be necessary probably in a few years to make it anew.

In its management it requires to be weeded in spring and again in the autumn in order to get rid of strong-rooted and large-leaved plants, such as sorrel, plantains, dandelions, and other obnoxious weeds which may have sprung up. The common daisy is sometimes very abundant upon lawns, being a most troublesome weed, and scarcely to be destroyed except by careful attention. Its stems are prostrate and strike root readily, having the property of producing numerous eyes at the surface of the ground, which rapidly grow into branches and root with great facility. The stems being brittle these side branches are readily separated, when they maintain an independent existence, each producing other side shoots which will root and break off in like manner.

This habit of the daisy has given rise to the idea that the plant has a creeping root, but in reality its roots are mere fibres, which strike down perpendicularly into the soil. It is because of the abundance of these rooting side branches which the daisy is continually producing that this plant is so difficult to eradicate, and mere harrowing and spudding fail to obliterate it.

In addition to the branching habit of the daisy, every head of flowers that is allowed to ripen seed sheds some 50 or 60 seed vessels, which germinate in a few days after they touch the damp soil, and form a fresh supply of viviparous plants. Hence the advantage of daisy rakes in keeping lawns in order, but these do not extirpate the original plants, they only prevent further multiplication by seed.

The best plan is to smother the daisy by encouraging grass to flourish; the daisy has a great aversion to being choked up. An occasional manurial dressing of sulphate of ammonia, 4ozs. to the square yard and watered in if the weather is dry, will bring the grasses to the front and choke out the weeds. In the autumn, when the lawn is not in use, a liberal application of soot may advantageously be given, which is an effectual restorer of weakly grasses. Such manures as basic slag, kainit, and superphosphate encourage clovers and weedy plants, so should as a rule be avoided.

If the lawn is infested with moss, a dressing of sulphate of copper, 2ozs. per square yard may be given; or early in spring or late in autumn an application of gas-water may be recommended, using one gallon of gas-liquid to five gallons of clear water; this will kill the moss, and also improve the grasses by giving them a darker green colour.

For exhausted soils a light dressing of guano or finely sifted hen manure largely mixed with sand and leaf-mould may be applied after the grass begins to grow in spring.

A lawn should be mown often enough to prevent the grass or other plants from coming to seed, and the ground rolled after every mowing.

If the lawn is coarse, owing to the turf having been taken from a bad pasture, it may be improved by sowing some good grass seeds, frequent mowing, and by often rolling with a heavy garden roller during moist weather. Should there be any vacant or exposed places they must be filled up by re-sowing seeds, and sprinkling over them a thin covering of mould.

Paddocks.

A paddock is generally the name given to that portion of meadow land which surrounds or is adjacent to a dwelling house, where a few cows, horses, or sheep are kept, according to the taste of the occupier.

When the paddock is grazed all the year round, the land stands less in need of manual assistance than when an annual crop of hay is taken off; but in either case it is a point of good management to keep the land always in good heart; and as there is usually a natural prejudice against the breaking up of such land for permanent improvement, recourse must be had to top-dressing with short dung, basic slag, and possibly a little kainit. A dressing of eight tons of dung per acre once in each five years, then eight cwt. of slag, and two hundredweight of kainit once in each three years will be beneficial.

If any rough patches of unconsumed grasses exist, give to these places a sprinkling of common salt, 6ozs. per square yard, this will sweeten the herbage and the animals will graze it close to the ground.

Spud out docks, thistles, nettles, cow parsley, or other rank growths which may from time to time appear, and spread the animal droppings occasionally. A bush-harrow or chain-harrow drawn over the paddock early in spring often does good service to the finer grasses. Nothing improves a pasture like a very heavy rolling when the ground is moist in January or February.

J. J. Willis.

Harpenden.

CAMPANULA TOMMASINIANA.

The peculiar and subtle charm of many alpine harebells lies in their quaintness. In C. Allioni, for instance, there is a small plant practically obscured by its flower. In C. pumila alba (La Religieuse des près) there is an attitude suggested in its pretty French popular name. In C. excisa and C. Zoysi quaintness of form in the miniature is the attractive feature, whilst in C. Tommasiniana there is a quaint type of beauty almost unique in garden plants. Happily it is a long-lived perennial that delights in gritty soils, not necessarily dry or sun-baked: it will thrive just as well, or better, in the plant border as on the rockery.

The plant is tufted, and may be described as resembling a strong bedding lobelia in habit and size, but some specimens I have seen averaged a foot in diameter. Flowers are produced in abundance from established tufts in June and July, and a few are in evidence till winter sets in. They are very quaintly formed, being cylindrical, with minutely-cleft corolla lobes that do not reflex fully, and their beautiful colouring, a pale but attractive blue, is a rare beauty that would baffle a clever artist to accurately reproduce.

Its home is the rock garden, because here it is possible to raise the plant to the eye level, and the full beauty of the comfit-shaped flowers, nestling in their thicket of green leafy trails is not lost. It thrives best in those parts where the soil overlies limestone, but cultivation is merely a question of keeping slugs at bay.

G. B. Mallett.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

LILIUM MONADELPHUM.

This is an old but very distinct and most beautiful lily, to which, beside that at the head of this note has been given the specific names of L. colchicum, and L. szovitzianum. This last, however, is now generally recognised as a distinct variety of L. monadelphum. It flowers as a rule in May or during the early part of June, and is, therefore, entitled to rank among the early-flowering lilies. In the variety L. szovitzianum the flowers are larger and the anthers chocolate instead of the yellowish-tinted ones of the type. A marked point of difference is that the stamens of L. monadelphum are united towards the lower part, whereas in the variety szovitzianum they are quite free.

Lilium monadelphum is a native of the Caucasian region, and is a thoroughly good garden lily. Being an inhabitant of bleak districts it succeeds best in an open spot, and does not need any preparation of soil, for a good, well-drained loam suits it best. In common with many other members of the Martagon group, to which it belongs, this lily is not seen to any advantage the first season after planting, as then even good bulbs will frequently refuse to flower. The second year, however, better results may reasonably be anticipated, and under favourable conditions the display will continue to increase year by year.

G.M. 369

PYRETHRUM LANGPORT CRIMSON.

Flowers bright velvety-crimson. A.M., R.H.S., June 9; from Messrs. Kelway and Son, Langport, Somerset.

Lilium monadelphum, when well-established, pushes up a stout erect stem to a height of five feet or even more, and this is thickly clothed with pale green leaves. On strong plants the numerous drooping flowers are borne in large pyramidal heads. Individually they are about four inches long, and much the same across the expanded mouth, with regularly recurved segments. These are of a thick wax-like texture, while in colour they vary from pale straw-yellow to deep yellow. Some individuals are almost, or quite pure in tint, while others are freely spotted.

Like several of the Martagons the flowers are too heavily scented for close quarters, hence it must be regarded solely as an outdoor lily.

W. T.

DROUGHT-RESISTING BEDDING PLANTS.

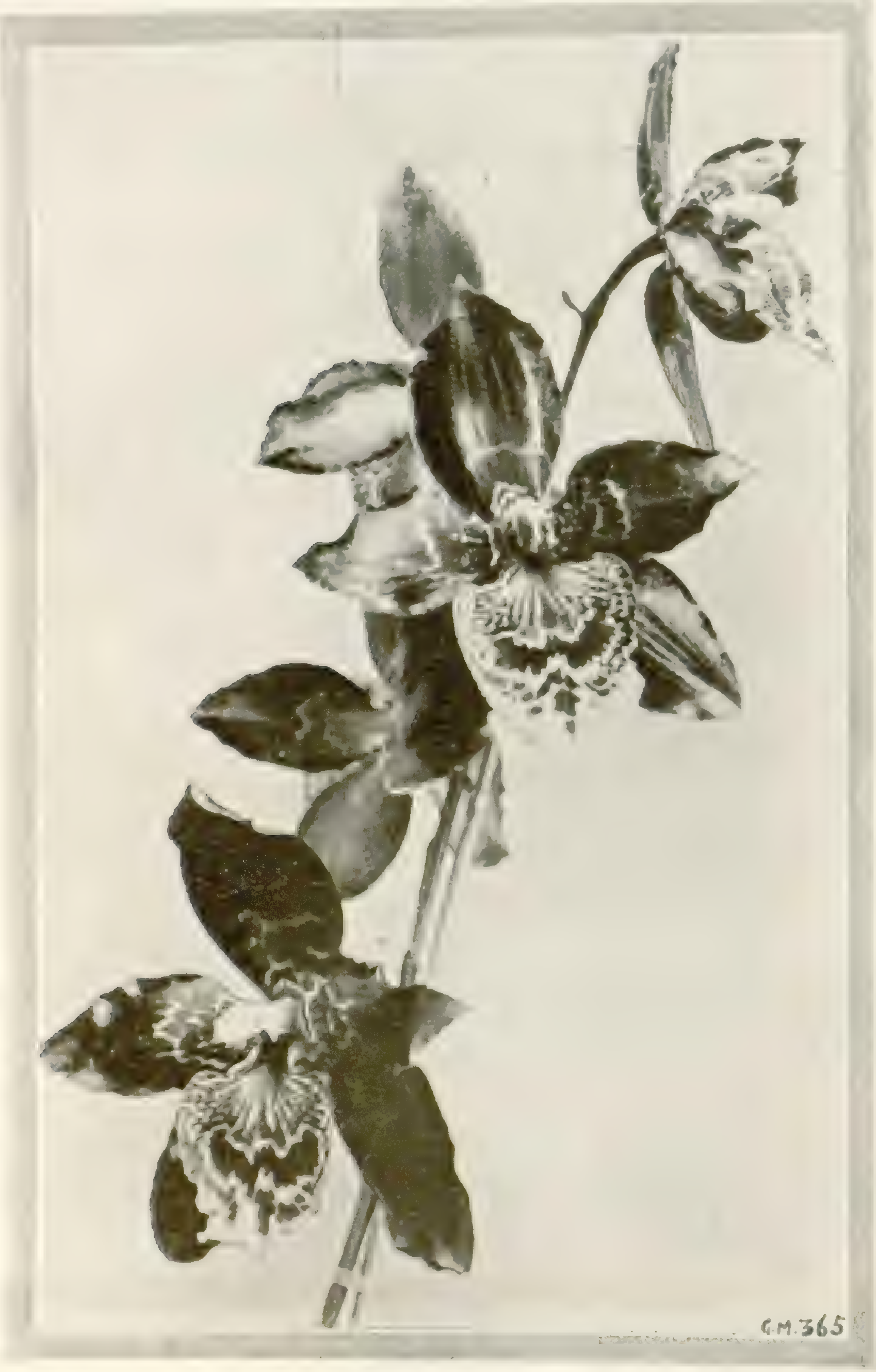
Plants that flourish and produce an uninterrupted succession of bloom during long periods of drought without artificial watering or assistance are extremely valuable, more especially in districts where the rainfall is small, or where considerable labour is involved in watering. Hot and dry positions, where the sun shines with all his strength during the greater part of the summer day exist in most gardens, and may well be planted with the subjects under notice

From time immemorial the antirrhinum has been known to excel in this direction, and it is difficult to understand or explain how the plants extract sufficient nourishment and moisture from a dry brick wall to support a great wealth of inflorescence. These plants have been prominent in the van of floral progress, and we now possess a large number of exquisite varieties. The rose-coloured and pure white varieties are very fine, and few plants surpass them for beautiful effects when employed for bedding purposes. Petunias, too, are superb dry weather plants, and flower with far greater freedom in a comparatively poor and dry soil than in heavily manured and moist ground; in fact, under the last-named conditions over-luxuriance is produced at the expense of the floral display. I have seen dry banks planted with petunias with splendid results.

The same remarks apply to nasturtiums of all sorts, and how infinitely superior are the new and named kinds to the old varieties! Cloth of Gold is strikingly beautiful, with rich golden foliage and scarlet flowers, which are thrown well above the leaves: Silver Queen has white and green foliage, and is a great beauty. The French marigolds must be included in this category, and the more refined varieties of comparatively recent introduction are very fine garden plants, and lend considerable brilliance in late summer, and until cut down by frost. The bold and aggressive African marigolds seem incapable of withstanding a long and continued drought, but verbenas call for attention, and it is interesting to note that they have to a great extent regained their old popularity. Such beautiful varieties as Defiance and Miss Wilmott have done much to bring this about, and surely we have few plants to surpass them as carpeting material, to say nothing of their value in pots, vases, hanging baskets, window boxes, etc.

Zinnias behave splendidly under dry conditions after their roots have penetrated the soil deeply, but bold and showy as they are, they cannot lay claim to being artistic in any sense of the term. The portulacas are second to none for dry spots, and in my younger days they were universally cultivated, the most exposed and dry positions being allotted to them, but they are anything but a success in a wet and sunless season.

Walter H. Aggett.



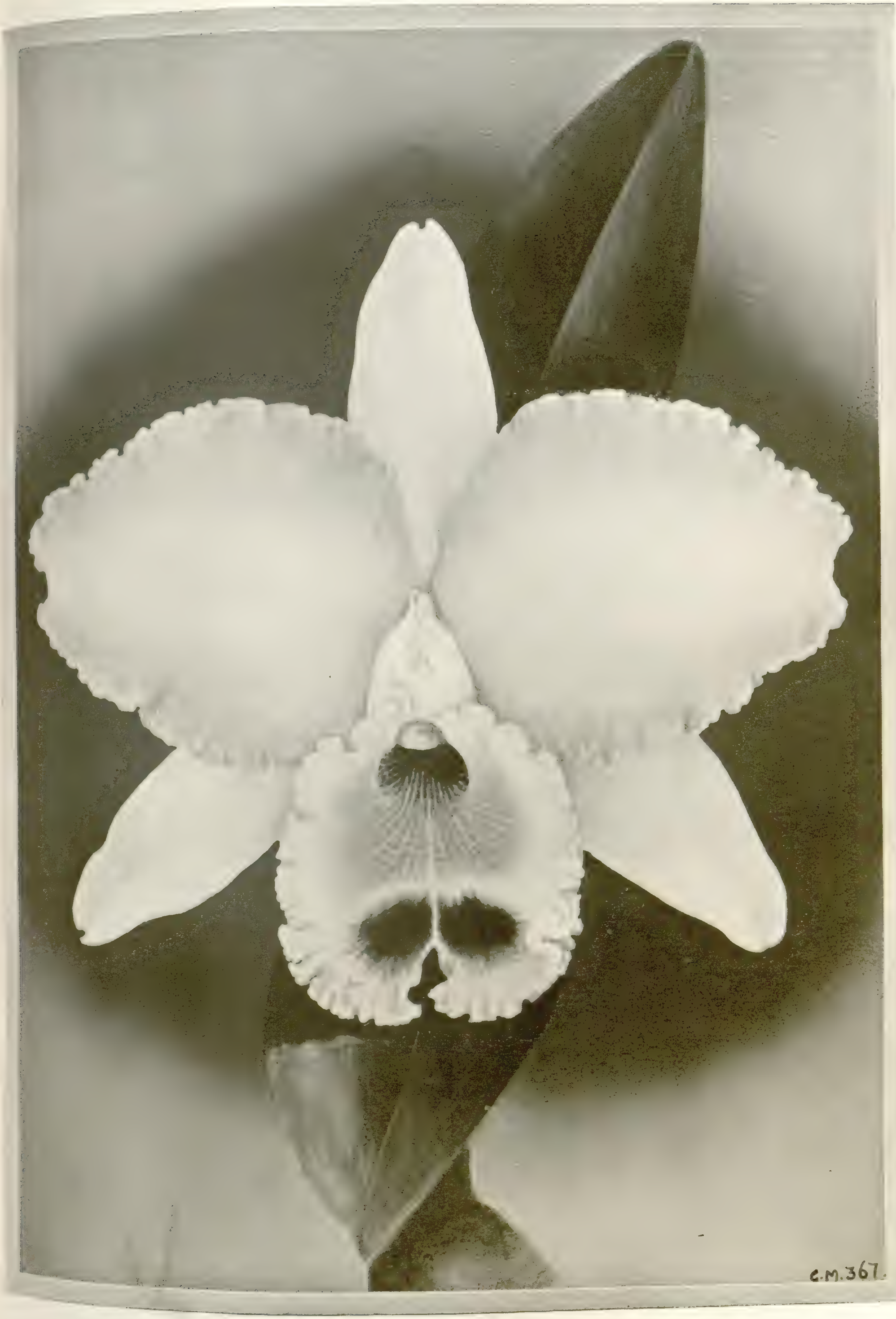
ODONTOGLOSSUM QUEEN ALEXANDRA, VAR. CRAWSHAYANUM.

Flowers brown, yellow, and white and purple. F.C.C., R.H.S., June 9; from De Barri Crawshay, Esq., Rosefield, Sevenoaks.

CATTLEYA MENDELI HIS MAJESTY THE KING.

It is many years since a variety of Cattleya Mendeli was awarded a First Class Certificate, but all who saw the exquisitely beautiful variety named His Majesty the the King, shown by Mr. Hopkins, gardener to Francis Wellesley, Esq., of Westfield Common, Woking, at the recent Temple Show, will agree that in this case the higher award granted was thoroughly merited. The splendid form of the flower as well as its delicate colouring and the delightful frilling of the lip all go to make this cattleya one of the best brought forward for many years. We were unable to secure a photograph of C. Mendeli His Majesty the King at the Temple Show, but Mr. Wellesley very kindly sent us Mr. Lamont's beautiful painting of the variety, and from this the present reproduction was made. The illustration gives a very good idea of the variety in all save the colour tinting, but is is of special interest because Her Majesty the Queen has been graciously pleased to accept the painting from which it was taken. The Queen greatly admired this noble orchid during her visit to the Temple Show, and was pleased that it had been named after the King, consequently Mr. Wellesley had the flower painted for Her Majesty's collection.

Planting Out Arums. — We often hear how successful some cultivators are with these plants who rely upon planting out. Doubtless much of the success is due to attention after planting, careful lifting in the autumn, and other cultural details. I have secured good results by a combination of the two methods usually adopted. I find I get much earlier flowers by potting and plunging the pots well over the rim during the growing season. When the plants are housed in the winter the pots are full of roots, and flowers appear much sooner than from lifted plants, which have to make new roots before they flower, a check being unavoidable when potting. It may be urged that plants with a mass of healthy roots soon make new growth, but as the potting does not take place till September, and often later, in open weather, growth at that season is not so rapid as earlier, and I find it impossible to do the work, no matter how carefully lifted, without loss of some leaves and roots. The earlier these flowers are produced in the winter months the more valuable they are. With a deficiency of large flowers in midwinter, the arum is one of our most useful plants, as five or six blooms in a large vase, with a few leaves, is an effective arrangement that lasts a long time in perfection.—T. B. Field.



G.M.367.

CATTLEYA MENDELI HIS MAJESTY THE KING.

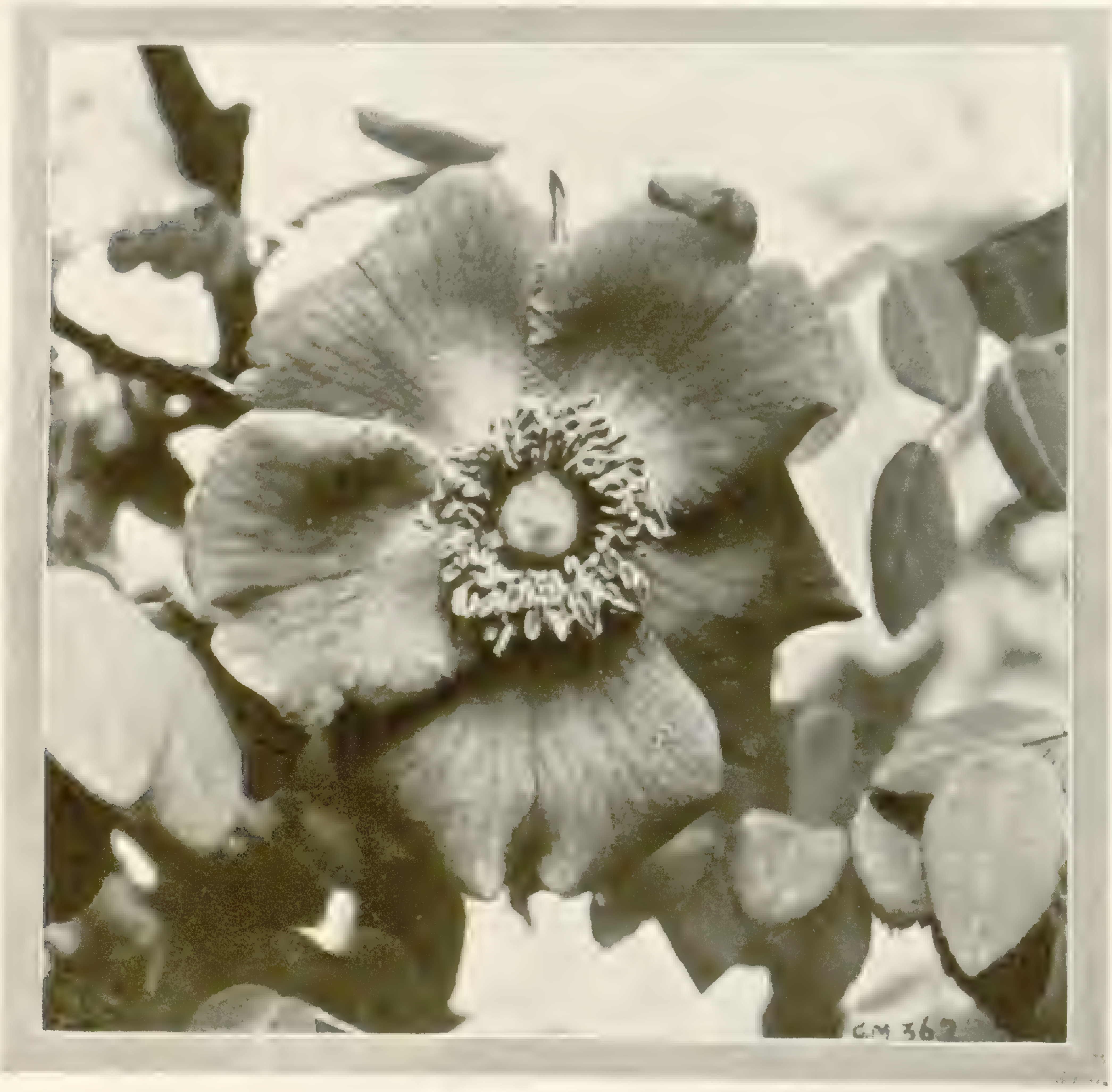
From Mr. Lamont's painting presented to Her Majesty the Queen by Francis Wellesley, Esq.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM QUEEN ALEXANDRA VAR. CRAWSHAYANUM.

A fine odontoglossum, obtained by crossing O. triumphans with O. Harryanum, and we should expect that Mr. Crawshay's fine O. triumphans Lionel Crawshay was the form used as one parent, because the shape of the flower, and the breadth of the sepals and petals, all suggest that splendid variety. The sepals and petals have a yellow ground colour that appears in thin marginal and irregular cross lines between the large areas of bright red-brown colouring. The flattish lip has a creamy-white apex, but the rest of this organ is handsomely marked with bright red-purple. F.C.C., R.H.S., June 9. De Barri Crawshay, Esq., Rosefield, Sevenoaks. (Gardener, Mr. Stables.)



ROSA MOYESI.
Flowers rich rose-red. A.M., R.H.S., June 9; from Messrs. Jas. Veitch and Sons, Chelsea.

MILTONIA ST. ANDRE.

A beautiful variety, obtained by crossing M. Roezli with M. Bleuana Sander's var. The flowers are flat, but of more rounded outline than in most forms. The sepals and petals are white, save for the pretty bright purple shading on the basal halves of the petals. The white lip has a red-brown radiating blotch at the base, and a few lines of colour run beyond the blotch itself. F.C.C., R.H.S., June 9. Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham.

ODONTOGLOSSUM GLORIOSUM CITRINUM.

In this distinct variety the brownish markings found in the type have all disappeared, leaving the flowers wholly of a pale yellow colour, with a few deeper shadings of yellow. A.M., R.H.S., June 9. Messrs. J. and A. McBean, Cooksbridge, Sussex.

ODONTOGLOSSUM PHŒBE, DELL VAR.

The most beautiful of the several charming hybrids derived from O. cirrhosum crossed with O. crispum. The plant shown carried a good spike of showy flowers. The ground colour is blush-white, and this is heavily blotched and spotted with rich bright red-purple. The flowers are of good size, the segments being pointed, and suggestive of O. cirrhosum. F.C.C., R.H.S., June 9. Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham.

MILTONIA BLEUANA STEVENSI.

This pretty variety has M. Roezli alba and M. vexillaria Leopoldi as parents. It is very free flowering, but the individual blooms do not reach the size of those of the finer forms of M. Bleuana, such as M. B. nobilior. The flowers are white, with radiating red-brown markings at the base of the large lip. A.M., R.H.S., June 9. Mr. Stevens, gardener to W. Thompson, Esq., Walton Grange, Stone, Staffs.

DEUTZIA WILSONI.

A bold and handsome species from China, discovered by the collector whose name it bears. It grows sturdily and flowers freely, producing terminal and axillary spikes of pure white flowers in great abundance, and these are well set off by the lanceolate, opposite, deep green leafage. The stronger growths, clothed throughout the great part of their length with spikes of bloom, are very graceful, and there should be a great future for this useful addition to our early summer flowering hardy shrubs. A.M., R.H.S., June 9. Messrs. James Veitch and Sons, Chelsea.

ROSA MOYESI.

A very distinct Chinese species of dense habit, and with very spiny growths and leaves. The latter have, in most cases, nine or eleven pinnæ, and they are very deep green. The flowers are nearly three inches across, rounded, single, and made up of very thick, substantial petals. The colour is deep rich rosy-red, but the buds are of brighter hue. This new rose should prove of great value in the creation of a new race of garden roses. A.M., R.H.S., June 9. Messrs. James Veitch and Sons, Chelsea.

ZEPHYRANTHES AUREA.

An exquisitely beautiful Peruvian species that bears trumpet-shaped flowers of the richest golden-yellow colour. The flowers measure about three inches across at the mouth. The deep green narrow leaves are slightly glaucous beneath. A.M., R.H.S., June 9. Mr. Bain, gardener to Sir T. Lawrence, Bart., Burford Lodge, Dorking.

PHILADELPHUS LEMOINEI ROSACE.

This is a semi-double variety of the now well-known P. Lemoinei. The varietal name is suggested by the appearance of the white double flowers, as they are very like the blooms of some small, semi-double cluster rose. Short flowering shoots only were shown, and these began to droop early in the day, so that the beauty of the variety was not evident to many visitors. A.M., R.H.S., June 9. Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Dorking.

IRIS CARTHUSIANA.

Although this has a general resemblance to the popular Iris dalmatica pallida, it is quite distinct from that variety, and promises to become a first-rate garden plant. It has fine tall spikes of large shapely blooms, the latter being very pale blue with deeper veins. There is a heavy yellow beard or crest on each of the broad falls, and the base of each fall is white, marked with irregular lines of yellow-brown. I. Carthusiana is slightly fragrant, and it has [illegible] greener foliage than I. dalmatica pallida. The latter variety was one parent and an unnamed Syrian species the other parent. A.M., R.H.S., June 9. J. W. Marshall, Esq., Charterhouse, Godalming.

PYRETHRUM LANGPORT CRIMSON.

A fine new single pyrethrum of large size and excellent form. It is a strong-growing variety, and the blooms are vivid rich velvety crimson. A.M., R.H.S., June 9. Messrs. Kelway and Son, Langport, Somerset.

CARNATION SNOWBALL.

A good white carnation that is the result of crossing a good border variety with one of the perpetual flowering varieties. The flowers have a smoothness, fulness, and substance that appeal to the florists, while the purity and size of the blooms, as well as the length of stem, will appeal to the market growers and decorators. A.M., R.H.S., June 9. Mr. H. Burnett, Guernsey.

STOCK VEITCH'S MAGENTA STRAIN.

A splendid strain of the old English Brompton stock; it produces splendid [illegible] of big blooms, and the colour is rather [illegible] crimson than magenta. A.M., R.H.S., June 9. Messrs. R. Veitch and Son, Exeter.

RHODOTHAMNUS KAMTSCHATICUS.

A charming little rhododendron-like alpine shrub, bearing clusters of magenta-purple flowers. It makes a little bush [illegible] eight inches high, and has hairy [illegible]. A.M., R.H.S., June 9. Mr. G. Reuthe, [illegible] Hill Nursery, Keston, Kent.

Vases on Terrace Walls and other places must not be overlooked, as they often complete a beautiful picture. See that drainage is in perfect condition, and use soil of good lasting quality, though open and porous, with an addition of bonemeal. Numerous plants are suitable for these [illegible] from the noble agave, surrounded by [illegible] crops, portulaccas, or mesembryanthemums, to the smaller annuals. Where there is a number of vases on terraces they [illegible] where possible, be arranged in pairs, keeping the brightest colours to the most important parts. The zonal pelargoniums are among the most suitable with ivy-leaved varieties. Queen Alexandra marguerites, fuchsias, petunias, heliotrope, ageratums, lobelias, nasturtiums, convolvulus, [illegible] lantana, Cordyline indivisa, dianthuses, [illegible] Drummondi, stocks, etc., etc., may be [illegible] Where there are large central vases, five to ten feet in diameter, noble effects [illegible] be made in these by using Zea japonica variegata, cannas, tobaccos, ricinus, Chilian beet, liliums, etc., in addition to some of the previously-named subjects.—E. F. Hazelton.

THE LEEK.

During recent years the leek has been much improved by experts both as regards size and appearance, and possibly also in hardiness and quality. Be this as it may, the medical profession appear to be quite unanimous in their opinion of the dietetic value of this vegetable. Judging from the huge quantities grown for market, and the continual demand for them in private establishments, leeks are rightly rising in popular favour, and are grown on a larger scale than formerly.

The culture of the leek is not so exacting as that of many crops, but if good produce is required the needs of the plants must be supplied. Extra large specimens for special purposes necessitates very early sowing under glass, and the potting or boxing up of the plants, and their being grown under glass protection till April or May, according to condition of weather. Then they must be planted out in richly manured trenches, and after the plants are well-established artificial manures may be applied with advantage, periodically, by sowing safe quantities along the trenches during rainy weather, or watering it in on fine days.

But for the usual kitchen supplies this high culture in trenches is not necessary, or even desirable, as the same amount of time and labour entailed may be made to produce a greater number of good medium, useful, and in many ways more profitable roots.

If seeds were sown thinly in March in the open this would be sufficiently early to provide suitable sized plants for the main plantation in June. In gardens where close cropping has to be considered, planting may be deferred by pricking out the young plants in nursery beds, at about six inches apart, where they may remain until a crop is removed from a suitable quarter.

If the ground has been manured for the previous crop no extravagant preparation will be needed, but the ground must be forked over, and the plants carefully lifted with their roots intact from the nursery bed, and planted twelve inches apart in lines from fifteen to eighteen inches from line to line. Where space is not a consideration the final planting may be carried out direct from the seed-bed at the above distance. A dibber is sometimes used for planting this crop deeply, but to my mind a trowel is preferable, as the roots are thus better distributed in the soil. In either case make the plants firm by carefully and deliberately pressing the soil round them, afterwards apply a good soaking of water.

The leek, with its decidedly gross habit, grows better in strong moist loam than in light ground, but with attention to watering should the weather prove dry, and with an application or two of a good artificial manure, it will thrive satisfactorily on even peaty soils. The danger with such land is that they may be stunted from insufficient root moisture. Once a serious check takes place the leek rarely makes robust growth again, despite every attention that may be given it. At all times keep the plants free from weeds, and from time to time stir the surface soil with a hoe or give a light forking over.

During the later stages of development the soil may be gradually worked up to the plants to blanch the stems without covering the centre leaves. With these small details carried out they will arrive at a size sufficient to give satisfaction towards the end of the year without serious outlay in labour, and will prove most useful where large supplies of vegetables have to be provided.

The English winters are uncertain, often damaging the more tender vegetables during sharp frosts and causing scarcity, but the leek stands the sharpest and severest weather with impunity, and never fails us, giving a supply of produce throughout seven or eight months of the year, and this alone is sufficient to place it amongst the best selection of vegetables.

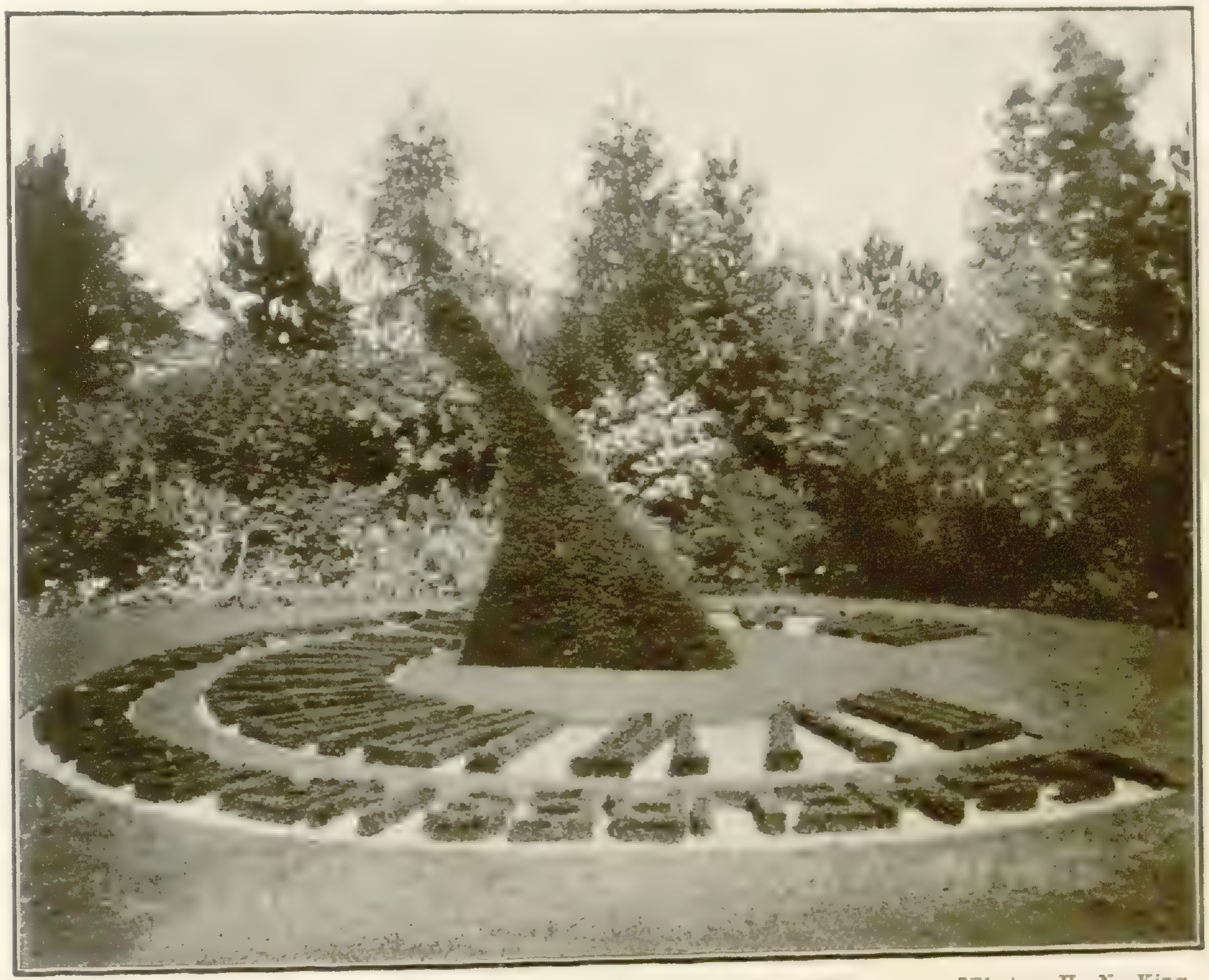
C. Flack.

Cholmondely Castle Gardens.

A FLORAL SUN-DIAL.

As mentioned in my article on "Sun-dials in the Garden," which appeared in the Christmas number of the Gardeners' Magazine for the year 1901, floral dials, or, to be strictly accurate, sun-dials formed with living plants, have not been plentiful in British Gardens at any period since sun-dials came into use in this country. At Wentworth Castle one was formed many years ago with dwarf box, planted to form the proper numerals and kept closely clipped, and a clipped yew in the centre to act as the gnomon. A dial of a similar character is illustrated in Loggan's "Views of Cambridge," and described as having been in the garden of Peterhouse College in 1675. Within a quite recent period a dial similar to that at Wentworth Castle has been made at Easton Lodge, Dunmow, the Essex seat of the Earl and Countess of Warwick, and of this I have pleasure in giving an illustration herewith. The dimensions of the dial, as kindly given me by Mr. H. Lister, the able head gardener, by whom the dial was made are: diameter of the dial, with its figures, 4ft. 6in.; depth of letters, 18in.; and the height of the yew gnomon, 11ft. The inscription surrounding the dial is: "Les heures heureuse ne se complent pas." The dial occupies a position in a somewhat secluded and a delightful part of the gardens, and constitutes a very interesting feature.

G. G.



A SUN-DIAL IN BOX AND YEW [Photo: H. N. King.

In the gardens of Easton Lodge, Dunmow.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEEDLING ORCHIDS. — The early-sown seed of the cattleya and lælia families should by now have produced seedling plants with their first leaves. As it is at this stage that the roots are formed opportunity should be taken to transplant the seedlings. There are different methods of transplanting or pricking out the seedlings. Some prefer to prick out several together in 3in. or 4in. pots. This is not at all a bad plan, because, owing to the greater bulk of material in the pots the compost does not dry so quickly, although I prefer to prick out singly in small pots, as I consider greater progress is made by the plants. We use for small seedlings a compost consisting of about equal portions of fibrous brown peat, broken oak or beech leaves, and chopped sphagnum moss, with sufficient sand and broken crocks intermixed to keep the compost open and porous. Care should be taken to see that the potting compost is moistened through after potting.

THE PROGRESS MADE with seedlings naturally depends on the treatment the young plants receive. If they have been kept in the close propagating case right up to the time at which they are pricked off, they are very liable to become checked in growth if they are not again placed in a close atmosphere until they become re-established. It is a good plan to harden the seedlings while in the seed pan to the conditions under which they are likely to be treated, a few days before pricking them off. Seedlings of all kinds are benefited by warmer conditions than that normally given to the genera to which they belong. The warmer conditions must also be accompanied by more humidity in the atmosphere, especially during the hot summer months. The fact should not be overlooked that it is desirable to keep all this class of seedlings in an active state of growth, right up to the time at which the flowering stage is reached. If these conditions are afforded, the length of time between seed-sowing and flowering is considerably shortened. Seedling orchids should also be placed in a position within a reasonable distance of the roof glass, a fixed shelf from 15 to 18 inches from the roof glass is very serviceable for this purpose. Spraying the plants overhead with the syringe in bright, warm weather will be found beneficial.

SHADING.—I have pointed out that it is desirable to afford all the light possible, but care must be taken to bring the roof blinds into use as soon as there is danger of scorching the young leaves. For dendrobium seedlings the treatment is practically the same as that recommended above. Calanthes should be pricked off as early as possible, as they commence rooting as soon as the first leaf has been developed; they should then be pricked off, two or three together, keeping them close to the edges of the pots. They should have every encouragement to make a fine first bulb. We find peat and moss in about equal proportions a suitable compost for these. Phaius seedlings must also be kept in an active state of growth until they reach the flowering stage. The young plants should also be kept under warmhouse treatment.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

DIPLADENIAS.—These plants deserve more extensive cultivation, as their flowering season ranges over a period of four to six months, and where cut flowers are in demand for house decoration they are of great service. In growing dipladenias an essential item is the maintenance of a brisk temperature well charged with atmospheric moisture. When one cannot accommodate large specimens a batch of cuttings may be put in any time before the end of August, but the plants are best raised as early as possible if required for early spring flowering. They may be kept growing steadily throughout the autumn months, and kept somewhat drier at the roots during the winter months, raising the temperature as the new year arrives. For compost I have not found anything more suitable than peat and sand. The peat must be of the best quality, and when used for large plants it is advisable to shake out all the fine portion, using only the lumpy fibrous remains. Although dipladenias may be cultivated very successfully on the usual balloon trellises, one does not secure the best results under such cultivation. Where space permits the plants being used for covering the roof of the plant stoves, it proves much more useful, and during the summer months its beautiful floral display will command the appreciation of everyone.

EUPHORBIA JACQUINIÆFLORA.—A further batch of plants of these useful winter-flowering subjects may now be raised from cuttings inserted in small 60-sized pots, as previously recommended. The earlier rooted plants will also require attention to potting and training. Where specimen plants are desired I strongly recommend bending the points down, which is preferable to pinching out the points, as it induces more eyes to break into growth. Continue to grow the plants as near the glass as possible, and afford as much light as the plants will stand; a thin shade, however, is desirable during the hottest part of the day.

POINSETTIAS.—Where small plants are used for decoration the dwarf poinsettias are exceedingly valuable. During the winter months they may be found useful for table decorations, and will greatly assist in prolonging the season of cut flowers. For this purpose a batch may be raised during the next two months in batches at intervals of a few weeks.

CROTONS.—Autumn-raised plants will grow into useful sized plants for winter and early spring decoration, and larger specimens which have become unsightly through the loss of foliage, but yet have good tops, may be notched and mossed; as soon as the material is well filled with roots the heads ought to be separated gradually from the parent plants and potted up; shading them from the hottest part of the day, and occasionally syringing the plants overhead will greatly assist root action. The larger specimens will also require feeding; give a weekly top-dressing of some approved chemical fertiliser, with an alternate application of weak liquid manure. An occasional watering of clear soot water will be found most beneficial.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

TOMATOES.—These will now require an abundance of water, especially those in large pots. They often fail to set in very hot weather, but a damping overhead in the afternoon will sometimes improve matters, but dryness at the root in summer time is the chief cause of failure. Top-dress those that are carrying a heavy crop. Keep all side shoots pinched out, and also the centre fruit of each bunch, as this will invariably be found deformed, or too large for culinary purposes; its removal adds strength to the better-shaped fruit round it, and for exhibition purposes even, round, and bright-coloured samples are required. To prevent disease keep the house well aired, and never allow stagnant moisture to stand in the house. For an early winter supply seeds may be sown at the end of the month.

MELONS.—If any fruits are left on the earliest batch it will be well to give shade in hot weather, as they often ripen too fast to be of good flavour; cut the branch half-way through if the fruits start cracking before they are fully ripe, and also keep less moisture in the house. Old plants should be removed as soon as the fruits are gathered. The second crop will be swelling up fast, and will take an abundance of clear and liquid manure water; sudden bursts of sunshine often burn the leaves that are covered with moisture, so syringing should be done early to allow them to dry. Where the roots are restricted, or growing on a stage-top, dress them with some good loam and old spent mushroom bed manure; thin out a few of the laterals, but this should be done carefully as it often induces canker. A little powdered charcoal may be placed round the stems. Seeds may be sown for a late batch, but melons are not required so much in the autumn, as there are then plenty of outside fruits.

PEACHES AND NECTARINES.—As soon as the fruits have been gathered give the early trees a good syringing with some insecticide, and if at all dry give the roots a good soaking of water. A little artificial manure may now be given if required, and the bed or top of the border be forked over. If not already done, mulch the border with some fresh stable manure, as this will help to keep red-spider down. Examine the trees, cut out old and useless wood, and get them to make good growth; throw the house open, and, if possible, remove the lights to get the wood ripened up for another season.

MIDSEASON HOUSES.—Where trees are carrying a good crop of peaches or nectarines they will require an abundance of water if the roots are in a proper position, but very often they are down below the proper ground level, and there is no proper drainage to take away the water, hence cold borders, sickly trees, and little or no fruit. Over-cropping is disastrous, but it is sometimes unavoidable, especially if some trees in the house have failed and a supply has to be kept up; these trees suffer for the failure of others. Keep such trees well syringed until the fruits show signs of ripening. If red spider appears dust the pipes over with sulphur, keeping the foliage quite dry for this operation. A little whitening may be syringed on the glass, if necessary. Gather the fruits in the early morning.

LATE VINES.—As soon as the grapes have been thinned give the vines a good soaking of water. Select well-placed shapely bunches, and crop the vines according to their strength. The pipes should be warmed at night, and a little ventilation allowed by the top ventilators. The front of the border, or where the sun strikes the hottest, may be mulched with some litter to keep it from drying up. A few laterals may be allowed to run at will, as these will keep up good root action. If red spider appears syringe in the early morning and afternoon with soft water, using a spraying syringe.

STRAWBERRIES.—As soon as layers can be obtained, place them in pots, using a stone to keep them down in the pot; these are preferable to pegs, as they keep the young plant cool. Keep the pots as close to one another as possible, as this saves time when watering. The pots should be clean, and have one crock each; use good loam and leaf-mould, or old horse manure.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

CARROTS.—Another sowing should now be made of one of the Early Horn varieties, which will furnish tender roots in the autumn and the early part of the winter. They may be presently protected from early frosts by placing bracken or spruce boughs over them. The main crop should have attention, and if there are any blank spaces in the rows, seeds of an early variety should be sown to fill up the vacancies, which will give the main crop a much better appearance.

BEET.—The same remarks also apply to beetroot, choosing the Globe variety to make good the losses. But I have often filled up vacancies with the thinnings, and if done in showery weather and attended to, they will make most useful roots. Keep the soil well stirred between these root crops, which will greatly assist growth, and also give a sowing of old soot when the foliage is damp.

WINTER VEGETABLES.—Make good any losses in the quarters that have already been planted, choosing a showery day for the work. But should the weather remain dry, watering will have to be attended to. Break the soil up between the rows with the hoe, which will tend to check weeds, and also benefit the plants.

OUTDOOR TOMATOES.—Those that are planted against walls or trained up stakes should have all side growths pinched out, and be kept to single stems. When four or five trusses of bloom have formed the leaders should be stopped, for they do not as a rule ripen more fruit. Give the plants plenty of water, and a little stimulating food when the trusses have set and the fruits are swelling.

MULCHING.—On light soils the mulchings of peas, runner beans, etc., should be given without delay, as it proves so helpful to these crops, and keeps them from suffering from drought. If stable litter is not available, old spent mushroom bed manure, or even the grass cuttings from the lawns, would be better than nothing. It is surprising what benefit these top-dressings give, especially in hot, dry weather.

FRENCH BEANS.—Continue to sow small batches of these out in the open ground, and for general use Canadian Wonder is still one of the best. If a little colour is required Golden Waxpod should be sown, as it is most attractive. Select nice good soil for French beans, so that they may grow on without a check.

PARSLEY.—This is in request almost daily, and to obtain a supply during the winter and spring months, a good bed should now be sown. Parsley requires a somewhat strong soil, which has been previously manured, and when the seeds are sown they should be trodden down, as the plants like a firm root-run.

LATE PEAS.—Autocrat and Late Queen should now be sown for giving a few dishes in the autumn. Sow the seeds thinly in shallow trenches, and on ground that has been trenched. Attend to other peas that are coming into bearing, as regards watering, and stick the rows that are coming on for succession.

CHICORY.—In some establishments this is frequently used, both the foliage and the roots, the latter making a delicious salad. It may therefore be necessary to sow some in lines about a foot apart, thinning the plants out when they are ready to about 15 inches.

VEGETABLE MARROWS.—The plants that were raised early in the season are making good progress; stop the shoots, and thin out the foliage so that sun, light, and air can reach them. The last batch of plants should be planted now on hillocks of loam; placed on manure heaps, they will give small, tender marrows later on in the season, providing early frosts keep off.—T. W. Birkinshaw, Hatley Park Gardens.

BRITISH PLANTS FOR BRITISH GARDENS.

Among the interesting "Notes of the Week" ("G.M.," May 23) appears one on the Bluebell (Scilla nutans), and the glorious effect it produces when it gems the glades and slopes with its superb carpet of deep blue. The extreme value of this, and kindred native flowers, is beginning to be more fully realised in these days of garden progress, and doubtless as time speeds on, and the love of natural gardening extends, a whole host of our charming native plants will be lifted to a higher plane, and meet with the approval of all who are in favour of English flowers for English gardens.

It is as well, now that the delightful phases of natural gardening, such as the wild garden, the rock garden, and the waterside garden are enjoying such a measure of deserved popularity, that attention should be more closely directed to the various native plants, in order that a more extended use may be made of them when the planting of glades, grass land, and watersides is in progress.

I am well aware that already many native plants appear in the herbaceous borders, but it is my desire that the many pretty scenes of floral beauty which occur in out-of-the-world spots in rural England should be reproduced in all their charm and interest in the gardens of those who love dainty effects.

One has but to refer to the aquatics and waterside plants associated with the water garden to realise in part the glorious possibilities of our England plants. We should acquaint ourselves with the beauties of the spiræas, epilobiums, lysimachias, lythrums, irises, etc., which afford such pleasing displays to the margins of the waterways; and realise the glories of such semi-aquatics as the king-cups (calthas), with their golden masses of colour, or the delicate blue sheets of myosotis, and the yellow of the mimulus.

With reference to the true aquatics one might well plant the water garden proper with such useful and pretty flowers as the native nuphars and nymphæas, the charming alismas, the floriferous Ranunculus aquatilis, the ever-popular Hottonia palustris, Menyanthes trifoliata, villarsias, etc., which could be supplemented with the sagittarias, stratiotes, hydrocharis, sparganiums, and many others, all of which are approved favourites.

Leaving the water garden one is confronted by a whole host of plants which may be readily utilised for naturalising in various positions in the wild garden. The varied scenes of the wild garden, which include the planting of grass land stretches, the beautifying of knolls and banks, the carpeting of the woodland floors, and the adornment of rock ledges, open out a vista of great possibilities for the native plants. In addition to the bluebells, one can utilise anemones, cowslips, primroses, hardy orchids, campanulas, narcissi, linarias, sedums, saxifrages, verbascums, veronicas, gentians, achilleas, [illegible] senecios, centaureas, valerians, potentillas, lathyrus, geraniums, hypericums, linums, cerastiums, dianthus, saponarias, silenes, lychnis, violas, papavers, thalictrums, clematis, and a whole host of other British plants.

The more one realises the wealth at hand, and its full possibilities, the easier will it be to produce rural beauty spots in the garden; and apart from the picturesque character of the wild garden, there is also a great educational interest attaching to the study of our native flora. That much remains for the keen observer to search out and note in the study of our native plants I am more than convinced. For instance, among large colonies of the early purple Orchis mascula, one may sometimes meet with the greatest variety of colouring, forms of pink, other lilac, some practically a violet hue, while others again may be marked with green, though this last I have only noted in the pale hued forms. Or to take another case, plants which are regarded as being of a common definite type may produce varieties under natural conditions which are far superior to the parent plants. A striking illustration of this was recently seen at Kilnfield, Colchester, where among colonies of Caltha palustris, a natural variety, superior in blossom and colouring, was found and isolated. This is typical of many other plants, and the floral enthusiast who is ever on the alert may find much to interest, as well as to educate, in the close study of plant life. The question of British plants for garden adornment is a very live one, and we may yet see fuller justice done to our many beautiful native plants.

P. S. Hayward.

WHY SMOKE IS MADE.

If the reader understands why a torch smokes, why a flat wick is used in a lamp, why a circular burner is provided for the student lamp, why a chimney is provided for oil lamps, why a fish tail flame was used in early gas lighting, or why a vacuum bulb is provided for the incandescent lamp; if he understands these things, he will, it is believed, be able easily to see what conditions are necessary for perfect combustion in boiler furnaces.

If any fuel is to be burned without smoke it must be supplied with the correct amount of air. The torch smokes because the large round wick brings up oil, especially in the centre, to which air cannot be supplied. If the air supply through the centre tube of our student lamp is shut off, a smoking flame results. The candle with the small wick is an advance over the candle supplied with the large wick. The flame from the flat wick has an extended surface for air supply, while the circular burner not only has maximum surface for air supply, but the air coming up through the centre of the tube is heated, making it still better suited to aid combustion and burn a large amount of oil. Thus it is that we have successfully solved the problem of burning a large oil supply without smoke. If we try to increase the oil consumption and turn up our lamps too high, they smoke, and because they are in the room with us we immediately turn them down. Furnaces burning coal sometimes smoke just because they are forced too hard, and because the top of the chimney is not in the room, but in the public's pure air, we do not turn them down but let them smoke.

Air correct in amount is a necessity for complete combustion, and the simple experiments with our oil and gas flames should be sufficient evidence to us that only when we are able to supply our furnaces with the correct amount of air shall we be able to control the smoke which it is so easy to make. How much easier our problem would be if, as in the lamp, we could see all that was taking place and could regulate all by a simple knurled brass handle!—"Weekly Florists' Review."

VIOLA TRIAL AT MARKS TEY.

So eminently useful have violas become for summer displays of flowers that any considerable trial of varieties becomes interesting because of the splendid opportunities it gives for making comparisons. It is only when a few rows of each of many varieties are grown close to each other, under similar conditions of soil, cultivation, and exposure, that one comes to fully comprehend the differences of habit, freedom of flowering, form of bloom, or purity or distinctness of colouring that exist, and hence a trial becomes not only interesting, but of great educational value.

At Marks Tey, Essex, Messrs. Dobbie and Co. commenced a trial of violas suitable for bedding, as distinguished from varieties suitable for exhibition, last autumn, and on Saturday, June 13, a small party of horticulturists invited to inspect this trial resolved themselves into a committee, and awarded marks to show the merits of the varieties, using a basis of four points, i.e., one point each for habit, freedom of flowering, colour or purity, and form. As with few exceptions the varieties were grouped in their colours, comparisons were easy.

The white varieties were taken first, and from these the fine old variety Pencaitland was transferred to a class by itself, because it was considered that the yellow blotch on the tip, often covering the whole of the segment, placed the variety on an unfair footing with the pure white forms, but it was given four marks, and, now, as ever, it is one of the best of bedders, and of dwarf habit. Snowflake was placed first among the rayless white varieties, a position it worthily fills, because it has fine habit and bears beautiful pure flowers on good stems. Alexandra was voted the best rayed white viola, and, though it is not so dwarf as some varieties, it has such a combination of good qualities that it easily won first place. The white varieties that were accorded three marks each were Countess of Hopetoun, still one of the best; Duchess of York, free, and very dwarf; Marchioness, a trifle tall and scarcely up to the best form of flower, but wonderfully free and pure; Sylvia, a variety that is creamy white, but not deep enough to be placed among cream varieties; and Mrs. A. D. Parker, a fine dwarf rayless viola of great beauty. The latter closely resembles Seagull in form and shade, but surpasses it in freedom. Seagull, Bethea, Christiana, Redbraes White, Virgin White, Mrs. H. Pearce, and White Beauty gained only two marks each, while White Empress and F. C. Barlow were only considered worthy of one mark each.

Cream-coloured varieties formed a very small class of only three varieties, Cream King, Devonshire Cream, and Iliffe. The first-named was considered the best, but only three marks were given, as it lacks something in habit. Iliffe, with two marks, is rather straggling, and Devonshire Cream is small. All are of fairly good colour, but Cream King is easily the best. In the primrose group there were five varieties, and Primrose Dame was regarded as the best, and it gained full marks; the colour is deep primrose, habit good, and the rayless blooms are of good form. Sulphurea and Ardwell Gem gained three marks each, the former is very dwarf and of good form; and the latter is very clear and has rayed flowers. Maggie Clunas only merited two marks, and gained these on form and colour, but there was a general agreement that it was a fine exhibition variety. Daisy Grieve, a rayless, deep-hued variety, was voted one mark only.

The yellow violas form a most beautiful and interesting group, and at Marks Tey they made a blaze of brilliant colour, though only two rows of a variety were grown. Out of eleven varieties Walter Welsh was selected as the finest rayed variety, and Redbraes Yellow as the best rayless variety. These are both excellent violas, the latter being particularly dwarf and free. The less dwarf Royal Sovereign, of good form and colour; King Cup, of lovely colour, rayless, and of fine habit; the old favourite Bullion, a good standard sort; and Grievi, a very dwarf, pure-coloured variety, each gained three marks. A. J. Rowberry was considered too tall; Klondyke was scarcely free enough, though of good form and colour; and Wm. Lockwood was regarded as an exhibition rather than a bedding variety. Each of these merited two marks as bedding varieties, and Mrs. E. A. Cade and Canary were accorded but one vote each.

Lavender-coloured violas are of great value in summer-bedding arrangements. Of these there were six varieties on trial, and Florizel, with three marks, was selected as the best of its class; it is of beautiful colour, and in this respect it beat Kitty Bell, which ran it closely for first place. The latter is an early and continuous bloomer, and of soft lavender colour. This and Belfast Gem, a very light, distinct, free, and good-habited variety, each merited three marks. Miss Harding was not considered worthy of more than one point, and Ariel was excluded, though on the recommendation of some present it was considered useful for planting on rockwork.

The light-blue varieties were seven in number, and there was a spontaneous and unanimous agreement that Maggie Mott was easily the best in this class. It is scarcely so dwarf as some, but is very compact, free, of good form, and lovely soft blue colour. Mauve Queen and Blue Duchess were accorded three marks each; the first-named is a very good viola, and a trifle later than most, but mauve hardly expresses its colour. Favourite, a very dwarf form, gained two marks, and Lilacina, considered as a pansy—which it is—was accorded two marks as a bedding variety. Bridal Morn and Ithuriel gained one point each.

Councillor Waters was placed first among the dark-blue varieties; it is free, of good habit, and fine rich violet-blue colour. It was the only one of its class to secure full points. Ophelia, large, and of fine form; Admiral of the Blues, rich and free, but a little loose in habit; Royal Scot, very deep-hued and free; True Blue, a fine dwarf, bright bedding variety; Archie Grant, fine form and colour, but not quite so dwarf as could be wished; and Jubilee, blue with a deep maroon or crimson shade under the eye, were all awarded three marks. Charles Jordan, Mrs. C. Turner, Blue Rock, and Lady Warwick had all some defect of form, colour, or habit, and only merited two marks.

Fancy and unclassed varieties were considered on their individual merits, but not one gained full marks, and many lost a point in respect of habit. Glencoe, shaded yellow, old gold, and bronze; Dr. Macfarlane, a blue, blotched variety; Blue Cloud, the old, blue-edged form, Ada Anderson, whitish, with deep blue edge, Mrs. Chichester, a free-flowering fancy, pale rosy mauve, with blue edge; Wm. Niel, a very dwarf rosy mauve variety; and Crimson Bedder, badly named, deep rose, very free, were all granted three marks. Iris, Countess of Kintore, White Duchess, Mrs. J. H. Rowland, and Peace, of varied colouring, each gained two marks.

A new and beautiful rich bronze and scarlet-shaded fancy viola, raised by the Messrs. Dobbie, was seen in Mr. W. Cuthbertson's garden. It is of splendid colour and form, and very free and compact. Had it been on trial it would have merited full marks; it is as yet unnamed.

Parliament Square, for many years regarded as one of the brightest of the smaller open spaces in London, was not a success from the floricultural point of view during the summer of 1907. Various reasons were assigned for the failure of the flowers in the large beds, such as the unpleasant fumes from motor' buses, new paving, etc., but whether a satisfactory conclusion was ever arrived at we do not know. This year the square has no flower beds at all, but in each half of the square there are ten handsome pyramidal bay trees, that, like the green grass, are good to look upon.

ATMOSPHERIC NITROGEN AS A FUTURE COMMERCIAL SOURCE OF PLANT FOOD.

(Continued from page 463.)

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Different Methods for Utilising Atmospheric Nitrogen.

Up to the present time four methods have been found for combining atmospheric nitrogen with other elements. One is bacterial and the other three are chemical. The bacterial method has been frequently discussed in these meetings, and need not be further considered in this connection.

Of the three chemical methods, two have been commercially developed, while one is still in an experimental state. It will answer our purpose to confine our attention to the two methods in commercial operation.

Before considering in detail these commercial processes for preparing nitrogenous plant food compounds by use of atmospheric nitrogen, it may be of interest to touch briefly upon the historical phase of the problem. The first experiments which form the starting point in one solution of the problem were performed by Cavendish, and also by Priestly, between 1780 and 1790. These experiments were what we call purely scientific in character, the experimenters having no thought of the possible applications of nitrogen compounds, because at that time the relation of these compounds to agriculture was understood little, if at all. However, it was necessary that someone should discover the facts established by these experiments, before it was possible to begin to solve the problem which is now of so vital practical importance as to constitute one of the great world problems. This is only one of thousands of cases which furnish illustrations of the truth that we must first find out facts before we can apply them practically. The work necessary to discover such fundamental facts may seem to the layman like wasted effort, but sooner or later its necessity is fully demonstrated. These facts lay quietly in the records of science for over a century, waiting for the time when they should be called forth to meet the most urgent needs of mankind. But they were ready when called, and formed the fundamental starting point in the solution of the greatest of world problems, that of feeding our crops and mankind. It was not until 1895 that definite progress began to be made. The technical methods for producing nitrogen compounds by the use of atmospheric nitrogen have been developed within the last ten years, and, it might be more accurate to say, since 1900.

In connection with the two processes to be discussed, we will have to consider the following points: (1) The substance produced; (2) the method of production; and (3) the suitability of the product as nitrogenous plant food. In considering the method of production it would hardly be advisable here to go into the details; these are of interest to mechanical and chemical engineers, but are rather too technical for our present purpose.

Calcium Cyanamid.

The first substance we will consider is known by the chemical name of calcium cyanamid and by the common name of lime nitrogen. This compound, in chemically pure condition, contains 35 per cent. of nitrogen; but the commercial product known as lime nitrogen is not pure, varying in contents of nitrogen from 14 to 22 per cent., the higher percentage being obtained by the latest modifications of the process.

Method of Manufacturing Lime Nitrogen.

The materials used in preparing lime nitrogen are (1) calcium carbide, the product so familiar to us in the production of acetylene gas, and (2) pure nitrogen obtained by liquefaction of air and distillation of the liquefied air. The nitrogen is passed over heated calcium carbide, and combines with it more or less completely. In later modifications of this process, calcium chloride or calcium fluoride is mixed with the carbide. The product resulting from the process is a mixture of calcium cyanamid and carbon.

Theoretically, 100 pounds of calcium carbide combine with 43¾ pounds of nitrogen to produce 125 pounds of calcium cyanamid and 18¾ pounds of carbon, or 143¾ pounds of lime nitrogen containing about 30 per cent. of nitrogen. But the combination of nitrogen is not complete according to theory, owing to defects in the process. Hence, the mixture produced, known as lime nitrogen, contains much less than the theoretically possible amount of combined nitrogen, varying, as previously stated, from 14 to 22 per cent.

Conversion of Lime Nitrogen into Plant Food.

The calcium cyanamid in lime nitrogen is not directly used as such by plants. It is interesting to notice the general change which it undergoes before it is directly useful as plant food. There are some details which can just as well be omitted here, the main fact being kept in mind that the nitrogen of calcium cyanamid changes into ammonia, which is one of our familiar acquaintances. This change we will now study briefly.

When calcium cyanamid is heated in contact with water under pressure, it gives off ammonia readily, forming, in addition, calcium carbonate (carbonate of lime).

For each 100 pounds of calcium cyanamid used, 67½ pounds of water would be used, and there would be formed 42½ pounds of ammonia and 125 pounds of carbonate of lime. One ton of lime nitrogen containing 20 per cent. of nitrogen would combine with 270 pounds of water, furnishing 170 pounds of ammonia and 500 pounds of carbonate of lime.

Now, here is an interesting fact: This change, which takes place quickly when calcium cyanamid is heated under pressure in the presence of water, also takes place when lime nitrogen is distributed in moist soil, but much more slowly.

I do not know that we can yet regard as settled the question as to whether this change, when it occurs in soil, is a simple chemical change, similar to that produced by treating calcium carbide with water in the production of acetylene gas, or whether it is produced only by the instrumentality of bacterial action. The latter view appears to be the prevailing one, supported by a considerable array of facts.

(To be continued.)

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Royal Horticultural Society.

SCIENTIFIC COMMITTEE, June 9.

Present: E. A. Bowles, Esq., M.A., F.L.S., F.E.S. (in the chair); Dr. M. C. Cooke, Dr. A. Voelcker, Messrs. A. W. Sutton, J. T. Bennett-Poë, W. Cuthbertson, H. T. Güssow, G. S. Saunders, W. Hales, W. C. Worsdell, E. M. Holmes, L. de B. Crawshay, J. W. Odell, and F. J. Chittenden (secretary).

BRUGMANSIA LEAVES INJURED.—Mr. Güssow reported that he had examined the leaves of Brugmansia shown at the last meeting by Mr. Saunders, and found that they had been injured by some insect which had punctured the leaf, and around this puncture corky cells had developed.

MALFORMED ORCHIDS.—Mr. W. C. Worsdell reported that he had examined a specimen of Cattleya intermedia referred to him in which three flowers had become fused together so that there were eighteen perianth pieces in the resulting fasciated specimen and three properly-formed columns. The ovaries, however, were completely absent. Mr. Gurney Wilson, of Glenthorne, Haywards Heath, Sussex, sent flowers of Odontoglossum crispum, which were referred to Mr. Worsdell.

OXALIS BUPLEURIFOLIA. — Mr. W. Hales, F.R.H.S., showed the interesting Oxalis bupleurifolia, a Brazilian species with small yellow flowers, having the petioles developed into phyllodes, which are remarkable as being placed horizontally instead of vertically, as in most plants possessing phyllodes. In several cases the phyllodes possessed at their tips the three leaflets normal in species of Oxalis, though occasionally the terminal one was represented only by a small linear outgrowth, and sometimes all were absent. These leaves are sensitive to contact. The plant grows in shady woods in Brazil, which probably accounts for the horizontal position of the phyllodes.

MALFORMED STREPTOCARPUS.—Mr. J. W. Odell, F.R.H.S., showed very fine flowers of streptocarpus having in some cases two linear petaloid outgrowths arising between the calyx and the corolla on the dorsal side of the flower, in others stamens were produced in this position. Mr. Odell found that the later-produced flowers bore stamens, while the first flowers had the petaloid outgrowths. He had seen similar growths in gloxinia, and in the present case he removed the first developed flowers as soon as the petaloid outgrowths were noticed, and the flowers next produced developed stamens in the position occupied by the outgrowths in the first-produced flowers.

ROSA LUTEA.—In June, 1906, Mr. A. W. Sutton, F.L.S., showed before the committee dried specimens of a yellow rose which had been named at Kew, Rosa Eglanteria (= R. lutea) from Baalbec. Mr. Sutton subsequently obtained, through a lady missionary at Baalbec, some pods and shoots of this rose, but they were dead when they arrived. Later, however, he received other seeds, from which three plants had been reared, and which were now flowering in his garden. He exhibited a flower of a beautiful clear yellow colour, measuring 3in. in diameter.

YELLOW STRIPE IN DAFFODILS.—Specimens of this well-known disease were received, and some discussion took place concerning it. Various members of the committee detailed their experiences concerning it, and regarded as contributory causes the use of fresh manure, late planting, and too wet a soil. The precise primary cause is at present unknown, but, as Mr. Darlington suggested in his lecture at the general meeting, imperfect root action may be a cause, but whether primary or secondary is not clear.

ABNORMAL DAISY.—Mr. A. W. Sutton showed an abnormal daisy having the head inverted so that the florets pointed downwards instead of upwards as in the normal inflorescence; while the stalk passed completely through the centre of the head and was attached at the upper side where there were the usual bracts forming the involucre, but in this case occupying the upper portion of the inflorescence.

VISIT OF COUNCIL AND COMMITTEES TO WINDSOR.

On the 10th inst. the members of the council and committees of the Royal Horticultural Society visited, by permission of the King, the Royal Gardens at Windsor and Frogmore. The party, numbering about 100, included Sir Trevor Lawrence, president, and the Rev. W. Wilks, secretary, and was, on reaching Windsor, hospitably entertained at the Guildhall by the Mayor of Windsor. At the close of the lunch the toast of "The King" having been duly honoured, Sir Trevor Lawrence proposed, in a singularly happy manner, "The Health of the Mayor." This toast was drunk with musical honours, and acknowledged in felicitous terms. The party then proceeded to inspect St. George's Chapel and the State apartments with the Resident Architect as guide. Leaving the Castle by way of the East Terrace, the visitors walked to Frogmore and inspected the Royal Mausoleum, and thence went to the Royal Gardens, where they met with abundant evidence of good gardening. Here about two hours were spent in walking through the innumerable plant and fruit houses and the quarters devoted to fruits and vegetables, and, in expressing their high appreciation of Mr. Mackellar's remarkable administrative ability.

COLONIAL FRUIT SHOW.

Another of the exhibitions of Colonial fruit and other produce was held at the Royal Horticultural Hall, Westminster, on Thursday, June 11. Whether, from the Colonial standpoint, this display was a success, we cannot say, but, as an exhibition pure and simple, it fell very far short of what one expects nowadays, and it was so poorly attended as to suggest that very few people cared much about it.

Birmingham.

Encouraged by the success of the past three years, the committee of the Birmingham Botanical and Horticultural Society has decided to continue the shows this year, viz., June 11 and July 15, the former for orchids and early summer flowers, and the latter for roses and midsummer flowers. The exhibition of June 11 proved eminently successful, and the attendance good. In addition to the competitive classes, medals were offered for other exhibits, and these resulted in an extraordinary display of orchids. The Right Hon. Joseph Chamberlain, M.P., sent a large and fine collection of orchids, effectively arranged by his grower, Mr. J. Mackay. It occupied about 40 feet run, and as each kind was represented by a considerable group, the exhibit produced a more striking effect than if arranged indiscriminately. The central portion consisted of very fine specimens of cattleyas and lælio-cattleyas, supplemented by a magnificent set of Odontoglossum crispum and other species. In suitable positions phalænopsis added grace to the scene, and the whole was flanked at each end by a grand display of Miltonia vexillaria, with a few plants of Anguloa eburnea, Cochlioda Noetzliana, and Ærides affine superbum, the whole making probably the grandest single exhibit of orchids ever staged in the Botanic Gardens, Edgbaston, or elsewhere in Birmingham. The society's highest award, a silver-gilt medal, was worthily bestowed.

In the competitive class for six orchids in flower, dissimilar, Mr. Mackay was the only exhibitor, and was awarded the first prize for fine examples of Miltonia vexillaria, Lælio-cattleya Aphrodite with thirteen flowers on it, and some unnamed specimens. In the class for twelve stove and greenhouse plants, Mr. R. Usher, gardener to J. A. Kenrick, Esq., Harborne House, Harborne, was the sole exhibitor; his plants consisted only of fairly good Hydrangea Hortensis and Astilbe Queen Alexandra; a third prize was awarded. Considering the district's resources, it was a matter of surprise that there was not a stronger competition in the classes just enumerated.

In the honorary classes, Mr. F. H. Jones, gardener to W. Waters Butler, Esq., Southfield, Edgbaston, staged a very fine collection of orchids, chiefly of Odontoglossum crispum, several being of high excellence, though not large specimens; there were also Lælio-cattleyas, miltonias, masdevallias, cypripediums, etc., backed by a row of tall white lilies in pots. An Award of Merit was granted to a remarkably fine form of Odontoglossum crispum named Southfield variety, possessing two fine racemes, with pure white petals, and sepals flushed with pale purple, and blotched with bright chocolate; this was exhibited by the last-mentioned grower, who gained a silver-gilt medal.

Messrs. Baker and Son, Wolverhampton, contributed an imposing display of aquilegias and oriental poppies, and to which a silver-gilt medal was awarded. Messrs. Gunn and Son, Birmingham, brought up an attractive display of roses in pots, including trained pillar specimens of hybrid teas and hybrid perpetuals; a silver medal was awarded. Messrs. Sander and Sons, St. Albans, were also awarded a silver medal for a collection of orchids, and a similar award was granted Mr. R. Sydenham for a bright group of Spanish irises and ixias.

Bronze medals were allocated to Messrs. Richard Smith and Co., Worcester, for a collection of hardy cut flowers; and to Mr. H. N. Ellison, West Bromwich, for a choice collection of ferns. Needless to remark, the display of orchids and other flowers in the various glass departments; also the alpine rock gardens, and the display of rhododendrons were objects of admiration from the visitors.

Royal National Tulip Society (Northern Show).

This exhibition was, as it has been for some years past, held at Middleton, near Manchester, on June 10. Time was when the show was a movable feast, and Derby, Manchester, Oxford, Birmingham, Cambridge, Slough, etc., competed for the honour. Times are altered now, and comparatively few hold the tulip in honour, and, as one looked at the small number of exhibitors and exhibits, it was not possible to avoid contrasting it with former times, over thirty years ago, when the competition was great, and the rivalry keen. I well remember having to go to shows as a lad to help fill bottles, write prize cards, etc., and I did not like it, because the show was generally somewhere in or near Whit week, and it interfered with my holidays. Later on, I came to like both the men and the flower they loved, and now they are nearly all dead, only Messrs. Horner, Thurston, and Simonite left, and these, although full of admiration for the flower, never exhibit.

The season has been unfavourable for tulips, the cold, miserable weather experienced up to the middle of May, followed by the great heat at the end of that month and the early part of June, was the worst that ever I knew, for the flowers were retarded when they should have been growing, and burst open, and burnt away in the utterly callous fashion that Nature at times favours us with, and thus had a short ignominious life, and few exhibitors were able to put in an appearance at Middleton, and only Mr. Knowles and myself were able to save the show from being a fiasco.

Great credit is due to Mr. Knowles, for, although the season has been so bad, he was able to bring some really fine flowers, especially feathered ones, and it was a treat to see his Wm. Wilson, Violet Amiable, Lizzie, and Flamed Sir J. Paxton. Breeders were poor; bitter cold, followed by great heat and thunderstorms, don't suit breeders, which soon show signs of giving up the unequal struggle.

The following were the awards:

Twelve dissimilar rectified tulips: First, Mr. J. W. Bentley, Middleton, with Sir J. Paxton, Masterpiece, Samuel Barlow, Mrs. Atkin, Jane, A. McGregor, Aglaia, Violet Amiable, Amazon, Talisman, and Bob Moorley; second, Mr. James Knowles, Stalybridge, with W. Wilson, Sir J. Paxton, Dr. Hardy, Modesty, Mrs. Collier, A. McGregor, Lady C. Gordon, Lilian, Talisman, Beauty of Litchurch, and seedling.

For six dissimilar rectified tulips: First, Mr. Knowles, with J. Smith, S. Barlow, Lady C. Gordon, A. McGregor, Talisman, and Stockport; second, Mr. Bentley, with Garibaldi, Sir J. Paxton, Mrs. Collier, A. McGregor, Violet Amiable, and Talisman; third, Mr. W. Mellalieu, Middleton.

Six dissimilar rectified tulips (for small growers): First, Mr. W. Stringer, Middleton, with Sir J. Paxton, Rose Hill, A. McGregor, Adonis, and Violet Amiable; second, Mr. W. H. Hulse, Middleton, with Sir J. Paxton, Mabel, A. McGregor, Adonis, and Violet Amiable.

For three feathered tulips: First, Mr. Knowles, with Lord F. Cavendish, Lizzie, and Lucy Grey; second, Mr. Bentley with Masterpiece, Mrs. Atkin, and Thurstan's Seedling. Three flamed tulips: First, Mr. Bentley, with Sir J. Paxton, Mabel, and Talisman; second, Mr. Knowles, with Sir J. Paxton. A. McGregor, and Talisman; third, Mr. Stringer.

Pair of tulips (maiden growers): First, Mr. Stringer with Lizzie and A. McGregor; second, Mr. Mellalieu, with Modesty and Sir J. Paxton; third, Mr. Hulse. Pair of tulips: First, Mr. Knowles, with Lizzie and Dr. Hardy; second, Mr. Bentley with Sir J. Paxton, feathered and flamed; third, Mr. Stringer; fourth, Mr. Mellalieu; fifth, Mr. Hulse.

Single blooms: Feathered bizarres, first and second, Mr. Knowles with Lord F. Cavendish; third and fourth, Mr. Bentley with W. Wilson and Masterpiece. Feathered roses: First and second, Mr. Knowles with Modesty and Rachel; third and fourth, Mr. Bentley with Jane and Lizzie; fifth, Mr. Stringer; sixth, Mr. Mellalieu. Feathered byblœmens: First and second, Mr. Knowles with Dora and Violet Amiable; third and fourth, Mr. Bentley with Bessie and Diarmid. Flamed bizarres: First and second, Mr. Knowles with Sir J. Paxton; third and fourth, Mr. Bentley with Sir J. Paxton and Dr. Hardy. Flamed roses: First and second, Mr. Knowles with A. McGregor and Mrs. Telford; third and fourth, Mr. Bentley with Mabel and A. McGregor; fifth, Mr. Stringer. Flamed byblœmens: First and fourth, Mr. Knowles with Talisman; second and third, Mr. Bentley with Talisman; fifth, Mr. Mellalieu.

For the best flamed flower in the show: Mr. Knowles with Sir J. Paxton. The best feathered flower in the show: Mr. Knowles with Wm. Wilson.

Six breeder tulips, two of each class: First, Mr. Bentley with A. Lloyd, Gerald (seedling), Olivia Dawn (seedling), Diarmid, and seedling. Three breeder tulips, one of each class: First, Mr. Bentley with Gerald. Thurston's rose seedling and seedling; second, Mr. Stringer with Lloyd's 219, A. McGregor, and Beauty of Litchurch. Single blooms, bizarre breeders: First and second. Mr. Bentley with Sir J. Paxton and A. Lloyd; third, Mr. Mellalieu. Rose breeders: First and second, Mr. Bentley with Mdme. St. Arnand and A. McGregor; third and fourth, Mr. Mellalieu with Rose Hill; fifth, Mr. Stringer. Byblœmens, breeders: First and second, Mr. Bentley with Seedlings; third, Mr. Mellalieu with Beauty of Litchurch. Best breeder in the show: Mr. Bentley with Alfred Lloyd.

J. W. B.

East Anglian Horticultural Club.

Although the early part of June is a busy time in the garden, the members of this club turned up well at the monthly meeting held at Norwich on the 10th inst. The subject for the evening was a paper by Mr. Lewis Smith, gardener to Robert Fellowes, Esq., Shotesham Park, upon "Herbaceous Flowers." Locally, Mr. Smith has quite a reputation for these flowers, being one of the chief prizetakers at the local exhibitions. To illustrate his paper, he had brought up about 60 kinds and varieties, and a very nice group they made.

At the outset, Mr. Smith spoke of the glories of the herbaceous border, as compared with the old stereotyped system of carpet-bedding. He stated borders could be made practically any size according to the space at command. Soil was not of such importance as deep digging and a liberal supply of good manure. How, when, and where to plant the several subjects gave material for some most practical cultural remarks which were splendidly expressed. He did not favour the cutting down of the flower stems as soon as the blooms had faded, but would leave them on till new growths appear, as this encourages stronger growth. The various forms of planting, in blocks, lines, dots, or broad colour effects, were all dealt with in detail. For a north border one had a host of plants always interesting, and Mr. Smith enumerated those which he grows, and which with him seem quite at home.

Having exhausted his cultural and suchlike details, the lecturer went through a list of the best subjects he grows at Shotesham, which was most comprehensive. As might be expected, an animated discussion followed, in which Messrs. J. Powley, H. Perry, T. B. Field, E. Peake, H. Goude, E. Pitcher, C. Burtenshaw, and J. C. Abel were the chief debaters. Mr. Smith suitably replied, and was accorded the best thanks of the club for his paper.

The exhibition tables were nicely filled with subjects, especially cut flowers and flowering plants. The exhibit of Mr. T. Notley, gardener to his Worship the Mayor of Norwich, of strawberries, variety Mentmore, was superb. Mr. F. Williams, gardener to Louis Tillett, Esq., M.P., Catton, staged the best herbaceous flowers in competition, and the pelargoniums of Mr. W. Rush, gardener to F. P. Hinde, Esq., Thorpe, deserve mention.

British Gardeners' Association.

At the monthly meeting of this association Mr. E. F. Hawes, superintendent of the Royal Botanic Society's Gardens, Regent's Park was elected chairman of the Executive Council for the ensuing year, and Mr. Char Foster, vice-chairman, for the same peri

Nineteen new members were elected, bringing the total up to 1,308. Messrs. Hawes, Foster, Winter, Castle, Raffill, and Weather were appointed on the Publication Committee. The examination question was discussed, and it was decided that an outline of its scope should be given in next issue of "Journal."

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. June 7 to June 13.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
June 7 - Sunday	6 5	47	44	62	37
„ 8 - Monday	7 4)	57	52	67	48
„ 9—Tuesday ...	3 0	57	54	69	46
„ 10—Wednesday.	9 0	65	60	74	56
„ 11—Thursday ...	11 10	59	56	70	51
„ 12—Friday	1 10	57	54	64	53
„ 13—Saturday ...	6 20	58	50	63	48
Means	6 20	57	53	67	48

Date. 1908. June 7 to June 13.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
June 7—Sunday	0·08	59	60	56	38
„ 8—Monday	—	59	59	56	48
„ 9—Tuesday ...	0·04	59	59	56	42
„ 10—Wednesday.	—	60	59	56	51
„ 11—Thursday ...	—	61	60	56	45
„ 12—Friday	—	61	60	56	46
„ 13—Saturday ...	—	60	60	56	44
Means ...	(total) 0·12	60	60	56	44

SOME SPECIAL FEATURES

. . IN . .

THE GARDENERS' MAGAZINE.

1908.

Jan. 4.—**ISLES OF SCILLY** (Illustrated).
11.— „ „ Bulb Industry.
Feb. 8.—**HORSHAM GARDENS** (Illustrated).—Dene Park, Leonardslee, Holbrook Park.
15.—**HORSHAM GARDENS** (Illustrated) —Warnham Court, Warnham Lodge, Sed Lodge, Wimblehurst.
March 7.—**THE GARDENS OF CORNWALL** (Illustrated). —Tremough, Trelissick, Rosehill, Penjerrick.
14.—**THE GARDENS OF CORNWALL** (Illustrated) —Carclew, Trebah, Enys, Penmo
April 11.—**NORWICH GARDENS** (Illustrated).—Gunton Park, Blickling Hall, Westwick Hall, Shotesham Hall.
18.—**NORWICH GARDENS** (Illustrated).—Duss'on Hall, Crown Point, Town Close House, Ashwellthorpe Hall, Oakland House, Boyland House,
May 2.—**GHENT CENTENARY FLOWER SHOW.**
16.—**BRISTOL GARDENS** (Illustrated).—Barrow Court, Ashton Court, Downside, field.
23.—**BRISTOL GARDENS** (Illustrated). — Uote House, Down House, The Priory, Old Sneed Park.
June 30 } 6 } **THE TEMPLE SHOW** (Illustrated Report).

Copies of the above, price 2d. each, or by post 2½d., may be obtained from the Publishers, 148 and 149, Aldersgate Street, London.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

[illegible] flowers, and fruits for naming [illegible] be sent to the Editor of the [illegible] MAGAZINE, "Endsleigh," Priory Park, [illegible] and as early in the week as possible. [illegible] be sufficiently prepaid.

[illegible] be glad to receive photographs of [illegible] flowers, trees, fruits, etc., for [illegible] the GARDENERS' MAGAZINE. He will [illegible] obliged by correspondents sending early [illegible] of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

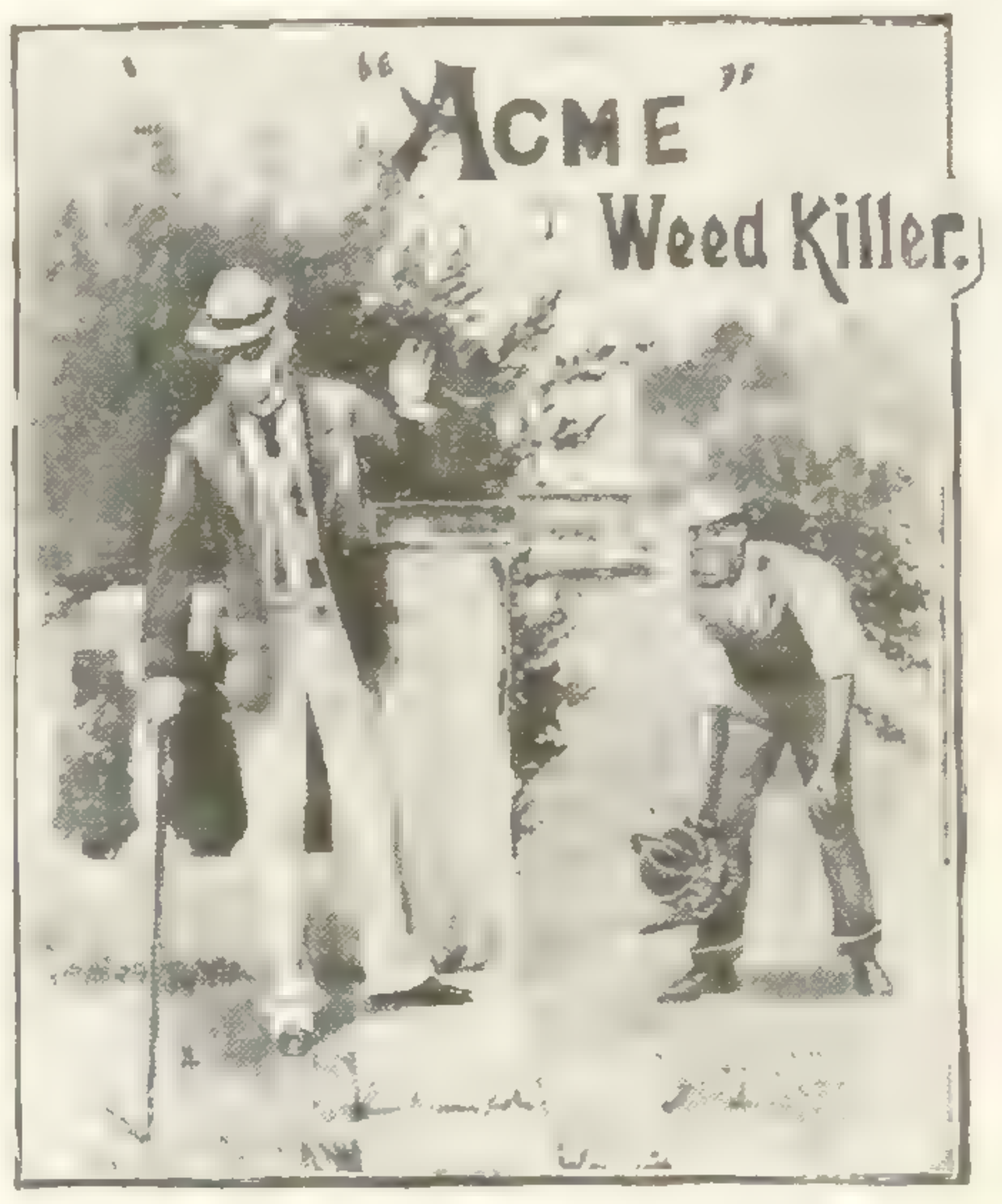
NEW SWEET PEA.—C., Devon: The variety is a distinct one, and well worth taking care of. If the colour keeps well and does not burn or run, the variety should prove a very useful one.

ROSES.—E. T., Walsall: For the present stick to the nitrate of soda, as previously suggested. It is a great pity your garden is so far from the residence, and the distance is a great handicap. If the garden was at home, so to speak, an hour or even a half-hour, morning and evening, devoted to the flowers, and to keeping pests under, would work wonders. Of the several remedies suggested, we should select Abol or Quassia extract. It was a great mistake to use long litter to cover the roses during winter, and no doubt a good deal of the weakness of the plants is due to its use. Bracken is by far the best material to use, you should cut it directly it is full grown and firm, and stick it when dry, as it then lasts better than if left until autumn before being cut. We cannot promise to always reply through the post, but we shall be always pleased to answer you through these columns. Accumulate wood ashes for a subsequent dressing, as your soil lacks potash, but, remembering the materials you have used already, a potassic fertiliser is not now desirable.

DENDROBIUM MOSCHATUM.—E. A. R., Darlington: There appears to be little need for us to enter into the details concerning the cultivation of Dendrobium moschatum, because, by your own showing, and by the specimens sent, it is evident you have hit upon the right conditions for this orchid. Abundance of light is necessary as the growths finish to ripen them up. Unfortunately the market value of D. moschatum is very small either as a plant or as cut flowers; it is one of the worst of dendrobiums so far as the lasting qualities of the flowers are concerned, as the blooms rarely last a week in good condition, but this fleeting character will, no doubt, have become apparent to you ere this. Sometimes an orchid enthusiast desires a large specimen of a rarely-grown species, such as D. moschatum, therefore it would be a good plan to notify one or two of the orchid specialists who advertise in our columns, that you have specimens you are willing to dispose of as occasion offers. D. moschatum is a fairly common species in Lower Burmah and Moulmein. It was first discovered in 1825 by Dr. Wallich.

INFESTED APPLE TREES.—J. W. W., [illegible]: The leaves sent were very badly infested with aphides, indeed, we have rarely seen a worse example of what greenfly can do. There were not many live aphides on the leaves, but there were lots of dead ones, and plenty of filth. The trees should be carefully sprayed with a fairly strong tobacco or quassia solution, with soft soap added to give the solution adhesiveness. [illegible] is 2lb. of soft soap, and ½lb. of [illegible] to [illegible] gallons of water, the two former being boiled separately to dissolve the one and extract the virtue from the other. A good remedy is made by adding paraffin to soft soap boiled in eight parts of water, the paraffin will amalgamate with this mixture if stirred vigorously when all is boiling hot; this should be diluted with warm water so as to allow a half-gill of paraffin to each gallon

CLEAN PATHS. CLEAN PLANTS.



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of spraying solution. Judging from the leafage, we believe your trees are suffering from drought, and so we suggest that they be all subjected to a vigorous hosing with clear water a day before the spraying is done; this will clear away some of the filth, freshen the trees, and also give the roots the much-needed moisture. It may be necessary to spray two or three times at intervals of three or four days; a hosing during the intervals will materially help matters. The larvæ present with the aphides are those of the Lacewing fly; these eat the aphides, but when the latter are present in such quantities the grubs do not seem to appreciably diminish the plague.

CUTTING ASPARAGUS. — In reply to E. Q. L., Farnham, Mr. Guilano writes from Elstree as follows: I have found that asparagus cut in early morning is more juicy, and cooks better than asparagus cut in the afternoon or evening. The early cut asparagus is more tender when cooked, and of finer flavour. Asparagus cut late in the day is firmer to the touch and more difficult to cook than that cut early, and, moreover, it is not of such good flavour.

SILVER LEAF ON PLUM.—E. M., Basingstoke: With very few exceptions the dreaded silver leaf disease sooner or later kills the trees it attacks, and the worst of it is that the disease is so subtle that its origin and its cure and prevention are unknown. It has been frequently suggested that lack of iron in the soil is a contributory cause, and in some instances an application of sulphate of iron solution has checked the disease. This is applied at the rate of ½ lb. of the sulphate to three gallons of water, and given at intervals of a week or ten days, the border being well moistened with the solution. It was believed that the disease was associated in some way with a fungus known as Stereum purpureum, a species that appeared to be always found where there was an attack of silver leaf, but Mr. Spencer Pickering has proved that the latter does sometimes exist without the former. Of course the American gooseberry mildew is not of quite recent appearance, but if your Job's Comforter means that silver leaf is a more recent discovery than the modern outbreak of American gooseberry mildew in this country, we can only say that his knowledge of the matter is infinitesimal, and he cannot be a regular reader of the GARDENERS' MAGAZINE. The grower who found silver leaf did not in any way affect the cropping of the peach tree it had attacked, has an experience quite foreign to any we have heard of. Try the sulphate of iron treatment, and cut out the diseased portions as soon as possible; if this treatment fails then root out the tree and plant a young vigorous and healthy one in new soil.

NITRATE OF SODA FOR ROSES.—R., Walsall: Sulphate of potash should be applied earlier in the season. For the present to encourage growth you should give the bed a dressing of nitrate of soda, at the rate of ½ oz. to the square yard; this should be thoroughly watered in at once, and the following day the surface of the bed should be hoed with the Dutch hoe. Keep the roses clean, and do not be afraid to use the hose or garden engine. Give another dressing of nitrate of soda about a month hence.

E. A. A., Farnham, and J. A., Gravesend.—We are giving the respective questions attention, and hope to publish the replies in our next issue.

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

E. A. R., Darlington.—Dendrobium moschatum.

R. P., Bedford.—1, Cestrum elegans; 2, Lotus peliorhynchus; 3, Asplenium Nidus-avis; 4, Todea arborea.

M. M., Watford.—1, Plumbago capensis alba; 2, Odontoglossum cirrhosum; 3, Ærides affine; 4, Pilea muscosa.

H. W., Moreton.—1, Achillea rupestris; 2, Thalictrum adiantifolia; 3, Saxifraga peltata; 4, Olearia Haasti.

T. V., Bath.—1, Leycesteria formosa; 2, Gaultheria Shallon; 3, Galax aphylla; 4, Cotoneaster horizontalis; 5, Circis siliquastrum alba.

R. S. D., Salisbury.—1, Pinus Cembra; 2, Abies Douglasi; 3, Cedrus Deodara; 4, Abies canadensis; 5, Cupressus Lawsonianus erecta viridis; 6, C. macrocarpa lutea.

T. H. S., Lingfield.—1, Peristeria elata; 2, Potentilla anserina; 3, Mertensia sibirica; 4, Cytisus Andreanus; 5, Delphinium nudicaule; 6, Schizanthus retusus.

F. E. G., Whitby.—1, Veronica gentianoides; 2, Thuja dolobrata; 3, Phlox canadensis; 4, Pulmonaria saccharata; 5, Galium aperina; 6, Sedum acre aurea.

L. H. B., Stratford-on-Avon.—1, Lupinus polyphyllus; 2, Lupinus arboreus; 3, Philadelphus coronarius; 4, Deutzia crenata flore-pleno; 5, Prunus Pissardi; 6, Manettia bicolor.

FORTHCOMING ENGAGEMENTS.

TUESDAY, June 23.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. by the Rev. Prof. G. Henslow, V.M.H., on "The Absorption of Rain and Dew, by the Green Parts of Plants"; Scientific Committee at 4 o'clock.

Horticultural Club, Hotel Windsor; Dinner at 6 p.m.; lecture on "Development of Gardening in Victoria during Recent Years," by Mr. H. Hitchcock.

WEDNESDAY, June 24.—Royal Society of Arts.

Horticultural Exhibition at the Franco-British Exhibition; three days.

Gardeners' Royal Benevolent Institution; Anniversary Festival Dinner at the Whitehall Rooms, Hotel Metropole, 7 p.m.

SATURDAY, June 27.—Reigate Rose Show.

Windsor Rose Show.

MONDAY, June 29.—Isle of Wight Rose Show at Ryde.

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FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (June 20) contains the following:

GOOSEBERRIES FOR MARKET.
DEGENERATION OF POTATOES.
CULTIVATION OF CABBAGES.
MANAGEMENT OF DAIRY COWS.
COOLING MILK.
FERTILITY IN SHEEP.
PURE v. MONGREL PIGS.
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MARKETS.

◆

COVENT GARDEN.

Flowers.

The demand has improved somewhat, but there are no material changes in prices.

		s.	d.	s.	d.
Adiantum cuneatum	per doz. bun.	5	0	9	[illegible]
Arums	per doz.	2	6	4	[illegible]
Asparagus	per doz. bun.	1	6	[illegible]	[illegible]
Berberis leaves	per doz. bun.	1	6	[illegible]	[illegible]
Carnations	per doz. blms.	1	6	3	[illegible]
,,	per doz. bun.	8	0	12	0
,, Malmaison	per doz. blms.	8	0	12	[illegible]
Cattleyas	per doz.	8	0	10	[illegible]
Croton leaves	per bun.	1	0	1	[illegible]
Cyclamens	per doz. bun.	6	0	8	[illegible]
Cypripediums	per doz. blms.	2	0	3	[illegible]
Eucharis	per doz.	4	0	5	[illegible]
French fern	per doz. bun.	1	0	3	[illegible]
Freesias	per doz. bun.	2	6	3	6
Gardenias	per doz.	1	6	3	0
Gladiolus Colvillei	per doz. bun.	7	0	10	[illegible]
Gypsophila	per doz. bun.	3	0	[illegible]	[illegible]
Iris, Spanish	per doz. bun.	3	0	6	[illegible]
Ixias	per doz. bun.	3	0	6	[illegible]
Lapagerias	per doz.	1	0	2	[illegible]
Lilium auratum	per bun.	2	0	3	[illegible]
,, speciosum	per bun.	2	0	3	[illegible]
,, longiflorum	per bun.	2	6	[illegible]	[illegible]
Lily of the Valley	per doz.	6	0	12	[illegible]
Marguerites, white	per doz. bun.	3	0	4	[illegible]
,, yellow	per doz. bun.	2	0	3	0
Mignonette	per doz. bun.	3	0	6	[illegible]
Narcissus	per doz. bun.	1	0	[illegible]	[illegible]
Odontoglossums	per doz. blms.	2	0	3	0
Pelargoniums	per doz. bun.	5	0	8	0
Ranunculus	per doz. bun.	5	0	7	[illegible]
Roses	per doz.	1	0	6	[illegible]
Smilax	per doz. trails	3	0	5	[illegible]
Spiræa	per doz. bun.	5	0	8	[illegible]
Statice	per doz. bun.	5	0	6	0
Stocks	per doz. bun.	3	0	4	0
Sweet Peas	per doz. bun.	2	6	[illegible]	0
Tuberoses	per doz. blms.	0	4	[illegible]	[illegible]

Fruits.

Strawberries and cherries from Hampshire and France respectively are plentiful.

		s.	d.		s.	d.
Apples, Australian	per case	7	0	to	12	0
,, Canadian	per barrel	10	6		[illegible]	0
,, Tasmanian	per box	7	6		14	0
Bananas	per bun.	3	0		[illegible]	6
Cherries, French	per box	0	9		[illegible]	6
Figs	per doz.	3	0		10	0
Gooseberries	per ½-sieve	5	0		7	0
Grapes, English (new)	per lb.	2	0		10	0
,, Australian	per case	6	0		14	0
Lemons	per case	8	0		[illegible]	[illegible]
Melons, Guernsey	each	1	3		[illegible]	[illegible]
Nectarines	per doz.	5	0		[illegible]	[illegible]
Oranges	per case	7	0		[illegible]	[illegible]
Peaches	per doz.	6	0		[illegible]	[illegible]
Pears, Australian	per box	4	0		[illegible]	[illegible]
Pineapples	each	2	0		[illegible]	[illegible]
Strawberries	per lb.	0	4		[illegible]	[illegible]
,, Hampshire	per basket	1	0		[illegible]	[illegible]

Vegetables.

Business continues moderately good, with a brisk demand for salading.

		s.	d.		s.	d.
Artichokes	per doz.	2	0	to	3	[illegible]
Asparagus, Paris green	per bun.	1	3		3	[illegible]
,, English	per bun.	1	0		1	[illegible]
,, Spanish	per bun.	0	6		0	[illegible]
,, Sprue	per bun.	0	[illegible]		0	[illegible]
Beans, Guernsey	per lb.	0	4		[illegible]	[illegible]
Beet	per bush.	1	[illegible]		[illegible]	[illegible]
Cabbage	per tally	2	6		[illegible]	[illegible]
Carrots	per doz. bun.	1	0		[illegible]	[illegible]
,,	per bag	2	[illegible]		[illegible]	[illegible]
,, French (new)	per doz. bun.	5	0		[illegible]	[illegible]
Cauliflowers	per doz.	1	0		[illegible]	[illegible]
Cucumbers	per doz.	1	[illegible]		[illegible]	[illegible]
Greens	per bag	1	0		[illegible]	[illegible]
Horseradish	per doz. bun.	9	0		[illegible]	[illegible]
Lettuce, cabbage	per doz.	0	[illegible]		[illegible]	[illegible]
Lettuce, cos	per doz.	1	0		[illegible]	[illegible]
Mint	per doz. bun.	1	0		[illegible]	[illegible]
Mushrooms	per doz. lb.	8	0		[illegible]	[illegible]
Onions, spring	per doz. bun.	1	0		[illegible]	[illegible]
,, Spanish	per case	5	0		[illegible]	[illegible]
Parsley	per doz.	1	0		[illegible]	[illegible]
Peas	per basket	3	0		[illegible]	[illegible]
Radishes	per doz. bun.	0	10		[illegible]	[illegible]
Turnips, French (new)	per doz. bun.	5	0		[illegible]	[illegible]
Vegetable Marrows	per doz.	3	0		[illegible]	[illegible]

LONDON POTATO MARKETS.

There is now a good supply of new potatoes prices are moderate.

		s.	d.		s.	d.
Old potatoes	per ton	75	0	to	[illegible]	[illegible]
Teneriffe	per cwt.	9	0		[illegible]	[illegible]
Lisbon	per box	3	0		[illegible]	[illegible]
Jerseys	per cwt.	8	0			

CATALOGUES RECEIVED.

BENJAMIN R. CANT AND SONS, THE OLD GARDENS, COLCHESTER.—The value of pots for early blooming has long been but many fear the cost of plants. The is instructive, as the newer varieties are plants are offered for outdoor planting.

MAURICE PRICHARD, CHRISTCHURCH, HANTS.—A very interesting catalogue of alpine plants, with special reference to hardy aquatics, and the useful hardy

M. V. SEALE, SEVENOAKS.—A handy pocket of dahlias and bedding plants; a

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J. B. NICHOLS, Esq., Holmwood Park, [illegible] can highly recommend T. L. IRELAND as HEAD WORKING GARDENER; 5½ years [illegible] at Holmwood Park; age 34; married, no [illegible] Address Heath Cottage, Caterham Valley, Surrey. No circulars.

GARDENER (Head Working), age 31, married; life experience in good places, including [illegible] Mereworth Castle, and Old Warden Park; [illegible] as Head; highest references. F. FRENCH. [illegible] Barming, Kent.

GARDENER (Head Working, where two [illegible] are kept); life experience vines, [illegible], stove and greenhouse plants, carna[illegible] kitchen and flower garden; good references; [illegible], C.R.H.S., M.B.G.A. Address, 14, York Terrace, Cheam.

GARDENER (Head Working, where two or [illegible] are kept); thoroughly experienced in all [illegible] good refs; middle-aged; disengaged June [illegible] would assist in house if required. D. S., [illegible] Lodge, Ewhurst, Guildford.

GARDENER (Head Working, where several [illegible] experience in all branches; thorough knowledge of the culture of grapes, melons, [illegible], stove and greenhouse plants, [illegible] kitchen garden; leaving through estate [illegible] good references from present and [illegible]; age 39, married. H. K., Sid-[illegible], Earley, Reading.

GARDENER (Head Working, where two or [illegible] kept); 16 years' good practical experience [illegible] branches; thorough knowledge of [illegible], melons, cucumbers, stove and greenhouse plants [illegible] kitchen garden; age 30; married [illegible] good ref.; 2½ years in last place. B. [illegible], Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working), thoroughly experienced in all branches, Inside and Out; early and late forcing; good references; age 38; married; no family. R. GRIFFITHS, Rose Acre, Bearsted, Maidstone.

GARDENER (Head Working), where two or more are kept; middle-aged; life experience Inside and Out; hard working; good references from last and previous employers. G. BURGESS, 17, Eversleigh road, Lavender Hill, London, S.W.

GARDENER (Head of two or three); life experience Inside and Out, including Vines, Peaches, Melons; age 32; single; excellent references. H. BENSTEAD, Spencers Row, Heacham, Norfolk.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER (Single-handed or with help); good characters; age 29; single. W. P., 104, High Street, Dorking.

GARDENER (Single-handed, or with Help). —Miss HOLT, Waratah, Chislehurst, highly recommends J. SAUNDERS to lady or gentleman wanting a good practical man; experienced Inside and Out; age 35, married, no family. 2, Edward Terrace, Chislehurst West.

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GARDENER (Second or Single-handed); life experience, Inside and Out; age 32; can be well recommended. J. CARTER, No. 2, Alma Road, Marlowes, Hemel Hempstead, Herts.

GARDENER (Under), age 19, seeks SITUATION; five years' experience Inside and Out; three years' good character. A. WORSFOLD, Benenden, Cranbrook, Kent.

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YOUNG MAN, age 2[illegible], foreigner, seeks SITUATION in Nursery, first-class testimonials from France, Germany, etc. R. ABR., [illegible] Lawson Road, Enfield Highway, N.

YOUNG MAN, age 24, seeks SITUATION Inside or Inside and Out; 9 years' experience; leaving to improve. F. COTTS, Station Road, Holt, Norfolk.

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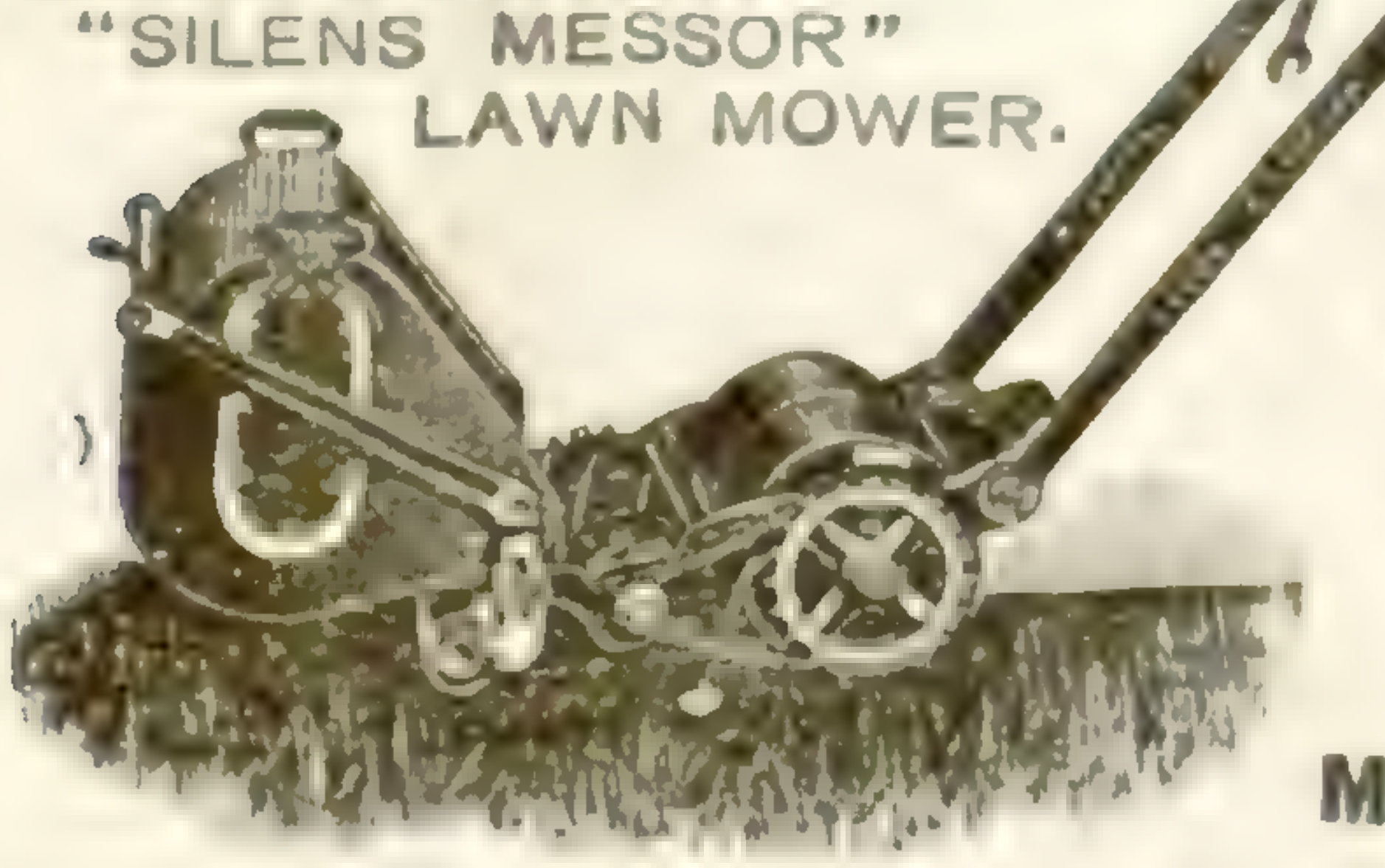

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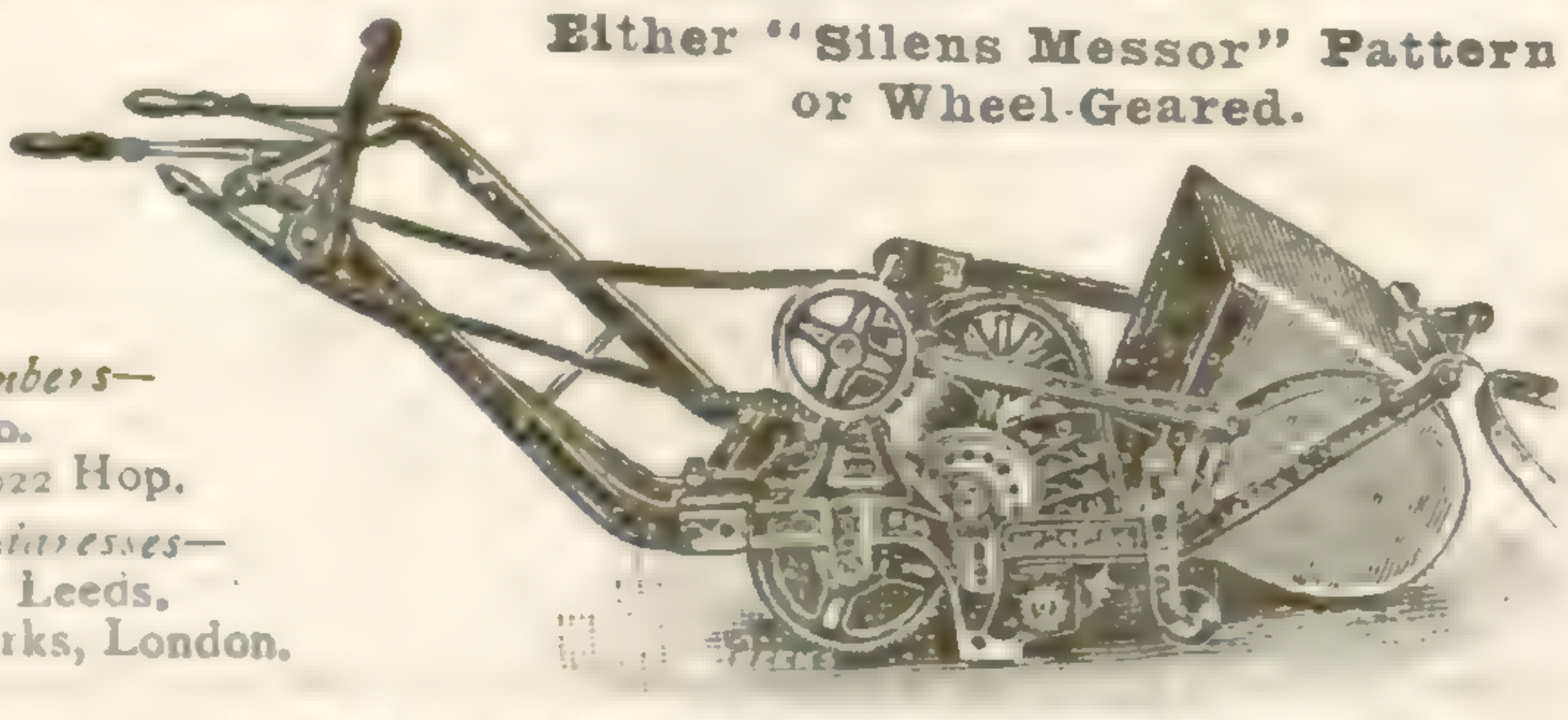

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PERTHSHIRE GARDENS I.—Illustrated.

THE GARDENERS' MAGAZINE.

No. 2,852. Vol. LI.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, JUNE 27, 1908.

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Illustrated price list, gratis and post free on application to WEBB and SONS, The King's Seedsmen, WORDSLEY, STOURBRIDGE.

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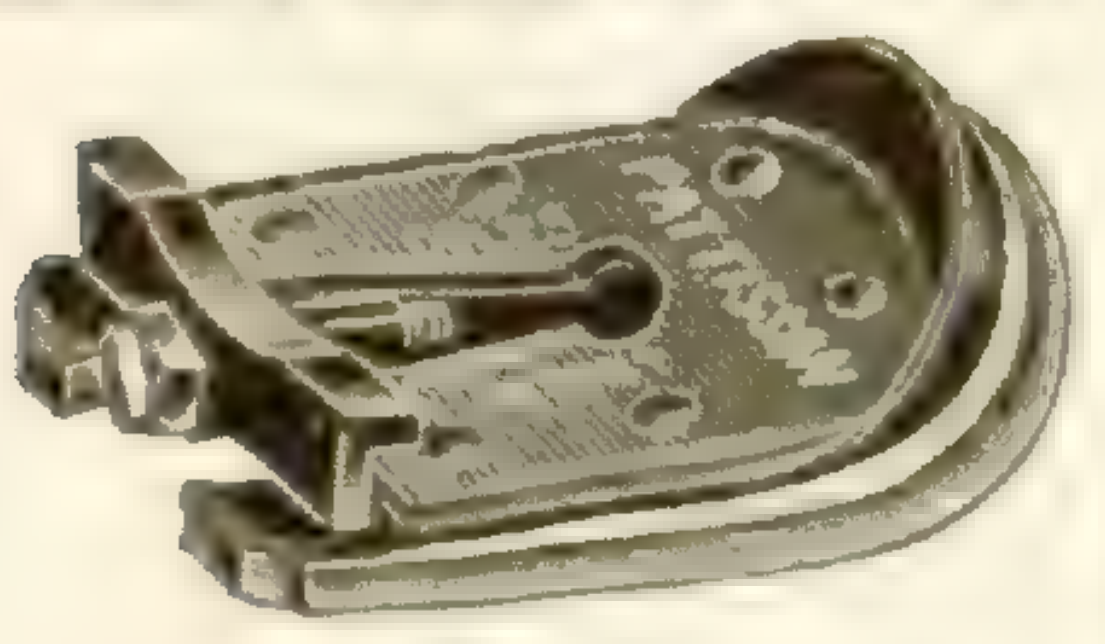

FIG. 1.

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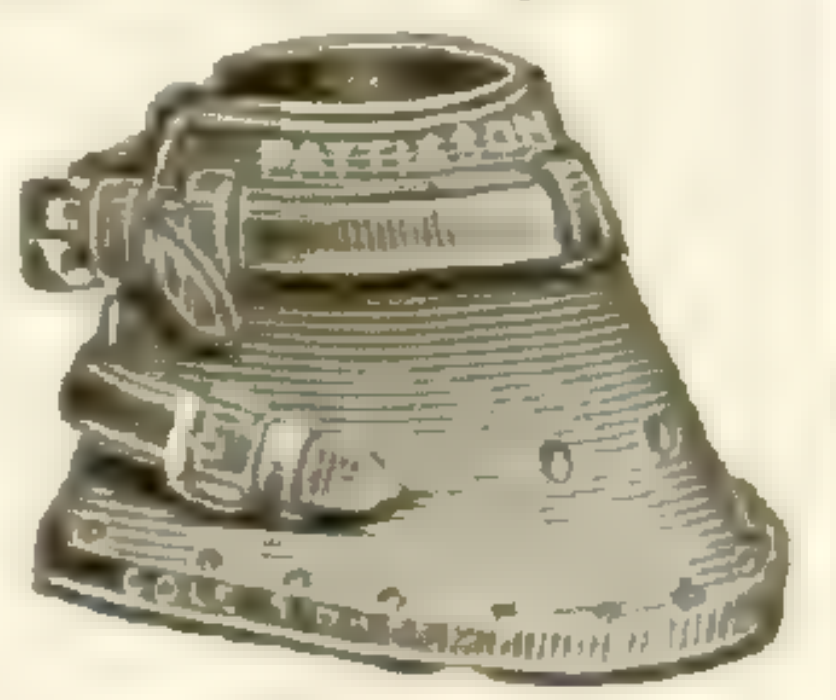

FIG. 2.

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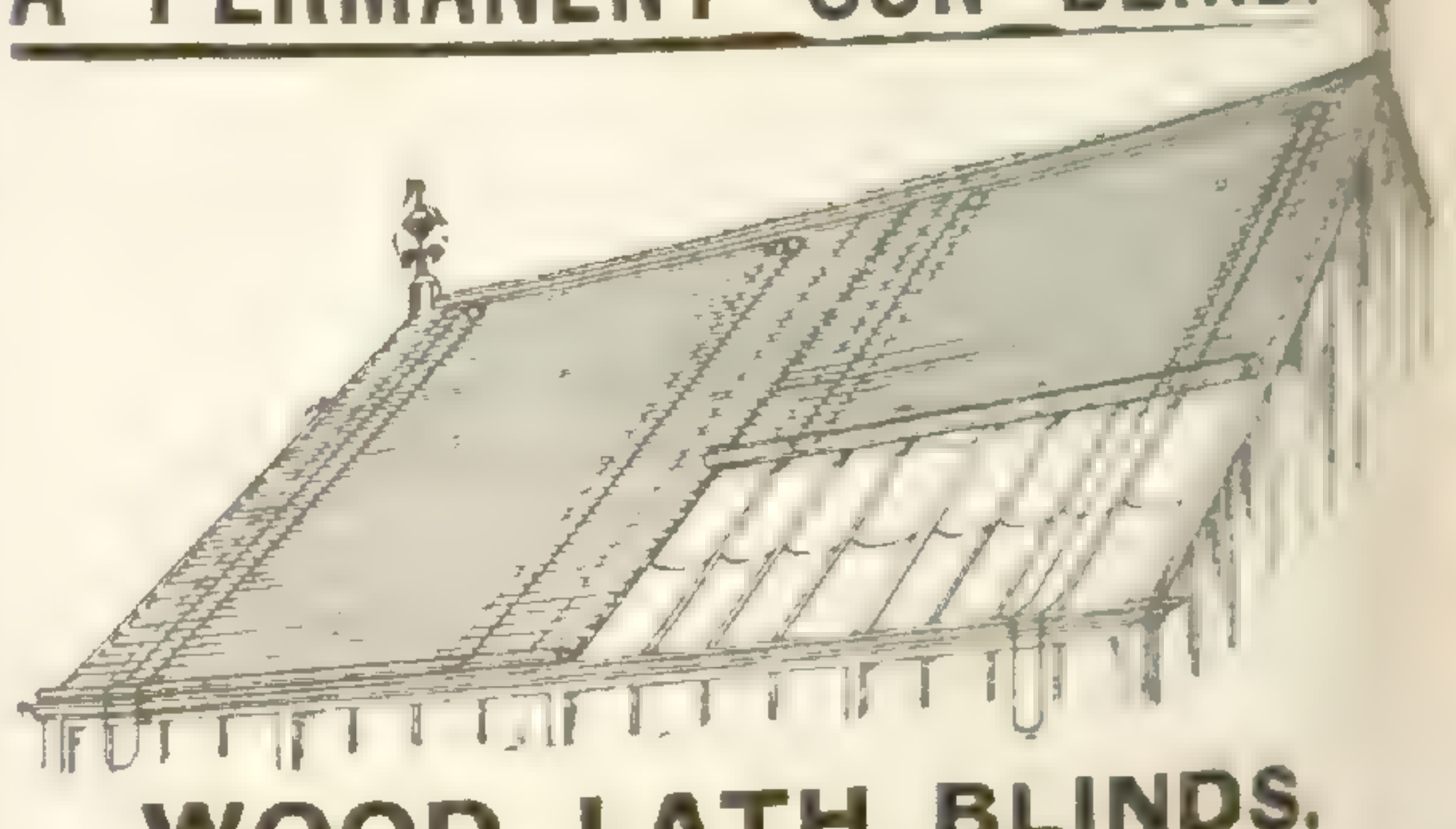

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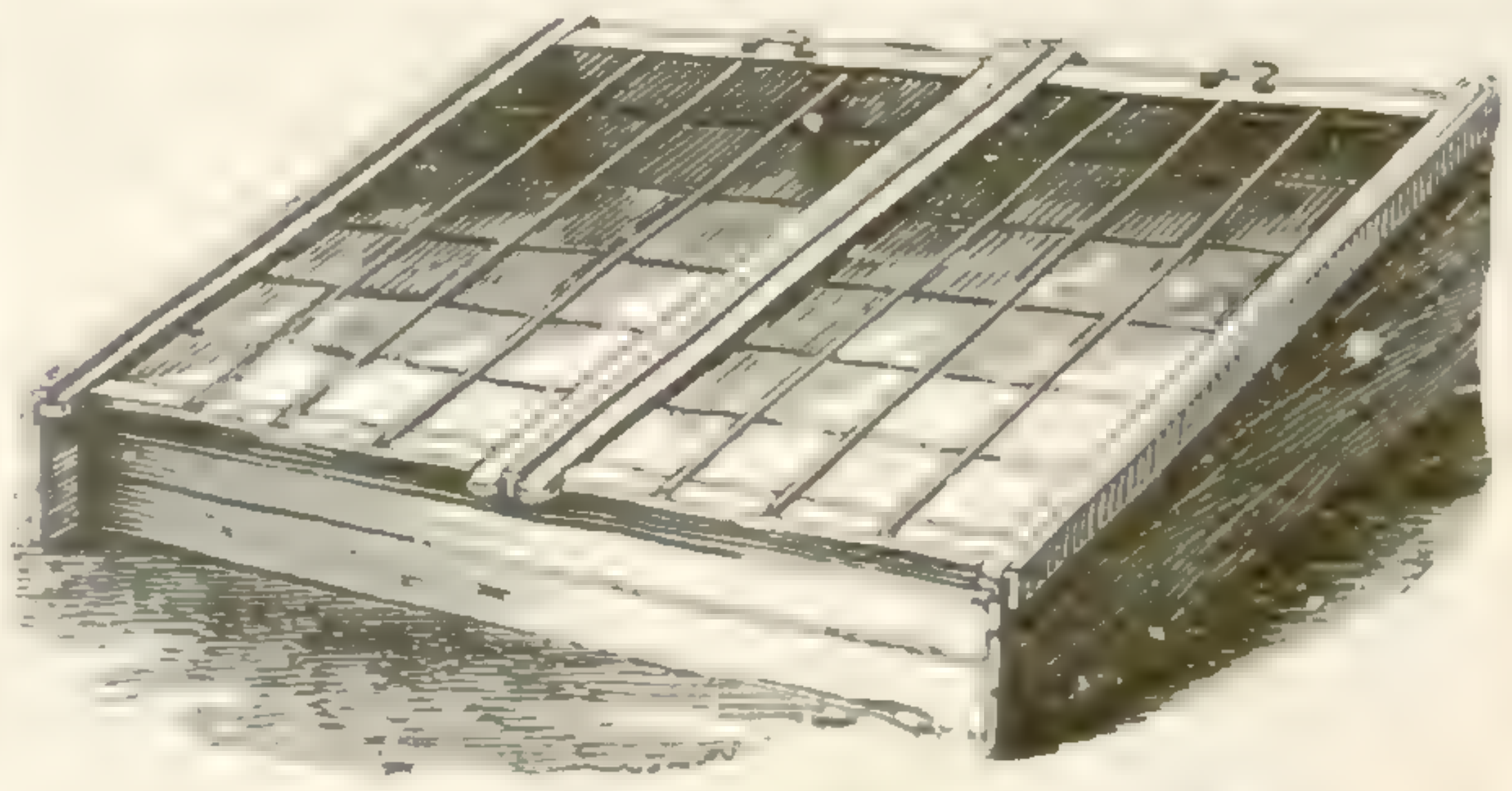

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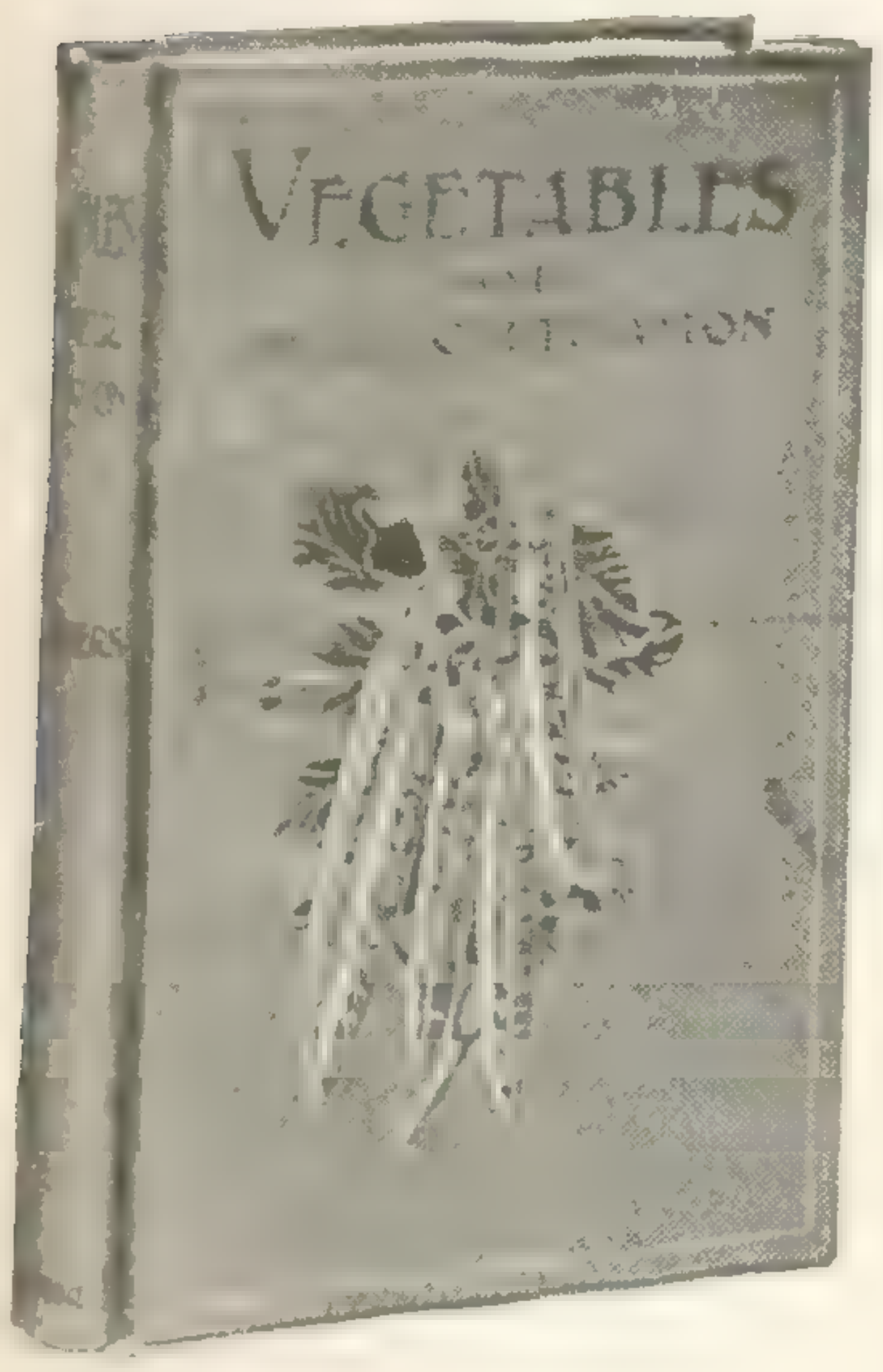

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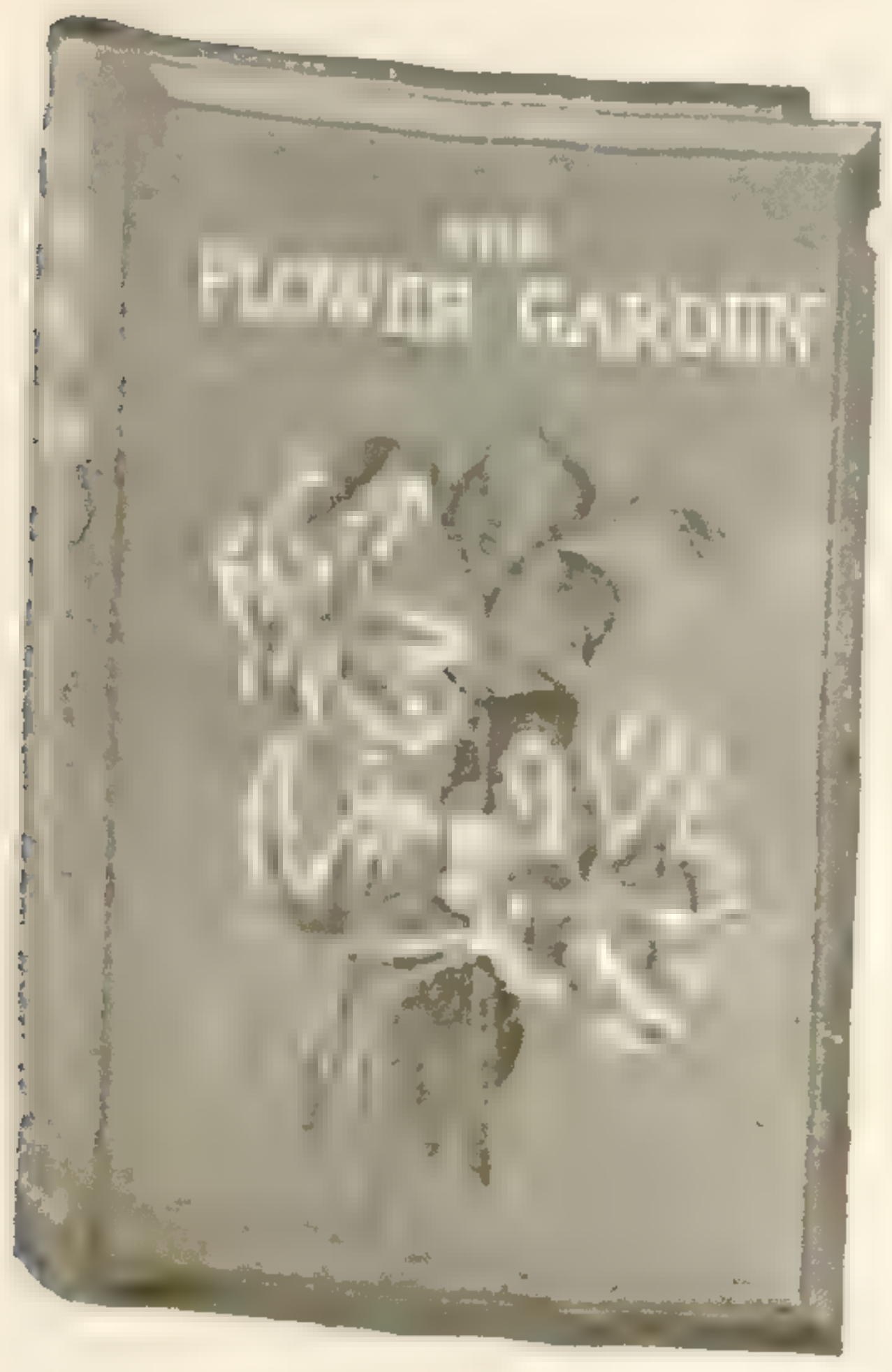

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VOL. LI.—No. 2,852. SATURDAY, JUNE 27, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Vermin.

Just as weeds are plants in, from the human point of view, the wrong place, so must vermin be regarded as animal or insect life existent under conditions inimical to man's interests. We not infrequently hear the question, "What conceivable useful purpose can such and such forms of vermin subserve?" and in most cases from the point of view of direct or indirect service to humanity, it is impossible to find an answer. Take, for instance, the inconceivable myriads of locusts which from time to time invade the cultivated areas of warmer climes, and by devouring everything of a vegetable nature, leave absolute desolation behind them. What compensating good do they do? True, some of the natives find them to their taste as food, and, judging by other cases, let us say, shrimps, periwinkles, and whelks as popular ones, it is even conceivable that it is only prejudice which stands in the way of a swarm of locusts forming a rich harvest for a canning factory by way of substitution for the vegetable harvest they have devoured. The succulent snail which the gardener regards as his sworn foe, and destroys remorselessly, has even been cultivated as a delicacy, and forms another exemplification of redeeming possibilities. Many kinds of vermin, however, appeal to us as peculiarly loathsome, weevils, grubs, and caterpillars to wit, and regarding mankind as Nature's masterpiece, and his perfection her sole end and aim, we can only assume that this class of pest and many others merely exist in order to exercise and strengthen the virtues of patience and fortitude by their chastening influence, precisely as the bitter blasts and the hard conditions of northern regions toughen and strengthen the races exposed to them, and by so doing have rendered them practically the masters of the world. So in horticulture, it is the constant war against the ever-invading foes, the so-called vermin, which has largely contributed to make the gardener what he is, and provides, moreover, employment for a veritable host of manufacturers and contrivers of remedial agents. Here, at any rate, is an indirect use. If, however, we were gifted with the power of "seeing ourselves as others see us," those others being the vermin themselves, we should probably learn that from their point of view, the worst vermin by far in all animate creation is that pestilent creature man himself. The poor little innocent aphis, for instance, a very lamb for gentleness and defencelessness, is born upon a rose leaf, and without dreaming of harm, or intending any, adopts that rose leaf as a pseudo-mother, and drawing nourishment therefrom, waxes fat and propagates its kind peacefully and prolifically until, if left alone, a day or two will see it surrounded by its myriad descendants. Suddenly, however, there comes between the community and the sun the shadow of a gigantic being, who either destroys the whole family with a cataclysmic finger and thumb, or more insidiously drenches it and myriads of its relatives with deadly poison in solution, or suffocates with deadly fumes. What, to the aphis mind, can possibly be the use of such organisms as man? He is a simple atrocity, an abomination of abominations, and nothing else, and in the aphis interest, ought undoubtedly to be exterminated. Considering the matter from an intermediate and wider point of view, it is, perhaps conceivable that utility to mankind is not Nature's sole end and aim, and that every organism has its own particular sphere of action and interaction, its inimical character as regards man's interests being purely accidental, and due to man's invasion of its particular domain. We may, indeed, see this exemplified within the range of humanity itself, since when civilised man comes into conflict with uncivilised races, the latter, although innocuous if undisturbed, become sooner or later wiped out, and if they resent this operation are classed with the verminous, and their utility in the great scheme of Nature called into question. It is entirely a matter of the "point of view," of the "survival of the fittest." Fortunately for man, the gift of an intellect has raised him so immeasurably above all other animate creatures that his interests are perforce paramount, and that being so, if any of the others rebel and attack what he considers his rightful possessions, and so earn the epithet of vermin, why, then, they have to put up with it, and stand the consequences.

CM 374.

MR. H. C. PRINSEP.

Mr. H. C. Prinsep, whose portrait we have the pleasure of giving in this issue, has charge of the gardens at Buxted Park, Sussex, the residence of the Hon H. B. Portman, a position he has occupied with singular success for upwards of 30 years. There is no occasion to enter into details as to Mr. Prinsep's training, but it may be mentioned that he passed through some of the more important gardening establishments in England and Ireland. He would appear to have taken full advantage of the opportunities he had for the acquisition of a knowledge of the practice and science of horticulture, for within a comparatively short period of his entering on his charge at Buxted Park he was recognised as one of the foremost gardeners of his day. While utilising to the full the knowledge obtained when preparing himself for the responsible position to which all young gardeners possessing some ambition naturally aspire, Mr. Prinsep has not slavishly followed the experience gained during his earlier years. Possessing keen powers of observation he has not been slow to make such changes in his methods of procedure as to him have appeared desirable. Many years ago he revolutionised the cultivation of dendrobiums by the adoption of a practice that was quite opposed to that which was regarded as essential to success by the general body of orchid growers. Instead of preserving the old pseudo-bulbs for an indefinite period, he cut them down to within a few inches of the base immediately the beauty of the flowers was past, and placed the plants under the conditions most favourable to a vigorous growth. The results were such as to startle those who had an opportunity of seeing the dendrobiums at Buxted Park when in bloom. No pseudo-bulb exceeded an age of twelve months, and every one was, so to speak, a wreath of bloom, the flowers being of exceptionally high quality. We might cite other instances of the splendid success achieved by Mr. Prinsep by the adoption of new methods of procedure did space permit. It must, however, be said that his successes have not been confined to the orchid house, and that he has long been regarded as one of our leading authorities on, and cultivators of, fruits and vegetables. Mr. Prinsep has also given special attention to trees and shrubs, as evidenced by the many fine kinds that have been planted in the gardens of Buxted Park during the period in which he has been responsible for their management.

Roses have this year made their growth under conditions so highly favourable that they are in the best possible state of health, and promise to yield a wealth of blooms of exceptionally high quality. In many seasons roses are stimulated into growth by short periods of warm weather early in the spring, and then seriously injured by the frosts and periods of cold weather by which these warm outbursts are followed. This year the roses were not unduly excited or exposed to frosts of sufficient severity to injure them or check the growth. Roses are considerably earlier than for several years past, and the exhibition of the National Rose Society, in the gardens of the Royal Botanic Society, on July 3, will, unless we are much mistaken, be the finest Metropolitan show the society has held for some years past. Writing to us about ten days ago, Rev. F. Page Roberts said he was then cutting tea roses of high quality, whereas last year he was not able to cut a good bloom until after the N.R.S. Metropolitan show had been held.

French Horticulturists in England.—At the present time a large party of French horticulturists are on a visit to this country, mostly members of the Société Nationale d'Horticulture de France. On the occasion of the Royal Horticultural Society's meeting on Tuesday the party, numbering about 100 members, visited the Horticultural Hall, and was received by the President and Council. After an inspection of the fine display in the hall our foreign friends adjourned to the lecture-room, where they were entertained to a light luncheon. M. Viger, the president, and M. A. Chatenay, the secretary, are accompanying the party.

Amateur Gardeners' Conversazione.—The National Amateur Gardeners' Association holds its annual conversazione, floral exhibition, and musical entertainment on Tuesday, July 7, at 7 p.m., at Winchester House, Old Broad Street, E.C. A schedule of no fewer than thirty-seven classes is provided, and there is sure to be a keen competition for the plate, medals, and cash prizes offered.

Enemies of the Apple.—According to the official report of the Board of Agriculture, published in the current issue of their journal, apples in the Wisbech district have suffered severely from caterpillars of the winter moth, and many trees have been stripped of their leaves, while the apple sucker has been very busy at the bases of the trusses of bloom. Large numbers of the winter moth caterpillars have descended to the gooseberry bushes, and attacked the berries. The quantity of winter moth and apple sucker is all the more remarkable owing to the great increase of spraying this season, but the washes do not, it is stated, seem to be of much effect against apple sucker owing to the difficulty of getting the spray fluid to touch the insect. In most cases, too, the spraying was not done sufficiently early and in many cases not thoroughly. In the Holland Division of Lincolnshire the same remarks apply as to apple sucker and winter moth, and it is believed that if good crops are to be obtained, winter banding must become more general.

Holland House Show will, as our readers have been already informed, be held by the Royal Horticultural Society on July 7 and 8, and in accordance with the custom that has obtained for several years past, the council will entertain the members of the several committees on the first of the two days.

Hanley Horticultural Fete, that is to take place in Hanley Park, Hanley, Staffs, on July 1 and 2, promises to be as great a success as its predecessors. A very fine schedule of eighty-eight classes has been provided, and fruit and vegetables, sweet peas, roses, and specimen plants are specially well catered for, while the big group class, in which a total of £85 9s. is offered as prizes, is certain to prove a great attraction. The class for a group of orchids should also produce a keen competition, as, to the first prize of £15, there is added a silver challenge cup, presented by Thomas Goodwin, Esq. Mr. Poulson, Town Hall, Hanley, is the secretary, and Mr. James Dodd is chairman of the Horticultural Committee.

Pæonies from Langport.—Messrs. Kelway and Son, who have accomplished much valuable work in the improvement of herbaceous pæonies, send us a gathering of flowers, which, as they stand in tall plain vases on our table, give further proof of the value of these pæonies for bold decorations. They are also of interest as demonstrating the wide range of form and colour that these handsome summer flowers now afford. There are both double and single varieties, and these are all so beautiful that it would be difficult were it desirable to say which were the most beautiful. To some the single varieties, with their large and elegant flowers, will the most strongly appeal, while others will attach the greatest value to the finely formed massive flowers of the double varieties. The colours range from pure white to deep purple-crimson, and include many intermediate shades of singular beauty. While extremely useful for bold decorations indoors, the herbaceous pæonies are of special value for the production of distinct colour effects, as exemplified in the nurseries of the firm at Langport. For the information of those of our readers resident within a short distance of London we would mention that at the present time there is an extremely beautiful display of herbaceous pæonies in association with foxgloves in the Royal Gardens, Kew. A more charming effect could not well be obtained, and it is being taken full advantage of by the flower painters, some three or four being seated around the arrangement daily. The pæonies and foxgloves are in the berberis dell on the east side of the gardens.

Mr. Edward Knowldin, a well-known horticulturist in the sister isle, has been appointed secretary of the Royal Horticultural Society of Ireland. The society's official address is 5, Molesworth Street, Dublin.

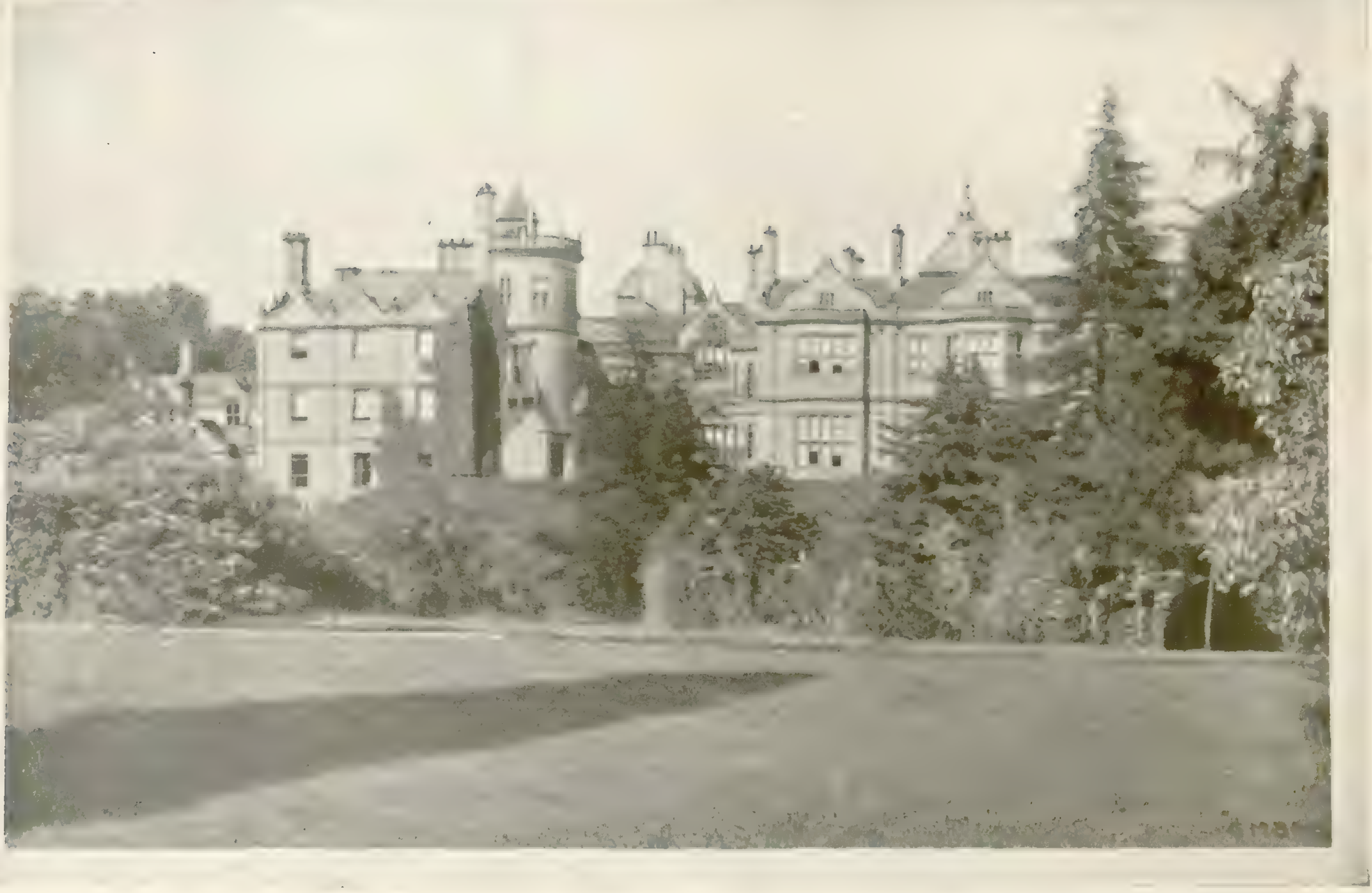
The Robinias, or Acacias, are flowering finely this year, notwithstanding the season of 1907 was regarded as not a good one for ripening up growth so as to induce free flowering in 1908. In many parts of Surrey, especially in the lovely side roads and lanes of that beautiful county, the common Robinia pseud-acacia is fairly common, and just now, with their abundant racemes of flowers and elegant leafage, they are very handsome.

National Chrysanthemum Society's Outing.—The annual outing will this year take place on Monday, July 27, when, by special permission, a visit will be paid to the Royal Gardens, at Frogmore. It is hoped that as many members as possible will avail themselves of this opportunity to visit the Royal gardens, and ladies are specially invited. The party will assemble at Paddington at 9.45 a.m., and travel to Windsor Station, and immediately proceed to the gardens. Lunch will be served at Layton's Restaurant at 1.30 p.m. After lunch there will be time for a short visit to St. George's Chapel, and at 3.30 p.m. the party will embark at Windsor Bridge on the steam launch "La Marguerite" for a trip up the river. A halt will be made at Maidenhead for tea at the Dumb Bell Restaurant (about 5.30), and after tea the party will return so as to reach Windsor in time to catch the 5.25 p.m. train to Paddington. Those who intend joining the party should at once apply for tickets (10s. 6d.) to Mr. Richard A. Witty, the secretary.

The Cours la Reine, Paris, the spot by the side of the Seine where so many beautiful and interesting flower shows have been held during recent years, is to be, we understand, greatly altered. There is a scheme on foot for removing the old and spacious glasshouses and laying out the ground in geometrical fashion after designs by Le Notre, the maker of Versailles. Room will be left for the construction of a glass house or houses for the accommodation of flower shows.

R.H.S. New Fellows.—At the general meeting of the Royal Horticultural Society, on Tuesday, 130 Fellows were elected. At the same meeting the Rev. G. Henslow, M.A., V.M.H., gave a lecture on the "Absorption of Rain and Dew by the Green Parts of Plants."

Fruit Congress at Besancon.—The Pomological Society of France will hold its annual congress at Besançon in September, when the following subjects will be discussed: The acclimatisation of fruit trees in mountainous districts; the best means of creating new markets for fruits; results of new methods of packing; the use of manures in intensive fruit culture; the use of copper preparations in combating the fungoid enemies of fruit trees; the best means of protecting fruit from the effects of spring frosts.



DUPPLIN CASTLE AND RAVINE.

SOME GARDENS ROUND PERTH—I.

Forming as it were a connecting link between the Scottish lowlands and highlands and including within its widely extended boundaries scenery peculiar to both, Perthshire is rich in interest to those in any way concerned with rural industries, and also remarkable for the diversity and surpassing beauty of its scenery. Combined in well-balanced proportions are towering mountains, lofty hills, picturesque forests, rolling meadows, and arable land distinguished for its fertility. In addition to these features, and certainly not the least attractive, is the rapidly flowing Tay, which, rising on the borders of Argyllshire, receives in its course of one hundred miles or so, nearly the whole of the drainage of Perthshire, and discharges into the sea a larger volume of water than does any other river of the United Kingdom, not even excepting the silvery Thames.

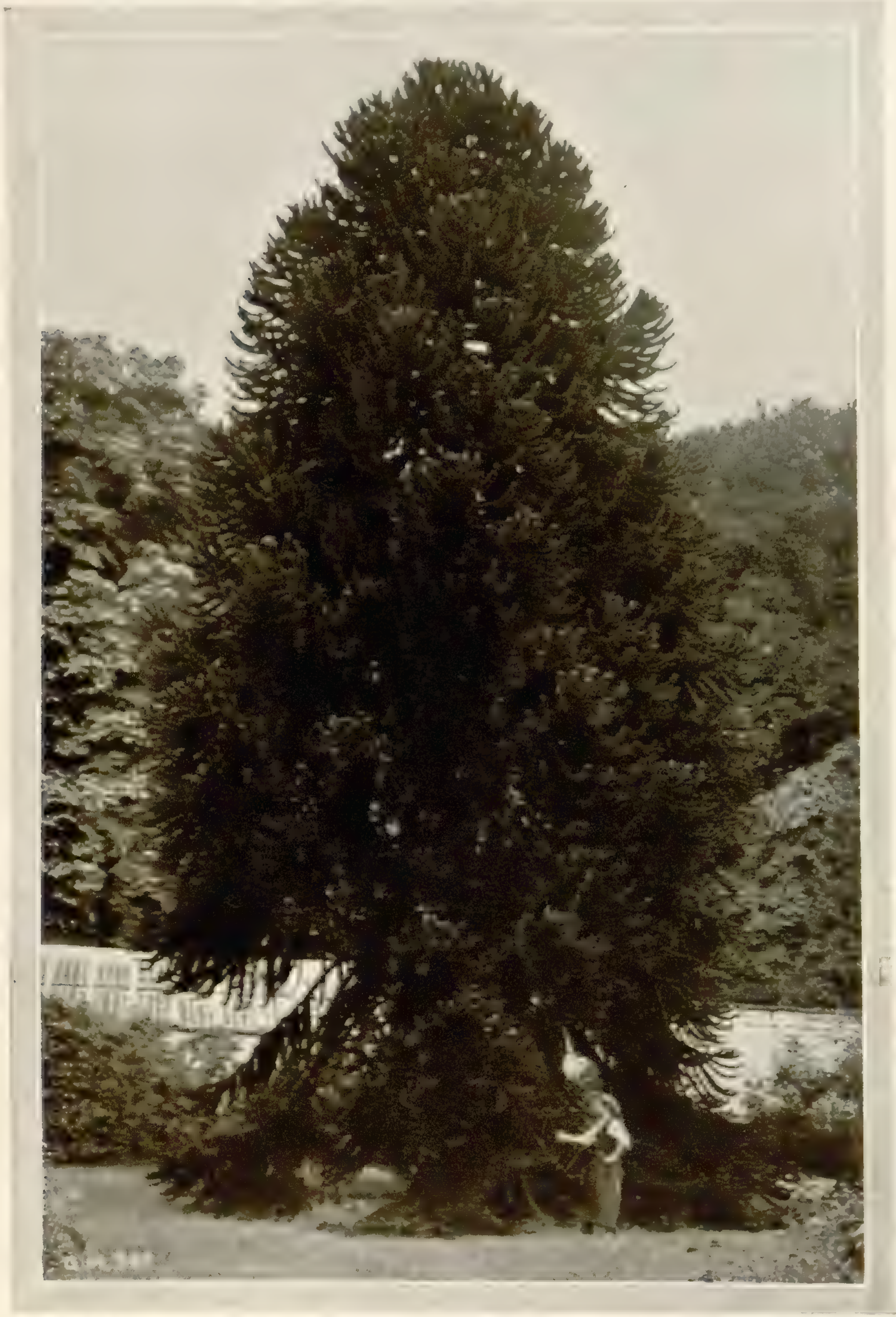
Situate not far from the centre of this fertile and picturesque county is the fair city of Perth, which has a setting of woodland, and water, and green meadows, and strongly appeals to the imagination by reason of its interesting traditions and the many stirring events that have taken place within its boundaries or at no great distance therefrom. Long the favourite home of the Scottish kings, and possessisg great natural advantages, both as regards convenience of access and the charm of its environment, it is not surprising that a goodly number of the landed proprietors of Scotland should have founded their homes within a short distance of the city, or that later on many wealthy merchants should have followed their example. There is certainly no cause for surprise that with so many great seats in the district of which Perth is the centre, that gardening should have long since acquired a high degree of importance, or that good gardens abound on all sides. As a matter of fact, the number of gardens within a comparatively small radius of the city is so large as to occasion considerable difficulty in the endeavour to give a short account of the gardens round Perth, the difficulty being due to the impossibility of making reference to any considerable proportion of the fine gardens that merit attention. Those to which reference will be made may, however, he regarded as typical of the district, and it is hoped that the description of them, if necessarily brief, will convey a good idea of the characteristic features of horticulture as it obtains in the neighbourhood of Perth.

Gardening of a high order of merit is by no means confined to the great establishments clustering around Perth, for in a walk through the outskirts of the city ample evidence was found of the great interest that is taken in the cultivation of the various classes of ornamental plants, and trees, and shrubs, by those who are fortunate in the possession of a garden attached to their place of residence. Many who have no ground associated with their dwellings have sought to satisfy their desire for a garden and secured a plot of land on an island of the Tay to the south-east of the older part of the city. I should have derived much pleasure from a walk through this colony of gardens, and had a peep into some of the hundred or more greenhouses that have been erected, but my engagements would not permit, and I had to to satisfied with a bird's eye view from the footway of the railway bridge that spans the Tay not far from the north-west end of the island; and if the contents of any of the immense number of glasshouses could not be seen, there was no difficulty in seeing that the ornamental plants and useful crops outside received careful attention, and that the plots were free from weeds.

Dupplin Castle.

Dupplin Castle, the magnificent seat of the Earl of Kinnoull, may well be regarded as a good starting point in visiting the typical Perth gardens, for not only are the pleasure grounds rich in interest and of great beauty, and the departments devoted to the production of useful crops such as to afford object lessons of immense value, but they are, by reason of their comprehensive character, able to give the visitor an excellent idea of the characteristic features of the Scottish horticultural establishments of the highest class. The castle and grounds are situate some five miles to the south-west of Perth, and the visitor has two courses open to him, he can walk or drive direct, or he can take the train to Forteviot Station and walk therefrom, a distance of between two and three miles. The scenery between the station and Dupplin Castle is pleasing, but the part of Strathearn traversed by the railway for some miles from Perth is flat, and the views obtained from the carriage windows are therefore not such as to make a strong appeal to those who have a love for the picturesque. The first of the two courses is far preferable in the case of those who are desirous of enjoying the scenery between the two points, for the road traverses high ground nearly the whole of the way, and affords a continuous succession of charming views. From the high ground that is reached at a distance of about two miles from Perth, a magnificent panorama is obtained of the city and its glorious setting, and were the ascent made for no other purpose than to enjoy the prospect, the time occupied would be repaid a hundredfold.

Unquestionably one of the most important of the many fine seats in Perthshire, **Dupplin Castle** is hardly less interesting for its historical associations than for its horticultural features, and as some of the numerous events that have had a far-reaching influence on Scottish history are recalled to mind, it is difficult to repress a feeling of regret that it is not now possible to refer to them. The grounds have an immense area, are intersected by several magnificent avenues, and are richly furnished with trees of noble proportions, and so admirably arranged as to produce a series of the most delightful effects. At the top of the finely-wooded and otherwise picturesque slopes on the southern side of the grounds, the castle occupies a commanding position and contributes a full share to the charming picture that has been created as the result of a happy combination of Nature and art. Elizabethan in style, it was built early in the last century at a cost of about £30,000, and occupies the site of the venerable building that was accidently destroyed by fire in 1827. The illustration of the southern side of the castle will afford an admirable idea of the palatial character of the building; but the trees and shrubs that fringe the ravine which passes along the south front appear in the photographic reproduction to somewhat dwarf the stately proportions; but seen from the lawn they do not convey any such suggestion. Very fine is the effect produced by the castle in its setting of trees as seen from the principal approach from the north, and of exquisite beauty is the effect obtained looking through the great masses of rhododendrons on the high ground on the western side.



A MAGNIFICENT SPECIMEN OF ARAUCARIA IMBRICATA AT DUPPLIN CASTLE.

Between the castle and the ravine is a geometric flower garden, with five handsome bronze vases of large size, and embellished during the summer months with such flowering and fine foliage plants as are found to thrive in the district. The garden on the south side is bounded by a low ivy-clad wall, and immediately beyond is the ravine referred to, through which a fine stream flows making pleasant music as it proceeds on its way to the Earn. When the grounds were originally laid out the stream was so diverted as to form a waterfall, of great beauty as seen from the windows of the castle and the flower garden. The banks of the ravine are tastefully clothed with trees and shrubs in variety, very fine being the masses of rhododendrons which give a wealth of colour early in summer, yews, roses, Cupressus Lawsoniana, and the graceful Cedrus deodora and C. atlantica, the last-named trees being represented by specimens in a high state of development. Beyond the southern lawn the pleasure grounds extend for a considerable distance, and embrace a series of slopes and plateaus intersected by broad walks of grass and gravel, and in passing through them one meets with great masses of rhododendrons and azaleas, and of other shrubs, and specimen trees innumerable.

The grounds are particularly rich in specimen trees of fine proportions, and this is explained by the fact that the noble owners have for several generations taken a keen interest in beautifying their gardens, and have been ever ready to make such additions as may have been considered necessary, and to provide for the development of the finer kinds. Coniferous trees are of much interest and great beauty, and here may be found specimens of Abies Albertiana, Abies Douglasi, A. Douglasi glauca, Araucaria imbricata, Picea cephalonica, Wellingtonia gigantea, and various cupressus, retinosporas, and thuias that are quite unique both as regards their size and development. In addition to the coniferous trees so successfully utilised in beautifying the pleasure grounds, there is a pinetum with an area of about ten acres alongside the magnificent oak avenue north of the castle. This was formed in the first half of the last century, and the trees have now reached a stage of development that affords an excellent idea of the distinctive characteristics of the respective kinds. Mental notes were made of many magnificent specimens, and of these Picea Lowi, P. monticola, P. cephalonica, P. Nordmanniana, Abies Albertiana, A. grandis, A. Hookeri, Cupressus Lawsoniana and Thuia Lobbi were the most remarkable specimens of these and of other kinds ranging from fifty feet to seventy feet in height and perfect to the ground line were quite common.

The finest of all the coniferous trees a Dupplin Castle is, perhaps, the specime of Araucaria imbricata herewith illustrated. This occupies a position in fro of the conservatory, and the figure standing in front of the tree conveys an ex lent idea of its immense proportions. I may, however, be of interest to ment that the height is between fifty and six feet, the spread of the branches over thirty feet, and 100 feet in circumference, and the girth of the tru seven feet at twelve inches from ground. The tree was planted about fif years ago, and it is extremely doubtf whether there is another araucaria in the United Kingdom to equal it. Beeche abound and there are hundreds of nob specimens, especially deserving of menti being those forming the fine avenues in t park, and the immense example of purple-leaved variety. Silver and S firs are especially fine, and there are oaks of quite exceptional proportions.

Not far from the conservatory and the araucaria is a geometric flower gar which gives a bright display of colour thereby adds appreciably to the p one has in a walk through the pictu and admirably kept grounds with th myriads of fine trees and shrubs. In furnishing of the scheme zonal and gated leaved pelargoniums. heliotropiums, violas, pentstemons nias, and some other subjects well-known are used with much Surrounding the garden a the photograph, from which the accompanying illustration has been reproduced was taken, there was a band of the elegant Newbury Gem pentstemon, which is one of the best of the varieties for summer bedding. The flowers are not so large as are those of the finest florists' varieties, but they are elegant in shape and bright in colour, and the habit is all that could well be desired. From the upper part of the flower garden a glimpse of the river Earn is obtained, as will be seen on reference to the illustration. Beyond the flower garden is a border of great length and breadth in which the finest of the hardy herbaceous plants have found a home in which they are placed under the conditions favourable to their attaining to a high state of development.

Fruits and flowers are grown under glass on a very extensive scale, and in a manner that proves to demonstration that Mr. J. Wilson is not less successful in the glass culture of these subjects than he is in the management of the other departments of the great gardens under his charge. Dupplin Castle has long been famous for its grapes, and therefore there is no occasion to speak of the splendid crops of Muscat of Alexandria and other varieties that are annually obtained. Peaches and nectarines to which several long lean-to's are devoted are of quite exceptional interest from the fact that they annually yield heavy crops of fruit of the finest quality without the aid of fire-heat. By the general body of fruit growers it is believed that while fire-heat may not be required for assisting the ripening of late crops of peaches and nectarines, it is most desirable the houses should be heated to enable the trees to receive assistance during the flowering season, and for a short time after the flowers have fallen. This is not Mr. Wilson's experience, for he annually obtains heavy crops whatever may be the state of the weather when the trees are in bloom. Finer crops of richly coloured fruits I have not yet seen, than those in these gardens. In three of the peach houses the Wilson Junior bramble was bearing a heavy crop of fruit, which is in request during its season. It would be of interest to make reference to the many charming subjects in the plant houses, but no more can be said than to suggest that as roses and carnations have a large space devoted to them, their fragrant flowers are highly appreciated at Dupplin Castle.

GEOMETRIC FLOWER GARDEN, DUPPLIN CASTLE.

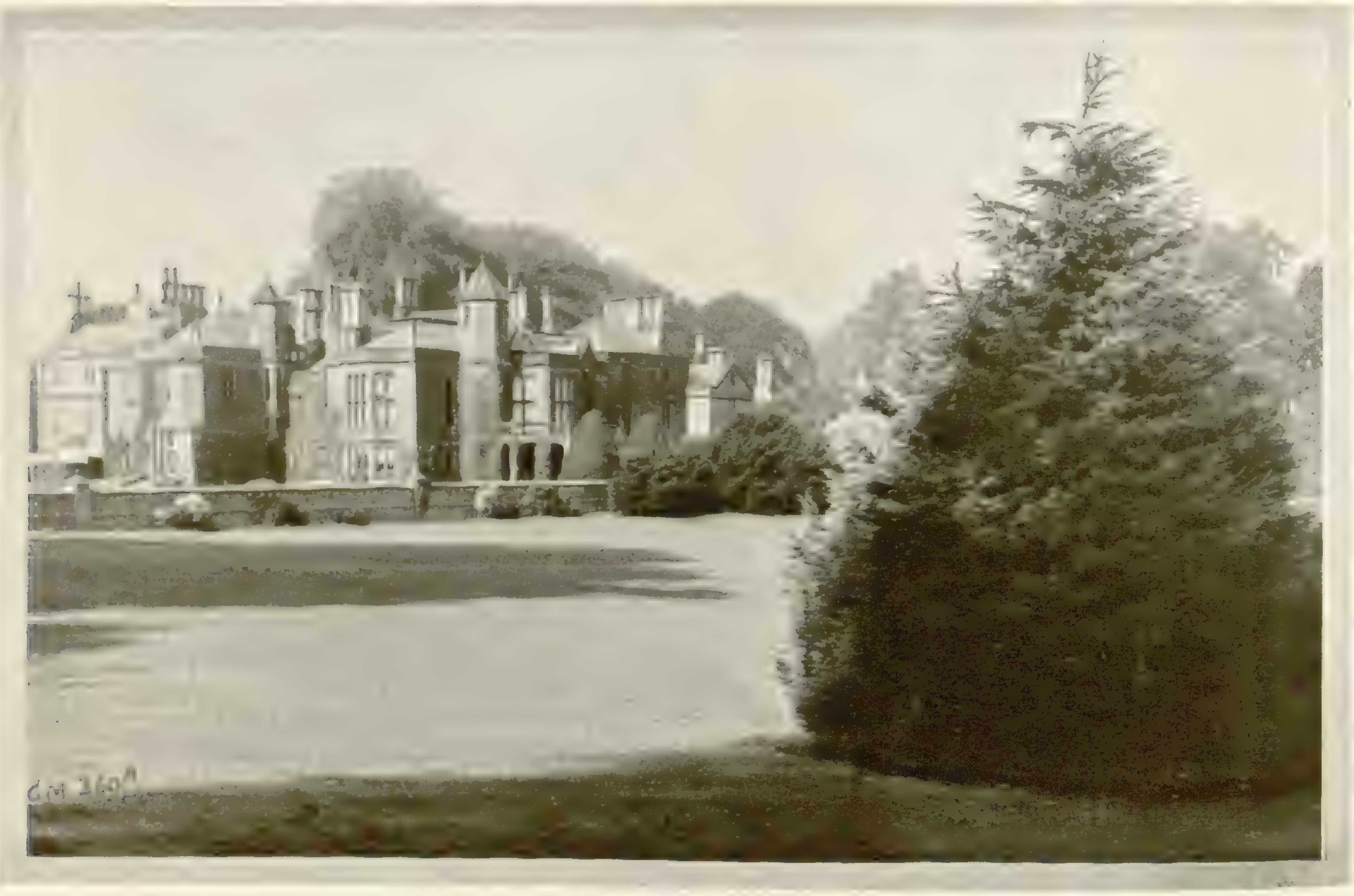
Freeland.

Freeland, the stately residence of Mrs. Wood, is situate quite close to the small but picturesque village of Forgandenny, is some two or three miles south-east of Dupplin Castle, and has for many years enjoyed considerable fame for its stately mansion, and its extensive and beautiful gardens in which coniferous trees and orchids are so splendidly represented as to form features of much importance. Much of the interest and attractiveness of this fine seat is due to the great taste and judgment of the late Mr. Collingwood L. Wood, who acquired by purchase the estate from a branch of the Ruthven family. Among other improvements he made were the enlargement of the mansion, and the extension of the gardens and woodlands; and in addition he greatly improved the hamlet that clusters as it were around the mansion, with the result that it is one of the prettiest places in Scotland, and, indeed, in the United Kingdom.

Originally the approach to the mansion was from the village, but it is now from the Dunning Road, and this is unquestionably a considerable improvement, inasmuch as visitors now pass through the broad avenue of magnificent lime trees which have an average height of 100 feet. This avenue, which is 495 feet long and 85 feet broad, was at one time in a line with the old mansion, and the space between the two lines of trees was occupied by a garden in the Dutch style with formal beds enclosed with broad edgings of box. The extensive pleasure grounds and woods would also appear to have been designed in accordance with the Dutch style of landscape, for they were laid out in a square with intersecting and enclosing avenues of trees. There is a fine avenue of beech trees commencing near the southern extension of the mansion, which forms a fine feature of that part of the grounds and affords delightful shade during the summer months. At the south end of the lime tree avenue there is an entrance to the old kitchen garden which has a history extending over seven centuries, and certainly does not afford any evidence of exhaustion, although it was some years since supplemented by a new one. Near the north end are the ruins of the old house that was destroyed by fire in 1750, and near to these is a spring known as the Lady's Well, which, in olden times, had a considerable reputation for the supposed curative power of the water. Proceeding down the picturesque ravine, or "den," which is crossed by a rustic bridge in reaching the old kitchen garden, many fine trees are met with, especially noteworthy being the elms, silver firs, and the yews, many of these being of noble proportions.

The mansion of Freeland is, as already indicated, partly old and partly new, and with its fine sweep of lawn and background of trees presents a delightful appearance. The style of architecture is well shown in the accompanying illustration, and the breadth of treatment which the grounds have received is also indicated, and the grounds should form an admirable object-lesson in the designing the ground of a stately mansion. On the far side of the wide-spreading lawn facing the mansion there is a hill of considerable height finely clothed with trees, and in front of the wood is a huge bank of rhododendrons skirted by a broad gravel walk which has on its other side groups of evergreens, specimen hollies, etc. Contiguous to the mansion are tastefully arranged beds and borders of hardy and other flowers, and to the south thereof, on the fringe of the woodland, are many specimen coniferous trees, comprising among others a remarkably fine example of the beautiful silvery-leaved Cedrus atlantica glauca.

In another part of the grounds is a large enclosure with many coniferous trees of quite exceptional merit. Along one side is a line of ten trees of Araucaria imbricata, all of large size, and every one perfect in branch and contour. Among other notable examples in the plantation were Picea Pinsapo, P. Lowi, P. Parryana glauca, P. macrocarpa, P. grandis, Cupressus Lawsonianus luteus—glowing with colour, Retinospora pisifera, Athrotaxis Doniana, Cedrus atlantica glauca, Thujopsis Dicksoni aurea, and Sciadopitys verticillata. It is difficult to convey an adequate idea of the splendid development of these specimens without giving the measurements, but that would require considerable space, and it must suffice to say that heights approaching eighty and ninety feet are quite common, and that all are splendidly furnished from the apex to the ground line. The oaks attain to large dimensions at Freeland, and one of the most noteworthy of those I had an opportunity of seeing was the handsome specimen of the variegated English oak, Quercus sessiliflora variegata, which has a height of over 80 feet, and a spread of branches closely approaching 90 feet.


FREELAND—GARDEN FRONT.

The new and old kitchen gardens have an area of about five acres, and therein the visitor finds plenty of evidence of Mr. W. Sharp's thorough asquaintance with the cultivation of fruits and vegetables. In the newer garden are the glass structures, and of special interest are those devoted to the orchids which have contributed so materially to the fame which the gardens of Freeland have so deservedly enjoyed. In the several structures are many superb specimens of the more beautiful odontoglossums, cypripediums, cattleyas, lælio-cattleyas, dendrobiums, and the finest of the forms of many other kinds. Very interesting was it to meet with a specimen of the old but distinctly handsome Dendbrobium densiflorum, measuring fully six feet across, and also a collection of vandas in the best of health. Calanthes are as a matter of course largely and well grown, and give in their season a bright display of these attractive flowers. The houses, which were built a few years since, are of teak and admirably adapted to the fulfilment of the requirements of the several classes of orchids that are so skilfully grown and successfully exhibited at Edinburgh and elsewhere by Mr. Sharp. Orchids have long formed a strong feature of the Freeland gardens, as evidenced by the fact that on more than one occasion Mrs. Wood had the honour of presenting to the late Queen Victoria a bouquet of orchids at Perth when her Majesty was passing through the city on her way to Balmoral.

In the structures other than those devoted to orchids are collections of greenhouse plants comprising the more useful kinds, and tea roses, and in the long ranges of peach houses and vineries are gathered in their respective seasons crops of great excellence.

Moncreiffe House.

On the occasion of my visit to Moncreiffe House the beautiful and highly interesting seat of Sir R. D. Moncreiffe, Bart., the weather was decidedly unkind, but happily that was the only unkindness experienced during my stay at Perth. The rain had been so heavy during the early part of the day that it was impossible to see the outdoor features of the two gardens visited without a wetting that outside Scotland would have been dangerous. But when in the afternoon Moncreiffe House was reached the rain settled into a steady downpour, it was not possible to do more than enjoy the many attractions of the plant and fruit houses which form an important feature of the extensive gardens.

Moncreiffe House, an interesting structure of handsome elevation, is within short distance of the Bridge of Earn, and its fine woodlands contribute liberally t the charms of the scenery for which the village mentioned is so well-known. Th is, for example, the finely wooded Moncreiffe Hill, which forms a conspicuous landmark and affords some of the fairest prospects in Perthshire. The mansion was built in the second half of the seventeenth century from the designs of Sir William Bruce, one of the leading Scottish architects of that time, as evidenced by the restoration of Holyrood Palace, 1671-78, having been carried out under his direction. The approach from the Edinburgh road is through a beech avenue between 600 and 700 yards long, and formed of large, splendidly developed trees. On the slopes of Moncreiffe Hill and the woods that form so characteristic a feature of the estate, are oaks, ash, beech, and sycamore of noble proportions, a about 100 years old, and with these a associated various coniferous trees th were planted forty or fifty years since, and are in a thriving state. There are many fine horse chestnuts and limes.

In the extensive pleasure grounds, notwithstanding the heavy rain, I was able to obtain a glimpse of magnificent specimens of Picea Nordmanniana, Pinus insignis, Wellingtonia gigantea, Araucaria imbricata, Abies Douglasi, A. Albertiana, A. Menziesi, Cedar of Lebanon, Taxodium sempervirens, Cupressus Lawsonianus and C. thyoides viridis, the latter being exceptionally fine. The spruces and silver are also remarkable for their development, many of these being 100 feet or so in height. I could see also that a large number of choice shrubs had found an excellent home in the pleasure grounds, but to do more than give them a cursory glance was impossible.

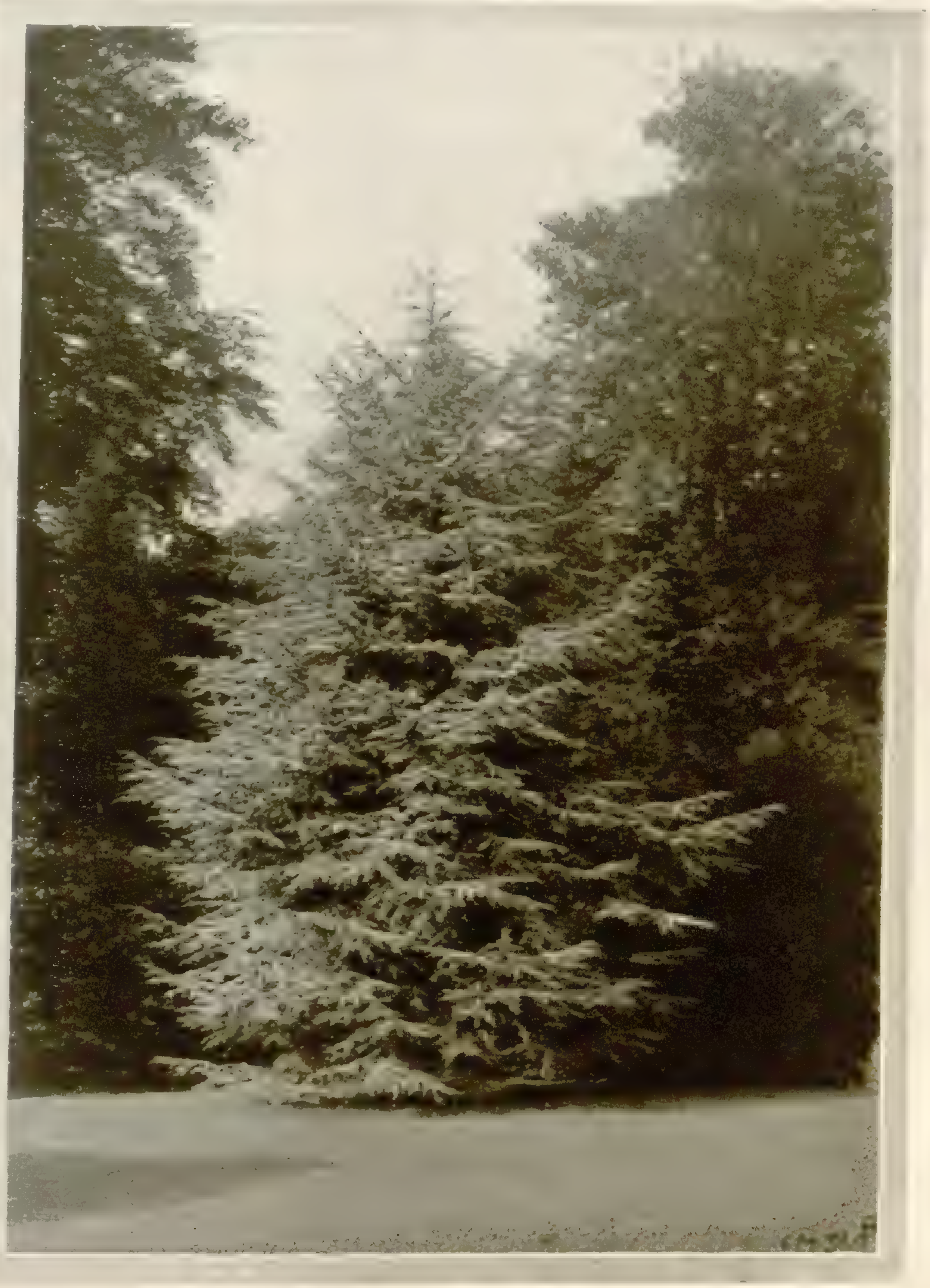
Under glass one of the distinguishing features is the collection of orchids, which Mr. A. Common, the able gardener, handles with so much skill. In passing through the several admirably arranged houses devoted to these highly attractive plants, one was struck by the fine collection of cattleyas and lælio-cattleyas, and the numerous choice lady's slippers, such as the Harefield Hall variety of Cypripedium insignis, and the albino forms of that species of which Sanderæ is one of the best known. Especially interesting is the house devoted to odontoglossums, for here are many exceptional varieties of O. crispum and other of the finer species that have of late years obtained the special attention of hybridists. Especially noteworthy is the beautiful and rare variety of O. crispum which bears the name of Lady Moncreiffe, and was some years since certificated by the R.H.S. Orchid Committee. Mr. Common, like many another successful cultivator of orchids, has turned his attention to the creation of new forms, and has already raised large numbers of seedlings. These have not as yet flowered, and with reference to them it can only be said that as they have been obtained from the intercrossing of forms of a high order of merit they should include some valuable novelties.

One might write at length on the success that is achieved in the cultivation of grapes, peaches, and other fruits in the gardens of Moncreiffe House, but in view of the fame which the Perth gardens enjoy for the splendid fruit crops produced under glass, there is no occasion to refer to them otherwise than thus briefly. The crops of melons were particularly good, and it may be mentioned as a matter of considerable interest that in not one of the stems was there evidence of canker, and Mr. Common considers the immunity of his plants from this disease due to the removal of the lower leaves from the stems. This, he considers, has the effect of hardening the tissues and thereby preventing canker.

Dunkeld House.

Situate some fifteen miles north of Perth is Dunkeld, one of the most ancient and picturesque towns of Scotland, and of much interest to horticulturists for the fine example it affords of the splendid results that may be obtained by the judicious planting of hill and mountain. With a history extending over at least eighteen centuries, there is much associated with the town that is deserving of attention, apart altogether from its great natural advantages as improved by the planters' art, but it would be outside the scope of these notes to make reference, however briefly, to them. At the point where Dunkeld and the quite modern village of Birnam nestle amid scenery of the most delightful description, the valley through which the Tay flows in its course eastward is overhung on its western side by Birnam Wood, immortalised by Shakespeare, and on the right is Craig-y-Barns, or Queen's Hill, which forms a bold background to the town of Dunkeld and its ancient cathedral, and also to the gardens and grounds of Dunkeld House, one of the two Perthshire seats of the Duke of Atholl. Much planting was done about the middle of the eighteenth century on Craig-y-Barns, and in other parts of the estate, by Duke John, who, in consequence thereof, became known as the "Planter Duke," and the result has been to add greatly to the beauty and value of the woodlands, and to increase the usefulness of the eminence mentioned as a barrier to the winds from the north and north-east.

The gardens of Dunkeld House have long been famous for their great natural beauty, and for the great success with which hardy fruits are cultivated therein. Their fame for fruit culture in the open is fully maintained by Mr. J. Stewart, who has had charge of them for some years past, and material improvements have been made in the ornamental grounds contiguous to the mansion within a recent period. The entrance to the park and gardens is a short distance to the north of the town, and the mile or more that has to be traversed ere the mansion and flower gardens are reached affords a succession of scenery of surpassing beauty. The mansion, a quite modern structure, is of simple, yet elegant elevation, and set in its charming garden of flowers and shrubs, and its wide-spreading lawns, it has so quiet and restful an appearance as to present a striking contrast to the palatial castle at Blair Atholl, the other Perthshire seat of this noble family. Some bold groups of choice trees and shrubs have been formed in the process of remodelling the grounds around the house, and already it can readily be seen that they will in a few years hence contribute liberally to the general effect. For a considerable distance north of the mansion to the ancient cathedral and the famous larches, not far from the east end of the magnificent bridge which spans the Tay, there is a great breadth of closely-shaven lawn, with many fine trees. This lawn is for the greater part of its length open on one side to the rapidly-flowing river, and on the other side the ground rises more or less abruptly, and in some parts to a great height, and is throughout finely wooded. Here we find silver firs rising to a height closely approximating 150 feet, and with splendid stems; Scots firs of quite exceptional proportions, with beeches, limes, and other deciduous trees that at once appeal to those who are interested in arborescent vegetation. For a considerable distance there is a magnificent avenue of limes, the trees rising probably to a height closely approaching 100 feet, and in other respects in a high state of development.



A FINELY DEVELOPED SPECIMEN OF CEDRUS ATLANTICA GLAUCA AT FREELAND.

On the higher ground, among the trees is a large area devoted to the choicer kinds of evergreen and deciduous trees, conspicuous among them being large and handsome specimens of Wellingtonia gigantea and other conifers. Especially noteworthy also is the tall specimen of the weeping ash. Leading from this area is the rhododendron garden, which must be wondrously beautiful in the season of flowering. Rhododendrons, hardy azaleas, and kalmias luxuriate under the conditions that obtain at Dunkeld, and attain to a size that is by no means common, and in proof thereof it may be mentioned that one of the examples of Kalmia latifolia has a height of nearly ten feet and a diameter of over twelve feet. On still higher ground in the park are fine examples of the Japanese larch (Larix leptolepis), one of the most elegant of conifers, and a tree regarded with much favour at Dunkeld.

Dunkeld House has for a century or so been regarded as the Scottish home of the larch, for within its grounds five of the first larches were planted, and of these two still stand as sentinels over the cathedral, but of those one, unfortunately, is dead. In the year 1738 Mr. Menzies, of Culdares, Glenlyon, brought a few small plants of the larch, that had been obtained from the Tyrol, home with him, and of these gave five for Dunkeld House and eleven for Blair Castle. They all soon became established, and grew well, and two of the former were felled in 1809, and of these one contained 147 cubic feet of timber, and the other 168 feet. The dimensions of the live tree is, according to the tablet affixed, 102 feet high, girth at three feet 17 feet 2 inches, girth at 68 feet 6 feet 1 inch. There are numerous other fine larches in the grounds that closely approach this specimen.

The kitchen garden, with its well-clothed walls and its admirably furnished fruit and plant houses, and its fine breadths of vegetables, well merit a somewhat full notice, but space will not admit of the department being dealt with otherwise than in the briefest manner. As will be seen from the accompanying illustration it is situate on the side of a high hill, and has been arranged to form a series of slopes and terraces. Running through the centre is a broad walk flanked by flower borders; on the central terrace is a handsome fountain, and at the top is a pavilion, from which a fine prospect is obtained of the county to the south-west.

George Gordon.

*** The second of the two articles on notable Perthshire gardens will appear in our next issue (July 4).

VIEW IN RHODODENDRON GARDEN, DUNKELD HOUSE.

SWEET PEAS IN THE HOME.

The sweet pea is a flower without legendary history, scarcely sung at all in verse, and few persons even seem aware that it is emblematical of "delicate pleasures." It has all its poetic reputation to make, although its one for beauty, combined with fragrance, is now so well established. There is merit in its popular name, since this distinguishes it as the sweet one among its relatives, yet its lovers perhaps wish that some more titles could be bestowed on a blossom so worthy.

The schizanthus has become dear to us as the Butterfly Flower, on account of the dark spottings upon pale petals. Why should not the sweet pea, made up of wings folded beneath a standard, be christened Angel Flower?

It is, beyond all others, a blossom for the home. Simple, graceful, of all artistic shades, perfumed deliciously, easy to arrange, appreciated by all, perfect in bouquets, or for bodice and buttonhole sprays, we may well doubt whether it is possible to sing its praises too highly.

With grasses of the field sweet peas make ideal table decorations, of course, also with the myriad-blossomed gypsophila, but we ought sometimes to give it dainty greenhouse ferns for a setting, the smaller kinds of maidenhair being especially suitable. Nor should there always be great masses of grass or fern and only a sprinkling of the flowers; the plan is elegant, but a change is wrought by filling vases first with as many sprays of blossom as possible, all of one colour, preferably scarlet for a blaze, and then thrusting in half a dozen or so spear-head grasses, just to give height and breadth. By this means we make use of the sweet pea as a gorgeous-hued blossom. A pale pink sweet pea similarly employed will give the same colour mass as a bowlful of La France roses, while the mauve of Dorothy Tennant is a shade that the eye never tires of.

Perhaps white sweet peas are never quite so lovely as when arranged alone with Gypsophila elegans instead of foliage. The vases should be of clear white glass, preferably with silver mountings, then the effect will be fit for any wedding breakfast. For a dinner party this scheme may well be carried out, but colour given by having a large mat, or table centre of vermilion velveteen or satin; this looks well cut of diamond shape, and closely edged by white glass troughs, or a series of tiny bowls, similarly filled with white peas and gypsophila.

To be able to afford to gather great branches of sweet peas is a joy indeed. How seldom do we see the natural growth of the flower in vase arrangements, yet it is of perfect gracefulness, and the unopened buds complete the lovely symmetry. Ask for a bunch of sweet peas from a florist's garden or that of a friend, and the supply is sure to be of single ste- bearing fully-opened blooms. Yet, wher- ever peas grow luxuriantly it is wise to c them with more freedom, the autumn harvest proving the later for it.

Sweet peas in pots are too much ne lected, or grown only for shows: they [illegible] thrive for weeks in sitting-room wind giving much delight, and are espe charming on the ledges of window se at the ends that join walls up which th appear to be climbing, or aga the inner upright frames of ca ment windows. Groups of pot sw peas are quickly arranged in halls, [illegible] dors, or odd corners of the drawing-r but are extra beautiful, as well as [illegible] when employed to fill up the firep Colour schemes should be carefully th out, pink of two shades, with white, [illegible] generally popular. To hide the [illegible] a close row of ferns, mosses, and [illegible] plants will be needed in front; a [illegible] effect results from using only silver-[illegible] subjects, of which Cineraria maritima [illegible] familiar example.

M. H

THE SIKKIM PRIMROSE.

Among the numerous species of primula which, on their first introduction, appealed to the admirer of this beautiful and varied race, few have so well maintained their hold upon the attachment of the cultivator as the charming Himalayan species known to us as Primula sikkimensis, or the Sikkim primrose, although cowslip would possibly be more appropriate from the nature of its inflorescence. However this may be, Primula sikkimensis has held its own well in gardens for the half-century and more since it was introduced, and there are few who have possessed it once who care to be long without it. Its absence from many gardens where it has once been cultivated is due to no lack of favour, but simply to the fact that its life is often too brief, and that it requires replacement by young plants at intervals. This is a drawback in the eyes of those who set their affections to more permanent things, and who do not care to be at the trouble of sowing a pinch of seeds now and again, so that their plants may have successors to fulfil their mission when they themselves have passed away.

It is undeniable that the Sikkim primrose is short lived, but the duration of its existence depends to some extent upon the conditions under which it is cultivated, and, even if only a year or two should see it depart, it is so easy to replace from seeds that no one who admires the primula need want it long. There is something so exceedingly attractive about it that it never fails to please, even if the plants have not attained the full vigour they reach under favourable conditions.

It seems almost superfluous to describe this well-known plant, but one knows from experience that there are always many readers of these pages who are unacquainted with some such flowers, and even those who have "loved and lost" will not be unwilling to be reminded of the plant, with its neat, wrinkled leaves, its beautiful mealy stem, its drooping yellow flowers, soft in colouring, and fragrant as of honey, and the whole pose of the primula, as its stem, some foot and a-half or two feet high, rears itself among dwarfer flowers, and we see these pretty blooms dangling from the top of the umbel. The flowers are not large, it is true, but they are beautiful, and they are plentiful, for a good strong plant may have as many as forty or even sixty blossoms in each umbel. Such a plant is worth some trouble, and but little is required to secure it.

The true term of the life of Primula sikkimensis is difficult to predict or state with any certainty. As with many flowers, "it all depends" upon certain circumstances, not always within the ken or the power of the grower to command. For one thing, as a moisture lover, this primula is impatient of drought in summer, and one has seen plants become weakened and finally destroyed for the want of a little timely assistance from the watering can. It is also unable to stand for long the non-covering of its crowns with soil, and some experiments with good examples have shown one how much a little care in this respect is needed. Then, in certain light soils, the plants are occasionally lifted by frost, and, if not pressed back into the soil, death is sure to follow.

A pinch of seeds sown each year or two will be found well worth the little trouble it involves. They can either be sown under glass or in the open, and if a little bare space is left near the plants self-sown seedlings will generally spring up. One has found this often, and one recollects some pretty effects produced by such self-sown plants appearing, growing in strength, and finally blooming in the most unexpected, but most picturesque places, such as by the margin of a little runnel, constructed to carry the water to a water lily tank.

Primula sikkimensis has a liking for water, and by the margin of a little stream, but above the reach of the water, or at the edge of a pond, it is quite at home, and will frequently seed and reproduce itself without any trouble, save preserving the young seedlings from destruction as "weeds," no small peril in ignorant hands.

If, however, the seeds are to be sown under glass, this can be done either when they are ripe in summer or in spring, a light compost being used, and the seeds no more than covered. Cover the pot or pan with a piece of glass and a sheet of paper; water carefully when required, remove the glass when the seedlings appear, give air gently, prick out timeously, and plant the following spring where they are to bloom. All going well, a pretty sight will be presented by a good clump in full flower.

S. Arnott.

WALK THROUGH KITCHEN GARDEN, DUNKELD HOUSE.

Eupatoriums.—These are very useful where flowers in quantity are wanted, either in a cut state or upon the plants, during the winter or early spring months. They are of specially good service for large conservatories or greenhouses, where it is impossible to grow many of the hard-wooded plants with that success one desires to see. Being plants of easy culture and of rapid growth, it is not a difficult matter to grow on a stock every year, keeping only the best of the previous season's propagation, so as to have some, at least, of larger size. I find Eupatorium Weinmannianum and E. odoratum both useful. Growth is too luxuriant if the plants are overpotted, or treated with stimulants before the flower trusses are well advanced.—T. B. Field.

EVERGREEN FLOWERING SHRUBS.

The greater part of our flowering shrubs consist of what are termed American plants, as they include all the rhododendrons, heaths, andromedas, kalmias, and many others. For these a fairly moist soil is essential, and if it is of a peaty nature so much the better. Not that this is absolutely necessary, as rhododendrons may in many districts be found thriving in pure loam.

Beyond the American plants, however, the choice of shrubs of a strictly evergreen nature, yet with showy blossoms, is a decidedly limited one. Of course, all flower, but in many of them the blossoms form quite a minor item. Such as the laurel, for instance, which, in full bloom is decidedly attractive, but it is chiefly considered as an evergreen shrub pure and simple.

YORK JUBILEE FETE AND GALA—MESSRS. J. BACKHOUSE AND SON'S FIRST PRIZE ARRANGEMENT OF ROCK PLANTS.

The chief of those that can be described as flowering evergreen shrubs are, omitting American plants, as follows:

Berberis.

The barberries, as a group, include several of our very finest flowering evergreens, for all of those enumerated are very beautiful. Berberis aquifolium is a well-known shrub with pinnate leaves of a stout leathery texture, and clusters of golden blossoms borne in early spring. Of these there are several forms, but all are beautiful. These were formerly known as Mahonias. Berberis buxifolia, known also as B. dulcis, is an early flowerer, for the bright yellow blossoms hanging suspended singly by long stalks are at their best frequently in the month of April. Berberis Darwini, a particularly valuable evergreen, whose orange-coloured flowers, borne in great profusion, form a notable feature of many gardens in May. Berberis empetrifolia, a little spreading shrub with narrow leaves, has golden flowers at their best at much the same time as the preceding. Berberis japonica has very long pinnate leaves, exceedingly stout in texture, and bears spikes of pale yellow flowers early in the year. Whether Berberis stenophylla or B. Darwini is the finest member of the genus is at least an open question, but both are exceedingly beautiful. In B. stenophylla the flowers are golden yellow, and the habit of the plant is more graceful than that of B. Darwini. Berberis Wallichiana is a sturdy, low-growing bush, with dark-green spiny leaves, and pale yellow flowers borne after all the others are past. For this reason it is well worthy of notice.

Choisya ternata.

At one time this, known as the Mexican Orange Flower, was looked upon as very tender, but it is now fairly recognised as hardy in many districts, and withal a beautiful flowering shrub. The white fragrant blossoms are borne in May and June. Even where rather tender it is a delightful wall shrub.

Cistus.

On warm dry soils some species of cistus are valuable flowering shrubs, but in cold localities they are more or less tender. The hardiest and most showy are: Cistus ladaniferus, white, with a dark red spot at the base of each petal; and Cistus laurifolius, with large white blossoms. The cistuses flower during the summer months.

Escallonias.

These are in many districts somewhat tender, but even if injured by the frost they often recover quickly. In the south of England and in many places around the coast they are exceedingly beautiful. The vigorous growing E. macrantha, with bright red blossoms, will flower throughout the summer. Other kinds that may be especially mentioned are E. exoniensis, whitish; E. langleyensis, pale red; and E. rubra, bright red.

Garrya elliptica.

Though the male catkins of this Californian shrub are not brightly coloured, they, from their length and graceful disposition, form such a striking feature that it well merits a place among flowering shrubs. In cold districts it is a charming wall shrub.

Hypericum calycinum.

This, the St. John's Wort, is one of the most persistent of the hypericums, and a delightful low-growing shrub. Some very fine kinds are deciduous, or at most only sub-evergreen in character.

Lavendula spica.

The lavender is a very general favourite, the fragrance of its blossoms being admired by everyone. Added to this the soft greyish-green of the foliage is most restful to the eye.

Ligustrum.

Two species—L. japonicum and L. lucidum—have strictly evergreen foliage, and towards the end of the summer their panicles of white flowers are decidedly ornamental. The best of all the flowering privets—Ligustrum sinense is sub-evergreen in character.

Magnolia grandiflora.

Totally unlike any other tree or shrub in our gardens, this magnolia, from the Southern United States, stands out as one of the grandest of all evergreens. The bold leathery leaves of a rich, glossy green render it from a foliage point of view alone a striking object, and when in addition the specimen is dotted with its large chalice-like blooms of the purest white and deliciously fragrant, there is nothing else with which it can be for one moment compared. Though quite hardy in some districts it is in many gardens more suitable for training to a high wall or dwelling-house.

Olearia Haasti.

The olearias, known popularly as daisy trees, are natives of Australia and New Zealand. From this last-named district we get the only thoroughly hardy species, viz., O. Haasti, that forms a dense growing bush clothed with dark green box-like leaves, and towards the end of July and in August it is thickly studded with clusters of small white flowers.

Ulex.

Perhaps the different members of the furze family are seldom given the position that the great beauty of their blossoms entitles them to, as they are really gorgeous when in bloom. The double furze in early spring and the dwarf furze (Ulex nanus) in the autumn are among the most striking of all shrubs.

Veronica.

In the particularly favoured districts of England many of the veronicas are remarkably showy, but the only one that can be depended upon around London is V. Traversi, a much branched bush about 4ft. high. In early summer the spikes of very pale lilac blossoms are borne in great profusion.

Viburnum Tinus.

As a valuable winter flowering evergreen this stands in the foremost rank, but its merits in this respect were so well told in the GARDENERS' MAGAZINE as recently as January 25 that nothing further remains to be said now concerning it.

Vinca.

The periwinkles form a pretty class of trailing evergreens, but from their lowly stature they are seldom regarded in the light of shrubs. For clothing banks and similar purposes they are, however, delightful.

In favoured districts or with wall protection in many parts, other flowering evergreens may be successfully grown. Among them are: Berberidopsis corallina, camellias, Carpenteria californica, ceanothus of sorts, Desfontainea spinosa, Fabiana imbricata, Ozothamnus rosmarinifolius, Tricuspidaria lanceolata, which used to be known as Tricuspidaria dependens.

W. T.

Plants in Tubs.—Agapanthus, hydrangeas, fuchsias, zonal and ivy pelargoniums, marguerites, and other plants in large pots or tubs that have been grown for standing on terraces and walks should now be brought into their summer positions, if possible giving the most tender or brittle ones the most sheltered positions; see that none are stood so that the drainage will be choked.—E. F. H.

YORK JUBILEE FETE AND GALA—MESSRS. ARTINDALE AND SON'S SECOND PRIZE ARRANGEMENT OF ROCK PLANTS.

NOTES FROM KEW.

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Felicia reflexa.

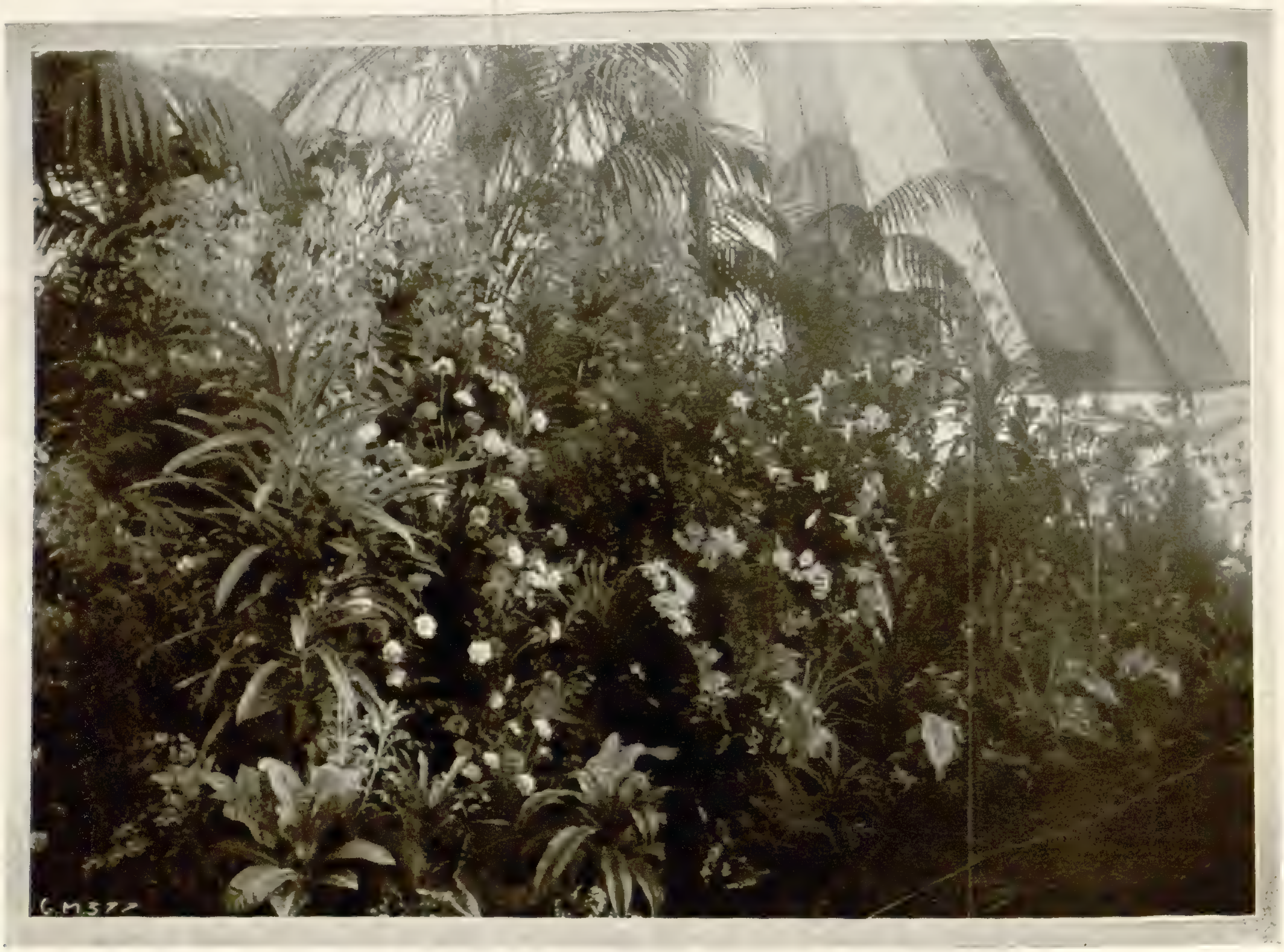
This very uncommon shrubby member of the Aster family is flowering freely in No. 4 greenhouse, and judging by the neat examples that may be grown in five inch pots it might with advantage be made more use of than it is. Introduced from South Africa in 1790, it is by no means a novelty, but I have not been able to find mention of it in any catalogue to hand. The "Dictionary of Gardening" gives the colour of the flowers as red or white, neither of which applies to the Kew plants. As seen there this felicia forms a rather upright plant, whose several shoots are in most cases pushed out from one main stem at a little height from the ground. Each shoot is terminated by an Aster-like flower head about 1½ inches across, being composed of deep mauve coloured guard florets surrounding a yellow disc. The leaves are very small, and of a rich green colour. The height of the entire plant is not much over a foot.

Impatiens.

Beside the original species of the Balsam family such as I. Hawkeri, I. Holsti, I. Olivieri, and I. Sultani, there are now several garden forms in whose production one or other of these species have doubtless played a part. A group of these in the greenhouse consists of plants whose blossoms show a great variety of colour, some of them being of much paler tints than usual. Among them all I. Holsti with its uncommon vermilion tint stands out in a marked manner. This Balsam is also valuable for bedding out during the summer.

Clianthus Dampieri.

Time was when this Clianthus used to be considered an extremely difficult plant to cultivate, but at Kew, grown in suspended baskets, it is very satisfactory. Not only is the typical kind, with its rich scarlet flowers and almost black boss laden with blossoms, but the scarcer variety—marginatus, in which the keel of the flower is white margined with scarlet is equally satisfactory. It must be nearly 40 years since I saw a magnificent specimen of Clianthus Dampieri in the (at that time) celebrated nursery of Messrs. Henderson, at Maida Vale, but thriving plants are as a rule few and far between. Though Clianthus Dampieri attracted the attention of the earliest travellers in Australia, according to "Hortus Veitchi" it first flowered at Exeter, and was exhibited before the Horticultural Society of London at St. James's Hall, on April 21, 1859, and awarded a silver medal.



YORK JUBILEE FETE AND GALA—MR. W. HOLMES' FIRST PRIZE GROUP OF PLANTS ARRANGED FOR EFFECT.

Echium Wildpreti.

A very striking biennial plant and of considerable value for greenhouse decoration. The first year from seed it forms a dense rosette of long, narrow, silky leaves. The second season the stem lengthens, ultimately reaching a height of 3ft. to 4ft., or even more. The greater part of this height is made up of a very dense, erect panicle of flowers, in colour a peculiar shade of reddish-pink. It may be bloomed effectually in a smaller state than its near relative the blue-flowered E. callithyrsum, which is also remarkably attractive. This is flowering in the Temperate House.

Lathyrus pubescens.

Kew has done a great deal to demonstrate the beauty and value of this member of the pea family, for it was almost unknown when first it attracted so much attention on the roof of the greenhouse. We used to look there for an annual display of its charming lavender coloured flowers, but it has now, I believe, been removed. In the Temperate House, however, it is flowering freely, but it scarcely appeals to one there as it did of old when in the greenhouse. This lathyrus is a native of Chili, and is hardy in some parts of the country. Like many plants from the region it is not always a success, probably owing to a lack of atmospheric moisture during the summer months.

Eranthemum graciliflorum.

This distinct and uncommon species of eranthemum is now in flower in the T range. It is a native of Penang, and like most members of the genus requires the temperature of a stove or intermediate house. In common with many other eranthemums this forms an upright growing sparsely branched plant, but it can be flowered successfully when not more than eighteen inches high. The flowers, borne in a loose terminal cone-like head, are of a pleasing shade of lilac, the upper petal being freckled with a lighter tint.

Russelia Lemoinei.

This is a hybrid raised several years ago by M. Lemoine, of Nancy, between the well-known Russelia juncea (Weeping Mary of West Indian Gardens) and the more uncommon R. multiflora. If grown in a suspended pot the hybrid is so pendulous that the slender shoots form a fringe all round. The tubular-shaped flowers are about an inch long, of a carmine-red colour, and borne freely during the summer months. Now in flower in the T range.

K.

SAXIFRAGA PELTATA.

The value of the giant Californian saxifrage for grouping in open areas of woodland, the wild garden, or in any situation where it is desirable the plants should be able to take care of themselves and thrive, is not fully appreciated. Whether in flower or foliage the plant is strikingly picturesque, but only as a group; and a single plant in a border of other flowers conveys nothing to the artistic sense that is pleasing. The root stock is a running rhizome that branches freely, and is of the type of Iris or Acorus. The flowers appear early in spring, rising in the form of erect drumsticks, and eventually reaching $2\frac{1}{2}$ft. in height, when the inflorescence unfolds. This is a dome-shaped cluster of starry pink flowers in ropes five to six inches long, the dome half a foot across.

The leafage develops just before the flowers open and helps to relieve the bareness of the flower stems somewhat, and before the last flowers have developed it has hidden the stems entirely, and one now gets the perfect plant. The leafage is in huge mounds, the individuals two feet across, their margins elegantly crimped and lobed, and it becomes literally a study in glossy dark green and bronze throughout summer. Such a plant as this could be well used by waterside and in open spaces difficult to plant on account of excess of wet. Dells, copses, and combes are good situations for a plantation of Saxifraga peltata, and if shelter from the north and east can be given, its flowers will escape the disaster from frosts that is invariably their lot when growing in exposed and wind-swept areas.

G. B. MALLETT.

GARDENER'S INCUMBRANCES.

In his speech at the recent coming of age festival of the Royal Gardeners' Orphan Fund, the Duke of Bedford expressed his regret that so many who required the services of gardeners specified that there should be "no incumbrances" (page 386). Every gardener is aware that this means "no children," and the word to those with is little short of an insult, particularly at a time when the decrease in the birth-rate of the country is a matter for very serious consideration. Probably, if you asked the majority of employers of gardeners in the country whether the size of a man's family should be a drawback to a man seeking a situation, they would say "No," but when it comes to self, the case is different, and persons who do not think in a general way that the size of a man's family should handicap him when seeking a situation, would never think of engaging a gardener with half a dozen youngsters.

I have a case before me at the present moment of a gardener who recently applied for a situation, and was granted an interview. The man had left his last situation through no fault of his own, his character is good, and his credentials highly satisfactory. Everything looked promising until the fatal question was put, "How many children?" "Six." That settled it, and the unfortunate fellow is still out of place, and looking for an opening by which he can be done with private gardening for ever. Who can blame him, and if parents refuse to bring their children up to an occupation in which the liberty of the individual is so interfered with, is it surprising?

Incumbrances! What a hateful word this is to apply to the offspring of a man and woman; and what a thing it is for a man to have to realise that he is handicapped in the competition for employment through the mere fact that he has what should be regarded in the interests of the nation as a blessing—a family.

What family have you? This is an inevitable question that the gardener is asked when applying for a situation, and not infrequently it is the answer that spoils all his chances of securing the situation. Or, again, there are men to-day who are dissatisfied with their situations and would like to make a change, but a family has grown up about them, and the knowledge that these "incumbrances" would stand in the way of getting another place holds them back. Further, the advertisements under the heading of "Situations Vacant" are never very numerous in the horticultural Press, but one may frequently see the stipulation "no family preferred," or other words which convey the clear impression that it is of little use any man applying who is blessed with more than one or two children.

And what is the reason for the objection on part of employers to engage gardeners with families? One fails to find any real one, though several of a lame character might be given. The only feasible explanation that can be given is that the gardener's cottage is, generally speaking, on the premises, and the children cannot be shut up altogether, but they naturally want to live and move about, and have their being. Perhaps there is a possibility of them making a bit of noise, or the owner may object to seeing children about the place that belong to an employee, and so when a new gardener is being engaged, the provision is made that he must have no "incumbrances."

I wonder if this matter has been considered by the British Gardeners' Association as being one of the grievances which need remedying, but if not, the expression of his Grace the Duke of Bedford might be taken as the text for a discussion, because, apart from what may be said about it from the gardener's point of view, it is, as the Duke observed, a disastrous policy in every sense, and considering the decrease in the birth-rate, a national calamity that such a specification should be made. For long it has been a standing slur on gardeners as a class that a man should be considered unsuitable to fill a post for which he has every qualification, owing to the simple fact that he has what most right-minded people prize most amongst their possessions, i.e., children.

H.

HYDRANGEA PETIOLARIS.

The species of hydrangea are frequently represented in gardens by a couple of examples only, these being the common H. hortensis and the Japanese H. paniculata. These, again, are more seldom represented by type specimens than by their sterile varieties. There are, however, several other species, examples of which might well be given positions in both large and small gardens, and H. petiolaris is one of them.

A native of Japan, H. petiolaris has occupied a place in scientific collections, either under the above name or one of its several synonyms, for a considerable period, but it does not appear to have ever been widely grown. The botanist Maximowicz, called the same plant H. scandens, an appropriate name, had not Siebold and Zuccarini previously adopted that of H. petiolaris. It is of scandent habit, growing very much after the fashion of the common ivy, trailing about the ground, or attaching itself to a support, and ascending to a considerable height by means of aerial roots. The leaves are large, more or less cordate and acuminate, with serrate margins and long petioles. The larger ones are often six inches long and four inches wide. The inflorescences are in the form of large cymes six inches or so across, the centre flowers being numerous, cream-coloured, and fertile, whilst a few of the outer flowers are conspicuous by reason of their sterility and well-developed white bracts. The flowering period extends for some six or eight weeks during June and July.

For planting against a wall it is an excellent subject, as it attaches itself to the support naturally, and is of neat appearance. A much better method of culture to adopt, however, is to turn a large butt of a tree upside down, so that the roots stand out in an informal manner, and plant several plants round it. In a couple of years' time the branches will cover the roots and form an effective feature. Such an example may now be seen at Kew in the hydrangea collection.

A plant often confused with this is Schizophragma hydrangeoides. Hydrangea and schizophragma are closely allied, but quite distinct genera, and there is really no reason why the hydrangea should be sent out for the schizophragma, as is frequently the case. H. petiolaris is, however, a somewhat variable plant, and extreme forms look very different from the type.

W. Dallimore.

"CARNATIONS, PICOTEES, AND PINKS," will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering, taking cuttings, fertilising blooms, etc. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

CATTLEYA HOUSE.—Plants that have recently passed out of flower, and that need repotting, should be kept under careful observation, so that they may be attended to as soon as root action commences. It is not advisable to repot plants at this season of the year, unless one is satisfied they have strong root action. The process of repotting is generally more or less distressing, even under the most favourable conditions, but when there is a prevalence of hot, dry weather, such as may be anticipated at this season of the year, the ill-effects are considerably minimised, and the plants become quickly re-established if first allowed to remain undisturbed until root action is observed. There are many species and hybrids now in an active state, and these must have every encouragement to assist development. The bright outside conditions of the past few weeks have been most beneficial, but every care is now necessary to avoid checks. With us the nights have been exceedingly cold, and more than an ordinary amount of artificial heat has been required to prevent the temperature falling below requirements. With a prevalence of cold outside conditions it is advisable to see that atmospheric moisture is reduced correspondingly with the fall of temperature after the sun declines. I consider there is nothing more likely to give checks to the young growths than excessive atmospheric moisture combined with a rapid fall of temperature.

AUTUMN-FLOWERING SPECIES, such as C. labiata, C. aurea, C. Gaskelliana, C. Rex, and C. Warscewiczi, are all now in a more or less forward state of growth. These should be placed in a position where they may have full benefit of the available light; this, combined with proper discretion in affording ventilation, will assist in ripening the growths as they develop. With this section of cattleyas, and the allied genera which flower before or immediately growth is completed, cannot produce satisfactory results unless the pseudo-bulbs become properly matured.

C. BOWRINGIANA, and the numerous hybrids that have been produced from it, are all producing new growths. These resent disturbance by repotting, and should not be disturbed more frequently than is absolutely necessary. They differ considerably in the period at which they produce their new roots; in several cases the new roots appear with the new growths, or when the latter has advanced a few inches, and in other cases the plants do not produce new roots until growth is completed, and, frequently, after flowering. Those that root with the new growths should have any attention necessary when the roots appear, but while there is sufficient room in the pots and the compost is good, any decayed or decaying compost should be carefully removed and a top dressing of fresh compost be given. We find a compost of two parts fibrous peat to one part broken oak or beech leaves, mixed with chopped sphagnum moss, suits these cattleyas well. Sufficient coarse sand or finely broken crocks should be added to keep the compost in an open and porous state. All newly-potted plants must be carefully shaded until the new roots have become re-established in the fresh compost.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

EVERGREEN BEGONIAS.—Since the introduction of so many beautiful forms of summer-flowering begonias the winter-flowering evergreen section seems to have fallen into disuse. Some of the varieties, however, such as B. fuchsioides and B. Weltoniensis, are among the most useful subjects for general decoration at a time when flowering plants are none too plentiful. They are most accommodating. A batch of plants may be brought on in a comparatively low temperature, and a few introduced into more heat at intervals, and by this means an almost continual succession of bloom can be maintained. I find it a good plan, after flowering, to keep the plants slightly drier at the roots for a short time, and then cut them back, shake out the soil, and repot, giving them a genial temperature. A mixture of three parts good loam and one part of leaf-mould, with silver sand, suits them well. Begonias will do well for as long a time in small pots as most things, but if large bushes are desired, liberal shifts must be given. The old favourite B. Weltoniensis looks well grown in baskets suspended from the roof of a warm conservatory, and some of the others are equally good for this purpose.

POT ROSES.—Some who grow tea-scented roses in pots for the production of early flowers think it best to keep the plants always under glass, but every experienced grower knows how much labour is necessary to keep the plants clean when they are so kept, and it is for this reason that many place them in the open air during the summer. I always do so as soon as the same class of roses come into flower in the open, the object being to ensure good roots, but the practice may, however, vary according to circumstances. It is more necessary to give plants that are expected to flower at Christmas and onwards a long rest in the summer, than it is those that are not expected to bloom until two or three months later. The cultivator who values his plants will give them the same attention during the summer as in the winter. Do not stand the plants on material that will reflect the full force of the sun, but, when convenient, the pots should be plunged to the rim in a bed of ashes quite in the open, away from walls or buildings, and then sun and air will harden up the growth. Pruning roses intended for the production of early flowers is also very important. If any are too large they should be dealt with at once, because if they are to be reduced in size it is necessary to cut back the old hard wood, which takes longer to start into growth than younger shoots. Small and young roses should only have just enough of the shoots reduced in length to ensure the resultant growth going to make a shapely plant. Plants that have fairly well filled the pots with roots should have weak liquid manure regularly, as this is necessary to keep up the fertility of the soil. Regular syringing with clear water will keep the roses free from insects, and two ounces of soft soap dissolved in a gallon of water, and syringed over the plants once a week will keep mildew away.

NICOTIANA SANDERÆ.—This makes a very beautiful subject for winter flowering in the greenhouse; not only does it flower continuously, but the colour is so much brighter than when flowers are produced outside in summer. If sown towards the end of June and given the same treatment as that usually given to cinerarias, and brought into the greenhouse towards the end of September, the result will be abundance of blooms all through the winter.—T. B. FIELD, Ashwellthorpe Hall Gardens.

THE FLOWER GARDEN.

LAWNS.—The recent pressure of bedding-out work has, in many cases, prevented close attention to lawns. Verges will need to be clipped, as nothing detracts so much from the good appearance of a place as untidy verges and walks. On most lawns there will now be a number of long grass "bents," which machines have failed to cut, and these should be cut off with a scythe and cleared away. Should the weather become hot and dry it may be desirable to remove the grass box from machines when mowing on light soils, as the cut grass will afford some help and shade to the roots, and, to some extent, prevent scorching. Watch freshly laid turf, and if it is suffering from drought a sprinkling of light soil may be brushed into any cavities made by shrinkage, and then given a good watering.

FLOWERING SHRUBS. — Pruning spring-flowering shrubs is best done immediately after flowering, especially in the case of weigelas, forsythias, philadelphuses, and all others that flower on the previous year's wood, the object being to induce as many strong, vigorous growths as possible, instead of a larger number of small weak ones that would not make such a pleasing display. Cut the old wood out to within a few eyes or buds of their base, and if the plants have become unduly crowded through past omissions, thin out rather freely, as growths of from two to five feet in length give a better effect than a large number of short ones. Berberis stenophylla and B. Darwini may be served in the same way. Mistakes are sometimes made by failing to take the centres out of young plants of broom, thus causing them to become too tall and leggy; these may with advantage be taken out immediately blooming is over, and before seed has time to mature. Freshly planted old, or any young rhododendrons and azaleas, should have all old flowers removed as soon as possible after flowering, for if allowed to remain the seed pods will be a severe strain, and prevent satisfactory growth being made.

NEW SHRUBS.—As so many new flowering trees and shrubs have been introduced during the past few years, one or two visits should be paid to good collections during the season with a view of selecting most suitable kinds for planting next autumn. From seeing them growing one gains a better idea of their suitability or otherwise for positions that might be devoted to them.

CLIPPED SHRUBS AND TREES.—It is rather too early yet to clip these, but attention should be paid them so that symmetry is maintained; should any vigorous growths appear these should be cut quite out, or they will unduly weaken other parts.

ROCK GARDEN.—This should have close attention. Many old flower stems will need to be removed, and weeds must be pulled out. Water when necessary, preferably late in the afternoon or early in the evening, to produce a humid atmosphere during the night. If ramondias and primulas have not seemed quite at home in the sites given them, mark other cavities or places for them. In some places the Wichuraiana roses rambling over and down the rocks form a very pleasing feature.

ROSE GARDEN.—Vigilant attention is very necessary now. Do not allow any growths to become damaged through lack of supports, especially on roses budded last year. If large blooms are needed disbudding must be practised. Remove all suckers that may appear, and search carefully for the rose maggot and caterpillars; dust with sulphur if mildew or rust appears, and should the weather be dry give copious supplies of water, especially on the lighter soils, and provide a good mulching of decayed manure. The roses may be further helped by using nitrate of soda or blood manure; the latter seems more helpful if dissolved in a tub of water overnight, and allowed to stand until morning, then diluted and applied. Towards the end of the month budding may be commenced; bud dwarfs as low down as possible, and insert the bud as quickly as possible after it is cut and the bark raised.—E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

WATERING AND MULCHING.—Examine carefully the roots of wall fruit trees, and if the soil is found too dry to be good for the trees give a thorough soaking, so that every particle of the soil is well moistened. Peach trees bearing good crops, and especially if the borders are well drained, will need heavy watering at least three times before the fruits riper. If the surface over and about the roots is hard slightly loosen it with a fork, so that the water can penetrate more freely; good soakings of liquid manure will greatly improve the growth and increase the size of the fruits, as also will good dressings of some patent manure well washed in with clear water. On sloping borders a basin-shaped depression should be formed round each tree to hold water; let each tree be given fully forty gallons of water in two applications, after which a good mulching with decayed farmyard manure will complete the work for the time being.

YOUNG TREES, and those bearing a light crop, should, if the growth is inclined to be too gross, not be watered for the present, but do not overlook those which may have been planted late, and those lifted and replanted last autumn.

STRAWBERRY PLANTS.—Beds which have been treated for the express purpose of raising young plants will, ere this, have thrown out strong healthy runners. These should be immediately pegged into sixty-sized pots filled with good loam. It may be thought that any soil will do for this work, but a sweet fresh mixture will be the better, so that the roots may from the first grow strongly. Pinch out the points of the runners just beyond the layered plant, and water when necessary. The variety Royal Sovereign, probably the most useful variety ever sent out, I always raise annually for filling a sunny border for our earliest outdoor supply. When so planted, at a distance of eighteen inches apart, the fruits do not rot in wet weather, as is the case with older plants whose leaves are strong and plentiful, and, further, the crop is generally ready to gather quite a fortnight before fruits are ripe on older plants. For fresh plantations the beds should be made ready as early as convenient; dig deeply and manure heavily, if the soil is light and porous, but with rich loam, and where the growth is likely to be too strong, manure should be given sparingly. Fruiting batches will be all the better for a heavy watering should the crop be heavy and the weather dry.

GRAFTS.—These should be carefully examined, and if the union is complete remove the binding and make the grafts secure against wind, otherwise they may be blown off. Tie them to stakes long enough to support the growth, the stakes being fastened to the stock. As the growth grows stronger remove all side shoots which may spring from the stock, except where the union has failed, when suitable shoots may be left and trained for budding, or probably grafting, next season. Trees horizontally trained, and which may have been cut back for the purpose of furnishing a fresh lot of young wood, should have the new growths made secure, and any not wanted may be removed. I have seen very fine fruits produced on old trees when the old tiers have been replaced by young wood, and especially in the case of pears.—H. MARKHAM, Wrotham Park Gardens.

Abutilons.—Abutilon igneum is far more suitable for pots in the conservatory than the taller growing varieties. It produces large flowers of a deep rich red colour in great profusion almost throughout the year. Like all the abutilons, it needs a great deal of nourishment in the form of rich soil, mulches of manure, and water; but if well supported it makes a good decorative plant for the conservatory, even in winter. Abutilons are all the better for being planted out in summer, gaining fresh vigour, given good soil, and not neglected in the matter of watering. Carefully lifted in October, before severe frosts occur, and sheltered in the greenhouse, the mass of buds formed during the autumn will open well, and make the plants highly decorative. If kept in pots throughout the summer they should receive two or three good shifts, in rich soil, and plenty of liquid manure when in flower. I find this abutilon does not root readily unless given a bell-glass. Cuttings may be put in now, or during any part of the summer, in light sandy soil, shading them from the sunshine, and keeping them moderately moist until rooted, when they should be potted separately and pinched back several times.—T. B. FIELD.

BATH GRAND ROSE SHOW and GENERAL SUMMER EXHIBITION.
SYDNEY GARDENS,
TUESDAY and WEDNESDAY, July 7 and 8.
[Please note dates.]
Classes for ROSES, Nurserymen and Amateurs, Bouquets, Cut Flowers, Sweet Peas, Strawberries, Plants, Tuberous Begonias, etc.
ENTRIES close July 3. For Prize Schedules, etc., apply E. R. F. PEARSON, Secretary. Office, 17, Argyle St., Bath.

CARDIFF AND COUNTY HORTICULTURAL SOCIETY.—TWENTIETH ANNUAL SHOW, SOPHIA GARDENS, CARDIFF, Wednesday and Thursday, July 22nd and 23rd, 1908.
Liberal Prizes for all sections.
Silver Plate, Cups, and Medals.
Every facility given to the Trade. Schedules free.
Mr. A. MAURICE BAILEY, Secretary,
24, Duke Street, Cardiff.

CROYDON ROSE AND HORTICULTURAL SHOW, WEDNESDAY, July 8, 1908.—Open classes, valuable Challenge Cup for Roses, with medals for amateurs; also good prizes for nurserymen, amateurs, and gardeners' group of plants, 70s., 50s., 30s., 15s., with medals and other good prizes. Full particulars of A. C. ROFFEY, Sec., 55, Church Road, Croydon.

HANLEY PARK, STAFFORDSHIRE.
July 1st and 2nd, 1908.
TWELFTH GREAT ANNUAL FLORAL FETE.
£650 IN PRIZES. Silver Cups, Gold and Silver Medals.
SILVER CHALLENGE CUP, value £10 10s. offered for
TRADE EXHIBIT"
(for particulars see page 10 in Schedule).
Valuable SPECIAL PRIZES offered by the principal firms in England.
The Railway Companies will convey Exhibits at one fare for the double journey, provided they remain the property of the Exhibitors.
Schedules post free on application to—
WM. POULSON, Secretary.
Town Hall, Hanley.

NORTH LONSDALE ROSE SOCIETY, ULVERSTON.
The 25th ANNUAL EXHIBITION in TODBUSK PARK, ULVERSTON, FRIDAY, July 17th, 1908, when an open Challenge Shield, 8 Challenge Cups, several Gold, Silver, and Bronze Medals, and Money Prizes, in all amounting £200, will be awarded for Roses, Sweet Peas, Violas, and Herbaceous Flowers.
Schedules Post Free on application to
F. J. HARRISON, Secretary.
[illegible], Ulverston.

POTTER'S BAR and DISTRICT AMATEUR ROSE SOCIETY.
(Affiliated to the National Rose Society.)
The Show will be held on THURSDAY, July 16th, 1908. Entries close July 9. Classes for Amateurs open to all England. Classes for Members, Nurserymen, and Others.
For Schedule and Entry Forms, apply to H. R. DARLINGTON, Park House, Potters Bar.

WOLVERHAMPTON.
GREAT FLORAL FETE.
July 7, 8, and 9, 1908.
£800 in Prizes. Entries close June 29.
Schedules on application to the Secretary.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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York Jubilee Fete and Gala.

PELARGONIUMS.

In concluding our report of the York Gala, from page 472, we have to state that although pelargoniums have long since ceased to be the great floral attraction at the York Gala, they still contribute a considerable and also an attractive section of the show. Premier place for a group of show pelargoniums arranged with ferns and foliage plants, was accorded to Mr. J. E. Skaife, Burton Lane, York, who had the best arrangement. Mr. W. Longstaff, Sydney Street, York, came second, and Mr. G. Lee, [illegible] Street, York, was third, but neither of the groups were of special merit.

The class for six specimen show pelargoniums was not up to the usual standard; Mr. G. Lee, Mr. J. C. Skaife, and Mr. F. Dean, [illegible] Cottage, Clifton, York, were placed in the order given.

Mr. W. F. Crowther, Wigginton Terrace, York, scored for six double-flowered pelargoniums with large and fairly well flowered specimens of Decoration, Boston Spa, Raspail Improved, King of Denmark, etc.; he was followed in order by Mr. J. W. Clarke, Skelton Street, Clifton; and Mr. Henry Pybus, Monckton Moor, Wormald Green, Leeds.

The class for three double-flowered ivy-leaved pelargoniums brought out a good competition, and all the exhibitors showed pyramidal specimens. Mr. J. R. Wedgwood, Burton Lane, York, led with Souv. de Chas. Turner, Fair Maid of Guernsey, and a light variety; Mr. H. Pybus came second, and Mr. H. Skaife third.

MISCELLANEOUS.

Groups of tuberous begonias were not of special merit, but the several exhibits made a bright display. Mr. F. Styan won first prize, Mr. Sydney Leetham came second, and Dr. P. W. Schmidt, Westfield, Fritton, York, was third. Mr. H. Mason, gardener to Mrs. Von Beverhoudt, Elvington Hall, York, had the best local group of herbaceous calceolarias, and showed a fairly good display. The best group of gloxinias was staged by Mrs. Craven; the best eight tuberous begonias, fine plants, by Mr. R. J. Foster; and Mr. S. Leetham led for eight calceolarias.

ILLUSTRATIONS.

In the present issue we give illustrations of the first and second prize rockwork exhibits, staged respectively by Messrs. J. Backhouse and Son, Lim., York, and Messrs. W. Artindale and Son, Sheffield. We also give an illustration of the first prize jubilee group staged by Mr. W. Holmes, Chesterfield.

NON-COMPETITIVE.

A bold and effective display of pæonies, pyrethrums, gaillardias, and delphiniums was set up by Messrs. Kelway and Son, Langport, Somerset, and among the double pyrethrums, which were very well shown, those that specially attracted our attention were Empress Queen, Souce, Virgo, Othello, Wega, Aphrodite, and Ivonne Cayeaux. The group of brilliant amaryllis set up by Messrs. Ker and Sons, Aigburth Nursery, Liverpool, was a great attraction. and rather a novel one for so late a date. The plants had been retarded by being kept dry early in the season. The pink varieties again attracted our attention, as these are so very distinct; The Mikado, Rosaflora, Unique, Monarch, and Masterpiece were very fine; while in deeper colours we made special note of President, The King, Lord Cromer, The Beacon, and The Premier, as fine in form and colour.

From Messrs. Sutton and Sons, Reading, came a pretty exhibit, made up of an excellent strain of streptocarpuses in the centre, with dishes and baskets of splendid melons around it; Hero of Lockinge, Ringleader, Perfection, and Sutton's Scarlet were the melons principally staged. With these subjects the Reading firm had dishes of fine early peas, some very fine tomatoes, and several varieties of the cucumbers for which they are famous. A large group of orchids was submitted by Messrs. Hugh Low and Co., Bush Hill Park, Enfield; it consisted of some fine examples of Cattleya Mendeli grouped with Cymbidium Lowianum, various odontoglossums, Cattleya Harrisoni, Lælia purpurata, Cypripedium niveum, and C. callosum Sanderæ. This firm had altogether a very extensive exhibit, and, in addition to orchids, they put up Hiawatha and Baby Rambler roses, blue and white hydrangeas, Metrosideros floribundus, Gerbera Jamesoni, Malmaison carnations in great variety, in pots, and a handsome lot of cut perpetual-flowering carnations representing all the leading varieties, and including a new yellow seedling of good colour.

A large and very handsome arrangement of choice foliage and flowering plants, from Messrs. Jas. Veitch and Sons, Lim., Chelsea, was a great attraction. The background of elegant palms was immediately fronted by specimens of Dracæna Goldiana, Alocasia crystallinum, Dracæna Godseffiana, Alocasia argyrea, Alpinia Sanderiana, etc. Along the middle were grand plants of Nepenthes Sir Wm. Thiselton Dyer, N. sanguinea, N. excelsa, N. Burkei excellens, and N. Amesiana, set up above the other things, and all with brilliant pitchers depending gracefully. The central foreground consisted of bright orchids, such as Lælia purpurata, L.-c. Canhamiana, Oncidium macranthum, Cattleya Mendeli, C. Mossiæ, and odontoglossums in variety. Other good things charmingly disposed were Abutilon Triumph, Kalanchoe flammea, Dracæna De Grootei, Elæocarpus reticulatus, with small pendant white flowers, the golden Richardia Elliottiana, and Medinilla magnifica.

Messrs. Clibrans, Altrincham, showed a group of choice hardy foliage shrubs, including a good assortment of vines, ivies, and maples. We noted Vitis Henryana, Hedera dentata aurea variegata, and the pretty silvery mottled Acer campestre marmorata, as very distinct and good.

A very large and bold group of well-grown caladiums, set up over a groundwork of maidenhair ferns, was capitally arranged by Messrs. J. Peed and Sons, West Norwood, London, S.E. The large plants of Madame J. R. Box, J. Peed, Silver Queen, Madame d'Halloy, Richard Bastin, Edith Luther, and Madame Pynaert were greatly admired, and drew forth many exclamations of admiration and wonderment from the visitors, both for their size and colour.

Messrs. Dicksons, Lim., Chester, put up an effective group of hardy cut flowers, in which pæonies predominated. P. Humei carnea was particularly fine, and of a delightful coral-pink, shading to cream. Some well-flowered spikes of the chaste Watsonia Ardernei and the uncommon little Lilium rubellum were noticeable. Several varieties of ixias, pyrethrums, and other useful things made up a very attractive exhibit. Considerable space was occupied by Messrs. Webb and Sons, Wordsley, Stourbridge, who staged gloxinias of excellent strain, embracing many lovely shades of colour. Interspersed between the plants were maidenhair ferns. Several varieties of tomatoes, cucumbers, and melons, including a fine fruit of Webb's new Masterpiece, occupied the front of the stage.

Pæonies occupied the greater portion of the space allotted to Messrs. R. H. Bath, Lim., The Floral Farms, Wisbech, conspicuous among the many varieties being Prince Victor, salmon-rose; Comte d'Osmont, creamy-white; and Mons. Pierre Dessert, glowing crimson. Several varieties of perpetual-flowering carnations occupied one end of the exhibit, vases of delphiniums completing the background.

Messrs. Richard Smith and Co., Lim., Worcester, staged hardy flowers in considerable variety, the exhibit containing a number of choice things. Fine spikes of delphiniums and various pæonies were conspicuous, as also were several vases of Campanula media calycanthema in delightful colours. The same firm set up a bold group of miscellaneous flowering and foliage plants, comprising Malmaison and other carnations, hydrangeas, petunias, and a few trained specimens of clematises. These bright subjects were arranged in mounds over a setting of dwarf shrubs, ferns, and dracænas, the whole arrangement being very artistic. Messrs. J. Backhouse and Sons, Lim., York, occupied a long stretch of ground-space with an exhibit of perpetual-flowering carnations, dwarf and standard roses of the polyantha class, hydrangeas, and the pretty little Azalea rosæflora. Tall palms and a few Crimson Rambler roses made up the background, while Nephrolepis todeaoides, Adiantum Farleyense, and other ferns finished off the front of a well-arranged group. Messrs. Wm. Artindale and Son, Nethergreen, Sheffield, staged violas in excellent style. Arranged in fan-shaped sprays of a dozen blooms, something like 100 varieties were to be seen, and among the many that appealed to us were Woodcock, white, edged mauve; Isolde, clear yellow; Seagull, white; and a pretty striped variety called James C. Erskine.

Messrs. Jarman and Co., Chard, Somerset, showed their beautiful race of new centaureas. In addition to the Bride, Bridegroom, and Bridesmaid, we noticed a clear yellow variety, aptly named Honeymoon. Zonal pelargoniums were also staged in large bunches, the varieties being of the best. A box of roses and a few carnations and sweet peas were other items on this stand. St. Brigid anemones were staged by Messrs. Reamsbottom and Co., Aldeburgh Nurseries, Geashill, Ireland. The blooms were scarcely so large as we have seen them, but the range of colour and beautiful shading and blending of these colours left little to be desired.

Messrs. W. and J. Brown, Stamford, staged hardy flowers, including fine spikes of eremuri, anchusas, a few liliums, and their yellow gaillardia Lady Rolleston.

Mr. H. N. Ellison, 57, Bull Street, West-Bromwich, put up a small interesting collection of ferns, among which were Gymnogramma Dobrodgense, G. Wettenhalliana, Hymenodium crinitum, and numerous other good things. Mr. John Forbes brought down from Hawick, Scotland, pot-grown phloxes in variety, also pentstemons, among which Crimson Gem, Marconi, The Paddocks, and Colonel Hope were extremely fine. Pansies and violas were also staged in Mr. Forbes' usual first-class manner. Two small hampers of the very brilliant bedding zonal pelargonium, named Black Vesuvius, were also shown. The blooms appear even more brilliant by reason of the sombre tint of the foliage, which, of course, is the variety's distinctive characteristic.

Messrs. W. Cutbush and Son, Highgate, London, put up a miscellaneous group of rambler and other decorative roses, carnations, and hippeastrums. A few tall crotons, dracænas, and palms rose above the level, and added much to the effect of the group. A very fine display of cut carnations was also staged by this firm, the leading varieties of the perpetual-flowering section being represented by large vases, in which the blooms were well arranged.

Needless to say the sweet peas staged by Mr. C. W. Breadmore, of Winchester, were remarkably fine. It is a long journey from Winchester to York, but Mr. Breadmore not only knows how to grow sweet peas, but how to pack them so that they travel well, an important point for exhibitors. St. George, George Herbert, Etta Dyke, The Marquis, King Alfonso, Prince of Asturias, Queen of Spain, Mrs. C. W. Breadmore, and Elsie Herbert were grandly staged. Carnations of the American type were well shown by Mr. C. F. Waters, Balcombe, Sussex, the fancies being very attractive, Glendale, white ground, heavily striped scarlet, and Fashion, lemon-yellow, edged and splashed with deep pink, being very beautiful. Among the selfs Victory, Winsor, and Pride of Exmouth were good, as also were the popular Enchantress, Britannia, and others.

Messrs. E. J. Batchelor and Sons, Station Square, Harrogate, put up a group of well-grown plants of nephrolepis, comprising the lovely N. todeaoides, N. elegantissima, N. Whitmannii, and N. Amerpohli, all of which are beautiful in the extreme. The exhibit of cut hardy perennials staged on the ground by Messrs. George Bunyard and Co., Lim., Maidstone, was rich in the variety of really useful subjects for border work it contained. Tiarella purpurea marmorata, an uncommon-looking flower of chocolate-brown, with golden anthers showing, is a plant of some merit, but the irises, pæonies, and inulas were, of course, more conspicuous. Pentstemon glabra was fine, and we were well pleased with the single Pæony Jupiter, a rich rose flower with golden anthers. A small water and bog garden was well arranged by the firm, Nymphæas Laydekeri and tuberosa occupying the improvised pond, which was surrounded by spiræas, irises, funkias, and many other moisture-loving plants.

Messrs. Charlesworth and Co., Heaton, Bradford, put up an attractive exhibit of choice orchids, all well displayed; Odontoglossum Phœbe splendens, Phalænopsis Rimestadiana, L.-c. Fascinator, Miltonia vexillaria Augusta Victoria, L.-c. Canhamiana King Edward VII., and Cattleya Mossiæ Wagneri were among the best examples. Mr. J. Sadler, Newbury, Berks, showed a small group of orchids that included a few good miltonias and Odontoglossum citrosmum. Messrs. Laxton Brothers, Bedford, contributed a fine lot of their strawberries and several baskets of fine peaches and nectarines. Mr. G. Yeld showed a few new seedling irises and hemerocallis, the former being very fine.

Messrs. James Backhouse, and Son, Lim., York, arranged an extensive group of deciduous and evergreen trees and shrubs outside the tents. In fact the exhibit was really a series of small groups with narrow walks between. Rhododendrons, acers, and conifers were well represented, with here and there standards of Cytisus Andreanus, golden privet, etc.

Messrs. Kent and Brydon, Darlington, set up a group of clipped box and yew trees representing all manner of quaint figures. The group was backed up by some excellent copper beeches. Topiary work exemplifies in a remarkable manner the patience of which the gardener is capable, for the specimens seen at exhibitions represent years of patient toil. Ornamental shrubs of more natural character were also well shown.

Royal Horticultural Society.

On Tuesday, June 23, there was again a very fine display at the Royal Horticultural Hall, hardy flowers being abundantly staged.

A beautiful lot of Spanish irises, set up in large bunches of each variety, was displayed by Messrs. Dobbie and Co., Rothesay, and afforded a good opportunity of comparing varieties. Thunderbolt, Czar Peter, Raphael, Belle chinoise, Soliel d'Or, Surbiton, Longfellow, Beauty, Leander, L'Innocence, and King of the Blues make up a fine set. Three fine new sweet peas, i.e., The King (A.M.), Dobbies' Mid-Blue (A.M.), and Mrs. Andrew Ireland were shown by the Rothesay firm. Messrs. William Bull and Sons, King's Road, Chelsea, set up a very bright lot of Spanish irises, in bunches of a variety.

Mr. Amos Perry, Enfield, put up a beautiful and delightfully cool exhibit of hardy flowers that included two grand banks of delphiniums in various rich shades of blue and violet. In the centre was a sheaf of Eremurus hybridus, a pink variety from E. Bungei and E. robustus, and in front of these was a group of liliums, such as L. colchicum, L. Browni, L. auratum, L. speciosum, etc., but the great feature of the exhibit was the pool of water lilies edged with funkias, Richardia Rehmanni, and hardy ferns.

Mr. James Douglas, Great Bookham, Surrey, contributed a large and interesting group of pinks, all growing in pots, and flowering with great freedom. We were specially struck with the merits of Snowdrift, a grand white, and such charming laced varieties as Bookham Gem, exquisitely laced with rich crimson; Beauty, Ascot, Gertrude, Mrs. Pomeroy, Tweeddale, Rosina, Ethel, and Fairy. A very big group of brightly-coloured crotons was set up on one long table by Messrs. H. B. May and Sons, Edmonton, and the well-grown plants attracted a great deal of attention; Prince of Wales, Achievement, Albert Truffaut, Florence, Neston, Chelsoni, Mooreanus, and Duke of Buccleuch were all particularly good. Messrs. W. Cutbush and Son, Highgate, were represented by a very fine lot of Malmaison and perpetual carnations in great variety, and by a group of Coleus Cordelia, the lovely spiræa Queen Alexandra, and the golden calceolaria Decorator.

Messrs. Wm. Paul and Son, Waltham Cross, put up a group of their new roses, and showed each variety in quantity. Refulgence, a bright scarlet hybrid sweet briar, was the most effective variety; it has large semi-double flowers, and apparently blooms with the utmost freedom; Dora, a pink H.T.; Elaine, a white H.T., Hugo Roller, a yellow and red tea rose of great beauty; Margaret, a pink H.T., and Albatross, a full white H.T., were others of great merit. A batch of brilliant crimson Scotch heather, Erica cinerea coccinea, was submitted by Mr. H. White, Sunningdale Nurseries, Windlesham. Messrs. H. Cannell and Sons, Swanley, had some very fine gloxinias.

Pæonies and delphiniums, as arranged by Messrs. T. S. Ware, Lim., Feltham, made up a bold and attractive group, the tall spike of the latter towering above the big pæony blooms; Duchess of Sutherland, Mdlle. Juliette Dessert, Eugene Verdier, Mons. Dupont, and L'Admirable were the best of the pæonies. Sedums in great variety made up an interesting exhibit from the Guildford Hardy Plant Nursery Company. Mr. George Mount, Canterbury, had a fine lot of roses. Messrs. W. and J. Brown, Peterborough, set up bunches of garden roses in variety.

Malmaison and perpetual carnations were largely and well shown by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, the former, especially Mrs. Trelawney and Maggie Hodgson, attracting even more attention than the perpetual varieties; this firm also had a few roses. A magnificent group of pæonies, containing a grand selection of varieties, was put up by Messrs. James Veitch and Sons, Chelsea; in the centre of the exhibit was a group of yellow eremuri spikes, representing E. Warei and E. Bungei. With these flowers were some fine campanulas.

The gloxinias displayed by Messrs. James Veitch and Sons, Chelsea, were a fine and brilliant feature of the show, and the method of showing batches of a variety and colour is an excellent one. With these finely grown and beautifully coloured flowers, representing a very fine strain, were some newer cannas, Richardia Elliottiana, Kalanchoe flammea, K. Kewensis, and Lobelia tenuior. The Chelsea firm also exhibited a big lot of beautiful Spanish irises, a selection of popular annuals, and the yellow Begonia Col. Laussedat (A.M.), a bedding variety. Messrs. Bakers, Wolverhampton, put up a bold group of aquilegias, poppies, pyrethrums, hemerocallis, and other useful and effective hardy flowers. Messrs. R. Wallace and Co. had a handsome lot of liliums, delphiniums, irises, Anchusa italica Dropmore var., and a lovely lot of heucheras that included some very beautiful and graceful varieties of these elegant flowers. Mr. W. J. Godfrey, Exmouth, showed delphiniums, the beautiful Solanum Wendlandianum, freely flowered, and a batch of handsome pelargoniums, such as Marjorie Brooks, Dairymaid, and Lady Decia.

Mr. F. W. Smith, gardener to G. Ferguson, Esq., Weybridge, submitted some splendid delphiniums, showing the result of careful cross-fertilisation and selection; Mr. Smith's pale cream and white varieties, and Orchioides, cream with brown centre, were greatly admired for their distinctness. Cambyses, a medium blue with white eye, was one of the finest of a fine and interesting set. Messrs. Kelway and Sons, Langport, Somerset, contributed a big exhibit of brilliant pæonies, pyrethrums, and delphiniums, the latter being remarkable for their free branching habit. From the Cottage Society, Garden City, Letchworth, came a contribution of pæonies, campanulas, [illegible] geraniums, etc., from the cottage gardens. Mons. A. Truffaut, Versailles, exhibited several fine anthuriums of the Andreanum type, and among these Pres. Liger, a crimson-scarlet, gained an A.M.

A very beautiful set of hardy flowers [illegible] included Spanish irises, gladioli, [illegible] irises, delphiniums, water lilies, [illegible] and pæonies, was well set up by [illegible] Barr and Sons, King Street, Covent Garden. Messrs. W. Spooner and Son, Hounslow, [illegible] up a very pretty group of roses. Mr. [illegible]ston, gardener to Dr. H. A. Martin, [illegible] brought up splendid examples [illegible] shaded hydrangeas. Messrs. J. Laing [illegible] Sons, Forest Hill, sent a group of [illegible] Messrs. Paul and Son, Cheshunt, showed a very fine group of pæonies. Little bunches of Madame Rousseau, [illegible] Marie d'Hour, etc.; single, as well as [illegible] varieties were shown. The Messrs. [illegible] and Son also showed roses well, [illegible] single yellow Buttercup proving a [illegible] traction; Starlight, Marquise [illegible]

Richmond, and W. A. Richardson, were also good. Messrs. B. R. Cant and Sons, Colchester, showed some lovely new roses, including Souv. de Stella Gray, Hugo Roller, Warrior, Richmond, Betty, Lady Roberts, and the vivid Etoile de France. Mr. R. Neal, Wandsworth, sent a few sweet peas. Messrs. J. Peed and Son, West Norwood.

ORCHID COMMITTEE.

Dendrobium clavatum was the feature of a small group of orchids exhibited by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, and round this were forms of Cattleya Mossiæ and C. Mendeli, with a few odontoglossums. Messrs. Stanley and Co., Southgate, N., exhibited a selection of varieties of Cattleya Mossiæ, with a few varieties of C. Mendeli and C. Acklandiæ. C. Mossiæ Heather Bell, C. M. Thompsoni, C. M. triumphans, and the deep-hued C. M. Duke of Marlborough were all very good forms.

Some interesting orchids came from the Burford Lodge collection, Mr. White setting up Epidendrum virens (A.M.), Bulbophyllum fusco-purpureum (B.C.), Eulophia nuda (B.C.), and the light orange-yellow Dendrobium Jerdonianum (A.M.). Messrs. Charlesworth and Co., Heaton, Bradford, showed a group of beautiful orchids that contained Lælio-cattleya Canhamiana albens, L.-c. Fascinator, Odontoglossum Williamsianum, O. Ossulstoni, Promenæa citrina, Lycaste tetragona, Phalænopsis Lindeni (B.C.), etc.

Mr. Stables, gardener to De Barri Crawshay, Esq., Rosefield, Sevenoaks, Kent, submitted a group of odontoglossums in which forms of O. Queen Alexandra were notable, with O. [illegible], finely coloured; O. Leo, O. Urania, O. Crawshayanum, and O. Astræa. Mr. Hopkins, gardener to F. Wellesley, Esq., Westfield, Woking, showed two fine forms of Cattleya Mendeli, named C. M. Majestica and C. M. Venus; the latter had a broad pale area on the lip.

Mr. Mertens, Mount St. Amand, Ghent, showed a few beautiful, but unnamed odontoglossums. Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham, exhibited the large broad-petalled Odontoglossum crispum Princess of Wales (A.M.). Mr. G. W. Bird, Manor House, West Wickham, showed Odontioda Wickhamensis (A.M.), a small rosy flower with brown spottings. Thunia Marshalliana was well shown by Mr. H. J. Elwes, F.R.S., Colesbourne, Gloucester, who sent eight specimens

FRUIT AND VEGETABLE COMMITTEE.

From a collection of potatoes planted in the open in Cornwall, on February 3, Messrs. Dobbie and Co., Rothesay, brought up a beautiful set of very clean, fine new tubers. The leading varieties were Sharpe's Victor, Sharpe's Express, Sir John Llewelyn, Mile-[illegible] Early, Midlothian Early, Eureka, Southern Queen, Alpha, Radium, and Beauty of Hebron. The set of radishes from Rothesay caused a good deal of comment, as many of the large varieties are more popular on the Continent than with us, but the Olive and long-pointed forms were good. Some well-grown grapes were exhibited by Mr. Weston, of Eastwell Park Gardens, Ashford, Kent; the bunches of Black Hamburgh were finely berried and, for the most part, well coloured; Muscat of Alexandria, good clusters of Foster's Seedling and Gros Maroc were also shown, there being fourteen bunches in all. Big cauliflowers, fine cos lettuces, Early [illegible] carrots, and Oxheart cabbages, all grown under the French system, were exhibited by Messrs. Jas. Veitch and Sons, Chelsea. Australian apples, fine in quality, fresh, plump, and juicy, were shown from the Government Experimental Farm, Bathurst, New South Wales, Australia.

CERTIFICATES AND AWARDS.

First-class Certificate. — Odontoglossum Princess of Wales, from Mr. H. Ballantine, gardener to Baron Schroder, The Dell, Egham.

Award of Merit. — Stokesia cyanea alba, from Mr. Amos Perry, Enfield; Delphinium [illegible], from Mr. T. W. Smith, gardener to [illegible] Ferguson, Esq., Weybridge; rose Re[illegible], from Messrs. Wm. Paul and Son, Cheshunt; sweet peas The King and Dobbies' Mid-Blue, from Messrs. Dobbie and Co., Rothesay; Erica cinerea pygmæa and Campanula Raddiana, from Mr. G. Reuthe, Keston, Kent; anthurium Pres. Viger, from Mr. A. Truffaut, Versailles; Kniphofia goldelse, from Messrs. R. Wallace and Co., Colchester; Eschscholtzia Mikado, from Mr. W. H. Gardiner, Mill Street, St. Osyth; begonia Colonel Laussedal, and Eremurus Bungei magnifica, from Messrs. Jas. Veitch and Sons, Chelsea; Dendrobium Jerdonianum, and Epidendrum virens, from Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking; and Odontioda Wickhamensis, from Mr. G. W. Bird.

MEDALS.

Silver-gilt Flora.—Messrs. H. B. May and Sons, Edmonton; Mr. Amos Perry, Enfield; Messrs. Jas. Veitch and Sons, Chelsea.

Silver-gilt Banksian.—Messrs. W. Cutbush and Son, Highgate; Messrs. R. Wallace and Co., Colchester.

Silver Flora.—Mr. G. Mount, Canterbury; Messrs. Paul and Son, Cheshunt; Mr. G. Reuthe, Keston; Mr. De Barri Crawshay, Sevenoaks; Messrs. Charlesworth and Co., Bradford.

Silver Knightian.—Mr. Weston, Eastwell Park Gardens, Ashford; Government Experimental Farm, Bathurst, New South Wales; Messrs. Dobbie and Co., Rothesay.

Silver Banksian.—Messrs. Barr and Sons, Covent Garden; Messrs. Bakers, Wolverhampton; Messrs. W. and J. Brown, Peterborough; Messrs. H. Cannell and Sons, Swanley; Messrs. B. R. Cant and Sons, Colchester; Mr. W. J. Godfrey, Exmouth; Messrs. Dobbie and Co., Rothesay (irises); Messrs. J. Kelway and Son, Langport; Messrs. J. Laing and Sons, Forest Hill; Messrs. Stanley and Co., Southgate; Messrs. H. Low and Co., Enfield.

Bronze Banksian.—Messrs. W. Spooner and Son, Hounslow.

Franco-British Exhibition.

In the fine music hall at the Franco-British Exhibition, a very handsome flower show was held on Wednesday, June 24. A schedule of prizes was prepared, but there were very few competitors, the show being composed almost wholly of trade displays. Some attempt at effect had been made, and, so far as the stage end was concerned, this was nicely carried out, and the central cross walk was also prettily finished. Besides the groups inside, there were a few displays outside, round the building.

Judging commenced about an hour later than the time fixed, but no one seemed to complain. It was also somewhat late before the awards were made known, but, no doubt, there will be an improvement in this direction on future occasions.

COMPETITIVE.

The gold medal offered as first prize for three dozen roses, three blooms of each, was won by Messrs. G. and W. H. Burch, Peterborough, with very clean, fair-sized flowers; Messrs. D. Prior and Sons, Colchester, came second, and Mr. G. Mount, Canterbury, third; there was no French competitor. First prize for twelve blooms each of Frau Karl Druschki and Caroline Testout was easily won by Messrs. D. Prior and Sons, Colchester.

In the open class for vegetables, arranged on a space of 20ft. by 5ft., open to French and British competitors, Mr. E. Beckett, V.M.H., Aldenham House Gardens, was a good first with a splendid display of finely-grown material, and a very varied selection. In the amateurs' class, Mr. Beckett was the only competitor, and again he had a fine lot. In the class for twelve kinds of vegetables, Mr. Searle, gardener to the Marquis of Northampton, Castle Ashby, Northampton, was the only exhibitor, and he had a fine display of Webb's specialities.

FRENCH EXHIBITS.

Mons. Chas. Maron, Brunoy, France, showed a group of cattleya and lælia hybrids; L.-c. callistoglossa, L.-c. Canhamiana, and L.-c. Martinetti were the best plants. The

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carnations from the Carnation Cottage establishment, Rue des Bois, Rueil, were not up to English standards, either in form or colouring; nearly all the flowers had broken centres and burst calyces.

Messrs. Millet et Fils, Bourg en Reine, showed a large exhibit of strawberries, representing some sixty odd varieties. A lot of the fruits were still carrying the sulphur used to dispel mildew. None of the fruits were up to British standards, but the display was interesting, because of the many old varieties it contained.

M. G. Compoint, Rue de Landy, St. Ouen, sent a few peaches and nectarines and some very fine asparagus.

TRADE DISPLAYS.

Messrs. Dobbie and Co., Rothesay, contributed a beautiful display of very fine sweet peas that included such good novelties as Clara Curtis, The King, Mrs. A. Ireland, Agnes Eckford, The Marquis, Rosie Adams, Menie Christie, etc. With these were some exquisite sprays of show violas and stands of beautifully-marked pansies, as well as a fine set of splendid new potatoes. Messrs. J. Cheal and Sons, Crawley, Sussex, put up a rockwork display filled with alpine flowers, and flanked by sweet peas, roses, and their new and lovely pink lupin, Lupinus polyphyllus roseus. On the stage the central position was filled by Messrs. G. Bunyard and Co., Maidstone, who had a background of fruit trees in pots, and a foreground of pæonies, delphiniums, and sweet peas. One corner of the stage—a big one—was filled with noble and graceful ferns, set up finely by Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton; cyatheas, davallias, maidenhair ferns, and the newer nephrolepises, were in fine form. The opposite corner was occupied by Messrs. H. B. May and Sons, Edmonton, who had a delightful exhibit of beautifully-grown ferns, in which davallias and the new plumose nephrolepises were the leading features.

The whole of the front of the stage was filled in with pillar, rambling, and garden roses, many in pots as growing, and others cut and in boxes and vases; these were all from Mr. G. Mount, Canterbury. Pæonies and roses, the latter in great variety, made up a fine group from Messrs. Paul and Son, Cheshunt. A group of carnations was set up in a very elegant manner by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, the Malmaison and perpetual varieties, combining with ferns and green moss to make up a charming group. The same firm had a small group of greenhouse plants. The fruit trees in pots, chiefly Peregrine, Dagmar, Dr. Hogg, Royal George peaches, and Early Rivers, Dryden, and Stanwick Elruge nectarines, all splendidly cropped, made a grand and tempting display from Messrs. T. Rivers and Son, Sawbridgeworth. The plums and cherries were also good, and the display was greatly admired. A group of fine double begonias was set up by Messrs. J. Laing and Sons, Forest Hill. Messrs. J. Peed and Son, West Norwood, sent gloxinias in variety. Mr. W. J. Unwin, Histon, Cambridge, had an elegant display of sweet peas that contained Sutton's Queen, Constance Oliver, Etta Dyke, Miss Drayson, Mrs. Hardcastle Sykes, etc.

Near the centre of the hall there were two good exhibits of orchids. One, from Mr. W. P. Bound, gardener to Sir Jeremiah Colman, Bart., Gatton Park, Reigate, was non-competitive. It was finely arranged, odontoglossums and oncidium spikes arching out from the central pyramid over the lælio-cattleyas, rare odontoglossums, masdevallias, and choice cypripediums. The other exhibit was the only competitive one of orchids, and was from Messrs. Armstrong and Brown, Tunbridge Wells, who had a fine Cœlogyne Dayana in the centre, and a front group of Cypripedium bellatulum and C. niveum, flanked by pretty odontoglossums. The base of the central pyramid was filled with Cattleya gigas and odontoglossums.

Miss Hemus, Holdfast Hall, Upton-on-Severn, showed the charming Evelyn Hemus and other sweet peas. Mr. C. W. Breadmore, Winchester, had two groups of fine sweet peas, one each side of the gangway; Mrs. C. W. Breadmore, Prince of Asturias, Dora Breadmore, and Elsie Herbert were very good. A glorious bank of gorgeous cannas, set up by Messrs. H. Cannell and Sons, Swanley, Kent, was one of the great attractions. We have never seen the Swanley firm stage these splendid plants so well. Mr. C. F. Waters, Balcombe, Sussex, had one of his excellent displays of perpetual and Malmaison carnations.

A very beautiful exhibit of sweet peas, arranged in arches, bunches, and vases, was put up by Messrs. E. W. King and Co., Coggeshall, and it was very much admired by the visitors. Mrs. W. King, Evelyn Hemus, Mrs. Hardcastle Sykes, and Phenomenal were all very finely shown. Mr. S. Mortimer, Farnham, Surrey, sent some big vases of good perpetual carnations, and boxes of his fine cucumbers and tomatoes. Messrs. R. H. Bath, Wisbech, set up carnations and roses, and Messrs. G. Jackman and Son, Woking, put up a very fragrant display of roses. Mr. John Barrow, Oadby, Leicester, had a charming exhibit of garden roses, chiefly tea and hybrid tea varieties, all in large bunches; a pretty exhibit. Messrs. S. Bide and Sons, Farnham, had a small group of roses, in which Queen of Spain figured largely. Mr. Tomlinson, gardener to R. Hoffman, Esq., Tower House, Streatham, contributed a group of bold caladiums.

Messrs. T. S. Ware, Lim., Feltham, contributed a grand lot of double tuberous begonias,but one variety—Lady Cromer—stood out far beyond all the other good things. It has immense blooms, slightly frilled, and of the loveliest pink hue—one of the finest begonias ever raised. Mons. Truffaut, Versailles, sent anthuriums. Messrs. G. and A. Clarke, Lim., Dover, showed sweet peas extensively. Messrs. Kelway and Son, Langport, had a quantity of pæonies and delphiniums outside the hall, and Messrs. R. H. Bath, Lim., Wisbech, were extensive exhibitors of pæonies, irises, etc. Messrs. Bunyard and Co., Maidstone, contributed hardy flowers, and Messrs. Jarman and Co., Chard, set up sweet peas, carnations, and roses. Messrs. G. Jackman and Son, Woking, and Messrs. R. Wallace and Co., Colchester, transferred their groups from Westminster. Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, showed cut sprays of ornamental trees and shrubs.

Messrs. Webb and Sons, Stourbridge, had a very attractive exhibit of their special varieties of peas, potatoes, melons, tomatoes, cucumbers, beet, etc., all admirably set up. The Syndicate des Maraichers de en Region, Paris, sent examples of their produce, the short, thick cucumbers, the seakale beet, capsicum, long turnips, endives, and fine cauliflowers attracting a good deal of attention by reason of their novelty. Messrs. Sutton and Sons had a very interesting exhibit of new potatoes, their special varieties.

Messrs. G. and A. Clarke, Dover, set up a big lot of hardy flowers, setting up a most imposing display outside the hall. Messrs. Barr and Sons' pigmy trees were a great attraction, and their pæonies and irises were very bright. Messrs. T. S. Ware, Lim., Mr. W. H. Page, Messrs. Carter Page and Co., London Wall, and Messrs. Fromow and Sons, Chiswick, all had outside displays, the latter showing two handsome groups of Japanese maples.

MEDALS.

Gold.—Sir J. Colman, Bart., Messrs. H. B. May and Sons; Messrs. Dobbie and Co.; Messrs. J. Hill and Sons; Messrs. T. Rivers and Son; Messrs. W. Fromow and Sons; Messrs. Hugh Low and Co.; Messrs. Millett et Fils; Messrs. E. Webb and Sons.

Silver-gilt.—Mr. C. F. Waters; Messrs. R. H. Bath, Lim.; Mr. W. H. Page; Mr. S. Mortimer; Messrs. G. Bunyard and Co.; Mr. C. Page; Messrs. Paul and Son; Messrs. R. Wallace and Co.; Mr. C. W. Breadmore; Messrs. E. W. King and Co.; Mons. Omere Decugas; Messrs. R. H. Bath, Lim.; Messrs. G. Jackman and Sons.

Silver. — Messrs. Hoffman; Misses Kipping; Messrs. J. Cheal and Sons; Mr. J. Harwood; Messrs. J. Kelway and Sons; Mr. J. Barrow; Messrs. Jarman and Co.; Messrs. Sutton and Sons; Hon. Vicary Gibbs; Messrs. Carter Page and Co.; Messrs. J. Laing and Sons; South Australian Government; Mr. M. G. Anderson.

Royal Botanic Society.

JUNE 17.

In place of the great horticultural exhibition which has usually been held in June, a monthly show was held on the above date. The weather was wet and dull in the morning, but finer in the afternoon, and there was a goodly number of visitors.

A large exhibit, remarkable for its excellent quality, was contributed by Messrs. Kelway and Son, Langport, Somerset, and consisted chiefly of herbaceous pæonies, two varieties receiving distinction. These were Fair Maid, a single variety, of a lovely shade of soft pink, the petals slightly incurving, which received a first-class certificate, and Langport Belle, a light pink double form, to which an Award of Merit was made (gold medal).

Messrs. Barr and Sons staged a representative group of hardy flowers, including irises and all the choicer kinds of herbaceous plants with their pigmy trees (large gold medal).

A handsome group of pot and cut roses was exhibited by Messrs. Paul and Son, Cheshunt, who also contributed a group of pæonies. (large gold medal).

Perpetual-flowering carnations were well shown by Mr. S. Mortimer, of Farnham, who had White Perfection, Robert Craig, President, and other leading varieties in good form (gold medal).

Messrs. T. S. Ware ('02), Lim., Feltham, had a most effective display of pæonies, delphiniums, carnations, and begonias (gold medal).

New and choice roses were shown by Messrs. Wm. Paul and Son, Waltham Cross, and these included several boxes of the hybrid fragrant briar Refulgence (A.M.), and a handsome basket of the beautiful seedling tea rose, Hugo Roller (F.C.C.), (silver-gilt medal).

Messrs. John Peed and Sons, West Norwood, staged herbaceous and alpine plants (silver-gilt medal).

A special large gold medal was awarded to Messrs. John Waterer and Sons, Bagshot, for their large and varied collection of rhododendrons.

United Horticultural Benefit and Provident Society.

The monthly meeting of this society was held on June 15, at the Horticultural Hall, Vincent Square, S.W., Mr. Charles H. Curtis in the chair. Four new members were elected. The amount of sick pay was £55 5s. since the last meeting. A member over seventy years of age was put on the benevolent fund, subject to Rule 19, Clause 3. The committee hope that members will do all they can to induce young gardeners to join the society, and so make provision for themselves during sickness and in old age.

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ANSWERS TO CORRESPONDENTS.

INSECTS ON CHERRIES.—L. A., Ealing: We hope to answer your query in our next issue; we have just succeeded in hatching out the eggs.

GRUB-EATEN STRAWBERRIES.—T. H., Kingston: It is always advisable to give a strawberry plantation a good dressing of soot directly after it has been hoed and cleaned preparatory to laying down the straw or long litter that is to keep the strawberry fruits from being splashed with dirt during rain. Unless this is done there is almost certain to be trouble from grubs of various kinds: if the material used for mulching is too old, then the trouble is increased. The fruits sent have been eaten by slugs and by the smaller millepedes, and also, perhaps, by the chafer beetles, but the former are answerable for the chief damage. By means of birch twigs, etc., keep the fruits as far from the ground as possible, and remove and burn all damaged fruits and pests as the work proceeds.

EVERGREEN BERBERIS.—E. L., Twyford: In addition to Berberis Darwini, B. stenophylla, and B. aquifolia, which you already have, there are several other useful evergreen kinds of berberis, notably B. buxifolia (or dulcis), B. congesta Lakiodes, B. japonica, B. Wallichiana, B. empetrifolia, and the handsome but rather tender B. nepalensis.

STRAWBERRY - GROWING DISTRICTS.—S. P. C., Fenny Compton: The chief strawberry-growing districts are those of Southampton in Hampshire, St. Mary Cray in Kent, Wisbech in Cambridgeshire, Evesham in Worcestershire, South Cornwall, Bedford, near Alnwick in Northumberland, and Blairgowrie. All round the Metropolis, in Herts, Essex, Surrey, and Middlesex strawberries are largely grown, but there is not the concentration of effort here as in the districts named.

ROSES FOR CHRISTMAS.—J. A., Gravesend: Please let us know what conveniences you have for forcing.

GRUBS IN CHERRIES.—E. A. A., Farnham: It is not a fact that every English cherry fruit contains a grub, though in districts where various moths and insects are abundant, some of the fruits may be found to contain a grub. But when the cherry trees are well cared for the luscious fruits are perfectly clean. It is not infrequently stated that every blackberry fruit contains a grub. But this is incorrect, though a modest percentage of wild fruits are found to have [illegible] tenant. Good culture and winter spraying are the best means of preventing the occurrence of grubs in apples, cherries, and other fruits.

CULINARY PEAS.—T. T., Birmingham: We are having the matter dealt with, and will report in due course.

DAFFODILS.—W. H. C., Leicester: Lift the bulbs carefully, so that as little damage as possible is done to roots and leaves, and then lay the bulbs in rows in ashes on light soil, give them a watering, and let them remain until the foliage dies away. If this is done the bulbs will not suffer appreciably, as the leaves have practically fulfilled their functions, and the removal of the daffodils will permit you to have a summer display. The bulbs should be laid in in an open position.

ONIONS FAILING.—A. S. J., Purley: The cause of failure is an attack of the Onion Fly, a pest that does a great deal of harm in some districts, especially on light soils. The flies appear towards the end of April or early in May, and soon commence to lay their eggs on the onion leaves, near the ground. As the grubs hatch out they eat their way into the base of the onion bulb, and cause collapse. When full fed, the maggots enter the soil, and pass into the chrysalis state, and in about fifteen days the perfect fly emerges ready to soon commence egg-laying, and provide another brood capable of doing as much damage as the first. All you can do at present is to water the bed carefully (not through a rose) with water, to which paraffin has been added at the rate of a half-pint to three gallons of water. At the end of the season, when the ground is bare, spread a layer of gas lime all over the surface, and when this has laid for about three weeks, thoroughly trench the ground, burying the top few inches of soil in the bottom of the trench.

ACALYPHA HISPIDA.—If cuttings are put in at once, and the plants grown steadily along in the stove, they will form useful material by about Michaelmas. Use a compost of peat and loam with a little dried cow manure and coarse sand. Keep each plant to one stem. Feeding will be necessary when the plants have filled their flowering pots with roots. Syringe freely until the tassels begin to form, then cease. Keep a sharp lookout for thrips and mealy bug; the former disfigure the foliage, and the latter spoil the inflorescences.

TAR ON HOT-WATER PIPES. — J. A., Gravesend. Either by the use of turpentine or paraffin, the tar may be removed from the hot-water pipes without any very great trouble, but great care will be necessary to prevent any of the cleansing material entering the vine border. Place a tin trough under the portion of pipe that is being cleaned, to catch the paraffin, which, of course, can be used over and over again. Ventilate as freely as possible while the work is being done. A piece of strong canvas makes good rubbing material.

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PICKLING ONIONS.—J. W. C., Berkhamsted: Make a good sowing at once on a piece of good open ground. Rake down the surface and tread it firmly, then draw very shallow drills, mere scratches, nine to twelve inches apart, and in these sow the seeds rather thickly. Choose a silver-skinned variety. No thinning will be necessary, but hoeing and weeding must be attended to. This crop very quickly matures.

NAMES OF PLANTS.

W. H. C., Swansea.—The Great Butterfly Orchis, Habenaria chlorantha.

J. F. W., Penryn.—Anthericum ramosum, or graminifolium as it is often called.

S. M. C., Rutland.—The shrub appears to be Piptanthus nepalensis; the other plant is Sedum acre.

G. S. H., Hampton.—1, Pinus pinea; 2, Wellingtonia gigantea; 3, Acalphya Macafeeana; 4, Iresine Herbsti.

M. E. M., Worcester.—1, Prunus Pissardi; 2, Eucalyptus globulus; 3, Oncidium flexuosum; 4, Catananche cærulea.

R. S., Chelsfield. — 1, Thalictrum adiantifolium; 2, Catalpa bignonioides; 3, Colutea arborescens; 4, Orchis maculata.

A. B., Hastings.—1, Diervilla rosea nana aurea; 2, Diervilla rosea; 3, Tradescantia virginica; 4, not recognised; 5, Sequoia sempervirens; 6, Abies pungens glauca.

C. M., North Wales.—The specimens had suffered considerably in the wet moss, in a close tin; 5 is Davallia hirta cristata; and 6, Adiantum diaphanum. The others appear to be garden varieties of Rock Roses, but we were unable to distinguish them.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. June 14 to June 20.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
June 14—Sunday	4 25	58	52	65	55
,, 15—Monday	13 0	59	54	67	42
,, 16—Tuesday ...	3 20	62	55	64	53
,, 17—Wednesday.	0 10	55	55	62	53
,, 18—Thursday ...	13 25	57	51	66	44
,, 19—Friday	13 0	60	54	71	42
,, 20—Saturday ...	12 20	61	53	65	44
Means	8 30	59	53	65	48

Date. 1908. June 14 to June 20.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
June 14—Sunday	—	59	60	57	53
,, 15—Monday	—	58	59	56	33
,, 16—Tuesday ...	0 45	60	60	56	50
,, 17—Wednesday.	—	60	60	57	54
,, 18—Thursday ..	—	58	59	57	35
,, 19—Friday	—	59	60	57	34
,, 20—Saturday ...	—	60	60	57	36
Means ...	(total) 0·45	59	60	57	42

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

MONDAY, June 29.—Isle of Wight Rose Show at Ryde.

TUESDAY, June 30.—Canterbury Rose Show.
Southampton Horticultural Society's Rose Show; two days.

WEDNESDAY, July 1.—Newcastle Summer Show; three days.
Hanley Floral Fete; two days.
Farnham Rose Show.
Sutton Rose Show.
Reading Rose Show.
Royal Society of Arts Meeting.

FRIDAY, July 3.—National Rose Society, Regent's Park.

OBITUARY.

We regret to record the death, on the 15th inst., of Mr. William Neild, head of the horticultural department of the Agricultural College at Holmes Chapel. Mr. Neild was an able lecturer and writer on gardening subjects, and was held in high estimation.

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		s. d.	s. d.
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Arums	per doz.	2 6	4 0
Asparagus	per doz. bun.	1 6	6 0
Berberis leaves	per doz. bun.	1 6	2 6
Carnations	per doz. blms.	1 6	3 0
,, ...	per doz. bun.	8 0	12 0
,, Malmaison	per doz. blms.	8 0	12 0
Cattleyas	per doz.	8 0	10 0
Croton leaves	per bun.	1 0	[illegible] 6
Cypripediums	per doz. blms.	2 0	3 0
Eucharis	per doz.	4 0	5 0
French fern	per doz. bun.	1 0	3 0
Gardenias	per doz.	1 6	3 0
Gladiolus Colvillei	per doz. bun.	7 0	10 0
Gypsophila	per doz. bun.	3 0	5 0
Iris, Spanish	per doz. bun.	3 0	6 0
Ixias	per doz. bun.	3 6	6 0
Lapagerias	per doz.	1 0	2 6
Lilium auratum	per bun.	2 0	3 0
,, candidum	per bun.	2 0	3 6
,, speciosum	per bun.	2 0	2 6
,, longiflorum	per bun.	2 6	4 6
Lily of the Valley	per doz.	6 0	12 0
Marguerites, white	per doz. bun.	3 0	4 [illegible]
,, yellow	per doz. bun.	2 0	3 0
Mignonette	per doz. bun.	3 0	6 0
Odontoglossums	per doz. blms.	2 0	3 0
Pæonies	per doz.	1 6	3 0
Pelargoniums	per doz. bun.	4 0	6 0
Ranunculus	per doz. bun.	5 0	7 6
Roses	per doz.	1 0	6 0
Smilax	per doz. trails	3 0	5 0
Spiræa	per doz. bun.	5 0	8 0
Statice	per doz. bun.	5 0	6 0
Stocks	per doz. bun.	3 0	4 0
Sweet Peas	per doz. bun.	2 6	5 0
Tuberoses	per doz. blms.	0 4	0 6
Violets	per doz. bun.	2 0	4 0

Fruits.

Strawberries, cherries, and Tasmanian apples sell freely, and there is a brisk demand all round.

		s. d.		s. d.
Apples, Australian	per case	7 0	to	12 6
,, Canadian	per barrel	10 0		19 0
,, Tasmanian	per box	6 0		12 0
Apricots	per box	0 9		1 3
Bananas	per bun.	3 0		10 0
Cherries, French	per ½-sieve	2 6		6 0
Figs	per doz.	1 0		4 6
Gooseberries	per ½-sieve	1 6		2 6
Grapes, English (new)	per lb.	1 0		5 0
,, Belgian	per lb.	0 9		1 3
Lemons	per case	8 0		21 0
Melons, Guernsey	each	1 3		2 6
Nectarines	per doz.	3 0		18 0
Oranges	per case	10 0		30 0
Peaches	per doz.	3 6		18 0
Pears, Australian	per box	7 0		12 0
Pineapples	each	2 6		5 0
Strawberries	per lb.	0 3		1 0
,, ...	per peck	3 6		4 0
,, Hampshire	per basket	1 0		2 0

Vegetables.

Business is brisk all through, and there are good supplies.

		s. d.		s. d.
Artichokes	per doz.	2 0	to	3 0
Asparagus	per bun.	1 0		2 0
Beans, broad	per ½-bush.	2 0		2 6
Beet	per bush.	1 3		2 0
Cabbage	per tally	2 6		4 6
Carrots	per doz. bun.	3 0		4 6
Cauliflowers	per doz.	2 0		3 6
Cucumbers	per doz.	1 6		3 0
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	9 0		12 0
Lettuce, cos	per score	0 9		1 0
Mint	per doz. bun.	1 0		1 6
Mushrooms	per doz. lb.	8 0		10 0
Onions, spring	per doz. bun.	1 0		2 0
,, Spanish	per case	5 0		7 6
Parsley	per doz.	1 3		1 6
Peas	per bush.	2 0		4 0
Radishes	per doz. bun.	0 10		1 0
Spinach	per bush.	1 3		1 6
Tomatoes, English	per doz. lb.	3 6		6 0
,, Guernsey	per doz. lb.	4 0		5 0
Turnips (new)	per doz. bun.	3 0		4 0
Vegetable Marrows	per doz.	3 0		4 0

GARDENING ENGAGEMENT.

Mr. Wm. Thompson, late gardener at Rawden Hill House, Arthington, has been appointed gardener to J. T. Forman, Esq., J.P., Wilford House, near Nottingham.

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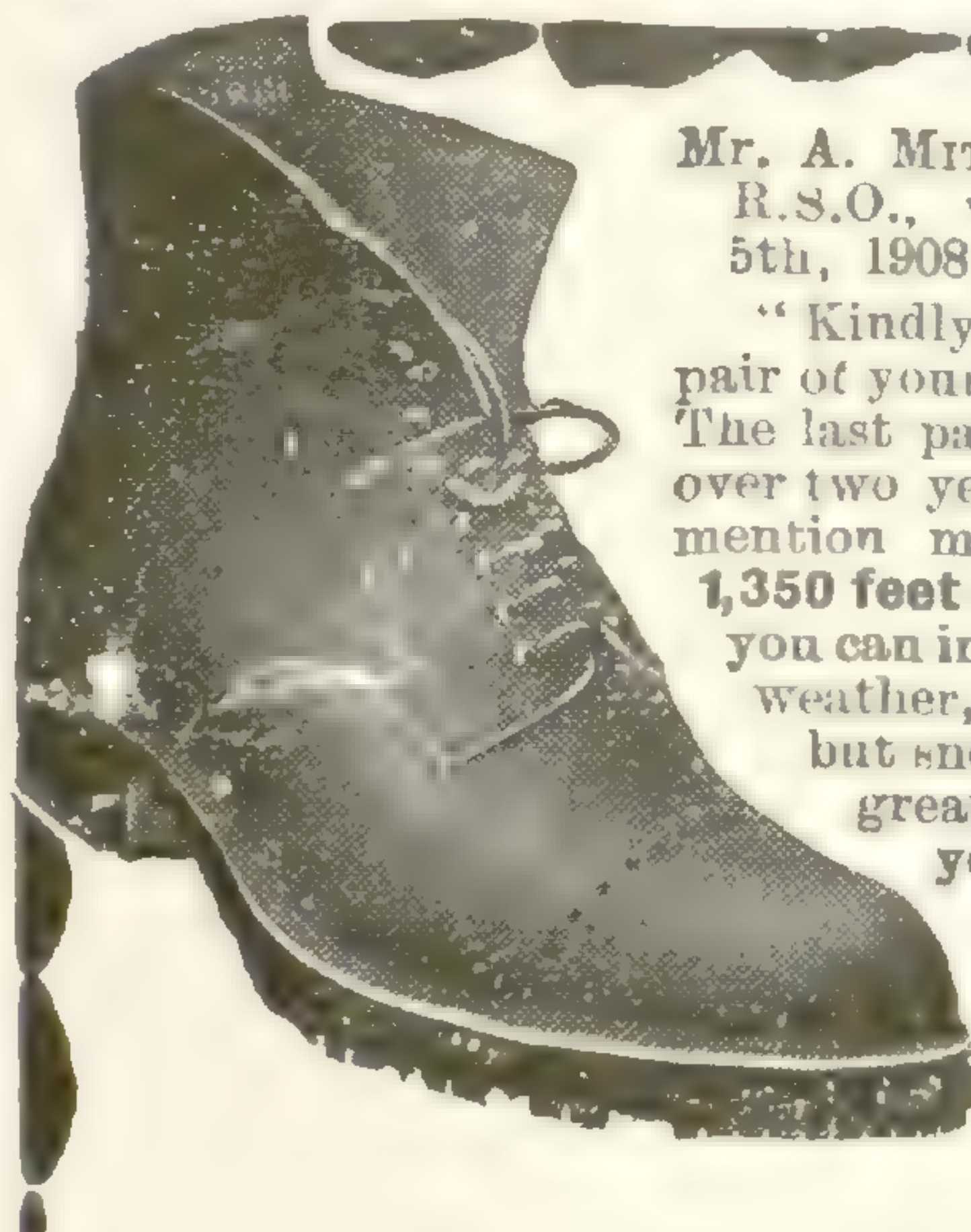

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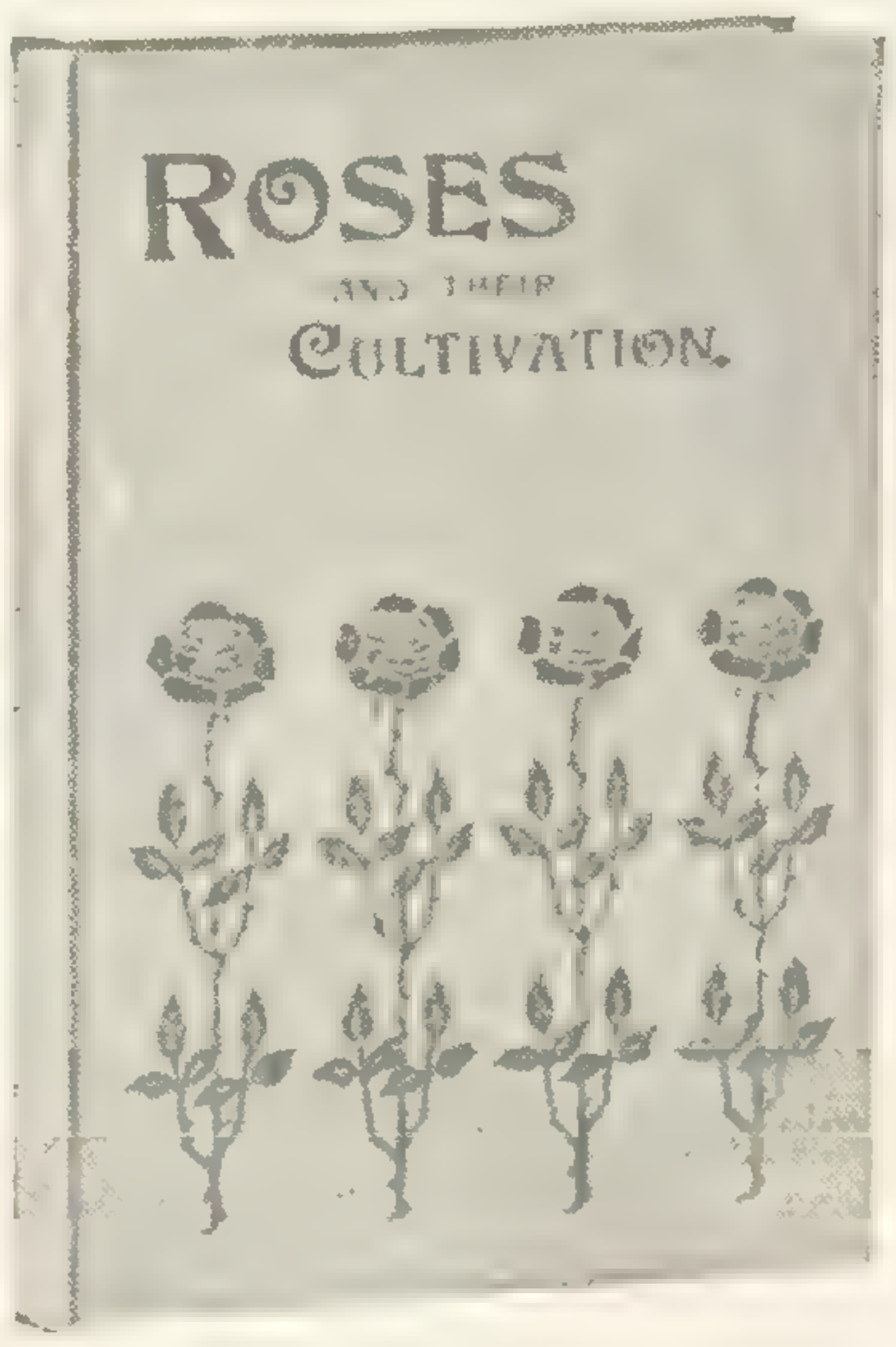

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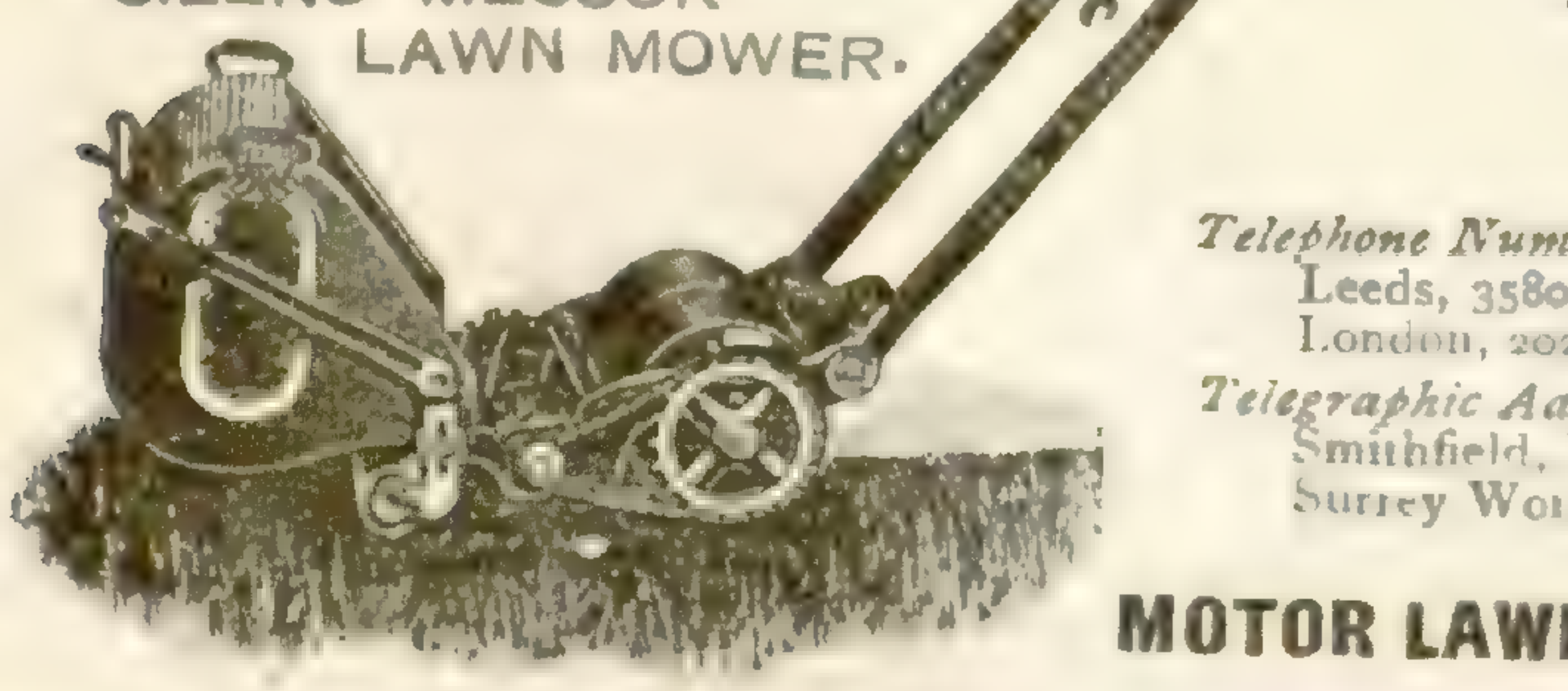

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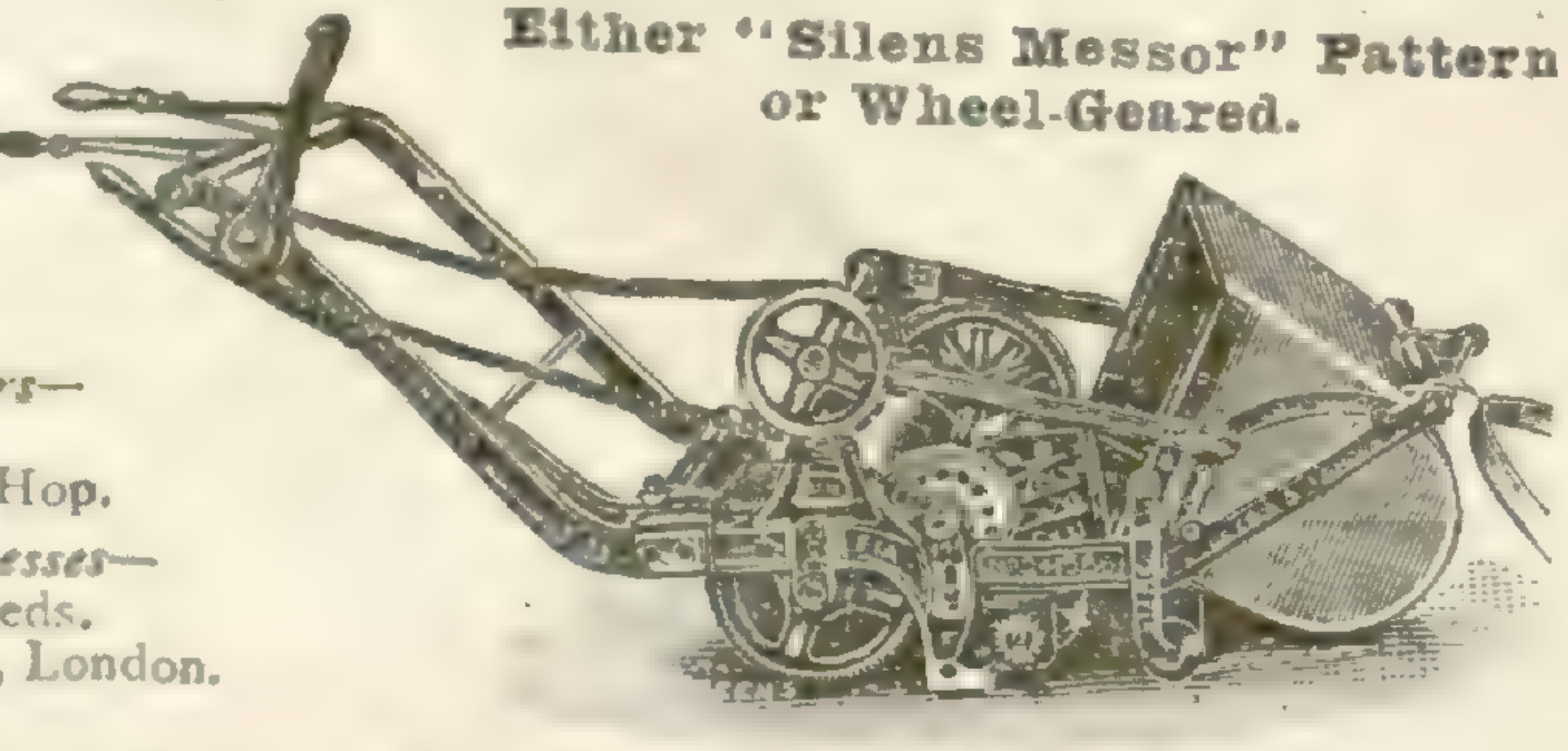

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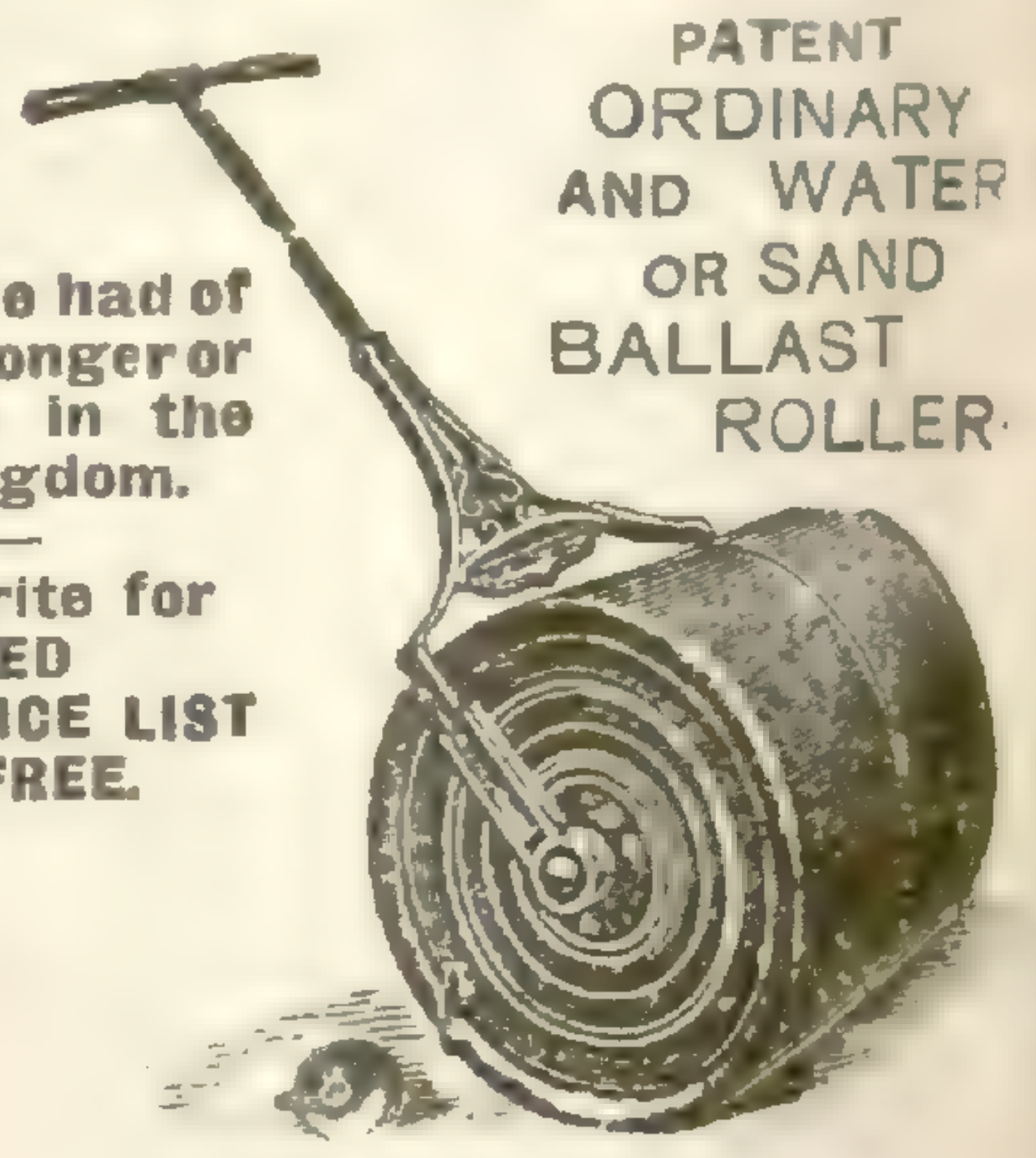

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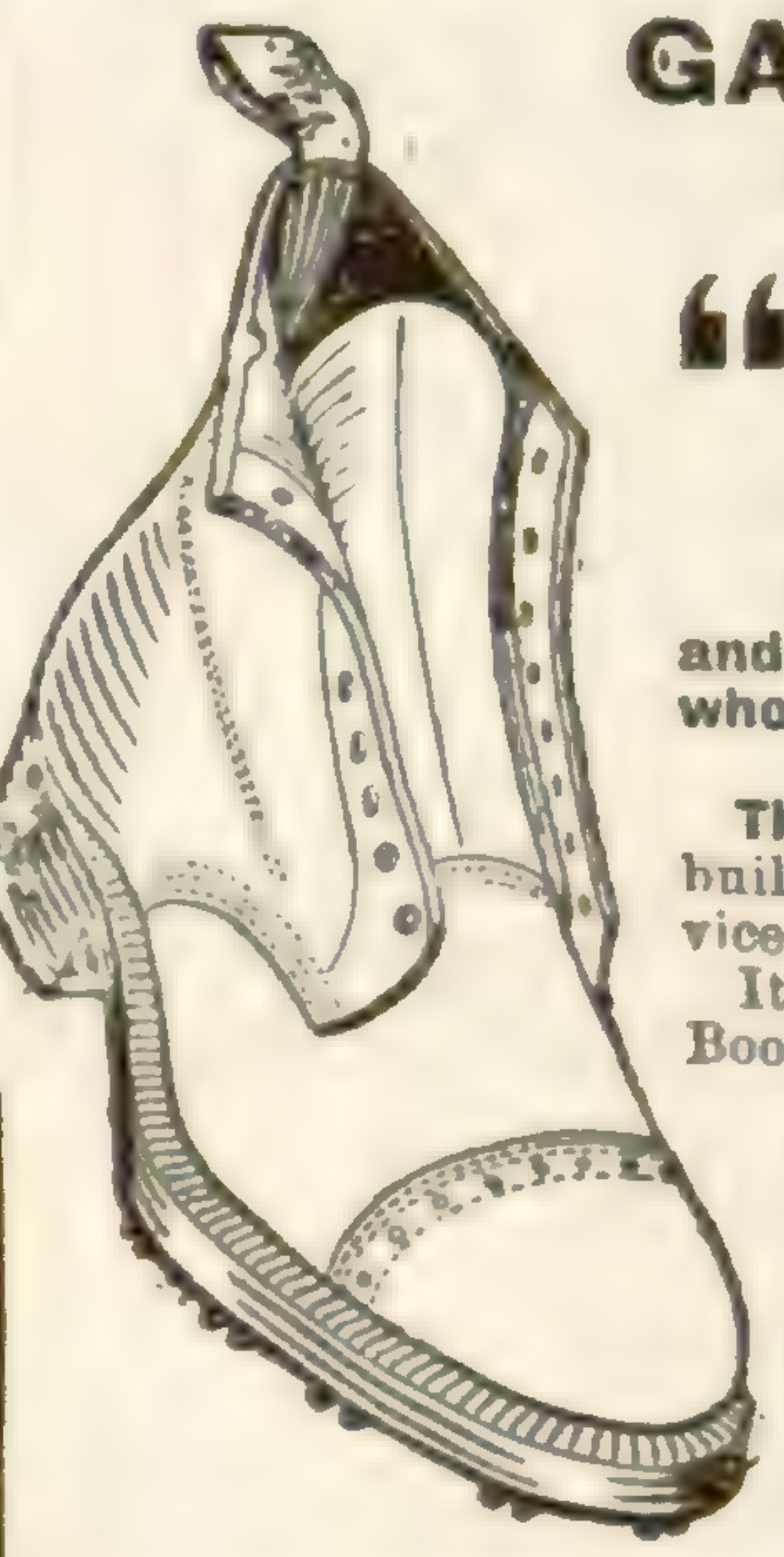

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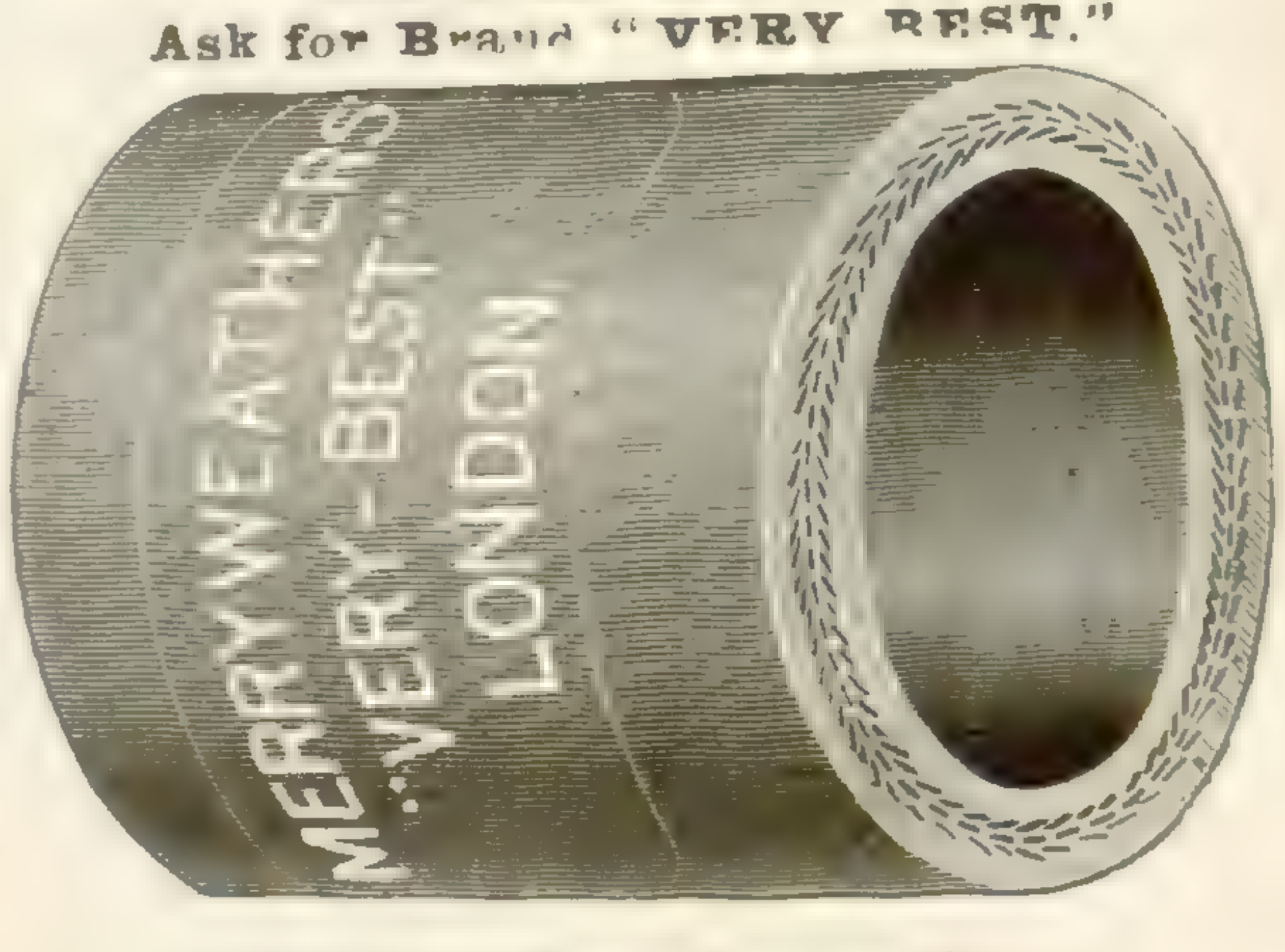

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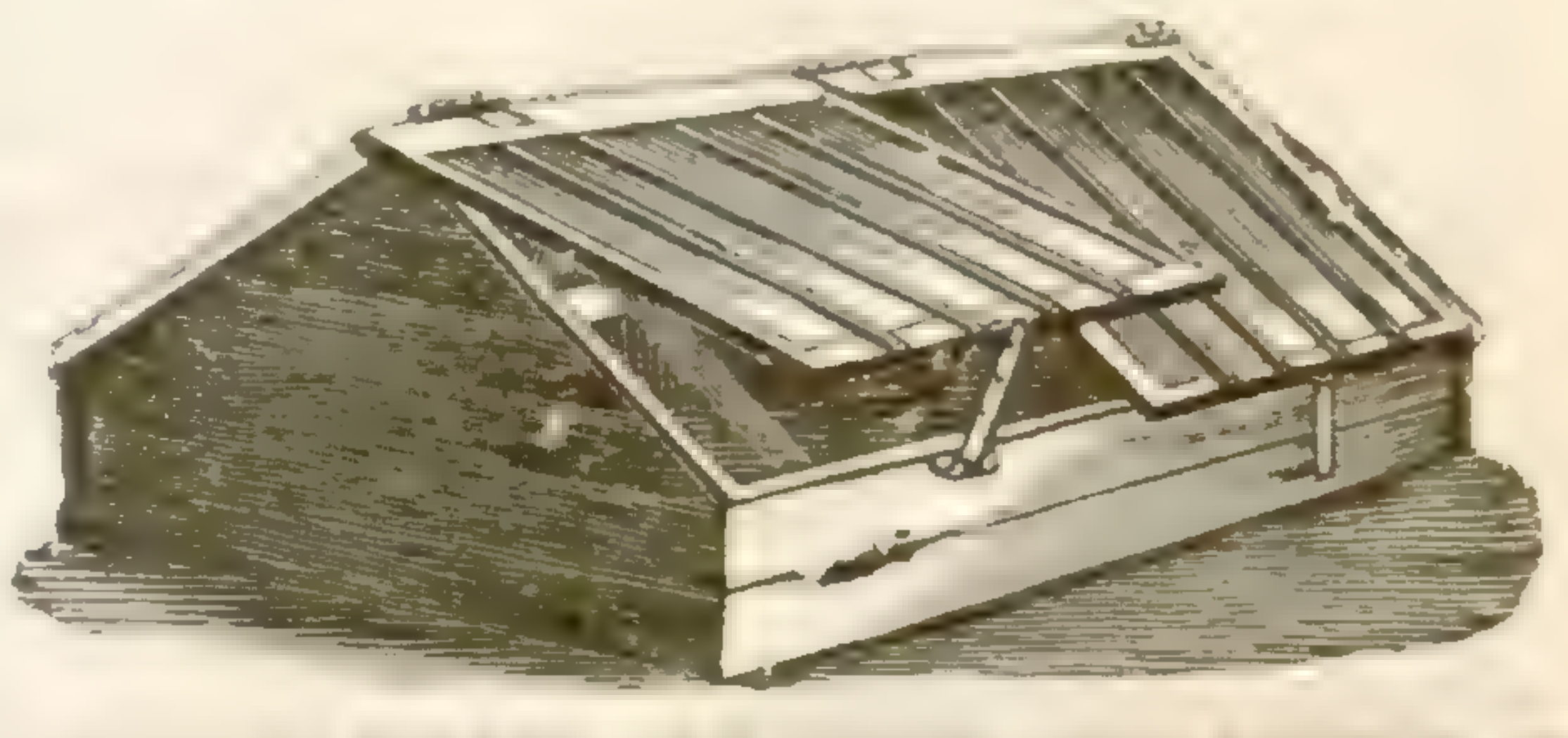

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GARDENER requires SITUATION (Head of two, or good, single-handed), well experienced in all branches; age 26; married, when suited; abstainer. T. AVERY, 28, Southern Road, Basingstoke, Hants.

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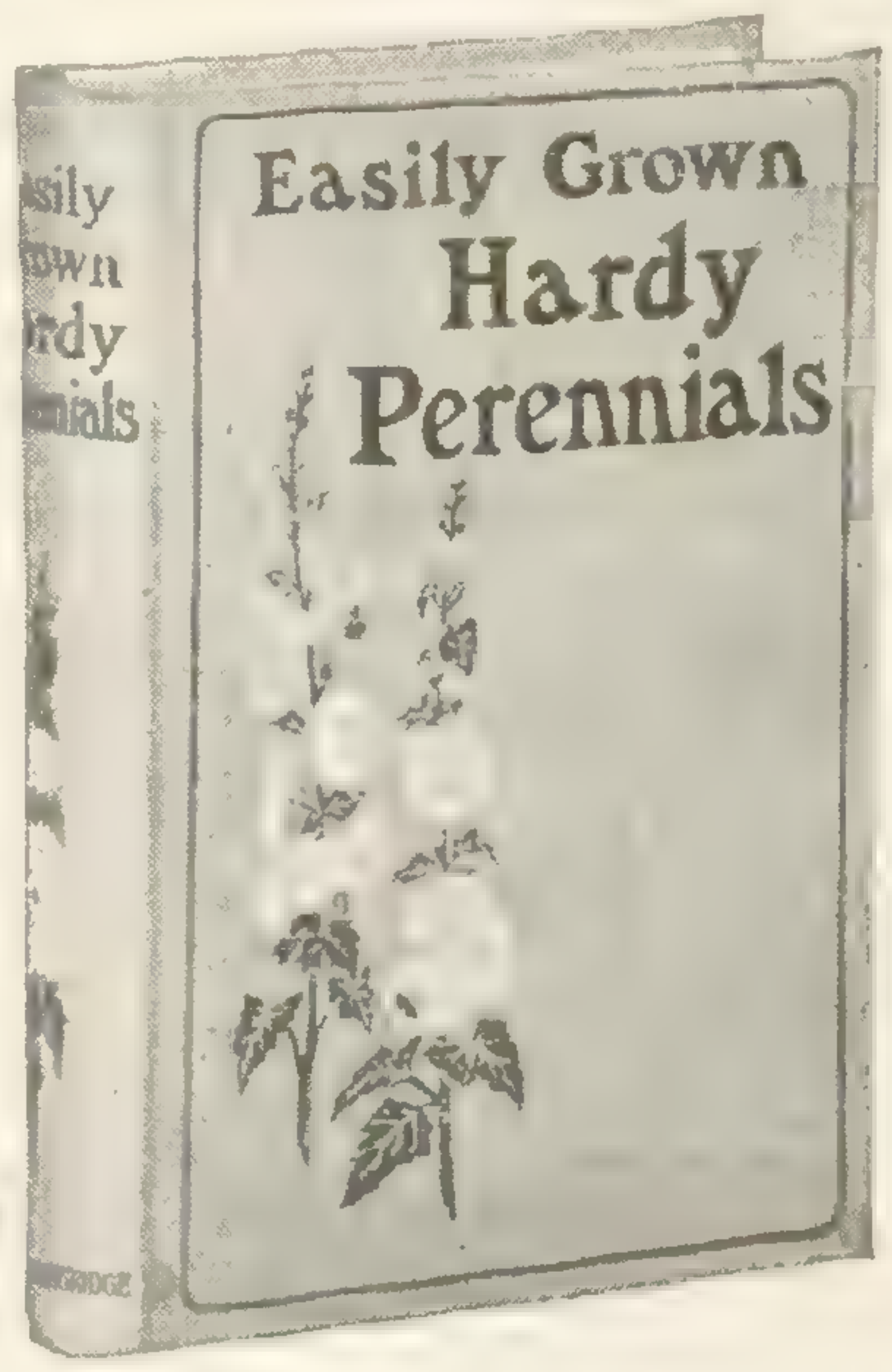

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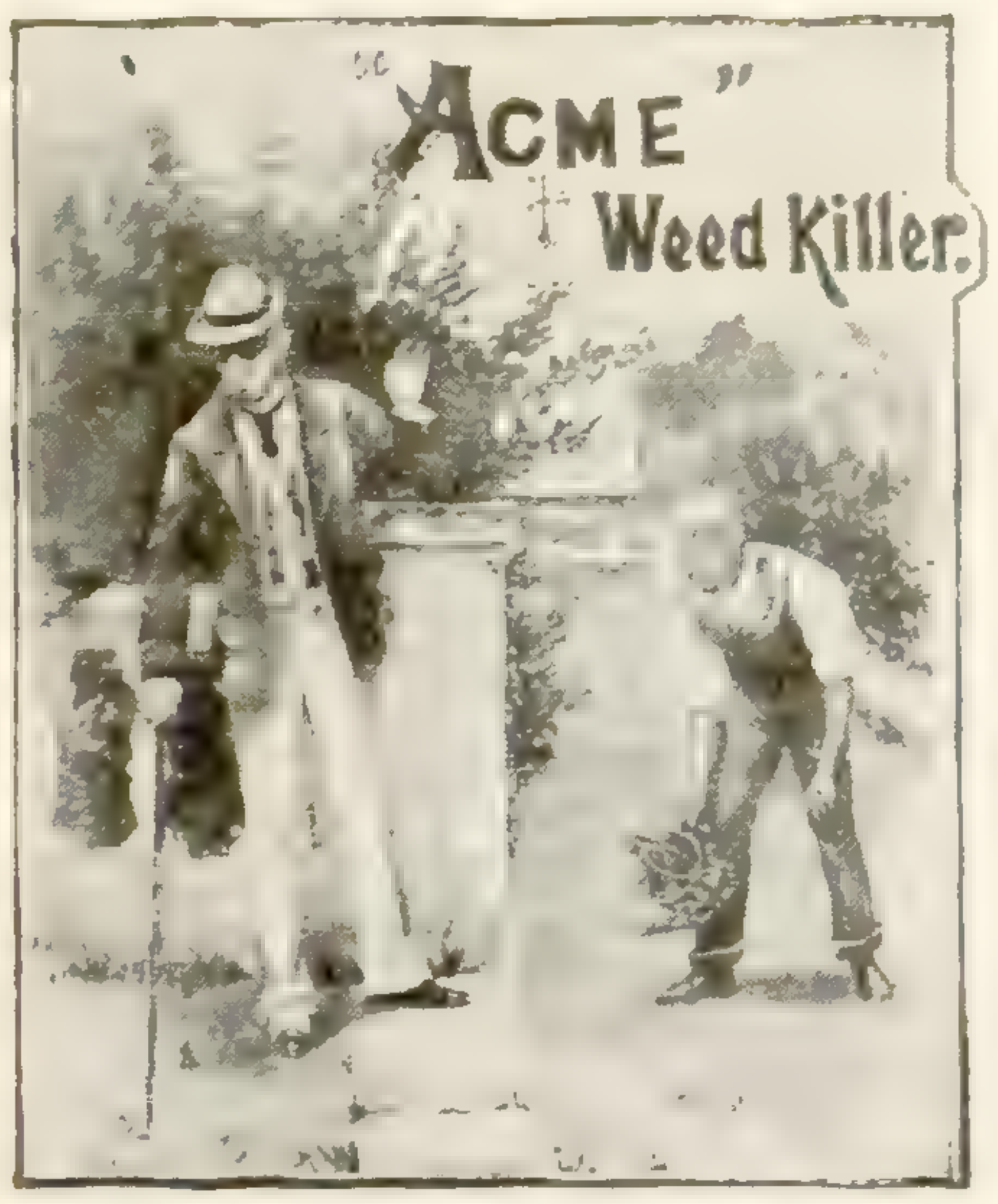

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VOL. LI.—No. 2,853.

SATURDAY, JULY 4, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Looking Round.

At the present moment our gardens are in the full flush of their summer glory, and favoured by bright, warm weather we are able to thoroughly enjoy their varied charms The leaves of the trees are still full of sap, and have that lush green hue so refreshing to the eyes, while affording a shade that is extremely grateful in these hot days. In the long borders we have surpassed the grand displays of hardy flowers so beloved by our grand-parents, and there are great masses of glowing colours, as well as virgin whiteness and soft colours, provided by the flowers, all making up a garden picture the like of which is hardly to be found outside the United Kingdom. We have digged and manured, planted and sowed, watered and mulched, weeded and hoed, tied and staked, and now, in great part, we can enjoy the result of our labours. A fine sense of satisfaction steals over us, and we feel, if we do not say, "Behold it was very good." Whether we own a ducal establishment or cultivate a homely little plot, whether we are employers or employed, this sense of satisfaction and also of gratitude to Nature, to the raiser and collector, may be ours, if good work has been done, and at the right time. But, after the enjoyment of contemplation, let us look around and see whether there is room for improvement in some of the many details that must have attention to ensure successful results. The garden has usually some lessons of more or less importance to teach; some plant needs a sunnier or a shadier position; something was sown or planted too early or too late; colours do not harmonise or contrast exactly as we had hoped; or it may be we have not so closely approached perfection in arrangement for a long continued display as we could wish. Lucky, or perhaps unlucky, is the person whose garden has no lesson to teach, no suggestion of improvement to offer. But we of the craft are ever progressive; we understand the difficulties of soil and situation; we know something of the vagaries of plants, and know that we are not likely to have everything in perfection in our garden however strenuous may be our endeavour. But that knowledge does not prevent us from attempting to continually improve the garden of which we have charge, and "looking round" is one of the greatest helps. Having looked round our own garden and made note of errors and needed improvements for another season, the opportunity for "looking round" other gardens should be taken advantage of. Our pride may suffer in some cases, while in others we may give helpful hints as well as receive them. This is the time to visit public and private gardens, nurseries, and the like, and employers who love their gardens and appreciate the efforts of their gardeners should give the latter every reasonable encouragement for "looking round" gardens other than their own, resting assured that they themselves will be the gainers thereby. Gardens within a comparatively short distance should, as a matter of course, be taken advantage of for "looking round," as they will include many object lessons of a local character that can hardly fail to be of much value, and especially to those who have not been in the district a sufficient length of time to enable them to fully understand the climatic and soil condition peculiar thereto. But "looking round" should not be confined to neighbouring gardens. Those in distant parts of the country should be included in any comprehensive scheme of "looking round." There are in most cases difficulties of time, or of finance, or it may be of both, in including any considerable number of gardens that involve a long railway journey and several days' absence from home. But by taking advantage of the facilities that at this season of the year are afforded for travelling long distances, much may be done that has hitherto been regarded as impossible without an unduly heavy tax on financial resources or time. In the case of distant gardens it is advisable to arrange, as far as circumstances will permit, for "looking round" those enjoying some degree of fame for one or more distinct features, and especially such as are formed by subjects that are of special interest to those who purpose visiting them. There is also a still wider range of vision that might well be taken by those who are specially favoured; we refer to Continental gardens. Our insular prejudices are apt to blind us to the excellencies of the gardens in Germany, Belgium, France, and Italy, but a week or a fortnight spent in these countries would prove the benefit of "looking round," and though we should learn what to avoid at home, we should also learn what to imitate and improve upon. Fortunately most horticulturists whether concerned in private, public, or trade establishments, are willing to allow their fellow-craftsmen to inspect their displays at this season of the year, and as brother gardeners are every ready to discuss the merits or demerits of plants and methods, "looking round" is now, as ever, one of the best means of advancing horticultural education.

HON. M. STUART-GRAY.

The Hon. M. Stuart-Gray, whose fine seat is one of the most noteworthy of the homes of great Scottish families in the neighbourhood of Perth, takes so keen an interest in his beautiful gardens as to justify his being regarded as one of the foremost amateur horticulturists in Scotland. The gardens of Kinfauns Castle, as stated in the account of them which appears on another page, are remarkable for their splendidly-developed conifers and deciduous trees. But until the present owner succeeded to the Kinfauns estates whatever of interest there was in the gardens and grounds of the castle was associated more or less closely with the trees. The gardens had been neglected for a period of sixty years, and to have brought them into their present condition is an accomplishment of which the Hon. M. Stuart-Gray has good reason to be proud. Whether he is proud of what he has done we cannot say, but we know that he takes great pleasure in his gardens, and gives careful attention to any points that may arise with regard to their further improvement. Imbued with a great love for gardening, and possessing taste of a high order, he fully appreciated the importance of carrying out the improvements on the most advanced lines, and did not hesitate to obtain the advice of one of the leading landscape gardeners of the present day, and thus, as he mentioned to us, have the advantage of new ideas. Chief among the many improvements in the gardens of Kinfauns Castle has been the conversion of a stream running through the grounds into a beautiful bog garden, the formation and planting of extensive borders of hardy plants, and making provisions for the cultivation of lilies on an extensive scale. The fame which the charming gardens of Kinfauns Castle now enjoy was exemplified by the visit of some fifty or sixty members of the Dundee Horticultural Association a few days since.

National Rose Society's Exhibition, which was held on the 3rd inst. in the gardens of the Royal Botanic Society will be fully reported in our next issue, and the report will be accompanied by illustrations of the more important exhibits.

School Gardens in Surrey.—Under the direction of Mr. John Wright, V.M.H., the school gardens in the county of Surrey have developed wonderfully during the past few years. The size of the individual plots varies somewhat, while, in the several districts, the range of soil is from heavy clay to almost pure sand. As a rule, the juvenile gardeners show great keenness and interest in the work, but it is wonderful how that keenness is accentuated when the teacher takes more than a passing interest in this special subject. We had the opportunity of inspecting several sets of gardens recently in company with Mr. Horace J. Wright. We saw youngsters learning how to trench, thin out crops, and spray potatoes, and in other cases we saw plots where no weed was permitted to exist, and where broad beans, peas, carrots, turnips, runner and French beans, potatoes, and onions, and beet were all in perfect health. Soil counts for a good deal, and it is quite possible that in some districts the crops resulting are not commensurate with the care expended, but even then, if thorough work has been put in the instructors are satisfied. One set of school gardens attracted our special attention because order, cleanliness, and good culture were so obviously reflected in the excellence of the crops. This set was at the Whiteleaf Schools, Caterham, where the master, Mr. Waterson, with practically no technical knowledge, has encouraged the lads to follow up the general rules laid down for guidance, and his school gardens are worth going a long way to see, as they are a pattern for anyone who is contemplating good work of this character.

Challenge Cups at Edgware.—The Edgware and Little Stanmore Horticultural Society offers no fewer than six challenge cups for competition at its exhibition, to be held at Canons Park, Edgware, on Saturday, July 11. For traders there are a ten-guinea cup for roses and a similar one for sweet peas; and there are a cup open to all amateurs, cup for roses, a cup for local amateurs for roses, and one for sweet peas, and a cup for vegetables open to cottagers and allotment holders.

Holland House Show. — The Royal Horticultural Society's exhibition in the grounds of Holland House on Tuesday next will be specially reported in our issue of the 11th inst.

Wilton House, which was visited by the King and Queen a few days since, is one of the most interesting and beautiful seats in Wiltshire. The mansion is built on the site of the monastery which with the lands attached thereto was given by Henry VIII. to Sir William Herbert, the first Earl of Pembroke, and is of handsome elevation, the garden front being in the Italian style. Wilton House is remarkable for its marbles and pictures, and is rich in historical associations. The grounds are extensive and beautiful, contain many interesting trees of unique proportions, and include an Italian garden of tasteful design.

Sherwood Cup Competition at Holland House Show.—One of the great attractions of the show to be held at Holland House, Kensington, on July 7 and 8, will be the competition for the silver cup presented by Mr. N. N. Sherwood for the best twenty-four bunches of roses, with their own foliage, shown in vases, by amateurs. We may add that Lieut. Charles Godfrey's band will play during each afternoon, and the private gardens of Holland House will be open for inspection both days.

York Jubilee Fete and Gala.—In the present issue we give our readers two other illustrations of the grand Yorkshire Flower Show, and this time present pictures of the fine and bold groups of orchids arranged by Messrs. J. Cypher and Son, Cheltenham, and Messrs. J. W. Moore, Lim., Rawdon, Leeds, who were placed equal first, and not first and second, as we inadvertently stated on page 471. We also learn that besides the awards already announced the committee subsequently awarded a gold medal each to Messrs. Ker and Sons, Liverpool; Messrs. E. Webb and Sons, Stourbridge; Messrs. Sutton and Sons, Reading; and Messrs. J. Peed and Son, West Norwood.

National Sweet Pea Society.—Members of this society have recently received their tickets for the exhibition to be held in Vincent Square on July 24, and the one to be held in Dublin on August 5. The date of the London shown is somewhat late, and will, therefore, give the midland and northern members a good chance of competing successfully with the southerners. With the tickets there have been sent out the classification lists, which members are requested to fill up and return to the hon. secretary, Mr. C. H. Curtis, Adelaide Road, Brentford, together with their answers to the eight questions set on the question-sheet. By such papers as these the interest of every member is sustained, and each has an opportunity of adding to the general knowledge of sweet peas and their cultivation. It was arranged that the members of this society should visit Messrs. Dobbies' seed farm, at Marks Tey, as soon as the sweet peas were in good bloom. Mr. Sherwood, senr., of Messrs. Hurst and Son, hearing from his neighbour Mr. Cuthbertson that the society was coming down to Essex, expressed a wish that the members should also visit his grounds. Arrangements are being made to visit both establishments at the end of next week. Those desirous of joining the party, and who have not already communicated with the hon. secretary ought to do so immediately, as the invitations are being posted to-day (July 4).

British Gardeners' Association Visit to Kew.—The members of the London Branch of the B.G.A. will meet at the main gates, Kew Green, on Saturday, July 4, at four p.m., whence the party will proceed to inspect the Royal Gardens. The arboretum will receive special attention. As a large number of members is expected it will be necessary to divide the party into sections when passing through the glass departments. Several well-known horticulturists will kindly act as leaders. All professional gardeners are invited to attend.

Flowers from Coombe Wood.—Messrs. J. Veitch and Sons very kindly send us a large gathering of flowers of trees and shrubs from their Coombe Wood nursery. The flowers are all more or less beautiful, and of special interest as showing that even at midsummer there are large numbers of trees and shrubs in bloom. The gathering includes weigelas, genistas, styrax, kalmias, escallonias, andromedas, and other kinds in great variety, the exquisitely beautiful Andromeda speciosa cassinæfolia being one of the most noteworthy of the many good things.

The Broom-Rapes form the subject of an interesting article in the "Journal of the Board of Agriculture" for June, accompanied by a coloured reproduction of Orobanche minor, the Lesser Broom-Rape, a species that is often plentiful enough among clover to form a pest. In some parts of Germany this parasite is so plentiful that it has received the name of Kleeteufee or Clover Devil. It is suggested that wherever the plant is seen it should be pulled up, and this may be done with ease, as the broom-rape readily separates from the clover root. When it occurs only in small patches it may be dug out and burnt. If allowed to come to maturity the seeds will be scattered broadcast in large quantities.

Prize-Giving Day at Swanley College.—On Tuesday, July 14, the Countess of Bective will distribute the prizes won by the successful students at the Horticultural College, Swanley. Sir John Cockburn, K.C.M.G., chairman of the governors, will preside, and the proceedings will commence at four p.m. Trains leave Victoria at 2.42 and Holborn Viaduct at 2.37.

Water Lilies at Kew.—During the recent bright and hot weather the pleasant places at the Royal Gardens, Kew, have been those where fine trees lend their grateful shade, or where the water produces such a cooling effect. In the tanks in the herbaceous garden, the end of the big lake, and the small pool by the side of the Cedar Avenue, the water lilies and other aquatics are now very beautiful. The nymphæas are the leading feature, and N. sulphurea, N. Leydekeri liliacea, and the Marliacea varieties, and the large nuphars, like N. polysepala, all lend character to the scene, and are in themselves very attractive and beautiful.

New Park for Norwood.—We learn that as the Lambeth Borough Council has added £1,000 to its previous grant of £4,000, and also as Sir E. Tritton has contributed £1,000, the London County Council will proceed to purchase a piece of land at Gipsy Hill and at once convert it into an open space. The total cost of the estate will be £15,000.

Some Gardens Round Perth—II.

KINFAUNS CASTLE, PERTH.

KINFAUNS CASTLE, the seat of the Hon. M. Stuart-Gray, holds a prominent place among the many important seats in the neighbourhood of Perth, both for its great natural attractions and for the extent, beauty, and high keeping of its gardens. Standing upon a broad terrace, high above the Tay, which here forms such a distinct feature of the landscape, the castle commands a prospect that could hardly have a superior in the United Kingdom; and as seen from the other side of the river forms a conspicuous landmark in its beautiful sylvan setting. As an illustration is given of this stately pile there is no occasion to dwell upon its architectural features, but it may be mentioned in passing that it was built in 1820 by the fifteenth Lord Gray, and that it occupies the site of the old castle. This last point is not without interest as illustrative of the great judgment that was so frequently shown in olden times in the selection of sites for mansions and other dwellings. Surrounding the castle are many fine trees, and on the flanks of Binn Hill, which rises at the back of the castle to a height of many hundred feet, are large breadths of woodland, and numerous specimen trees occupying positions where they were able to make unrestricted growth. At the summit is a tower, eighty feet high, which was built early in the last century by Lord Gray as an observatory, and affords from its top one of the most widely-extended prospects in the Perth district. Some part of the famous Kinnoull Hill is on the Kinfauns estate, and one of the former owners contributed his share to the replanting of that famous landmark.

The gardens, long famous for their finely developed trees, have had their charms and interest greatly enhanced by the present owner, who takes a keen interest in them as in all that relates to his fine possessions, and is not slow to give practical expression to any views he may hold with regard to their improvement. The richly-furnished pleasure grounds are of extreme beauty, particularly above the castle, where the lawns slope on either side down to a babbling brook, and, as elsewhere, contain many fine trees. This brook has been taken advantage of in the formation of a bog garden, wherein may be seen a selection of the finest moisture-loving plants at present in cultivation. The illustration given herewith will afford a good idea of this delightful feature, but it hardly does it justice, as the brilliant sunlight imposed a severe restriction in the selection of the point of view in the taking of the photograph, and the very strong shadows increased the difficulties in connection with the endeavour made to depict the garden and its characteristic vegetation. Higher up are beds and borders of hardy flowers, and in two or three beds were examples of the finest lilies, which were in so robust a state of health as to show that at Kinfauns the cultural requirements are well understood, and that they are so beautiful as to justify strenuous endeavours to grow them in the best possible manner. Still higher up the grounds are many other choice hardy herbaceous plants, growing and flowering in so satisfactory a manner as to prove to demonstration that much care and skill have been brought to bear upon them.

One of the chief glories of the gardens of Kinfauns Castle is formed by the coniferous and other trees, which comprise a large number of the choicest kinds in a high state of development, and deserve a much fuller notice than can now be given them. Flowering shrubs, arranged in groups and otherwise, contribute materially to the attractions of the grounds, and it may be mentioned as a point of some practical importance that the beautiful Buddleia variabilis Veitchi grows vigorously, and blooms profusely thus far north, as evidenced by the fine specimen in these gardens. Among the more noteworthy of the splendidly-developed coniferous trees are Abies Douglasi, Picea Lowi, Araucaria imbricata, Wellingtonia gigantea, Cedrus deodara, C. Libani, Cupressus Lawsoniana, the deciduous cypress, and various thuias. The illustration herewith of a few of the specimens affords an excellent idea of the fine growth of these trees. Chief among the deciduous trees are Turner's Oak (Quercus Turneri), one of the finest specimens in the country; the variegated English oak (Q. robur variegata), a handsome form remarkable for its bright leaf colouring; the Purple Beech (Fagus sylvatica purpurea), and the stately elms, sycamores, and common oaks, some of the latter being of great age.

A GROUP OF FINELY DEVELOPED CONIFEROUS TREES, KINFAUNS CASTLE.

VIEW IN BOG GARDEN, KINFAUNS CASTLE.

The kitchen and fruit gardens are extensive, and furnished with glass structures adapted to the requirements of an establishment of the highest class, and in the several houses there were many proofs of Mr. Farquharson's skill as a cultivator of both plants and fruits.

Seggieden.

Some two miles distant from Kinfauns Castle, in the direction of Dundee, is Seggieden, the charming residence of Mrs. Drummond Hay, with its large and interesting gardens. The mansion occupies a position within a short distance of the Tay, and in front is a geometric flower garden which in each recurring season is embellished with summer-flowering plants that thrive in the district, and produce a rich and tasteful display of colour. There is a tendency to strongly deprecate the use of tender bedders, but when used with taste and judgment, as at Seggieden, the pleasing display of colour produced forms a welcome contrast to the dark hues of the trees with which the gardens are furnished. As in other gardens round Perth there are many fine conifers, and two that are of much interest to those who have devoted any considerable share of their attention to arboriculture, are the examples of the variety of the Scots fir known as Pinus sylvestris hagnensis, which were raised from seed brought by Louden from the Continent, and given to the then owner of Seggieden, or his gardener, but probably to the latter. The trees have long since attained their full size, and the source whence they were derived has due weight in the appreciation shown them. There are also fine beeches, elms, and limes in the grounds, with good examples of some other deciduous kinds.

In a rather distant part of the grounds a large collection of flowering and ornamental-leaved shrubs was formed some years ago, and as they have attained to a considerable size they form a delightful feature. An illustration is given of one of the walks through this part of the grounds, with its border of shrubs on either side, and from this it will not be difficult to gather that the several kinds are in a flourishing condition, and large enough to display to advantage their distinctive

A WELL-FURNISHED SHRUBBERY IN THE GARDENS OF SEGGIEDEN.

characteristics. There are a few coniferous trees in association with the shrubs, and an illustration of the exceptionally fine specimens of Cupressus Lawsoniana erecta viridis is given herewith.

Just outside the pleasure grounds is a portion, about fifteen acres in extent, of one of the old orchards for which the Carse of Gowrie was at one time famous. As in the case of so many of the old orchards in England, the trees are much crowded, and, therefore, not in accordance with the more advanced views that obtain with regard to orchard management. The orchard comprises apples, pears, and plums, and a considerable proportion of the varieties represented are local, and in most seasons produce heavy crops. Last year, when over the greater part of the United Kingdom standard pear trees were practically barren, the trees in this orchard carried heavy crops, many of the branches resembling the proverbial "rope of onions."

Under glass a very interesting feature was formed by the large collection of Cape plants that had been collected and sent home by Colonel Drummond Hay, who has been on active service in South Africa for several years past. Another important feature is the cultivation of the choicer kinds of fruits, such as peaches and nectarines, in pots, in which, as in other departments, Mr. W. Blakley displays skill of a high order.

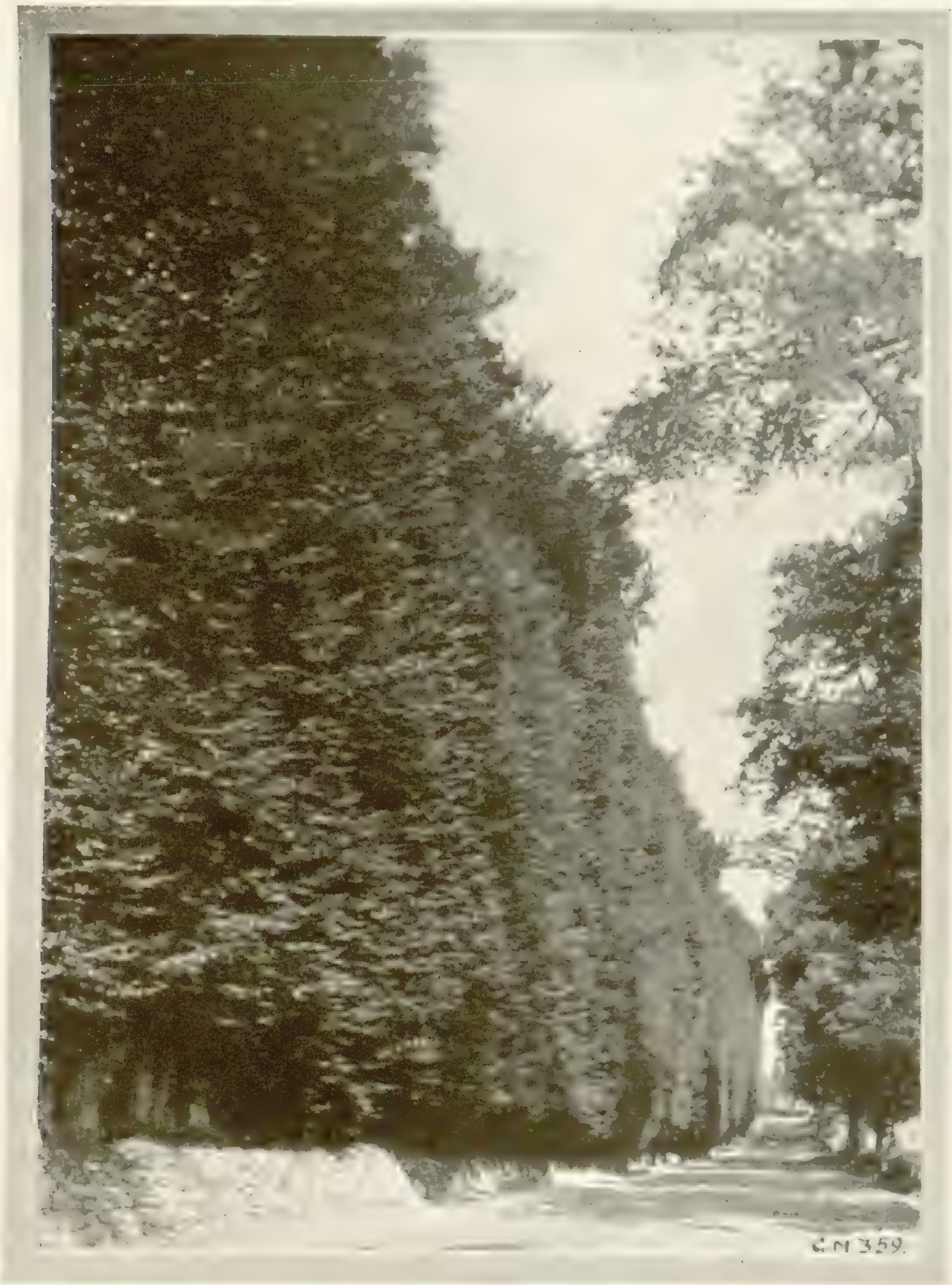
Murthly Castle.

Murthly Castle, one of the Scottish seats of W. S. Fothringham, Esq., has long been famous for its coniferous trees, and assuredly the fame is fully justified, for nowhere in the United Kingdom are they so strongly represented either in point of numbers or stature. Occupying a position on the south side of the river Tay about twelve miles north of Perth, and situate amid scenery of the most charming description, the castle and grounds have attractions altogether apart from those due to the liberal planting of the finest of the then available conifers, which was commenced in the first half of the last century.

The grounds of Murthly Castle contain fully six miles of grass walks and drives, and these were commenced by Sir John Drummond Stewart, who succeeded to the estates in 1827, and built the new castle. His successor, Sir W. S. Drummond Stewart, continued the work of making drives, and proceeded to beautify the grounds by planting on a large scale the finest of the coniferous trees that were then introduced to Great Britain. The Douglas fir would appear to have been regarded with much favour by Sir William and some of his successors, for there are a large number of trees both in the grounds and the woods. Where grown in the latter, and under the conditions most favourable to the production of timber, the trees have formed straight stems, and timber derived from them has been found to possess great durability. One of the most beautiful features within the grounds is the magnificent avenue of this fir, planted

CUPRESSUS LAWSONIANA ERECTA VIRIDIS, SEGGIEDEN.

about 65 years ago, and the trees approaching 100 feet high, and with a proportionate spread of branches. Leading from the old castle to the new chapel is an avenue of Araucaria imbricata, and this, if not equal to the one formed by the Douglas fir, is so remarkably good as to constitute a notable feature. Another avenue certainly not less interesting than those mentioned is that formed by the English yew. At the upper end of this avenue, or yew walk as it is commonly designated, are trees between 300 and 400 years old, and forty or more feet high, and with boles of quite exceptional size. The lower part of the avenue is formed with younger trees that are about twenty-five feet high, and therefore of large size as compared with yews that are generally met with. In other parts of the grounds there are other yews of an age fully equal to the oldest in the avenue, and one of the largest has a head exceeding 200 feet in circumference.



A FAMOUS BEECH HEDGE ON THE MEIKLEOUR ESTATE.
Height 100 feet.

To refer, however briefly, to any considerable proportion of the magnificent specimens that are met with in a walk through the principal drives would require more space than could well be spared, and, notwithstanding the interest associated with them it must, for the present, suffice to enumerate a few only of the most noteworthy. The piceas are very strongly represented, and of these mention must be made of P. sitchensis, a distinct and handsome tree of vigorous growth, and over 100 feet in height; P. Pattoniana (P. Hookeriana), one of the most beautiful of coniferous trees when growing vigorously as is the case here, is well represented, and among the specimens is one with a graceful pendent habit and a glaucous hue. The Servian spruce (P. Omorica), one of the most promising coniferous trees of recent introduction, is so well advanced as to bear cones and indicate its distinctive characteristics. Among the more noteworthy of the abies are A. Albertiana, A. Mertensiana, A. nobilis, the last-named one of the most handsome of the several species, and the numerous trees in the grounds are remarkable for their great height and splendid colouring. The largest specimens are 90 feet or more in height, while some seedlings planted 20 years ago are now 45 feet high and making growth at the rate of 30 inches annually. A. grandis, a species hardly less beautiful than A. nobilis, and a great favourite in Scotland, as evidenced by the many fine specimens in gardens north of the Border, and A. sachalinensis, a species but little known owing to the difficulty in growing it satisfactorily. Interesting also are the fine examples of Cryptomeria japonica spiralis, one of the most distinct of the Japanese conifers, Juniperus recurva, and Sequoia gigantea. Among the newer pines, Pinus Ayacahuiti, P. pentaphylla, and P. Koraiensis were noticed in a thriving state. One might use many adjectives in making reference to the conifers at Murthly Castle, but as the limit of space is reached, it is not possible to do more than say that they are all remarkable for their great height, the splendid development of the branches, and for the skill exercised in their management by Mr. J. Laurie, who has long had charge of the Murthly Gardens.

Meikleour House.

Meikleour House, the Scottish seat of the Marquis of Lansdown, lies some seven or eight miles to the north of Perth, and is readily reached by train to the station on the Aberdeen line of the Caledonian Railway Company, which is between one and two miles distant. The more pleasant way would probably be to drive out from the city, and take the famous beech hedge which forms so distinct a feature of the estate on the way. The mansion is reached by a drive traversing a finely wooded park, and occupies a charming position on the north-east side of the Tay, a short distance above the point where the Isla mingles its waters with those of this fine river. Of quite modern date, and in the style of architecture known as mixed French, its handsome elevation and stately proportions appear to great advantage in a setting of splendidly developed trees and wide-spreading lawns.

It would be possible to enumerate many handsome trees of goodly proportions that occupy positions in the grounds immediately surrounding the mansion, but the most remarkable is perhaps the ancient silver fir which, rising to a height of 100ft. or more, and well furnished to the ground, contributes greatly to the attractions of the arboreal features. On the lawn are a few bold masses of rhododendrons which grow luxuriantly and bloom with great profusion, and of these the most notable is the group of Rhododendron caucasicum, which annually blooms so freely as to resemble during the season of flowering a mountain of snow. I had intended giving an illustration of the mansion and grounds to show the fine effect obtained from breadth of treatment in the arrangement of large grounds, but an accident to some negatives taken here and at Ballathie renders it impossible to do so.

A feature of considerable importance in the grounds is the fine avenue formed by beech, lime, and sycamore trees, which, commencing at the far side of the lawn is immediately opposite the centre of the mansion. From the mansion and that part of the lawns in line therewith a pleasing view, looking down the avenue, is obtained of Dunsinane Hill in the distance, while from the other end a good view is obtained of the mansion.

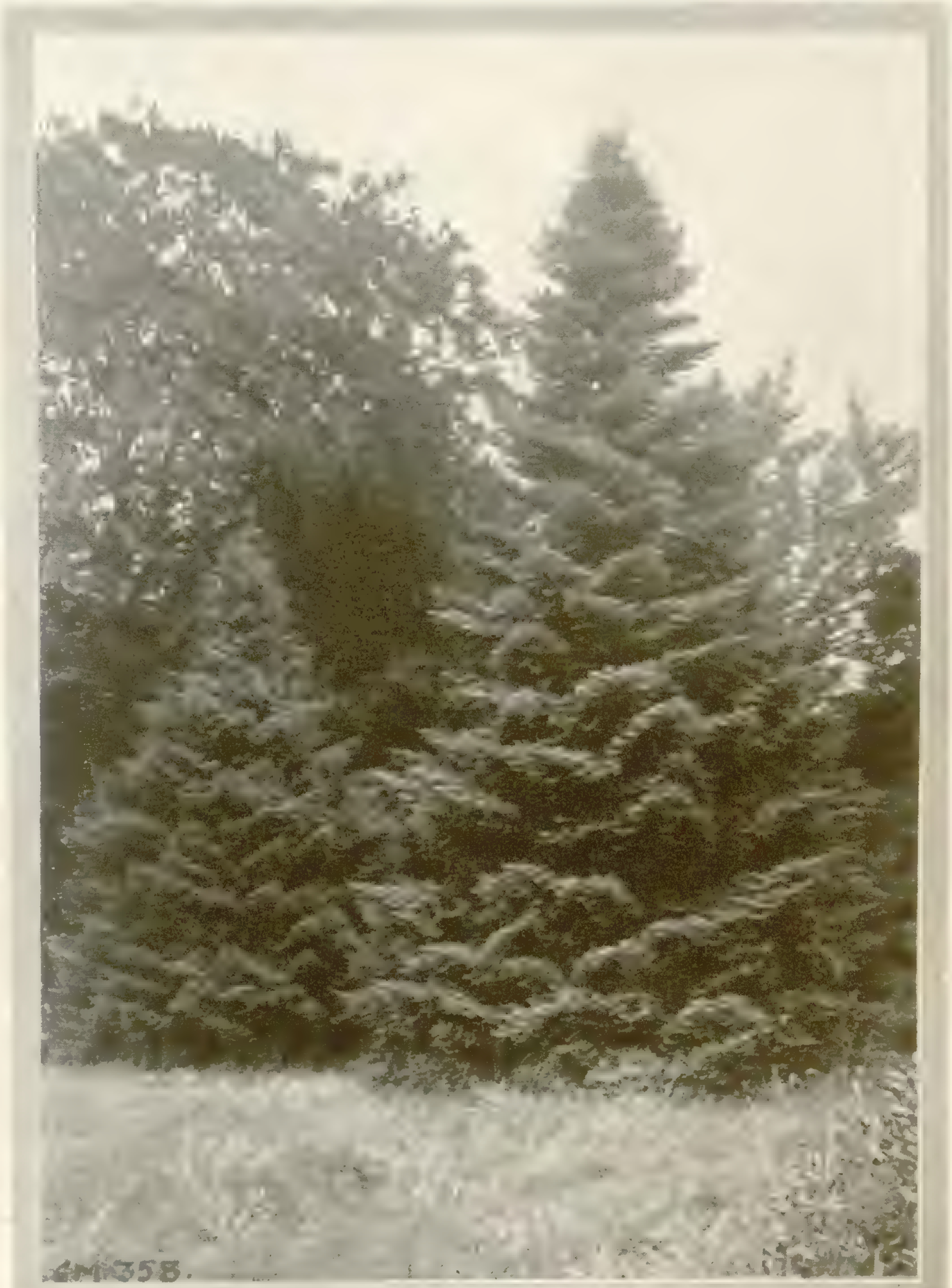
In the park are many deciduous and coniferous trees of noble proportions, and one might linger long in enjoying their distinctive charms. Mr. Donald Matheson, the estate agent, who has occupied his present position for about forty years, and has the direction of the gardens as of other parts of the estate, evidently developed early in life a strong affection for beautiful trees. Hence we find that quite early in the seventies he was busily engaged in planting some of the finest of the coniferous trees in the park and pleasure grounds. On the margin of the former there is a magnificent group of Abies Douglasi formed with trees planted by Mr. Matheson in 1872, and now over 100ft. high, while sweeping the ground with their graceful branches. It is not without interest that the trees were planted in the months of April and June, and that they have increased in height at the rate of nearly three feet annually. Here also is a group of exceptionally fine trees of Picea Webbiana, ranging from 50 to 60 feet high, and handsome specimens of P. Pinsapo, two of which are herewith illustrated, and other of the best kinds; P. nobilis, is represented by trees 60ft. in height and perfect in contour, and remarkable for their fine colour, and with reference to the latter point Mr. Matheson said that, according to his experience, grafted trees were invariably the brightest in colour. Highly interesting also are the specimens of the horizontal form of the common yew. This grows quite flat, and forms at Meikleour House table-like specimens about three feet in height and eighteen feet in diameter. This variety was found by Mr. Gorrie and distributed in the usual course, but it would not appear to have received much attention from the general body of planters.

Within the kitchen garden we find long ranges of houses devoted to grapes, peaches, and nectarines, and these are so admirably furnished with vines and peach and nectarine trees that it is not easy to resist the temptation to refer to them in detail. Among the peaches is a large tree of great age, bearing large fruits with firm crimson flesh, and remarkable for their high flavour, and near it is a tree of the Elruge nectarine that has occupied its position during the past 36 years, and possesses the vigour and productiveness of a tree ten or twelve years planted. Barrington and Stirling Castle peaches, and Dryden, Lord Napier, and Humboldt nectarines are also held in high favour. Of quite exceptional merit are the crops of grapes, both Muscats and the early and late varieties being remarkable for their fine colour and high finish, as well as for weight of bunch. It was interesting to note how much heavier were the bunches of Madresfield Court on the lower part of the canes, as compared with those higher up.

Of special interest is the great beech hedge which proves so great an attraction to the Scottish tourists, and it is not surprising it should do so, for no such hedge has a place in any other part of Great Britain. The hedge is on the road between Perth and Blairgowrie, and has a length of 510 yards and a height of 100 feet. It was planted in the year 1715, or nearly 200 years ago, and not as sometimes stated about the middle of the eighteenth century. To keep the hedge in order it is pruned every seven years, and to accomplish this task is by no means an easy matter. For the purpose a strong ladder 35 feet high, on wheels, is provided, and this is fitted with a platform large enough for two men to stand, and, indeed to readily move about. To prune the hedge to the top of the ladder is an easy matter, and above this to a height of 45 or 50 feet the pruning is done with an averruncator worked by two men, one man guiding the cutter and the other having charge of the string by which the cutting leverage is applied. Above the point reached by the averruncator the hedge is pruned by foresters, who ascend the trees armed with light billhooks and provided with stout straps that, when passed round their bodies and the trunks of the trees, obviate all risk of accident. Mr. Matheson has carried out the arrangements for pruning them five or six times, and on no occasion has there been the slightest accident.

Ballathie.

This, the charming residence of Colonel E. R. S. Richardson, is within a short distance of Meikleour House, and occupies a delightful position on the banks of the Tay. The grounds are extensive and exceedingly beautiful, and it is with much regret that the unfortunate accident mentioned previously should have prevented me giving illustrations of some of the more distinct features. The drive by which the mansion is reached is over a mile in length and is admirably furnished on either side with finely grown limes and conifers. Very beautiful is the entrance lodge built in the Swiss style, and the visitor cannot well fail to appreciate the taste shown in the selection of the design and the site for the building. Especially deserving of mention is the success which has been achieved in the grouping of coniferous trees alongside the approach to the mansion, and the charming effect that has already been created. The trees are as yet comparatively young, but they have made sufficient progress to develop their distinctive characteristics and to indicate how liberally they will contribute to the attractions of the grounds at no distant date. These well thought out and excellent planting effects have been produced from Colonel Richardson's own ideas, and under his personal supervision, and the results achieved amply demonstrate his rare judgment and good taste, and show how keen is the interest he takes in his beautiful gardens.



MAGNIFICENT SPECIMENS OF PICEA PINSAPO, MEIKLEOUR HOUSE.

Without attempting to deal in detail with the arboricultural features of Ballathie, it may be mentioned that they include several yews whose age is reckoned in centuries, and a splendidly developed specimen of the golden Douglas fir (Abies Douglasi aurea), whose foliage presents a striking contrast to the hues of the more sombre coloured trees with which it is associated. Contiguous to the mansion is a large geometric flower garden, the beds cut in the grass, and the planting singularly effective and tasteful. Mr. J. Davis, the able gardener, is especially successful in the combination of flowering and foliage plants, and the colouring of the scheme, while not wanting in richness, is not too strong, and the general effect is extremely pleasing. Intersecting the kitchen garden is a broad walk flanked by borders of proportionate width, and those devoted to annuals form a delightful feature. It is evident that Mr. Davis is fully conversant with this interesting class of plants, for their vigour indicates the provision of well-tilled soil, and they are given ample room for their full development. Several long ribbon borders, planted with suitable subjects, constitute a feature both tasteful and effective, and at once attract the attention of visitors. These borders have as a background an espalier fence, and, furnished with several hundred cordon apple trees, the fences form an excellent screen to the vegetable quarters, and yield liberal supplies of fruit large in size and of high quality.

The plant and fruit houses constitute a strong feature of the Ballathie Gardens, and the skill with which they are managed is sufficiently indicated by the high position Mr. Davis invariably occupies in many of the more important classes at the Edinburgh and Perth exhibitions. On many occasions the premier award in the class for groups arranged for effect at the exhibitions of the Royal Caledonian Horticultural Society has been made in favour of Mr. Davis, who has much taste in arrangement as well as skill in cultivation.

Pitfour Castle.

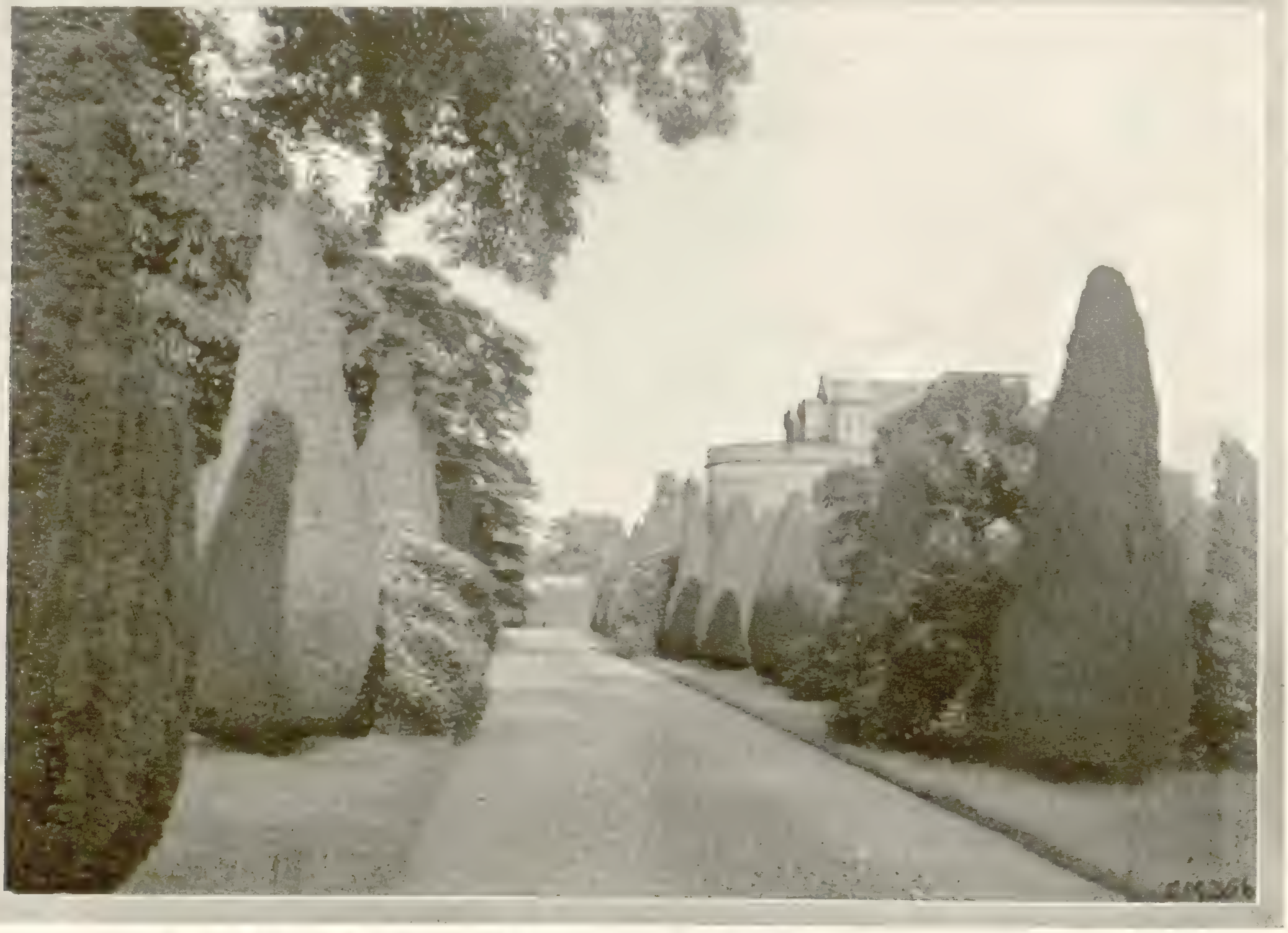
Leaving Seggieden and continuing in the direction of Dundee for three miles or so, the gardens of Pitfour Castle, the seat of Sir E. A. S. Richardson, Bart., are reached, and within them the visitor will find much to engage his attention, whether he be interested in fine trees, beautiful flower gardening, or the cultivation of fruit in the open and under glass. The mansion is of handsome elevation, and possesses in a marked degree the air of stateliness that pervades so many of the Scottish residences of the highest class. It has a delightful environment, and commands scenery less bold perhaps than some in the neighbourhood of Perth, but of surpassing beauty.

One of the most distinct and interesting of the several features that attract the special attention of the visitor is the large and beautiful hardy plant garden. Instead of the hardy herbaceous plants and other perennials being grown in borders alongside the principal walks, in the kitchen garden, and in borders skirting the lawns, in common with the practice that so greatly obtains, these attractive subjects are grown in large beds and in groups in a spacious garden wholly devoted to them, and one can hardly fail to appreciate the change. With the herbaceous plants are associated groups of shrubs, specimen trees, and beds of roses, so that an interest is maintained in the garden from early in the spring until late in the autumn, and the effect produced at those periods in which the flowers are most abundant is such as to at once appeal to the plant lover. In a garden of limited dimensions this plan of providing for a representative collection of hardy perennials would be difficult of execution, if not practically impossible, but there are many establishments where an enclosure of this description could be readily made, and a quite new and charming feature provided. We need not give the names of the herbaceous plants, of the roses, or of the trees and shrubs, because as so readily understood they include all the best in their several sections, and an enumeration of these would require considerable space, and probably prove somewhat tedious. On all sides were proofs of Mr. Shields' skill in the cultivation of hardy perennials, and the roses display such vigour as to suggest that their roots have the advantage of deep, well-tilled soil.

Leading from this garden to the mansion is a broad walk with cupressus and variegated hollies on either side, of such large proportions as to produce a very distinct effect. The trees are about twenty feet high, and the cupressus and hollies are arranged alternately, the latter being of pyramidal form and remarkable for the brightness of their leaf colouring. On the western side the mansion is approached by a carriage drive, which is flanked by lines of Irish yews of large proportions and perfect in contour, as so well shown in the illustration thereof. In the grounds are fine specimens of Abies nigra, A. Douglasi, Cedrus atlantica, Cedar of Lebanon, Picea cephalonica, P. Pinsapo, P. Lowi, and P. Webbiana.

In the large kitchen garden was much to interest, both in the open and under glass, and while it is not possible to deal with this important department in detail, it must be mentioned that the cultivation of pears as cordons is carried out with much success by Mr. Shields. The trees are admirably formed, in the best possible health, and in the majority give an abundant yield of excellent fruits. Especially deserving of mention also was the somewhat formally arranged border of annual and other flowers, which produced a bright display of colour, and was of value for its distinctness.

George Gordon.



CARRIAGE DRIVE WITH AVENUE OF IRISH YEWS, PITFOUR CASTLE.

THE ALTAI ROSE.

One of our earliest, and also one of our most charming wild roses is that from the Altai Mountains, sometimes called simply Rosa altaica, but more correctly designated R. alpina altaica. A good bush, almost covered with its large creamy-white flowers, is a picture of beauty indeed, and when at its best is certain to command the commendations of all who love the rose, even if more devoted to the double than the single roses. It makes a good plant for a low wall, but is even more beautiful when seen in bush form, when its elegant branches and hosts of flowers are displayed to much better advantage. If I recollect aright, it was at Glasnevin that I saw it first, and it was added to my garden at the earliest opportunity, and has been a cherished rose ever since. It is fairly vigorous when established, and I have met with plants at least six feet high, but it can be kept dwarfer by pruning in the ordinary way. Still, I think these wild roses are much finer when allowed to grow into large proportions, and as R. altaica will thrive in almost any position, space can surely be found for it to have full development somewhere. S. Arnott.

Horticulture at Turin.—It is proposed to hold three horticultural exhibitions of an international character at Turin in 1911. The exhibitions will be held under the auspices of the Royal Horti-Agricultural Society of Piedmont, and, as at present arranged, they will take place in May, September, and October.

BEAUTIFUL GARDENS OF SHADOW.

It is in the heat of summer that shaded gardens show at their best, and are of value far above that of sun-scorched expanses—a fact we are too apt to forget in those days of winter and spring, when we should raise and purchase plants to adorn them. Again, the reason why many shady borders are fatal to plant life is that the soil has become sour through want of attention during the blossomless seasons. Land in shadow needs very frequent surface forking and weeding to encourage it to throw off that moisture which sunshine cannot conquer. The incorporation of sharp sand in considerable quantity is excellent, and leaf-mould should also be employed, both as an addition to the soil and a thick protective mulch upon it, for heavy rains filter through this light material, instead of beating earth hard and lying in pools upon it. A little study of these matters, and the work that they suggest, will enable a gardener to achieve fine foliage and floral results even where no sunshine rests.

A last resource, of infinite service where the ground is naturally wet and heavy, is to strew large and smaller rocks in picturesque groups over a bed or border; another plan is to turn a bed into a mound of soil, held up by scattered rocks, and change a flat border into a one-sided bank in the same style, sloping it from the background of wall or fence. These methods will result in a well-drained soil. It is not only as a preparation that shaded ground should be frequently surface-loosened, but the attention should be paid it when plants are in place; even a single root of Solomon's Seal, or London Pride, if carefully watched, will be seen to respond to this kind of good culture, becoming larger and greener in the course of a few weeks. As an edging for a large shaded border London Pride cannot be excelled. To raise it from seed is easy, and a large quantity can thus be gained, besides which there is a specially elegant variety, Saxifraga umbrosa serratifolia, with cut-out leaves and a deeper pink in the white flowers. Seedlings in boxes of sandy soil, in a cold frame, can be allowed to grow on until they are a fair size, when they may be put out in the ground at once, and I have found a spring sowing quite as successful as a late summer one.

A wide border in shadow can be made attractive almost at once by judicious planting, the formal, or row upon row, style being most suitable. A belt of white pinks, followed by one of London pride, another belt of the pinks, and one of dwarf orange wallflowers, a wider belt of London pride, then a broad mass of single blue Campanula persicifolia, backed by white foxgloves, with a final background of Solidago altissima, will supply lavish bloom.

The rich hue of purple honesty is one we should make use of largely; masses of this early summer bloomer will make a warm display, that will be less missed afterwards if there are as many clumps of purple foxgloves; the surroundings of these flowers may consist of the yellow poppy, Meconopsis cambrica, the exquisite fern-like foliage and white florescence of spiræas, and the variegated trails and blue star-flowers of Vinca minor.

Other beds and borders in shadow can be made beautiful by other flowers; there is the German iris, for example, offering the richest violet, and the gold and bronze, white and blue of its rarer varieties, all of which are willing to bud and open without sun. The native tall yellow water iris is no mean ornament for the garden, and it seems impossible to discover a soil in which it will not thrive. Sweet rocket, antirrhinums, Vinca major, sweet williams, verbascums, hollyhocks, and the violet, many-belled Campanula glomerata, I have had in profusion and fine quality in a north border backed by a high fence, and between tall houses, a draughty alley where not five minutes' sunshine a day was ever experienced. Sedum acre and Asperula odorata made a fine carpet for the ground, the former being of especial service to show up clumps of common blechnum and hartstongue ferns.

Hypericums are grand plants for covering huge stretches of soil, indeed the popular Hypericum calycinum is not seen at its best unless it can luxuriate by itself, forming a kind of covert. The taller, and the shrubby hypericums are all admirable, while if actual shrubs are needed we may safely employ the crimson-tinted Berberis aquifolium, which will give yellow bloom and blue-purple fruit in abundance. The snowberry tree is another subject that is just as good in shade as sunshine, its fresh young green foliage in spring being exceedingly welcome, its pinky summer florescence interesting, and its long-hanging, white, autumn berries weighing down its branches by their numbers.

Mention has not yet been made of phloxes; these alone give innumerable brilliant colours, the cerise and orange-salmon varieties being gayest of all, while the white varieties stand out prominently. Day lilies and Turk's cap lilies, if sufficiently massed, give fine displays; the ordinary white Japanese anemone and lavender Michaelmas daisy will flower in shade too; so will yellow mimulus. The secret of making the best show with the flowers that can be relied on for the shadowed garden is to surround masses of them with foliage of a tint to contrast forcibly; thus a couple of dozen plants of scarlet phlox will look more striking if they stand all together within a yard-wide belt of pinks. White phlox in the midst of Hypericum calycinum

AN ATTRACTIVE BORDER OF ANNUALS, PITFOUR CASTLE.

presents a fine appearance. Even the woodland primrose creates a noteworthy feature of a garden when it covers a large stretch of ground.

When centre height is needed for a bed in shadow nothing can be better than a pole of natural wood climbed by a fine-leaved ivy. M. H.

ADONIS.

The species of Adonis form a most charming group of hardy perennials, and valuable on account of their early flowering. In some cases the flowers appear in December, at a time when there are few subjects in bloom in the border or rock garden. The area of distribution of the family, as a whole, extends from the Pyrenees and Central Europe to Russia and Japan. While possessing varied growth, they have a long period of flowering, extending from December to July. Various shades of yellow predominate in their flowers, but in recent importations from Japan a few white and purplish shades have been introduced. As regards culture, all the members of the genera delight in a good deep, rich garden soil, and should not be disturbed when once planted, as a good colony, when well established, is very attractive, both on the rockery and in the herbaceous border.

One of the best of the species is Adonis amurensis, sometimes known as Adonis davurica. It produces tufts of graceful fernlike foliage, and glistening golden yellow flowers about two inches in diameter during January and February. There is a splendid group of this species in the rock garden at Kew, and this has occupied its present position some years, and I do not remember to have ever seen finer flowers. The height is about eighteen inches. It is a native of Siberia and Manchuria. A distinct form, which may be regarded as a geographical variety is Adonis Kiknasaki from Japan. This differs from the type in its extreme earliness and finer cut foliage, while its flowers are more cup-shaped, and they are lemon yellow. Growing in heavy clay soil in the North of London, it was in bloom in the open border on New Year's Day, although not protected in any way from the weather. During the last few years a double-flowered form of the typical species, A. amurensis, known as A. amurensis fl.-pl., has been introduced from Japan, and is undoubtedly of much merit. Its flowers are deep golden yellow, perfectly double, with a ring of deep green segments in the centre. This double form does not, however, bloom so early as the other varieties mentioned, being generally at its best in March, but it is quite as easily grown.

As it name implies, A. pyrenaica, is a native of the Pyrenees, and is distinct, both in foliage and flower, from any other kind, while it is also the latest to flower, reaching its fullest development in June and July. In height, when well established, it attains quite 18 inches, with branching stems and large saucer-shaped golden yellow flowers, quite two inches across. Its foliage is also very ornamental, being finely cut or divided, and deep glistening green. A. vernalis is probably the best known of the genus, and a useful subject for the rockery or front row of the herbaceous border. The flowers which are produced in quantity during March and April, are golden yellow, and average quite three inches across on established plants. Its extreme hardiness and free flowering qualities render it useful for massing, while its price now places it within the reach of all lovers of hardy plants.

A. Volgensis, which has been received from Russia, is intermediate in character between A. vernalis and A. pyrenaica, having branching stems, and scale-like leaves at the base of the stems. The flowers are yellow, produced during April, and the sepals are hairy on the outside. By some authorities it is regarded as a hybrid between the two species previously noted, and is sometimes known as A. Walziana. Some of these species can be raised from seed, and increased by careful division of the crowns when dormant; but when there is no occasion to increase the stock, the plants should be disturbed as little as possible at the roots. E. S.

Finchley.

SWEET PEA JOTTINGS.

In the southern counties, especially where the soil is light, and rain has not fallen sufficiently to provide that genial condition of soil and atmosphere so essential to free growth, growers are complaining that their sweet peas are flowering freely or bursting into bloom, but growth is very slow. In some of the seed-growing districts the plants are by no means strong, and rain is ardently wished for; indeed, in many parts of Essex rain would be welcomed during May, June, and early July, provided it stayed away altogether and gave the sun a full chance during August and September. One grower, further south, writes that if the present conditions continue he will be able to show new sweet pea seed at the National Sweet Pea Society's show on July 24, but no flowers.

There is a great keenness among many of those who have but lately taken up sweet pea culture, and the manner in which they discuss varieties and methods of culture and the naive manner in which they ask for information is very cheering, and very indicative of a long and bright future for this favourite and popular flower, but it is rather exacting, both as regards time and patience.

The question of accepting exhibits sent by post or carrier, and the staging of the same when received, is one exercising the minds of not a few sweet pea lovers who live at some distance from the show place. The committee of the N.S.P.S. has, so far, set its face against accepting and staging exhibits in this way. This may seem hard upon an ardent amateur away in the country, but there are several matters to consider, such as the time and labour occupied in setting up numerous exhibits, the risks of transit, and the skill of the person setting up the blooms. The business is, at best, an unsatisfactory one, and if Mr. John Brown's flowers win first prize, Mr. W. Robinson believes that his own flowers were not properly taken care of and staged, or they would have obtained the premier award. If amateurs could but see their flowers after these have been closely packed and forwarded, and after a journey of twelve or more hours, they would not soon forget the appearance they present. In many cases well-developed flowers would improve 30 per cent. if the ends of the spikes were cut, and then placed for a few hours in water, but there is not time for this resuscitation if the flowers arrive only an hour or two before judging commences, while, if the flowers were to arrive overnight, they would have been cut so early as to prejudice their chances of success.

In the matter of varieties it is interesting to note that two of the three varieties to which I recently drew attention have been granted the A.M. of the Royal Horticultural Society. The one that did not gain an award, is, in my estimation, more entitled to it than Dobbie's Mid-Blue, which gained the A.M., good though this variety is. The variety that failed to win the blessing of the R.H.S. Floral Committee is Mrs. Andrew Ireland, a beautiful wavy variety that I am told is very like Burpee's Apple Blossom Spencer, but this latter I have not yet seen. Clara Curtis is fine, and the best of the yellow shades, though, so hard-working are the raisers, Miss Hemus has a deep cream seedling that may strongly compete with it for first place. Agnes Eckford and Queen of Spain are charming, and the way in which those and Lady Grizel Hamilton attract the attention of the ladies, leads me to believe that a long period will elapse before hooded varieties go out of fashion and cultivation. Menie Christie and Rosie Adams are much alike; both are very fine sweet peas, and give a distinct colour effect, but one of these varieties will be sufficient for small growers.

A few days ago I inspected a large breadth of seedling sweet peas, all the result of careful cross-fertilisation, and in every case the full pedigree is on record. There were scores of lovely things, and not a few specially fine ones. Some of the latter had enormous blooms, and I am sorry I did not measure the width of the standard in several. But I found myself wondering whether this enormous (for sweet peas) size gave our popular flower an added beauty and dignity, and came to the conclusion it did not. I dislike that excessive frilling or waving that makes a sweet pea flower resemble a crumpled mass of petals, and I also dislike that excessive size in the standard and wings which produce a floppiness utterly foreign to true beauty.

Mr. Basile, of Weybridge, has some wonderful sweet peas this year, if those he brought up to the Franco-British Exhibition the other day are a fair sample. As a combination of good size, rich colour, substance, and length of stem, I have never seen anything to beat them, and he puzzled not a few of the specialists whom he asked to name them. As Mr. W. J. Unwin remarked, Mr. Basile grows so finely that a small-flowered variety becomes a prizewinner in his hands. Ware Mr. Basile on July 24.

Chas. H. Curtis.

ABELIA TRIFLORA.

The several species of abelia are all showy shrubs, though, unfortunately, it is only in the warmer parts of the country that they can be grown to perfection in the open ground. There are, however, many places where at least two sorts may be grown successfully if given wall protection. These two species are A. chinensis and A. triflora. The former is most frequently met with, sometimes being seen as a pot plant in a cool greenhouse, again, as a wall specimen, or sometimes as a bush in the open ground.

A. triflora, on the other hand, is more rare, and is seldom seen except in a cool greenhouse or against a wall, though in favoured localities it can be grown successfully in the open ground, under which condition it assumes the proportions of a large bush. It is a native of the Temperate Himalayas, and was known in Paxton's time, for a figure of it is given in "Lindley and Paxton's Flower Garden," Vol. III., p. 93, tab. 91. The deciduous leaves are lanceolate, about one and a-half inches long, and less than half an inch wide; on very vigorous plants, however, they often become larger. The corolla is tubular, with the free lobes of the petals expanded in the form of a star. The tubes are pink in colour, and half an inch wide; the lobes are white, and a third to half an inch across. The calyx is long, linear, and hairy, and retained after the fall of the petals.

This species succeeds in ordinary garden soil, and is doubly valuable, as it blooms in June and July after many of our trees and shrubs are over. If cuttings are inserted in sandy soil in a close case in July they root readily, and good examples for planting in permanent situations may be had in two years' time. W. D.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in The Amateur's Greenhouse, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

THE STRAWBERRY INDUSTRY.

The extraordinary growth of the strawberry industry during recent years is one of the most surprising features of latter-day horticultural enterprise. It is very evident that the public is much more fond of the strawberry to-day than it was five and twenty, or even a dozen years ago, but it can hardly be said that this is because the fruit is now more excellent in all respects than it was then. Certainly we have berries which are larger and more pleasing in appearance, and the fruit is marketed in a more satisfactory and inviting way, but those who can remember the exquisite flavour of some of those varieties whose names are nowadays little more than a memory will vouch for it that the flavour of the twentieth-century strawberry is no great improvement—if, indeed, it is as good—upon such old favourites as British Queen, Dr. Hogg, Vicomtesse Héricart de Thury, and Sir Joseph Paxton.

LOADING UP STRAWBERRIES FOR MARKET, BOTLEY RAILWAY STATION.

The public fancy, one fears, is tickled more by appearance than by taste, but, after all, if the public is satisfied that is the chief thing, and the grower must cultivate those sorts that pay him best. Amateurs will still find a place for the old, small-berried kinds, whose flavour is their chief recommendation, while the market grower will confine his attention to such of the newer sorts as are heavy croppers, good-looking, and able to stand handling and packing.

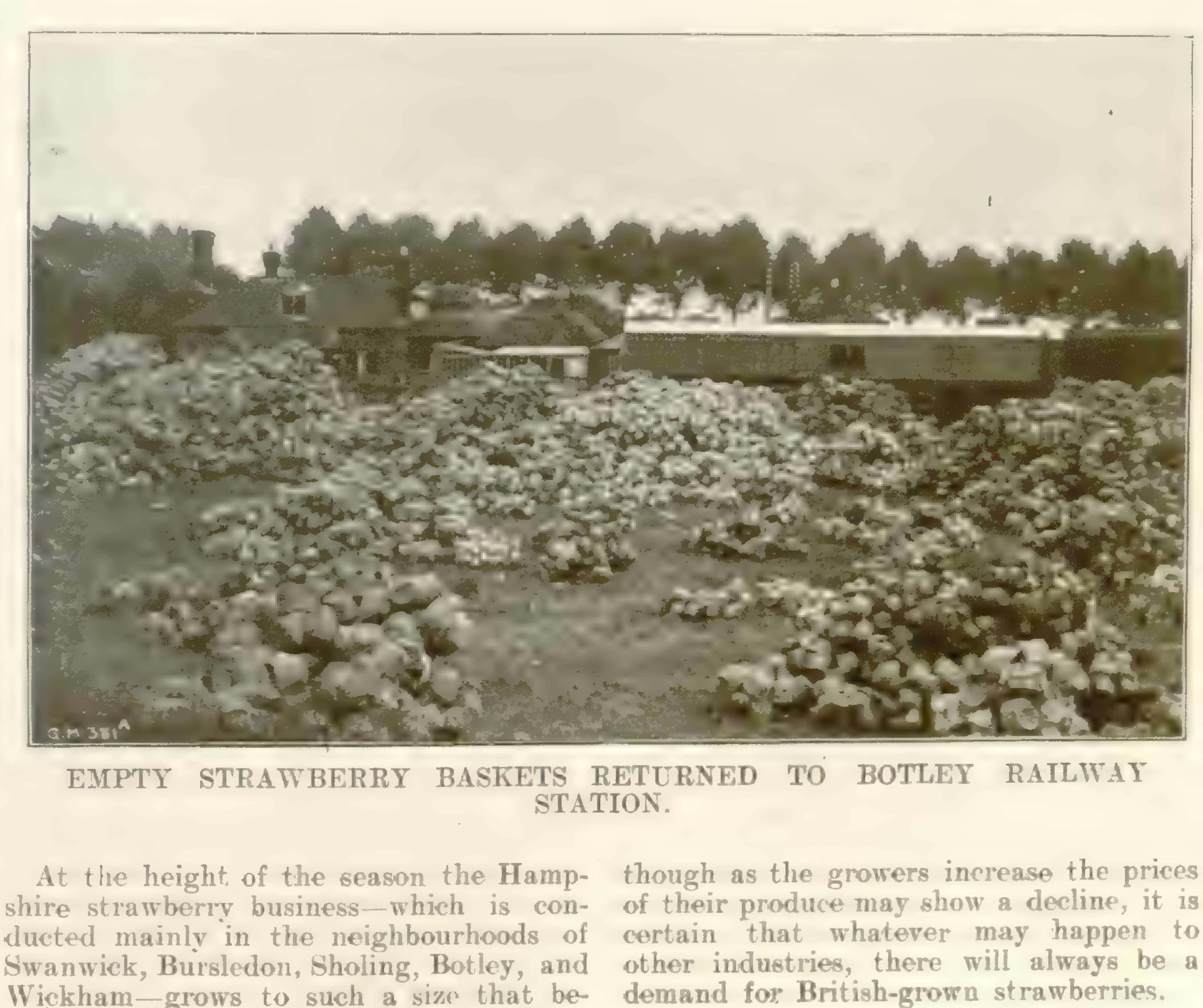
Few people have any idea of the present extent of the strawberry-growing business, and a few particulars may therefore be interesting. France sends us an immense quantity of fruit every year, the bulk of it being early strawberries, which reach the market during April, May, and June. Most of this fruit comes from the Brest district, and the trade is now so important that the growers charter their own boats for its conveyance to English ports. The following figures, which are supplied by the courtesy of the Great Western Railway Company, show the shipments of fruit to this country during the last two seasons. It should be mentioned that the totals include a few small consignments of early peas, but, in the words of the company, "this is a very small item; the traffic consists almost entirely of strawberries." The figures are as follows:

	1906.	1907.
Strawberies (Brest to Plymouth)	1,416 tons.	1,125 tons.

The West of England also sends some fairly large consignments of fruit to London, strawberries again forming the bulk. A few gooseberries and cherries are included in the following figures, the different kinds of fruit not being recorded separately by the railway company:

	1906.	1907.
Strawberries (Saltash and Tavistock districts)	428 tons.	433 tons.

But the bulk of the strawberries sent to London and other large towns comes from the Hampshire gardens in the Southampton district. The supply from that county comes in immediately after the Cornish berries, and generally a few days before the Kentish crop. The fruit is marketed in handle baskets, a practice which prevents their being piled one upon the top of the other, and the fruit is therefore marketed in much better condition than when packed in the Kentish peck baskets. The latter are flat, and hold about 12lb. of fruit, while the Hampshire baskets contain no more than 4 to 5lb.



EMPTY STRAWBERRY BASKETS RETURNED TO BOTLEY RAILWAY STATION.

At the height of the season the Hampshire strawberry business—which is conducted mainly in the neighbourhoods of Swanwick, Bursledon, Sholing, Botley, and Wickham—grows to such a size that between 60,000 and 80,000 baskets per diem are despatched from the various stations of the district, with the result that the London and South Western Railway Company, which has practically a monopoly of the traffic, is obliged to run as many as eight special trains a day laden solely with strawberries, besides despatching several vanloads by the ordinary trains. Altogether about 150 vanloads are sent away daily, and picking continues so long as the fruit fetches a shilling a basket.

An idea of the size of this important industry, which has developed so wonderfully of recent years, and found employment for thousands of men, women, and children, may be gathered from the fact that there are about 150 growers in the neighbourhood of Southampton, each of whom grows strawberries by the acre, and reckons his crop in tons. London takes about half the entire crop, and the rest goes to the Midlands, North of England, Scotland, and even Ireland. Through trains are now run from the principal stations in the strawberry districts to all the large towns, the fruit being packed on shelves in special vans to avoid crushing. A good use has been found in this connection for old third-class carriages, many of which are now fitted up as fruit vans.

The best year on record in the Southampton district was 1907, in spite of the gloomy, sunless weather, which was by no means favourable to the rapid ripening of the crop, and necessitated several pickings. Previous to this the best year was 1904. The crops for the last four seasons are given below:

	1904.	1905.	1906.	1907.
Strawberries (tons)	4,250	3,400	2,794	4,705
No. of baskets ...	1,900,148	1,500,000	1,250,000	2,100,148

From these figures the immense importtance of so large an industry to the inhabitants of the district, as well as to those who come from far and near during the picking season, will be readily understood. Indeed, there are few, if any, agricultural or horticultural enterprises that employ so much hand labour. The active picker, earning pay at the rate of 1½d. per basket, can make 10s. to 15s. per day, and even children can earn as much as 2s. 6d. to 3s. 6d. by industrious picking. And although as the growers increase the prices of their produce may show a decline, it is certain that whatever may happen to other industries, there will always be a demand for British-grown strawberries.

East Sussex.

TIMELY ATTENTION TO VEGETABLE CROPS.

At this season the spring-sown and planted crops will be fairly established and growing freely, and it is too often the case that through pressure of other work at this time they are, to a great extent, allowed to take care of themselves. When this is the case it is mainly to favourable weather conditions if the best results are thoroughly satisfactory. Even with every attention to cultural details it is not always that we can command success. Yet I think it will be generally admitted that the closer we observe these the greater are the chances of obtaining it.

No garden is complete without a well-arranged water supply, with hose to effectually direct it to crops. For the next two months we may reasonably expect a high temperature, and should rainfall be light it must be counteracted by a mulch or watering to prevent the crops from suffering from a check to their growth. It is at this time also that insect pests are particularly liable to attack some crops. I will enumerate a few that are liable to injury from drought, etc.: The pea, if not in a deep and rich soil, is one of the first to give way; the foliage takes on a glaucous colour, which is often the forerunner of an attack of mildew. When this unnatural colour is seen half measures should not be used, but the plants, if possible, be given a thorough soaking of water at the roots. This watering should be accompanied by a liberal syringing of the foliage in the afternoon, and dusting with flowers of sulphur. As soon as the foliage has assumed its natural colour give the plants a watering of liquid manure; this will be useful in assisting to swell up the peas in their pods. Mulching of the surface soil is also a great aid in retaining the moisture in the roots.

Too early sowing of celery and checks of various kinds, such as drought at the roots, are fruitful causes of the plants running to seed, which, unless they are blanched early, and used at once, are worthless. To prevent this, in the case of the main crop, keep the plants supplied with sufficient moisture during their active growth. Periodically, a boy may be profitably employed in damping over the foliage and dusting it with soot to prevent the celery fly depositing its eggs upon the leaves. Should they become badly infested have the infested part of the leaf removed and burnt.

Young plants of cauliflowers are particularly liable to suffer from drought, and also from slugs eating their young leaves, which tend to reduce their value in consequence of the plants turning in early and producing only small heads. To prevent this, as far as practicable, give timely waterings, with frequent stirring of the surface soil, or mulching with manure. Grass mowings from the lawn are not recommended for small plants, as they act as a harbour for the slugs. Keep the leaves dusted with soot and lime to make them distasteful as far as possible till growth is nicely moving, when the nuisance will subside.

To assist the setting of the flowers and the growth of the pods of runner beans an application of liquid manure water at the roots will be highly beneficial. In high situations, where heavy dews do not reach the plants during the night, a syringing of the foliage after a bright day will also act beneficially upon them. With due attention to keeping the larger pods picked, a maximum amount of produce will be obtained till autumn frosts arrive and cut them down.

Lettuce require constant care, especially during the summer months, as they so soon run to seed and become useless for the table. Frequent sowings are necessary. I find it advantageous at this season to sow thinly in lines, and reduce the plants to the requisite distance apart: this practice not only saves time in planting, but the plants invariably grow away better. If the thinnings are planted they give a succession to the permanent plants. Select cool borders, and provide the plants with plenty of moisture for the next few months.

These suggestions are not intended as a calendar of operations, but are merely a few hints concerning those plants that are very susceptible to suffer from the drought, etc. From a few hours' attention of this nature a crop may be materially helped, and in some cases altogether saved without seriously affecting other matters, Nature usually yielding to liberal treatment when rightly directed. In support of this, a market grower of early cabbages near here was for years successful in cutting them quite a fortnight in advance of other growers in this neighbourhood, and even of those also who planted them on sheltered borders in rich ground. To be equal with him some growers sowed in June, but the result was not satisfactory, as a large percentage of the plants ran to seed. The secret of his success turned out to be a simple one. His method was to send a man once a month among his plants, from January onwards, with a short-handled hoe; holding the plant with one hand, he loosened the surface soil round it with the hoe, at the same time sprinkling a small amount of nitrate of soda or sulphate of ammonia round them. His plants grew with great vigour with this attention, and, being large and early, the crop was remunerative. I need not say that his method has been copied by others and attended with the same success. One accustomed to the work a man can attend to a large number of plants in a day, and the expense is small as compared with the enhanced value of the crop.

Charles Flack.

Cholmondely Castle Gardens.

YORK JUBILEE GALA—MESSRS. J. W. MOORE'S, LIM., GROUP OF ORCHIDS.
(Equal First Prize.)

TRANSPIRATION.

Transpiration in plants means the evaporation through the pores of the leaves of the surplus water supplied from the root system after a sufficiency has been used by the cells for their various purposes. The great extent to which this goes on, especially in warm weather, is evidenced at once if we sever a branch and see how quickly the leaves flag, wilt, and wither, owing to the escape of the water which previously had filled their cells and kept them turgid, and which, normally, would be at once replaced by a fresh supply, which, however, the severance had now cut off.

If we examine a leaf microscopically we shall find its surface dotted over more or less profusely with myriads of little orifices termed stomata, and it is through these that the said water is evaporated, and the carbonic acid of the air is absorbed. They are extremely numerous even on a small leaf, and if we consider what this means in the case of a huge tree, it strikes the mind as marvellous that even the immense and widespread root system of such a tree can collect enough water to maintain a supply, especially during long periods of dry weather.

The vegetable world, however, possesses wonderful powers of adaptation to circumstances, and thus we find foliage to vary very much to meet the variations of environments as regards water supply and consequent transpiration. In shaded, damp habitats the leaves present a much larger area, and, consequently, transpire much more than under opposite conditions of drought and heat, which, while setting up an extra drain upon the foliage by way of transpiration, tend at the same time to restrict the root supply. As a consequence of this, in the process of adaptation and evolution, even practically leafless plants have been evolved, such as the cacti, euphorbias, and other kindred vegetation, where the leaves proper are suppressed, and their functions are performed by enlarged stems. In other plants, under like conditions, thick fleshy leaves are packed closely together, so as to present the smallest possible area to the sunshine, while, at the same time, their compact masses are admirably adapted to check evaporation from the soil in which they grow.

Transpiration, however, is only a secondary factor in leaf evolution, the main purposes of all foliage are to catch the sunlight and to absorb carbonic acid as a formative ingredient of plant structure, which the sunlight enables the cells to break up into its components oxygen and carbon, the latter then resuming solidity both as a building material and a contributory ingredient in the starches, sugars, etc., formed in the cell laboratories. Water, however, is an essential to all these processes, and forms, indeed, in some plants, the great bulk of their substance. This water is collected by the roots and mixed with the earthy salts the roots also absorb, forms the sap. To fulfil its office and reach the possibly far distant points of active growth, some of the water must work its way from the tips of the most extended roots to the tips of the remotest twigs, and it is here that the faculty of transpiration figures as a motive power.

The necessary water having reached its distant goal, it fills the cells there, its contained salts are utilised, and part of it evaporates through the cell walls and the pores we have alluded to. The cell, deprived thus of part of its contents, sucks by a process called osmosis, an equivalent from its nearest neighbours, and these in turn draw upon the veins and veinlets of the leaves and the channels for supply beneath the bark of twig, branch, and trunk, until this sucking impulse is transmitted to the very root system itself, and the myriads and myriads of transpiration pores are seen to constitute as many microscopic pumps.

It is obvious from all this that the work going on in a large tree, especially in the active period of spring growth, is really inconceivable in its extent, and that even at a later period, when the foliage growth is completed, and only the work of completing the fruits has to be done (no mean task in itself, by the way, when the crop is heavy), there is still a vast deal to be done to keep up the aqueous supply still needed to replace that which is constantly being passed off through the pores of transpiration. To this evaporation, too, is due the coolness of foliage, which, if it attained the temperature of the blazing hot sunshine to which it is often subjected, would infallibly shrink up and die.

Chas. T. Druery, V.M.H., F.L.S.

YORK JUBILEE GALA—MESSRS. J. CYPHER AND SON'S GROUP OF ORCHIDS.
(Equal First Prize.)

Tomatoes for Winter.—In order to obtain good fruitful plants before the winter sets in the seeds should be sown at once, for it is a waste of time to delay this sowing until the autumn, and then to expect good results. It is rarely a good set of fruit can be had after October unless the weather is very fine indeed. Sow the seeds in boxes or pans in rich, friable soil, dibble the seeds in about 2in. apart each way, and place them on a greenhouse shelf or in a cold frame. When the seedlings are up, keep them as sturdy as possible by placing them well up to the glass. When potting them off into 3½in. pots, rougher compost may be given. Two useful varieties for this sowing are Sutton's Winter Beauty and Vick's Criterion, the latter, a very old variety, but one that sets splendidly in heat, and is a most prolific fruiter.—T. W. Birkenshaw.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

MILTONIA VEXILLARIA. — The most difficult period in the cultivation of the varieties of this species, is between the removal of the flower spikes and the appearance of young growths. Where a house can be devoted to their culture the difficulty is considerably minimised, but when grown under the same conditions as that provided for plants in full growth, whether it be in the intermediate house or the odontoglossum house, it is no easy matter to provide suitable requirements. Atmospheric moisture is the greatest difficulty, as excess is at any season likely to produce damp-spotting on the foliage and cause a permanent disfigurement. It is a good plan to keep the plants as near resting conditions as possible, and, above all things, only sufficient moisture to keep the pseudo-bulbs and foliage plump. I would advise placing the plants in a light position in the odontoglossum house during the next few weeks, until the growth commences, in preference to keeping them in a warmer house.

M. BLEUANA, the hybrid derived from M. vexillaria and M. Roezlii is one of the most desirable of this class of orchids; it is not only exceedingly variable in its forms and markings, but it is by no means a difficult plant to deal with. It is practically a perpetual grower when treated in the warm intermediate house. Plants that have recently flowered will have their young growths in an advanced state, and any repotting necessary is best attended to when the new roots make their appearance at the base of the developing growths. The pots used should be filled to two-thirds of their depth with drainage—chopped bracken roots suit miltonias well as a drainage medium. The compost consists of about equal portions of fibrous peat, broken oak or beach leaves, and chopped sphagnum moss, with sufficient sand or broken crocks to render it porous. The compost should be pressed moderately firm, and about half an inch depth of chopped sphagnum should be placed on the surface of the material.

AUTUMN-FLOWERING VARIETIES of miltonia, such as M. candida, M. Regnelli, M. Peetersiana, and the dwarf-growing members of the M. spectabilis section, which are now developing their flower scapes, must have every encouragement. These latter are best placed in a position or suspended near the roof glass, where they may obtain every advantage procurable from the available light. In fact, the whole of this section flower more satisfactorily where little or no shade at all is given, but with more light, moisture requirements need greater attention. It is a good plan to syringe the plants overhead two or three times a day in bright weather. Insect pests, such as thrips and red spider are the most troublesome; for the latter carefully sponging the leaves is the best method of destruction. For thrips dipping or spraying with some safe insecticide at regular intervals will keep the pests under. Rain-water should always be used for insecticide, as the use of hard water frequently leaves a white deposit on the leaves.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

ANANASSA SATIVA VARIEGATA.—The variegated pineapple is easily cultivated, and the plants are extremely useful where ornamental stove subjects are in demand. They are raised from suckers, similar to the pandanus, these being separated from the parent plant, potted in small 60-sized pots, and plunged into bottom heat. Under these conditions they readily take root, and then it is advisable to move them to a drier place on a shelf near the glass; the syringe may be used freely on bright days. Ananassas do not require over much water, as they succeed best under drier conditions than most plants, and on no account ought they to be watered until the soil is thoroughly dry. In order to maintain the best colour the plants should be put in small pots and kept root bound. They succeed well in a compost of good fibrous loam and peat, with coarse silver sand and lumpy charcoal. The variegated pineapples are less subject to insect pests than most plants. Mealy bug will sometimes prove troublesome, but care must be taken not to propagate from infested plants.

BILLBERGIA RHODOCYANEA.—This bromeliad is well worth cultivating on account of the handsome and unique markings on its foliage. Plants may be raised from suckers taken off any time during the summer, so long as they have time to establish themselves before the winter sets in. They succeed well in turfy loam and sand.

NIDULARIUM MEYERDORFI. — This most interesting plant is well worth attention; the bright green leaves form a beautiful base for the small, brilliant scarlet leaves which surround the flower spike. It succeeds well in a warm, moist atmosphere. Our batch of plants is now producing flowers, and after the flowering season the suckers are separated from the parent, and, whenever possible, those with a few roots are selected.

ALLAMANDAS.—These require further attention to thinning out of weakly growths and training the remaining shoots into their permanent positions. Plants that are growing freely will require a plentiful supply of water, and frequent applications of diluted liquid manure, with alternate top-dressings of an approved chemical fertiliser. If careful attention is paid to regular feeding and watering the flowering season will be much prolonged. Plants intended for exhibition specimens ought to be trained upon the desired shapes just previous to the flowers showing colour.

GENERAL REMARKS.—The occupants of the stoves ought to be thoroughly overhauled from time to time, and a diligent search be made for insect pests. The leaves of ornamental foliage plants are much improved in general appearance by an occasional sponging, damping down the paths and stages at intervals throughout the day in order to maintain a moist átmosphere. Careful manipulation of the ventilators is strongly advised in order to counteract sudden changes of temperature.—JOHN DONOGHUE, Bardon Hill Gardens.

THE KITCHEN GARDEN.

SEAKALE.—The growth in young plantations has now advanced far enough to permit of the removal with the knife of all except one crown to each plant. This is most important work if good, well-grown crowns are required. Should the plants show signs of weakness, apply liquid manure or a good sprinkling of nitrate of soda, choosing showery weather if possible, or watering it in. Keep the soil well hoed between the rows to check weeds and benefit the plants.

RHUBARB.—To secure good plump crowns for early forcing, it is not wise to pull rhubarb after this date, for it is most necessary that the crowns should develop to the highest degree. Young plantations should be encouraged as much as possible by placing round each root some good cow manure, and watering them occasionally with liquid manure. Cut away all flower stems as fast as they appear.

GLOBE ARTICHOKES. — These always form an agreeable change to the stock of vegetables. The "heads" are coming on very well, and the plants should have copious supplies of liquid manure in fairly strong doses, about once a week, which will still further increase the size of the heads. Another method may be also adopted; that is, removing all the lateral heads that appear when they are the size of a walnut. Chards are the blanched hearts of the plants, and are by many preferred to blanched cardoons. Globe artichokes should be renewed about every three years, especially on hot dry soils.

SPRING CABBAGES. — A pinch of seed may be sown about the 15th of the present month, making the seed-bed in an open situation, and if the weather is dry and hot the soil should be well soaked with water over night. It will be ready for the seed next morning, which should be sown quite thinly and covered over with fine soil. When the plants have attained a height of 1½ inches they should be pricked out in lines three or four inches apart. This will be sure to check the little plants, but they will soon recover and make up for lost time if well attended to. I always rely on Ellam's Early Dwarf and Flower of Spring. It is always prudent to make two sowings of this important vegetable, the last one about the latter end of the month, and it will be found that the plants from this sowing generally give the best results.

SHALLOTS.—These are on the point of ripening, and when the growth is completed lift and dry them ready for storing later on. A most suitable place for drying them is under a north wall or hedge, then they can be cleaned during some wet day, and properly stored.

MUSHROOMS. — These are always welcome. It is too hot now in the mushroom house, so if a bed could be made up under a north wall outside, or in an underground cellar, a few dishes could be obtained in August. Where suitable meadow land abounds, spawn inserted now about 2in. deep would give some produce a little later on, if the weather is at all suitable for the spawn to work.—T. W. BIRKENSHAW, Hatley Park Gardens, Sandy.

THE ALPINE KNOTWEED.

Those who grow the Alpine Knotweed (Polygonum alpinum) in its rightful home —the higher reaches of the rock garden, and in its most effective position—skirting a boulder's base, or filling a rift between boulder divisions, can fully appreciate its rare beauty, and realise somewhat the splendid picture of the elegant florescence the plant gives in its native home amid the rocks of the Southern Alps. Grown, however, amid the rank and file of border plants, and treated liberally the while there is very little to admire in it, as its sprawling habit defeats the best efforts of staking, and its flowers are virtually inferior to those of P. bistorta or P. affine in effective display.

It is one of the many good alpines that respond favourably to repressive measures, and its greatest beauty is manifest in positions where it literally struggles to live. Thus grown its habit becomes normal—a loose, flax-like sheaf of elegantly lanceolate leafage, overtopped by pretty white branched spikes of flowers that look exactly like the side growths of Spiræa japonica on light airy stems. It is one of the prettiest free-habited alpines one can grow, well adapted for both large and small rockeries, and peculiarly acceptable to the artistic sense when seen skirting the stone pediments of vases and other ornamental stonework, or framing a low flight of stone steps, whether rough hewn or of worked stone. It increases fairly rapidly by stoloniferous growths, but is not likely to develop into a troublesome weed at any time if not unduly fed. One needs to see an old specimen happily planted and associated under starveling conditions, first, in spring, for its tender leafage; secondly, at midsummer, for its white florescence; and, lastly, in the autumn season for its display of autumn tints in leaf and stem. It is good at these periods.

G. B. MALLETT.

Roses may be grown to perfection by following the instructions given in ROSES AND THEIR CULTIVATION by T. W. Sanders. A selection is given, with description of all the best varieties, and full details of culture outdoor and under glass. Price 2s. 6d.; by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM CRISPUM PRINCESS OF WALES.

A very fine and beautiful white variety of the best form and size. It is white, tinted with rose on the sepals, and the lip has a very large yellow crest. F.C.C., R.H.S., June 23. Mr. H. Ballantine, gardener to Baron Schroder, The Dell, Egham.

EPIDENDRUM VIRENS.

A very graceful species, and one that should prove very useful for decorating, either as a plant or as cut flowers. It has medium-sized, pale creamy green flowers, and a white, purple-stained lip. The flowers are borne freely on long, wiry, branched stems. A.M., R.H.S., June 23. Mr. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

DENDROBIUM JERDONIANUM.

This somewhat rare species from Western India has been shown once or twice before, but never in such fine condition. It has stiff, hirsute stems, and produces its vivid orange flowers in dense clusters. A.M., R.H.S., June 23. Sir Trevor Lawrence, Bart., Dorking.

ODONTIODA WICKHAMENSIS.

A pretty little orchid, derived from Odontoglossum crispum and Cochlioda sanguinea. It has small rosy-pink flowers, freely speckled and dotted with red-brown. A.M., R.H.S., June 23. Mr. Redden, gardener to G. W. Bird, Esq., Manor House, West Wickham.

SWEET PEAS.

The King.—A very fine addition, producing big, wavy blooms of the same brilliant colouring as King Edward VII. A.M., R.H.S., June 23. Messrs. Dobbie and Co., Rothesay.

Dobbies' Mid-Blue.—A pretty sweet pea, with fine erect standard. The colour is a bright shade of blue. A.M., R.H.S., May 23. Messrs. Dobbie and Co., Rothesay.

STOKESIA CYANEA ALBA.

A beautiful white-flowered form of the well-known blue species. It appears to be a free grower, and it carries numerous aster-like flowers. A.M., R.H.S., June 23. Mr. Amos Perry, Enfield.

KNIPHOFIA GOLDELSE.

One of the dwarfer varieties, but one that is charming in the mass. It has medium-sized heads of yellow flowers. A.M., R.H.S., June 23. Messrs. R. Wallace and Co., Colchester.

ANTHURIUM PRES. VIGER.

A very large variety of Anthurium Andreanum, with big broad spathes of a rich crimson-red hue. A.M., R.H.S., June 23. Mons. A. Truffaut, Versailles.

DELPHINIUM CAMBYSES.

A handsome variety that has a bold spike of beautiful rich blue, double flowers, each with a white centre. The spike is not so dense and stolid as in so many modern varieties. A.M., R.H.S., June 23. Mr. F. W. Smith, gardener to C. Ferguson, Esq., Weybridge.

ERICA CINEREA PYGMÆA.

A very useful dwarf heath, growing about four inches high, and bearing a profusion of brilliant crimson flowers. A good rock garden plant. A.M., R.H.S., June 23. Mr. G. Reuthe, Keston, Kent.

CAMPANULA RADDIANA.

A dwarf species, rather under a foot high. It is very distinct and beautiful, carrying bell-shaped nodding flowers of a very rich violet-blue shade, the colour and effect being enhanced by protruding yellow pistil. The species comes from the Ural Mountains. A.M., R.H.S., June 23. Mr. G. Reuthe.

EREMURUS BUNGEI MAGNIFICA.

This is a glorified E. Bungei, with large spikes and brighter yellow flowers. A.M., R.H.S., June 23. Messrs. Jas. Veitch and Sons, Chelsea.

BEGONIA COL. LAUSSEDAT.

A very low-growing tuberous begonia, suitable for edging and carpeting. It has bright yellow double flowers of medium size. A.M., R.H.S., June 23. Messrs. Jas. Veitch and Sons, Chelsea.

ESCHSCHOLTZIA MIKADO.

A very handsome eschscholtzia that has blooms of largest size and of brilliant orange-scarlet colouring. A.M., R.H.S., June 23. Mr. W H. Gardiner, Mill Street, St. Osyth.

ROSE REFULGENCE.

A hybrid sweet briar, with probably a double portion of the rose in its composition. The foliage is rose-like with a suggestion of the sweet briar, and with some degree of fragrance. The flowers, freely produced, are about three inches across, semi-double, and of a brilliant crimson colour, with whitish centre. An attractive variety. A.M., R.H.S., June 23. Messrs. Wm. Paul and Son, Waltham Cross, Herts.

PELARGONIUM FRED T. HAMILTON.

A fine semi-double variety with large trusses of scarlet flowers. This has evidently been produced by crossing a zonale variety with an ivy-leaved variety. A.M., R.H.S., June 23. Messrs. W. H. Rogers and Sons, Lim., Basset, Southampton.

NEW BOOKS.

◆

SCHOOL GARDENING.

By W. E. Watkins and Arthur Sowman. (George Philip and Son, 32, Fleet Street, E.C.)

As the authors tell us in the preface, this book has been written with a view to giving an account of a year's cultivation of a school garden, and suggesting a systematic method of carrying out the most practical and useful method of dealing with nature study in elementary schools. It gives full details of the various garden processes, and the reasons for them, needed in the cultivation of the—comparatively speaking — limited number of flowers, fruits, and vegetables that are suitable for cultivation in the school garden. In addition there is a concise and clear account of the common insect pests and fungoid pests to which the various crops are liable, and the best remedies for their prevention and extermination. We fully agree with the authors that there are few subjects taught in rural elementary schools which are capable of developing a child's powers of observation and reasoning to the same extent as gardening, and it gives us much pleasure to have evidence of the increased importance that is being given to the teaching of the practical work of the garden in schools in rural districts. We are pleased also to observe the steady improvement in the books relating to school gardening, and we heartily congratulate the authors on the success they have achieved in providing so excellent a book as that now before us. While intended for the assistance of those engaged in school gardening, the book will be found of much value to the amateur with a garden of limited dimensions and to cottagers who are fortunate in the possession of gardens or allotments. We have no information as to the price of the book.

MANURES FOR FRUIT AND OTHER TREES.

By A. B. Griffith, Ph.D. (Robert Sutton, 43, The Exchange, Southwark Street, London.) Price, 7s. 6d.

For a long number of years Dr. Griffith has devoted much attention to the food requirements of plants, and has written several works that are now regarded as text books by those engaged in the study of the constituents of plants and the methods by which they can be the most successfully supplied with the food necessary to their being maintained in a robust state of health. This, we venture to suggest, is the most important of the works written by Dr. Griffith, and, while an excellent guide to both agriculturists and horticulturists in the application of fertilisers, it will be found of special value to those who are desirous of becoming fully acquainted with the composition of the many plants grown for use and ornament.

The historical introduction with which the work opens is of much interest, for therein we have a short yet admirable summary of the advances that have been made in the art of soil cultivation in ancient and modern times, and a brief statement of the theories held by Tull, Bonnet, Dundonald, Liebig, and others with reference to the sources of plant food and the requirements of plants. Not less interesting but of greater practical value are the chapters devoted to plant physiology and the chemistry and bacteriology of soils, and these are deserving of the most careful study by those who are desirous of becoming intimately acquainted with these subjects in relation to fruit culture. The most important feature of the book is perhaps formed by the two chapters in which the composition of fruit and other trees are dealt with. The analyses which the author gives of the ash constituents of trees when studied in connection with the information given on manures for fruit trees, and special manures, will be found of much value in determining what fertilisers to apply to the various kinds of trees that come under the care of the gardener with the fullest assurance of successful results.

While "Manures for Fruit and other Trees" is scientific in method, it does not belong to the dry-as-dust order, but is remarkably interesting and not likely to be lightly laid aside by those who are concerned with the important matters with which it deals. The author is indeed well deserving of the warmest praise for the admirable manner in which he has presented the results of his investigations during the past quarter of a century of the food requirements of the various forms of arborescent vegetation.

HELENIUM BOLANDERI.

From the enormous quantity of yellow-flowered composites that have reached us from North-western America it is possible to select a few that bear the hall-mark of refinement in habit and flower, and recommend them for more extensive planting than is desirable for the many.

Noteworthy among the heleniums is a very fine species named H. Bolanderi, which is not new or very rare, but which every good judge of attractive border flowers invariably wants once it is seen in good condition. It is, however, wholly neglected by many, who, I feel sure, would appreciate its many desirable features. It makes a sheaf-like bush, a yard high and through, and for many weeks after midsummer it is the richest colour note in yellows the border can afford at that season. The flowers range from 1½ to 2½ inches in diameter, and are apparently, but not actually, twice the size of the older Helenium autumnale, of which everyone who had one plant two years ago has now more than enough. The ray florets are pure yellow throughout, and their crimped and undulating margins, often delicately frilled in addition, give an impression of double and treble rows of petals. The cone is a flat-topped sphere of rich mahogany-brown, bespangled with myriads of anthers, the rich velvety sheen recalling some of the darker forms of annual scabious, but is even more beautiful in the perfect foil of the yellow ruff-like petal arrangement. Such a fine plant of easy culture should be grown in quantity for its yield of cut flowers, and particularly in goodly breaks in the flower border, where its colour note is distinctly pleasing. It likes a good loam, failing this, hollow-stemmed flowers of short life, cut or uncut, are an inevitable result.

G. B. Mallett.

CARDIFF AND COUNTY HORTICULTURAL SOCIETY.—TWENTIETH ANNUAL SHOW, SOPHIA GARDENS, CARDIFF, Wednesday and Thursday, July 22nd and 23rd, 1908.
Liberal Prizes for all sections.
Silver Plate, Cups, and Medals.
Every facility given to the Trade. Schedules free.
Mr. A. MAURICE BAILEY, Secretary,
24, Duke Street, Cardiff.

NATIONAL SWEET PEA SOCIETY.
EIGHTH GRAND EXHIBITION.
FRIDAY, July 24, 1908.
ROYAL HORTICULTURAL HALL, VINCENT SQUARE, WESTMINSTER, S.W.
Entries close Saturday, July 18.
CHARLES H. CURTIS, Hon. Sec.
Adelaide Road, Brentford.

POTTER'S BAR and DISTRICT AMATEUR ROSE SOCIETY.
(Affiliated to the National Rose Society.)
The Show will be held on THURSDAY, July 16th, 1908. Entries close July 9. Classes for Amateurs open to all England. Classes for Members, Nurserymen, and Others.
For Schedule and Entry Forms, apply to H. R. DARLINGTON, Park House, Potters Bar.

SHREWSBURY GREAT FLORAL FETE.
Aug. 19th and 20th, 1908.
Cash Prizes are offered amounting to above £1,200, with Cups, Medals, etc.
Schedules may be had, post free, on application to the Hon. Secs.
Messrs. ADNITT and NAUNTON, Shrewsbury.

THE EDGWARE AND LITTLE STANMORE HORTICULTURAL SOCIETY'S TENTH ANNUAL EXHIBITION
Will be held on
SATURDAY, July 11th, at CANON'S PARK, EDGWARE.
This magnificent Park, formerly the seat of the Duke of Buckingham and Chandos, is being lent by kind permission of Arthur du Cros, Esq., M.P.

The Society is affiliated with:—
The Horticultural Society.
The National Rose Society.
The National Sweet Pea Society.

ADMISSION:—
1 to 3 o'clock, 1s. After 3 o'clock, 6d. Children half price.
Band, Pierrots, Dancing on the Green, and other attractions.
REFRESHMENTS AT MODERATE PRICES.

WOLVERHAMPTON
GREAT FLORAL FETE.
July 7, 8, and 9, 1908.
Next week.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Gardeners' Royal Benevolent Institution.

JUNE 24.

The anniversary festival of this charity, over which the Right Hon. Lord Aldenham presided, was of quite exceptional interest and highly successful in every way. It was, as usual, held at the Whitehall Rooms, Hotel Metropole, and there was a large gathering of the friends of the institution, the company including M. Viger and M. Abel Chatenay, the president and secretary respectively of the National Horticultural Society of France. Lord Aldenham had for his immediate supporters, M. Viger, the Right Hon. Colonel Lockwood, Mr. Arthur W. Sutton, V.M.H., Mr. N. N. Sherwood, and Mr. Harry J. Veitch, V.M.H., treasurer of the institution. The customary loyal toast having been proposed in felicitous terms and duly honoured, the Chairman submitted the toast of "Continued Prosperity of the Gardeners' Royal Benevolent Institution." He said that as the majority of the large company were well acquainted with the history of the institution, and fully appreciated the splendid work in which it was engaged, there was no occasion for him to speak at any length. For the information of foreign friends and the small number of guests who were not acquainted with the history of the institution, he would mention that for the long period of 70 years it had been engaged in assisting gardeners and their widows in their old age, and during that period had disbursed the large sum of £122,000 in pensions. The institution commenced its beneficent work by electing two pensioners, and the demands upon its funds had become so great that it now had 231 gardeners and widows of gardeners on the pension list. The support of so large a number involved an annual expenditure of about £4,000. To meet this the institution had an assured income of about £1,500 only, and had to depend upon voluntary contributions for the balance of £2,500. In addition to the pensions given to those who were fortunate in being placed by election on the pension list, considerable sums derived from the Good Samaritan Fund and the Victorian Era Fund were annually disbursed among the unsuccessful candidates. This assistance, he need hardly say, was greatly appreciated by the recipients, and materially helped them to tide over the period of waiting for election. While all who were in distress were eligible for election, a preference was very properly given to those who had subscribed to the funds. This preference was shown by allotting candidates 100 votes for every £1 they had contributed to the funds of the institution. As the management expenses were derived from invested funds, all the donations go direct to the pensioners. Lord Aldenham spoke of the pleasures of gardening, and urged his hearers to do their best to assist, in their old age, those who had when in their full vigour done so much to add to the happiness of owners of gardens.

Mr. H. J. Veitch responded, and in the course of his eloquent speech, passed under review the work of the institution, and read several letters from pensioners, in which they expressed their gratitude for the generous help they received from the funds of the institution. Mr. Veitch said they had not been able to accomplish so much as they could wish, but it was simply a question of funds, and he should like to see the annual income raised to £5,000 to enable them to elect a larger number of candidates annually. At present they had upwards of thirty candidates waiting for election.

Mr. George Paul, V.M.H., proposed, with his customary ability, the toast of "Horticulture in all its Branches," and this was acknowledged by M. Viger and by Mr. George Munro, V.M.H., both of whom made eloquent responses. The toast of "The Chairman" was in the capable hands of the Right Hon. Colonel Lockwood, M.P., and was drunk with musical honours. Lord Aldenham, having acknowledged the toast, thanked the donors of flowers and fruits for their contributions, and proposed "The Health of Mr. G. J. Ingram, the secretary. This was warmly received and duly acknowledged.

The donations consequent on the dinner amounted to upwards of £2,000, of which sum Messrs. Rothschild and Mr. A. W. Sutton contributed 100 guineas each, the Messrs. N. N., E. and W. Sherwood £150, and the guests at the three Covent Garden tables £227.

The Worshipful Company of Gardeners.

JULY 1.

A presentation of flowers, fruit, vegetables, and herbs was made to the Lord Mayor and the Lady Mayoress at the Mansion House on Wednesday last, the Company being represented on this interesting occasion by Sir Thomas Robert Dewar, J.P., Master; Robert Inigo Tasker, Esq., F.R.H.S., upper warden; Charles Bayer, Esq., renter warden; and Ernest Arthur Ebblewhite, Esq., F.S.A., clerk.

The company was incorporated by Letters Patent under the Great Seal, 18th September, 1605, by King James the First, who declared that the gardeners' inhabiting within the City of London and within the six miles compass thereof should be incorporated as a company, with perpetual succession and a common seal. The King granted to them power to make ordinances for the government of the company, and they duly exercised such power. Their bye-laws were con[illegible] by the Lord Chancellor of England, the L[illegible] Treasurer, and the Chief Justice on July [illegible] 1606. The same monarch granted the company further powers by other Letters Patent dated November 9, 1616. In spite of these charters the company experienced great difficulty in carrying out the provisions therein contained, and in selling their commodities in the London markets, owing to the opposition of unqualified persons; and accordingly, in 1632, they petitioned the then Lord Mayor for redress. Their petition was favourably received, and on June 29, 1632, Sir Edward Littleton, then Recorder of London, issued his warrant to the bailiffs, constables, headboroughs, and other King's officers in the counties of the City of London, Middlesex, Surrey, Kent, and Essex, for the apprehensions of any persons using the trade of gardening in contempt of the charters. This warrant continued in force until the Recorder became Lord Chancellor of England in 1645, and the benefits which it secured contributed greatly to the usefulness and prosperity of the company, and protected the Freemen from carrying on their trade in the London markets.

King Charles the First, by a proclamation of December 3, 1634, for the reformation of the many abuses committed against the company, commanded the then Lord Mayor, and the Justices of the Peace in the before-named counties, to assist the company as much as possible. In August, 1891, the Court of Aldermen gave the company the honour and privilege of the Livery. His Majesty King Edward VII., by Warrant of June 9, 1[illegible] recited the Charters of 1605 and 1616, and granted his Royal Licence and Authority enabling the company to continue to use their ancient armorial bearings.

The company resolved in March last to endeavour to obtain permission to present annually, on June 29, to the Lord Mayor for the time being, a basket containing specimens of flowers, vegetables, and herbs, [illegible] grateful remembrance of the Recorder's warrant of 1632. They accordingly petitioned the Lord Mayor, who, on April 14, was pleased to reply to the effect that it would give him much gratification to receive [illegible] a mark of respect, and promising that [illegible] would ask his successors to continue the observance of this agreeable and pleasant practice.

Owing to the Lord Mayor's engagements, it was decided that the first presentation should take place on July 1, instead of on June 29, the date selected for future presentations.

The Master, in the name of the company, handed to the Lord Mayor a basket containing specimens of flowers, fruits, vegetables, and herbs, arranged in the form of the company's ancient crest. The kinds represen[illegible] included currant tomatoes, beans, carr[illegible] cucumbers, asparagus, peas, radishes, [illegible]nips, Globe artichokes, vegetable marr[illegible] cherries, red and black currants, app[illegible] mixed herbs, red and pink roses, [illegible] cloves, and sweet peas.

The Master then presented the La[illegible] Mayoress with two bouquets, in order [illegible] show the progress of horticulture since [illegible] incorporation of the company. The [illegible] bouquet contained all the English [illegible] which were popular in 1632, and the [illegible] included some of the finest orchids [illegible] known. The Old English bouquet [illegible] stonecrop, sweet thyme, thrift, old [illegible] sweet william, orange lily, stocks, [illegible] snapdragon, mountain cornflower, [illegible]bury bell, Spanish broom, yellow [illegible] mock orange, British harebell, gilly[illegible] everlasting pea, Guelder rose, holly[illegible] honeysuckle, madonna or St. Joseph's [illegible] lily of the valley, French marigolds, [illegible]ram, oleander, ox-eye daisy, pansy, [illegible]mary, York and Lancaster roses, [illegible] campanula, rue, heartsease, bladder [illegible] jasmine, gardener's garter, honesty, [illegible] flower, Portugal laurel, and London [illegible] The second bouquet included a [illegible] choice orchids, including some of the [illegible] of the Lælio-cattleyas and hybrid [illegible]sums.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, June 23.

Present: Mr. E. A. Bowles, M.A., F.L.S., F.E.S. (in the chair), Dr. A. Voelcker, Rev. W. Wilks, Sir J. T. D. Llewelyn, Messrs. E. M. Holmes, G. Gordon, H. T. Güssow, G. S. Saunders, — Curtis, W. C. Worsdell, G. Massee, J. T. Bennett-Poë, and F. J. Chittenden (secretary). Visitors: Professor Hansen, of Dakota, U.S.A., and Mr. Scrase Dickins.

CHERRIES EATEN.—It was reported that the holes in the fruits of cherry which were received from Sir Robert Harvey at the last meeting were due to the feeding of the larvæ of the Winter Moth.

MALFORMED ODONTOGLOSSUMS. — Mr. Worsdell reported that one of the flowers of Odontoglossum crispum received from G. Wilson, Esq., F.R.H.S., of Haywards Heath, had the three stamens of the outer whorl all developed, instead of only one, as is usual. The second flower had a normal column and normal sepals, but each of the three petals had become partly modified into stamens and bore anthers.

DODDER.—Mr. H. T. Güssow showed photographs of Cuscuta trifolia attacking clover and Kohl-rabi, and of C. chiliensis growing upon lucerne, kohl-rabi, rye grass, and red and white clover. Dr. Voelcker said that experiments had been tried with Chilian clover seed containing dodder, and it had been found that though the dodder had germinated and grown upon the clover in the first year, in the second none had been found, as it had failed to form seed. Mr. Güssow, however, thought that seed was, at least under certain circumstances, produced.

LILY HYBRIDS. — Mr. Scrase Dickins, F.R.H.S., showed seedlings of L. croceum x L. elegans and L van. Houttei. The plants showed extraordinary vigour, which the raiser attributed partly to the fact that they were seedlings, and partly to their hybrid origin. The hybrids do not set seed when pollinated with one another's pollen, but set seed freely when pollinated with pollen from L. elegans. The forms varied considerably among themselves, and forms of L. dahuricum could be well matched among them. The L. elegans parentage was evident in many by the reflexing of the perianth pieces. Unfortunately the hybrids are not disease resisting. A hearty vote of thanks was accorded to Mr. Dickins.

PHLOX LEAVES MALFORMED. — Mr. Worsdell drew attention to the peculiar form at times assumed by the leaves of phlox. Sometimes the leaves appeared as ascidia or as pockets, or merely as wings on the midrib. This condition, Mr. Massee pointed out, was due to the presence of the eelworm Tylenchus devastatrix, large numbers of which were present in the plants. This and other species of eelworm were responsible for many malformations in plants, as is seen in the tulip-rooted oat, the thickened neck of the onion, malformed flowers in cereals and various wild grasses (in one case of Agrostis vulgaris, a malformation due to an eelworm has been taken as a character upon which to found a variety), and warts and knobs upon roots.

ARISÆMA CONSANGUINEUM. — Mr. Massee, on behalf of Mr. H. J. Elwes, showed plants of this new species.

PLANT BREEDING.—Professor Hansen, of N. Dakota, who is passing through London on his way to Russia and Siberia on his fourth journey of exploration, received a hearty welcome from the committee. In the course of his remarks he alluded to the efforts which were being made to obtain fruit trees which would maintain their existence without suffering through the rigours of the American winter, and remarked upon the great measure of success which had already attended their efforts to obtain frost-resistant plums, raspberries, etc.

FRUITS OF LATHRÆA CLANDESTINA. —Mr. Bowles showed capsules of this interesting and beautiful parasite to illustrate the explosive mechanism by which the seeds are flung out of the capsule when ripe. The two valves of the capsule suddenly roll inwards and fling the seeds out a very considerable distance.

PRIMULA ANGUSTIDENS. — From Messrs. Veitch, of Chelsea, came a pan of this beautiful primula, which is closely allied to P. Poissoni, and bears several whorls of drooping deep clear purple flowers upon its rigid erect stems.

MILTONIA VEXILLARIA.—Baron Schröder, V.M.H., sent a spike of Miltonia vexillaria with normal flowers, and another with partially double flowers, which was borne upon a plant divided from the former a few years ago. The parent had always (for over twenty years), borne normal flowers, while each year since its separation the offset had produced semi-double flowers.

BLUE SWEET PEA "ZYPHYR."—From Mrs. R. H. Biffen, of The Gables, Histon, came flowers of a pea raised by crossing Zoë (a medium blue) with a Countess Spencer (Paradise) in 1905. Mrs. Biffen had obtained the same thing from a number of crosses made subsequently between flowers of a deep blue and others of a pink colour, in addition to others, of all shades of blue and of the "Spencer" form.

CULINARY PEAS. — Mr. A. W. Sutton showed the offspring of a pea occurring spontaneously in Palestine, twelve miles from Jaffa, four years ago. Many hybrids have been raised from crosses between this wild form and the best of the cultivated ones, and in some the coloured flower is reproduced, in others the flowers are white; in some the serrated edges of the foliage, normal in the wild plant, are retained, but in others the margin of the leaf is practically entire.

Royal Oxfordshire Horticultural Society.

JUNE 23.

Favoured by brilliant weather, the seventy-eighth Midsummer exhibition of this society was held in the gardens of the Warden of Wadham College, Oxford, and was largely attended. These gardens, formerly the site of an Augustinian monastery, are admirably suited to the holding of a flower show, being rich in noble cedars, copper beech, ailanthus, walnuts, and evergreen oaks; there is also a fine example of Judas tree and tulip tree. In the snowstorm of April last much damage was done to the ornamental conifers, and one remarkable Lebanon cedar was uprooted. Being cut into sections for removal, it was discovered that its age was some 150 years less than had been supposed. The college authorities intend to use the timber, when seasoned, for tables.

Entries for the show were a fair average, the competition in the open to all England classes being keen. For a group of plants, arranged for effect on 220 feet, Messrs. J. Cypher and Sons, Cheltenham, secured the £15 prize with one of their splendid arrangements; Mr. W. Vause, Leamington, second; with Mr. D. Curtis, Iffley Road, Oxford, third. The first and second prize sets were rich in orchids; the third was very chaste, and had some fine maples.

To aid this section Mr. W. Balmforth, gardener to F. M. Ogilvie, Esq., The Shrubbery, Oxford, arranged a design filling fully 250 feet, but not for competition. Its central line was a low arch of cork bark, crowned by a noble palm, and flanked by neat crotons, caladiums, grevilleas, acalyphas, etc. At each of the angles the mounds supported fine specimen crotons, the interspaces being broken up into a series of hillocks, each encircled by choice orchids, with the groundwork filled in with rare stove subjects. On close inspection one noticed numerous examples of Odontoglossum crispum Xanthotes, and fully 200 spikes of good forms of odontoglossums, carrying from 10 to 20 blooms on a spike; very lovely were the specimens of O. lutea-purpureum Vuylstekianum, the spikes of pale yellow blooms proving attractive. The numerous examples of the old Oncidium flexuosum, with its slender racemes, appeared midgets in comparison to the specimens of O. macranthum, with spikes fully fifteen feet in length, and furnished with a 100 flowers each. The group was brilliant with Cattleya Mossiæ, and Mendeli, each furnished with about twenty spikes; then there were a number of Lælio-cattleyas, such as Canhamiana, Fascinator, delicata, splendens, rubiceus, and others.

Mr. W. T. Mattock, Barton End Nursery, Headington, secured the prize for a charming arrangement set out on 120 square feet; Mr. John Walker, Thame, led in the open class for single and double zonal pelargoniums; Mr. A. V. Tuffrey, gardener to Miss Bull, Arncott House, Oxford, had the premier collection of gloxinias; Mr. Joseph Green, Latimer Road, Headington (carpenter), had the best group of tuberous begonias. Exotic ferns were poor, but the collections of nine varieties of British ferns were equal to anything seen at provincial exhibitions; Mr. H. Mount, superintendent of the Oxford University Parks, being first, with Mr. W. F. Cross, Iffley Road, Oxford, second.

Cut flowers comprised displays of roses set out on 72 square feet; Mr. J. Mattock, Rose Farms, New Headington, securing the chief award, also for two dozen varieties, eighteen teas, and twelve vases of roses; Mr. George Prince, Rose Gardens, Longworth, Berks, was second in each class; the prizes for eighteen varieties of roses went to Messrs. W. T. Mattock, and F. Taylor and Sons, Chipping Norton Junction. Mr. Walker was the only exhibitor of cut pelargoniums in the open class. Herbaceous perennials made a blaze of colour, Mr. John Johnson securing all the open awards, and filling more than 100 feet run of staging, in three tiers, with large sheaves of garden varieties.

Sweet peas were largely staged. Messrs. West and Sons, The Market, Oxford, secured the first prize (open to all England) for a dozen bunches; Mr. W. T. Mattock, won Mr. Sydenham's large medal and cash for nine bunches; and Mr. T. Sirman, Stanton Harcourt, secured the society's premier prize for a dozen varieties in the members' section. The best pansies came from Messrs. F. Taylor and Sons; pyrethrums, from Mr. T. Sirman; and iris, from Mr. L. S. Loat, Cumnor Place, Berks. There were seven decorated dinner tables, Mr. W. T. Mattock securing the prize in the open class.

Fruit made a small show. Mr. C. E. Munday, gardener to the Right Hon. Lewis Harcourt, M.P., Nuneham Park, led for white and black grapes, nectarines, and strawberries; Mr. C. Jones, gardener to Sir W. Anson, Bart., M.P., Pusey House, Berks, was first for melons; Mr. R. Wadham, gardener to Mrs. Bradshaw, Steeple Aston, led in the classes for cucumbers, tomatoes, and a collection of vegetables in eight varieties. In the amateur section, Mr. S. Mold (cooper's foreman), Grandpont, Oxford, headed the list in the classes for fuchsias, zonal geraniums, cucumbers; Mr. T. Anstiss, Brill, scored for hardy ferns, cut zonal pelargoniums, and pansies; Mr. A. Evans, Marston (dairyman), in two classes of roses; Mr. A. Adams, Headington (butcher), for cos lettuce, turnips, and rhubarb; Mr. W. F. Cross, with strawberries, peas, carrots, white and coloured potatoes, and cabbage lettuce; and Mr. W. R. H. Powell, Divinity Road, Oxford (tailor), for broad and long-pod beans.

Non-competitive exhibits, exclusive of the orchids referred to, comprised a large collection of pæonies in variety, from Mr. Johnson, Garsington; three specimen crimson carnations, in pots, furnished with fully sixty flowers each, from Mr. G. Hollingsbee, gardener to Captain A. G. Russell, Wood Eaton House, the variety being John Burns; a miniature rockery from Mr. John Cooper, Hardy Plant Nursery, Chipping Norton; collection of rhododendrons from Mr. J. Osborne, gardener to Mrs. Newhall, Youlbury, Boar's Hill, Berks; artistic floral designs from Messrs. R. Tucker and Sons, Magdalen Street, Oxford; and a collection of delphiniums from Mr. L. S. Loat, Cumnor Place, Berks. To each an Award of Merit was granted.

Richmond.

The summer flower show held in the Old Deer Park, Richmond, is always one of the great attractions in this fashionable suburb. This year, on June 24, the exhibition was a great success from a horticultural standpoint, while, owing to the splendid weather that prevailed, the attendance was a large and fashionable one. The exhibits were so numerous and the competition so keen that judging was not concluded until 1.30. There was an advantageous rearrangement of the tents, and more space than usual was provided for visitors in the tents, all of which tended to comfort and better inspection of the exhibits.

In the group class Mr. Lock, gardener to Sir C. Swinfen Eady, Oatlands Lodge, Weybridge, led the way with an attractive and elegant design in choice flowering and foliage plants, and he was followed by Mr. W. Vause, of Leamington. In a smaller class the prizewinners were Mr. Burfoot, gardener to Lady Waechter, Terrace House, Richmond, who was placed first, and followed by Mr. H. Hicks, gardener to C. M. Bartlett, Esq., East Sheen, and Mr. W. Vause. The latter won first place for six orchids, and also for half a dozen palms, the latter being big and noble examples of kentias and latanias. Mr. Vause was also first for fine-foliaged plants, winning with big crotons, cycas, etc. In other plant classes Mr. H. Hicks was successful for coleuses and for caladiums; Mr. T. Rabitt, gardener to W. S. Edwardson, Esq., Ballari, Sidcup, scored for a dozen tuberous begonias with splendid plants; Mr. J. Foster, gardener to A. R. King-Farlow, Esq., Spa House, Richmond, led for exotic ferns; and Mr. B. Mason, gardener to A. Elsee, Esq., Burlington House, Hampton Hill, scored for fuchsias.

Roses were splendid, and there was a keen competition between the various well-known exhibitors. The Gunnersbury Challenge Cup for forty-eight roses, three blooms of each, was won by Messrs. D. Prior and Son, Colchester, who had fine flowers and a good assortment of colours; Messrs. Harkness and Son, Hitchin, came second, and Messrs. F. Cant and Co., Colchester, third. Messrs. B. R. Cant and Sons, Colchester, came to the front with two dozen trebles, the other prizes falling in order to Messrs. G. and W. H. Birch, Peterborough, and Messrs. D. Prior and Son. Messrs. Harkness and Son led for twelve trebles, Messrs. D. Prior and Son for twelve blooms of one variety, and Mr. E. J. Hicks, Twyford, scored for twelve tea roses. In the amateurs' division Mr. E. J. Holland, Silverdale, Sutton, beat the Rev. J. H. Pemberton, Havering, for twenty-four roses, distinct, and these two strong competitors occupied similar positions for a dozen blooms, Mr. Colin Romaine, The Priory, Old Windsor, coming third. Mr. W. J. Palmer, Netherton Road, St. Margaret's; Mr. G. Penkeril, The Vineyard, Richmond; Mr. B. Mason, and Mr. Bartleet, Severndroog, Shooter's Hill, were also successful with roses.

Sweet peas were again a fine feature, and Mr. T. F. Conway, gardener to the Earl of Dysart, Ham House, Petersham, was placed first for nine varieties; Mr. F. Gower, gardener to the Rev. W. H. Oxley, Petersham, second; and Mr. T. Stevenson, gardener to E. Mocatta, Esq., Woburn Place, Addlestone, had to be content with third place. For six varieties Mr. Gower led, with Mr. Conway second, and Mr. J. Watson, gardener to W. Compton, Esq., Eastcott, Kingston Hill, third. All showed the finest varieties. In a special class for nine varieties Mr. Conway, Mr. Stevenson, and Mr. J. Watson were placed as named.

Floral designs are always a great attraction here, and once again Miss C. B. Cole, Feltham, was a leading prizewinner, gaining firsts for a basket of roses, three epergnes, and basket of flowers and foliage, but she was beaten for a table decoration in the open class by her sister, Miss N. H. Cole. Miss Gertrude Sage had the best table decoration in the local class.

Mr. Lock was very much to the front in the fruit classes, taking first prizes for peaches, nectarines, and cherries, and second for white grapes. In the latter class Mr. Lintott, gardener to Sir W. Greenwell, Marden Park, Caterham, was first, but he was second to Mr. Weston, gardener to H. J. King, Esq., Eastwell Park, Ashford, for black grapes. Mr. Lock scored again for a collection of six dishes of fruit, his grapes, peaches, and strawberries attracting considerable attention.

In the open class for twelve kinds of vegetables, Mr. Conway was first, and Mr. Lock second; the latter led for tomatoes, but Mr. Conway was again first in the class provided by Messrs. J. Carter and Co., for vegetables, and also in Messrs. E. Webb and Sons' class.

The cottagers', allotment-holders', and children's displays were highly meritorious, particularly the vegetables shown by the former.

Non-competitive exhibits were once more numerous and good, adding materially to the extent and attractiveness of the show. Gold medals were awarded to Messrs. J. Veitch and Sons, Chelsea, for pot roses; Messrs. T. S. Ware, Lim., Feltham, for hardy flowers; Mr. L. R. Russell, Richmond, for foliage and flowering plants; Mr. W. Thomson, Richmond, for palms, etc.; and to Mr. Amos Perry, Enfield, for hardy flowers and water lilies. Silver-gilt medals were awarded to H. Little, Esq., Baronshalt, Twickenham, for a group of handsome orchids; Messrs. J. Peed and Son, Norwood, for hardy flowers; Messrs. W. Cutbush and Son, Highgate, for carnations and hardy flowers, and Messrs. W. and J. Brown, Peterborough, for roses.

FORTHCOMING ENGAGEMENTS.

TUESDAY, July 7.—Holland House Show; judging commences at 10 o'clock; committees meet at 10.30; and luncheon at 1 o'clock; two days.
Wolverhampton Floral Fete; three days.
Bath Rose Show and Fete; two days.
Southend Horticultural Society; two days.
National Amateur Gardeners' Association Exhibition at Winchester House, Broad Street, 7 p.m.
WEDNESDAY, July 8.—Beckenham Horticultural Society.
Hayward's Heath Rose and Sweet Pea Show.
Gosport and Alverstoke Summer Show.
Croydon Horticultural Society.
York Florists' July Show.
Colchester Horticultural Society.
Epsom Horticultural Society.
Tunbridge Wells Horticultural Society.
Hemel Hempstead Summer Show.
THURSDAY, July 9.—Newmarket Horticultural Society.
Eltham Rose Show.
Harrow Horticultural Society.
Stour Valley Flower Show.
FRIDAY, July 10.—Maidstone Rose Club.
SATURDAY, July 11.—Fingall Horticultural Society.
Edgware and Little Stanmore Horticultural Society.
Purley Rose Show.

SOME SPECIAL FEATURES
. . IN . .
THE
GARDENERS'
MAGAZINE.
1908.
Jan. 4.—**ISLES OF SCILLY** (Illustrated).
11.— „ „ Bulb Industry.
Feb. 8.—**HORSHAM GARDENS** (Illustrated).—Denne Park, Leonardslee, Holbrook Park.
15.—**HORSHAM GARDENS** (Illustrated) —Warnham Court, Warnham Lodge, South Lodge, Wimblehurst.
March 7.—**THE GARDENS OF CORNWALL** (Illustrated). – Tremough, Trelissick, Rosehill, Penjerrick.
14.—**THE GARDENS OF CORNWALL** (Illustrated). —Carclew, Trebah, Enys, Penmorvah.
April 11.—**NORWICH GARDENS** (Illustrated).—Gunton Park, Blickling Hall, Westwick Hall, Shotesham Hall.
18.—**NORWICH GARDENS** (Illustrated).—Dunston Hall, Crown Point, Town Close House, Ashwellthorpe Hall, Oakland House, Boyland House,
May 2.—**GHENT CENTENARY FLOWER SHOW.**
16.—**BRISTOL GARDENS** (Illustrated).—Barrow Court, Ashton Court, Downside, Elmfield.
23.—**BRISTOL GARDENS** (Illustrated). — Cote House, Down House, The Priory, Old Sneed Park.
June 30 } 6 } **THE TEMPLE SHOW** (Illustrated Report).

Copies of the above, price 2d. each, or by post 2½d., may be obtained from the Publishers, 148 and 149, Aldersgate Street, London.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to [illegible] Editor of the GARDENERS' MAGAZINE, 148 and [illegible] Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for [illegible] or opinion should be sent to the [illegible] GARDENERS' MAGAZINE, "Endsleigh," [illegible] Kew, Surrey, and as early in the week as [illegible] All parcels must be sufficiently [illegible]

The Editor will be glad to receive [illegible] gardens, plants, flowers, trees, fruits [illegible] reproduction in the GARDENERS' MAGAZINE [illegible] also be greatly obliged by correspondents [illegible] early intimation of interesting local events [illegible] to horticulture. In sending newspapers [illegible] matter to which they wish to draw attention [illegible] respondents are requested to distinctly [illegible] paragraph.

CLIPPING BOX HEDGES.—S. V., [illegible] ing: You could not select a better time [illegible] the present for clipping box and other [illegible] green hedges. The shrubs soon make [illegible] growth that becomes hard before winter [illegible] is therefore able to pass through [illegible] weather unscathed. If there is any doubt [illegible] to the ability of the operator to [illegible] hedge in a straight line, it will be an [illegible] matter to strain a few rows of string [illegible] the hedge front and top as a guide [illegible] straightness and depth.

GRUBS IN CARNATION LEAVES.—R. R., Streatham: The grubs in the [illegible] tion leaves are those of Hylemia [illegible] and they are perfect pests in some [illegible] especially near towns. The grubs, or [illegible] tion maggots, as they are generally [illegible] must be carefully sought after and killed. Cut off and burn badly infested leaves, and in other cases pick out the maggot with a pin and kill it. If the maggots or [illegible] not caught while in the leaves they will work along into the stem, and in all probability soon kill the plant. Examine the bed carefully every day, disposing of the pests as far as they can be found. In all probability the attack will presently cease. Spraying with a quassia or tobacco solution [illegible] been suggested as a preventive, but [illegible] to be of little value.

CURLED ROSE LEAVES.—S. [illegible] Derby: Each of the curled up leaves [illegible] a sheltering home for the larvæ of the [illegible] rolling sawfly (Blennocampa pusilla [illegible] best remedy is hand-picking, removing [illegible] destroying the curled leaves directly [illegible] are noticed. This early removal of [illegible] foliage not only prevents the larvæ [illegible] passing on to infest other leaves, [illegible] curled leaves are burned, the larvæ [illegible] vented from entering the soil in [illegible] autumn, there to remain, pupate, and [illegible] rise to adult sawflies next season.

FOXGLOVES.—B. L., Lewes: [illegible] seeds at once, choosing a good [illegible] spotted foxgloves. Sow in pans and [illegible] in a shaded cold frame, and as [illegible] the seedlings can be handled prick them [illegible] on a semi-shaded border where the [illegible] rich and contains plenty of leaf-mould [illegible] these beds they may be transplanted [illegible] flowering quarters in the autumn.

AMERICAN BLIGHT ON OLD [illegible] F. L. G., Lincoln: The shoots are [illegible] teeming with American blight, and [illegible] this awful pest will become [illegible] throughout your garden, and [illegible] your neighbours' gardens also. [illegible] burn all the shoots, and then grub [illegible] burn the tree, taking the greatest [illegible] care not to permit the dispersal [illegible] This will be by far the best plan, [illegible] acknowledge the tree is of little value.

THE SPROUGHTON HOE.—[illegible] Hunstanton: The Sproughton hoe is [illegible] cellent tool in careful hands, but [illegible] hands it may become a far deadlier [illegible] than a Dutch hoe. In the latter [illegible] blade is held firm by two curved arms [illegible] in the Sproughton hoe the blade is [illegible] one arm only, and thus it can be [illegible] closely up to and around the stems [illegible] Both edges of the blade are [illegible] action by thrusting and drawing the

The free end of the blade, slightly pointed, is also very useful if cautiously manipulated.

BUDDING.—A. T., Faringdon: It is usual to associate the operation of budding with [illegible] fruit trees, and most kinds of ornamental trees can be successfully increased by [illegible]. The directions for budding [illegible] apply equally to trees, with the [illegible] that while the buds of the former [illegible] inserted in the young growths, the [illegible] fruit and ornamental trees are best [illegible] wood one or more years old. The best months for budding are July and August, the wood and bark being then moderately firm and so full of sap that they part from each other, this latter condition being essential to success. In the pre- [illegible] the stocks for standard and half-standard roses a beginning should be made during the second half of June or quite early in July. The first step will be to remove all but two or three of the strong, well-placed shoots near the top. If these are unduly vigorous they may be shortened by having eight or nine inches taken off the top; but when the shoots are shortened the insertion of the buds should be deferred until they are beginning to make new growth, as it is essential the sap should be flowing freely. The buds should be inserted on the upper side of the selected shoots, and as near the base as may be convenient. For the supply of buds select, from the varieties it is desired to increase, shoots that are of medium size and moderately firm. From these shoots cut off the leaves immediately under the lower leaflets, and proceed to prepare the buds. Take a sharp knife, insert it about an inch below the base of the leaf, and by means of an upward cut take off a shield-like piece of the bark, with a small piece of the wood, and in doing this bring the knife out about half an inch above the bud. Remove the small slice of wood without bringing away the bud, and the shield-like bud is ready for insertion in the stock. The latter is prepared for its reception by a longitudinal cut about one and a-half inches long, and a cross cut at the top. The bark is then raised on each side of the longitudinal incision, and the bud slipped underneath and cut across the top so that the latter fits the bark of the stock immediately above the incision. The shoot at the point where the bud is inserted is bound with raffia, raffia tape, or worsted. It is essential to success that the bark of both the buds and stocks part freely from the wood, and it will be better to wait for rainy weather than to attempt the work when the weather is so dry that the bark adheres firmly to the wood. Dwarf roses should be budded so closely to the surface that when they are transplanted the junction of the bud and stock can be buried below the surface. Fruit trees should also be budded low down, and when quince stocks are used for pears the buds should be inserted as for dwarf roses, as it is most important the junction should, when the trees are transplanted, be below the surface to enable them to produce roots above the stock.

WOBURN WINTER WASH.—S. W. E., Farningham: The Board of Agriculture, in a recent issue of its "Journal," gave the following formula for the Woburn Wash, for use as a winter dressing for fruit trees: Paraffin, 5 pints; sulphate of iron, ½lb.; caustic soda, 2¼lb.; lime, ¼lb.; water to make 10 gallons. The wash may be prepared as follows: (a) Dissolve the sulphate of iron in about 9 gallons of water; (b) shake the lime in a little water and then add a little more water to make this into a "milk"; (c) run b into a through a piece of coarse sacking to remove grit; (d) churn the paraffin into the mixture; and (e) just before using the wash add the caustic soda in the powdered condition and stir thoroughly. The wash may be used during February and March so long as the plants are dormant and cold weather prevails.

PINKS.—F. R. W., Cardiff: You will find the information you require, and also particulars of carnations and their culture in "Carnations Picotees and Pinks," post free 2s. 10d., from the GARDENERS' MAGAZINE Office, 148, 149, Aldersgate Street, E.C.

BLACK SPOT ON ROSES.—H. D. H., Birmingham: The spotting on the rose leaves sent is due to a fungus known as Black Spot (Actinonema rosæ). The diseased leaves should be removed and burned, and any that fall should be at once consigned to the fire. Spray with a weak solution of potassium sulphide—1oz. to 10 gallons of water is recommended. It is difficult, indeed, almost impossible, to cure an attack, but one may do much to prevent a spread of the disease, and, next spring, judicious sprayings at intervals may prevent a recurrence of attack. Present spraying should keep the new growth clean.

PIG-KEEPING.—J. H., Saffron Walden: A very useful and practical work dealing with pigs and pig-keeping, is "Pigs for Profit," by John Walker, 1s. 9d. post free, in cloth, from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.

INSECTS ON CHERRIES.—L. A., Ealing: We very much regret that the little insects escaped during their journey to an entomologist, and we are therefore unable to give you their name. We shall be glad if you will let us know whether you have seen any other rings of eggs on the cherry stems, and whether there is any sign of an attack of small round insects at present.

SINGLE-HANDED GARDENER.—H. H., Buckhurst Hill: A single-handed gardener is a man who, without any assistance, manages and works a garden for his employer. If a man is allowed one lad, or the occasional help of a man, he does not work the garden

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single-handed. We find, however, that your rules classify competitors into six divisions, and one of these is for single-handed gardeners having only occasional help. As there is no division specially for the true single-handed gardener, we take it that, for the purposes of your show, this classification applies to all classes for single-handed gardeners. Class 20, taken without reference to clause B of rule 13, would exclude gardeners who have any assistance whatever, and if it was so intended, then the class specification should have been properly worded to meet the case, and rule 13 should have had a further clause added. At present rule 13 governs class 20, and its effect is to handicap gardeners who have no assistance; and, as further showing the curious effect rules and regulations may have when class specifications are not in accord with them, we may point out that a man who has no assistance is, if one wished to split hairs finely, debarred from competing in any but the open classes.

CULINARY PEAS.—T. T., Birmingham: There is no trace of fungus attack in the peas sent, and we therefore can only conclude the damage has been caused by sudden changes of weather, or error in culture. Heavy waterings with cold water before the plants were able to profit by them, followed by a sudden fall of temperature, would so lower the temperature of the soil as to seriously check, if not quite kill the young and tender rootlets. We incline to the belief that the cause must be looked for in some such direction as that indicated.

PEACHES FAILING.—G. B., Dublin: The markings suggest an attack of Peach-spot Mould, but we are having the matter investigated. Kindly send us other examples. Remove and burn all diseased fruits, and maintain a drier and more buoyant atmosphere in the peach house. Spraying is practically impossible at this stage, as it would quite spoil the healthy fruits.

SOIL FOR ROSES.—Staffs: You are fortunate in being able to command plenty of turf. Cut the turves about four inches thick with a spade, and stack them as cut, placing between each layer of turf a good thickness of fresh cow manure, and a free dressing of soot and wood ashes. Such stack will provide material for adding to the rose border in autumn just previous to planting, but it should not be put at the bottom of a 2ft. trench. Use it where the roots will be at once able to take advantage of it.

NAMES OF PLANTS.

M. N., Colchester.—Acer campestre.

J. J., Croydon.—1, Dictamnus fraxinella; 2, Anthericum Liliago.

F. S. R., Horsham.—1, Polygonum cuspidatum; 2, Campanula Mayi.

W. A., Harwich.—1, Bifrenaria Harrisoniæ; 2, Cattleya Mossiæ, a very fair variety.

T. S., Derry.—1, Chionanthus virginicus; 2, Asclepias curassavica; 3, Bellidiastrum Micheli.

J. C., Cirencester.—1, Commelina cœlestis; 2, Tradescantia virginica; 3, Stellaria graminea aurea.

E. P. D., Hertford.—1, Dossinia marmorata; 2, Cypripedium Sedeni; 3, Erica persoluta; 4, E. Cavendishiana.

L. B. A., Taunton.—1, Costus igneus; 2, Tillandsia Lindeni; 3, Sisyrinchium striatum; 4, Rosa rugosa; 5, Plectranthus australis; 6, Quercus Suber.

C. M., North Wales.—Your post-card did not reach us until after we had gone to press, but you will have seen the names, so far as we could give them, on page 506.

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,,	per doz. bun.	8 0		12 0
,, Malmaison	per doz. blms.	8 0		12 0
Cattleyas	per doz.	8 0		10 0
Croton leaves	per bun.	1 0		1 6
Cypripediums	per doz. blms.	2 0		3 0
Eucharis	per doz.	4 0		5 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	1 6		3 0
Gladiolus Colvillei	per doz. bun.	7 0		10 0
Gypsophila	per doz. bun.	3 0		5 0
Iris, Spanish	per doz. bun.	3 0		6 0
Ixias	per doz. bun.	3 6		6 0
Lilium auratum	per bun.	2 0		3 0
,, candidum	per bun.	2 0		3 6
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 6		4 6
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	3 0		6 0
Odontoglossums	per doz. blms.	2 0		3 0
Pæonies	per doz.	1 6		3 0
Pelargoniums	per doz. bun.	4 0		6 0
Pyrethrums	per doz. bun.	2 0		4 0
Ranunculus	per doz. bun.	5 0		7 6
Roses	per doz.	1 0		6 0
Smilax	per doz. trails	3 0		5 0
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Statice	per doz. bun.	5 0		6 0
Stocks	per doz. bun.	3 0		4 0
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,, Tasmanian	per box	7 0		13 6
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Bananas	per bun.	3 0		10 0
Cherries, French	per ½-sieve	2 6		6 0
Figs	per doz.	1 0		4 6
Gooseberries	per ½-sieve	2 0		3 0
Grapes, English (new)	per lb.	1 6		8 0
,, Belgian	per lb.	0 9		1 3
Lemons	per case	8 0		21 0
Melons, Guernsey	each	0 9		2 0
Nectarines	per doz.	3 0		18 0
Oranges	per case	10 0		28 0
Peaches	per doz.	4 0		21 0
Pears, Australian	per box	7 0		12 0
Pineapples	each	2 6		5 0
Strawberries	per peck	1 3		2 6
,, Hampshire	per basket	0 9		1 6

Vegetables.

Excellent produce meets a ready sale; salads and greenstuffs are in great demand.

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Asparagus	per bun.	0 9		2 0
Beans, broad	per bush.	3 0		3 6
Beet	per bush.	1 3		2 0
Cabbage	per tally	2 6		3 6
Carrots	per doz. bun.	2 0		3 0
Cauliflowers	per doz.	2 0		3 6
Cucumbers	per doz.	1 6		3 0
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	9 0		12 0
Lettuce, cos	per score	0 9		1 3
Mint	per doz. bun.	1 6		2 0
Mushrooms	per doz. lb.	8 0		10 0
Onions, spring	per doz. bun.	1 0		2 0
,, Spanish	per case	5 0		7 6
Parsley	per doz.	1 0		1 6
Peas	per bush.	1 6		3 0
Radishes	per doz. bun.	0 10		1 0
Spinach	per bush.	1 3		1 6
Tomatoes, English	per doz. lb.	3 6		6 0
,, Guernsey	per doz. lb.	4 0		5 6
Turnips (new)	per doz. bun.	2 6		3 6
Vegetable Marrows	per doz.	3 0		4 0

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Cherbourg	per bar.	7 0		7 6
St. Malo Giants	per cwt.	7 0		8 0

TRADE NOTE.

Messrs. Mackenzie and Moncur, Lim., of Edinburgh, London, and Glasgow, the hot-house builders, etc., have, we understand, carried out a good deal of work at Dupplin Castle, Dunkeld House, Kinfauns Castle, Pitfour Castle, Ballathie, and Murthly Castle, a matter of considerable interest to our readers, in connection with the descriptive accounts of these and other Perthshire gardens given in our issues of June 27 and July 4.

METEOROLOGICAL OBSERVATIONS

TAKEN IN THE R.H.S. GARDENS AT WI SURREY.

Height above Sea-level, 150 feet.

Date. 1908. June 21 to June 27.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.
	hr. m.	deg.	deg.	deg.
June 21—Sunday	6 40	53	48	63
,, 22 Monday	11 25	53	48	70
,, 23—Tuesday	12 50	63	57	73
,, 24 Wednesday	12 50	66	58	74
,, 25—Thursday	10 0	57	52	71
,, 26—Friday	14 20	67	54	78
,, 27—Saturday	3 55	57	55	68
Means	10 20	59	53	71

Date. 1908. June 21 to June 27.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
June 21—Sunday	—	59	60	57	43
,, 22—Monday	—	59	60	57	[illegible]
,, 23—Tuesday	—	60	60	57	34
,, 24—Wednesday	—	61	61	57	41
,, 25—Thursday	—	62	61	57	43
,, 26—Friday	—	61	61	57	31
,, 27—Saturday	—	63	62	58	[illegible]
Means	(total) —	61	61	57	[illegible]

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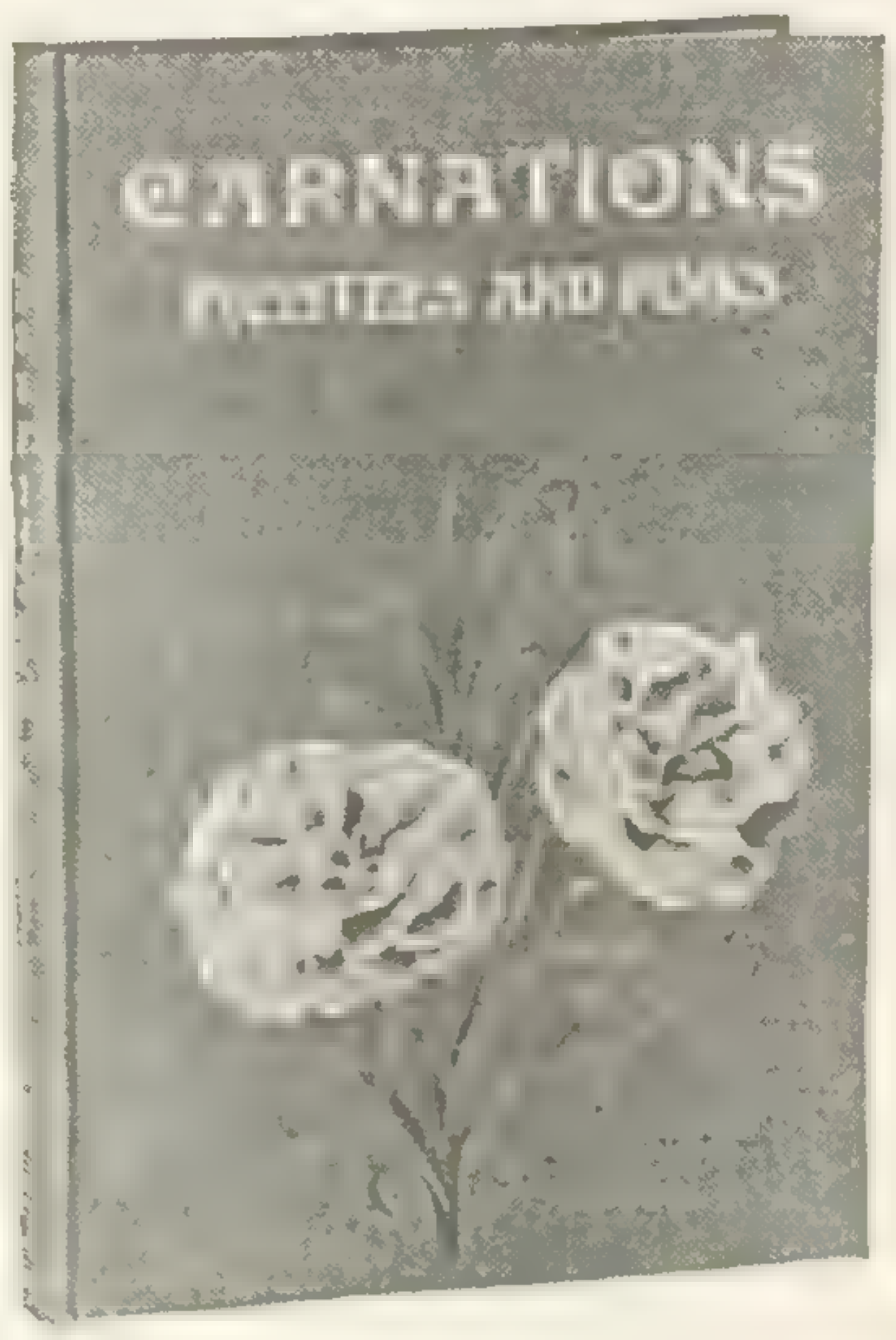

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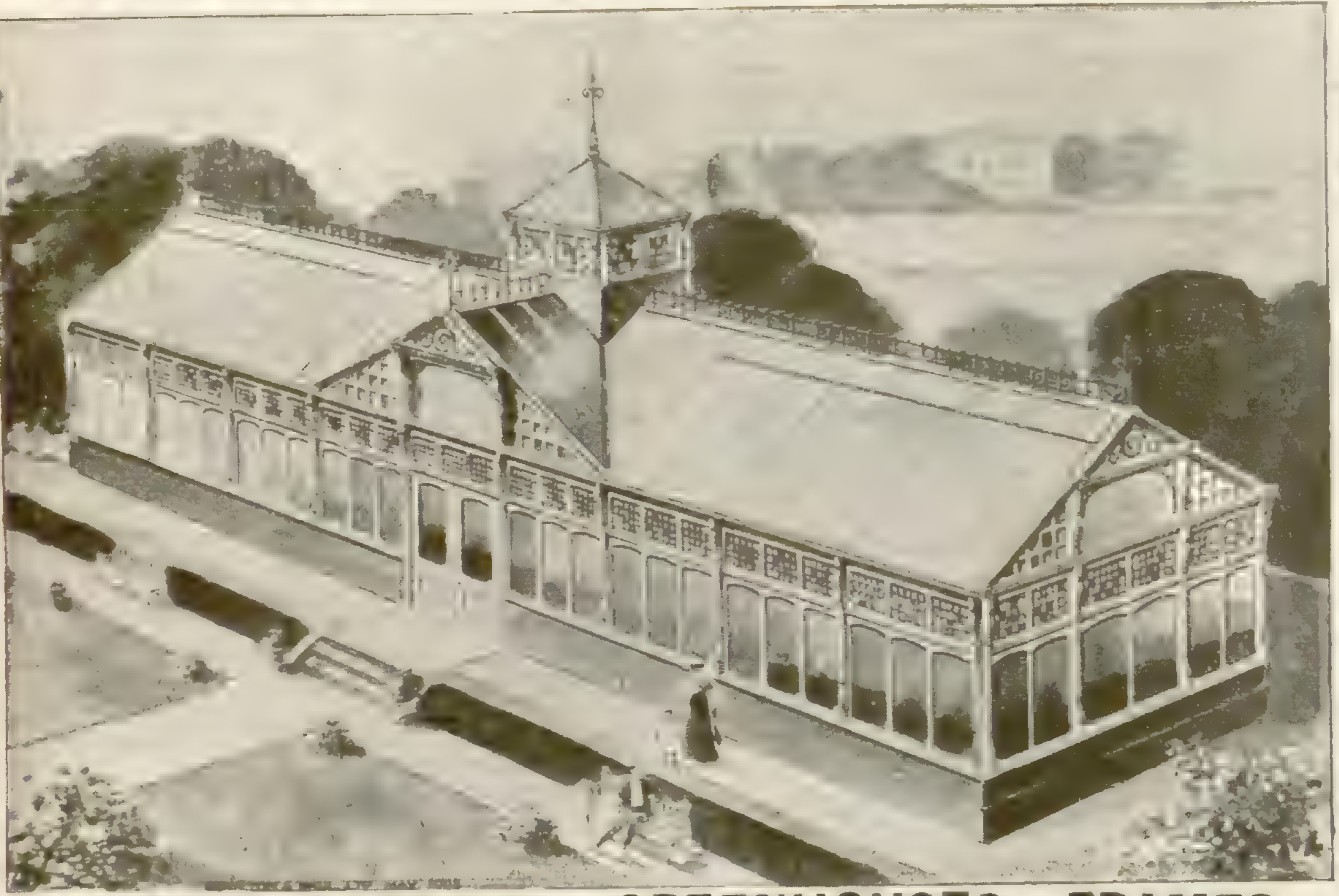

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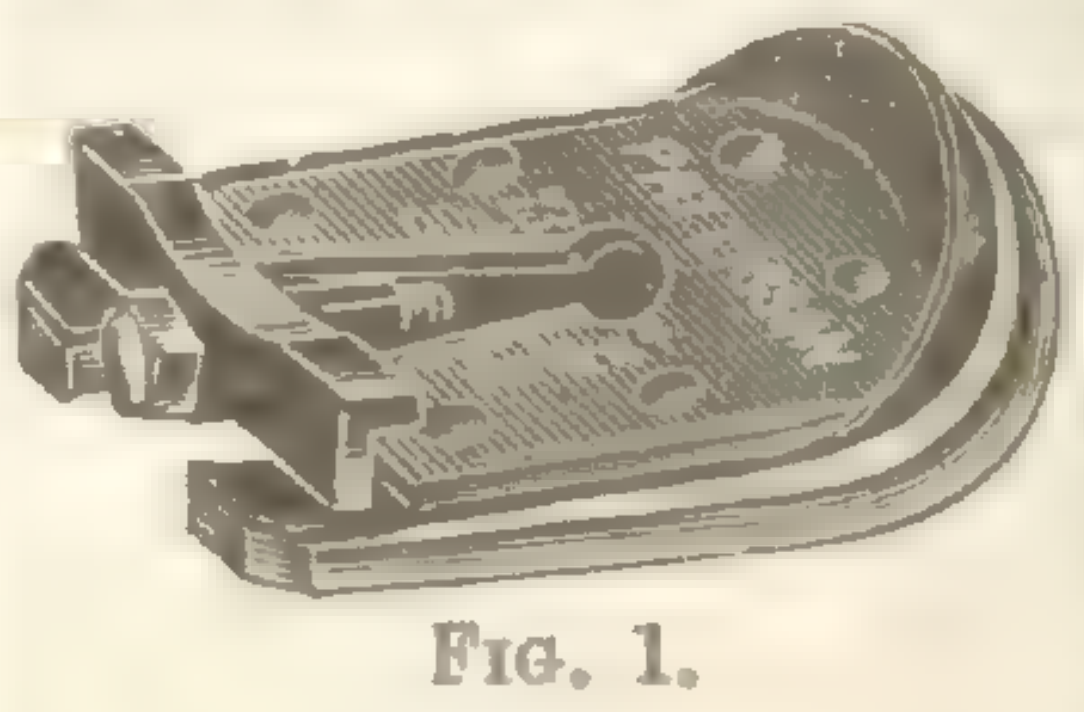

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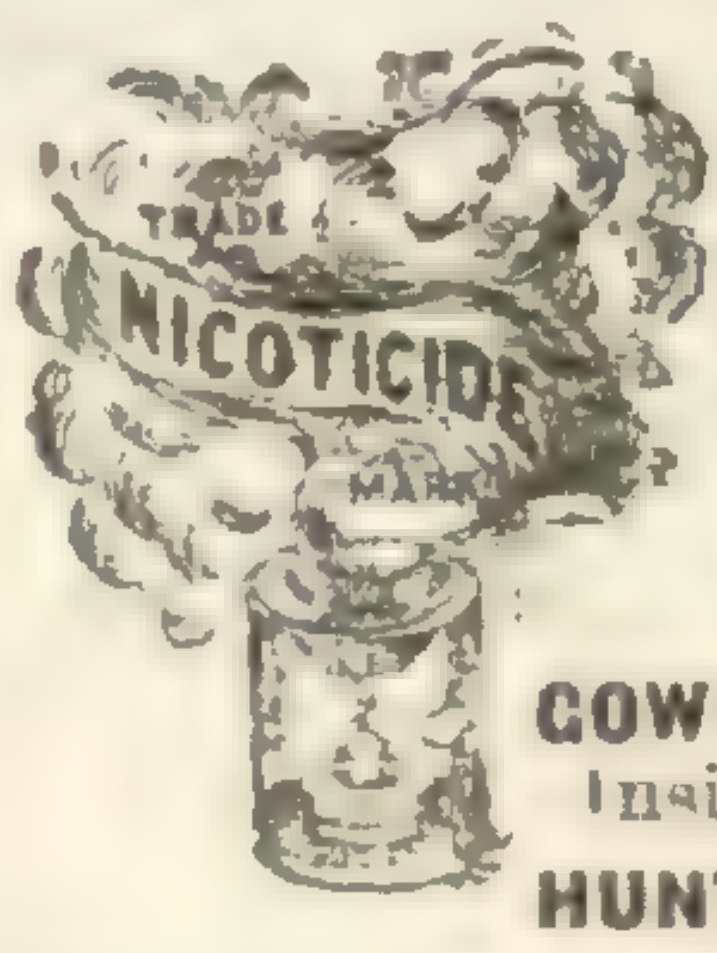

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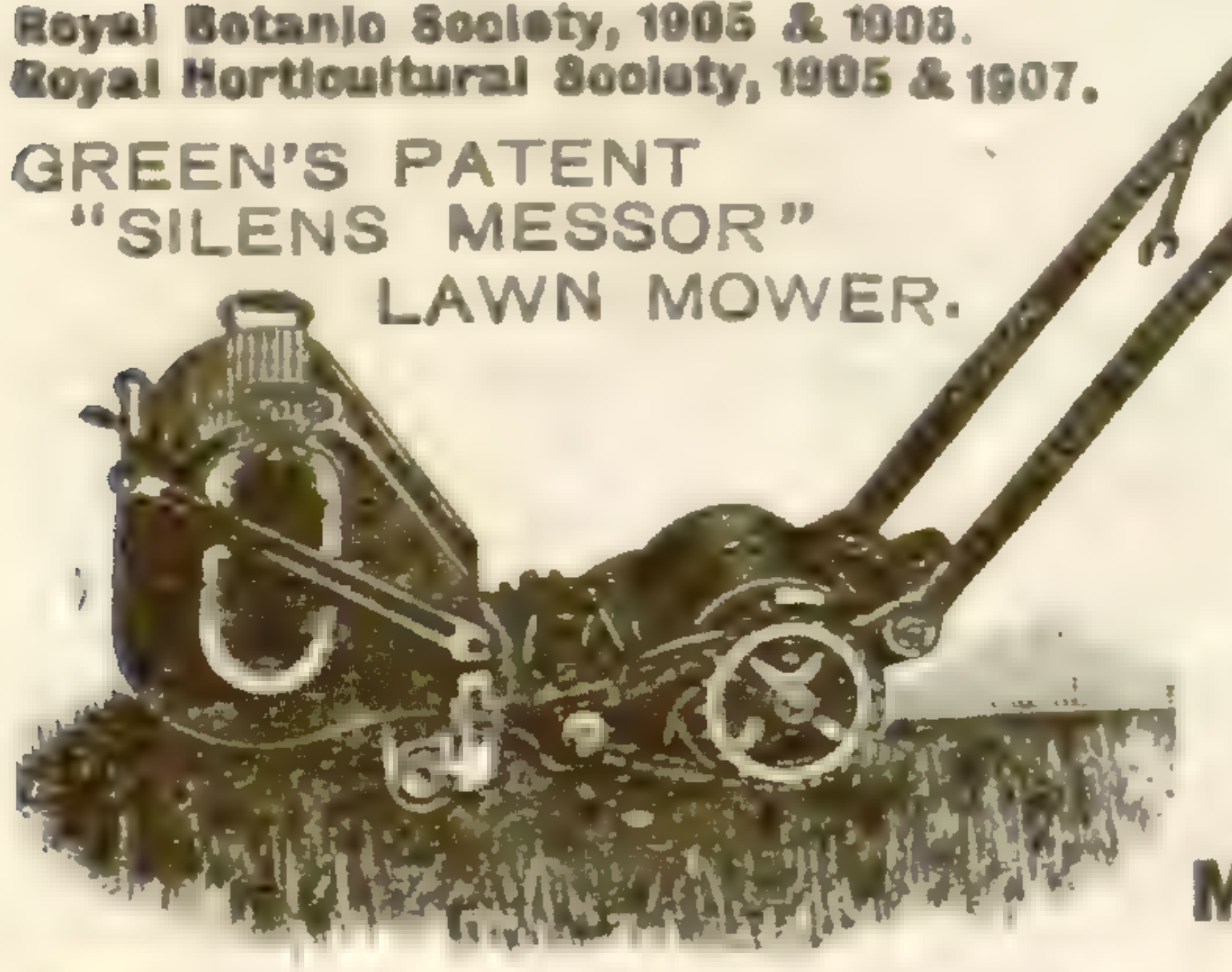

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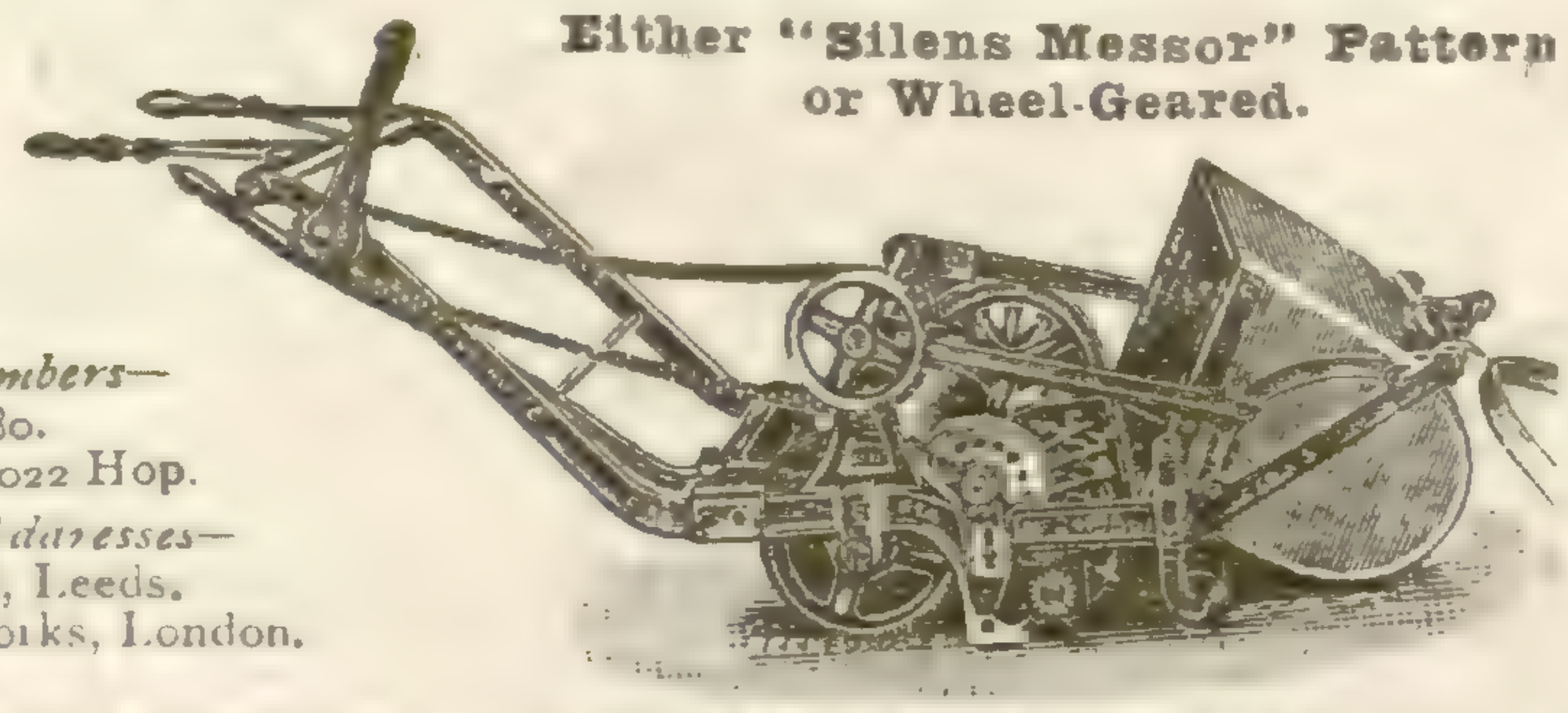

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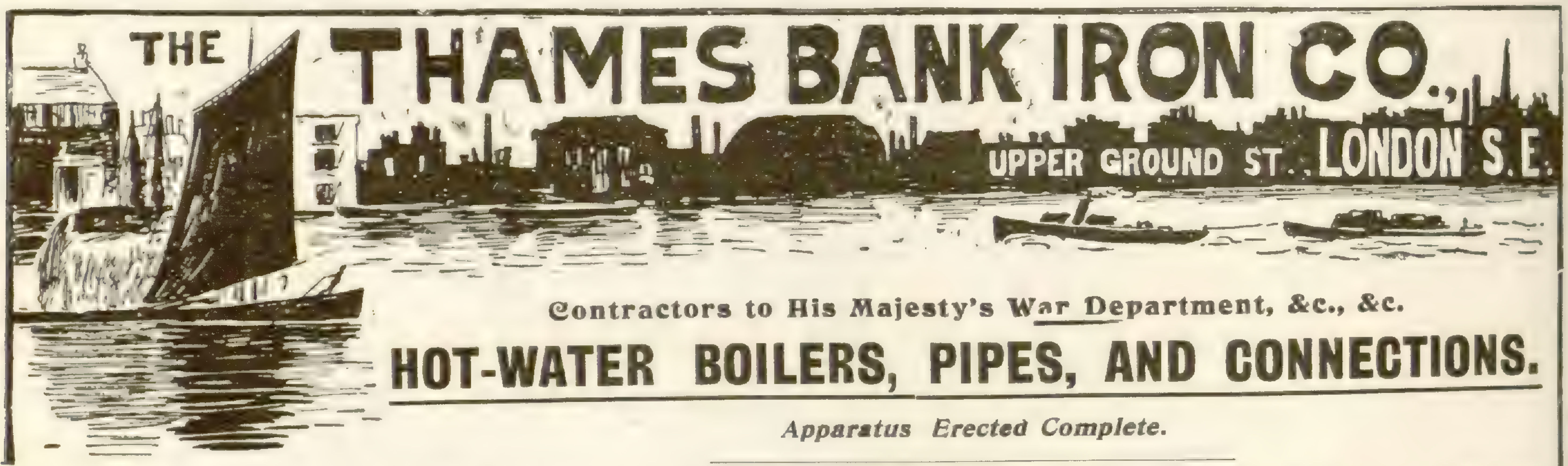

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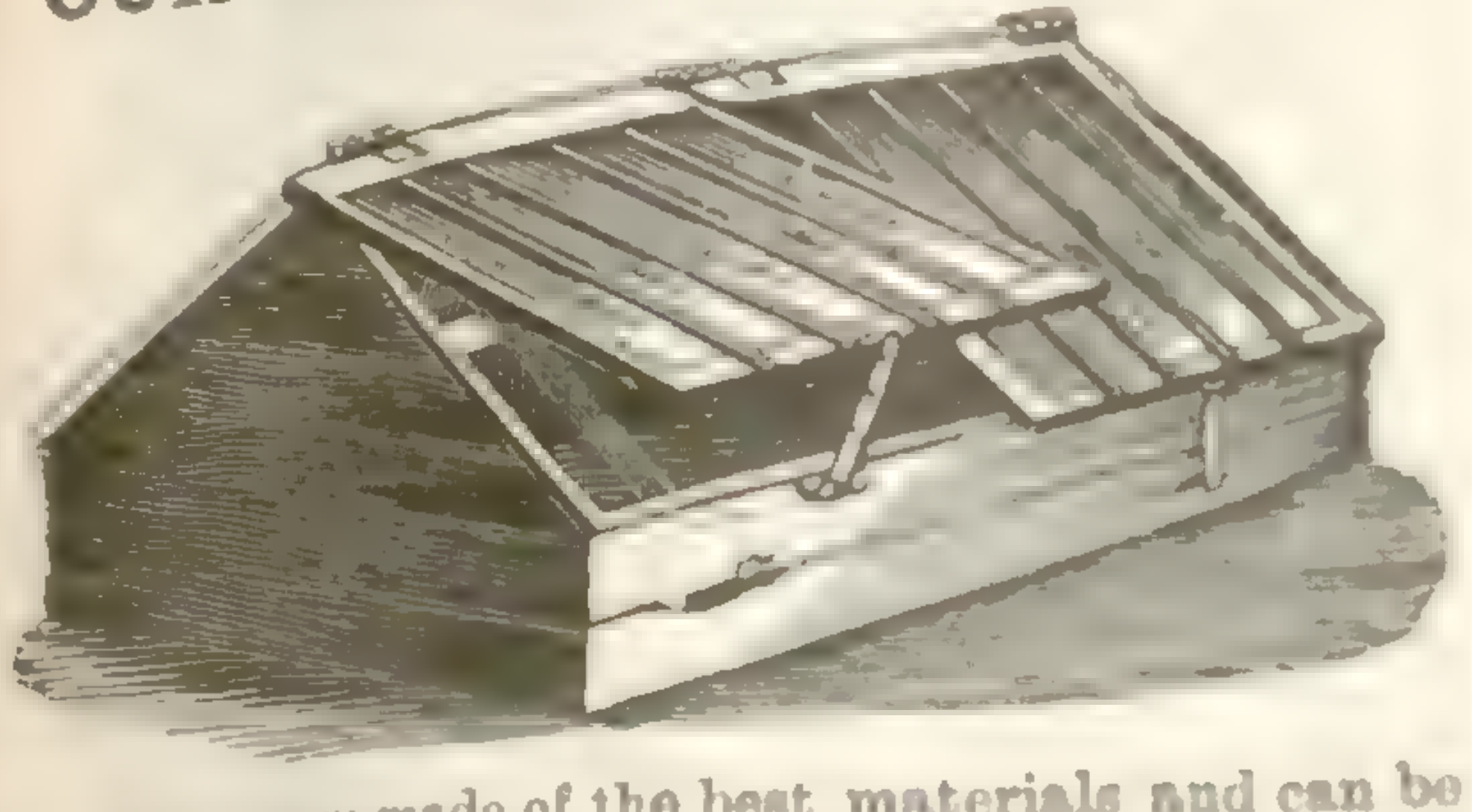

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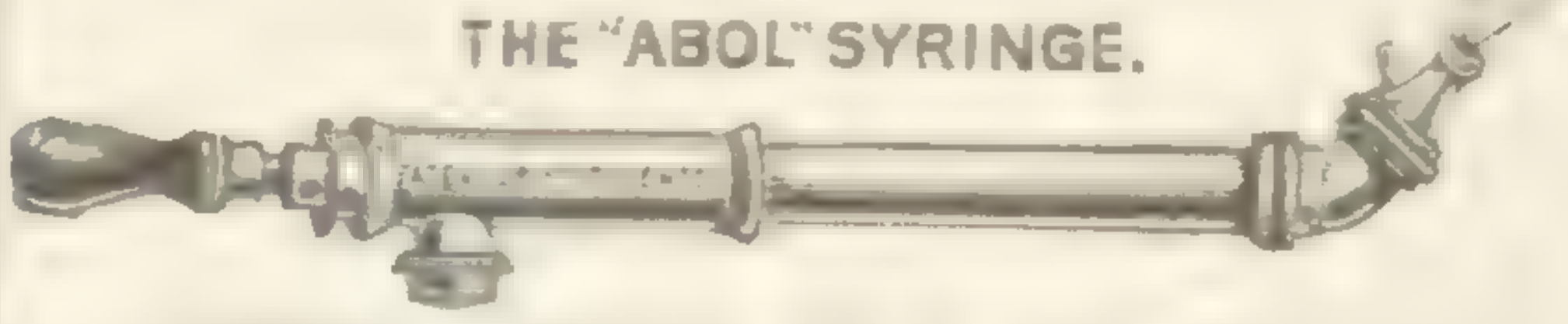

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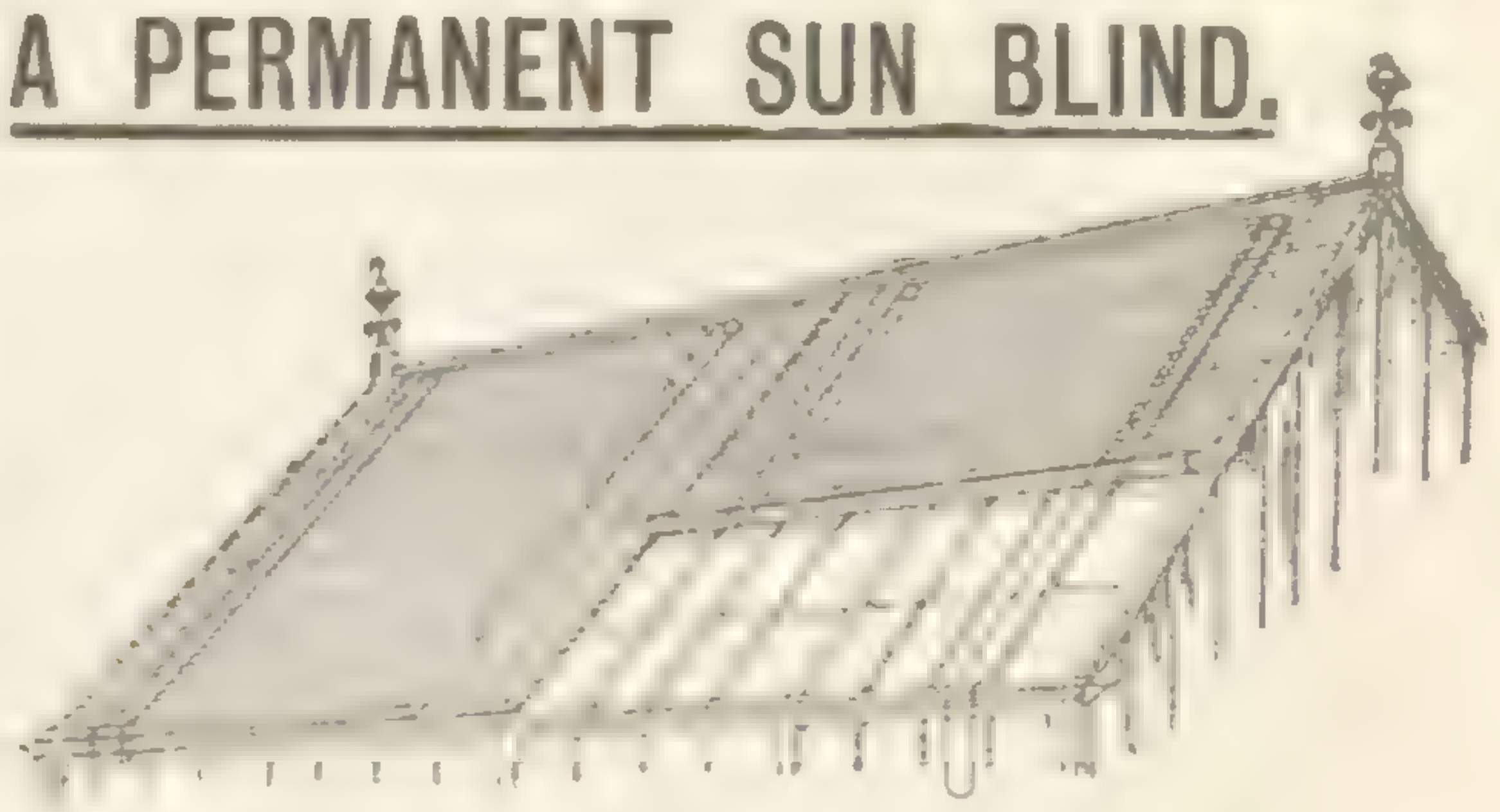

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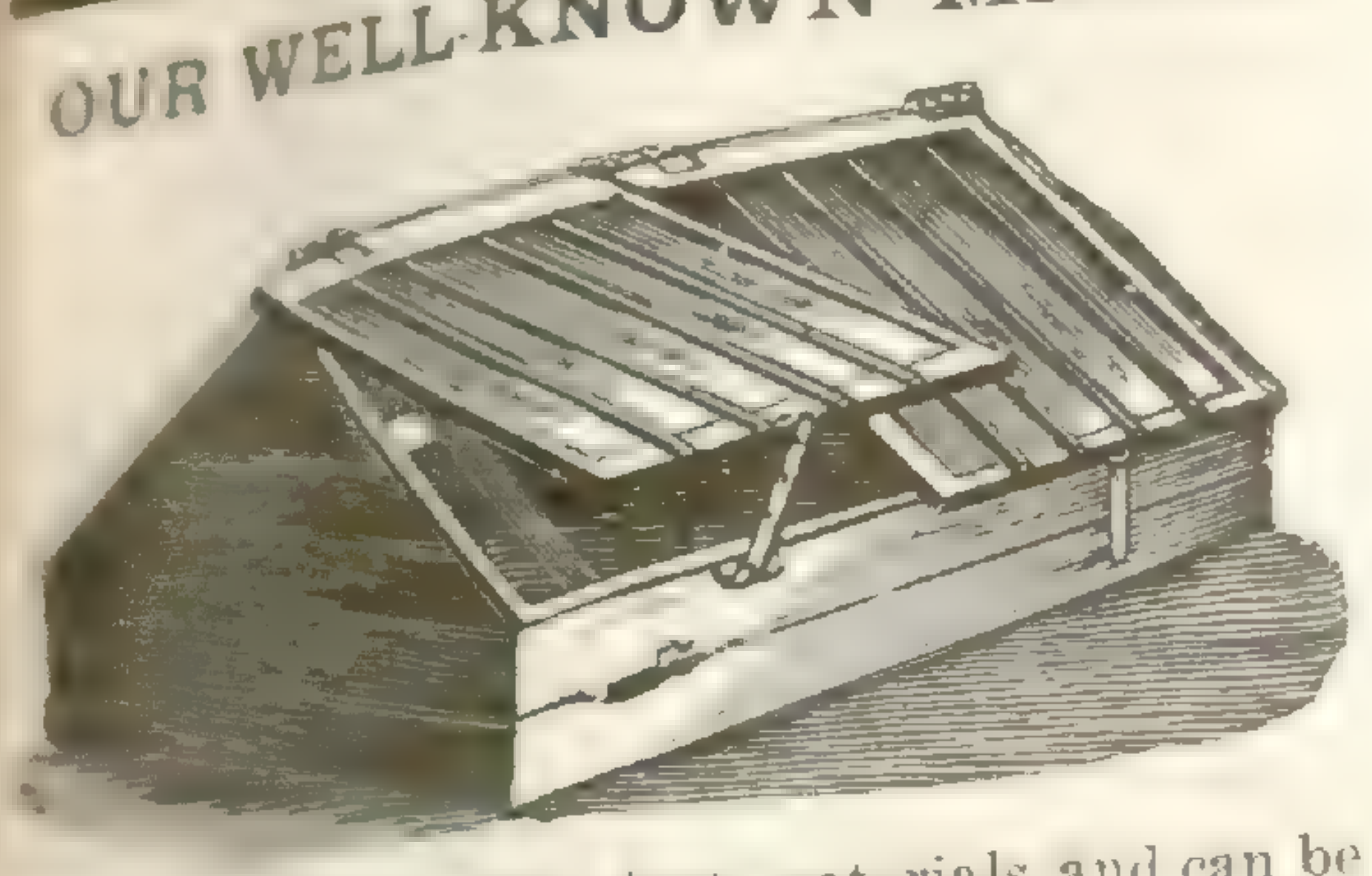

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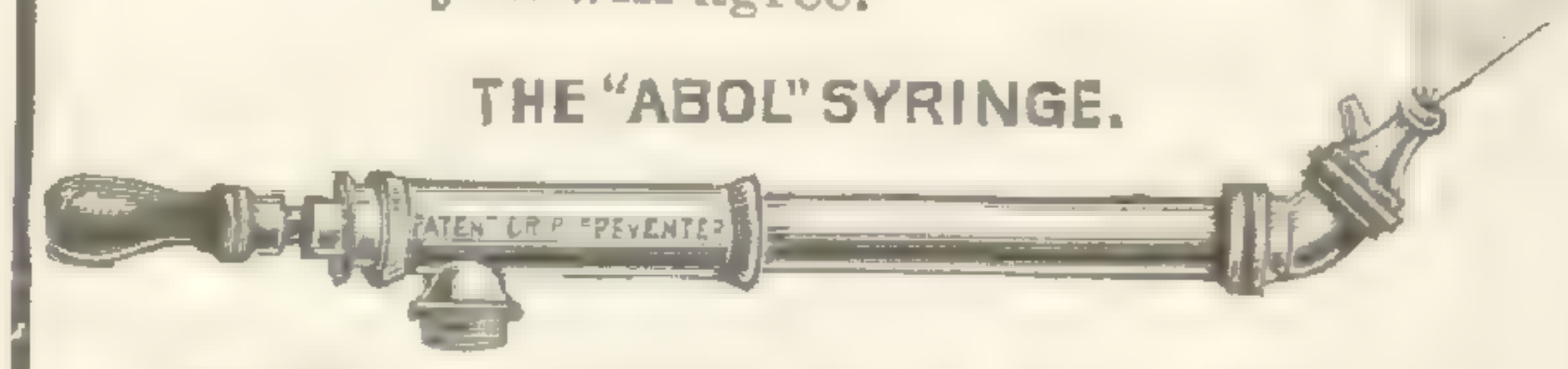

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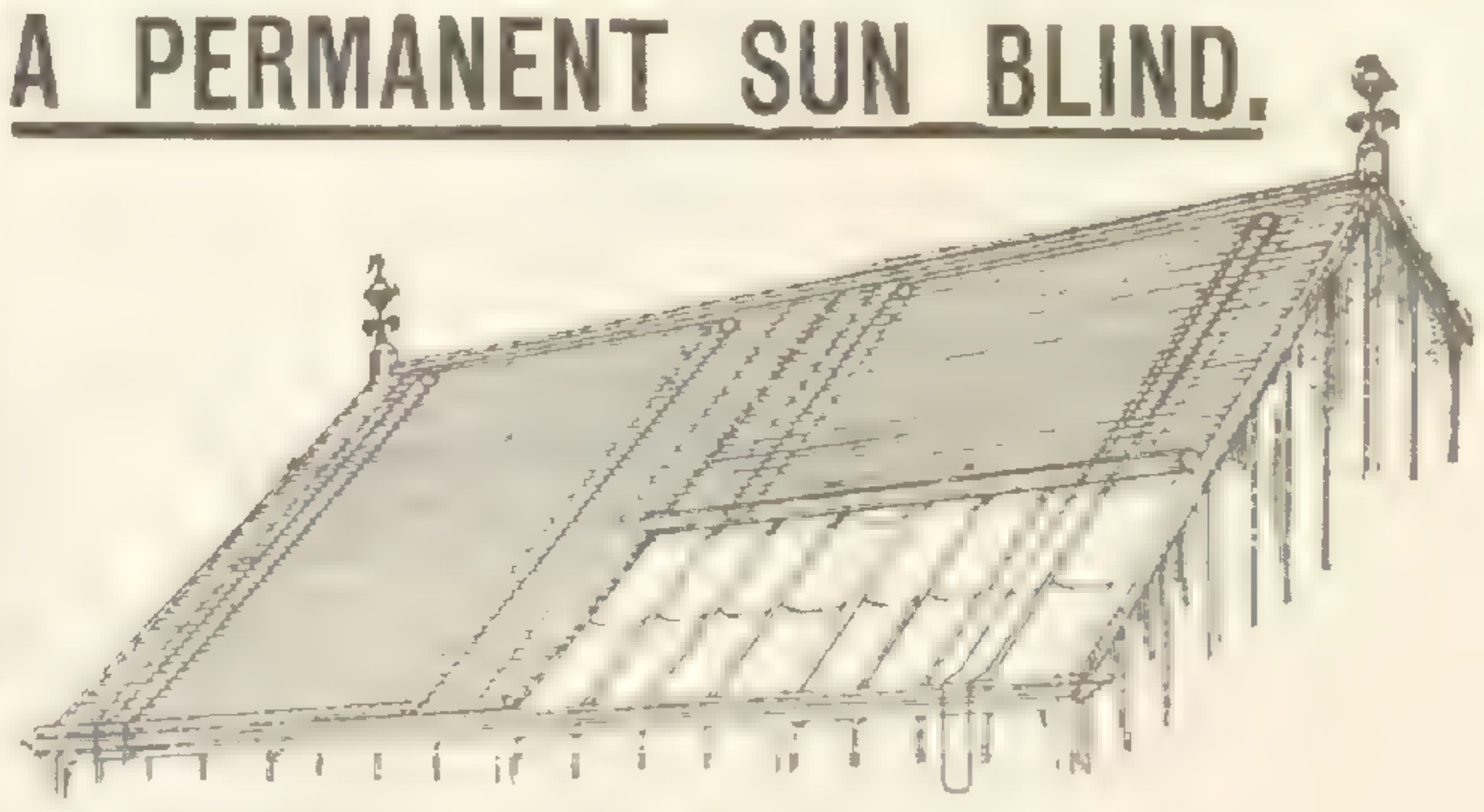

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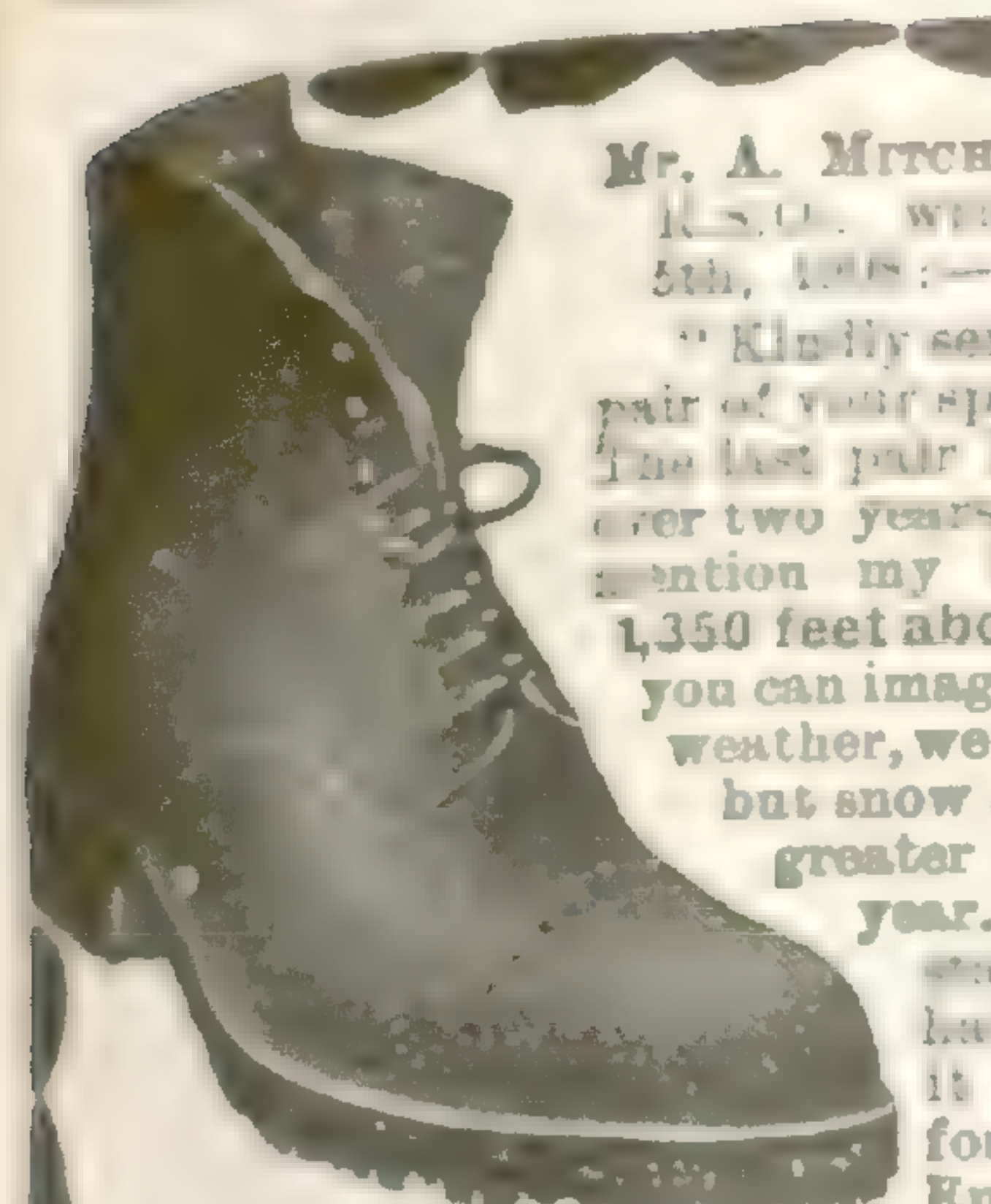

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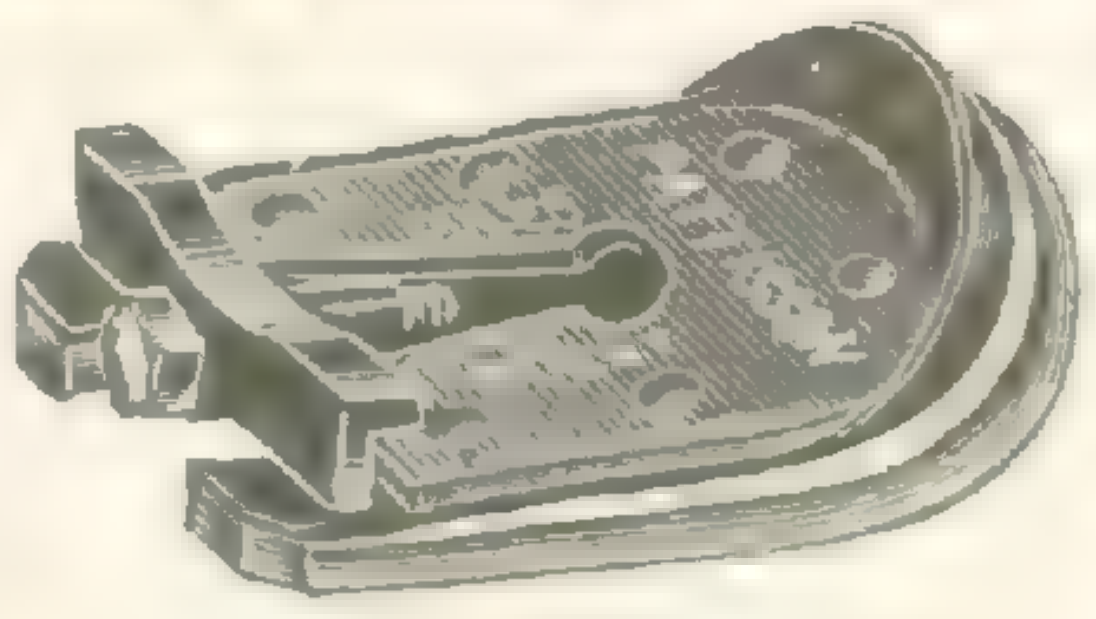

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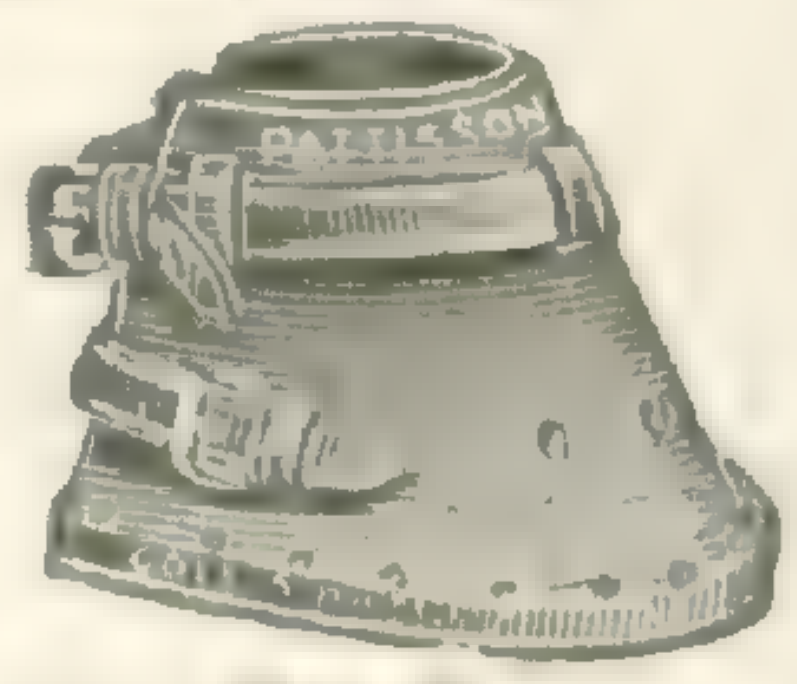

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THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Roses.

The exhibition of the National Rose Society, which brought crowds of visitors to the gardens of the Royal Botanic Society on the 3rd inst., came very near to establishing a record as far as the Metropolitan rose shows are concerned. If it failed to accomplish this, as was undoubtedly the case, the failure was due to causes wholly beyond the control of the society and the large body of enthusiastic rosarians who take part in the competitions at its shows. There was an immense, varied, and beautiful display of roses, so large a number of visitors as to indicate the largely increased interest that is being taken in the National Rose Society and its work by the flower-loving community, and the exhibition was honoured by the presence of Her Majesty the Queen. The cause of the failure of the exhibition to fully realise the anticipations of those who, for some time, believed it would surpass the most successful of the Metropolitan shows previously held was unquestionably the weather. Until within a fortnight or so of the date of the show the roses were so far favoured by the weather as to justify the anticipations that the rose season would this year be considerably above the average. In consequence of the low temperature that prevailed until the end of April roses were later in starting into growth than usual, and as, generally speaking, there was no severe frosts in May, growers had no occasion to complain of the growth being checked or buds injured by spring frosts, or of the development of the flowers being slow owing to an abnormally low temperature in June. Everything in the rose garden proceeded in the most satisfactory manner until about the middle of June, when the weather changed to tropical conditions, which obtained until the date of the show, and rendered an inspection of the roses less pleasant to the feelings than is usually the case, notwithstanding the precautions that were taken to keep the tents as cool as possible. Roses can bear with impunity a relatively high temperature, provided they have a moderate amount of moisture within reach of their roots, but the great heat experienced in the second half of June found the soil in a comparatively dry state, and was accompanied by brilliant sunshine and easterly winds. As the result of these unfavourable climatic conditions, the blooms of all classes of roses were wanting in substance and staying power, a state of things that made it very difficult for growers to cut the desired numbers, and rendered it quite impossible for them to stage in such manner as to ensure their roses retaining their freshness and beauty for any considerable period on the exhibition stage. It would appear that the so-called summer-flowering roses suffered even more severely from the heat and drought than did the other classes, for they were less plentiful than for several years past, and not a few showed signs of distress before the judging was completed. To the attractions of the garden many of these roses have contributed but little this year, for their season of flowering was very short, and, owing to the rapidity with which the flowers shed their petals, they failed to produce a really satisfactory effect. The behaviour of these roses suggests the desirability of their being planted somewhat sparingly, for under the most favourable conditions their season of flowering is short, and when, as in a season such as the one through which we are passing, conditions are not favourable, the results are far from satisfactory. Hybrid perpetuals, hybrid teas, and teas, although lacking the substance characteristic of well-grown blooms in seasons favourable to their development, were, on the whole, of excellent quality, and formed the great feature of the excellent show. They were not perhaps quite so effective as in some years, owing to the highly-coloured varieties being less numerous; but until the raisers have succeeded in giving us brilliant scarlet and rich crimson roses that will not be affected by great heat and strong sunlight, we must bear with a decrease in highly-coloured roses in hot, dry seasons. With regard to these roses, it must be mentioned as a point of considerable practical importance that the blooms staged in the orthodox boxes retained their freshness and beauty better than did those staged in vases, and thereby fully justified the views of those who hold that, while the decorative aspects of roses should be adequately represented, exhibition boxes should not be abolished. At the National Rose Society's shows the box and vase classes are so admirably balanced that no change appears desirable in their relative proportions, but it does appear desirable that some substitute should be found for the bamboo stands, more especially for the display of a given number of blooms of one variety. The matter is beset with difficulty, and we would suggest that until some receptacle

MR. E. B. LINDSELL,
President of the National Rose Society.

can be found for the display of these blooms in a natural and pleasing manner they should be shown in boxes of the ordinary type. The large bamboo stands are hardly so objectionable for rambling and other garden roses as for exhibition blooms, but for these they are hardly equal to the large vases of metal or earthenware in use. The competition for arches decorated with climbing roses is useful in giving a distinct feature to the exhibition, but it can hardly be said to have accomplished the end the committee had in view when it was initiated. There appears to be a great difficulty on the part of some exhibitors in avoiding overcrowding, and we have now and again, as on this occasion, evidence of the fact that an arch spanning a walk is seen from all sides, and that judges who understand their work give due consideration to this in making their awards. Notwithstanding the drawbacks with which rosarians have had to contend, the exhibition was in every way worthy of the National Rose Society and the large band of rosarians who own allegiance to it.

Mr. E. B. Lindsell occupies so commanding a position among amateur rosarians, and, moreover, is so genial and unassuming in manner, that we have something more than the ordinary degree of pleasure in presenting our readers with his portrait. In this brief reference it is not necessary we should inquire into the motive which induced Mr. Lindsell to devote so much of his leisure to the cultivation of roses, or give particulars of his early efforts in the production of blooms for exhibition. It is sufficient for our purpose to know that he has a strong affection for the rose in its many attributes of beauty, and that for nearly twenty years he has, with but few breaks, been successful in winning the amateurs' challenge trophy offered at the metropolitan exhibitions of the National Rose Society. The first year in which Mr. Lindsell had this trophy awarded to him was in 1890, and during the three following years he was successful in retaining possession of it. In 1894 Mr. S. P. Budd was successful in obtaining the trophy, but in the next year Mr. Lindsell again became its owner. Mr. Lindsell had in 1896 to surrender the trophy to the Rev. J. H. Pemberton, but in 1897, he was again the winner, and from that year until the exhibition held on the 3rd inst., he has been able to retain the championship, notwithstanding the invariable keenness of competition in the trophy class. In addition to his success in the trophy class at the Metropolitan shows, Mr. Lindsell has won the amateurs' jubilee challenge trophy at the Northern show of the National Rose Society no less than ten times, and he must have won during his career as an exhibitor many hundreds of other prizes at the leading exhibitions. From the first Mr. Lindsell has been held in the highest respect by rosarians, and in 1906 the members of the National Rose Society gave practical expression to their esteem by unanimously electing him as their president, a position he has filled with much success.

Amherstia nobilis at Kew.—There is a good example of this handsome tropical tree in the aroid house (No. 1) at Kew, where it has been for at least 30 years. Until about 10 years ago it was planted in a tub, but since then, says the "Kew Bulletin," it has been in the open border, the soil in which receives a certain amount of heat from the boiler chamber immediately below. This plant is 25ft. high, and has a stem 6in. in diameter, with loosely spreading branches. It has flowered more or less freely every year since it was planted out, and this year it has been exceptionally floriferous, carrying 82 large pendulous racemes of bright scarlet and yellow flowers, which were at their best early in June. Several spikes were, as our readers will remember, shown, from Kew, at the recent Temple Show. Amherstia was first introduced from Burma into English gardens through Chatsworth about 60 years ago, and was first flowered in a garden at Ealing in 1849. The Kew tree is probably about 40 years old. In Burma there are trees 40 to 50ft. high, and when in flower they are said to be magnificent, and one of the features of the Royal Botanic Garden at Calcutta is an avenue of these trees. The flowers are used by the Burmese in connection with their religious ceremonies.

Messrs. E. Webb and Sons' etc.—It gives us much pleasure in illustrating on page 538 the remarkably fine collection of vegetables, melons, etc., for which Messrs. E. Webb and Sons, of Wordsley, were awarded a gold medal at the recent flower show, held at the Franco-British exhibition. The collection so admirably depicted in the photographic reproduction,comprised tomatoes, cucumbers, early peas, and beans, cauliflowers, carrots, and other kinds. Nearly 100 varieties were included in the collection, and they were all represented by specimens remarkable for their high state of development. Especially noteworthy also were the many finely ripened melons that were associated with the vegetables. At the recent Hanley exhibition this firm was awarded a silver cup and gold medal for an exceptionally fine exhibit comprising sweet peas, melons, and vegetables, and similar high honours have fallen to them at Wolverhampton.

R. H. S. Committees and Judges at Holland Park.—The Council of the Royal Horticultural Society entertained the judges, the members of the various committees, and the Press to luncheon on the occasion of the Holland Park Show. The attendance was a large one, under the presidency of Sir Trevor Lawrence, Bart. Hearty thanks were accorded Mary Countess of Ilchester for the loan of Holland Park for the show, and on behalf of the Council, Sir Trevor thanked the committees for their services so continuously and ably rendered, and Sir Albert Rollit proposed the toast of "Judges and Exhibitors." Mr. T. Challis, of Wilton House Gardens, Salisbury, Mr. W. Poupart, Twickenham, and Mr. J. Cheal, Crawley, responded, the latter on behalf of the exhibitors. We learned during the progress of the speeches that the Council is paying the travelling expenses of the judges this year, a departure that is greatly appreciated by those who come many miles, hundreds in some cases, to fulfil their duties.

A Big Mushroom.—A daily contemporary records the find of a big mushroom at Keady, co. Armagh, by Mr. Patrick Molloy. The size of the mushroom is given as 4ft. in circumference, and the weight as 11½lbs. What a whopper!

Begonia cathayana, a handsome Chinese species, collected by Dr. Henry, introduced by Mr. A. K. Bully, of Ness, Neston, Cheshire, and distributed by Messrs. Sander and Sons, St. Albans, is the subject of a double page illustration in the "Botanical Magazine" of July; the leaves are green above and crimson below, and the vermilion coloured flowers are borne in pendulous racemes. In the same issue are illustrations of Cœlogyne perakensis, an erect growing, green flowered species; Didymocarpus cyanea, a pretty, dwarf, blue flowered Gesneriad, collected at Kasum, Malay Peninsular, by Mr. C. Curtis; Olearia ramulosa communis, a pretty Australian shrub with white flowers, suitable for a greenhouse; and Rhododendron Mariesi, a deciduous Chinese species found at Ichang by Dr. Henry, it has pink, purple spotted flowers, and may probably prove hardy in the southern counties.

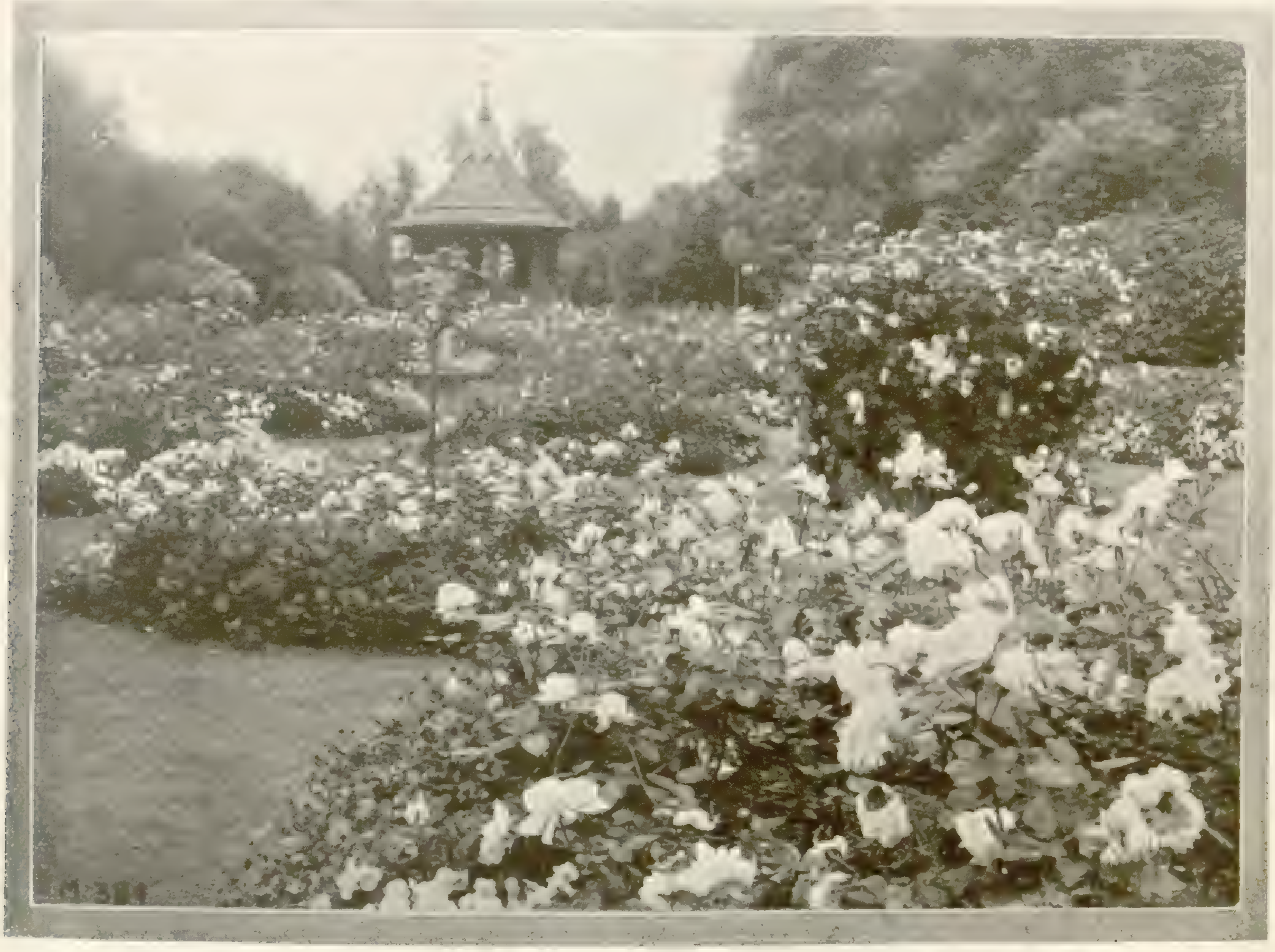
The "Gardeners' Magazine" in Russia.—Our readers, and especially those who advertise in our columns, will be interested to learn that the Gardeners' Magazine not only reaches all parts of the United Kingdom, the Colonies, the United States, India, and the nearer Continental countries, but that it also reaches the further parts of Russia. Mr. H. N. Ellison, of Bull Street, West Bromwich, sends us a letter received from Zaraisk, in the province of Ryazan, in answer to his advertisement of begonias and gladioli. This is another proof of the wide circulation of the Gardeners' Magazine and its value as an advertising medium.

Sherwood Cup Competition.—It had been arranged that the Sherwood Cup, presented by Mr. N. N. Sherwood, V.M.H., should be competed for at the Holland House Show on July 7, and the class was for twenty-four bunches of roses, with their own foliage, shown in vases by amateurs. Remembering how many keen amateur rosarians there are it was regrettable that only two entered for this handsome and important prize, and it is a matter of still further regret that neither of these exhibits was worthy of the award. We expected a fine competition among the leading amateur rosarians, and were, therefore, grievously disappointed.

Playing Field at Plaistow.—On Saturday afternoon last the Mayor of West Ham opened a new seven-acre playing field at Plaistow. This open space has been leased to the Rev. T. Given-Wilson, vicar of St. Mary's, by the Gas Light and Coke Company, and should prove of inestimable value in this crowded district. All the work of preparing the site, and of building the pavilion and water tower, has been done by the unemployed of the district, so that Plaistow has benefited in every way by the enterprise of the vicar.

Effect of Ammonium Salts on Flora.—Dr. Voelcker showed at the recent R.H.S. Scientific Committee, a fern which had developed under curious circumstances. A series of drain pipes filled with soil, and each covered at the base with a perforated slate, below which a glass funnel had been fixed in order to catch the drainage water, had been kept for two years, during which time through some ammonium sulphate had been passed, through others ammonium chloride, others nitrate of soda, and others distilled water. The ferns had grown through the perforation of the slate into the funnel, which was exposed to light, only in those cases where ammonium salts had been passed through the soil. This was apparently due to a difference in the reaction of the soil in the different cases. It had been noted that continued manuring of the soil with ammonium salts finally resulted in a sterile condition, and before that the appearance of certain algæ upon the soil different from those found under other circumstances. This sterility can be overcome by the addition of lime to the soil, and in cases where only a small bulk of soil is in use by stirring the soil up with distilled water and allowing it to settle.

R.H.S. Examination in Horticulture.—The annual examination in the principles and practice of horticulture was held on April 8 last, when 151 candidates entered. Twenty-seven candidates, or upwards of 18 per cent. of the whole number, were placed in the first class. Sixty-eight, or nearly 46 per cent., were placed in the second class. Fifty-two, or upwards of 34 per cent., were placed in the third class. The corresponding percentages in 1907 were: First class, 14; second class, 40; and third class, 46. Of the questions on the principles, according to the report of the examiners (Rev. G. Henslow, V.M.H., and Mr. J. Douglas, V.M.H.), by far the majority almost confined themselves to the first three questions on physiology. In the majority of cases these were answered very well. Other questions attempted were generally rather imperfectly treated. Although none of the candidates obtained the highest number of marks obtainable in the operations and practice division, the answers were, generally speaking, better than in any previous year. The question referring to the uses of garden tools, etc., was more frequently and well answered; so also was that referring to the laying out of a new garden, and the preliminary work pertaining thereto. Several candidates failed to obtain the number of marks commensurate to their abilities, owing to (a) their not timing their work, and by answering three questions only, instead of four; (b) one candidate answered six questions, another seven, and yet another eight, in one division, notwithstanding that it is clearly stated, "Eight questions only may be answered, four from Division A, and four from Division B." Candidates should also be as concise as possible, the one that fills the greatest number of pages may be very far from gaining the highest number of marks, but nearly all the candidates kept better to the details of the questions than in previous years.



A VIEW IN THE ROSE GARDEN OF THE PLEASAUNCE, OVERSTRAND, THE MARINE RESIDENCE OF LADY BATTERSEA.

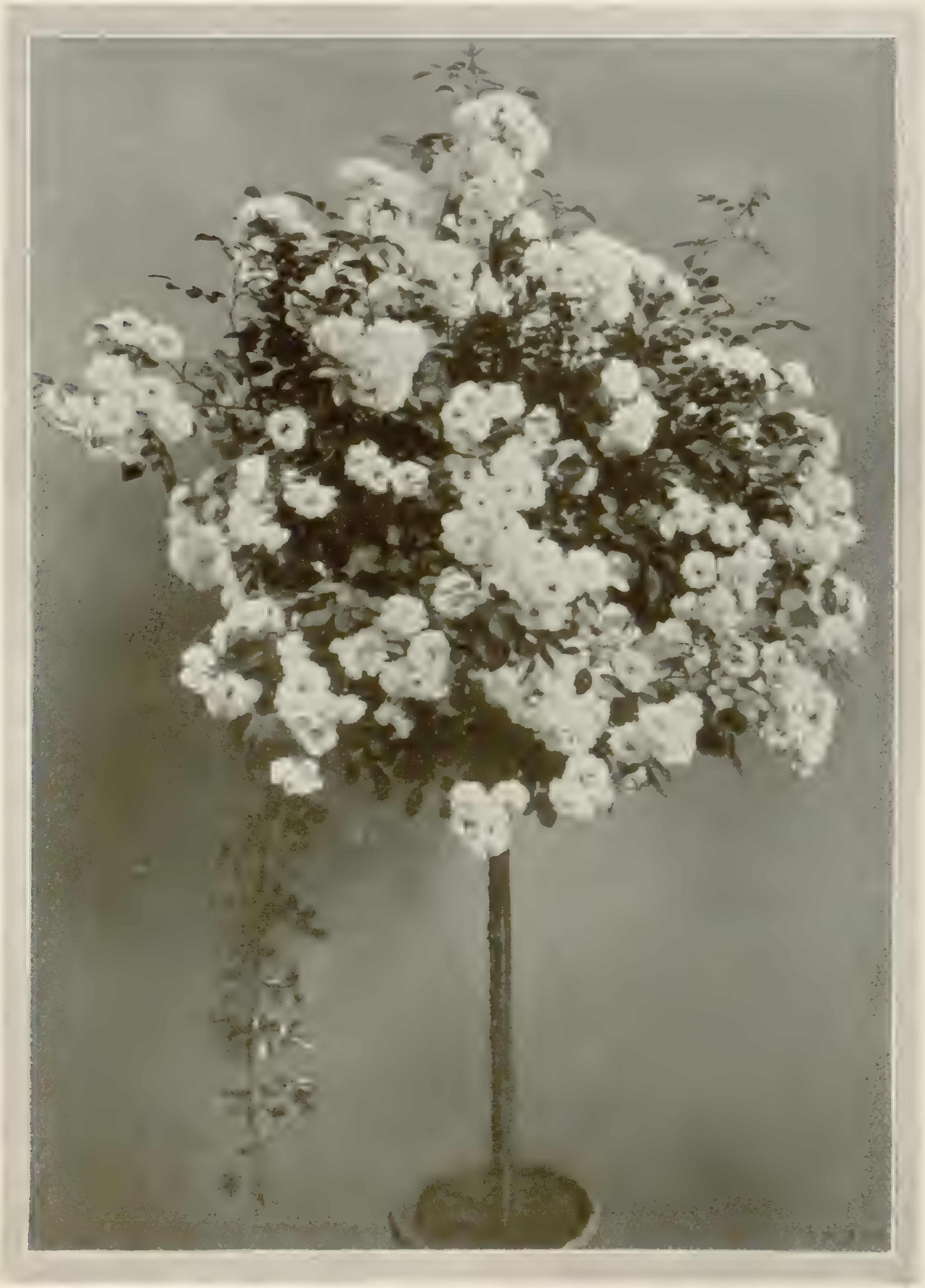
Oxford Gardeners' Visit to Heythrop Park.—The beautiful gardens and grounds of Heythrop Park, Chipping Norton, were thrown open to the members of the Oxford Gardeners' Association a few days ago, by the kindness of Albert Brassey, Esq. Under the guidance of Mr. W. B. Jeffreys, the head gardener, the members inspected the various departments, the rock garden and fine old trees attracting considerable attention. The visit proved a most enjoyable and instructive one.

The Value of Parks and Open Spaces.—In a leader drawing attention to the beauty of the existing public parks in the United States, and making a spirited appeal for more and larger parks, our American contemporary "Gardening," says: Look at the millions that London and other old world cities are spending now to break up the congested districts and allow the poorest children to run about upon land worth hundreds of dollars a square yard, simply because in the days gone by people were too near sighted to see that these towns were growing and that every square inch of available land would soon be covered with houses and factories. Such people look upon parks as a means of exploiting horticultural or gardening interests, whereas there is no single item of civic expenditure that gives so much pleasure to so many people as the parks systems. The horticultural end of it is entirely subservient to the pleasures of visitors. The fine shrubberies and open lawns are there not for the glorification of the gardener but for the public to enjoy and as playgrounds for everybody, young and old and at all seasons of the year.

ROSES BY THE SEA.

Roses are not usually included in lists of deciduous shrubs that are prepared with special reference to their adaptability to the conditions that obtain on the sea coast; and it is not desirable they should have a place in the first line of coastal defences. Yet they grow vigorously and produce an abundance of blooms of high quality when grown within the influence of the sea breezes. We might give many examples of this, but it will suffice to mention one or two instances. One unquestionable proof is to be found in the gardens of Westcliff-on-Sea, where roses are grown largely and are everywhere in the finest possible condition. Here no special protection is provided, as the rising ground on the north and east affords all the shelter from cold winds in spring that is necessary. Still more remarkable is the proof found in the gardens of The Pleasaunce, the marine residence of Lady Battersea at Overstrand. The gardens are within a few hundred yards of the cliffs, which rise to a height of 80 or 90 feet, and have practically speaking nothing between them and the arctic regions except the North Sea. That part of the grounds in which the rose garden has been formed is sheltered on the north and east side by a broad belt of deciduous and evergreen trees, and thus protected from the north and easterly winds which sweep across this part of Norfolk with great force during the spring months, all kinds grow luxuriantly and yield a rich harvest of finely developed blooms. The illustration herewith very clearly indicates the manner in which roses grow and bloom on these high wind-swept cliffs, when they have the advantage of good culture and an effectual screen on the seaward side. Good culture is an important factor in the growth of roses by the sea, and in the gardens of The Pleasaunce the beds were prepared by the liberal addition of fresh loam and thoroughly decayed manure and deep digging. Since the roses have become established the fertility of the soil has been maintained by applications of manure at such intervals as appeared to be necessary, having regard to the growth of the roses. The varieties include such fine roses as Kaiserin Victoria, Madame Abel Chatenay, Lady Battersea, Caroline Testout, and Marie Van Houtte, which bloom freely and continuously throughout the season. Each bed is devoted to one variety, and the beds are margined with violas. This beautiful rose garden is of special interest as evidence of the success with which roses can be grown by the sea, and of Mr. Naylor's skill as a cultivator.

G.



STANDARD SPECIMEN OF RAMBLING ROSE LADY GODIVA.
Grown by Messrs. Paul and Son, Cheshunt. Flowers, pale yellow.

Raspberries are now fast ripening, and the crop is an excellent one. Mulching over the roots with manure, and a few soakings of water or liquid manure, will help a stronger growth for next year's fruiting. Our loganberries are looking well, and the crop will be fine; this is a fruit which ought to be more grown. Ours are planted in rows on a rather light soil, and the growth is medium.—H. Markham.

THE MALE FERN FOR INDOOR DECORATION.

During the summer months there is often a difficulty in finding suitable plants to fill fireplaces and dark recesses in rooms, as the absence of sunlight usually quickly kills most things we grow for this purpose. Some six years ago I had occasion to find plants to form a bank in a recess, and having a fine lot of Lastrea Felix-mas available I lifted and potted as many as I required, and utilised them in making a bold, green, cool-looking mass. The effect was finer than I could have anticipated, and the plants kept in good form till well into the autumn. Since then I have profited by the result, and annually lifted and potted the most suitable plants of this fern to meet my requirements. This has enabled me to dispense with the cultivation of more tender and less suitable subjects, which had been employed for such work previously. Labour has, therefore, been economised, and decidedly better results obtained.

My mode of operation is to grow the ferns on a border on the north side of a wall, and in similarly shaded positions, and when the young fronds are fully developed, which is about the middle of June, to lift and pot, or tub as many as I require of those most suitable for my purpose. When lifting, I preserve all the roots I can, but usually shake a certain amount of soil from them, in order that they may go into small pots. The compost they seem to like is one consisting of equal parts of leaf-mould and loam. I pot fairly firm, and then soak the plants with water, stand them in a shaded position for a couple of days, and give them an occasional dewing with a syringe. After the time stated they are fit for the house, where they look well, and produce a most pleasing effect all through the summer if well supplied with water.

In autumn, when they show signs of decay, I turn them out of their pots and replant in their former quarters. The following June other plants are employed to serve the same purpose as those of the previous year, so that after a summer in the house they are allowed to grow out of doors for one or two years before being again utilised for indoor decoration.

Having proved the value of the male fern for indoor decorative purposes during the summer months I have drawn the attention of some of my friends to it, and now am not alone in growing it for room decoration. Besides filling fireplaces and dark recesses, where the sun does not reach them, they also do well in the sunny spots, only in such positions they need a deal of water. For town houses this fern will be found most useful, as by employing it instead of palms, equal, if not better results, will be obtained, and the lives of many palms will be saved. Hibernia.

NEW RAMBLING ROSE, LADY GODIVA.

For some years past Messrs. Paul and Son, of Cheshunt, have devoted special attention to the raising of rambling roses, and in this branch of their work have achieved a degree of success that might well be described as exceptional. One of the latest of their additions to the rambling roses is Lady Godiva, which, grown in standard form, contributed materially to the effectiveness of the fine group arranged by the firm at the Temple Show. The growth, as in the case of other of the ramblers, is vigorous, and the elegant pale yellow flowers are profusely produced. Grown in pots as in the case of the example illustrated herewith, the variety is extremely useful for conservatory decoration, and in the open it forms handsome weeping standards, while suitable for the same purposes as other roses of its class.

The Sand Myrtle.—The little sand myrtle, Leiophyllum or Ledum buxifolium, is one of the dwarfer shrubs so dear to the heart of the lover of alpines, and a small group of plants in the lower part of the rock garden generally appeals to him if they are in perfect health. When this is so the sand myrtle is about six inches high, and has all its branches adorned with small leaves, bearing some resemblance to miniature box foliage, and the flowers, which are in small bunches, are white. It is a pretty little subject which deserves to have its likings studied a little, and as they are not very exacting many can supply it with the treatment it prefers. This is to give it a place in sandy peat soil, but if this cannot be obtained, a compost can be made up of well-decayed leaf-soil, a little loam, and some sand. The position ought not to be too dry, as it suffers much from drought, this being the cause of frequent losses of this plant when placed on dry parts of the rockery. It is a native of New Jersey and Virginia, whence it was introduced in 1736.—S. Arnott.

THE BEST CLIMBING ROSES.

Two years ago Mr. W. E. Nickerson, of Cambridge, Massachusetts, U.S.A., who takes a keen interest in the development of roses specially adapted for general culture in the garden, presented the National Rose Society with three five-guinea silver cups; and these were, in accordance with the wishes of the donor, awarded to the raisers of the best H.P., the best H.T., and the best T. for general cultivation, which had been sent out in 1900 or subsequent to that year. The varieties for which the awards were made were Frau Karl Druschki, Dean Hole, and Madame Jules Gravereaux respectively. In order to still further encourage the raising of roses specially adapted for general cultivation, and to assist the smaller growers in selecting the best varieties for gardens, Mr. Nickerson last year generously placed at the disposal of the society twelve silver cups of the same value as those he had previously given. In accordance with Mr. Nickerson's wishes, the competition was arranged in three divisions, each to contain four classes. The first of the divisions was for climbing roses blooming in clusters, the second for climbers blooming more or less singly, and the third for dwarf roses. The four classes in each division were for shades of crimson, shades of pink, white or pale blush, and shades of yellow. The members of the committee, with other leading rosarians in this country and elsewhere, were invited to mark on the voting papers with which they were supplied, the variety in each of the twelve classes that, in their opinion, best complied with the conditions laid down. No restriction was imposed either as regards the age of the variety or the class to which it belonged. Eighty-three voting papers were returned, with the result that the following roses obtained a first, second, or third place in the ballot.

Climbing Roses Blooming in Clusters.

Turner's Crimson Rambler.—This fine rose, which has enjoyed, and deservedly so, a high degree of popularity during the past fifteen years, obtained first place with 33 votes in the class for shades of crimson. As is well known, this effective climbing polyantha was introduced from Japan and distributed by Mr. Charles Turner, who placed it in commerce in 1893. Notwithstanding the large number of rambling roses that have been introduced since Crimson Rambler made its appearance, it still remains the finest of the ramblers with crimson flowers. It was at one time thought by some rosarians that Philadelphia Rambler would prove a formidable rival, but it has not done so. The last-named has more richly coloured and finely formed flowers, but they are not so freely produced, a point of considerable importance in the case of a garden rose.

Gruss an Teplitz, H.T.—This attractive H.T. was second in the class for crimson roses with 22 votes. It was raised by Geschwind, and distributed in 1897. The flowers are rather large and of a brilliant crimson hue, and the growth is so vigorous as to render it of much value for pillars and hedges, while it is admirably adapted for culture in bush and standard form.

Hiawatha, Wich.—One of the best known and most attractive of the single Wichuraiana roses, and of much value for arches, pergolas, pillars, weeping standards, and indeed for all purposes for which the roses of its class are suited. The flowers are bright crimson, with white centre. Raised by Mr. M. H. Walsh, and distributed in 1905, it obtained the third place in the class for crimson roses, with 16 votes.

Dorothy Perkins, Wich.—The deservedly high degree of popularity this beautiful rambler so deservedly enjoys, was indicated by it being placed first for pink roses with 52 votes. The raisers were Messrs. Jackson and Perkins, and the year of introduction 1901. Vigorous in growth and profuse in blooming, this variety is well suited for pergolas, arches, screens, standards, and for trailing over walls, and it has the advantage of yielding of its wealth of blossom after most of the ramblers have flowered.

Blush Rambler, Cl. Poly.—A charming single variety, which was placed second in the class for pink roses, with eight votes. Raised by Messrs. B. R. Cant and Son, and distributed in 1903. The flowers are blush-coloured, and produced in large clusters. Well suited for arches, pergolas, screens, and hedges, and tall standards.

Minehaha, Wich.—A beautiful variety, that obtained the third place in the class for pink roses with six votes. It was raised by Mr. H. M. Walsh, and introduced in 1907. The flowers are double, deep pink, and freely produced. Like other of the Wichuraiana roses, it has a vigorous habit and is well suited for arches, pergolas, screens, and tall standards.

Climbing Aimèe Vibert, N.—This beautiful noisette was placed first for white climbers with 19 votes, and it is not surprising it should have obtained a premier position. The typical variety, which is of dwarf growth, was raised by Vibert, and distributed in 1828, and the climbing form originated as a sport, and was fixed by Curtis, who distributed it in 1841. Remarkable alike for its vigorous habit, handsome foliage, and freedom of flowering, it is not surprising that it should have maintained a high position among white climbers. It is admirably adapted for pergolas, screens, and tall standards, and of quite exceptional value for walls of houses, and especially of houses in suburban districts where the conditions are not specially favourable for roses. The fine specimen herewith illustrated embellishes the walls of the residence of Mrs. Picton at Kew.

Félicité et Perpetué, Evergreen. — This useful rose, which was raised by Jacques, and introduced as far back as 1828, has cream-white flowers, and is useful for all purposes for which a hardy, vigorous-growing climber is suitable. It was second for white climbers with 15 votes.

ROSE CLIMBING AIMEE VIBERT.

Awarded the Nickerson Cup as the best white climbing rose flowering in clusters. This specimen is growing against a villa residence at Kew.

Bennett's Seedling, Ayrshire.—A hardy and useful hardy rose, raised by Bennett, and introduced in 1840. It was placed third in the class for white climbers with 10 votes, and is useful for pergolas, fences, arches, and tall standards.

Alister Stella Gray, N.—A beautiful climbing rose, raised by Mr. A. Hill Gray, and placed first in the class for yellow climbers with 40 votes. It was distributed in 1894, and has steadily gained in favour since that year. The flowers are light yellow, deeper in the centre, and produced in great profusion during the summer and in smaller numbers in the autumn. The illustration of the splendidly-grown specimen in the gardens of Warnham Court, Horsham, renders description of the characteristics of this fine rose unnecessary.

Claire Jacquier, Cl. Poly.—A charming variety that obtained second place in the class for yellow roses with thirteen votes. It was raised by M. Bernaix, and distributed in 1888, and has nankeen yellow flowers. It is vigorous and elegant in growth, but a trifle tender.

Aglaia, Cl. Poly.—A strong-growing climber, third in the class for yellow roses with 12 votes. It was raised by Mr. Lambert, introduced in 1896, and has pale yellow flowers; vigorous in growth, and free in blooming when well established. For pergolas, screens, and tall standards, it has much to recommend it.

Climbing Roses Blooming More or Less Singly.

Ards Rover, H.P.—This fine dark rose was raised by Messrs. A. Dickson and Sons, and introduced in 1894. The flowers are rich crimson, and freely produced, and the growth is vigorous. Valuable for pillars, walls, and trellises.

ROSE ALISTER STELLA GRAY.

Awarded the Nickerson Silver Cup as the best yellow climbing rose flowering in clusters. This finely-flowered specimen is growing in the gardens of Warnham Court, Horsham.

Reine Olga de Wurtemburg, H.T.—A much appreciated rose that obtained second place in the class for crimson climbers with 18 votes. M. Nabonnand was the raiser, and 1881 the year of introduction. Vigorous in growth, it has handsome foliage that is nearly evergreen, and light crimson flowers that are freely produced, and effective in colour. Equally suitable for arches, pillars, pergolas, screens, and walls.

Longworth Rambler, H.T.—A useful variety, placed third among the crimson climbers with 16 votes. It is robust in growth, has light crimson flowers, and blooms freely in the autumn. A good suburban rose, and well suited for all the forms in which climbing roses are usually grown. Raised by M. Liabaud, and introduced in 1888.

Climbing Mrs. W. J. Grant, H.T.—A vigorous-growing form of Mrs. W. J. Grant, obtained by Messrs. E. G. Hill and Co. as a sport, and introduced in 1899. It was placed first for pink climbers with 17 votes, and is well suited for pillars, and a good rose for pegging down.

Climbing Caroline Testout, H.T.—A robust form of this popular rose, which was placed second in the class for pink climbers with 17 votes. The variety originated as a sport, and was introduced by M. Chauvry, in 1902. A fine wall and pillar rose.

Papillon, T.—Raised by Nabonnand, and introduced in 1882. This attractive rose obtained third place among pink roses with 13 votes. A useful rose for walls and pillars, and makes an effective bush.

Madame Alfred Carrière, H.N.—A very fine white climber, which obtained premier position in its class with 62 votes. The growth is vigorous, and the variety is well suited for arches, pergolas, and walls, and can be successfully cultivated in beds under the pegging down system. Raised by M. Schwartz, and introduced in 1879.

Una, S.—A remarkably beautiful single variety, which was placed second for white climbers with 11 votes. Raised by Messrs. W. Paul and Son, and introduced in 1900. A fine rose for hedges and screens and also for lawn groups.

Macrantha, S.—A beautiful flesh-coloured single rose, introduced quite early in the last century. It was third in the class for white and blush-coloured roses with six votes. This species forms a handsome bush.

William Allen Richardson, N.—Raised by Veuve Ducher, and introduced in 1878, this free blooming rose soon attained to a high degree of popularity, and obtained premier position in the class for yellow climbers with 23 votes. One of the best of pillar and wall roses; the colour orange-yellow, with light margin.

Gloire de Dijon, T.—This fine old rose, raised by M. Jacotot, and introduced in 1850, has enjoyed a high degree of popularity, and was placed second for yellow climbers with 13 votes. As so well known, it is exceedingly useful for pillars, walls, and standards, and pegged down it is attractive in beds.

Madame Jules Gravereaux, T.—A fine rose raised by Messrs. Soupert and Notting, and introduced in 1901. The flowers are large and finely formed; the colour chamois-yellow, suffused light rose in the centre. Although placed third for yellow roses with 11 votes, the variety should be largely grown. It is well suited for walls, pillars, and standards, and for culture in beds; while possessing the attributes of a good garden rose, the blooms are of exhibition quality.

V.

A BEAUTIFUL NEW BRIAR ROSE.

Prominent among the new roses that have of late been presented to public notice is the beautiful briar Refulgence, which the raisers, Messrs. William Paul and Son, submitted to the Floral Committee of the Royal Horticultural Society on June 23, when an Award of Merit was made in its favour. We have already described this variety, but in giving the accompanying illustration we would mention that it has a robust habit, and is remarkably profuse in flower production, two characteristics that render it of much value in the garden. The semi-double flowers are three or more inches in diameter, and have stout petals; the colour is brilliant crimson with whitish centre. In addition to its other good qualities, this fine briar is delightfully fragrant and has the promise of proving one of the most useful of the many excellent roses that have originated in the Waltham Cross Nurseries.

CANTERBURY BELLS IN THE CONSERVATORY.

Canterbury bells form delightful subjects for conservatory and house decoration in the early season if brought along under glass. I came across an article the other day giving elaborate detail as to how to produce plants for this purpose from seeds, and the advice given was to grow in pots from the commencement. I am not at one with the writer of that article, as the method undoubtedly means a considerable amount of time and labour wasted.

The method I adopt, and I have utilised Canterbury Bells largely for the purpose indicated, is to lift young and vigorous plants that possess a good crown or crowns, in autumn, and pot them in suitably sized pots, when they are either plunged in the open garden, or, if there is available space, wintered in cold frames, and even [illegible] there is no advantage gained. It suffices to plunge them and forget all about them until it is time to transfer them to the genial conditions of a warm greenhouse, when they readily respond by producing a wealth of inflorescence.

They are satisfactory when lifted early in February, potted and kept close in a cold frame for two or three weeks prior to their introduction into warmth, and the only difference is they are slightly, and very slightly less long lived as regards their season of beauty. Both liquid manure and overhead syringings will be found [illegible] beneficial.

Walter H. [illegible]

AMONG THE ALPINE FLOWERS.

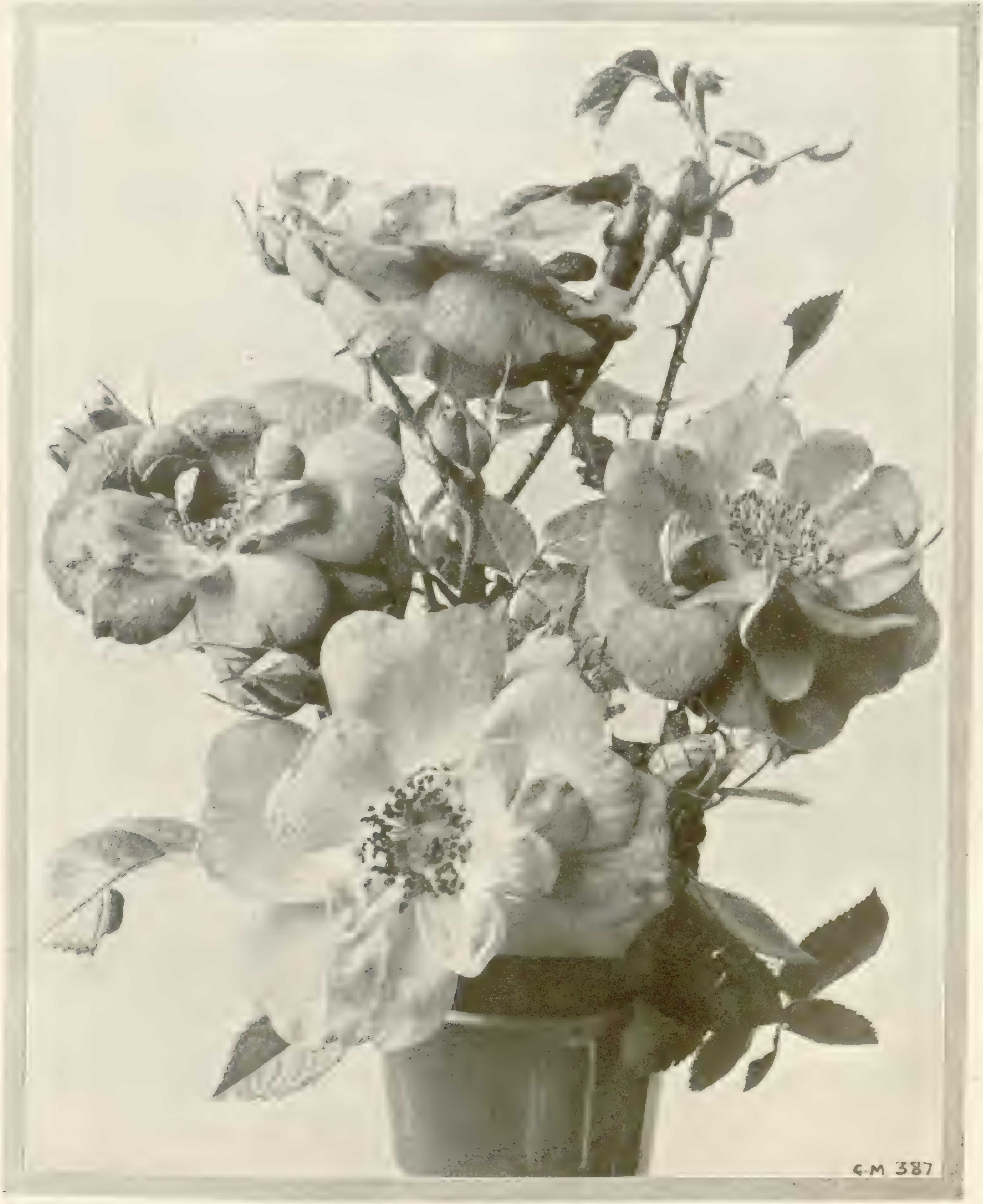
As July comes in we are still delighting in abundance of flowers, although the many beauties of the earlier season have passed to their rest for the year. Yet the slopes are aglow with blossom, and over the stones there creep many beautiful flowers as if they sought to show the superior charms of floral beauty when contrasted with the hardness and coldness of the mineral world. There are colours of almost all hues, and combinations of striking or harmonious effect. In truth, there is a superabundance of beauty for the pen to detail, and, as perforce, we must as usual select a few and leave others unchronicled or merely alluded to in a casual manner. Among the most beautiful alpine flowers of the times are the

Helianthemums or Sun Roses.

These are typical flowers of the season, and they enjoy to the full the bright and sunny days we have had, each morning opening to the dazzling sunlight their fugacious, crinkled, and beautiful flowers, which have all the glow of the true sun-loving blossom. It may be that they are short-lived, like our real summer, but then they are all so gloriously beautiful, spreading out into great sheets of dazzling or softest-coloured blossoms. Of the many I would notice now

Helianthemum polifolium roseum,

about which there seems some confusion in the minds of the trade and amateur growers. The one I consider the true plant (although I am always open to correction when evidence is submitted) is of rather erect growth, about six inches high, or at times a little more, and carrying a wealth of soft rose flowers, and, all in all, giving us one of the most beautiful of the genus. On the other hand, a plant is being sold as such which seems to have at least no claim to the name of "roseum," as it is more a combination of salmon and terra-cotta than a rose, while it is not an erect, but a spreading procumbent plant, although not to be despised by any means, and flowering most freely for weeks at a time. I have had this twice as H. polifolium roseum, both times, I believe, from the Continent, and although I cannot accept it as H. polifolium roseum, I am glad to own it, and to be able to enjoy its beauty as the years come round again.



NEW HYBRID BRIAR, REFULGENCE.

Blooms about three inches in diameter, semi-double, the colour brilliant crimson. Raised by Messrs. W. Paul and Son.

Allium Ostrowskyanum.

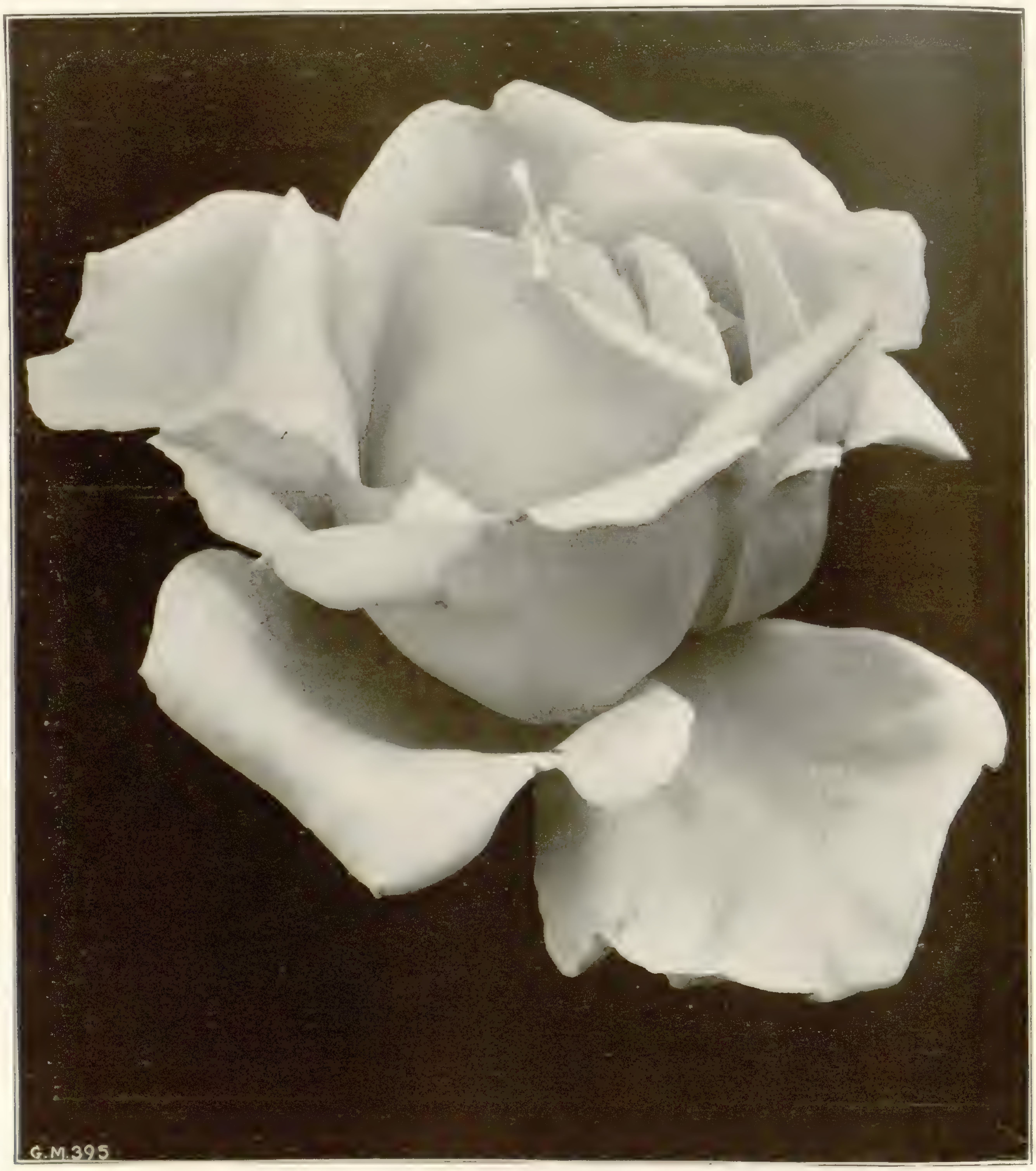
The garlics are always undeservedly under a cloud, but a little group of Ostrowsky's allium cannot well be passed over in silence, as it is not only a flower which has good features of its own, but is one which has a distinct claim to be considered effective and beautiful on the terraces or level plateaus of the rock garden. It has pretty rose-coloured flowers in a large umbel bearing many individual blossoms, and with a slightly drooping habit the heads of bloom hang over so as to reveal their beauty more to the observer than if they were quite erect. Its height is from six to twelve inches, but it is none the worse for being in poor soil, as here, so as to keep it dwarfer and making it more suitable for the rock garden. It is an excellent thing to carpet with some dwarf subject, such as a low-growing white alpine, through which the allium would spear and flower happily from year to year. It is one of the many flowers we now owe to Turkestan, whence it came in 1883, but it has never acquired popularity, probably because it is so little seen, for our summer-flowering bulbs are none too plentiful, and one such as this deserves attention. Planting is best done in autumn.

Campanula G. F. Wilson.

The bright, though deep blue, little bell-flower which bears this honoured name has from time to time caused discussion so far as regards the true plant, there being two bearing this name in cultivation and both named for that departed flower-lover, whose work formed Oakwood, Wisley, with all its beauties, now, happily, not lost and destroyed, but devoted to even greater usefulness in the hands of the Royal Horticultural Society. There is but little difference in the flowers of the two, and the main one lies in the leaves, those of one form having the foliage of a decidedly yellowish tint, the other having it of a good green. The confusion lies in their both having been raised and sent out under the same name by the raiser, the late Mr. Anderson-Henry, near Edinburgh, as C. G. F. Wilson, as they were of the same parentage and had the flowers practically the same. Both are beautiful; that with yellowish leaves is scarcely so vigorous as the other, but the contrast between the leaves and the flowers helps to heighten its beauty to some of us at least. It is a charming little flower only some three or four inches high, and having deep blue bells in some plenty raised a little above the leaves.

Dianthus strictus.

One of the troubles of cultivating a lection of plants with any regard for rectness of nomenclature is that of fying the names and "hunting up" "down" for the synonyms. This has exemplified with me in the case Dianthus strictus, which came to me as D. integer, a name still quite common nurseries and private gardens, and wh was at one time, at least, much familiar than the proper one of strictu In writing of it now I am doing so w the reservation that it is not brought forward as being better than its sisters of that delightful dianthus race to which it belongs, but as one which is in bloom; which is charming in its own way; and which I have not before written about in these pages. It is at present delighting in warm and sunny weather, and on a plant of fair dimensions there are many of its little pure white, beautifully fringed, slightly reflexed flowers. Like those of its sister-flower, the maiden pink, these are "of odour faint," and have not the perfume to the marked degree which exists in our double garden pinks. The flowers of Dianthus strictus charm us with their simplicity, elegance, and beauty. S. Arnott.



NEW HYBRID TEA ROSE, META WELDON.
Awarded Gold Medal, N.R.S. Exhibition. Colour, rich cream-yellow.

WINTER-FLOWERING SWEET PEAS.

It is fully evident that the value of the new American sweet peas has not been over-estimated, but rather that these most useful novelties are gaining rapidly in favour, and another winter will see them largely grown under glass in this country. As has been previously intimated, these sweet peas come into blossom early and give a continual succession of flowers, so that we can now regard the sweet pea (like the perpetual carnations) as an all-the-year-round product.

At the recent Boston (U.S.A.) Spring Show, these sweet peas were a noteworthy feature, and a special class was provided for them. The winning vases (of 100 spikes in each) were the white Florence Denzer and the popular Christmas Pink. Many other notable varieties were exhibited, and of these Mrs. Alex. Wallace, a good lavender, and W. W. Smalley, a satiny salmon-hued pink, were awarded first-class certificates.

As stated in a previous note, these sweet peas originated with Mr. Ant. C. Zvolanek, and I believe that some of his varieties will be seen in the Reading trials this summer, and should be in blossom in advance of our English sweet peas. With reference to the value of these varieties, I should hazard an opinion that they would prove profitable to follow on after late tomatoes or early chrysanthemums. If they are to follow on after the crysanthemums, they might be sown in pots a month before the time of planting, thus saving considerable time, and then as soon as the house or houses are cleared of one crop, the other crop is ready to take its place. One should bear in mind when making up beds for winter sweet peas that a good supply of nutriment should be present in the soil, and also see that the beds are made firm before planting.

As an instance of the continuous blossoming of sweet peas, I may briefly give the raiser's experience of Mrs. E. Wild, a bright carmine-red, which makes a wealth of stout growth and foliage. This was sown in the beds under glass on August 25, 1906, and the plants commenced to flower on October 16. From this time forward until June 5, 1907, a continuous supply of blossoms was given, a long enough period for any plants to produce flowers. Of course, some varieties will secure a greater amount of public favour than others, especially the whites and pinks, and in a lesser degree the reds and lavender shades. Sweet peas are so light in effect, and look so dainty when arranged in vases or made up into bouquets, etc., that the possibility of having a continuous supply the whole year through will give another fillip to sweet pea culture.

It must be borne in mind that there are other early sweet peas, in addition to the varieties of Mr. Zvolanek. The origin of some of these is of interest because the primary variety, Earliest of All, was a sport from Blanche Ferry (a well-known sweet pea of the older type). Earliest of All partakes much of the character of its parent, and true to its own origin, it gave a distinct and noteworthy break in Earliest White. From these two varieties, aided by cross-breeding and further sportive breaks, came the Telemby strain which has been brought into prominence by the Rev. E. Arkwright. These forms, whose chief merit is their early-flowering propensities, differ from our sweet peas in having narrower foliage and stems of a distinctly woody character.

But to revert to the Zvolanek varieties.

G.M. 394.

NEW TEA ROSE, MRS. CAMPBELL HALL.
Awarded Gold Medal N.R.S. Exhibition. Colour, rich cream-yellow ground, passing to bright rose-pink at the margin of the petals.

the raiser definitely states that his peas have been crossed with a species of vetch, and the presence of vetch strain has been demonstrated by the fact that they require more soil moisture and a cooler temperature than ordinary sorts, and also the tendrils and the narrow, harder leafage of the vetch has, to a certain extent been retained. The first notable variety of the group, Christmas Pink, is of the Blanche Ferry colour, but it is not quite apparent how it came into being. The notable white, Florence Denzer, sprang up, a chance seedling among a batch of sweet peas which had been crossed with Christmas Pink. Christmas Captain was obtained by crossing the Christmas Pink with Captain of the Blues, and it is of practically the same colour and form as the latter variety.

It is worthy of notice that the Zvolanek varieties are tall growers, and the raiser claims that the tall habit was acquired by crossing and recrossing aided by selection. As a contrast, it may be stated that Earliest of All grows about four feet high, while Watchung, a Zvolanek white, similar in form, grows nine feet in height, and the same may be said of the other varieties. There is one point about this tall habit. Provided one has sufficient space to permit of unrestricted growth, it should be possible to obtain a larger supply of blossom from them than from dwarfs.

Many Zvolanek varieties which at present are not in commerce will probably be put on the market at the end of the summer. Among them one will probably find Mrs. George Lewis, a giant white; Mrs. Hannay, cerise; Mrs. W. W. Smalley, satiny-salmon; and Miss Helen Gould, white and lilac. Among the most profitable of those already disseminated it is the bright, decided colours, and pure-hued paler forms which will be sought after. Six of the most popular for cutting would be Christmas Meteor, scarlet; W. J. Stewart, clear blue; Mrs. Alex. Wallace, lavender; Mrs. E. Wild, carmine-red; Florence Denzer, white; and Christmas Pink, all of which will give good results under sound treatment.

P. S. Hayward.

THE W. ATLEE BURPEE SILVER CHALLENGE TROPHY,
Offered for Waved Sweet Peas at the National Sweet Pea Society's Show, July 24, 1908.
Value Fifteen Guineas; Weight 50 Ounces.

HARDY PRIMULAS—No. II.

P. cortusoides is the parent of many varieties which are known in gardens under the name of P. Sieboldi. This species is deciduous and leaves no trace of its presence in winter. It spreads by means of creeping stems which soon cover a large area, the flowers range from white and crimson to lavender or mauve, and embrace many delicate and beautiful shades. It is generally in flower during May, and lasts in perfection for some time.

P. japonica is a vigorous and splendid species, producing rich crimson flowers in successive whorls, and the spikes, under liberal treatment, will often reach 30in. in height, while the rosettes of leaves frequently measure a yard across. It produces seed very freely, and a good strain can easily be degraded by the presence of inferior forms. To retain the purity of the stock all spurious colours should be vigorously weeded out before the pollen grains reach maturity.

Primula sikkimensis is an ideal bog primula, which produces in late summer abundant tall mealy stems, bearing lovely sulphur yellow, drooping blossoms, the leaves are deciduous, and the fresh growth is somewhat late in appearing, so that care must be exercised in marking its position. A species so effective from a colour point of view should be extensively planted, added to which the growth is refined, and it rarely proves an intruder like P. japonica.

Among the primulas specially suitable for rock gardens, none are more welcome than P. auricula, as the sweetly-scented yellow flowers are pretty, and the mealy leaves are effective even when the flowers are absent; second to auricula comes P. marginata, a species which plumps up great fat buds preparatory to unfolding the toothed leaves with their dense coating of white powder. The flowers are lavender or mauve, a shade which matches closely with the older forms of aubrietia. P. marginata is an easy plant to grow, its only fault in its becoming leggy with age, and w this takes place the plants should be lif and divided, leaving only the buds expo when replanting. P. viscosa, is a su deciduous species, bearing mage flowers; the foliage is light green and glu tinous to the touch. P. calycina is an eve green, with stout, pointed shining leave the flowers are large and of a pleasa purple shade, being borne in loose umb upon 6in. stems. P. calycina is a satisfa tory species to grow in any sunny chink or crevice, as it steadily increases in size and beauty each year.

P. Forbesi is the Bird's-eye primrose of the East; the slender stems, as well as the leaves, are densely mealy, and upon these the flowers are produced in successive whorls, the colour being a delicate shade of lilac-pink. Unfortunately, P. Forbesi is not hardy, but, being easy to raise from seed—which ripens freely—no trouble should be considered too great in retaining a good colony of this precious plant. P. pubescens alba is to the rock garden what P. rosea is in the bog, so freely are the chaste white flowers produced that, when intermingled with the light green leaves in some roomy crevice they form a picture complete in itself. P. pubescens alba is also known as P. nivalis in gardens, where it is more often grown as a pot plant. In the open it prefers a position not wholly exposed to sun, though it can never endure overshadowing by coarser growth. The plant is robust, and seems to prefer rich stony soil, with liberal supplies of water during the summer months.

The foregoing notes only briefly touch upon some of the best known of the hardy primulas, but sufficient has been said to show that none are without interest, but that most of them have a charm and beauty all their own, which deepens with closer intimacy.

Thomas Smith.

Walmsgate.

SWEET PEA JOTTINGS.

Whew! It is warm, in spite of the pleasant breezes, indeed, without them life in the south would have been scarcely bearable during the last fortnight. But the wind and sun together exert a very drying influence upon soil and vegetation, and those who did not dig deeply and have failed to mulch, water, and use the hoe are having a bad time of it.

What a remarkable difference there is in the habit of sweet peas. Some varieties never grow sturdily and vigorously; some are rampant; some flower much more freely than others; on some spikes of four and five flowers are common, while on others it is difficult to get more than three blooms, and twos are most frequent. Henry Eckford is a variety that has often been abused, especially by impatient folk; it seems necessary this sweet pea should have widespread roots ere it starts into good growth, and consequently when many varieties are beginning to "give out" Henry Eckford goes ahead, and gives a good autumn display—at least, that is my experience with it. Princess Victoria I like, not because I regard it as absolutely distinct, but because it gives me shapely four-flowered spikes without special feeding. Evelyn Hemus is one of the strong growers, but with me it was one of the latest to come into bloom, and even yet it has not developed its beautiful rosy-red edge properly. We all regret that Miss Hemus had such bad luck with her large autumn-sown crop of this novelty, weather and slugs combining to kill practically every plant. She has had to rely on spring sowings, and consequently her flowers are not so fine and early as last year.

Sweet peas are so forward, and have come along so quickly that the inspection of the Reading trials, and the outings of the National Sweet Pea Society have had to be arranged post haste, and are in progress as these lines appear. The three hundred rows at the University College Gardens, Reading, afford an unique opportunity of inspecting practically all the novelties of the season, and many that may be sent out next season, and they show how well or ill the varieties are fixed. The question of fixity grows more and more serious. Last year I saw breadths of certain varieties growing for seed, and these were wonderfully clean and true, and very little rogueing had been necessary. One would naturally conclude that such stocks would give seed likely to reproduce the variety truly, and yet, in some cases, it is doubtful whether there are 50 per cent. true. I am not going to name these varieties now, I await the report of the N.S.P.S. Floral Committee, but I would suggest that those really interested in the matter should join the Sweet Pea Society, and take advantage of the privilege of membership to visit the Reading trials.

I am sorry to learn that the streak disease has broken out in Ireland again. By this I do not mean that hundreds, scores, or even dozens of growers have reported attacks. My friend, Mr. H. J. Digges, of Donnybrook, reports that, in spite of every care and precaution, the disease has broken out badly in his garden. Although I am credited with a fair stock of patience and perseverance, I am sure my stock of these virtues would not permit me to annually attempt the cultivation of sweet peas, when, year after year, they fell a prey to a disease that baffles all attempts to cure or prevent it.

Now we are looking forward to the great exhibition on July 24, at Westminster. What kind of a show will it be? Even the most optimistic of us can hardly hope for so magnificent an exhibition as in 1907, but the size of the display will probably be as great, though the general quality may not be as high. Still, one never knows, and a few good rains will work wonders. The National Sweet Pea Society has added 204 new members to its list this year, and 24 new societies have affiliated with it, making a total of just over [illegible] members and 46 societies. There should be a keen competition for the Burpee Cup, which is a very handsome piece of silver presented by Mr. W. Atlee Burpee, who, I am sorry to hear, is on his way home, and so will not be with us on July 24, but he has promised to send Mr. Howard Earl, his right hand man, to see our show, and the new sweet peas. Mr. H. Mackereth, the great [illegible] from Ulverston; Mr. Hugh Dickson, of Newtownards; Comte d'Estienne, from Paris, and also one or two of the big German seed-growers, have all expressed their intention of being present at the show, consequently we may anticipate a good gathering of specialists, as well as of sweet peas.

Chas. H. Curtis.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

IMPORTED ORCHIDS.—There appears to have been a considerable number of late importations this season, and as these will have become generally distributed, some reference to their treatment may not be out of place. In the case of the cattleya family, I consider the sooner they are potted up the better. Carefully cut away all dead and decaying matter about the plants, and look out for any traces of the cattleya fly. It is a very risky business to place plants that show the least signs of attack from this and other pests in a collection of healthy cattleyas. I would, if space permitted, isolate all imported plants, and plants flowering for the first time, from the general collection of cattleyas, until satisfied that they are free from this pest. The traces of the fly may be easily detected by the perforations in previously made pseudo-bulbs. I would also advise that the plants be placed in as small pots as possible, and be potted up in practically all crocks, giving only a slight layer of potting compost or chopped sphagnum on the surface. They should also be kept shaded from strong light after being so long in the cases, as strong light causes the foliage to turn yellow and die. It is desirable to retain as much of the foliage as possible, therefore care in shading is necessary. The saturated condition of the atmosphere in orchid houses at this season is usually sufficient to keep the pseudo-bulbs plump, and little root moisture is necessary. It is advisable to spray the plants overhead once or twice a day.

CYPRIPEDIUM BELLATULUM and its allied species are also being extensively distributed. After the plants have been cleaned of any dead and decaying matter, do not disturb the crowns or matted roots more than is absolutely necessary. Pots should be selected that will contain the plants comfortably; fill these to about one-third their depth with clean drainage. The potting compost we find suitable for the whole of this section consists of about equal proportions of broken fibrous peat and turfy loam, with sufficient lime rubble and coarse sand intermixed to render the compost porous. This compost should be made moderately firm, and when potting is completed a thin layer of finely chopped sphagnum moss on the surface of the potting compost adds to the appearance of the plants. Water with rain water as soon as potting is completed, wetting the compost through. The temperature of a cool intermediate house suits these plants well during the summer months, but the warmer and drier conditions of the cattleya house are desirable for the winter months.

IMPORTED COOL ORCHIDS, such as Odontoglossum crispum and Cochlioda Noetzliana, should be placed in as small pots as possible. They usually suffer considerably from the hot, dry conditions of our houses when received in an imported state at this season of the year, but where small pots are used there is greater opportunity of frequent spraying overhead, which will assist the plants to regain a plump condition.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

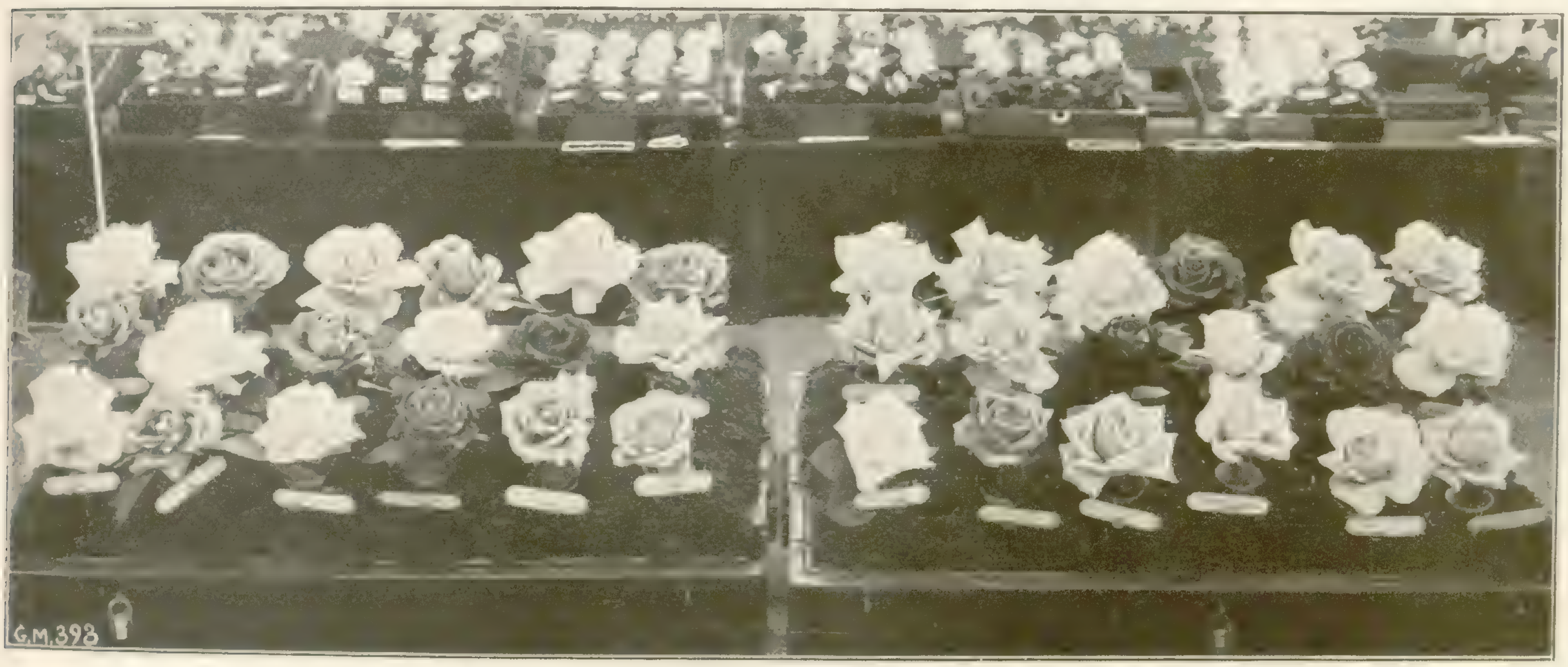
PERSIAN CYCLAMENS.—Now that growth is free plenty of air will be necessary. Shading, too, must be given in bright weather, and on very hot days it is well to damp the shading material. Greenfly is now very troublesome, and fumigation at regular intervals should be resorted to for keeping it in check. It is well to have the lights drawn off the frames at night so as to charge the foliage with moisture, which will help to sustain it in the more trying temperature of the day.

FUCHSIAS.—These have now a good start, and will be growing vigorously, and the stronger-growing sorts should be selected and given larger-sized pots. Judicious pinching and regulation of the growths must be well attended to if shapely plants are the object. Good rich soil, of which old mushroom bed manure should form a portion, should be given. Unless heavy rains prevail the plants should stand outside, but in such a position as to avoid the force of the wind, which soon works havoc with tender growth.

ASPARAGUS PLUMOSUS.—Young plants raised from cuttings and well rooted in small pots, should now have a shift into others two inches larger. These, if well grown, will be useful by autumn for either table or room decoration. Few plants are more useful in a small state, and they are readily raised and grown into a suitable size in one season.

GLOXINIAS.—Seedlings that are now in small pots, and are well rooted, may be placed in five-inch or six-inch pots. If the plants have been brought forward in gentle warmth they should be gradually hardened, and grown in a cool house or frame. The foliage of the plants must not be watered, but should be shaded from bright sunshine.

ADIANTUM CUNEATUM.—Plants are now growing freely, and if intended to yield fronds in the best condition in autumn and winter they should now be grown in a cold frame. If the plants have been shaded it will be necessary to give them light shade for a time, after which they may be exposed to the sun. It is only by exposure and abundance of air that fronds of the lightest green,



AMATEUR'S CHAMPION TROPHY COLLECTION OF THIRTY-SIX BLOOMS.
Exhibited by Mr. E. B. Lindsell at the N.R.S. Exhibition.

and those that will last when cut, can be produced. These ferns are frequently not shaded, and the fronds flag directly they are cut. Seedlings may now be placed in two and a-half inch pots, a very suitable size for many forms of decoration.

CAMPANULAS.—Seedlings of Campanula pyramidalis should now be ready for potting into five-inch or six-inch pots. The soil should be fairly rich to encourage strong growth. Continue to feed the plants coming into flower. Stake and tie any of the growths that are likely to get broken by heavy storms of rain or wind. Give liquid manure to the baskets of C. isophylla and its varieties, and if the slender growths cannot be allowed to hang down, support them with a few twigs from an old birch broom.—T. B. FIELD, Ashwellthorpe Hall Gardens, Norwich.

THE FLOWER GARDEN.

FLOWER BEDS.—Maintain a close watch on all flower beds, and where space permits give frequent hoeings; keep all absolutely free from weeds, and remove all dead leaves and old flower stems or seed pods.

TUBEROUS BEGONIAS will, on poor light soil, soon become exhausted if allowed to frequently become dry, therefore a mulching of cocoanut-fibre refuse or well-decayed leaf-soil would be very helpful. Tubs, vases, and raised beds must all be attended to in the same way.

COLLECTION OF FINELY-GROWN VEGETABLES AND MELONS

For which Messrs. E. Webb and Sons were awarded a Gold Medal at the Franco-British Exhibition.

WILD GARDEN.—Where grass has been allowed to grow long it should be cut at once, as all bulb foliage will have quite ripened off, and the extra warmth reaching the bulbs after the grass is cut will help to ripen and mature them. A general cleaning up all through the wild garden should be given, the grass being carefully cut from the sides of walks, and if the walks are at all green, dirty, or weedy, a dressing of weed killer should be applied, carefully guarding against its contact with anything else. Weed killer should only be given in quite settled weather, and the Knebworth watering can is the best medium to apply it with. All climbers rambling over or up the stems of trees must be attended to, directing their growths where most required; the beautiful Polygonum Baldschuanicum is one of the most suitable for this purpose, if given a light position. In corners where a summer effect only is required, and where it can be quite restricted, Polygonum cuspidatum is well suited; here it is quite a pest, some woods being almost covered with it. Epilobiums will, if planted, spread in the same way, and form beautiful masses of colour.

HARDY FERNERY.—Give similar attention here, guard against damage, and keep everything thoroughly clean and well watered.

BIENNIALS.—Wallflowers, campanulas, myosotis, calliopsis, and other biennials should now be pricked off as they become ready, and the ground well pulverised (but no manure added), and made firm. Prick out wallflowers nine to twelve inches apart each way, myosotis six inches, and other plants according to the size they will grow; give an open position, so that growth will be well ripened and hardened by the winter. All plants in the reserve garden should be well attended to. Recently divided daisies, primroses, and polyanthus; shrubs used for beds in winter, freshly propagated arabis, aubrietias, etc., must be carefully watched and attended to, proper attention now being well repaid in the following season's display. Young growths from the base of hollyhocks may not be rooted by inserting them singly in sandy soil in small pots, and standing or plunging them in cold frames, preferably with northern aspect; keep them close and well shaded until rooting commences, when air may gradually be given. Should the dreaded disease appear in established plants, remove and burn all dead leaves, syringing others with one of the approved fungicides.

HERBACEOUS BORDERS.—Pæonies have again given of their wealth, and proved their value for cut blooms as well as for border decoration. Inula glandulosa, heucheras, saxifragas, iris, campanulas, etc., give pleasing variety, being followed by Chrysanthemum maximum, delphiniums, phloxes, and a host of others. See that nothing is damaged through want of support; plants may be apparently standing erect and safe, but a heavy storm or strong wind will sometimes irreparably damage them in a few minutes. Anything transplanted late in the season will need watering and mulching, and probably none of them will reach their usual height this season; but if allowed to remain another year will regain their full height. The earliest flowering varieties of chrysanthemums will soon be producing their buds, and must be carefully attended to, and should flowers of a maximum size be wished for, disbudding may be practised; but the greater charm is found in allowing the earliest varieties to produce their full number of blooms. Liquid manure may be given, and they must be staked or supported.—E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

FIGS.—These trees need attention at intervals, and some of the weak, useless shoots may be removed, cutting them back to within a few eyes of the base, but the more fruitful wood should be retained and made secure to the walls or older branches. If the borders are firm, and there is ample room for extension, the growth ought to be stout and firm, as it is from this class of growth the figs are most plentifully produced. Fig trees require but very little pruning, and in favourable chalky parts of the country fine crops are almost annually produced. Brown Turkey is one of the best, although I have seen very fine fruits of the Brunswick near Margate and along the Thanet coast. When the fruits show signs of ripening they must be protected from birds, either by netting the trees over, or using small muslin bags just large enough to cover each fruit. The roots need a few heavy soakings of water should the trees be bearing heavy crops, and the syringe must be freely used in the afternoon in warm, sunny weather, otherwise red spider may put in an appearance. Young trees, if making much wood, need not be watered, but must be kept neatly trained. In the case of fruiting trees, the shoots bearing fruit may be stopped at a few leaves above, so as to throw all the strength possible into the fruit.

GOOSEBERRIES.—If fine fruit is wanted a few applications of liquid manure should be given; in any case, the soil under the bushes will be all the better if covered with manure and a little strawy material to keep the fruits clean and free from grit. Cordons will need attention, stopping some of the shoots to avoid overcrowding; those on walls are very liable to attacks of red spider, so that a few good syringings with clear water at intervals will be helpful in maintaining a clean, healthy leafage.

RED CURRANTS must be protected early, otherwise most of the fruit will be taken by birds while quite green, and the same may be said of black currants. Our crop is very light this season, as many of the fruits dropped after the severe late spring frost and snow.

SUMMER PRUNING.—Plums and pears on walls, etc., should receive attention in the matter of summer pruning. Do not cut the shoots too far back this time, otherwise the buds at the base may break into growth. I usually cut back to about the fifth leaf when pruning early. Preserve young pieces of new growth at intervals, especially in the case of greengages, as these may be nailed to the walls between the older branches. Keep a sharp look-out for aphides, and should they attack the leaves, syringe with quassia extract. If the crops are heavy, thin the fruits; the Victoria plum is bearing heavily, and when the fruits are large enough some may be used for tarts while quite green. Do not forget to examine the roots of newly-planted trees, and give water if required; mulching must not be overlooked. Apples are bearing heavy crops, and on the whole the trees are looking very promising.—H. MARKHAM, Wrotham Park Gardens.

Hardy Border Flowers.—Many early-flowering plants have passed out of bloom, and others will rapidly follow, so remove all old flower stems as they ripen off. Trollius, doronicums, aquilegias, pæonies, Oriental poppies, etc., have finished their display for the season, and if there is nothing adjacent to continue the display, annuals of suitable heights may be planted. Continue to stake and support all plants needing it, but guard against tying them too closely or tightly. Those that have not been transplanted for a season or two, and have become rather large, impoverishing the ground around them, must not be allowed to suffer from drought; a liberal sprinkling of an approved chemical manure well watered in will be very helpful to them. Do not allow underground spreading subjects, such as alstromerias, Anemone japonica, Helianthus rigidus, epilobiums, and others to occupy more than their allotted space. Keep close guard against damage by caterpillars and slugs. Lay lettuce down early in the evening, especially after watering, and examine them later on, when many slugs may be caught. Caterpillars should be searched for and picked off by hand.—LANCASHIRE GARDENER.

EXHIBITIONS AND MEETINGS.

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National Rose Society.

Patronised by Her Majesty the Queen, and Princess Victoria; held on the brightest and hottest day of a fine run of beautiful summer weather; situated in one of the most rural spots in London—the Royal Botanic Gardens; attended by what must have been a record crowd; and with an overwhelming abundance of beautiful roses on view, it is small wonder that the National Rose Society's Metropolitan Show, held on Friday, July 3, was in every way a huge success. So successful was it in attendance and weather that, in spite of the cooling (artificial) showers that ever and anon fell on the canvas roofs of the four big tents, the heat was so great that only those who were present at or before the opening hour saw the blooms in their beauty. Long before our representative finished his survey of the display the beauty of the show had fled; indeed, in some cases flowers had drooped ere the judges commenced their duties. But it was a grand show, worthy of a flourishing society.

NURSERYMEN.

The first competition to which rosarians hurry, after, of course, they have discovered how their own blooms have fared, is the one for the Champion Trophy, open to nurserymen. The fight for this trophy is always a keen one, and the blooms are always worthy of inspection. This year there were six competitors, and the coveted award was won by Messrs. D. Prior and Son, Colchester, who had a superb set of bright, clean flowers, and whose leading varieties were Wm. Shean, Marchioness of Londonderry, White Maman Cochet, Dean Hole, Alice Lindsell, Bessie Brown, Frau Karl Druschki, Horace Vernet, Mildred Grant, J. B. Clarke, Killarney, and Caroline Testout. Second prize fell to Messrs. Harkness and Co., Hitchin, and third to Messrs. B. R. Cant and Sons, Colchester.

For forty varieties, three blooms of each, Messrs. Ben Cant and Sons, Colchester, secured the chief honours from four other competitors with a stand that contained excellent examples of Maman Cochet, Ben Cant, Lohengrin, Alice Lindsell, and Caroline Testout; Messrs. Alex. Dickson and Sons, Newtownards, a good second, and Messrs. D. Prior and Son, Colchester, third.

In the second division of the nurserymen's general section, the premier position in the class for forty-eight blooms, distinct, was won by Messrs. J. Burrell and Co., Howe House Nurseries, Cambridge, from seven other competitors, with a set that had specially notable blooms of Florence Pemberton, Bessie Brown, Muriel Grahame, Ulrich Brunner, Gustave Piganeau, Mildred Grant, Dean Hole, Mdme. C. Soupert, and Mrs. Dudley Cross; Messrs. G. and W. H. Burch, The Rose Gardens, Peterborough, came second, and Mr. G. Mount, Canterbury, was third. Mr. Hugh Dickson was awarded an extra third prize. In the same section Mr. H. Drew, Faringdon, Berks, led for a box of twenty-four blooms, distinct, with another beautiful and even set of blooms, in which Hugh Dickson, Mrs. T. Roosevelt, Ulrich Brunner, Comtesse de Nadaillac, and Dean Hole, figured well. Mr. Charles Turner, Slough, second, and Mr. E. J. Hicks, Twyford, Berks, third, seven competitors.

The best set of sixteen varieties, three blooms of each, was shown by Messrs. G. and W. H. Burch, Peterborough, with a really fine set, in which were Mrs. T. Roosevelt, Dean Hole, Mildred Grant, Mdme. Jules Gravereaux, Her Majesty, Caroline Testout, and Florence Pemberton. Messrs. Burrell and Co., Cambridge, came second, and Messrs. J. Jefferies and Son, Cirencester, came third. There were seven competitors.

NURSERYMEN'S TEAS AND NOISETTES.

The D'Ombrain Challenge Cup for tea and noisette roses is for twenty-four blooms, distinct, and the winner is regarded as the tea-rose champion. There were four competitors, the winner being Mr. George Prince, Longworth, Berks, who had fine bright examples of Souv. de P. Notting, Princess of Wales, White Maman Cochet, Maman Cochet, Mrs. E. Mawley, Marechal Niel, E. Veyrat Hermanos, Mdme. Berger, Mdme. J. Dupuy, Innocente Pirola, Mdme. Jules Gravereaux, Mdme. Cusin, and Mdme. C. Soupert; Messrs. B. Cant and Son, Colchester, second, and Messrs. Frank Cant and Co., Colchester, third.

The best twelve tea or noisette roses, distinct, came from Mr. John Mattock, Headington, Oxford, whose varieties were White Maman Cochet, Cleopatra, Boadicea, Medea, Catherine Mermet, Innocente Pirola, Empress Alex. of Russia, Muriel Grahame, Maman Cochet, Mdme. C. Soupert, Mdme. Jules Gravereaux, and Bridesmaid; Messrs. Paul and Son, Cheshunt, second, and Messrs. J. Burrell and Co., Cambridge, third.

An interesting class is the one for fourteen tea or noisette varieties, three blooms of each, shown in vases, on a space not exceeding 5ft. by 3ft. The set staged by Messrs. B. R. Cant and Sons was placed first, and it included White Maman Cochet, Madame Jules Gravereaux, Edmond Proust, Catherine Mermet, and Souv. de Pierre Notting; Mr. H. Drew, Faringdon, second; and Mr. G. Prince, third.

ROSES IN VASES.

For a dozen varieties of roses, not more than six tea or noisette varieties, seven blooms of each, arranged in vases, there were six entries, and Messrs. A. Dickson and Sons, Newtownards, took the lead with a finely set-up lot of Bessie Brown, Mildred Grant, Dean Hole, Grace Molyneux, Ulster, Frau Karl Druschki, Lady Derby, Lady Ashtown, Florence Pemberton, and Marquis Jean de Chas. Paigner; Messrs. D. Prior and Son, Colchester, second, with lovely flowers; and Messrs. Frank Cant and Co., Colchester, third. In the class for nine distinct tea or noisette roses, seven blooms of each, set up on a space 5ft. by 3ft., there were four competitors, Mr. Henry Drew, Faringdon, Berks, scoring with good blooms, fairly well arranged, of Madame Cusin, White Maman Cochet, Medea, Mrs. S. Tresider, Mrs. E. Mawley, The Queen, Maman Cochet, and Muriel Grahame; Mr. J. Mattock second, and Mr. G. Prince, Longworth, Berks, third.

MRS. ORPEN'S FIRST PRIZE BOWL OF DECORATIVE ROSES, N.R.S. EXHIBITION.
The variety is the bright pink single damask Mrs. O. G. Orpen.

DECORATIVE ROSES.

In this section all H.P.'s, except singles, and all exhibition roses, are excluded.

The nurserymen made, as usual, a fine display, though they permit formality of arrangement to reduce the beauty of their flowers. The class for thirty-six varieties induced only two competitors to come forward, and premier position was accorded to Mr. J. Mattock, Headington, Oxford, for a fine lot of blooms of Irish Glory, Belle Fleur, Lady Battersea, Hebe's Lip, Papillon, Madame Abel Chatenay, Claire Jacquier, Leuchtstern, etc. Messrs. Paul and Son, Cheshunt, secured the second award.

The displays of eighteen decorative roses were of interest, and there were six of them. Messrs. W. Spooner and Son, Hounslow, led with goodly bunches of Rubens, Gustave Regis, Allan Ramsey, etc.; Mr. Charles Turner, second; and Mr. J. Barrow, Oadby, Leicester, third. For eighteen summer roses, arranged on a space 4ft. by 4ft., Mr. George Prince, Longworth, led with a very pretty set of Mrs. F. W. Flight, Rubens, Crimson Rambler, Himalaica, Wallflower, etc., set up in pyramidal fashion; Messrs. G. Cooling and Sons, Bath, also had Mrs. F. W. Flight in fine form, and were second; Messrs. Paul and Son, Cheshunt, third.

Mr. John Mattock won first place for a set of eleven varieties of decorative roses, not less than three sprays of each, showing Prince de Bulgarie, Irish Elegance, Crimson Rambler, Lady Battersea, Leuchtstern, Madame Abel Chatenay, and Helene, finely; Mr. George Mount, second; and Messrs. J. Jefferies and Son, Cirencester, third.

GROUPS OF ROSES.

The first prize, including a gold medal, for a representative group of roses, staged on the floor, on a space of 250 sq. ft., was won by Messrs. Hobbies, Lim., Dereham, who had an imposing and attractive exhibit, composed chiefly of pillar and standard plants of Hiawatha, Dorothy Perkins, and other rambling roses, faced with baskets and vases of tea and hybrid tea roses. Messrs. Paul and Son, Cheshunt, were placed second, with some fine masses of rambling roses and Wichuraiana varieties, baskets of cut blooms of H.P's., H.T's., and T's.

The class for a group of cut roses, arranged on staging and occupying 100 sq. ft., was more enticing, as here there were five competitors. Mr. George Mount, Canterbury, was an easy first with a bold and beautiful exhibit, in which the great features were the pyramids of Mrs. J. Laing, Richmond, Joseph Lowe, Frau Karl Druschki, Helene, and other striking varieties. Mr. F. M. Bradley, Church Street, Peterborough, second; and Messrs. W. and J. Brown, Peterborough, third. Messrs. W. Spooner and Son, Hounslow, gained an extra prize.

A class was provided for arches decorated with long sprays of roses, and there were numerous entries. The successful exhibitors were Messrs. Paul and Son, Hobbies, Lim., and Mr. G. Prince.

OPEN CLASSES.

Messrs. R. Harkness and Co., Hitchin, were first for a crimson rose, eighteen blooms, in a bamboo stand, with Ulrich Brunner; Messrs. B. R. Cant and Sons, second, with the same variety; and Mr. Hugh Dickson, Belfast, third. For eighteen blooms of a white or yellow rose, similarly shown, Mr. J. Mattock, New Headington, led with Bessie Brown; Messrs. R. Harkness and Co., Hitchin, second, with Florence Pemberton, and Mr. Hugh Dickson third. For eighteen roses, other than a white, yellow, or crimson, in bamboo stands, Messrs. Frank Cant and Co. led with superb examples of what appeared to be Lady Moyra Beauclerc; Messrs. S. Bide and Son, Farnham, second, with Queen of Spain; and Mr. Hugh Dickson, Belfast, third.

The best dozen blooms of White Maman Cochet came from Messrs. Frank Cant and Co., Colchester, and they were a beautiful set; Mr. Chas. Turner, Slough, second; and Messrs. B. R. Cant and Sons, third. For twelve blooms each of Frau Karl Druschki and J. B. Clarke, arranged alternately, there were ten entries; Mr. George Mount, Canterbury, was first with grand examples; Messrs. G. and W. H. Burch second; and Messrs. Frank Cant and Co. third; this was an attractive class.

NEW AND GOLD MEDAL ROSES.

Messrs. A. Dickson and Son, Newtownards, had the best nine blooms of a new rose, showing William Shean in good form; Messrs. F. Cant and Co. second with Mrs. T. Roosevelt; and Messrs. S. Bide and Son, Farnham, and Messrs. B. Cant and Sons, Colchester, were placed equal third, the former with Queen of Spain, and the latter with Mrs. Theodore Roosevelt. Messrs. F. Cant and Co., Colchester, led for twelve new roses with Mrs. T. Roosevelt, Mrs. J. Bateman, Yvonne Vocherot, Wm. Shean, J. B. Clarke, Mdme. C. Soupert, Countess of Gosford, Mrs. Tyler Kennedy, Queen of Spain, Countess de Saxe, Frau Ernest Borsig, and Pie X.; Messrs. B. Cant and Sons, second; and Messrs. A. Dickson and Sons third.

Messrs. Alex. Dickson and Sons, Newtownards, gained a gold medal for Meta Weldon. a globular, bright cream-coloured variety of great depth and beauty. Dr. J. Campbell Hall, Rowantree, Monaghan, was awarded a gold medal for a cream, pink flushed, sweet tea rose, with very broad petals, named Mrs. J. Campbell Hall.

A card of commendation was awarded to Messrs. Paul and Son for Shower of Gold, a neat flower, something in the way of Alister Stella Gray. A similar award fell to Mr. Hugh Dickson, Belfast, for W. R. Smith, a full, broad-petalled, creamy rose, tinted with pink, probably a H.T. From Messrs. A. Dickson and Son came an unnamed tea rose, a globular blush variety, that gained a card of commendation, as also did this firm's Grace Molyneux, a deep cream pink variety, very fragrant. Messrs. McGreedy and Son, Portadown, Ireland, secured a card of commendation for Earl of Gosford, a rather thin, but very bright and pretty rose-red, H.T.

OPEN DECORATIVE ROSES CLASSES.

Messrs. G. Cooling and Sons, Bath, scored for single roses, twelve kinds, with a pretty set of Lady Curzon, Paul's Single White, Andersoni, Stella, Himalaica, and Polyantha grandiflora; Messrs. Paul and Son, Cheshunt, second. The best dozen roses of the beautiful Mdme. Abel Chatenay came from Mr. George Mount, who grows this variety so well; Messrs. W. Spooner and Son, Hounslow, second; and Messrs. D. Prior and Son, Colchester, third. Wiring was too obvious in many cases.

AMATEURS.

There were seven entries for the amateur championship trophy, offered for the best thirty-six blooms, distinct, and here there was a close battle, but the president, and longtime champion, Mr. E. B. Lindsell, Bearton, Hitchin, again secured the coveted award, scoring with a handsome set of Overhofgartner Tenks, Ulrich Brunner, Dean Hole, Comtesse de Nadaillac, White Maman Cochet, Marie Baumann, Alfred Colomb, Bessie Brown, Edouard Andre, Alice Lindsell, S. M. Rodocanachi, Mrs. John Laing, Her Majesty, Souvenir de Pierrre Notting, Marquis of Dufferin, Fisher Holmes, Maman Cochet, Mdme. Delville, Mildred Grant, Mrs. J. Bateman, Frau Karl Druschki, Cleopatra, Beauty of Waltham, Lady Moyra Beauclerc, Mrs. Mawley, Louis Van Houtte, Florence Pemberton, Horace Vernet, Countess of Gosford, Duchess of Portland, Marchioness of Londonderry, A. K. Williams, Queen of Spain, Souvenir d'Elise Vardon, and Helen Keller. Rev. J. H. Pemberton, Havering-atte-Bower, Essex, was second prize winner with a good set of blooms, but his dark varieties were a trifle small. The third award fell to Mr. F. Dennison, Rosecroft, Kenilworth; and the fourth to Mr. Conway Jones, Hucclecote, Gloucester.

There were five competitors in the class for two dozen blooms, distinct, Mr. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, leading with very bright blooms of Mrs. T. Roosevelt, J. B. Clarke, Countess of Derby, Florence Pemberton, Ulster, Ulrich Brunner, etc.; Mr. E. B. Lindsell took second place, and Mr. F. Dennison was placed third.

Out of seven competitors in the class for a dozen trebles, Mr. E. B. Lindsell again led with a pretty set of Bessie Brown, Ulrich Brunner, Florence Pemberton, Mrs. J. Laing, Duchess of Portland, Dean Hole, White Maman Cochet, Mildred Grant, Alice Lindsell, Her Majesty, Ulster, and Marchioness of Londonderry; Mr. E. J. Holland, Sutton, Surrey, was a capital second, but two or three of his flowers were badly bruised.

No fewer than seventeen competitors entered for the Ben Cant Memorial Prize for a dozen blooms, distinct, in the section for growers of fewer than 750 exhibition roses. Mr. W. Upton, Claremont Street, Belgrave, Leicester, led with a very fine box of Dean Hole, Mildred Grant, Innocente Pirola, Wm. Shean, Mdme. Jules Gravereaux, White Maman Cochet, Countess of Caledon, and Bessie Brown. Mr. H. Robins, Margaretting, Ingatestone, second, and Dr. T. E. Pollett, Earl's Colne, Essex, third. In this same section Mr. G. Moules, Hitchin, led for five blooms of a tea or noisette rose; Mr. F. Bostock, Springfield, Northampton, second; and Viscountess Enfield, Dancer's Hall House, Barnet, third. For six trebles, similar conditions, Dr. C. Lamplough, Kirkstall, Alverstoke, Hants, was a capital first; Mr. Joseph Wakeley, Moor Street, Rainham, Kent, second; and Dr. Pollett third.

In the section for growers of fewer than 500 roses, Mrs. E. Horne, Park House, Reigate, was first for nine blooms; Mr. H. C. Baker, Bayfordbury, Hertford, first for six blooms; Mr. Vivian Rolt, Brook House, Storrington, Pulborough, first for five blooms in a vase.

The President's prize for a dozen blooms, distinct, open to all growers of fewer than 1,000 plants, brought out a splendid competition, no fewer than fourteen entrants. The coveted award was won by Mr. C. F. H. Leslie, Epcombe, Hertingfordbury, Herts, who had a good set of Frau Karl Druschki, Ulrich Brunner, Bessie Brown, Her Majesty, Maman Cochet, Mildred Grant, White Maman Cochet, Prince Arthur, Beauty of Waltham, Florence Pemberton, Lady Moyra Beauclerc, and Mdme. Jules Gravereaux; Rev. H. S. Arkwright, Binfield Rectory, Bracknell, second, and Mr. Mahlon Whittle, Belgrave Avenue, Belgrave, Leicester, third.

Growers of fewer than 350 exhibition roses made a good display, and sent some excellent flowers; Mr. E. F. Brown, Sussex Place, Slough, scored for nine blooms, and also for five blooms in a vase, with Florence Pemberton; Mr. A. Searle, Ashton Lodge, Burnett, second. The best four trebles came from Mr. H. C. Baker, Bayfordbury, Hertford, who was followed by Mr. W. Upton and Mr. K. H. Gifford, Edensor, Slough, in the order named.

In the section for growers of fewer than 200 plants, the leading prizewinners were Mr. C. G. Baron, Charmwood, The Avenue, Hitchin; Mr. W. G. Pedley, Hoddesdon Herts; Mr. W. Bentley, Lombard Street, E.C.; Mrs. F. Pridliam, Heron's Gate, Rickmansworth; Rev. J. T. Kershaw, Warminster; and Dr. Alfred K. Williams, The Moat, Harrow.

For roses grown within eight miles of Charing Cross, Mrs. A. E. Clark, The Hurst, Mottingham, led with very fair blooms, with Mr. A. F. Booth, Woodside Park, N., second; Mrs. Clark thus becomes the amateurs' suburban champion. Mr. W. D. Conz, Magdalen Road, Wandsworth Common, S.W., scored in another class for London roses, and Mr. A. Wilkinson, St. Olave's, Granville Road, North Finchley, came second.

In the novices' classes the leading prizewinners were Mr. J. Hart, Little Heath, Potter's Bar, who led for twelve blooms; Mr. H. Peerman, Glenross, Nantwich, second. Mr. Darling, Clare House, Tonbridge; Mr. G. H. Heaton, St. Vincent Road, Westcliff-on-Sea; and Mr. R. M. Munro, Millfields, Nantwich, were other leading prizewinners.

EXTRA AMATEURS' CLASSES.

In an extra class for amateurs, Mr. Mahlon Whittle, Leicester, won the piece of plate offered as first prize for two dozen blooms, distinct, but he had not a good set; Mr. Eversfield, Denne Park, Horsham, was second; and Mr. G. A. Hammond, Burgess Hill, Sussex, third. The Harkness Cup for a dozen blooms, distinct, was well won by Mr. E. J. Holland, who had very fine specimens of Florence Pemberton, Mildred Grant, Maman Cochet, Mrs. T. Roosevelt, Wm. Shean, etc.; Mr. E. B. Lindsell second, and Mr. W. Leggett third.

Mr. A. Hill Gray, Beaulieu, Newbridge, Bath, was easily first for nine tea and nine H.T. roses, with a beautiful box of lovely blooms of Auguste Compte, Mdme. Melanie Soupert, Mdme. J. Gravereaux, Florence Pemberton, Maman Cochet, Comtesse de Nadaillac, Souv. de Pierre Notting, Mdme. Cusin, etc.; Mr. W. Leggett, Roseville, Malden Road, Colchester, second, and Mr. E. M. Eversfield, Denne Park, Horsham, third. Mr. E. J. Holland had the best six new roses, amateurs, winning with Mrs. Myles Kennedy, Yvonne Vachet, Mrs. T. Roosevelt, Mrs. J. Bateman, Wm. Shean, Mdme. Melanie Soupert; Mr. F. Dennison, Kenilworth, second.

Mr. H. Darlington, Park House, Potter's Bar, had the best collection of seven varieties of roses, winning with some fine flowers of Madame Ravary, Antoine Rivoire, La Tosca, Caroline Testout, etc.; Mr. E. M. Wightman, Bengeo, Herts, second; and Dr. Freeland, Delamare, Snodland, Kent, third.

AMATEURS' TEA ROSES.

The tea rose championship, amateurs', is this year held by Mr. A. Hill Gray, Beaulieu, Newbridge, Bath, who led from five other competitors with the following eighteen varieties, all finely shown: Maman Cochet, Souv. de P. Notting, Bridesmaid, Madame C. Soupert, Madame J. Gravereaux, White Maman Cochet, Lady M. Curry, The Bride, Comtesse de Nadaillac, Muriel Grahame, Madame Cusin, La Boule d'Or, Souv. d'un Ami, Madame Vermorel, Boadicea, Madame J. Dupuy, Jeanne Proudfoot, and Dr. J. Guyon; Mr. O. G. Orpen, West Berg-

CARDIFF AND COUNTY HORTICULTURAL SOCIETY.—TWENTIETH ANNUAL SHOW, SOPHIA GARDENS, CARDIFF, Wednesday and Thursday, July 22nd and 23rd, 1908.
Liberal Prizes for all sections.
Silver Plate, Cups, and Medals.
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Will be held on
SATURDAY, July 11th, at CANON'S PARK, EDGWARE.
[illegible] magnificent Park, formerly the seat of the [illegible] f Buckingham and Chandos, is being lent by [illegible] rmission of Arthur du Cros, Esq., M.P.

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The National Rose Society.
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ADMISSION:—
1 to 3 o'clock, 1s. After 3 o'clock, 6d. Children half price.
Band, Pierrots, Dancing on the Green, and other attractions.
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holt, Colchester, was second; and Mr. Conway Jones, Hucclecote, Gloucester, third.

The Prince Memorial Prize, for a dozen blooms, fell to Mr. Mease, gardener to A. Tate, Esq., Downside, Leatherhead; Mr. E. M. Eversfield, Horsham, second. Mr. A. Hill Gray also had the best eight trebles, teas and noisettes, his best varieties, in a [illegible] box, being Madame J. Dupuy, Mrs. Mawley, White Maman Cochet, and Maman Cochet; Rev. F. R. Burnside, Great Stambridge Rectory, Essex, second; and Mr. Conway Jones, third.

Mr. Hill Gray was also successful in the class for seven blooms of one variety, leading with White Maman Cochet in fine condition; Mr. E. M. Eversfield, second, with Madame Jules Gravereaux. Mrs. B. Fortescue, Dropmore, Maidenhead, led for twelve teas and noisettes, followed in order by the Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead; and Dr. Pallett, Earls Colne. [illegible] Mahlon, Whittle, Leicester, led in a class for four trebles with Madame Jules Gravereaux, White Maman Cochet, Maman Cochet, and Caroline Kuster, all well shown; Dr. F. H. Cooke, Birch, Colchester, second; and Mr. J. Wakeley, Rainham, third. Mr. A. Hammond, Burgess Hill, beat Mr. E. M. Eversfield, Horsham, for nine varieties, three blooms of each, in vases.

Mr. Eversfield and Mr. Orpen were first and second for tea roses in vases, but by the time we reached them the flowers were suffering [illegible] from the heat. Dr. Pallett scored [illegible] varieties, three blooms of each, in vases, and Mr. E. R. Smith, Muswell Hill, was a good second.

DECORATIVE CLASSES.

There were fourteen competitors in the class for a table decoration of roses, ladies only, and here the premier award fell to Mrs. O. G. Orpen, who had a cool, elegant, and altogether delightful and simple design in the big single Irish Elegance rose; Miss B. Langton, second, with Irish Elegance and Jersey Beauty, in silver vases; Mrs. W. Munt, Stagenhoe Park, Welwyn, Herts, third.

Mrs. O. G. Orpen, Colchester, had the finest bowl of roses, and showed the variety Mrs. O. G. Orpen superbly; Miss J. Langton second with Dawn and Una. In a class for a bowl of exhibition roses first place was won by Miss J. Langton, Hendon, with Killarney, very beautiful; Mrs. H. E. Molyneux, Brantwood, Purley, second; and Lady Wil[illegible], Benfield Grove, Bracknell, third. Miss [illegible] Langton led for a vase of roses with a charming exhibit of Clara Watson, An[illegible]e Rivoire, and Madame de Watteville; Mrs. E. Mawley, Berkamstead, second; and Lady Wilmot third.

The best basket of roses was a lovely design by Mrs. O. G. Orpen, but Mrs. F. H. Cooke's basket of Madame Abel Chatenay must have run it closely; this gained second place, and Mrs. W. Munt, third. Mrs. O. G. Orpen had the best bowl of a Wichuraiana rose, and Mrs. Duckworth, Elmstead, London Road, Twickenham, was second. In another bowl class Mrs. J. B. Shackle, Dropmore Vicarage, scored with Madame Abel Chatenay, and Mrs. C. Brown, Hatfield Peveril, Essex, came second with Maharajah.

In the open classes Mr. J. Mattock, Headington, led for buttonhole bouquets with charming designs; Mr. O. G. Orpen second; in many cases the flowers were useless at the end of three hours after judging. In the ladies' section the best bowl of roses was evidently the one set up by by Mrs. A. Bide, Farnham, who had Hiawatha sprays, but only gained second prize.

AMATEURS' DECORATIVE ROSES.

Mr. A. Tate, Leatherhead, had the finest set of decorative roses, and won the Girdlestone Memorial Prize therewith; Rev. J. H. Pemberton, second. Mrs. Perkins, Holmwood, Surrey, had the best twelve bunches of decorative roses, and showed well. Mrs. E. Mawley scored for six bunches of decorative roses, and Lady Sutton. Berham Valance, Newbury, scored for six bunches of Sweet Briar Roses in a good competition.

Miss B. H. Langton and Mr. H. Darlington also secured first prizes in other classes for decorative roses. Rev. J. H. Pemberton scored for five distinct varieties of decorative roses shown in bamboo stands, and his set consisted of Trier, Red Provence, Lady Curzon, the Garland, and Claire Jacquier; Mr. O. G. Orpen second, and Miss B. H. Langton, Hendon, third.

NICKERSON ROSES CLASSES.

In another part of the present issue we make special reference to the ballot for the best dozen roses suitable for garden decoration, instituted by Mr. Nickerson, of Cambridge, Mass., U.S.A. In connection with the finding of this ballot classes were arranged for the best, second best, and third best dozens of roses, as follows:

The best set of twelve roses that headed the poll for the best roses for garden decoration, in competition for the Nickerson cups, was the one set up by Mr. John Mattock, Headington, the varieties being Crimson Rambler, Madame Ravary, Dorothy Perkins, Climbing Mrs. W. J. Grant, W. A. Richardson, Alister Stella Gray, Caroline Testout, Climbing Aimee Vibert, Frau Karl Druschki, Hugh Dickson, Abel Carriere, and Ards Rover; Mr. George Mount second.

Of interest also was the class for the twelve roses that secured second place in the ballot for garden roses. Mr. G. Prince, Longworth, was first, the varieties being Ulrich Brunner, Blush Rambler, Climbing Caroline Testout, Una, Madame Abel Chatenay, Claire Jacquier, Marie Van Houtte, Reine Olga de Wurtemburg, Gruss an Teplitz, Gloire de Dijon, Felicite Perpetue, and White Maman Cochet; Mr. J. Mattock second, and Mr. G. Mount third.

For a group of twelve roses that occupied the third position in the recent ballot for garden roses, Mr. J. Mattock was first, the varieties being Aglaia, Souv. de Pierre Notting, Madame Jules Gravereaux, Bennett's Seedling, La France, Longworth Rambler, Macrantha, Viscountess Folkestone, and Papillon; Mr. G. Mount second, and Messrs. Paul and Son, Cheshunt, third.

MEDAL BLOOMS.

The best blooms in the show i.e., those to which silver medals were awarded, were as follows: Amateurs.—Best H.P. rose, Her Majesty, shown by Mr. E. J. Holland, Sutton, Surrey; best H.T. rose, Dean Hole, shown by Mr. E. B. Lindsell, Hitchin; best T. rose, White Maman Cochet, shown by Mr. Conway Jones, Hucclecote, Gloucester. Nurserymen.—Best H.P. rose, A. K. Williams, shown by Mr. George Mount, Canterbury; best H.T. rose, William Shean, shown by Messrs. A. Dickson and Sons, Newtownards; best T., Mrs. Myles Kennedy, shown by Messrs. G. Cooling and Son, Bath.

NON-COMPETITIVE.

There were numerous non-competitive displays, chiefly in the corridor and out of doors, and the leading exhibitors were Messrs. Barr and Sons, Covent Garden; Messrs. Hugh Low and Co., Enfield; the Misses Hopkins, Shepperton; Mr. Williams, Oxford Road, Ealing; and Mr. Howard Crane, Highgate.

Holland Park Show.

The summer show of the Royal Horticultural Society, held by permission of Mary Countess of Ilchester, in Holland Park, Kensington, on July 7 and 8, was a great success. Five big marquees were well filled, and there was a small tent for most of the novelties, as well as numerous displays out of doors. On the first day there was a large attendance of visitors, and though the tents were often very crowded, there was ample room outside for people to sit or walk about in comfort, and listen to the band. Roses were well shown, but the amateurs showed so poorly that the Sherwood Cup was not awarded.

FLORAL COMMITTEE.

Roses were beautifully shown by Messrs. Frank Cant and Co., Colchester, who had grand blooms of Duchess of Portland, Mdme. Melanie Soupert, Dean Hole, Liberty, and other lovely varieties, all finely staged. Mr. W. Chaplin, Joyning's Nursery, Waltham Cross, had fine Frau Karl Druschkis in his group of cut roses. Messrs. A. Dickson and Sons, Newtownards, co. Down, had a display of roses that was always a centre of attraction. Their new varieties—Mrs. David Jardine (A.M.), Mrs. John Waud (A.M.), Florence Ethel Coulthwaite (A.M.), and Molly Sharman Crawford (A.M.), a lovely cream tea rose, were the great attractions in a wonderful group of fine roses.

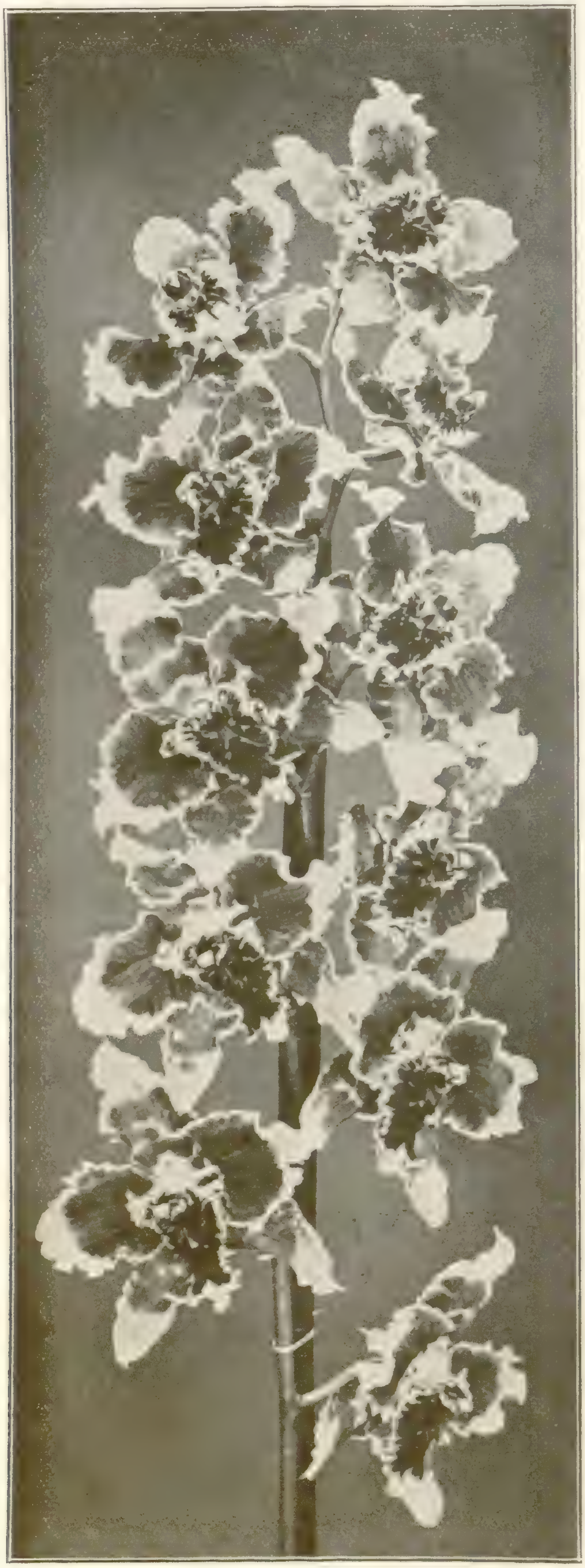
Sweet peas were largely shown by Messrs. Jones and Son, Shrewsbury, who had bright but rather small flowers, and, with them, staged carnations. Mr. W. Chaplin, Waltham Cross, had a small set of very bright sweet peas. Messrs. E. W. King and Co., Coggeshall, had a very fine lot of sweet peas, and these were set up handsomely on arches, baskets, and in vases; Mrs. Wm. King, Henry Eckford, and a number of seedlings attracted attention. Mr. Horton, Seaford, Sussex, sent a few sweet peas. Mr. M. Prichard, Christchurch, displayed hardy flowers to great advantage, and his water garden, with water lilies and surrounding breadths of Kæmpfer irises, spiræas, eremuri, and phloxes was a success.

Sweet peas were largely exhibited by Messrs. S. Bide and Sons, Farnham, who had a group of small flowers. Mr. R. Sydenham, Birmingham, also exhibited these fragrant blooms. Messrs. Sutton and Sons, Reading, had an extensive sweet pea display, showing popular sorts, a number of pretty seedlings, and a fine set of Sutton's Queen, a lovely pink variety. The lovely Queen Alexandra and Peach Blossom spiræas were finely shown by Mr. Wm. Profittlich, Twickenham, agent for Messrs. G. Van Waveren and Kruyff, Sassenheim, Holland. Mr. R. C. Notcutt, Woodbridge, was a large exhibitor of showy and popular hardy flowers. The Misses Hopkins, Shepperton, contributed a rock garden and a few cut herbaceous flowers.

A very beautiful exhibit of lovely carnations, set up in very large vases by Mr. W. H. Page, Hampton, was a great success. All the popular varieties were on view, and with them were splendid bunches of lilies, and all were over maidenhair ferns. Messrs. H. Merryweather and Sons, Southwell, Notts, contributed a lot of roses, but crowded their bunches somewhat. Messrs. Gunn and Sons, Olton, Birmingham, had a glorious lot of the finest phloxes, set up in big vases and stands of a variety; Coquilicot, Magician, Ironie, and Iris were all good.

Splendid banks of hardy flowers and carnations were set up boldly by Messrs. T. S. Ware, Lim., Feltham. Messrs. William Bull and Sons, Chelsea, showed varieties of Gladiolus Colvillei. Mr. G. Mount, Canterbury, contributed a handsome lot of roses, well set up, the Joseph Lowe variety occupying the place of honour in a big group. Messrs.

Hobbies, Lim., Dereham, had a large and pretty display of pillar roses, Hiawatha being very largely staged over arches, pillars, etc., these, with other sorts, making an elegant exhibit.



ODONTOGLOSSUM ILLUSTRE KING OF ENGLAND.
F.C.C., Holland Park Show, July 7. Shown by H. S. Goodson, Esq., Fairlawn, Putney. Flowers, mauve-purple and white.

Messrs. J. R. King and Sons, Coggeshall, submitted finely-grown sweet peas in variety. Mr. Charles Turner, Slough, staged big bunches of garden roses, but his box of White Maman Cochet was the feature of the group; the same exhibitor had a set of border carnations. Some of the finest sweet peas in the show were those exhibited by Mr. Hopkins, gardener to F. Wellesley, Esq., Westfield, Woking, who had grand spikes and flowers of Constance Oliver, Clara Curtis, Mrs. H. Sykes, Miss M. A. Linzee, St. George (grand), and Nora Unwin. The Misses Kipping, Hutton, Essex, had a neatly-turnished rock garden. Messrs. Richard Smith and Co., Worcester, had a miscellaneous display of stove plants, carnations, water lilies, and hardy flowers. Messrs. R. H. Bath, Lim., Wisbech, brought up sweet peas in variety and bold groups of roses, stately delphiniums, and beautiful carnations.

A bank of border carnations, all excellent varieties, was staged in fine style by Mr. James Douglas, Edenside, Great Bookham. Mr. C. W. Breadmore, Winchester, sent up a magnificent group of sweet peas, all beautifully set up, and all of fine quality. This was a great attraction, especially the varieties Audrey Crier, J. T. Taylor, Constance Oliver, Helen Lewis, and Gordon Ankentel. Mr. J. Kerr, Loudwater, Rickmansworth, contributed a small group of carnations in pots. Hardy flowers in great variety, together with a very fine selection of gaillardias and pinks, were set up by Messrs. B. Ladhams and Sons, Shirley, Hants. Messrs. B. R. Cant and Sons, Colchester, submitted a collection of the newer roses, Richmond, Mrs. Myles Kennedy, Hugo Roller, and Killarney figuring conspicuously.

Messrs. James Carter and Co., High Holborn, had a most artistic exhibit of sweet peas arranged in baskets, on arches, and in vases, and with these were splendid culinary peas, in dishes, representing varieties for which the name of Carter is famous. Very brilliant were the sweet peas shown by Messrs. G. Stark and Son, Great Ryburgh, their Lord Nelson, St. George, Nell Gwynne, George Stark, Frank Dolby, and Enchantress being very fine.

The Guildford Hardy Plant Company showed a great variety of hardy flowers. Mr. Vincent Slade, Taunton, had a brave show of zonal pelargoniums, these making a rare blaze of colour. Mr. H. C. Pulham, [illegible]ham, Essex, showed hardy flowers and alpines, and a collection of border flowers was set up by Mr. G. Hart gardener to H. P. Burrell, Esq., Brooklands, Alton, Hants. Messrs. Jarman and Co., Chard, sent their charming sweet sultans, Bride, Bridegroom, and Bridesmaid. Mr. Howard Crane, Highgate, showed dainty violas and violettas in variety. Wonderfully fine perpetual and Malmaison carnations were well set up by Mr. A. F. Dutton, Iver, Bucks, who, as usual, showed the leading varieties in grand form. Messrs. Bell and Sheldon, Guernsey, were also large exhibitors of very fine perpetual carnations, the blooms of Lady Bountiful being very large. Mr. H. Burnett, Guernsey, contributed a lovely lot of carnations, and set these charming flowers up in a most elegant manner, the beautiful Mrs. H. Burnett showing up well.

Mr. Ernest E. Grimson, Sutton, Surrey, had a pretty amateur's collection of two dozen bunches of roses, his Maman Cochet, White Maman Cochet, and Killarney being the best varieties. Brilliant varieties of Gladiolus Colvillei were well shown by Messrs. Lilley and Co., Guernsey, who also showed Kæmpfer irises. A broad stretch of pansies and violas, flanked by hardy flowers, made up the exhibit from Messrs. W. Artindale and Son, Nether Green, Sheffield.

Dwarf Japanese trees from Messrs. [illegible] and Sons, Covent Garden, proved attractive to many visitors, but most people were more interested in their hardy flowers and water lilies.

Four magnificent banks of glorious blue delphiniums from Mr. Amos Perry, Enfield, were as great an attraction as his cool and charming bog and water garden, with its irises, spiræas, sagittarias, bold Gunneras, [illegible]bra, bamboos, and lovely water lilies. Mr. Perry filled one half of the centre of one big tent, and made up a display of greatest beauty and interest, as well as educational value. It was one of the finest exhibits ever put up at a show. In the big tent Messrs. R. Wallace and Co., Colchester, had a fine display of the lovely Japanese or Kæmpfer irises bedded in damp moss. With these a pool of water lilies, surrounded by grasses, spiræas, etc. The whole idea was a little path through an iris swamp, leading [illegible] (by stepping stones) the pool, and up the [illegible] rockery hill in the distance—a very [illegible] picture.

Very artistic and effective was the fine display of caladiums, crotons, greenhouse rhododendrons, nepenthes, new ferns, dracænas, and choice carnations, staged by Messrs. James Veitch and Sons, Chelsea. The same firm had, on the opposite side of the tent, a bold exhibit of perpetual, border, and Malmaison carnations in great beauty and variety. Messrs. Paul and Son, Cheshunt, had one of their large and beautiful exhibits of roses in pots and baskets, their rambling and tea varieties being particularly good. Messrs. W. Artindale and Son, Sheffield, had an artistic display of hardy flowers in the big tent, where, with a pool of water and a rustic bridge as centrepiece, they had roses, liliums, irises, and spiræas in great variety. Messrs. T. Cripps and Sons, Tunbridge Wells, were responsible for an effective and interesting group of Japanese maples, etc.

A very handsome group of perpetual and Malmaison carnations from Messrs. Hugh Low and Co., Enfield, was notable for the yellow varieties, Amber, Sunset, Cecilia, and C. P. Little, which it contained. The pink Irene, Malmaison variety, was also very fine. Roses and hydrangeas were also shown by this firm. Messrs. Wm. Bull and Sons, Chelsea, had a bold group of stove foliage plants in the big tent. A large and very beautiful group of roses, set up in baskets, tall stands, and vases, and shown as growing, in pots, was boldly and beautifully arranged in one corner of the big tent by Messrs. Wm. Paul and Son, Waltham Cross, who made a speciality of roses of their own raising, and had their new Refulgence in good order.

Messrs. George Mallett and Co., Cheddar, set up a big lot of hardy flowers that included a glorious lot of Lilium candidum and L. auratum. Gaillardias and delphiniums were well shown by Messrs. Kelway and Son, Langport, Somerset; their gaillardia Glory is a lovely and brilliant thing. Dr. Freeland, Snodland, Kent, brought up a few good roses, and Colonel Hesseltine, 196, Queen's Gate, also showed these queenly flowers.

Messrs. H. B. May and Sons, Edmonton, had verbenas, zonal pelargoniums, and choice hardy ferns. From Messrs. Wm. Cutbush and Son, Highgate, came a blaze of liliums, verbenas, rambling roses, and carnations, the whole combining to make up a most pleasing display. Mr. G. Reuthe, Keston, Kent, had choice hardy flowers, including hosts of liliums and eremuri. Drooping, long-tubed fuchsias, descended from F. triphylla, were well shown by Messrs. H. Cannell and Sons, Swanley, the varieties Mary, Perle, and H. Henkel being very graceful and beautiful. Messrs. G. Jackman and Son, Woking, sent up a gorgeous lot of hardy flowers and a collection of roses. Roses were also extensively shown by the King's Acre Nursery Company, Hereford.

The group of verbenas, heliotropes, and roses set up by Messrs. W. and J. Brown, Peterborough, faced a bold exhibit of well-grown hardy flowers, arranged by Messrs. G. and A. Clark, of Dover. Messrs. J. Peed and Son, West Norwood, were responsible for groups of caladiums and gloxinias. Tuberous begonias in great variety, including the orange-tinted Mrs. Maurice Glyn, and the lovely pink Mrs. A. P. Bland, came from Messrs. T. S. Ware, Lim., Feltham. Messrs. J. Laing and Sons, Forest Hill, also sustained their reputation with tuberous begonias. Mr. A. L. Gwillim, Cambria Nurseries, Eltham, contributed a group of choice and well-developed tuberous-rooted begonias. Messrs. Blackmore and Langdon, Bath, had some glorious delphiniums, and a bank of lovely tuberous begonias that included some charming crimped-edged and frilled varieties, notably the pink Frilled Queen (A.M.).

One corner of the big tent was filled with bold stove foliage plants by Mr. L. R. Russell, Richmond, the alocasias figuring well. Big specimen Malmaison carnations, clothed in blooms, were sent by Mr. Fitch, gardener to Sir G. Faudel Phillips, Bart., Ball's Park, Hertford. Sir Daniel Gooch, Hylands, Chelmsford, was also a large exhibitor of Malmaison carnations, in pots. The big group of cannas set up by Messrs. H. Cannell and Sons, Swanley, was a blaze of colour, and drew forth many exclamations of surprise and admiration.

The caladiums from Messrs. J. Laing and Sons, Forest Hill, and the carnations from Messrs. J. Peed and Sons, West Norwood, and the fine display of choice and new exotic ferns from Messrs. H. B. May and Sons, Edmonton, were three bold groups in the big tent. Pillar roses, staged over dwarf roses, liliums, and spiræas, with the graceful Humea elegans, rising over all, made up a handsome group from Messrs. R. and G. Cuthbert, Southgate.

ORCHID COMMITTEE.

Messrs. Charlesworth and Co., Heaton, Bradford, who gained the Gold Medal for orchids, had a fine show of these flowers, and their Lælio-cattleya Canhamiana Fire King, Cattleya Warneri alba, C. Mossiæ Wagneri, Miltonia Hyeana, Odontioda Charlesworthi, etc., were notable in a choice lot of good plants. An artistic exhibit of orchids set up by Messrs. J. W. Moore and Co., Rawdon, Leeds, contained fine examples of Cattleya gigas, miltonias, cypripediums, brassias, etc.

Messrs. Sander and Sons, St. Albans, were large exhibitors, as, in addition to their new plants, previously described in connection with the Temple Show, they had a bold exhibit of orchids that included fine Cypripedium bellatulum, Lælio-cattleya Martineti, miltonias, Vanda cœrulea, Cypripedium Rothschildeanum, etc. The orchids shown by Messrs. Stanley and Co., Southgate, contained excellent selections of Cattleya Warner, C. Mendeli, C. Mossiæ, C. gigas, and a few oncidiums, etc. M. Claes, Brussels, showed the lovely Cattleya Mendeli Claes var., with the purple colour edging all round the white lobes of the lip. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, set up a large group of orchids, the cattleyas, Cœlogyne Dayana, Cypripedium niveum, and oncidiums being all very attractive.

Lælio-cattleya Clive magnifica (F.C.C.),very fine, was well shown by Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester, who also sent the pretty, spotted Odontoglossum Eleanor Westonbirt var. (A.M.). Odontoglossum illustre King of England (F.C.C.), a bold and beautiful variety of O. ardentissimum descent, was well shown by Mr. H. S. Goodson, Fairlawn, West Hill, Putney.

FRUIT AND VEGETABLE COMMITTEE.

A wonderful display of vegetables was made by Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House Gardens, Elstree. It was one of Mr. Beckett's best efforts, and remarkable in such a season. There were over a hundred dishes of splendid produce. The cherries in pots, grandly cropped, shown by Mr. G. Camp, gardener to S. Heilbut, Esq., Holyport, Maidenhead, were a great source of interest and attraction to visitors, and growers were loud in their praise of the good culture they evidenced.

A very fine exhibit of fruit trees in pots, showing this mode of culture in its best style, was made by Messrs. James Veitch and Sons, Chelsea; the figs, peaches, nectarines, standard gooseberries, and white and black grapes were all finely cropped and very tempting. Fruit trees in pots, notably peaches, nectarines, plums, and cherries, were largely and well exhibited by Messrs. G. Bunyard and Co., Maidstone, who also had hardy flowers in great beauty and variety.

Splendid Queen pineapples came from Mr. T. Coomber, gardener to Lord Llangattock, The Hendre, Monmouth, and with them was staged a grand lot of strawberries, notably Waterloo, Trafalgar, Leader, Givon's Late Prolific, the pale Louis Gauthier, The Bedford, and Royal Sovereign. Mr. W. Peters, gardener to H. P. Sturges, Esq., Givons, showed several new strawberries, including a new one named Marmaduke.

From the Horticultural College, Swanley, came a display of melons, peaches, tomatoes, and good Beauty of Bath apples. Strawberries were grandly shown by Messrs. Laxton Brothers, Bedford, who had magnificent fruits of Laxton's Latest, Givon's Late Prolific, Cropper, Laxton's Reliance, Fillbasket, The Bedford, Reward, Waterloo, and other fine kinds, all shown in large baskets. Splendid Hero of Lockinge and other melons, with fine Hanwell Victory tomatoes and some cucumbers demonstrated Mr. S. Mortimer's ability as a grower of these subjects.

OUTDOOR EXHIBITS.

A quite large number of exhibits were arranged outside the tents. Messrs. Castle's Man-o'-War garden seats were greatly appreciated and used. Mr. J. Forbes, Hawick, sent a wonderful lot of fine phloxes, delphiniums, and pansies. Messrs. Liberty and Co., Regent Street, showed garden pottery and pergola pillars. Messrs. Jas. Veitch and Sons, Chelsea, showed a collection of hardy fuchsias. The Potteries Art Guild, Compton, Guildford, contributed garden pottery of good style. Messrs. H. Scott and Sons, Woodside, S.E., showed summer houses extensively, and Messrs. W. Walters and Co., Water Lane, E.C., showed elegant trelliswork. Messrs. Shanks and Co., Cannon Street, E.C., had a fine display of their lawn mowers. Coniferous trees and shrubs were submitted by Messrs. H. Lane and Son, Great Berkhamsted. Mr. Riley Scott, of Herne Hill, was a large exhibitor of rustic summerhouses, and Messrs. Inmans and Co., Stretford, Manchester, had a display of these useful garden accessories. Lawn mowers were largely shown by Messrs. Ransomes, Sims, and Jefferies, of Ipswich. Seats and hammocks were sent by Messrs. G. and W. Buswell, Torquay, and Messrs. Duncan Tucker and Sons, Lim., Tottenham, put up examples of their greenhouses and conservatories. Messrs. Headley and Edwards, Cambridge, showed iron trelliswork, etc. Japanese maples and other elegant hardy shrubs were shown extensively by Messrs. Fromow and Sons, Chiswick, and near by Messrs. J. Stiff and Sons, Lambeth, had garden pottery with the vases filled with gay flowers.

A very fine exhibit of coloured ivies and of other bright-leaved ornamental trees and shrubs was made outside by Mr. L. R. Russell, Richmond. Messrs. J. Cheal and Sons, Crawley, Sussex, had a pretty pergola exhibit outside, and furnished with rambling roses, clematises, vines, etc. Messrs. Thos. Green and Son, Lim., Leeds and London, showed their excellent motor and other mowers.

HORTICULTURAL SUNDRIES.

As is usual at the Holland Park Show, one big tent was devoted to horticultural sundries, though these, in many cases, as already indicated, overflowed to the grounds outside.

The leading exhibitors were Messrs. Wood and Son, of Wood Green, whose display seemed to lack nothing necessary for garden work and use, from wood wool to spraying machines, and pot-washers to summer-houses. Messrs. C. Toop and Son, Stepney Square, E., sent examples of their heating apparatus for small greenhouses. Messrs. W. Voss and Co., Lim., Millwall, showed spraying machines and insecticides, and excellent syringes. Messrs. Wakeley Bros. and Co., Lim., Bankside, S.E., sent samples of hop manure. Mr. J. Pinches, Crown Buildings, Crown Street, S.E., contributed a large assortment of imperishable labels, and Messrs. H. Pattison and Co., Greyhound House, Streatham, showed their excellent horse lawn boots. Messrs. W. Herbert and Co., Hop Exchange, S.E., staged garden sundries in variety, and Mr. F. Hickson, South Hill Park, Hampstead, made a display of Gishurst Compound, Vall's Beetlecute, etc. Mr. M. Johnston, New Park, Cranleigh, Guildford, contributed samples of good yellow loam, and Mr. J. George, Redgrave Road, Putney, sent samples of peat and mushroom spawn.

Messrs. Abbott Brothers, High Street, Southall, showed their folding table trays, beehives, etc. Mr. R. Anker, Queen Victoria Street, E.C., showing pumping machines. Messrs. de Luzy Freres, Knatchbull Road, Camberwell, S.E., showed various knapsack and other sprayers. Horticultural pottery was displayed by Messrs. D. Dowell and Son, Hammersmith, W. Various artificial manures were sent by the Anglo-Continental Guano Company, 15, Leadenhall Street, E.C., and Messrs. Fenlon and Son, 8, Tudor Street, showed heating apparatus, while Messrs. Lloyd, Lawrence, and Co., Worship Street, E.C., displayed their useful Pennsylvania lawn mowers.

CERTIFICATES AND AWARDS.

First-Class Certificate.—To Lælio-cattleya Clive magnifica, exhibited by Lieut.-Colonel G. L. Holford, Westonbirt, Tetbury, Glos.; to Odontoglossum illustre King of England, exhibited by H. S. Goodson, Esq., Fairlawn, West Hill, Putney.

Awards of Merit.—To Odontoglossum Eleanor Westonbirt var., exhibited by Lieut.-Colonel Holford; to viola Ernest Needham, exhibited by Messrs. W. Artindale and Son, Sheffield; to begonias Duchess of Cornwall and Frilled Queen, from Messrs. Blackmore and Langdon, Bath; and to delphinium statuaire, from the same firm; to Tunica saxifraga fl.-pl., from Mr. G. Reuthe, Keston, Kent; to roses Florence Edith Coulthwaite (H.T.), George C. Waud (H.T.), and Mrs. David Jardine (H.T.), and Molly Sharman Crawford, from Messrs. A. Dickson and Sons, Newtownards; to Delphinium Progression; and to hybrid berry Low Junior, from Messrs. H. Low and Co., Enfield, N.

MEDALS AND CUPS.

Gold Medal.—To the Right Hon. Lord Llangattock, The Hendre, Monmouth (gardener, Mr. Coomber); the Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett); Messrs. Frank Cant and Co., Colchester; Messrs. Charlesworth and Co., Heaton, Bradford; Mr. A. F. Dutton, Iver, Bucks; Messrs. Hobbies, Lim., Dereham; Messrs. H. B. May and Sons, Edmonton; Messrs. Paul and Son, Cheshunt; Messrs. William Paul and Son, Waltham Cross; Mr. Amos Perry, Enfield; Messrs. J. Veitch and Sons, Lim., Chelsea; Messrs. R. Wallace and Co., Colchester.

Silver Cups.—To Mr. C. W. Breadmore, Winchester; Messrs. James Carter and Co., High Holborn; Messrs. Wm. Cutbush and Son, Highgate; Messrs. R. and G. Cuthbert, Southgate; Mr. L. R. Russell, Richmond; Messrs. G. Bunyard and Co., Maidstone; Messrs. G. and A. Clark, Dover; Messrs. Sander and Sons, St. Albans, Mr. M. Prichard, Christchurch, Hants; Messrs. H. Cannell and Sons, Swanley; Messrs. T. Cripps and Sons, Tunbridge Wells; Messrs. Blackmore and Langdon, Twerton Hill Nursery, Bath; Messrs. W. Artindale and Son, Nether Green, Sheffield; Mr. W. H. Page, Hampton; S. Heilbut, Esq., Holyport, Maidenhead; Messrs. Alex. Dickson and Sons, Newtownards; Messrs. B. R. Cant and Sons, Colchester; Messrs. Bell and Sheldon, Guernsey; Messrs. J. W. Moore, Lim., Rawdon, Leeds; Messrs. T. Green and Son, Lim., Southwark Street, S.E.; and Messrs. W. Bull and Sons, Chelsea.

Silver-gilt Flora Medal.—To Messrs. T. S. Ware, Feltham; Messrs. Barr, Covent Garden; Messrs. Jackman and Son, Woking; Messrs. J. Peed and Son, West Norwood; Mr. W. R. Chaplin, Waltham Cross; Mr. G. Mount, Canterbury; Messrs. Cheal and Son, Crawley; and Messrs. Wood and Son, Wood Green.

Silver-gilt Knightian Medal.—Messrs. Laxton Bros., Bedford.

Silver-gilt Banksian.—To the Misses Hopkins, Shepperton; Mr. G. Reuthe, Keston; Messrs. R. H. Bath, Lim., Wisbech; Mr. C. Turner, Slough; Messrs. E. W. King and Co., Coggeshall; and Mr. H. Burnett, Guernsey.

Silver Knightian Medal.—To Mr. Mortimer, Farnham; Swanley Horticultural College; Messrs. R. Jackson and Co., Piccadilly; and Miss C. E. Martin, New York, U.S.A.

Silver Flora Medal.—Mr. R. C. Notcutt, Woodbridge; Messrs. J. Laing and Sons, Forest Hill; Mr. Lilley, Guernsey; Messrs. Gunn and Sons, Olton; Mr. A. Ll. Gwillim, New Eltham; Messrs. Bide and Sons, Farnham; Messrs. Stark and Son, Great Ryburgh; Mr. H. C. Pulham, Elsenham; Messrs. Jones and Son, Shrewsbury; Mr. John Forbes, Hawick; Messrs. Lane and Son, Berkhamsted; Messrs. Merryweather and Son, Southwell; Messrs. B. Ladhams, Lim., Southampton; The King's Acre Nurseries, Hereford; Messrs. Fromow and Sons, Chiswick; Sir G. Faudel-Phillips, Hertford; Messrs. Sutton, Reading; Messrs. Stanley and Co., Southgate; Mr. G. W. Riley, Herne Hill; Messrs. H. Scott and Sons S. Norwood; Messrs. Inmans and Co., Stretford; Potters' Arts Guild, Compton; Messrs. Pulham and Son, Newman Street, W.

Silver Banksian.—Messrs. R. Smith and Co., Worcester; Messrs. G. Mallett and Co., Cheddar; Messrs. Kelway and Son, Langport; H. P. Burrell, Esq., Horton; Dr. Freeland, Snodland; E. E. Grimson, Esq., Sutton, Surrey; Colonel Heseltine, 196, Queen's Gate; Messrs. J. K. King and Sons, Coggeshall; the Misses Kipping, Hutton, Essex; Mr. V. Slade, Taunton; Mr. A. R. Upton, Guildford; F. Wellesley, Esq., Woking; Messrs. W. and J. Brown, Stamford; Patent Ladder Company, Peterborough; Castle Ship Breaking Company, Millbank; Messrs. de Luzy Freres, Camberwell; Mr. A. Hamilton, 11, Conduit Street, W.; Messrs. Liberty, Warwick Street; Messrs. Ransomes, Sims, and Jeffries, Ipswich; Mr. E. Westmacott, Leadenhall, St. James; and Messrs. Lloyd, Lawrence, and Co., Worship Street.

Bronze Banksian.—Messrs. Headley and Edwards, Cambridge; Mr. James George, Putney; Messrs. Dowell and Son, Hammersmith; Messrs. Fenlon and Son, Tudor Street, E.C.; Messrs. W. Herbert and Co., Hop Exchange, S.E., Messrs. T. Syer and Co., Wilson Street, Finsbury; Messrs. A. Shanks and Son, Bush Lane House, E.C.

Southampton.

JUNE 30 and JULY 1.

The annual summer show was held on the County Cricket Ground, and was a great success. The arrangements were, as usual, in the experienced hands of Mr. C. S. Fuidge.

Eighteen classes were provided for roses, including a competition for the handsome challenge cup provided by the president and vice-presidents, for the exhibitor making the most points in the three leading open classes.

Generally the roses were of fair size and quality, the exception being the tea varieties, amongst which were many handsome blooms. The leading class was for forty-eight, distinct, single blooms, and here six competed, making a good display. After a close survey the judges awarded the premier position to Messrs. Frank Cant and Co., Braiswick Nurseries, Colchester, for a set of somewhat small blooms, yet possessing much quality and freshness. The leading varieties were Dean Hole, J. B. Clark, Florence Pemberton, Ulster, Mrs. Theodore Roosevelt, Ben Cant, Lady M. Beauclerc, Mdme. J. Gravereaux, Hugh Dickson, Lady Ashtown, Mildred Grant, Robert Scott, Maman Cochet, Alice Grahame, Victor Hugo, Frau K. Druschki, Star of Waltham, and Mrs. C. J. Grahame; Messrs. B. R. Cant and Sons, Colchester, were a close second, with a brighter stand of blooms; and Messrs. D. Prior and Sons, Colchester, were third. For twelve triplets, five entered, the best coming from Mr. H. Drew, Longworth, Faringdon, Berks, who had really good examples of Bessie Brown, White Maman Cochet, Dean Hole, Florence Pemberton, Lady Ashtown, and Lady Mary Fitzgerald; Messrs. F. Cant and Co., second, with smaller specimens; and Messrs. B. Cant and Sons, third.

Exceptionally fine were the blooms in the tea or noisette class for twelve, distinct, and here Messrs. B. Cant and Sons had the best of five sets, a grand lot, of such varieties as Boadicea, Cleopatra, Souvenir de P. Notting, The Bride, Mrs. M. Kennedy, Mrs. E. Mawley, Ernest Metz, Souvenir d'Elise Vardon, Maman Cochet, White Maman Cochet, and Mdme J. Gravereaux; Mr. Drew second, with the Messrs. Prior a close third. Messrs. B. Cant and Sons thus won the president's cup with a total of six points in the three classes.

In the class for six blooms, any one dark variety, Messrs. D. Prior and Sons won with substantial blooms of J. B. Clark, in a small entry. Mildred Grant won easily for Messrs. Frank Cant and Co., the premier place for six of any one light variety, Messrs. B. Cant and Sons following with Bessie Brown, and Mr. Drew securing the third place with Comtesse de Nadaillac in capital order.

Garden or decorative varieties were sparsely shown. For six bunches, Mr. H. Childs, gardener to Mrs. Macrae, Meonstoke House, Bishop's Waltham, was an easy first, with typical examples of Queen Alexandra, Perle d'Or, Gardenia, Gruss an Teplitz, Comte de Calla, and Leonie Lamesch; Mr. C. Smith, gardener to the Rev. J. T. H. Du Boulay, Shawford, Winchester, second. For six bunches of single roses, Mr. H. Mattingley, gardener to Admiral Sir J. Hopkins, Greatbridge, Romsey, secured the premier place with an interesting exhibit; Mr. Childs followed for second place. The premier bloom in the show was one of Mildred Grant, belonging to Mr. Drew; and the premier T. was one of Mdme. J. Gravereaux in Messrs. B. Cant and Sons' second-prize stand of forty-eight.

Nine classes were provided for gardeners and amateurs. A challenge cup was offered for eighteen distinct blooms, and seven competed. With an excellent set, Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, secured the coveted award. The leading blooms were Florence Pemberton, Mildred Grant, White Maman Cochet, Maman Cochet, Dean Hole, Lady Ashtown, and William Shean. Dr. Charles Lamplough, Kirkstall, Alverstoke, was a good second. The last-named won for six triplets, distinct, with a fair exhibit, as also he did for twelve blooms, distinct. Mr. Neville staged an even set of medium-sized blooms of good quality in the class for twelve teas or noisettes, and won easily with Princess of Wales, Mrs. Mawley, Boadicea, and Mdme. J. Gravereaux; Dr. Lamplough second.

Sweet peas made a remarkable display, and they were of fine quality. The habit of including more than one variety in a vase is, however, to be deprecated. For instance, vases of what should have been Dorothy Eckford contained flowers with waved standards, and in various other varieties the same irregularity occurred. Had the judges treated such vases in the proper manner, much disqualification would have ensued. Messrs. Toogood and Sons, Southampton, offered the prizes for six bunches, distinct, and for which twenty exhibitors entered. Mr. Usher, gardener to Sir R. Baker, Bart., Ranston House, Blandford, was easily first with a magnificent set of typical blooms of John Ingman, Etta Dyke, Primrose Spencer, Minnie Toogood (new), Helen Lewis, and Prince of Asturias; Mr. G. Hawkins, Violet Cottage, Alverstoke, second with a capital exhibit; and Mr. J. Mattingley third. Mr. Usher also won the leading prize in the classes provided by Messrs. Breadmore, Webb, and Carter, with similar exhibits; Mr. H. H. Lees, Warblington Cottage, Havant, was second in Messrs. Webbs' class, Mr. Mattingley occupying a like place in Mr. Breadmore's class, in which there were ten competitors. Messrs. Sutton and Sons offered substantial prizes for a single bunch of their Queen and Marbled Blue varieties, which produced a good competition, and Mr. Usher was here again successful.

Hardy border flowers were numerous and good. For twelve bunches, distinct, Messrs. B. Ladhams and Son, Shirley Nurseries, Southampton, were first with huge sheaves, nicely arranged, of Gaillardia superba, Heuchera superba, Scabiosa caucasica, Coreopsis grandiflora, Iris Kæmpferi Kuroki, Campanula coronata alba, Chelone barbata coccinea, Delphinium Belladonna, Campanula rotundifolia, and Gaillardia Vivian Grey.

Plants were but few in number; Mr. T. Hall, gardener to Lord Swaythling, South Stoneham House, Southampton, had the best specimen foliage plants, palms, and ferns. Mr. C. Hosey, gardener to Mr. J. C. E. D'Estene, Elmfield, Southampton, had some freely-flowered zonal pelargoniums, easily securing premier place for six. Mr. Ellwood had the best table plants—quite a desirable able collection.

Fruit was scarce. Mr. M. Foskett, gardener to Mrs. Ubsdell, New Milton, had the best two bunches of black grapes. Mr. W.

Palmer had the best peaches, and Mr. H. C. Siezoun, gardener to C. H. Farman, Esq., [illegible]hams, had the best nectarines. Strawberries were finely shown, and Mr. T. Hall was first for two dishes with Royal Sovereign and Bedford Champion, the latter very fine.

Vegetables were numerous and excellent. Thirteen competed for Messrs. Toogood's prizes for six dishes, and Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, was easily first with superb examples of White Mammoth onion, Tremendous peas, Masterpiece cauliflowers, Intermediate carrots, Best of All tomatoes, and Royal Kidney potatoes; Mr. B. Hollis, gardener to Major Chichester, Embley Park, Romsey, second; and Mr. T. Hall third.

For Messrs. Sutton's prizes five entered, Mr. E. Beckett, gardener to the Hon. V. Gibbs, Aldenham House, Elstree, Herts, being a distinct first prizewinner with choice examples of Leviathan onions, Duke of York potatoes, Centenary Marrowfat peas, Perfection tomatoes, Magnum Bonum cauliflowers, and Intermediate carrots; Mr. Ellwood second. The latter also won Messrs. Carter's and Webb's premier prizes for six dishes with admirable examples.

Non-competitive exhibits came from Messrs. Toogood and Sons, who had sweet peas, and gained a gold medal; Mr. E. Wills, The Nurseries, Winchester Road, Shirley, who had miscellaneous plants and floral designs, for which a gold medal was worthily awarded; Messrs. Ladhams and Sons, who had a charming group of herbaceous flowers and pinks; Mr. Godfrey, Exmouth Nurseries, who had a huge bank of Solanum Wendlandi, pelargoniums, and poppies; and Messrs. Rogers and Son, Southampton, who had a bank of roses in pots, mainly of the Wichuraiana type.

Newcastle.

July 1, 2, and 3.

This show was held in connection with the Royal Agricultural Show, on the Newcastle Town Moor, in beautiful summer weather. It was perhaps one of the finest floral displays that has been seen in connection with this show for many years, but the competition was not nearly so keen as is usually the case, being confined to twelve open classes and six special classes. The working men's classes, which have been always such an attraction, were altogether left out of the schedule. Those who have visited the show in previous years have generally spoken highly of the marvellous specimens of stove and greenhouse plants in particular, and the fine vegetables the pitmen produce; however, what was lacking in this respect was fully compensated for by the manner in which the horticultural trade displayed their produce.

For a group of foliage and flowering plants, occupying a space of 300 sq. ft., Mr. J. Sharp, Valley Nurseries, Huddersfield, was first with finely-coloured crotons and beautifully-flowered roses, effectively arranged; Mr. T. Bell, gardener to A. E. Bainbridge, Esq., Lynwood, Jesmond, second, with an effectively arranged group, the orchids being particularly fine; Messrs. Ord Brothers, South Shields, third. For the best collection of orchids in flower Mr. H. A. Innis, Croft Spa, Yorkshire, was first with Cattleya Mossiae, C. Mendeli, Lælia tenebrosa, and numerous cypripediums and oncidiums in variety; Mr. W. Lawrenson, Gallowgate, Newcastle-on-Tyne, second, with a group consisting principally of Odontoglossum crispum and Cattleya Mendeli. The best collection of carnations came from Mr. C. F. Waters, Deanland Nursery, Balcombe, Sussex, who had a beautifully arranged and attractive group, Britannia being particularly brilliant in this display, though the whole of the flowers were fine in form and substance; Mr. W. Lawrenson, second; and Mr. H. A. Innis, third.

Tuberous begonias were best shown by Messrs. Blackmore and Langdon, Bath, who had a grand display of finely-flowered plants, and blooms of splendid quality; Messrs. Ord Brothers second. The best collection of sweet peas came from Mr. R. Bolton, Warton, Carnforth; the arrangement in this group was very fine, there being pyramids of Countess Spencer, Helen Lewis, John Ingman, Clara Curtis, St. George, and Henry Eckford; Mr. C. W. Breadmore, Winchester, second; and Messrs. G. and A. Clark, Lim., Dover, third. For a collection of herbaceous plants Messrs. Harkness and Sons, Bedale, were first, the delphiniums and Papaver Princess Louise being particularly attractive; Messrs. Gibson and Co., Leeming Bar, second.

The best collection of hardy foliage and flowering plants came from Mr. W. Lawrenson, whose liliums and roses were a most attractive feature; Messrs. Ord Brothers second. For a collection of roses Mr. F. M. Bradley, Peterborough, had the only exhibit, and gave a fine display, which was awarded first prize.

For a dining table arranged with flowers and fruit Mr. J. Tullett, Raby Castle, Darlington, was first; Mr. F. Edmondson, Westerhope, second; and Mr. Mark Purvis, Binton, third. For six dishes of fruit, distinct kinds, Mr. J. McPherson, gardener to Lord Londesborough, Market Weighton, was first, showing Black Hamburgh and Muscat of Alexandria grapes, Queen pine, Hale's Early peaches, Lord Napier nectarines, and Royal Sovereign strawberries, all being of good quality; Mr. J. Tullett, second; and Mr. Thomas Pattison, West Hartlepool, third.

Messrs. Sutton's chief special prize, for six kinds of vegetables, was won by Mr. T. H. Bolton, Powderham Castle, Exeter; Mr. J. Henderson, Christon Bank, second; and Mr. E. Keith, Wallington, Morpeth, third. For a bunch of Sutton's Queen sweet pea Mr. E. Keith was first, and Mr. Bolton second.

In the class for a rockery, showing alpine and water gardening, Messrs. Backhouse and Son were the only exhibitors, and they were awarded the first prize. This was a most attractive display, with a background of ornamental trees and shrubs. The rocks were very tastefully arranged, and the flowering plants were attractively displayed; the water and aquatic plants were also a great attraction. The Royal Horticultural Society's gold medal was also awarded by the R.H.S. deputation.

Among the non-competitive displays Messrs. Hugh Low and Co., Enfield, showed the largest group in the show, this consisting of orchids, carnations, and a miscellaneous collection of flowering and foliage plants. Among the orchids were finely-flowered plants of Cattleya Mendeli, C. Mossiæ, and Lælia tenebrosa, odontoglossums in variety, and a plant of the rare natural hybrid, O. Williamsianum. The carnations where shown in fine form in a space of about 50ft. by 4ft. Messrs. W. Cutbush and Son, Highgate, N., sent a grand display of fine cut carnations, Spiræa Queen Alexandra, banks of verbenas in variety, and dwarf begonias. Messrs. G. and A. Clark, Dover, had a display of delphiniums and cut sweet peas. Messrs. R. H. Bath, Lim., Wisbech, sent cut hardy plants. Messrs. W. H. Hardy, Lim., Gosforth, had an extensive group of tree carnations and miscellaneous foliage and flowering plants. Messrs. Little and Ballantyne, Carlisle, sent stove and greenhouse flowering and foliage plants. Messrs. Dobbie and Co., Rothesay, exhibited a large stand of sweet peas, pansies, and violas. Messrs. Jarman and Co., Chard, Somerset, sent a fine table of cut roses and sweet sultans in variety.

Messrs. Laing and Mather, Kelso, had a fine display of ornamental trees and shrubs. Messrs. Dicksons, Chester, sent a large exhibit of cut hardy flowers. Messrs. J. Backhouse and Son, Lim., York, had a group of Malmaison carnations and flowering and foliage plants. Mr. E. Edmondson, Granger Arcade, Newcastle, had a grand display of floral designs, which was a fine feature of the show. Messrs. Ord Brothers had a group of ferns. Mr. W. Lawrensen had a large group of stove ferns and foliage plants and numerous greenhouse flowering plants. Messrs. W. and J. Brown, Peterborough, made a fine display of cut roses, hardy perennials, and greenhouse flowering plants. Messrs. Kent and Brydon arranged, in the open, a remarkable group of ornamental trees and shrubs, and a collection of topiary work in tubs. Messrs. Little and Ballantyne had, in addition to the inside group, a fine display of ornamental trees and shrubs in pots. Messrs. R. Smith and Co., Worcester, were awarded the R.H.S. gold medal for an attractive and miscellaneous group of very finely-grown ornamental trees and shrubs, the golden yews being a remarkable feature. Messrs. Laxton Brothers had a very fine display of strawberries in baskets.

The following medals were awarded by the Royal Horticultural Society's deputation:—Gold medals to Mr. J. Sharp, Messrs. R. Smith and Co., Mr. F. M. Bradley, and Messrs. Backhouse and Sons. Silver-gilt Knightian to Messrs. Laxton Brothers, for strawberries, and Mr. McPherson. Silver-gilt Flora to Messrs. Backhouse and Son, Mr. T. Bell, Messrs. Hugh Low and Co., Mr. Edmondson, and Mr. Tullett. Silver-gilt Banksian to Messrs. Ord Brothers, Mr. C. F. Waters, Messrs. Dobbie and Co., Messrs. W. and J. Brown, Messrs. R. H. Bath, Mr. J. Robson, Messrs. Harkness and Co., and Messrs. W. Cutbush and Son.

Norwich Summer Show.

A success. Yes, we can vote this from all points; the attendance was 1,500 better than the previous year, the exhibits were better, and the weather was ideal. Roses, which years ago formed the primary feature at this show, were not so largely shown as one would wish to have seen. The collection of 48 sent by Messrs. B. R. Cant and Sons, took premier position, but the blooms showed evidences of the hot scorching sun of the previous days in the open. The best teas undoubtedly were those from Messrs. J. Burrell and Co., their freshness attracted one to them. In classes confined to amateurs and residents in the county one saw splendid blooms from Mr. R. Steward and the Rev. J. A. L. Fellowes, the former winning two silver challenge cups with his grand blooms.

When we went to the tent of cut flowers we found the local growers much in evidence. The display of 48 bunches of hardy perennials, staged by Mr. Lewis Smith, gardener to Robert Fellowes, Esq., Shotesham, stood out first and foremost. They were in bold, massive bunches, splendidly arranged, and, as might be expected, of the best varieties. 'Twas a pity there was no other competitor in this class. Mr. W. Chettleburgh, gardener to Colonel Rous, Worstead, had made a decided improvement on his previous year's staging, and won first for 36 bunches. Mr. H. Goude, gardener to E. Reeve, Esq., The Grange, Catton, was a new exhibitor in this department, and staged a meritorious group of twenty-four bunches, and for which he received the coveted first. There were classes for iris, antirrhinums, pelargoniums, exotic flowers, and such like, all of which were keenly contested. Mr. W. Allan, Gunton Park Gardens, set up some of his fine tree carnations, and Mr. Henley, gardener to Sydney Morris, Esq., Wretham, had a fine batch of border carnations.

In the pot plant section Mr. W. Rush, gardener to F. P. Hinde, Esq., Thorpe, did great things. His greenhouse ferns were pictures of health, and the colourings of his coleus were well brought out. In this section Mr. H. Rider Haggard sent a batch of orchids, mainly cypripediums, for which he received a special prize.

Sweet pea growers had a new feature, viz., a tent all to themselves, and right well they filled it, proving the popularity of this flower to-day. Messrs. Stark and Son, Ryburgh, had some fine new seedlings, and so did Mr. Robert Holmes, Tuckswood Farm, Norwich. The best competitive exhibit of peas came from Mr. T. Notley, gardener to E. Gurney Buxton, Esq., Thorpe, other good collections being staged by Mr. W. Chettleburgh, Mr. G. Baker, gardener to B. E. Fletcher, Esq., Marlingford; and Mr. W. Laws, gardener to E. G. White, Esq., Eaton.

The fruit section had a much larger number of entries than had been witnessed for several years, and was the scene of some close fights. Mr. W. Shingler, gardener to Lord Hastings, Melton Constable (who will be remembered as the winner of the great grape prize at Shrewsbury), set up a splendid collection of six varieties, his peaches and nectarines being far in advance of any others in the show. Mr. L. Smith, gardener to R. Fellowes, Esq., came first in a strong competition for strawberries. Grapes of both white and black kinds were much in evidence, and provided some keen struggles. Mr. Hilsdon, gardener to Sir F. Adair, gained most prizes in the several classes for these. There was furthermore a large array of vegetables, peas, beans, tomatoes, and potatoes predominating. Add to this some fine groups of nursery exhibits from such firms of repute as Messrs. Daniels Bros., Lim., Norwich, and R. C. Notcutt, Woodbridge. Every gardener seemed in good humour. There was much handshaking to be done, and stories to be related. Such annual gatherings do good socially as well as educationally.

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

MONDAY, July 13.—Baltic Rose and Sweet Pea Show, at the Shipping Exchange, St. Mary Axe.
TUESDAY, July 14.—Saltaire Rose Show.
Gloucester Rose Show.
Trowbridge Horticultural Society.
WEDNESDAY, July 15.—Woodbridge Horticultural Society.
Chippenham Rose Show.
Luton Sweet Pea and Rose Show.
Formby Horticultural Society.
Thornton Heath Horticultural Society.
Birmingham Flower Show, at Edgbaston.
Women's Agricultural and Horticultural Produce Exhibition, at the Royal Botanic Gardens, Regent's Park.
THURSDAY, July 16.—Potter's Bar Horticultural Society.
Brentwood Horticultural Society; two days.
Chipping Norton Rose Show.
Helensburgh Rose Show.
FRIDAY, July 17.—Ulverston Rose and Sweet Pea Show.
TUESDAY, July 21.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m.; Scientific Committee at 4 o'clock.
National Rose Society, at Manchester.

SOME SPECIAL FEATURES

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THE
GARDENERS'
MAGAZINE.

1908.

Jan. 4.—**ISLES OF SCILLY** (Illustrated).
11.— „ „ Bulb Industry.
Feb. 8.—**HORSHAM GARDENS** (Illustrated).—Denne Park, Leonardslee, Holbrook Park.
15.—**HORSHAM GARDENS** (Illustrated) —Warnham Court, Warnham Lodge, South Lodge, Wimblehurst.
March 7.—**THE GARDENS OF CORNWALL** (Illustrated). —Tremough, Trelissick, Rosehill, Penjerrick.
14.—**THE GARDENS OF CORNWALL** (Illustrated). —Carclew, Trebah, Enys, Penmorvah.
April 11.—**NORWICH GARDENS** (Illustrated).—Gunton Park, Blickling Hall, Westwick Hall, Shotesham Hall.
18.—**NORWICH GARDENS** (Illustrated).—Dunston Hall, Crown Point, Town Close House, Ashwellthorpe Hall, Oakland House, Boyland House,
May 2.—**GHENT CENTENARY FLOWER SHOW.**
16.—**BRISTOL GARDENS** (Illustrated).—Barrow Court, Ashton Court, Downside, Elmfield.
23.—**BRISTOL GARDENS** (Illustrated). — Cote House, Down House, The Priory, Old Sneed Park.
June 30 } 6 } **THE TEMPLE SHOW** (Illustrated Report).
27.—**PERTHSHIRE GARDENS** (Illustrated). — Dupplin Castle, Freeland, Moncreiffe House, Dunkeld House.
July 4.—**PERTHSHIRE GARDENS** (Illustrated).—Kinfauns Castle, Seggieden, Murthly Castle, Meikleour House, Ballathie, Pitfour Castle.

Copies of the above, price 2d. each, or by post 2½d., may be obtained from the Publishers, 148 and 149, Aldersgate Street, London.

ANSWERS TO CORRESPONDENTS.

IMPORTED ORCHIDS.—R. B. C., Northampton: We cannot do better than refer you to the notes on how to deal with imported orchids, given by Mr. H. J. Chapman in our "Work for the Week" columns in the present issue. If you need any further particulars please write us again.

LIFTING DAFFODILS.—W. A. W., Lechlade: Lift the bulbs at once, and store them in a cool dry shed in flat boxes, where they can be sorted, cleaned, and placed in their various sizes as soon as convenient. If left longer in the ground the bulbs may begin to root again if a spell of wet weather comes, and then lifting would cause a check.

HANDY BOOK ON GARDENING.—C. F., Leighton: If we judge your needs aright then the "Alphabet of Gardening" will be just the work you require. It describes in very simple fashion the various gardening operations, and their why and wherefore. The book is 1s. 9d., post free (2s. 3d. in cloth), from W. H. and L. Collingridge, 148, 149, Aldersgate Street, E.C.

TREE ROOT ROT.—J. D. H., Swansea: There is little doubt but that the tree is suffering from an attack of the dreaded Tree Root Rot (Armillaria mellea). We published an account of this fungus a couple of years ago, as issued by the Board of Agriculture, and we now give again the portion that is of most importance to you. When the leaves of a tree droop and turn yellow owing to the presence of the fungus, curative measures are hopeless, as the mycelium has by this time completely girdled the trunk. Nevertheless, it is very important at this period to adopt measures against an extension of the disease. When a tree has been killed the black rhizomorphs surrounding its root extend in all directions about three or four inches below the surface of the ground in search of living roots. When such are encountered, the tips of the rhizomorphs pierce the bark and give origin to the white mycelium, which eventually kills the tree. These underground rhizomorphs travel for an unlimited distance in the ground, and, unless checked, constitute a continual source of danger to trees surrounding the one attacked. When a tree is attacked a portion of the bark at the collar should be removed, and if the white mycelium is found to have passed up the trunk the case is hopeless, and the wisest course is to cut down the tree, remove as much as possible of the root, which should be burned, and not used for ornamenting some other portion of the garden, as is too frequently the case. When this is done, dense masses of toadstools appear in due course, and the underground rhizomorphs spread on every side. If the mycelium has not entered the trunk, but is confined to certain branches of the root, these should be removed, as much as possible of the root exposed, and covered with a mixture of equal quantities of quicklime and powdered sulphur. This mixture should also be placed round the base of the trunk before the soil is filled in. Whether a diseased tree has been removed, or treated in the hope of recovery, a trench about eight inches deep and six inches wide should be made all round the site of the tree, at a distance well outside the spread of the branches. The object of the trench is to intercept the spreading rhizomorphs. If in a situation where an open trench can be allowed to remain, this is all that is required to be done. If in a place where an open trench would be objectionable, planks about six inches deep, well coated with gas-tar, may be let into the ground. In making the trench it is important that the soil removed be spread over the ground enclosed by the trench. When the toadstool appears at the base of a trunk, it should be collected and buried; crushing it underfoot is worse than useless, as this only aids in the dispersal of the spores. Great care should be taken not to injure the base of the trunk or exposed roots, as the spores can only enter the tree through a wound. The grass-cutting machine is responsible for many wounds through which this and various other fungi parasitic on trees first gain an entrance.

CASTOR OIL PLANT. — Amateur, Redditch: Your gardener friend is right, the plant you have is not a castor-oil plant, but a member of the aralia family. It is commonly called Aralia Sieboldi, but its correct botanical title is Fatsia japonica.

SPITTLE-FLY.—N. M. S., Steyning: The little pests that hide themselves in a spittle-like froth are frog-hoppers. They are not very harmful, but they should be got rid of by hand-picking or by syringing affected plants with a tobacco solution, or even with clear water, so as to disperse the froth. The froth is a natural protection, without which the pest cannot long live.

SWEET PEAS. — M. M., Sandown: The raisers of the varieties are as follows: Romolo Piazzani—H. Eckford, Wem; Nymphæa—C. Morse and Co., San Francisco; Paradise — Miss Hemus, Upton-on-Severn; Florence Molyneux—Dobbie and Co., Rothesay; E. J. Castle—W. J. Unwin, Histon; Etta Dyke—C. W. Breadmore, Winchester; George Gordon—H. Eckford; Purity—R. Bolton, Carnforth; and Rosie Adams—Thos. Stevenson, Woburn Place Gardens, Addlestone.

HOT-WATER AS AN INSECTICIDE.—T. M. H., Gloucester: It is not so generally known as it should be that water at a temperature of 150 deg. Fahrenheit, is a very fine insecticide, and a safe one. For green-fly and red-spider it is first-rate. But the great difficulty in connection with the use of water at this temperature is that a supply of boiling water must be kept close at hand wherewith to keep the water used at the proper degree of heat. Unless this is done the heat declines quickly, and the "hot-water cure" is ineffective. A thermometer should be kept in the dipping tub or bucket to indicate the temperature of the water.

SCALDED VINE LEAVES.—C. M., Loughton: The leaves of the vines have been badly scalded, and scalding is due to faulty ventilation. All too frequently ventilation is regarded as merely a means of reducing temperature, and the ventilators are opened more or less widely when the thermometer indicates an uncomfortable degree of heat. Proper ventilation, as a means of supplying the plants with fresh air, should begin in a small way early in the day, especially in the case of vines. There are two ways in which scalding occurs. In the one case ventilation is not given early enough to permit the moisture that has condensed on the leaves during the night, to evaporate, and the sun gaining strength shines with force through the glass and through the globules of moisture which become veritable burning glasses, and thus holes are burned or scalded through the leaves. In the other case the ventilators are opened wide when the temperature has become unbearable, and the moisture on glass and leaves evaporates so quickly that the tender tissues of the leaves are badly injured or killed by the heat of the sun. There is no remedy for scalding, but it may be prevented by a judicious use of the ventilators. A gardener should learn to anticipate the weather, with the help of thermometer and barometer, and if there is a prospect of warm and bright weather he should commence to ventilate first thing in the morning, gradually increasing the ventilation as the day advances and the heat increases. By this means the condensed moisture disperses gradually and early, and the leaves receive no injury.

NAMES OF PLANTS.

D. T., Epsom.—Escallonia Philippiana.

C. G. H., Bristol.—1, Dendrobium moschatum; 2, Cocos Weddelliana.

R. R., Leeds.—1, Strobilanthes Dyerianus; 2, Veronica teucrium; 3, Helxine Solieroli.

W. T. J., Histon.—1, Ligustrum chinensis; 2, Zygadenus elegans; 3, Campanula garganica; 4, Genista dalmatica.

G. O., Redcar.—1, Veronica incana; 2, Sedum album; 3, Lilium davuricum; 4, Phlox glaberrima; 5, Stachys grandiflora.

P. C., Maldon.—1, Campanula glomerata; 2, Gentiana saponaria; 3, Hesperis matronalis; 4, Geranium sanguineum album; 5, Tilia europæa; 6, Gingko biloba.

MARKETS.

COVENT GARDEN.

Flowers.

Flowers are very abundant; roses, carnations, and sweet peas are cheap and good. Business good, but slackening a little.

		s. d.		s. d.
Adiantum cuneatum	per doz. bun.	5 0		9 0
Arums	per doz.	2 6		4 0
Asparagus	per doz. bun.	1 6		6 0
Carnations	per doz. blms.	1 6		3 0
,,	per doz. bun.	8 0		12 0
,, Malmaison	per doz. blms.	8 0		12 0
Cattleyas	per doz.	8 0		10 0
Croton leaves	per bun.	1 0		1 6
Cypripediums	per doz. blms.	2 0		3 6
Eucharis	per doz.	4 0		5 0
Forget-me-not	per doz. bun.	2 0		3 0
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	1 6		3 0
Gladiolus Colvillei	per doz. bun.	7 0		10 0
Gypsophila	per doz. bun.	3 0		5 0
Iris, Spanish	per doz. bun.	3 0		6 0
Ixias	per doz. bun.	3 6		6 0
Lilium auratum	per bun.	2 0		3 0
,, candidum	per bun.	2 0		3 6
,, speciosum	per bun.	2 0		2 6
,, longiflorum	per bun.	2 0		4 0
Lily of the Valley	per doz.	6 0		12 0
Marguerites, white	per doz. bun.	3 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	3 0		6 0
Odontoglossums	per doz. blms.	2 0		3 0
[illegible]	per doz.	1 6		3 0
[illegible] Lilies	per doz. bun.	4 0		6 0
Pyrethrums	per doz. bun.	2 0		4 0
Roses	per doz.	1 0		6 0
Smilax	per doz. trails	3 0		5 0
Spiraea	per doz. bun.	5 0		8 0
Statice	per doz. bun.	5 0		6 0
Stocks	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	1 6		2 6
Tuberoses	per doz. blms.	0 4		0 6

Fruits.

Fruit is becoming more plentiful and, owing to the hot weather, the demand is very good.

		s. d.		s. d.
Apples, Australian	per case	6 0	to	14 0
,, Tasmanian	per box	5 6		16 0
Apricots	per box	0 9		1 3
Bananas	per bun.	5 0		12 0
Cherries, French	per ½-sieve	2 6		6 6
,, English	per ½-sieve	5 0		7 0
Currants, Red	per ½-sieve	3 0		5 0
,, Black	per ½-sieve	4 6		5 6
Figs	per doz.	1 0		4 6
Gooseberries	per ½-sieve	2 0		3 0
Grapes, English (new)	per lb.	1 6		3 0
,, Belgian	per lb.	0 9		1 3
Lemons	per case	6 0		21 0
Melons, Guernsey	each	0 9		2 6
,, English	each	1 0		2 0
Nectarines	per doz.	3 0		15 0
Oranges	per case	10 0		28 6
Peaches	per doz.	3 0		18 0
Pears, Australian	per box	4 0		5 0
Pineapples	each	2 0		5 0
Plums, French	per box	1 0		1 6
Strawberries	per peck	2 0		3 6
,,	per basket	0 9		1 6

Vegetables.

The fine weather has brought along English tomatoes with a rush. Peas have been very good. Salading is in great demand.

		s. d.		s. d.
Artichokes	per doz.	1 6	to	1 9
Asparagus	per bun.	0 9		3 0
Beans, Broad	per bush.	3 0		3 6
Beet	per bush.	1 3		2 0
Cabbage	per tally	2 6	to	4 0
Carrots	per doz. bun.	2 0		3 6
Cauliflowers	per doz.	1 0		2 0
Cucumbers	per doz.	1 6		3 0
Greens	per bag	1 0		2 6
Horseradish	per doz. bun.	9 0		12 0
Lettuce, cos	per score	0 9		1 3
Mint	per doz. bun.	1 6		2 0
Mushrooms	per doz. lb.	6 0		8 0
Onions, spring	per doz. bun.	1 6		2 0
,, Egyptian	per case	5 0		7 0
Parsley	per doz.	1 0		2 0
Peas	per bush.	1 6		3 0
Radishes	per doz. bun.	0 4		0 8
Spinach	per bush.	1 3		1 6
Tomatoes, English	per doz. lb.	3 0		6 0
,, Guernsey	per doz. lb.	2 0		5 6
Turnips (new)	per doz. bun.	2 0		3 6
Vegetable Marrows	per doz.	2 0		4 0

LONDON POTATO MARKETS.

There is now a brisk demand for new home-grown potatoes.

		s. d.		s. d.
Old potatoes	per ton	60 0	to	75 0
Jerseys	per cwt.	5 6		6 0
Cherbourg	per bar.	4 6		5 0
St. Malo Giants	per cwt.	5 0		5 6
English, Kent	per bush.	5 0		6 0
,, Lincoln	per cwt.	6 0		6 6

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. JUNE 28 TO JULY 4.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
June 28—Sunday	8 24	57	55	74	56
,, 29—Monday	12 20	64	59	76	54
,, 30—Tuesday	13 5	62	56	77	52
July 1—Wednesday	13 50	69	61	80	50
,, 2—Thursday	13 40	67	59	80	49
,, 3—Friday	13 50	69	59	83	47
,, 4—Saturday	1 30	60	58	70	58
Means	10 55	64	58	77	52

DATE. 1908. JUNE 28 TO JULY 4.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
June 28—Sunday	—	61	61	58	55
,, 29—Monday	—	62	61	58	44
,, 30—Tuesday	—	63	62	58	43
July 1—Wednesday	—	64	63	58	41
,, 2—Thursday	—	64	63	58	39
,, 3—Friday	—	64	63	59	39
,, 4—Saturday	0·03	65	64	59	52
Means	(total) 0·03	63	62	58	45

Saturday, July 4th, thunderstorm with lightning, from 6 p.m. to 8 p.m.

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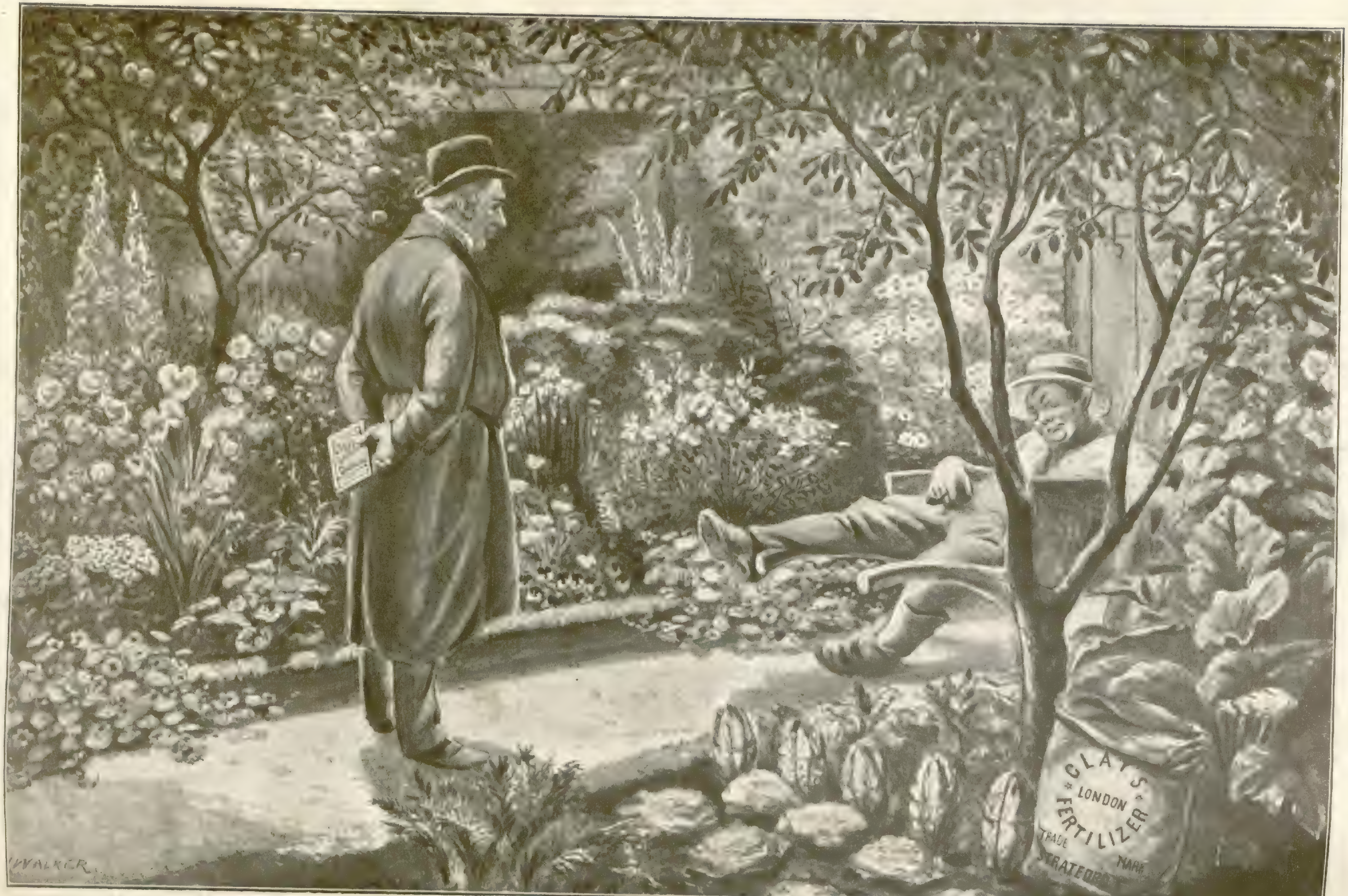

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(See page vii.)

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The best new and standard varieties of Roses.

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INSPECTION OF OUR RANGE OF HOUSES IS CORDIALLY INVITED BY

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SOW NOW, to FLOWER NEXT YEAR, Cannells Aquilegia, long-spurred hybrids; Antirrhinum, Canterbury Bells, Hollyhocks, Delphiniums, Digitalis (Foxglove), 6 pkts., 1s., post free. CANNELLS, Loddon, Norwich.

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THE GARDENERS' MAGAZINE may be obtained by order from all Newsagents, price Twopence, every Saturday. If any difficulty be found, a copy will be posted weekly direct from the Publisher, 148 and 149, Aldersgate Street, London, on the following terms: Twelve Months, 10s. 6d.; Six Months, 5s.

INDEX and Title Page to Vol. L. (comprising the weekly numbers from January to December, 1907), price 2d., by post 2½d.

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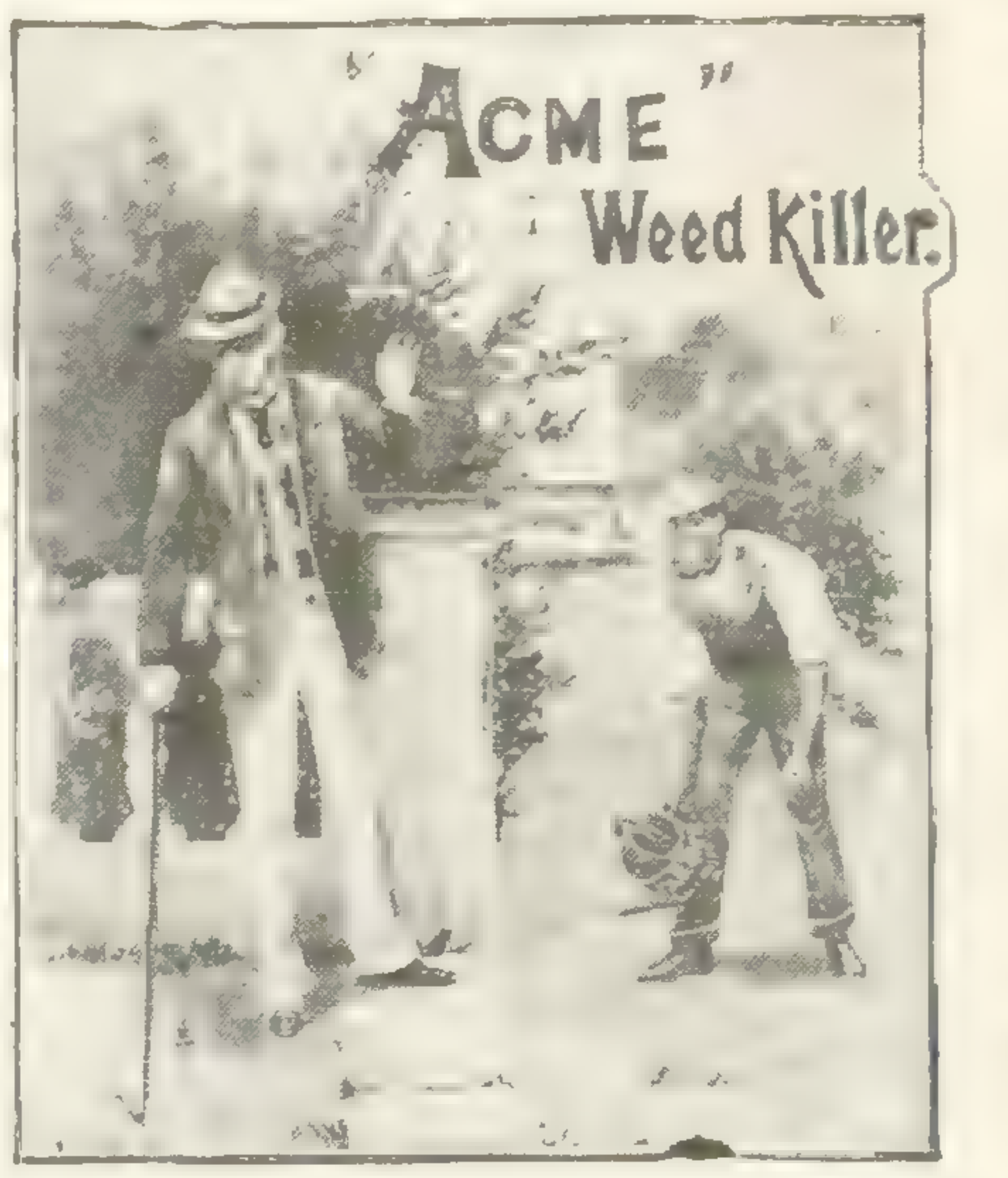
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"Weeds, weeds, everywhere! I wonder if that new gardener can suggest anything."

"Yes, sir, I'm just using the 'Acme' Weed Killer. The best in the world for killing weeds."

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"ACME" POWDER WEED KILLER.

Sizes.		Tins free.		Per tin.
No. 1.	...	To make 25 gallons	...	1/9
No. 2.	...	" 50 "	...	3/3
No. 3.	...	" 100 "	...	6/-

Soluble in cold water. No. 3 carriage paid. Prices for larger quantities on application.

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Certain death to Aphis, Red Spider, &c., &c. Sample pint, sufficient for 10 galls., 1/-, post paid. Try it.

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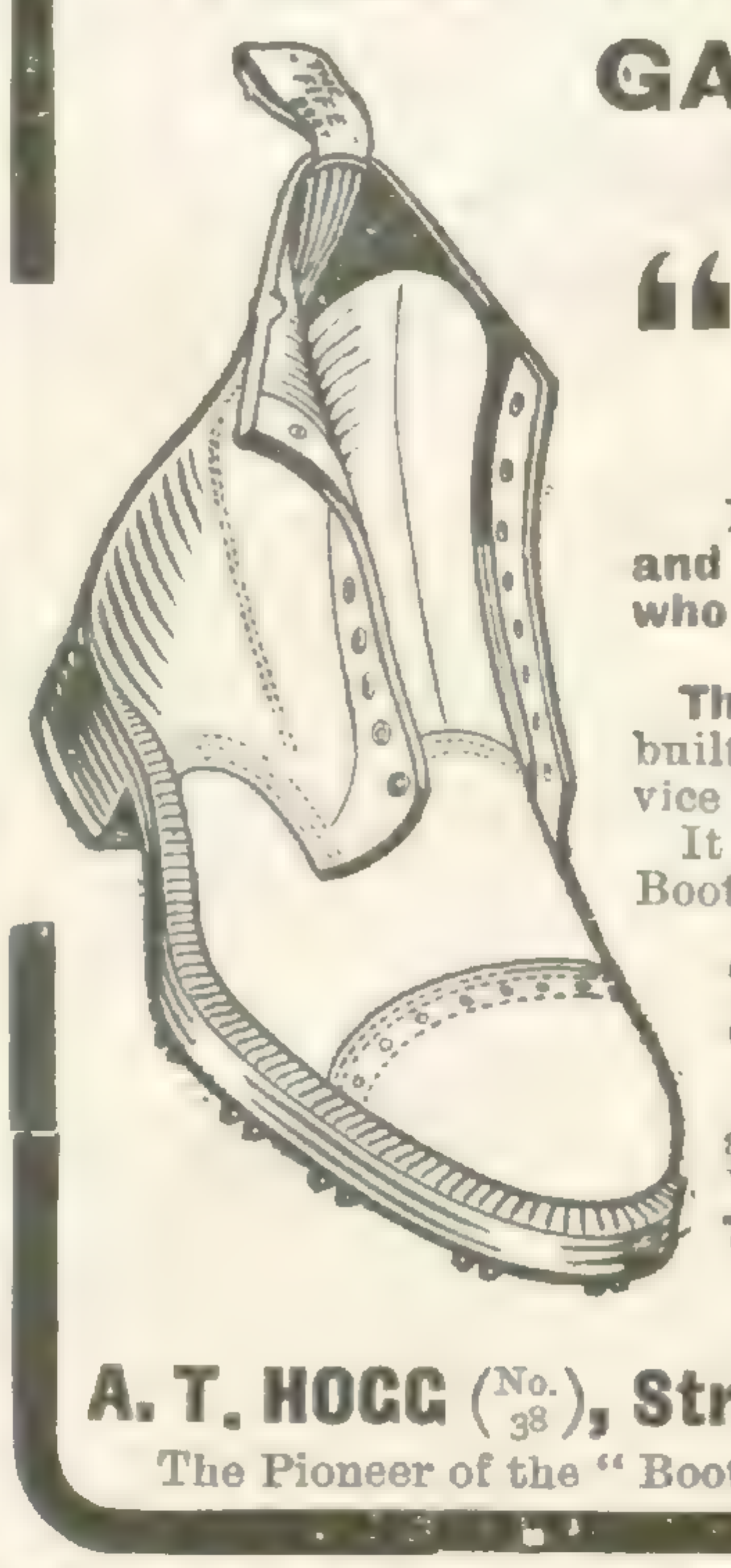

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It is the most dependable Boot for Garden work.

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All Sizes. Send size and P.O. With or Without Tackets.

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The Pioneer of the "Boots-by-Post" Trade.

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(POISONOUS).

One gallon will make 51 gallons, sufficient to dress 200 to 250 square yards. **PRICES—Carriage Paid.**

5 gallons,	14/-;	drum, 2/6	20 gallons,	50/-;	cask, 5/-
10 "	26/-;	" 5/-	40 "	90/-;	" 5/-

Drums and casks refunded when received carriage paid at Liverpool.

POWDER WEED KILLER.

PRICES—No. 1 Tin ...	2/-	Five No. 2 Tins ...	28/-
No. 2 " ...	6/6	Ten " " ...	52/6

Twenty No. 2 Tins ... 100/-.

No. 1 Tin makes 25 gallons, sufficient to dress 80 to 100 square yards.	No. 2 Tin makes 100 gallons, sufficient to dress 320 to 400 square yds. Carr. pd.

No charge for Tins. No empties to return.

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ONCE USED. ALWAYS USED.

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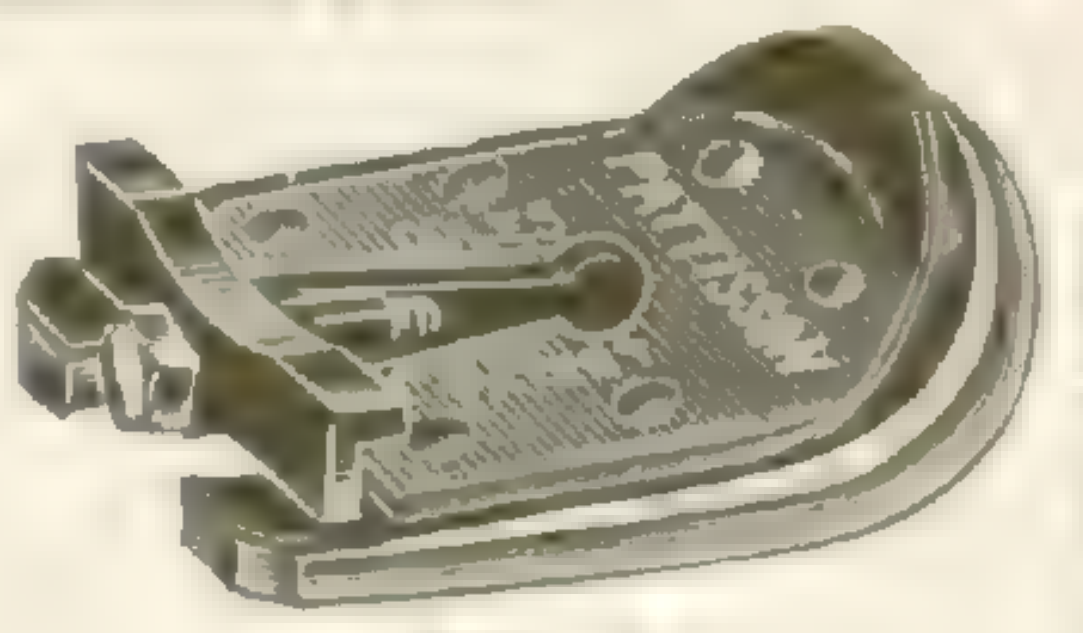

FIG. 1.

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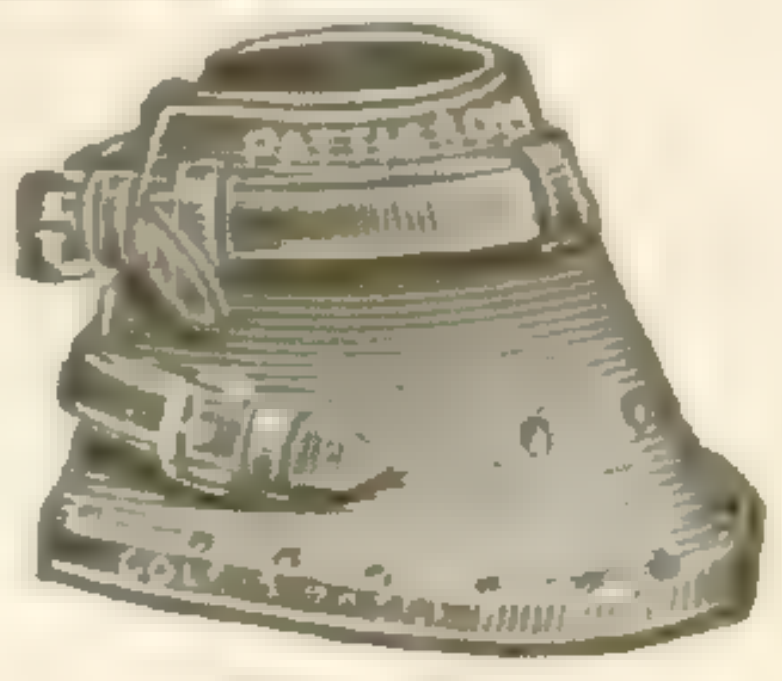

FIG. 2.

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BAMBOO POLES for making **Pergolas, &c.**

Immense stock of BAMBOO. **Write for Our Lists.**

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A. C. BECK, Esq., M.P., highly recommends his HEAD GARDENER to anyone requiring a thoroughly good all-round Man; life experience in all branches of Gardening, House and Table Decorations; leaving when suited; age 30; married, no children. J. C. LUNNON, Harrold Hall Gardens, Bedford. (No circulars.)

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GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working); good all-round experience; well up in Hardy Garden and Lily Growing out of doors; married 12 years; abstainer; no family; can be well recommended; age 32 years. WALROND, Peppard Common, Henley-on-Thames.

GARDENER (Head, where several are kept), thoroughly experienced; good references; 22 years in present situation as Head; leaving through death of employer; abstainer; age 49; married, four children, youngest 11 years. R. J. WALTERS, The Hermitage Gardens, The Park, Nottingham.

GARDENER (Head Working, where two or more are kept); thoroughly experienced in vines, stove, and greenhouse plants; early and late forcing, fruit, flower, and kitchen garden; good reference; age 48; no family; life abstainer. E. DABORN, 52, Mersham Road, Thornton Heath, Surrey.

GARDENER (Head or good Single-handed); good practical experience in all branches; grapes, melons, cucumbers, peaches, stove and greenhouse plants, flower and kitchen garden; age 43; married, no family. Apply W. F., Office of this Paper.

GARDENER (Head or good Single-handed, where help is given); life experience Inside and Out; good references; middle age; widower. G. B., 17, Eversleigh Road, Lavender Hill, London, S.W.

GARDENER (Head or good Single-handed with help); life experience Inside and Out; present place 5 years; good characters. HOWELL, North Lodge, Tingrith Manor, Woburn, Beds.

THE HON. C. H. WYNN will be pleased to recommend his HEAD GARDENER to any lady or gentleman requiring the services of a thorough practical, all-round man; upwards of twenty years' experience, gained in leading establishments; five years present place. HIGGINS, Rug, Corwen, N. Wales.

GARDENER (Single-handed, or where help is given); 10 years' experience; Inside and Out; good character; age 31; single; abstainer; state wages. DAVIS, 42, Lilley, Luton, Beds.

GARDENER (Single-handed or with help); life experience Inside and Out; age 35; tall; married, one child; foreman last situation; good references. H. J. W., 17, Salmestone Road, Margate, Kent.

GARDENER (Single-handed or with help); good characters; age 29; single. W. P., 104, High Street, Dorking.

GARDENER (Single-handed, or with help), experience Inside and Out, Vines, Stove and Greenhouse Plants, etc.; willing to be useful; married; age 35; 5½ years as single last place; good reference by me. Apply, stating terms. C. H. SMITH, 44, Ravensbourne Road, Catford, S.E. (No circulars.)

GARDENER (Single-handed), Flower, Kitchen Garden, Greenhouse, etc.; good character; 9 years last situation; 7 years previous; married, no family; age 50. T. CROSBY, 69, Lordship Road, Stoke Newington, N.

MANAGER or FOREMAN; 20 years' experience; age 33; single; well up in Roses, Vines, Tomatoes, Cucumbers, Chrysanthemums, Stove Plants, and Forcing; good references. F. BARROWCLIFFE, 8, Nichol Street, Brenwell, Newcastle-on-Tyne.

FOREMAN (Inside), age 25; 11 years' experience in Fruit, Plants, and House Decorations in good places; previously at Pylewell Park and Chilton Lodge. F. FISHER, Oaklands Gardens, Curridge, Newbury, Berks.

GARDENER (Second), age 22, desiring Change; knowledge of Fruit, Vegetables, and Greenhouse; good references. G. W. JOHNSON, 17, Prospect Place, Union Road, Dover.

GARDENER (good Second); chiefly Outside; age 26; 9½ years' experience; 3½ years Little Missenden Abbey; well recommended. F. ELDRIDGE, Church End, Weston Turville, Bucks.

JOURNEYMAN (Second) seeks SITUATION; experienced Inside and Out; age 19; can be thoroughly recommended; disengaged. CROUCH, Landford, Salisbury.

JOURNEYMAN (Inside), age 22; six years' experience; good references; Bothy preferred; Hertfordshire preferred. W. FISHER, Thirlestone, St. Peter's Park, St. Albans, Herts.

GARDENER (Under), age 22, Inside; good knowledge of Vines, Peaches, Orchids, Stove, Greenhouse Plants, and general Garden work. H. WAITE, Tapton Bank, Sheffield.

GARDENER (Under), age 19, seeks SITUATION; five years' experience Inside and Out; three years' good character. A. WORSFOLD, Benenden, Cranbrook, Kent.

UNDER GARDENER.—Young Man, single, age 21, seeks SITUATION as Under Gardener; accustomed to all kinds of work, Inside and Out; 6 years' experience; good references from last place. Midlands preferred. J. TAYLOR, 37, Broadbank, Louth, Lincs.

YOUNG MAN (21) seeks SITUATION as UNDER GARDENER; 6 years' experience; 2 years Roses; good reference. Apply TOWNSEND, Avondale Cottages, Shirehall Road, Hawley, Kent.

ADVERTISER, age 18, seeks SITUATION on Gentleman's Estate in Houses or Outside; 4 years present place; good references. A. GIRDLESTONE, 67, Osterley Vue Road, Hanwell, W.

CHARGE HAND or GARDENER (Second); last 4 years as such; age 26; 10 years' experience; excellent references; disengaged when suited. DUNCAN, Lanes Farm, Hatfield Peverel, Essex.

CARPENTER seeks re-engagement ESTATE CARPENTER; used to all Repairs, Painting, Paperhanging, etc.; age 40; two children; good references. F. BAKER, Almora Villa, Birkbeck Road, North Finchley.

FIRST-CLASS BUDDER seeks EMPLOYMENT; best references. Address, C., 100, Post Office, Hanworth, Middlesex.

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GARDENER'S SON seeks SITUATION in Garden, with some experience; age 18. WILKINS, Batts Hill, Redhill, Surrey.

HOUSE and ESTATE CARPENTER, or good HANDY MAN; good knowledge of all-round general repairs, including Hot-water; abstainer; excellent references. W., 48a, Isis Street, Earlsfield, S.W.

IMPROVER (18) seeks SITUATION, Inside or Inside and Out; 4½ years' good character. W. TOM, St. Menifreda, St. Minder, Wadebridge, Cornwall.

RICHARD SMITH and CO., LTD., beg to announce that they are constantly receiving applications from Gardeners seeking Situations, and that they will be able to supply any Lady or Gentleman with particulars, etc. St. John's Nurseries, Worcester.

A YOUNG MAN, age 18, seeks SITUATION in plant houses; four years' experience Inside; willing to help Outside; good references. A. COOPER, 20, Bridge Street, Stowmarket, Suffolk.

YOUNG MAN (24) seeks SITUATION GROOM (single-handed or otherwise), in gentleman's stables; used to horses, good rider and driver; highest military references. Apply J. R., 79, Office of this Journal.

YOUNG MAN age 25, seeks SITUATION in pleasure grounds and kitchen garden; years' experience in good gardens; disengaged. MOORE, 1, Lewis Cottage, Franklyn Road, Hayward's Heath, Sussex.

YOUNG MAN (21), Inside or Inside and Out; 4½ years present situation; good reference; Bothy preferred; disengaged July 18th. H. HARRIS, Dysons Wood Gardens, Reading.

SITUATION COUPON

To the Advertisement Manager of "THE GARDENERS' MAGAZINE," *148 & 149, Aldersgate Street, London, E.C.*

For JULY 25, 1908.

Please Repeat my Advertisement.

Name..

Address..

Date..............................

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GUIDE TO THE FLOWER GARDEN,

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BY
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Editor of
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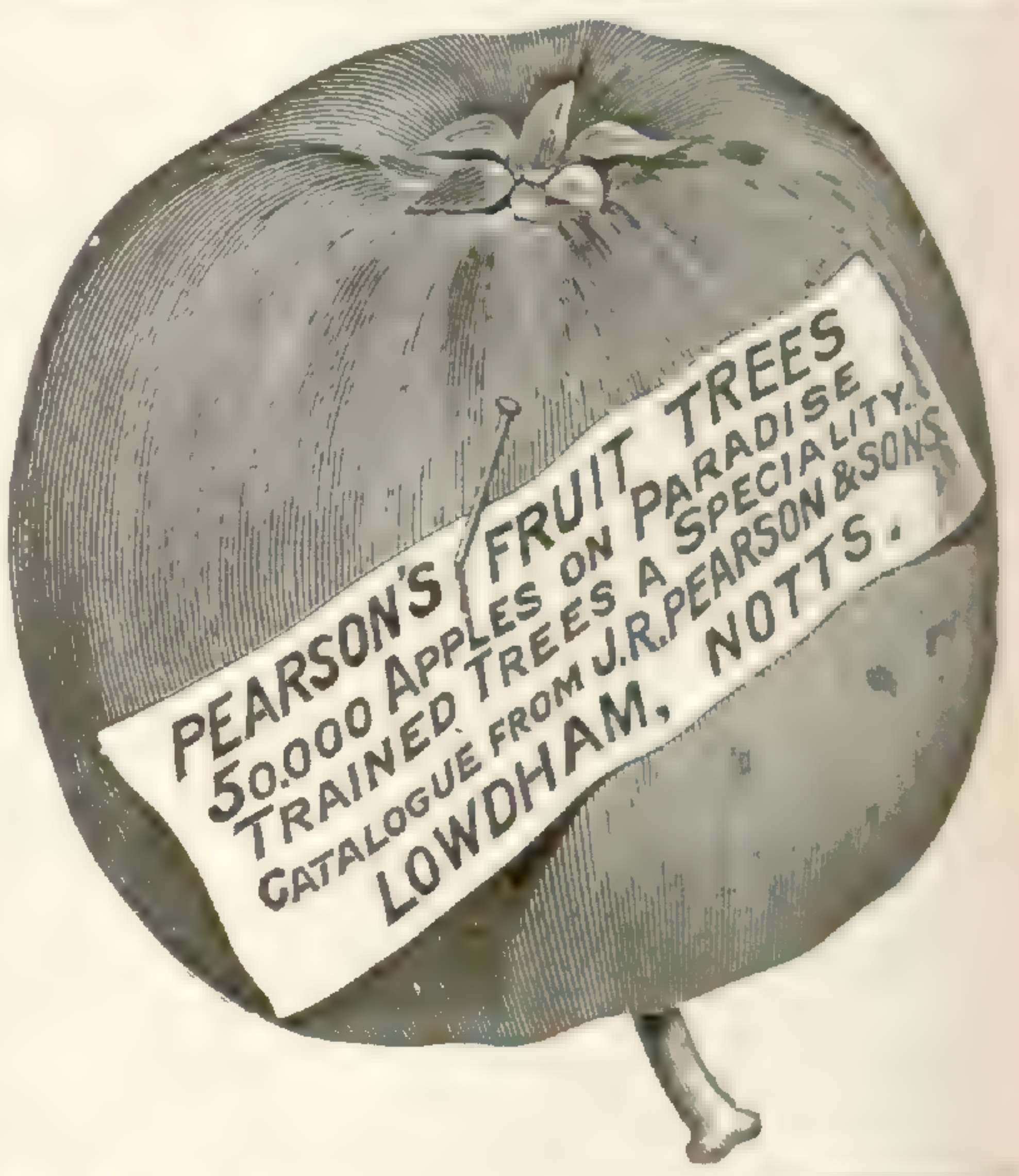
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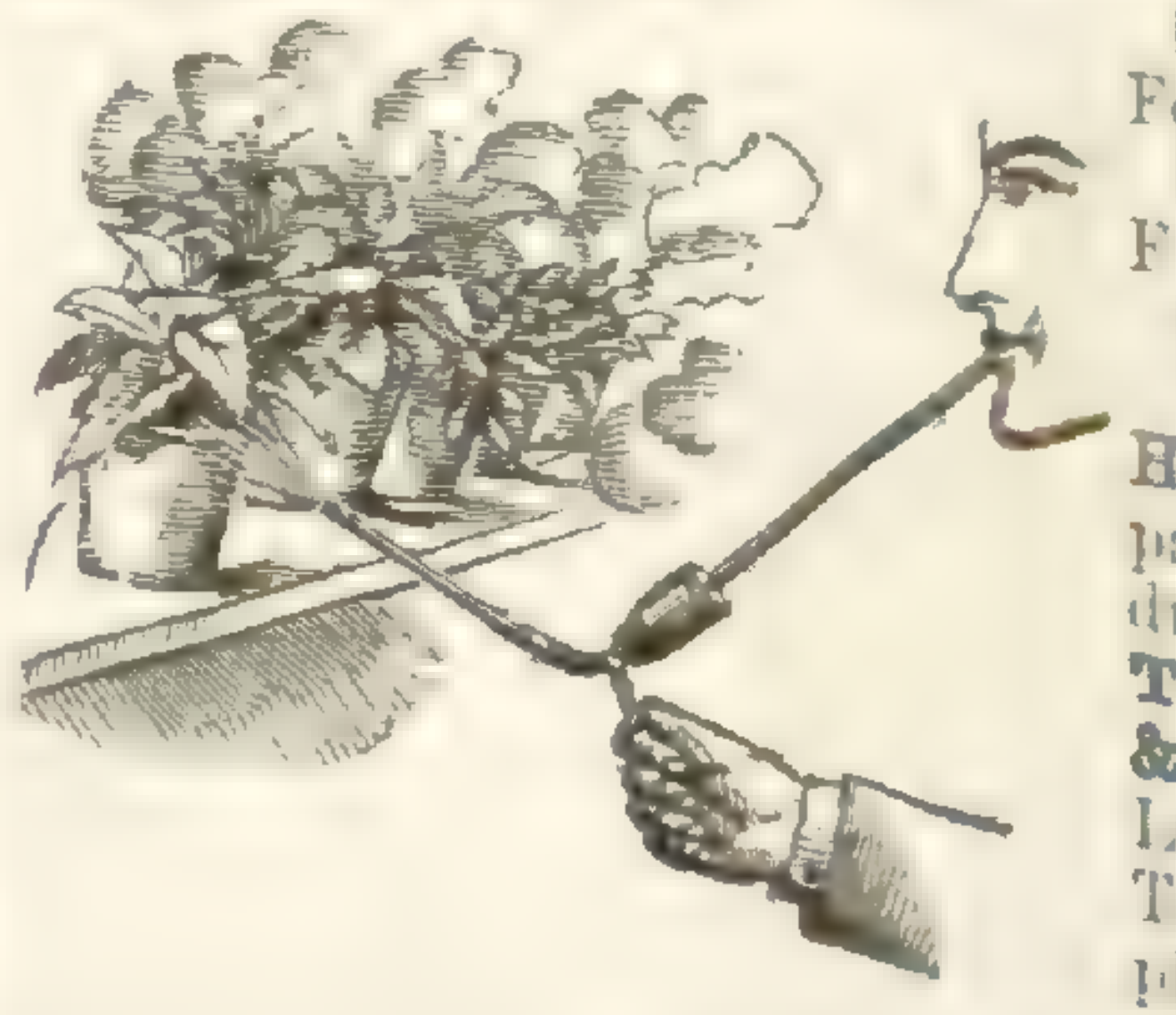

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VOL. LI.—No. 2,855 SATURDAY, JULY 18, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Fasciation.

The curious form of growth which we see exemplified as a fairly constant varietal feature in Celosia cristata or cockscomb, and which is known as fasciation or a bunching together, is due to an abnormal multiplication of those growing points which ordinarily would be few in number, and would each produce a single independent shoot. The close proximity in which these are produced deprives them of sufficient space for individual development, and as a consequence all are cemented together, as it were, into one mass. In the cockscomb the normal tendency of each shoot is to expand at its summit into a feathery mass of flowers, and in the curiously serpentine, almost sponge-like, masses of the so-called comb, the tendency to expand and flower finds expression by such a formation in an ever-increasing thickening and widening of a frilled fan, on the surfaces and edges of which an imperfect inflorescence appears and gives the brilliant colours they present. In lilies a similar growth is often seen, but the flowers although reduced in size in proportion to the great increase of number, are generally perfected, only the multiplied main stems being conglomerated. Given mere formation of stalk and no inflorescence, we may see, as in the common asparagus, long, thick ribbon-like growths of even width from base to summit, and several feet long, all these cases showing that the shape assumed is entirely correlated with the normal process of growth. In Asparagus plumosus there is a so-called crested variety, in which fasciation occurs in both main shoots and laterals, and, indeed, pervades the plant, though appearing most markedly at the terminals so as to form tassels very much on the lines of crested ferns. This would, however, appear to be only a superficial resemblance, for on examination it is seen that the stems widen appreciably on true fasciate lines long before the expanded terminal is reached, which is very rarely the case in ferns. The crest or tassel of a fern is not fasciate, since although the growing points are abnormally multiplied they almost invariably branch away separately, and although by doing this again and again a bunch-like tassel is formed, it is not centrally massive as in Asparagus plumosus, it is indeed ramification instead of fasciation. So far as our present knowledge goes we have no idea at all of the cause of these phenomena. Fasciation crops up here and there in very diverse plants, and that the tendency can be inherited is proved by the fixed cockcomb strains in many colours, and by the so-called mummy pea, which bears fasciated bunches of flowers and comes quite true from seed. These departures from usual lines are of extreme interest. How plants grow has been the favourite study of innumerable botanists and biologists, and through their research we know that every part of a plant, like the plant itself in its infant stage, is built up cell by cell on a definite plan, a mother cell as it is termed, heading, as it were, the procession, and splitting up as it proceeds, throwing out other mother cells for lateral growths, and so on until all the complex formation of the full-grown plant is perfected. In fasciated growths, however, we must assume a phalanx of such mother cells marching many abreast instead of a single pioneer. Each one is doing its level best to act on the old lines, but it cannot, it can only push forward in a straight line with its neighbours and enter into the general compromise by which alone they can grow at all. In cauliflower and broccoli we see an apparent floral fasciation, but this is rather due to multiplication of flowers to so great an extent that the plant cannot possibly carry them all to perfection. It is easily seen that they are not fasciated, but separated, and in the same family of Brassicas it is also easy to see that the turnip-like kohl rabi is merely a thickened stem, and not a fasciated one, the leaves around it being normal, and the terminal growth single. At the recent meeting of the Linnean Society Mr. W. C. Worsdell, F.L.S., exhibited a large series of scarlet runner beans seedlings, in which fasciation had been induced by cutting away the plumule or axis of growth at an early stage, a result probably due to a proliferous bud production at the site of the wound, which, perforce, assumed a fasciated form for lack of space for individual development.

MR. ERNEST J. EDWARDS,
Chairman of Committee, National Sweet Pea Society.

Mr. Ernest J. Edwards, whose portrait we have much pleasure in publishing this week, is one of the celebrities of the sweet pea world. For many years Mr. Edwards has been a vice-president of the National Sweet Pea Society, and when, for the present year, the turn came for an amateur to hold the post of chairman of committee, Mr. Edwards was unanimously elected to the position. Although a busy man, Mr. Edwards finds time to fulfil the duties of chairman; and, moreover, he has given evidence of his enthusiasm and generosity by presenting to the National Sweet Pea Society a handsome silver trophy, to be competed for at the society's provincial exhibition at Dublin in August. Mr. Edwards is a great lover and skilful cultivator of sweet peas, and encourages their exhibition at local exhibitions. At his pleasant home at Haydon Hall, Eastcote, Middlesex, he grows most of the novelties each year, and his own influence, coupled with that of his fragrant flowers, has been the means of adding many new members to the National Sweet Pea Society.

Foreign Fruits in British Markets.—One of the most interesting points in the imports of fruits during June was the big drop in the quantities of apples and pears. In the corresponding month of last year the imports of apples amounted to 108,716 cwt., of the value of £115,296, but last month the aggregate was only 87,263 cwt., of the value of £84,338. Apricots and peaches show an increase in quantity of 9 cwt., and in value of £13, the total being 122 cwt., of the value of £308. Banana imports were in excess of those of June, 1907, the total having been 690,631 bunches, of the value of £196,671. The imports of cherries aggregated 112,887 cwt., of the value of £178,333, or an increase in quantity of 37,538 cwt., and in value of £78,577. Currants were also imported in largely increased quantities, the total having been 6,445 cwt., of the value of £9,294, against 3,187 cwt., of the value of £6,177, in the corresponding month of last year. Gooseberries, on the other hand, were imported in lessened quantities, the total having been 18,116 cwt., of the value of £10,837. Grapes also show a decrease, the aggregate having been 507 cwt., of the value of £2,571, or a decrease in quantity of 80 cwt., and in value of £2,306. In the imports of lemons there was a large increase, while oranges were imported in smaller quantities. Pear imports dropped from 3,282 cwt., of the value of £4,605, in June, 1907, to 141 cwt., of the value of £182 last month. Of plums the imports were 169 cwt., of the value of £255, and of strawberries the imports aggregated 26,137 cwt., of the value of £33,757. Unenumerated fruits were about 1,000 cwt. down, the total being 9,531 cwt., of the value of £15,225. The value of the fruit imports for the month was £780,515, or an increase of £87,851. For the six months ending June 30, the value of the fruits imported was £4,588,364, or an increase of £46,108, as compared with the first half of last year.

Chrysanthemum Congress at Tours.—The French National Chrysanthemum Society will hold its thirteenth annual congress at Tours from November 3 to 5 next. In conjunction with this congress there will be an exhibition of chrysanthemums which will be organised by the Tours Horticultural Society. The congress will be opened at 2.30 p.m., on the first day, and the sitting will be continued from 9 a.m. to 12.30 p.m. on the second day. The subjects arranged for discussion comprise grafting chrysanthemums, the systematic application of manure to chrysanthemums growing in the open, the best method of packing plants and cut flowers, and the best means of producing and fixing sports. Several of these subjects have been discussed at previous congresses.

New Rambling Rose Lady Godiva.—In the note accompanying the illustration of this exquisitely beautiful rambling rose, which appeared in our issue of the 11th inst., the colour of the flowers is inadvertently described as pale yellow, instead of pale blush. We are especially anxious this correction should be made note of by rose growers because Lady Godiva is a most valuable addition to the rambling roses with blush-coloured and light pink flowers. This variety originated with Messrs. Paul and Son, of Cheshunt, who also are the raisers of the fine single climbing rose Una, which obtained the second place in the ballot for the Nickerson Cup for the best white climbing rose flowering more or less singly.

The Imports of Vegetables in June last were considerably less than in the corresponding month of last year, the principal falling-off being in potatoes. Of these the imports were 1,761,259 cwt., of the value of £671,293, or a decrease in quantity of 699,609 cwt., and in value of £174,920. Germany sent 4,612 cwt.; France, 766,465 cwt.; Channel Islands, 884,766 cwt., and other countries, 105,416 cwt. The imports of tomatoes aggregated 127,793 cwt., of the value of £93,477, and of onions 536,850 bushels, of the value of £60,327, the figures for the last-named representing an increase in quantity of 154,136 bushels, and in value of £4,210. Unenumerated vegetables imported during the month were of the value of £40,474, a decrease of £3,177, as compared with June, 1907. The imports of potatoes for the six months ended June 30 were 5,508,789 cwt., of the value of £1,657,532; onions, 4,075,645 bushels, of the value of £490,492; tomatoes, 521,298 cwt., of the value of £427,165, and unenumerated vegetables, of the value of £253,444.

National Sweet Pea Society.—From a circular letter, signed by Mr. W. Cuthbertson, Marks Tey, Mr. E. Sherwood, 152, Houndsditch, E.C., and Mr. Leonard Sutton, Reading, we have received, we learn that steps are being taken with a view to the presentation of a testimonial to Mr. C. H. Curtis, hon. secretary of the National Sweet Pea Society, on the occasion of the annual exhibition. Attention is directed in the circular letter to the remarkable growth of the society within recent years, the consequent increase in the secretarial work, and the desirability of acknowledging the services Mr. Curtis has rendered the society. The hope is expressed that the testimonial will be general, and that therefore small sums will be welcomed.

Hedges of Roadside Gardens.—With reference to the suggestion of the secretary of the Motor Union that owners of gardens alongside roads should cut their hedges in rather closely, Mr. W. Verner, of Winchfield, writes as follows: "Four years ago I cut down the hedges and shrubs to a height of 4ft. for 30 yards back from the dangerous crossing in this hamlet. The results were twofold: The following summer my garden was smothered with dust caused by fast-driven cars, and the average pace of the passing motors was considerably increased. This was bad enough, but when culprits secured by the police pleaded that 'it was perfectly safe to go fast,' because they 'could see well at the corner.' I realised that I had made a mistake. Since then I have let my hedges and shrubs grow, and by planting roses and hops have raised a screen 8ft. to 10ft. high, by which means the garden is sheltered to some degree from the dust and the speed of many passing cars is sensibly diminished. For it is perfectly plain that there are a large number of motorists who can only be induced to go at a reasonable speed at cross-roads by considerations for their own personal safety. Hence the advantage to the public of automatically fostering this spirit as I am now doing. To cut hedges is a direct encouragement to reckless driving."

Rainfall in June.—Our readers will not need to be informed that June was a dry month, but it may be of general interest to state that in London there were eight rainy days, and that the total rainfall was 1.33 inches, of which nearly one-half was registered on the first day of the month. At Dungeness, Liverpool, and Stornoway, the rainfall closely approached the average, and at Aberdeen and Blacksod Point it was above the average; but at other stations it was considerably below

Examination in Horticulture.—The Executive Council of the British Gardeners' Association are making arrangements for holding an examination in horticulture in October next, and in the current issue of the association's journal, a set of questions is published as a guide to those who intend offering themselves for examination. The questions, of which there are thirty-six, have been prepared by Mr. Charles Foster, and should prove most useful as types of the questions that will have to be answered by those who take part in the examination.

Thibetan Caryophyllaceous Plants.—Although only eleven members of the order Caryophyllaceæ were formerly recorded from Thibet, that number has been raised to forty-three by the discoveries made during the recent military expedition to Lhassa. The route followed by the expedition was practically an unexplored one, hence, of the species recorded nineteen are entirely new ones.

Floral Freaks.—Miss H. C. Philbrick, of the Cedars, Halstead, Essex, sends us two curious flower spikes. One is a foxglove with the upper flower campanulate and the others very widely inflated, but this departure from the type is now fairly common. The other spike, of an antirrhinum, had one clear yellow-self flower, one purple self, several flowers with purple tubes and crimson lips, two flowers half yellow and half purple, the colours running longitudinally, and two yellow ground flowers, heavily striped and speckled with crimson and purple. A more curiously mixed spike of flowers we do not remember to have seen, and when we find so many colours and combinations in one spike we begin to understand the difficulties raisers find in fixing colour variations of highly-bred florists' flowers.

Potato Spraying in Ireland.—According to the report of the Inspector of the Irish Department of Agriculture in Connaught, the spraying of potatoes in the Counties of Galway, Mayo, and Roscommon is being proceeded with on a larger scale this season than in any year since 1904. Spraying was commenced earlier than usual, a point of interest, as indicating a fuller appreciation of the value of the Bordeaux mixture as a preventive. A larger proportion of the work is being done by machines than in any previous year, and in all cases the spraying is being done in a more efficient manner.

Foreign Flowers.—Notwithstanding the remarkable extension in flower production in the United Kingdom, foreign growers continue to send us large quantities of flowers. During the first half of the current year the value of the flower imports was £177,620. This amount is nearly £400 more than in the corresponding period of 1907, and nearly £1,000 less than in 1906.

The Cowper and Newton Museum, at Olney, Bucks, has been in existence eight years, and the trustees and committee are anxious to extend its usefulness. The museum is singularly rich in literary and human interest, but the two rooms devoted to the exhibits are so overcrowded that it would be an immense advantage to devote the whole of the house to the public, who would then be admitted to the "John Gilpin" and other rooms now occupied by the curator. The income of £18 a year is wholly insufficient to admit of the desired extension being made, and to provide the small endowment considered necessary, an appeal is being made for a sum of £2,200. Mr. Thomas Wright, Olney, Bucks, is the secretary. The garden of the museum presents very much the same appearance as it did in Cowper's time, and to visit this charmed spot can hardly fail to be a source of much pleasure to those well acquainted with the poet's works.

Horticultural Exhibitions at Turin in 1911.—Preparations for great International Exhibition of Industries and Labour to be held at Turin in 1911 to commemorate the fiftieth anniversary of the proclamation of the kingdom of Italy, proceed apace. We have now received the preliminary schedule of the special horticultural exhibitions to be held at Turin, exhibitions that are being organised by the Executive Committee with the co-operation of the Regia Società Orto-Agricola del Piemonte. The May show is for ornamental plants, floral designs, and forced vegetables. In September, trees and shrubs, conservatory plants, fruits, and vegetables will receive special attention, and at the end of October fruits and vegetables and chrysanthemums will provide the chief features, though ornamental plants and floral designs are to be provided for.

Insect Mimicry.—It appears that in the Argentine Republic there is a caterpillar that closely imitates the stems and leaves of Arauja sericifera. This caterpillar, says "Nature," which is rather more than 1in. in length, is the larva of Dilophonota lassauxi, and feeds on Arauja sericifera, to the stem and leaves of which it presents a most striking resemblance, both as regards form and colouring. Pale blue in colour, with three longitudinal stripes of fawn, this caterpillar has two of the anterior segments of the thorax transversely enlarged in such a manner that they closely simulate the nodes of the food plant. The most remarkable feature in the resemblance is, however, the development of a pair of white knobs on the second of these enlarged rings exactly matching the white knobs on the nodes of the plant, which mark the points of attachment of fallen leaves. The mimicry is one of the most remarkable that has ever come under our notice.

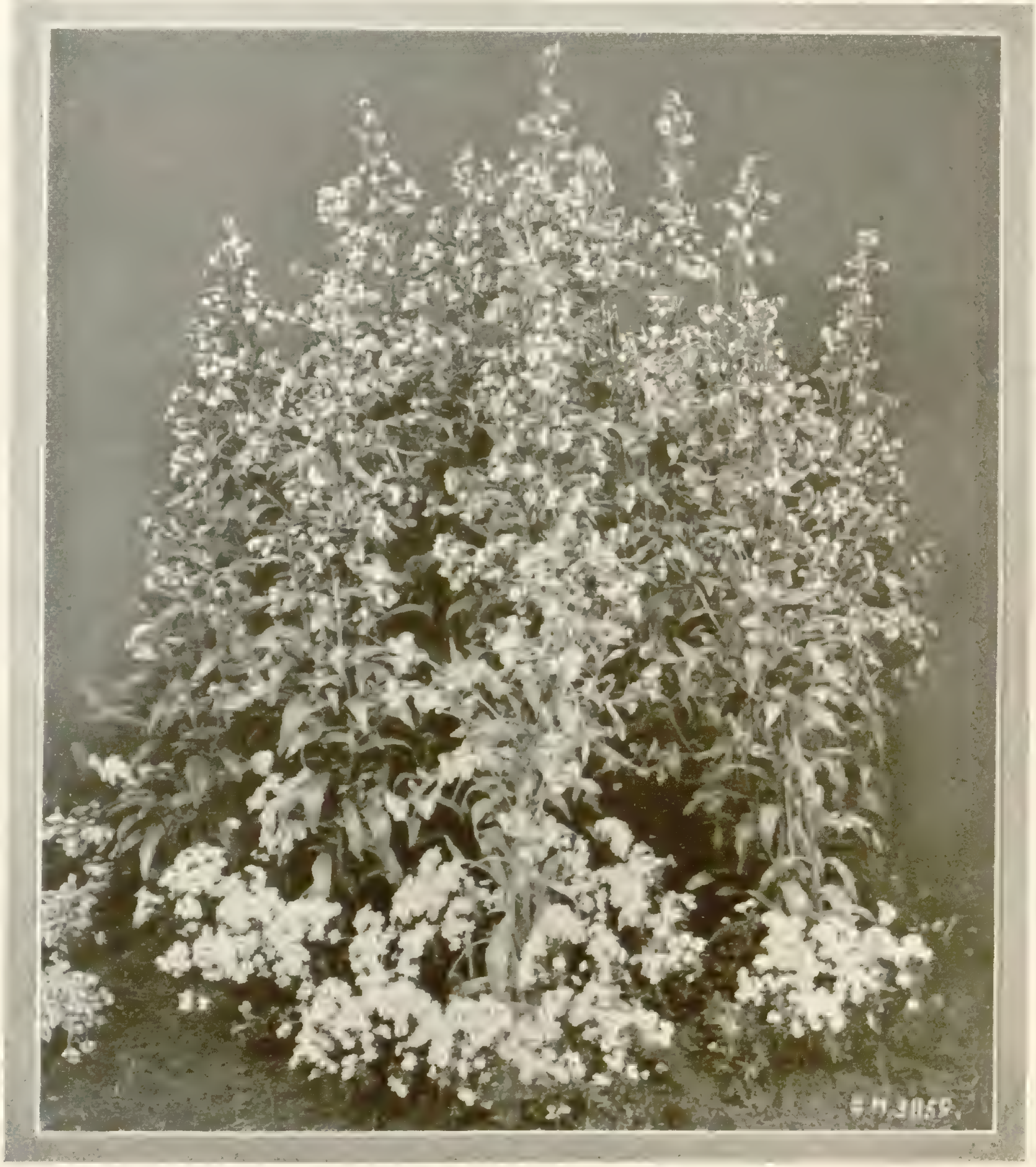
Rose Beetles and Fragrant Roses.—Mr. E. Thomasson, of Walsall, who is taking a keen interest in rose-growing, draws attention to the fact that in his garden the rose beetle does not affect Frau Karl Druschki, a scentless rose, and Caroline Testout, with but little fragrance, is also unscathed. This, he avers, shows that the rose beetle has no love for scentless roses. The beetles are pests on Richmond, Mdme. Ravary, Mdme. Abel Chatenay, Mrs. David McKee, and Melaine Soupert, all very sweet roses, while Mons. Joseph Hill and Mons. Paul Lede, both moderately scented, are proportionately damaged by the beetle. Cannot some one, he asks, discover a food that these pests like, so that we might trap them easily?

ANCHUSA ITALICA AND ITS VARIETIES.

Although Anchusa italica, or Italian Alkanet, has been in cultivation in British gardens since 1810, it has not assumed a prominent position there until within the last few years, when the introduction of some new varieties seemed to take the horticultural world by storm and revealed to it the possibilities before this fine perennial. Nothwithstanding this, the typical Anchusa italica is a pleasing border plant, sending up above its shining leaves a long-panicled raceme of handsome blue or purple flowers for a considerable time in summer, these reaching to a height of from three to four feet.

For a number of years no varieties of this plant existed in gardens, but some considerable time ago a fine variety, with larger and brighter flowers of a good blue appeared. It was called amœna, and was distributed, if my information is correct, from the then noted firm of E. G. Henderson and Son, who in their day enriched British gardens with many good plants. This fine form, although superior to the type, did not find general appreciation, as at that time a number of new flowers requiring less attention to maintain in health and vigour were introduced. It was, however, in favour with a select circle of exhibitors of hardy flowers in the North, and was up till lately, at least, cultivated to some extent by these growers.

But it is to the advent of what is known as the Dropmore variety of Anchusa italica that the real interest in A. italica and its possibilities is due. This has only been a short time in possession of the nursery trade, but in that time it has been well exhibited, and has taken hold of the public in a way few hardy flowers have done for some time. It is now pretty familiar to those who attend shows, frequent nurseries, or visit good gardens, and it always elicits great admiration by its good habit, its tall stature—about four feet—the size of its blooms, and its wonderfully beautiful colouring. The flowers are of a pleasing, rather light blue, and are about double the size of those of the typical A. italica, and at least a half more than those of A. i. amœna. It well deserved the award of merit it received from the Floral Committee of the Royal Horticultural Society.



GROUP OF ANCHUSA ITALICA OPAL.
As grown by Mr. B. Ladhams. Flowers pale blue.

A very beautiful variety, called Opal, has lately been introduced, and it will form an excellent companion to the Dropmore one, as its colour is lighter and more of a sky-blue than that of its sister flower, although the name Opal hardly conveys its distinctive colour. Its flowers are large also, and it sends up loose heads of fine blooms. The illustration of a group will give an excellent idea of the general character of A. i. Opal, better than any verbal description, although, of course, the colour must be imagined to complete the picture.

Among other forms of A. italica in the way of becoming known may be appreciatively mention that shown as A. i. Perry's variety. As exhibited it is apparently larger than the two preceding, and the flowers are of a very rich blue of great beauty, while the habit is also good. There is another splendid variety called superba, which is not, so far as I am aware, in commerce as yet, but which has originated in a famous garden. It is of large size, has very deep blue flowers, and is of excellent habit. There are probably several raisers at present working on this Alkanet, and in a few years there is every likelihood that there will be ample choice of improved varieties of this good flower.

It is when we come to the question of cultivation that the weak point of the Italian Alkanet is revealed. It cannot be called a really perennial plant everywhere, and if it is to be maintained in the best condition occasional propagation is necessary. Nay, one would prefer to say "regular" propagation, as the plants are liable to die off, especially in some soils, where they appear to flower so freely as to exhaust themselves, unless it may be that the species and its forms are not hardy enough to withstand our winters after the exhaustion of flowering. Even in the south it is found desirable to raise a stock of young plants from time to time, so as to have vigorous specimens in reserve. The average life of the best varieties is about three years that is, they are at their best in the third year.

While Anchusa italica can be raised freely from seeds, sown in spring under glass, and the seedlings pricked out in good time, the best varieties are most suitably propagated by means of root cuttings. Propagation by this method is familiar to the greater number of one's readers, so that it is needless to give details of the practice at present. It is sufficient to say that this is recognised as the most approved method of raising and retaining a stock of the lovely new varieties of Anchusa italica referred to.

It may be added that it is to be hoped that someone will take up the improvement of our charming naturalised or native—(which?)—plant, Anchusa sempervirens, which, although not so stately as A. italica, is a good border plant of considerable beauty. These Italian alkanets like a good soil, and prefer an open and sunny situation, but A. sempervirens will flourish in shade and in a poorer soil than they.

Dumfries. S. Arnott.

Primulas.—The main batch of plants, still in the boxes or pans in which they were pricked out early in May, will now require attention, as from such plants, which will flower during November and December, far better trusses of bloom may be expected than from either the earlier or later flowering lots. Some growers, in order to secure flowers in February and March, continue to pinch out the bloom stems from the time they show in autumn until the New Year, and although good stocky plants may be obtained in this way, the individual trusses are much inferior to those from plants which have never been pinched at all. Primulas are much like stocks in this respect; pinch out the first-formed or central trusses and you have side ones in quantity, but individually they will be poor. Primulas do best in fairly light, fibrous loam, but it must be free from wireworm, as these pests quickly bore through the base of the crowns and ruin the plants. A sixth part of leaf-mould and sufficient sand or grit to keep the compost open should be added. Although the plants require a certain amount of shade, I do not believe in the practice of growing them behind a north wall, preferring a south aspect, and whitening the lights to afford protection from excessive sunshine. Primulas will stand, and enjoy, more sunlight than many are aware of.—T. B. Field.

THE LOCAL COLOUR OF GARDENS.

"Every landscape has its predominant colour," wrote a great essayist, and it is certainly true that no scene, large or small, is without its distinguishing tints; they may, and probably will, vary according to the months of the year, but to recognise and arrange harmonies with them all is one of the gardener's chief arts.

Within one garden we may find many scenes; wherever a barrier crosses ground a new aspect is created, remember; in the same way wherever a mass of tree, shrub, or plant is placed there is a new colour effect; future plantings must be done after consideration of this feature, or the result cannot be successful except by chance.

A fine lawn I once knew ended in a stretch of rock-strewn ground beneath some copper beeches; the garden-owner, noting the original ruddy background thus gained intensified it by planting Berberis aquifolium as an undergrowth, with bracken fern for its glorious autumn colouring, and a series of pillar-supported ampelopsis rising in the open spaces. A couple of flower-beds at this end of the lawn were filled permanently, one with Lilium candidum and white Japanese anemones, the other with white chrysanthemums and white roses, the carpeting of both consisting of crimson pansies and violas. As a further improvement a clump of pampas grass was set between the two beds. Altogether this garden scene was one of unique charm, created by taking full advantage of the "local colour" of the copper beeches, and using it to show up white blossoms.

In many a lawn landscape, where shrubberies abound, the predominant colour effect will, of course, be green; to accentuate this is often advisable, and a square arbour made by training hops over green-painted lattice walls, is a satisfactory beginning, to be followed by a hut of green-painted deal climbed by ivy. Now, in the midst of this cool, leafy scene how gorgeous will be the show made by a large garden basket filled with scarlet pelargoniums. It may, however, be best, if the garden is a hot glaring one, to keep the green nook in it as a refreshing spot for the eye; in this case all other than green shrubs should be removed from the vicinity, and their places filled up suitably. Giant foliage plants, such as rheums and gunneras will prove useful also.

Where a portion of the garden is in the close neighbourhood of red brick this somewhat violent colour must infallibly be taken into account; to locate pink or crimson roses, for instance, there, is to produce a discordant appearance that no artistic person can admire, yet scarlet walls are frequently climbed by cherry-carmine Reine Marie Henriette and arches close by are wreathed in the vivid blossom-laden branches of Crimson Ramblers!

Sometimes we find that white flowers and silver variegated shrubs have been largely used near white walls; in this case I would advise the strengthening of the casual result; white bedding and bulbous plants, white plumed spiræas and grasses, with perennials of white foliage such as cerastiums, agrostemmas, and pinks, would soon create a distinctive white garden, aided by such shrubs as Acer negundo variegata, Cytisus albus, Viburnum opulus, and deutzias. White stone urns, and possibly a statue, or fountain also, would improve the scene.

It is often by adding to local colour that the most striking garden landscapes are formed. M. H.

BUDDING ROSES.

There are few amateurs, lovers of the Queen of Flowers, who do not like to point with pride to their successful efforts in the operation of budding roses, and as the season is near at hand for this interesting work a note on this subject may be acceptable, especially so after such a glorious display of roses which this season so far has produced.

There are several varieties of stocks which may be grown from cuttings, including the briar stock for dwarf roses. Cutting briars we find in our soil answers best for most varieties of the roses grown as dwarfs, while the briars procured from the hedgerows are the best for the budding of standard roses.

With the unusually hot weather experienced during the past month the wood of both stock and scion should be in good condition for budding, and with the welcome advent of much-desired rain, which need to be in copious showers, the sap will soon flow freely. It is almost useless to attempt budding until the sap is circulating so freely that the bark will part readily from the wood. It will take more than the average amount of moisture this season before this will be the case and the operation can be satisfactorily performed.

Take the buds from well-ripened shoots of this season's growth, but in removing the woody part care must be exercised that the bud is not injured in the basal part, or it will not grow after being inserted. In taking out the bud the leaf-stalk at the base should be left, as being useful when inserting the bud, and also forming some partial protection after insertion. The buds should be prepared for insertion, and placed in some moisture before cutting the bark of the stock to prevent any undue evaporation of sap. This is a most important matter, because if they are allowed to become dry before insertion, the results will not be satisfactory.

Having the buds ready, a T-shaped cut in the bark of the stock should be made. Then carefully raise the bark with the handle of the budding knife, and insert the bud. If many stocks have to be budded the work will be greatly expedited if an assistant follows behind and binds in the buds. This is best done with cotton or soft raffia. In binding in the bud care must be taken that the eye of the bud is quite free of the binding material when the operation is finished.

Dwarf stocks should be reduced to one good shoot on which to bud, and the bud should be inserted as low as possible by removing a little of the surface soil. When the budding is done low down the planter can cover the union when planting the roses without burying the roots too deeply.

Standard stocks should have buds inserted on several shoots, as a plant is formed more quickly. Divert the sap to the base of the bud by pinching or partly breaking off the shoot which has been budded. From two to three weeks after budding, according to the weather experienced, examine the binding, and should it appear to be too tight, loosen it, gradually removing it altogether after the bud is growing.

In the selection of varieties for budding each rosarian has his own especial favourites, and at the present time there is sufficient to satisfy the most fastidious in dwarfs, standards, half-standards and weepers, while the wealth of bloom this season has seldom been equalled.

T. H. Slade.

Poltimore Park Gardens.

THE KALMIAS.

The genus Kalmia is included in the great natural order Ericaceæ, which is at once suggestive of lovely flowering shrubs, for it is remarkable what a large percentage of plants which are included in the order are of decorative value. Among the numerous groups which compose ericaceæ, kalmia certainly takes a foremost place, for, although the species are few in number, all are extremely ornamental when in flower, whilst some, especially K. latifolia and K. angustifolia, are well worth attention by reason of their evergreen foliage. The genus is essentially American, and the species are confined to the northern part of the continent.

Like other members of the Erica family, the kalmias are somewhat fastidious with regard to soil, requiring a light, sweet, open compost, which never becomes really dry. The very best material for their requirements is sandy peat, while they also thrive excellently in sandy soil into which a little peat has been dug. Although it is quite possible to grow them well in loam, it is highly necessary that the loam should contain no lime, or, if lime is present, it must be only in very minute quantities, and it is simply courting failure to plant them in ground highly impregnated with lime.

Though sometimes met with in good condition in positions exposed to full sun, the kalmias, like the rhododendrons, attain their greatest perfection in places where shade is provided during the hottest part of the day. When planting, care should be taken to keep the surface roots well up, and, instead of covering them with soil, give a dressing of half-decayed leaves. Round the sides of the root mass the soil should be trod quite firm, loose planting being very detrimental. Propagation of the smaller growing ones, K. angustifolia and K. glauca, is by division of the clumps and by layers, while the larger growing species is raised most successfully from seeds. The most objectionable item that can be raised against the kalmias is their slow rate of growth, for it takes a long period to raise really good examples of K. latifolia from seeds, hence its comparative scarcity and rather high price.

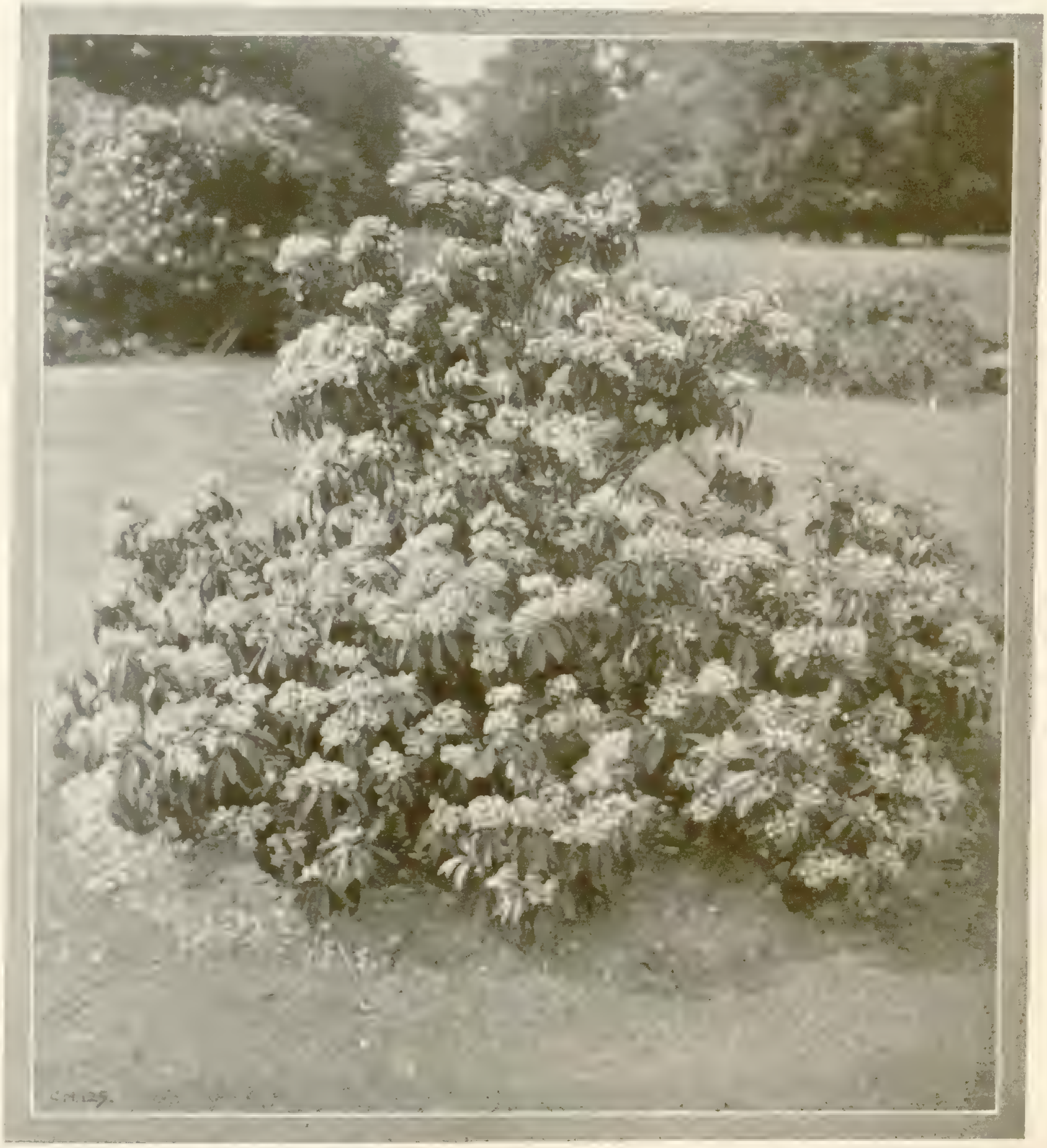
The species most often met with are K. angustifolia, K. glauca, and K. latifolia, and although one or two other species exist it is not possible to obtain them from trade establishments.

K. angustifolia is widely distributed from Canada to the Southern States, and is usually met with in swamps and bogs, though it is also found in rocky ground in the vicinity of mountain streams. Under cultivation it rarely exceeds a height of from 2 to 2½ feet, but forms a wide mass, adding annually to its diameter by means of underground stems. The leaves are evergreen, but are rather sparingly produced. They are small and narrow, being scarcely more than one inch long, and half an inch wide. The flowers are red, half to three-quarters of an inch across, and borne in axillary clusters from the end of May onwards for six to eight weeks.

Several varieties are in commerce which differ from the type, either in stature or colour of flowers. The most distinct are: K. a. glauca, distinguished by the bluish or glaucous tint of the foliage. K. a. nana is a variety of compact habit growing from 6 to 9 inches high. K. a. ovata, a form with larger leaves and more robust habit than the type. K. a. rosea.—This is, perhaps, the prettiest of all, the flowers being a pretty shade of rose, and the whole plant very floriferous. K. a. rubra is recognised by its deep red flowers. The common name of Sheep Laurel is sometimes applied to the species, the name, according to Loudon, having arisen through the branches and leaves being poisonous to sheep. Kalmia angustifolia was introduced about 170 years ago.

K. glauca was introduced about 1767, and was an early plant to be honoured by a plate in the "Botanical Magazine," the illustration occurring at tab. 177. The species is a dwarf grower, being more frequently met with below than above 2ft. in height. It is of rather dense habit, and bears small oblong leaves, with revolute margins and glaucous under-surfaces, the latter being the reason for the application of the specific name. The flowers are pale red in colour, about half an inch across, and borne in corymbose heads from the points of the branches. When in full flower during May and June it forms a very striking feature and impresses one with its virtues for a position on a lawn where a neat, free-flowering shrub is required. It is met with in many parts of N. America.

K. latifolia is, for many purposes, the most useful species of the genus, for, in addition to being very beautiful when in flower, its large firm leaves stamp it as a useful and ornamental evergreen. Under favourable conditions it attains a height of 10ft., but more frequently it is met with as a bush of half that height. Its distribution is very similar to that of K. angustifolia, being found from Canada southwards to Carolina. It has been in cultivation in English gardens for nearly two centuries, and Loudon reports that Mr. Peter Collinson was the first person to grow it successfully, whilst Mr. Catesby is said to have been the first person to flower it, this event occurring in his garden at Fulham in 1741. The leaves are rhododendron-like in appearance, more or less oval, and three to five inches long, with moderately long petioles. The flowers are white, delicately tinted, and spotted with pale pink, and are borne in large terminal heads in June and July. Several varieties have been given distinctive names, such as myrtifolia, with narrow leaves; polypetala, with many divided petals, and latifolia, with broad leaves.



[Photo: F. Mason Good.

A FINELY-FLOWERED SPECIMEN OF KALMIA LATIFOLIA.
Flowers soft pink.

For people who prefer common names to those of botanical origin, this shrub may be spoken of as the Mountain Laurel or Calico Bush.

W. Dallimore.

Kew.

Netherland Horticultural Federation.—At a recent meeting at Utrecht, at which all the principal horticultural societies of the Netherlands were represented, a new society, to be known as the Netherland Horticultural Federation, was founded. Upwards of fifty societies, representing the different branches of horticulture, with about 1,800 members, have joined the Federation, which will form the central representation of Dutch horticulture. Mr. R. P. Bonthus, The Hague, Holland, is the secretary.

STRAWBERRY TIME—1908.

At the time of writing the great interest of the community is absorbed in strawberries, not so much in its relation to name or kind, as fruit, brightly-coloured, large and even in berry, and temptingly served. To the gardener, however, strawberries are of much interest, although they do not appeal to his personal taste, because his office is to cater for that of others, in other words, his own tastes and palate are not officially recognised. In the matter of name and character the gardener finds often many points to interest him which the wayfarer does not stay to debate; thus varieties, whether they be new, unfamiliar, or old, are placed in their "line of inspection," and severely criticised at this season of the year. Only during their fruiting time can their merits or demerits be so satisfactorily noted for future guidance, and the enthusiast in strawberry matters now makes critical research in historical records, and decides there and then what varieties shall be given the greatest prominence in the strawberry plantations. It is true, since Royal Sovereign has taken up such large areas in field and garden there is not nearly the same enthusiastic interest in the roll of names there used to be prior to its introduction. At the same time, all gardeners do not sit down satisfied that they have everything in this regal strawberry. Evidently the Messrs. Laxton do not intend that this should be so, for they have still more names with which they hope to obtain the good opinion of their many patrons. Nor would it be fair to give credit to this well-known Bedfordshire firm for all the enthusiasm in the matter of novelty, for there are others engaged in the fascinating work of raising strawberries.

DAFFODIL FLORENCE PEARSON.

In perusing trade lists of strawberries one cannot disguise the fact that many names are chronicled that have but small—very small—following, especially among the old varieties, and the wonder is that they are included in strawberry lists, and, still more, that stocks should be propagated annually. With these, as with all other fruits, the familiar phrase applies, "Too many varieties." Not only are these old names retained, but new ones are added, with the result that the numbers may be described as legion. The public obtain an astonishingly lengthened season of supply from the great Royal Sovereign, drawn, as they are, from widely separated areas. In the home garden it would be otherwise were dependence placed on one variety only. The north border, the open bed, and the sheltered south aspect, may, we know, be utilised for the purpose of extending the supply over as long a season as possible, but this can be materially extended, even apart from favouring aspects, when a selection is made that includes varieties which ripen at different periods. Thus, while we have now exhausted the whole range of Royal Sovereign stocks, and, so far as that variety is concerned, we have no fruit, at the time of writing there are beds in which other varieties have only just opened their season. These, like Royal Sovereign, will necessarily have a shortened life, because of the extremely tropical nature of the passing summer. The latest fruits, instead of swelling, dry up, from the fact that there is insufficient moisture in the ground to support them.

One of the most useful of the later-ripening strawberries is Givon's Late Prolific, a dark, even-coloured, and sweet berry, which keeps up a supply some time later than the Sovereign type. It is, with us, small of growth, and not so very productive in yearling plants, but with increase of age and size of plant then its character, as defined by its title, is readily recognised. We regard this as one of the most commendable of late strawberries, as it embodies several good qualities useful in the private garden, and, we should say, the market field also. The Bedford proves a most acceptable midseason fruit this year, for when Royal Sovereign can hold out no longer this steps in and carries on the supplies. There is, in well-ripened fruits, a bright colour, and refreshing sweet flavour, that cannot fail to be appreciated after the acidulous Sovereigns are over. This has a good constitution, that can endure the heat and drought well, and, moreover, there is a marked freedom in cropping. Bedford Champion we have not yet fruited, but its trial favours an extension, and reviews made of Messrs. Laxton's fruit exhibits support the high opinion given it by the R.H.S. in the coveted Award of Merit.

In the private garden Fillbasket is popular because of the sweet sugary flavour of its berries, and the prodigious crops which it gives in normal seasons. On good ground a space of two feet becomes literally filled with advancing berries, so much so, that it was impossible to gather them without some portion being crushed under foot. We now allow thirty inches for this variety, which is none too much when the ground is good and fresh to strawberry crops. As a market variety, however, it is not favourably received, because of its pale colour and softness of flesh, especially following high day temperatures. We hold a high opinion of Dumbarton Castle, by reason of its intensely bright fruit, neat growth, and good constitution. In a gathered state this is a very attractive fruit, and in flavour superior to Royal Sovereign. Laxton's Latest of All has had a fairly lengthened trial and varied acceptance. Heavy, well-tilled ground is what is required to do justice to this fine variety; on thin, poor land it simply languishes for want of adequate support, and when in this state red spider attacks the leaves and crushes what little hope remained of advancement. From young plants come extra fine fruits, and in succeeding years good average samples are produced in greater quantities. Some confusion is likely to be felt in the adoption of the newer Laxton's Latest, jointly with this one. We have not had sufficient experience of it yet to form an opinion of its merits as a fruiting or market variety. The French Louis Gauthier would not, either in a natural or forced state, be received in the market, the colour of the berries not appealing to the public taste. It is vigorous in growth, and bears heavily, and by some private owners we know it is recognised as useful because it maintains a late supply. President Loubet, Progress, Laxton's Reward and The Alake each await their trial, without which no opinion can be expressed with regard to them. Cropper is claimed by the raisers to be an improved Fillbasket in size and colour, but unless there is an accompanying firmness of flesh, unpossessed by the older stock, it will certainly not oust the standard Sovereign in the market field. Certainly size and colour are distinct gains in an otherwise good strawberry, but firmness of flesh is just as desirable. In its earlier days Leader gave very fine berries, of rich colour, and a flavour certainly sweeter than the favourite of to-day, but in other respects more recent introductions are so superior that it now drops out of the race.

The once popular President, Sir Joseph Paxton, Vicomtesse H. de Thury, Dr. Hogg, British Queen, Eleanor, and James Veitch are names which the younger generation of gardeners scarcely recognise, they have all been eclipsed by the popular Royal Sovereign. Thus the newcomer, however good it may be, has to fight great odds in the race for supremacy, or even trial.

W. STRUGNELL.

Rood Ashton Gardens.

RANDOM NOTES ON DAFFODILS.

In a disastrous season like the past one it were well to recall, and be thankful for, such small mercies as we have experienced. In other words while the generality of daffodils have without doubt suffered from the extraordinary weather they had to put up with, yet there were certain varieties which were extra fine.

Among the latter none was more prominent than the one illustrated on this page, Prima Donna. It is one of Mr. Engleheart's latest productions which was purchased last year by my firm as a single bulb, the one bulb had a large offset and from the two we this season had three perfect blooms. The perianth is very firm and lasting, and measured four inches across, the colour is pale straw. The disc, which measures 1¼ inches across, is yellow, edged orange-red. I think it is quite the most remarkable flower I have yet seen; everyone seeing it for the first time has made an exclamation of surprise or delight.

Other varieties which have shown up well are Florence Pearson, a seedling of my own raising, the result of a cross between Emperor and Mme. de Graaff. It has come beautifully smooth, and very fine this year, and some blooms gathered when partly open and finished indoors have been very much admired. Pearl of Kent has been grand. I consider it to be the finest and largest white daffodil yet sent out. As grown here this year the flower was not nearly so drooping as when exhibited for its A.M. by the raiser, Rev. G. P. Haydon. The segments are as broad as those of Grandee, and are perfectly white, the trumpet is beautifully formed and prettily reflexed, and frilled at the edge. The whole flower opens almost pure white, and after a day or two indoors is absolutely perfect. The stalk is amply long enough, and the foliage is almost as strong as that produced by Emperor.

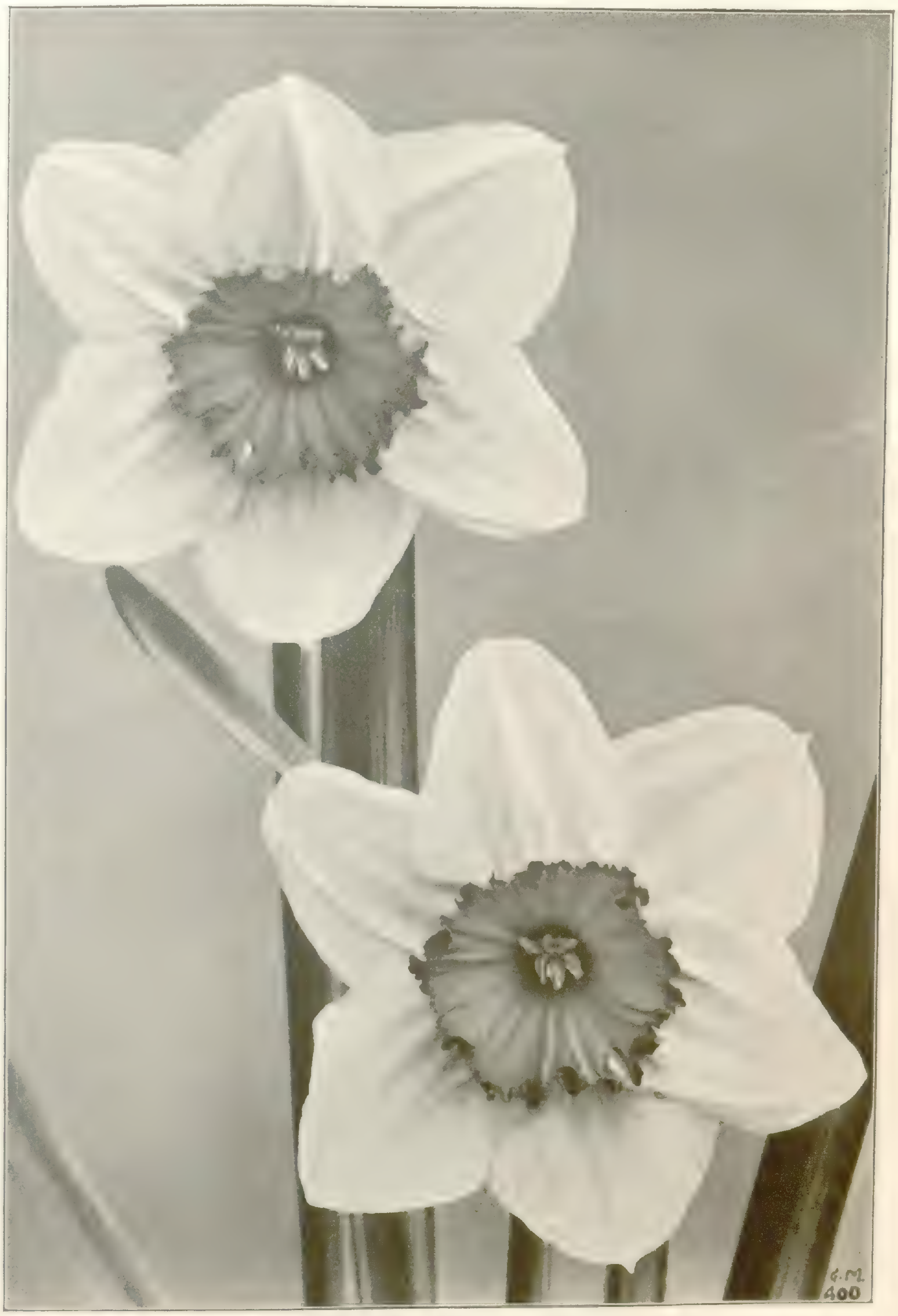
Some of my giant Leedsi seedlings have withstood the frost, snow, and rain very well. Lowdham Beauty, Hon. Mrs. Francklin, Priscilla, one with a long frilled cup (almost trumpet), tinted a delicate apricot, and having a delicious scent; and several unnamed ones have been really beautiful. Then some very good seedlings of various types have opened for the first time, and have helped to keep one from sinking into the state of despair into which the weather might otherwise have driven one.

The subject of colour in narcissi has always been a puzzling one, but this year has added to the difficulties. Though, perhaps, in one way it may have helped to substantiate one theory, viz., that in cold weather the colour is good, in hot weather it is more or less missing. This year the earlier red cups such as Lucifer, Firebrand, and the later Scarletta had wonderful colour. Then came a few hot days and all the later ones came almost entirely without colour. Albatross was yellow in the cup instead of having its red rim. Heroine, a much improved Albatross, was just the same. Beauty, Duchess of Westminster, Nelsoni major, and others were almost entirely free from any tint of red in their cups. The extraordinary part of the matter is, that some of the later blooms of the above varieties which opened in cooler weather came with much more red, and these changes all occurred in a few days. This clearly shows that while soil, moisture, and other factors undoubtedly have an effect upon colour in narcissi, yet the most potent factor is temperature.

The exhibitions of daffodils were extremely good considering the unfavourable season. Many people feared the Birmingham show would be a failure, yet in spite of frost, snow, wind, and hail a grand lot of flowers were staged, perhaps quite as good as at any previous meeting. If it had not been for our friends and rivals from the West of England and Ireland there would not have been much for visitors to see, but these growers turned up in such force and in such fine form that we poor Midlanders were hardly missed. The writer has had a very bad time of it from a show point of view, for he has not been able to take flowers to a single exhibition, for although he had at one time a grand lot of really fine things, they happened to open just in between the dates of the different meetings and could not be persuaded to last for the R.H.S. on May 12. Well, one bad flowering season will not make a real enthusiast give up in despair; he or she will lift, plant and wait—hoping—like a patient fisherman, for better luck next time.

J. DUNCAN PEARSON.

Lowdham, Notts.



DAFFODIL PRIMA DONNA.

PARSLEY.

The demand for parsley is so continuous that not less than two sowings have to be made during the year to provide for a constant supply. Even where every care has been bestowed upon it parsley will sometimes show a sickly growth, and cause a scarcity. With soils that are infested with wireworm considerable difficulty is experienced in keeping healthy plantations serviceable for cutting.

The most trying time for parsley is towards the end of winter and in early spring. Before the summer is too advanced, not later than July, a sowing should be made to form plantations for the above season, and where protection can be given them during sharp weather, such as a high, narrow south border running parallel with a wall, so that glass lights may be placed over the plants when required, success is practically ensured. I have often noticed that parsley has a partiality for the foot of a growing hedge, and will often go through the winter with less damage in this position than even under glass lights, especially if the ventilation has been at all faulty. My advice to those who are required to maintain a continual supply is to plant in several places and under various conditions, including a large pit full of plants, which may be relied upon for picking during the scarcest time.

Whatever the position selected careful choosing of the soil and its preparation is one of the important points in the culture of parsley. Give preference to a piece of ground that has carried a crop of early potatoes or other crop by which the soil has been thoroughly worked and sweetened, over one that has been hard worked by members of the Brassica family. If the site has been manured for the late crop no manure will be required when digging the bed for sowing, but supply a dressing of soot, with a little lime, and lightly work it in to allow the roots of the young plants to freely lay hold of it. This acts as a stimulant, and also as a deterrent against pests likely to affect the plants. It is not a rampant sappy growth that is required, but a firmly made growth that has been fully exposed.

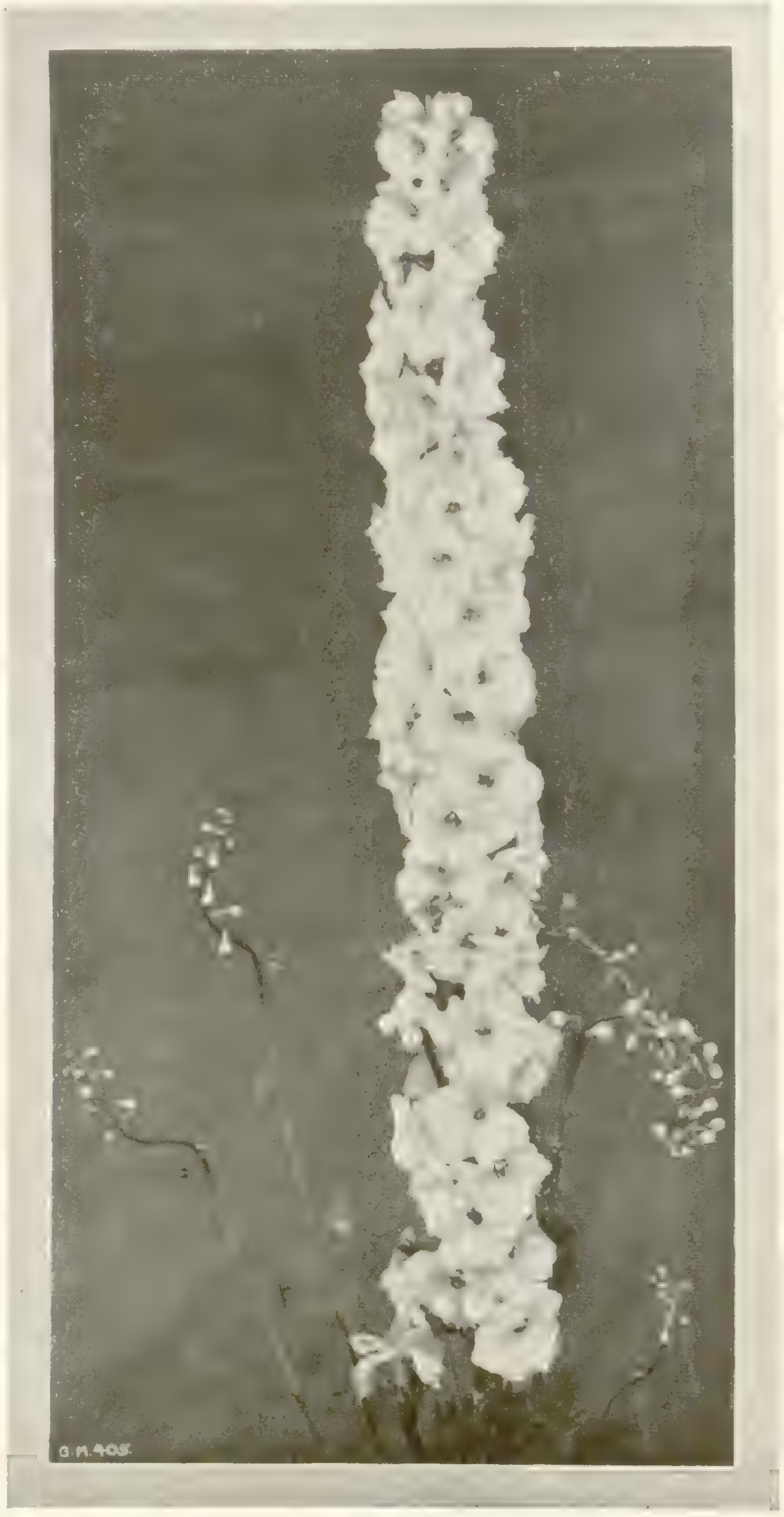
When the young plants have attained a height of two inches and have formed their rough leaves they will be large enough, and should be without delay planted in their permanent beds, which should be similarly prepared as advised for the seed sowing. I am aware that many growers sow their seed in beds and simply thin the plants to the required distance apart, but I find the extra time and trouble involved in transplanting from the seed bed is amply repaid, and the plants are more vigorous and satisfactory. It is not advisable to plant too thickly, but allow a distance from row to row of twelve inches, and not less than ten inches from plant to plant in the row; this permits proper development and encourages sturdy growth. When planting carefully retain every root possible by lifting the plants with a fork and expeditiously carrying out the work; immediately after planting give a watering to settle the soil. With good workmanship of this kind the young plants will quickly start into growth and be suitable by winter time to fill the demand.

Where there is a possibility of attacks from wireworm it is a good plan to sow dressings of soot between the rows from time to time, and water it in. Ply the hoe between the crop about once a week to disturb the crust of the soil, and remove all weeds.

The protection of the plants will largely depend upon the nature of the weather; it is not wise to resort to it too early, as parsley will stand a considerable amount of frost, and the longer protection can be avoided the hardier the plants will remain. When November is in it will be time to have protecting material in readiness that it may be promptly applied when necessary. In the case of plants in pits free ventilation is of the utmost importance, and the lights should not be closed down except when sharp frosts are experienced. On wet days they should be so arranged as to throw off the rain, and thus prevent damping. During fine weather every opportunity should be taken advantage of to remove the lights and give full exposure.

Should, through any cause, scarcity arise, there are two ways of meeting it; one is to lift a quantity of old plants, put them in boxes rather closely together, and place them in heat to force growth. The other, to make sowings in boxes under glass, in heat, and transfer the seedlings to other boxes when large enough, and grow them on in a genial temperature. This entails extra time and labour, but it is worth some trouble to keep the chef in good humour.

C. Flack.



NEW DELPHINIUM STATUAIRE RUDE.
A.M., R.H.S., July 7; Messrs. Blackmore and Langdon, Twerton-on-Avon. Colour soft pale heliotrope.

BAMBOO GROWTH.

By the courtesy of Professor F. O. Bower I recently had an opportunity of seeing a gigantic specimen of a bamboo rod in the Glasgow University Botanical Museum, and of obtaining the following particulars. This rod is no less than 105 feet long, being twelve inches in diameter at the base, and terminating in a slender point. It is cut into sections, and goes completely round the gallery balustrade. It is recorded that bamboos of this class make a daily growth of fifteen inches, and that the entire growth of such a rod is completed from the ground level in one growing season of five to seven months.

When one considers what such a growth means in cellular multiplication, and that it is not merely the terminal growth which is in question, but also the simultaneous expansion of the stem from bottom to top, the vegetable activity is seen to be immense, since millions of cells must be added daily to the structure to build it up on such lines in the time available. Rapid as outdoor growth is in this climate, especially in the case of many climbing plants, we can find no cases approaching that of tropical ones, when great heat and humid conditions stimulate activity to the utmost.

The banana may be cited as a fair rival even to the bamboo in question, since with that a small sucker, protruding from the ground in the spring, swells in the course of a few months into a crown of enormous leaves many feet long, borne on a solid trunk, possibly a foot in diameter, and seven or eight feet high to the leaf bases, while in addition an immense bunch of flowers, and, maybe, a hundredweight of the now familiar fruits may hang pendulous from the heart of it. Here again the mind utterly fails to grasp the extent of the vegetative work, the splitting up and multiplication of the innumerable tiny cells which contribute to build up such a fabric in a single season. It must be borne in mind, however, that in all such cases there is in the soil a vigorous, persistent root system, whence these rapid growths arise, and whence they draw the terrestrial supplies of nourishment from the outset. Even this adjunct, however, detracts but little from the marvel such remarkable development of plant growth involves.

C. T. Druery, V.M.H., F.L.S.

NEW PLANTS, ETC.

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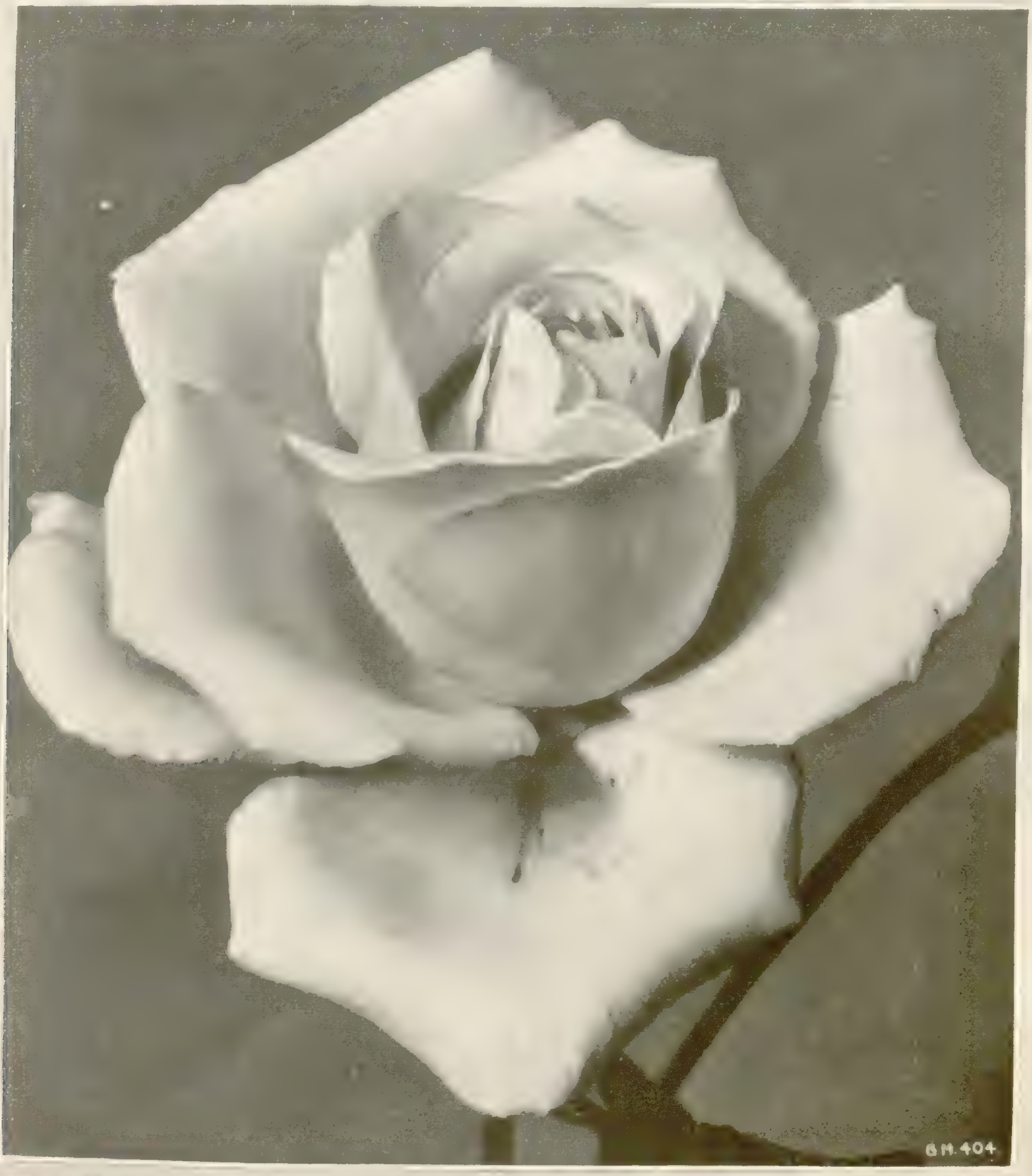
ODONTOGLOSSUM ILLUSTRE KING OF ENGLAND.

Although hybrid odontoglossums are now so numerous that ere long awards will have to be given for the best strain rather than to individuals, the variety named must rank as one of the best seen of late. Its probable parents are O. ardentissimum and O. Vuylstekeæ. The plant shown was figured in our issue of July 11, p. 542, so that there is now little need to describe the form of the flowers. The colouring is bright mauve purple, varying in shade, on a whitish ground. F.C.C., R.H.S., July 7. Mr. H. S. Goodson, Fairlawn, West Hill, Putney.



NEW H. T. ROSE MRS. DAVID JARDINE.

A.M., R.H.S., July 7; Messrs. A. Dickson and Sons, Newtownards. Colour rosy pink.

ODONTOGLOSSUM ELEANOR WESTONBIRT VAR.

A most elegant orchid, the result of crossing O. cirrhosum with O. Uro-Skinneri. The branching spike of comparatively small flowers is strikingly effective as well as most graceful. Both flowers and spike take most closely after O. cirrhosum, though the colour is different. The sepals and petals are soft creamy-green, thickly spotted all over with dark red-brown; the lip is white, freely speckled with dark red. A.M., R.H.S., July 7. Lieut.-Colonel Holford.

LÆLIO-CATTLEYA CLIVE MAGNIFICA.

A particularly handsome and finely-formed variety of the fine hybrid produced from Lælia præstans and Cattleya aurea. The blooms are of large size, with ample sepals and petals of a warm rose-purple hue, and a very large, bright crimson lip with old gold markings in the throat. F.C.C., R.H.S., July 7. Mr. H. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester.

ROSES.

Mrs. David Jardine.—This promises to be one of the finest hybrid tea roses sent out from Newtownards. It is of perfect shape, broad-petalled, substantial and full, and it has good stems and foliage, and holds itself up finely. The colour is clear soft rose-pink. It is a beautiful and distinct rose, and should prove useful alike for the market, garden, or exhibition. A.M., R.H.S., July 7. Messrs. Alex. Dickson and Sons, Lim., Newtownards.

G. C. Waud.—A large-flowered and brilliant H.T. rose that adds a new colour to this useful class, and hence will be greatly welcomed. We find the colour difficult to describe; rosy-orange is the shade suggested. The raisers' description of "glowing orange-vermilion," is apt to be misunderstood. Anyhow, it is a fine bright, broad-petalled rose. A.M., R.H.S., July 7. Messrs. Alex. Dickson and Sons, Lim.

Molly Sharman Crawford.—A lovely tea rose with full high-centred flowers of beautiful form and sweetly scented. The colour is pale creamy white. A.M., R.H.S., July 7. Messrs. Alex. Dickson and Sons, Lim.

Florence Edith Coulthwaite.—Though not so high centred as the other varieties, this charming H.T. rose has a combination of colour that appeals to everyone. The ground colour is deep cream, and on this is laid the most exquisite shadings of rose, the tips of the petals having a rich rose flush. Very fragrant. A.M., R.H.S., July 7. Messrs. Alex. Dickson and Sons, Lim.

BEGONIAS.

Frilled Queen.—A fine development of the frilled single begonia. The flowers are a lovely shade of light pink, and have their edges charmingly frilled or ruffled. A.M., R.H.S., July 7. Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath.

Duchess of Connaught. — This bold and handsome double begonia has large, well-defined flowers of a brilliant crimson-scarlet hue. A.M., R.H.S., July 7. Messrs. Blackmore and Langdon.

DELPHINIUMS.

Statuaire Rude. — A superb delphinium with large, very double flowers, well set on a long regular spike, that is neither too dense or too loose. The colouring is soft pale heliotrope, a most pleasing shade. A.M., R.H.S., July 7. Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath.

Progression. — A distinct variety with a good spike of double white, cream-centred flowers. A.M., R.H.S., July 7. Messrs. R. Wallace and Co., Colchester.

TUNICA SAXIFRAGA FL.-PL.

A pretty little rockery plant that has recently caused quite a sensation on the Continent. It differs from the type in having its small lilac flowers finely doubled. A.M., R.H.S., July 7. Mr. G. Reuthe, Keston, Kent.

VIOLA ERNEST NEEDHAM.

A large-flowered fancy variety with a wide margin of soft violet round the white regular segments. A.M., R.H.S., July 7. Messrs. W. Artindale and Son, Nether Green, Sheffield.

HYBRID BERRY LOW JUNIOR.

This new fruit, resulting from a cross between the Loganberry and the Blackberry, is very richly and sweetly-flavoured. The berries are black, about the size of those of the Loganberry, but rather more pointed. A.M., R.H.S., July 7. Messrs. Hugh Low and Co., Bush Hill Park, Enfield.

THE ROUND-LEAVED REST-HARROW.

Those who are only familiar with the native ononises, or rest-harrows, would hardly recognise in the ornamental O. rotundifolia any kinship to these wildings of our own land which are so beautiful in their own way, but which are not so suitable as garden plants as this alpine species. It is, perhaps, less easily cultivated than they, but its distinctness and beauty are great, and call for the consideration of those who wish to possess good flowers of its class possessing some features of their own, and likely to give pleasure to their owner. Those qualities they will certainly secure in the possession of the round-leaved rest-harrow, which I grew for a number of years, and which always appeals to me as a distinct and pleasing plant for the border or rock-garden. It is of rather shrubby and erect-growing habit, reaching a height of from about a foot to almost two feet high, and forming a compact bush with rounded leaflets on the trifoliate leaves, and giving in summer many flowers, generally arranged in pairs, of a beautiful rose, the standards being veined with a deeper tint. Like almost all flowers with pea-shaped blooms, it is a graceful although sturdy plant.

The needs of the round-leaved rest-harrow are not exacting, but it appears to prefer, and, in some places, to require, a little shelter from cold draughts during winter and late spring. A sandy soil suits it best, and full exposure to the sun is alike appreciated. It can be increased by division, but is best raised from seeds sown in pots, pans, or boxes, in early spring under glass, and the seedlings pricked out when large enough to handle. Slugs are fond of seedlings of O. rotundifolia, and must be guarded against, or they will destroy the young plants. Seeds are obtainable from some seedsmen, and the plant is fairly plentiful in certain nurseries, but old specimens do not often transplant well.

S. Arnott.

BULBS FOR FORCING

In establishments where large quantities of cut flowers are required throughout the winter and early spring months, those produced from the various kinds of bulbs form a considerable proportion, as the flowers from many of them have long stalks, and, being of good substance, they last a considerable time when placed in water.

Daffodils.

Of all the bulbous plants none are more appreciated than the daffodils, and there is such a variety of these that a continuous supply of flowers may be had from them throughout the winter. Home-grown bulbs of all these, with the exception of the polyanthus varieties, are far preferable to those obtained from the Continent, and in gardens where a plot of ground can be set apart for their cultivation, they may be taken up as soon as the foliage has died off, and placed in a cool shed until they can be potted, or put in boxes ready for forcing. It is this early potting that produces the finest flowers with the least use of artificial heat. We grow about two acres of narcissi, a portion of which is lifted annually, and after picking out the largest for forcing, the others are again replanted. By doing this, there is an ample supply to draw from.

Many of the early kinds have now lost their foliage, therefore the sooner the bulbs are taken up the better, as they may be prepared for potting. It will be found that if the bulbs are potted early in August, and stood in the full sun, and liberally supplied with moisture, they will have started into growth before the cold weather sets in. Where a quantity of flowers are required for cutting the most economical way to proceed is to purchase from the nearest fruiterer all the French pear boxes you can, and these can usually be obtained at about eighteen shillings a gross. They are about fifteen inches long, ten inches wide, and five inches deep. If a couple of inches of rough leaf-soil or old mushroom bed manure be placed over the bottom, and covered with a rich compost, the bulbs can be pressed into this at equal distances apart. We usually plant twelve bulbs of the large varieties,such as Sir Watkin, and two dozen of the smaller ones, like ornatus, in a box. The boxes are then stood side by side in a sunny place and given a good watering to settle the soil, after which they are covered with about four inches of leaf-soil that has been passed through a half-inch sieve; this, being light and warm, allows the heat to penetrate, and if kept constantly moistened growth is robust. A thousand boxes do not cover a very big space, and as they are so portable they may readily be transferred from one place to another.

Narcissi treated thus are sure to give satisfaction; the flowers are large, of fine substance, having stout stems that hold them well up. Such varieties as Sir Watkin, Emperor, Golden Spur, Maximus, Horsfieldi, and all that class producing stems from a foot to fifteen inches in length are of much value for the production of flowers.

Spanish Iris.

These beautiful flowers are so easily grown, that good batches in separate colours should be planted in boxes as soon in the autumn as possible. To grow good bulbs for forcing a light rich soil and an open situation are essential. The bulbs should be planted in beds about four feet wide, allowing about four inches between the bulbs. When planted cover with about two inches of old mushroom bed material, or thoroughly decayed manure. The young growths will readily push through this in spring, and grow away rapidly, flowering freely in June. When the flowers have faded the stems should be cut off, and as the foliage dies down the bulbs should be lifted and stored away in a cool shed until they can be looked over and the finest picked out for forcing. Spanish iris will not stand a high temperature, therefore to have them in flower early they must be brought on gradually in a cool house, otherwise they will fail to bloom. They should be allowed all the light and air possible to insure sturdy blooms.

For early flowering use such varieties as Belle Chinoise, yellow; Avalanche, white; Blue Beauty, blue; and Cajanus, Cant[illegible] and Snowball. If boxed as recommended for narcissi, and covered with about two inches of light material, such as decayed leaf soil or short manure, this will both afford protection and keep the soil moist. The bulbs should not be covered more than a couple of inches, or the young growths will become spindly. When potting or boxing do not overcrowd the bulbs, or they will fail to bloom freely. Bulbs that have been forced degenerate very much, and are very little larger than the offsets from the larger ones, but if planted in the open in beds of light rich soil they will increase in size rapidly.

Freesias.

These are not hardy in this country, but small bulbs planted in a cold frame in the autumn and protected from frost will increase very much in size by the end of the summer, when they should be taken up, selecting the largest for potting, and replanting the smaller ones for another year. Bulbs grown thus usually give good results. A few thousands may be grown in a very limited space, but it is not well to overcrowd, or the bulbs will not swell out satisfactorily. Most people know freesias, but not all can grow them to perfection. When in full growth they require water frequently, and at no time must they be kept in a close temperature, or the flowers will be of but poor substance.

We have for some time grown our bulbs for forcing in cold frames during the summer, and when ripened they are lifted and replanted, so a good stock of fine bulbs is always at hand when required for potting, and if these are kept in cold frames they may be introduced into a gentle heat as required.

Gladioli.

There are among the early-flowering section many beautiful varieties with delicate flowers, but, like the freesias, they are not hardy with us. They may, however, be grown by the thousands in a very simple manner, and when thus cultivated they provide a wealth of flowers for cutting. The following is the mode we adopt for such forms as The Bride, Rosy Gem, Cardinalis, Fairy Queen, Blushing Bride, and [illegible]

Temporary frames are made, and the soil used is of a rich, light sandy nature, and in this the bulbs are planted in autumn from four to six inches apart according to the variety. When severe weather sets in the frames are covered with litter to protect them from frost, and when the mild weather returns they are uncovered so that air can be admitted. In this way they are not only protected from frost, but are brought forward so that by the time it is safe to leave them uncovered they have grown a good height, and succeed those grown in pots. Not only [illegible] but they keep up a supply of bulbs to select from for forcing. Some of these varieties when grown under glass are most beautiful when in bloom during the spring months. They will stand much forcing, but when brought on gradually they will give a wealth of flowers of a choice character that last well when put into vases in the rooms.

Ixias.

One is often puzzled to understand how it is that these are not more generally grown. The flowers, though small, are very attractive, being of such remarkably rich and varied colours, and as they are borne on long, wiry stems they form objects of rare beauty. To grow these to perfection, so as to have them in bloom early, a cold frame is necessary, as the flowers, when grown in the open, are often spoiled by the cold winds, and the foliage injured during severe weather.

The bulbs should be planted two or three inches apart in light, rich, sandy soil, about October. During the winter protect them from frost, but whenever the weather is mild remove the lights or ventilate freely so that the plants may grow as sturdily as possible. During May they will give a wealth of their brightly-coloured flowers.

MESSRS. FRANK CANT AND CO.'S EXHIBIT OF ROSES AT HOLLAND HOUSE.

This very fine exhibit of garden and exhibition roses was one of the features of the Royal Horticultural Society's Exhibition at Holland House, last week. It was deservedly awarded a Gold Medal.

For pot culture they are also useful. The bulbs ought to be potted up early in light, rich soil, using pots about five inches in diameter, and putting eight or ten bulbs in each. The pots should be stood in a cold frame and given a good watering to settle down the soil, but, like the freesias, they should not be covered, otherwise the growth will be spindly. Protect from frost during winter, and to induce them to flower early remove to a shelf in the greenhouse in February or March, according to the time they are required to bloom.

Tritelias.

Many people are acquainted with T. uniflora as a rock plant, which produces its charming flowers in early spring in the open. When well grown the stems are from six to nine inches long, carrying a single flower of a very peculiar shade of white and blue, and beautifully fragrant. When grown in pots under glass the flowers are very attractive, standing well up above the grass-like foliage. The bulbs should be grown in an open situation, in a light rich soil, and as the foliage dies away early the bulbs ought to be taken up as soon as they are ripe. If intended to flower early pot them up as soon as possible and stand the pots in a sunny position, giving them a liberal watering, but do not cover the pots as in the case of narcissi. When rooted introduced them to gentle heat, when they will bloom freely during the winter months. The bulbs are small, therefore a dozen or so may be planted in a five-inch pot, and when in bloom they make very pretty indoor decorative plants.

In addition to T. uniflora there is T. uniflora violacea, which, instead of being white shaded with blue, has the flowers blue, striped with violet. Those who have not grown these in pots would do well to give them a trial, as they are of such easy growth there is but little fear of their failing to give satisfaction.

H. C. Prinsep.

Buxted Park Gardens.

Mint.—This herb is in request almost daily; and in some gardens it grows like a weed, while in others it send up thin weakly shoots, and only just manages to exist. New beds should be made annually, and the best method is to put in cuttings about six inches long on well-worked ground this month, shading them from the sun with tiffany, and damping them over each evening, when they will soon begin to form roots and take care of themselves. For forcing, cuttings should be inserted in boxes, at the same time using any old potting soil, placing the boxes behind a north wall, and watering them as required.—T. W. Birkinshaw.

SWEET PEA JOTTINGS.

If anybody had a lingering doubt as to the enthusiasm of sweet pea-lovers that doubt would have been expelled had such person accompanied the expedition to Reading University College on Friday last to inspect the National Sweet Pea Society's Trials, so ably conducted there by Mr. Chas. Foster. About fifty members attended, and they discussed sweet peas, novelties, awards, mixed stocks, and the like, in the keenest and best-tempered manner possible. The social side of these inspections is never forgotten, and on this occasion Mr. Leonard Sutton, with his usual thoughtful hospitality, entertained the party at lunch in the College Hall, and in the afternoon Mr. Owen Ridley, chairman of the College Council, and Mr. C. Foster provided tea.

The official inspection of the trials by the Floral Committee was made on Thursday evening and Friday morning, July 9 and 10, and it speaks volumes for the enthusiasm of the experts, and their eagerness to do all that lies in their power to make the work of the National Sweet Pea Society effective and valuable, that the members of that committee came hundreds of miles to fulfil their duties without fee or reward. Mr. Malcolm came from Duns; Mr. M. Hitchins from St. Austell, Mr. T. Jones from Ruabon, Mr. G. Herbert from Winchester, Mr. T. Stevenson from Addlestone, Mr. J. M. Bridgeford from Cricklewood, Mr. S. B. Dicks from Norwood, Mr. J. Watson from Kingston, Mr. Herbert Smith from Birmingham, Mr. Andrew Ireland from Marks Tey, and the chairman, Mr. W. P. Wright, from Lyminge, in Kent. The only absentee was Mr. J. Jones, of Wem, who was prevented by indisposition from being present. So far as I am aware, no other floral society holds independent trials, and none other bases its awards to novelties upon the behaviour of the varieties at extensive and well-managed trials.

The work of the committee is not light. It includes granting certificates or awards of merit to promising novelties that are distinct, or an advance on older forms, and that are practically true in the trials. Any stock containing over 5 per cent. of rogues stands no chance of an award, however fine the correct variety may be. This work will safeguard sweet pea lovers and prevent much disappointment, and it will also deter raisers from sending out unfixed varieties. As the work of the society becomes better known and more widely understood the membership will increase, because all will recognise that only by the continuation of such work can the interests of the raiser, the seedsman, and the buyer be properly safeguarded.

In the matter of awards the Floral Committee exercised great discretion, and wisely so. The silver medal for the best novelty of the year, together with a first-class certificate, fell to Messrs. G. Stark and Son, Great Ryburgh, Norfolk, for a brilliant waved scarlet variety, named George Stark. The Messrs. Stark have for several years been hard at work on scarlet waved varieties, and their efforts have now been crowned with success. Mrs. Henry Bell, a beautiful pink variety, with creamy keel, annexed a F.C.C. for Mr. Robt. Bolton, of Carnforth, and Mrs. Andrew Ireland, a lovely waved bicolor with splendid rosy standard and pale wings, secured a F.C.C. for Messrs. Dobbie and Co., and thus fulfilled my own expectations of this variety. Constance Oliver, pink with creamy bases to the segments, is a charming variety from Mr. Lumley, and Paradise Ivory, a creamy variety with a faint pink tinge, from Miss Hemus, each secured an Award of Merit.

There were over three hundred rows of sweet peas at Reading, and, naturally, there were many beautiful novelties besides those that obtained honour. The King, a very large waved form of King Edward VII., is a glorious variety, scarcely fixed enough yet, but Messrs. Dobbie and Co. have the best stock and type of this sweet pea. Chrissie Unwin, a glorified Coccinea, is very beautiful, and is a charming rosy cerise sweet pea that needs another season's fixing. Etta Dyke stands ahead as the best white waved variety, in my estimation. Kathleen McGowan, best described as a waved Flora Norton, is a lovely blue, and it is almost true, so that a year or so hence it should prove a fine novelty for Mr. Breadmore. A. B. Bantock is a fine upstanding flower with a rosy lavender standard; it is from Messrs. Bakers. These are all worthy of special note.

A FINE VASE OF SWEET PEAS.
Exhibited by Mr. C. W. Breadmore, Winchester, and showing good style of arrangement for home or exhibition.

The weather was not altogether kind on Friday, July 10, and for some part of the afternoon the trial ground presented a curious spectacle, viewed from a short distance, as about fifty umbrellas seemed to have been suddenly gifted with locomotive power. But the weather on Saturday was splendid, and a long day was again spent among sweet peas, this time in Essex, at the seed farms of Messrs. Hurst and Son, and Messrs. Dobbie and Co., respectively at Kelvedon and Marks Tey. The party was even larger than on the previous day, notwithstanding that many had to reach Liverpool Street in time to catch the 8.45 a.m. train.

The first visit was to Messrs. Hurst and Son's grounds, where everyone was delighted to see Mr. N. N. Sherwood hale and hearty again after his long and trying illness. No fewer than five hundred rows of sweet peas were here to be seen, these representing the stocks of something like forty tons of sweet peas. It was a seed grower's trial conducted solely for the purpose of testing quality and genuineness, and in no sense conducted for the purpose of producing large blooms. The trial was a most interesting one, and as in some cases there were three, four, and five stocks of a variety, the fixity of some was as pleasant to see as the mixity (to coin a word) of others was painful. A big wholesale firm must keep a sharp eye upon its growers, and this is one of the methods by which it does so. Taking the variety Mrs. Collier as an example, there were several pure rows, another with one rogue in it, and yet another with almost all the colours in the range of sweet peas. The grower of the latter stock is sure to lose money, as his untrue stock is worthless, and would bring any seedsman into trouble.

Well, we inspected the sweet peas; again we admired Chrissie Unwin, and also the 300 yards run of Messrs. Hurst's St. George. We admired the newly-selected, large-flowered nemesias and the hundreds upon hundreds of rows of culinary peas, English, Scottish, and Continental. I was very greatly impressed by the admirable galvanised wire supports used so extensively by Messrs. Hurst and Son for their culinary peas. These are stiff and strong and of various sizes, and they stand firm by means of a wire foot at each end, and by means of slender iron rods thrust through the loops of the top and bottom wires and driven about a foot into the ground. Unless I am very much mistaken this means of support will come very largely into use among amateurs who find it difficult to obtain stakes. The first cost is about six times that of sticks, but the latter last one year and the wire supports are good for from ten to twenty years.

After the inspection, luncheon was served in the large old barn, and ample justice was done to the generous hospitality of Mr. Sherwood and Mr. W. Cuthbertson. After lunch Mr. Sherwood proposed the "Continued success of the National Sweet Pea Society," observing that he was proud of the fact that the society was born on his grounds, and pointing out that as a result of the society's work, the trade in sweet pea flowers and seeds had become a great industry. Mr. Cuthbertson, the president, said it was no use being president unless able to command, and he therefore called upon the hon. secretary to respond. The hon. secretary obeyed dutifully, and drew special attention to the work of the Floral Committee, the weeding out of worthless varieties, the trials, the steady increase of membership, and the many advantages attaching to membership. Mr. Arthur Sutton proposed "Our Hosts," and in an excellent speech, through which ran a rich vein of humour. He stated that Mr. Sherwood had been treasurer from the beginning of the society, and that Mr. Cuthbertson, with the late Mr. Richard Dean, first suggested the celebration that led to the founding of the society. Both Mr. Sherwood and Mr. Cuthbertson suitably replied. The former saying that if ever the society should fall on evil times he would be quite prepared to see it through.

At Mr. Sherwood's request, the party drove to Prested Hall, his house, but when brakes, traps, and motor cars were all ready to start the photographer was requisitioned, and then, on reaching Mr. Sherwood's home, the members were again photographed. The next item on the programme was a drive to Marks Tey, about three miles further east, and here, on Messrs. Dobbie and Co.'s grounds the finest sweet peas seen during the two days were found. Finely cultivated and smothered in bloom the large trials and [illegible] growing for seed astonished all who had not previously seen them. The stocks were wonderfully true, and it was evident that ing had been done. I thought [illegible] Mrs. Charles Foster could not [illegible] but here it was splendid and quite [illegible]. Mrs. H. Bell was greatly admired, as [illegible] Dyke, The King (very fine), Mrs. Andrew Ireland, Chrissie Unwin, Mid-blue, Miss H. C. Philbrick, the charming silvery-blue Mrs. Bieberstedt, and a splendid stock of John Ingman.

The large breadths of seedlings representing three generations of crosses proved a great attraction, especially to those raisers who believe that Mendel's law applies to sweet peas, and that by its careful observance the fixity of a variety can be secured in a reasonable time. But whether this is [illegible]. Messrs. Dobbie and Co. have a [illegible] of seedlings to select from for [illegible] trial, and the firm evidently believes the real sweet pea boom is still to come. I believe they are right, and, as Mr. Cuthbertson remarked at lunch, the Messrs. Sutton and Sons have entered the field as raisers and exhibitors of sweet peas, so evidently the Reading firm believes in a great future for this popular flower.

All good things come to an end, and so the sweet pea outings concluded at Marks Tey with a most refreshing strawberry tea, thoughtfully, amply, and graciously provided by Mrs. and Miss Cuthbertson, who were heartily thanked on the motion of Mr. [illegible]. Mr. C. W. Breadmore and Mr. [illegible] remembered the work of the hon. secretary, and he too received and acknowledged hearty thanks. After tea we departed our various ways—north, south, east, and west—to meet again, if the fates are kind, on July 24. This (Monday) morning's post has brought numerous entries for the show, and as good rains have fallen in the south lately we are sure to have a big show.

CHARLES H. CURTIS.

Melons.—Pot on the plants that are to give a late crop, keeping them close to the glass, and giving plenty of water.—A. B. W.

DENDROBIUM CLIO.

There are several distinct forms of this most desirable secondary hybrid, derived from the intercrossing of D. Ainsworthi splendidissimum grandiflorum and D. Wardianum. The typical hybrid was exhibited by Mr. White, from Sir T. Lawrence's collection, on March 10, 1896, at the Royal Horticultural Society, the plant receiving an Award of Merit. On April 7, 1896, D. C. Lyntisfield variety was shown from Mr. F. Hardy's collection, by Mr. Stafford, and was awarded a First Class Certificate. D. C. Vine House variety received an Award of Merit April 18, 1899, and on June 5, 1900, a F.C.C.

The subject of the accompanying illustration was shown from Sir T. Lawrence's collection, and received an Award of Merit; in my opinion it is the finest of the whole series, and one of the most beautiful hybrids of the deciduous section. The sepals and petals are deep rose, shading to white in the centre. The broad white lip is tipped with purple, and has a distinct band of yellow almost surrounding the maroon-purple disc. It is of free habit of growth, but, like most other hybrids derived from D. Wardianum, it is very liable to start prematurely into growth, and the prospects of flowering are then detrimentally affected. There is plenty of room yet for hybrid dendrobiums of this class, and hybridists would do well to turn their attention more to the use of D. Wardianum. There are few hybrids from it, and these are among the finest we have in cultivation.

H. J. CHAPMAN.

Oakwood Gardens.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in THE AMATEUR'S GREENHOUSE, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London.

WORK FOR THE WEEK.

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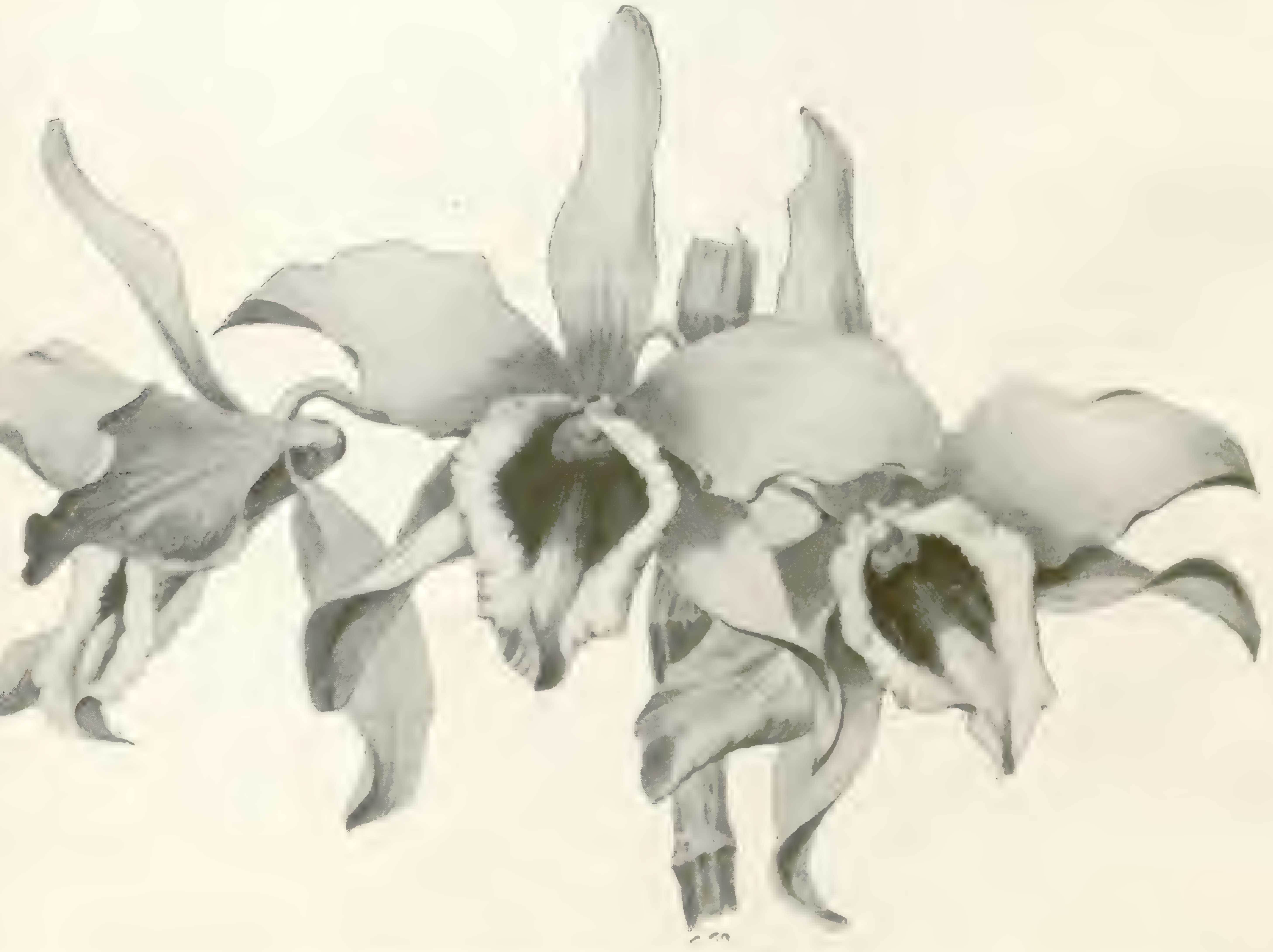
THE ORCHID HOUSES.

VANDA TERES.—There are few orchids more desirable than this terete-foliaged plant. The delicate colours of the flowers and the long-stemmed racemes renders them exceedingly useful for cut-flower purposes. They are by no means difficult to cultivate, and when they receive conditions suitable to their requirements they give satisfactory returns. The plants will always do well in a hot, moist atmosphere during their active season of growth, but to produce satisfactory results it is necessary that they should have full advantage of the direct rays of the sun. Those which have recently passed out of flower should now be repotted as necessary. They may either be planted out in boxes or better still in a bed in a heated pit. In the former case the boxes should be well drained, and, after the plants have been placed in position, the remaining space may be filled in with chopped sphagnum moss, intermixed with plenty of course sand or finely-broken crocks. Where planted in a bed, they may be arranged in order of height according to the slope of the roof, but care should be taken that the growths are placed within reasonable distance of the roof glass. In the compost for this purpose I think it a good plan to have about equal portions of fibrous peat and sphagnum, with plenty of charcoal and sand added.

SPECIMENS. — Where the plants are grown in pots, if large specimens are desired, it is advisable to place several examples together. When a suitable pot has been selected one or more teak rods should be made secure in the centre of the pot, and the plants placed at suitable distances around them. Those that have become leggy from the loss of leaves may have the stems suitably shortened before planting. The potting compost, entirely of chopped sphagnum and sand, should be made firm at the base, and a little moss may also be worked in among the



DENDROBIUM CLIO SUPERBUM.

plants and stakes higher up the stems. They should then be placed in a hot humid position, where little or no shade whatever is given. Syringe the plants thoroughly, and give every encouragement to free growth.

INCREASE OF STOCK. — The parts of plants that have been shortened may be laid in a bed of sphagnum moss in a warm, moist place, where they will form new growths, which, when they commence to root, may be potted in the usual way.

VANDA HOOKERI is even more beautiful than V. teres. It is of much weaker constitution, and is seldom seen in perfection. It should be grown under the same conditions as V. teres. The hybrid V. Miss Joaquim is a robust grower, and in every way desirable. To be successful in flowering this it should be grown fully exposed to light at all seasons of the year. When in active growth, like V. teres, it requires ample moisture, with drier and cooler conditions when in the dormant state.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

BOUVARDIAS.—Batches of bouvardias ought to be placed in their flowering pots before the end of July, to become well established before the winter months arrive. After the plants have been transferred, pinching out the points of the growth should be discontinued, and, if required for early flowering, they *may* soon be allowed to form their flower buds. As soon as the pots are filled with roots, weak liquid manure and soot-water should be applied at intervals of a few days. A further top-dressing of some approved artificial fertiliser will be of great assistance to the plants when developing their blooms. A neat green stake should be firmly fixed in the centre of each plant, and the young shoots carefully looped to it with green raffia tape.

POINSETTIAS. — Stock raised as previously advised will now be ready for shifting into four-inch and five-inch pots. I have noticed from observation that soils which contain a good percentage of iron greatly improve the colour of poinsettias, and where soil of this quality is not obtainable it is an excellent plan to mix with the compost a small quantity of iron filings. After repotting, careful attention must be given to shading and watering until root-action has commenced again. The plants, which may now be placed in cool pits or frames, should have sufficient space allowed to freely develop their foliage, for if, through any cause the foliage is allowed to suffer, their value for winter decoration is much depreciated.

CYPERUS ALTERNIFOLIUS. — Where large supplies of this plant are required for house decoration an autumn-raised batch is indispensable for early spring decoration. They are easily propagated, and quickly grown into useful plants; when they are growing freely they require abundance of water, and they will succeed well in either loam or peat.

CALADIUMS.—The earliest of caladiums are showing signs of ripening off; care must be taken at this stage to expose the tubers thoroughly to the sun, and that the drying off process is not completed too soon. As long as the foliage remains on the plants water may be given sparingly. When thoroughly ripened off, store away in a dry position, where the temperature does not fall below 50 deg. Caladiums for autumn decoration should be watered occasionally with weak liquid farmyard manure, which will greatly prolong their season of usefulness.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

FIGS.—The early house should be kept well supplied with moisture. If the roots of the trees are restricted liquid manure may be given, but its application must be guided by the state of the trees. Keep the house open day and night, and well syringe twice a day to keep all clean. Regulate the shoots to allow plenty of light into the trees. Do not overcrop the second time, and if the trees are not strong the young fruits should be removed. Pot trees will now be out of doors, and will be best plunged in ashes to keep them from becoming too dry; give them plenty of water, liqud manure, and soot-water. These, like the above, will throw up a second crop, but if not in robust health the fruits should be removed. We are now gathering a good second crop of Violette Sepor, not large, but useful fruits.

MIDSEASON FIGS will be in fruit. The syringe must be dispensed with. In very hot weather a little whitening may be syringed on to the glass. Clear water should be given to the roots at this stage. Keep air on at night, and just warm the pipes. To keep up a succession of fruits a few trees are required in a cool case or house. Stop the shoots when they have made four or five leaves. Young plants struck last autumn should be given another small shift as they require it.

FRUIT TREES IN POTS.—If these are vigorous and carrying a good crop they will be best plunged in the ground to keep them from becoming too dry, and the hot sun from scorching up the tender roots. A layer of cow manure placed inside the rim of the pot and built up will enable more water or liquid manure to be given. Soot-water if used too strong makes the fruit bitter, especially peaches and nectarines. Trees that have failed to carry a crop should be stood outside, plunged in ashes, and kept well syringed. Cherries in pots soon show the effects of over-cropping and should be well thinned out. Pears are a good crop in pots; these require an abundance of water. Plums in pots are, as a rule, not satisfactory. One of the best methods of treatment to ensure a crop is to plunge the pots in the soil and train the stem up on the single cordon principle, keeping them shifted on until they are in 10-inch or 12-inch pots, then lift them every winter and plunge them back again. The roots will find their way through the holes at the bottom, and find sufficient nutriment to ripen the crop. The varieties we have tried here with good results, and these are 12-feet high, trained up the sides of the orchard house, are Early Transparent Gage, Old Green Gage, Kirke's, and Golden Drop, and no doubt most of the others would give good returns.

EARLY VINES.—The early crop being finished, give the vines a good syringing night and morning, and once a week (if there are any signs of pests) add a wine glassful of paraffin and a little soft soap to four gallons of water, and apply in the evening. Examine the border, and if nearly dry give a good soaking of liquid manure. Vines in pots or tubs that have carried a crop should be stood outside, and the rod be tied up securely to a rough fence and freely syringed and watered; place some long litter round the pots to keep them from becoming too dry, as the rods will require feeding to plump up their buds for another season.

BANANAS. — Those now swelling their fruit will require an abundance of water, both liquid and clear; top-dress them as they come into fruit with some good loam and manure. Keep plenty of heat and moisture in the house. Pot on a few plants when ready, as the young ones grow rapidly this time of the year.

TOMATOES.—Young plants required for a winter crop should be kept close to the glass and potted as necessary. Others carrying heavy crops should be liberally treated. Keep air on the house always at the top, and keep the pipes warm at night in dull wet weather.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

ASPARAGUS SEEDLINGS.—Where seeds were sown in permanent quarters the young plants should now be thinned out to 12 inches apart, so that they may grow strong and sturdy. Destroy all weeds as fast as they appear, and if the plants seem at all dry a thorough soaking of water will be beneficial. The old beds are now covered with growths that are top-heavy, and therefore require some support, such as stakes or string stretched along the rows. By this means next season's crowns will be all the better, and if liqud manure can be given now it will assist them very much.

ENDIVE.—Some of the early-sown plants are sure to bolt, so it is wise now to make another good sowing in good rich soil. If the seedlings are thinned out when ready and planted in a rough frame, this will leave the permanent plants more room to develop, and those that are pricked out into frames will be valuable later on. Let the early plants be well blanched before they are sent in for salads, or they will be very bitter. A very simple method is to lay boards or slates over them, and this also tends to make the leaves crisp.

BEANS.—Make a late sowing of dwarf beans on a warm, sheltered border, and where it will be possible to place old spare lights over them if necessary in case of early frosts. The soil should be good, so that they may grow right away without a check. If the ground is very dry give a good watering before inserting the seeds thinly in rows about 15 inches apart. Canadian Wonder is a suitable variety for this sowing.

RUNNER BEANS should be kept well supplied with water; syringe the foliage occasionally towards evening to assist them in setting their pods. Attend to the later batch by training the young growths up the stakes. Liquid manure should be given freely when the beans are in full bearing.

HERBS.—If a pinch of tarragon seed is now sown in a box of light soil, and placed in a cold frame, it will soon germinate, and be ready for planting out in lines about eight inches apart on the herb border. Then it will become established before winter sets in; at the same time if four plants are pricked out in each of several 6in. pots, and kept outside, they will come in for forcing later. This herb is always in demand for soups, etc. Stems of mint, when just coming into flower can be cut and dried for winter use. Summer savory, marjoram, and sage may be treated in the same way. Sorrel should have the old flower stems cut off at once, so that new leaves can push forth.

PARSLEY AND CHERVIL.—Preparations should now be made for the principal sowing of parsley for winter use. Select a warm border if possible, and where the soil has been deeply dug and manured. Sow the seed thinly in shallow drills one foot apart; if the soil is dry the drills should be watered before sowing. We find no difficulty in getting good plants on our strong clay soil. Make another sowing of chervil for autumn use, but where the old plants have been allowed to seed, seedlings very often come up freely.—T. W. BIRKINSHAW, Hatley Park Gardens.

Agaves at Kew.—The cultivated collection of agaves at Kew is an exceptionally large one, and there are nearly always some of them in flower. The tradition that A. americana, the "American Aloe," flowers only once in a hundred years sometimes gives rise to excitement in the daily press when it is seen that some of these "century plants," as they are popularly termed, are in bloom at Kew, with the result that many visitors are disappointed when they learn that the flowering of these plants is quite a common occurrence at the Royal Gardens. The age at which an agave will flower depends largely upon the conditions under which it has grown; happily situated it may flower when ten years old; on the other hand, if the conditions are unfavourable to healthy, quick growth, it may take 20, 50, or even a hundred years, or it may never flower at all. Mr. Watson records, in the "Kew Bulletin" that the species that have flowered at Kew this year are the following: A. Leopoldi, flower spike 14ft. high; A. micrantha picta, 2½ft.; A. horrida macrodonta, 7½ft.; A. polyacantha, 4½ft.; A. Bouchiei, 2½ft.; A. densiflora, 5ft.; A. Scolymus, 8ft.; A. Haseloffi, 3ft.

UNCOMMON ALPINE PLANTS.

To my mind too much space is often taken up in rockeries by common species which have been allowed to grow, in many instances, at their own sweet will and at the expense of rare and beautiful kinds. Both may have been planted at the outset, and almost imperceptibly the grosser-growing kinds have ousted the comparatively slow-growing species, and taken possession of six times their allotted space. This is a matter that calls for close attention on the part of the amateur, who should take care that each individual plant is happy, and provided with breathing space. Many instances of this kind came under my notice last summer, and I remarked a splendid specimen of Lithospermum prostratum being smothered by one of the brambles or rubus, while in another part of the garden a grand tuft of that rare beauty, Gentiana acaulis, was being rendered ineffective by the altogether too close proximity of a huge plant of Funkia subcordata grandiflora.

Since I have mentioned the gentian a word may be said on behalf of G. pyrenaica, which has delightful flowers, sky blue in colour, and tufts of glossy leaves; and G. angustifolia, of a deep blue shade, the throat being marked with green spots. These thrive under the same conditions as the well-known G. acaulis, namely, an open position, and chalk or lime rubble, peat, and loam to grow in. Erysimum thyrsoideum is a native of the Eastern mountains, and revels in any kind of soil in the crevices of rockwork, fully exposed to the sun. It has silvery foliage, and its inflorescence is very similar to that of the wallflower.

Ranunculus Sommeiri is a brilliant subject, and remains in beauty over ten weeks from early in May to July. To do it justice good loam and manure should be added to its site, and in times of drought water must be supplied. It has golden-yellow flowers and leathery leaves, and is easily increased by division early in spring. It is gratifying to know that the fine Corydalis Wilsoni is being widely distributed, and that it has proved itself capable of withstanding our winters, provided a somewhat dry spot is found for it. It hails from Central China, and forms a fine mass of gold in its season, being vastly superior to older kinds. Genista sagittalis is a hardy little plant from Southern Europe, and does not exceed half-a-dozen inches in height; yellow in colour, the inflorescence is borne in leafless and terminal spikes, the foliage being ovate and lanceolate. And yet another yellow-flowered species is Mimulus primuloides, which blooms continuously from June to the end of September. This New Zealand plant requires a raised position and a peaty soil.

Primula marginata, variety cærulea, is, as its name implies, blue-tinted, and altogether an exquisite subject. It does not grow very rapidly, and every effort should be made to increase the stock by offsets so as to form fine and bold groups. Campanula Allioni is a first-rate species for the rock garden, being of tufted growth, and bearing very large purplish-blue flowers. It is impatient of drought, and should be planted in a slight cavity, or upon the level, and in a loamy, well-manured soil. Tunica saxifraga looks very charming trailing over large stones, and is exceedingly graceful. It is wonderfully floriferous, blooming from early summer until smitten by frost. A group of half-a-dozen plants becomes very effective, and the plant is readily raised from seeds in a cold frame in spring. Geranium sessiliflorum affords a striking contrast to the many large forms seen among hardy geraniums. It does not exceed an inch in height, and from this tiny growth the purple and white flowers are produced.

The Plantain-leaved Slipperwort, Calceolaria plantaginea, is described in some catalogues as being hardy, which is misleading. In the case of continued severity it suffers to the point of extinction, while our notoriously damp climate acts injuriously upon it. It should be planted in a position where it lays rather dry in winter, and can be covered, or at least the basal part, with cocoanut-fibre refuse. Some folks place a bell-glass over the plants in severe weather. Slugs are very partial to the succulent leaves, under which they hide, but soot spread thinly over the whole surface occasionally will prevent their raids.

Walter H. Aggett.

DWARF LILIES.

Among the dwarfest of all the lily family must be included Lilium elegans, or L. Thunbergianum as it is often called, and its numerous varieties. Some of them, even in the case of vigorous examples, are, when fully developed, not more than a foot in height, while others are somewhat taller. Lilium elegans belongs to the sub-genus Isolirion, or cup-shaped lilies, whose flowers are borne erect in a compact head or cluster. The nomenclature of the different varieties is by no means uniform, indeed a good deal of confusion prevails on this point. A few years ago very fine bulbs of the best varieties used to be sent to this country from Japan in considerable numbers, but the supply seems to have lessened a good deal of late. Possibly this is owing to the demand for these smaller lilies being much less than for the large, showy kinds, such as L. auratum, L. longiflorum, and L. speciosum.

A few distinct varieties are still grown by the Dutch cultivators, but as far as my experience proves it is difficult to obtain as fine bulbs now as one could purchase from twelve to fifteen years ago. An exceedingly distinct variety from Japan, known as Horsmanni or Læmatochroum, with flowers of a rich, blackish-crimson colour has not come under my observation for the last three or four years, and another from the same country with clear lemon-yellow flowers known as Alice Wilson, is much scarcer than it was at one time.

Among the varieties of which bulbs can be readily obtained from dealers during the winter months may be especially mentioned the following: Alutaceum, not much more than six inches high, with buff-coloured flowers; astrosanguineum, deep red, a taller grower; bicolor or pictum, yellow, splashed more or less with red; Orange Queen, a beautiful orange-coloured variety; Prince of Orange, very dwarf, apricot yellow; sanguineum, light red, a rather tall grower; Van Houttei, a massive flower of a rich crimson colour; and venustum, clear apricot yellow, later in blooming than the rest. Most of the varieties of Lilium elegans flower during the month of June, but the variety venustum must be classed with the July lilies.

They are all good border lilies, and succeed in a well-drained sandy loam. When grouped among dwarf-growing shrubs or in the foreground of a border they are seen to very great advantage. Beside this they may readily be grown in pots for the embellishment of the greenhouse in early summer. The bulbs are small, hence three or four should be put in one pot. All the forms of Lilium elegans flower in a perfectly satisfactory manner the first season after planting.

W. T.

ATMOSPHERIC NITROGEN AS A FUTURE COMMERCIAL SOURCE OF PLANT FOOD.

(Concluded from page 482.)

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Use of Lime Nitrogen as Plant Food.

The suitability of calcium cyanamid, in the form of lime nitrogen, for plant food depends upon two factors: (1) its cost, and (2) its action upon plant growth.

The latest obtainable figures give the cost of this form of calcium cyanamid as $54 to $63 a ton, when produced under favourable conditions. This means that each pound of nitrogen costs thirteen and a-half to fifteen cents, which is about the average cost of nitrogen in nitrate of soda. If the material is found to be a thoroughly desirable form of nitrogenous plant food, it is highly probable that its cost will be considerably reduced. This end is, of course, being worked for constantly.

For three years past, considerable experimental work has been done, mostly in Germany, in testing the value of nitrogen in the form of calcium cyanamid for use in feeding plants. As might be expected, somewhat varying and contradictory results have been reported by different investigators; but, on the whole, and more particularly in the later experiments, the reports are quite favourable.

The following objections have been urged against the desirability of the use of calcium cyanamid as a plant food:

(1) It absorbs moisture readily, and, therefore, on standing some time, it forms a hard mass, difficult and disagreeable to handle as a fertiliser.

(2) It loses ammonia on standing, and is, therefore, not suitable for application in late fall or winter.

(3) It injures soil bacteria, and especially nitrogen-gatherers.

(4) It injures seeds and prevents germination when applied at or near the time of planting.

(5) It cannot be applied in mixtures with other fertilising materials on account of its tendency to absorb moisture, and cause caking. It must therefore be applied by itself.

(6) It is not suited for top dressing, as in case of grass lands, since direct contact with grass produces injury.

(7) Forcing crops, during their early stages of growth, are sensitive to the presence of calcium cyanamid, and may be unfavourably affected by it.

(8) It does not appear to work efficiently in soils rich in humus, or in acid soils, unless used along with considerable carbonate of lime.

On the other hand, the following favourable features have been extensively reported by different experimenters:

(1) The crop-producing efficiency of calcium cyanamid, under ordinary conditions, with field crops is from 75 to 90 per cent. of that of nitrate of soda, and not much below that of sulphate of ammonia. On garden crops, the efficiency was about the same as that of nitrate.

(2) On clay soils, lime nitrogen is nearly as efficient as nitrate of soda. On sandy soils, it needs to be used with caution on account of liability to cause burning of crops.

(3) Owing to recent improvements in methods of manufacture, it is claimed that the material does not absorb moisture, and does not lose ammonia on standing.

(4) Calcium cyanamid forms ammonia in the soil quite rapidly, the rate varying according to various conditions. The conversion of its nitrogen into ammonia is reported in one case as complete in twenty-

three days in a loam soil, at ordinary temperatures. In sandy soils the change is much slower.

(5) This material can be safely used in quantities varying from 135 to 270 pounds an acre, but it should be applied eight to fourteen days before putting in crop, and thoroughly mixed with the soil to a depth of three to five inches. The injurious effects on seeds can be overcome to a large extent also by mixing the lime nitrogen thoroughly with two or three times its weight of fine dry earth or other inert material before applying it to soil.

(6) It leaves as a residue in the soil carbonate of lime, which is desirable to neutralise acidity.

We may therefore conclude that in calcium cyanamid, in the commercial form of lime nitrogen, we have a source of nitrogenous plant food which, when used with proper precautions, may do efficient work in promoting plant growth. We can, at least, regard it as a very promising material, which will be found valuable as a source of agricultural nitrogen in case we are unable to find something equally or more efficient, and, at the same time, free from the inherent drawbacks which this substance seems to possess. In this connection it will be interesting to know that the material is to be exploited in this country by the American Cyanamid Company.

Calcium Nitrate.

The second substance we will consider in relation to nitrogenous compounds prepared by the use of atmospheric nitrogen, is known under several different names: Calcium nitrate, nitrate of lime, basic calcium or lime nitrate, basic nitrate, lime niter, etc. It is a compound closely related to nitrate of soda; in calcium nitrate, we simply have calcium instead of sodium combined with nitric acid. Strictly pure calcium nitrate contains 17 per cent. of nitrogen, a little more than is contained in pure sodium nitrate. The commercial product actually contains 12 to 14 per cent. of nitrogen, since it is not pure calcium nitrate, but a mixture of this compound with lime.

Method of Manufacturing Basic Nitrate of Lime.

Briefly stated, the process of manufacturing basic nitrate of lime consists of the following steps: (1) Ordinary air is passed through a powerful electric flame or arc, resulting in the combination of much of the oxygen and nitrogen in the form of nitric oxide. (2) This nitric oxide, on exposure to air, combines with more oxygen, forming other oxides of nitrogen. (3) These last formed oxides of nitrogen, on treatment with water, form nitric acid. (4) The nitric acid treated with lime forms lime nitrate.

The materials required by this process could hardly be simpler or more inexpensive, consisting of only common air, water, and lime. A high degree of heat, produced by electric power, is the form of energy used. The details of the various steps of the process are very interesting from a technical point of view, but we do not need to consider them here.

That portion of the process in which the nitrogen and oxygen are caused to combine appears to be less expensive than the subsequent portion of converting the oxide of nitrogen into nitric acid and nitrates. In its essential elements, the process is seen to be a simple one. The only expenses to be considered are: (1) electric power, (2) lime, and (3) current manufacturing expenses. The raw material which is consumed in largest quantities, the air, costs nothing.

Many patents have been taken out in connection with the electro-chemical production of nitrogen compounds from air. The patent of Bradley and Lovejoy was exploited by the Atmospheric Products Company, of Niagara Falls, and we heard much about it a few years ago. No one could obtain more than a vague knowledge of what was being done, but we were led to suppose that the process was successful, and that soon large supplies of nitrate nitrogen would be available at our door. This company stopped work in 1904, not having succeeded in producing nitrate nitrogen at a price which would enable it to compete with our usual sources of supply.

As nearly as can be ascertained, the best results have been obtained by the Birkeland-Eyde process, which is in operation on a commercial scale at Notodden, Norway. The necessary electrical energy is furnished by water power. The company which is at the back of this enterprise has gained control of most of the available water power of Norway, and propose to increase the number of manufacturing plants as rapidly as practicable.

Use of Calcium Nitrate for Agricultural Purposes.

The chemical substance known as calcium nitrate has a powerful attraction for moisture, but this is overcome by treatment with excess of lime. I believe they use an excess of about 2 per cent. This so-called basic lime nitrate powders readily, and does not absorb moisture seriously.

The cost of basic calcium nitrate at the works, not including packing and transportation, is about thirty dollars a ton, which would furnish nitrate nitrogen at about ten cents a pound. It is expected that its cost of production will be reduced to seven and one-half cents a pound. Even adding the cost of packing and transportation, the price compares most favourably with nitrate of soda. It is probable that it will be a strong competitor with the older sources of supply.

Basic nitrate of lime has been shown by numerous experiments to be fully equal to nitrate of soda as a nitrogenous plant food. As compared with nitrate of soda, basic nitrate of lime has certain advantages as a source of plant food: (1) When basic nitrate of lime is applied to soils, it leaves carbonate of lime as a residue, and this may be regarded, in general, as of more agricultural value than the sodium compounds left by nitrate of soda. (2) Basic nitrate of lime will probably be cheaper than nitrate of soda, if it is not already. The chief question for the future would appear to be an increase in the number of factories sufficient to meet the future demands, and this will naturally adjust itself.

It would, therefore, appear that we do not need to fear any famine in the future that might come from a lack of commercial supply of nitrogenous plant food for growing our crops.

Lime nitrate, as well as nitrate of soda, has the disadvantage of bulk. For each pound of nitrogen one must pay transportation on six or seven pounds of cheap material. A further problem in the production of cheaper nitrogenous plant food is the economical manufacture of a compound richer in available nitrogen. Such a compound is found in ammonium nitrate, which is probably the most concentrated form of nitrogen that would fulfil all the demands of the problem. In this compound we have both ammoniacal and nitrate nitrogen. The total amount of nitrogen is about 35 per cent., equally divided between the two forms of nitrogen. A good commercial product containing 30 to 33 per cent. of nitrogen would reduce one-half the cost of transportation which must be met in the case of nitrate of soda or of lime nitrate. The solution of this problem must be found in the economical production of ammonia and nitric acid in the same factory. It resolves itself, in reality, into the question of producing ammonia cheaply. It is possible that calcium cyanamid may be utilised in this way, if it can be produced much more cheaply.

There is some comfort in knowing that this little earth of ours has not yet run up against any great fundamental problem, seriously affecting the welfare of the whole human race, which has not been solved in time to prevent any overwhelming catastrophe. We are optimistic enough to believe that great things lie ahead of us in many lines, and especially in future developments relating to agriculture.

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EXHIBITIONS AND MEETINGS.

Bath Rose and Begonia Show.

JULY 7 and 8.

Owing to the Royal visit to Bristol on the 9th, the Bath Floral and Band Committee were under the necessity of fixing the date of their exhibition one day earlier than was intended; and as they had decided not to hold an autumn show, they were expecting a very large attendance. On the first day some 3,500 persons passed through the tents; but on the second day the attendance suffered owing to heavy rain and thunder-storms. The Sydney Gardens, Bath, presented a gay appearance on the first day, despite the heat, which, however, was fanned by a westerly breeze.

The open classes for roses well filled the centre of the "Queen of the West" tent, wherein were staged some 1,700 blooms, in competition, the amateurs' productions being located in the tent on the lawn above the railway; their contribution numbered about 800 specimen blooms.

NURSERYMEN'S ROSES.

There were four competitors in the class for seventy-two varieties, the silver cup going to Messrs. Alex. Dickson and Sons, Newtownards, for a noble collection, containing prominent flowers of Horace Vernet (selected as the N.R.S. medal H.P.), Florence Pemberton, Marie Rodocanachi, William Shean, Xavier Olibo, Caroline Testout, Mdme. Crapelet, Mdme. E. Verdier, Comte de Raimbaud, Ulster, Duchesse de Morny, Maman Cochet, Star of Waltham, Robt. Baesler, Earl of Dufferin, Her Majesty, Ulrich Brunner, Lohengrin, Gustave Piganeau, Bessie Brown, Marie Verdier, Princess Marie Mertshersky, Ben Cant, Mildred Grant, Tom Wood, Marquise J. de la Chataigneraye, Earl of Warwick, A. K. Williams, Mollie Sharman Crawford, Ellen Drew, Dean Hole, White Cochet, Alice Lindsell, The Bride, Souv. d'Elise Vardon, Duchess of Bedford, and Mdme. Melanie Soupert. The second award fell to the King's Acre Nursery Company, Hereford; Mr. John Mattock, Headington, Oxford, was third; and Messrs. G. Cooling and Sons, Bath, very highly commended. For thirty-six trebles Messrs. A. Dickson and Sons again headed the list, the best-balanced triplets being G. Piganeau, F. Pemberton, Duchess of Portland, White Cochet, B. Brown, M. Grant, Her Majesty, Mrs. Bateman, Horace Vernet, and Marquise J. de la Chataigneraye; Mr. J. Mattock, second, and the King's Acre Nursery Company third.

Eighteen trebles was another good class, Mr. Geo. Prince, Longworth, Berks, leading with Souv. de Pierre Notting, B. Brown, Mdme. C. Soupert, W. Shean, Comtesse de Nadaillac, Mrs. E. Mawley, Mdme. J. Gravereaux, F. Pemberton, Muriel Grahame, and K. Augusta Victoria; Messrs. Jefferies and Sons, Cirencester, were a good second; and Mr. H. Drew, Longworth, third. For three dozen single trusses, Messrs. Jefferies and Sons, led, having B. Brown, Ulrich Brunner, Her Majesty, J. B. Clark, F. K. Druschki, Queen of Spain, F. Pemberton, Duchess of Bedford, Mrs. E. Mawley, Helen Keller, Marechal Niel, Mdme. J. Gravereaux, White Cochet, Earl of Dufferin, and Golden Gate; Mr. H. Drew second, and Mr. G. Prince third. One of the best classes is that for eighteen teas or noisettes, and here Mr. Prince occupied the post of honour, with Bride, Comtesse de Nadaillac, Souv. de Pierre Notting, Mrs. E. Mawley, Muriel Grahame, Souv. d'Elise Vardon, Mdme. Jean Dupuy (the N.R.S. medal tea in the open class), Nellie Johnston, Marie Van Houtte, M. Niel, Maman Cochet, and Miss Ethel Brownlow, Mr. H. Drew second, and Mr. J. Mattock third. For a dozen of any variety of light rose, the King's Acre Nursery Company led with Bessie Brown; Messrs. A. Dickson and Sons second with Mrs. W. J. Grant; and Mr. Prince third for Dean Hole. For a dozen teas the awards went to Mr. J. Mattock, A. H. Gray, Esq., Bath, and Mr. Prince, each with White Maman Cochet. For five blooms each, in a dozen varieties, in vases, the awards fell to Messrs. A. Dickson and Sons, Jefferies and Sons, and Mr. Prince, but the exhibits did not appear very effective.

For six of any new rose of 1906-7, Messrs. A. Dickson and Sons and King's Acre Nurseries secured the awards with William Shean. Displays of roses on 40ft. were veritable bowers, Messrs. Cooling and Sons leading, this firm having the advantage of being at home.

AMATEURS' ROSES.

In the amateur's division were many excellent stands, very attractive being that for a dozen hybrid teas, the first prize (silver cup) going to Mr. R. Foley Hobbs, Worcester, thus winning the blue ribbon of the show, who set up eight buds of B. Brown, J. B. Clark, Mildred Grant, Florence Pemberton, Mrs. Bateman, Mrs. T. Roosevelt, Mrs. D. McKee, Dean Hole, White Lady, Mamie, Oberhofgartner Terks, and Robert Raizeler; A. Hill Gray, Esq., and Mr. Conway Jones, Hucclecote, took the lower awards, the champion prize for two dozen varieties also falling to Mr. Hobbs, with Rev. T. G. W. Henslow, Stanton St. Quinton, Chippenham, second; and Mr. Conway Jones third. For eighteen varieties A. Hill Gray, Esq., headed the list with a lovely set, very noticeable being Papa Lambert, Dean Hole, Oberhofgartner Terks, M. Cochet, Mrs. E. Mawley, Mrs. M. Kennedy, and Mdme. J. Gravereaux; the other prizes went to G. R. Bonnor, Esq., Gloucester, and Mrs. Rust. Mr. Hill Gray further added to his honours by securing the first prizes for six triplet teas, and eighteen singles (teas); in the latter class his White Maman Cochet was selected as the N.R.S. medal bloom; the other N.R.S. medal bloom was a Bessie Brown in the stand of four triplets staged by A. S. Chapman, Esq., The Cottage, Warminster, who also scored a premier for a dozen singles. W. Garrett-Thorpe, Esq., Gloucester, led for eight trebles and six singles. Miss Fisher, Devizes, for six teas, Mr. Conway Jones being placed first for a dozen teas.

MISCELLANEOUS CUT FLOWERS.

Classes were provided for collections of roses in vases, baskets, and shower bouquets, but the heat deprived many of the exhibits of their beauty. But one collection of cut stove or greenhouse blooms was staged, the greatest displays being made by the sweet peas and zonal geraniums. Hardy perennials filled a large amount of table space, and some charming collections of carnations in stands and on boards were most attractive.

Sweet peas were certainly a fine show, Mr. Humphries, Chippenham, leading for a dozen varieties.

Decorated dinner tables numbered eight, and were chiefly dressed with sweet peas, Mr. Viner, Bath; Sir W. Howell Davies, M.P., Bristol; and Mr. F. T. Cole, Bath, securing the prizes. The section reserved for ladies provided ten exhibits; Mrs. Viner first, Mrs Colston Hall, Warminster, second, and Miss E. M. Sheppard third. Single and triple bouquets of sweet peas were presented in numbers, and other cut blooms were sprays, vases, etc.

MISCELLANEOUS PLANTS.

Plants were set out as groups for effect on 200 square feet. Major H. Doherty, Mr. W. Walles, and Mr. C. W. Mackillop divided the honours in this class. Exotic ferns were limited to a second prize dozen varieties. Gloxinias in sixes were good, Captain Gillingham leading, while some lovely veined and marbled caladiums came from Major Doherty, who also scored a premier for a table of decorative plants. For one stove plant, Mr G. Hallett was placed first for a densely-flowered Bougainvillea Cypheri; Messrs. W. J. Stokes, Hilperton Marsh, Trowbridge, second for a balloon-trained Stephanotis floribunda. Begonias in sixes and single plants were sturdy examples, F. J. Tarr, Esq., Yatton, and Mr. A. A. Walters, Bath, being the winners of the first and second cards, the first-named making a grand show of large double forms in two dozen varieties.

STRAWBERRIES, VEGETABLES, ETC.

Strawberries were of most excellent quality. For six dishes Mr. W. D. Porter, Batheaston, led with Givon's Prolific, Trafalgar, Royal Sovereign, and Fillbasket; Mr. J. Ricketts, Batheaston, second, having Eleanor, Sir J. Paxton, and Royal Sovereign. For three Mr. Prince, Longworth, took the card for large, handsome berries of Royal Sovereign, Eleanor, and Sir J. Paxton; Mr. J. Ricketts second, adding President and Princess Alice; Mr. E. J. Ricketts third. The twelve heaviest berries were Givon's Prolific from Mr. W. D. Porter, who, likewise in the class for a dozen berries, staged the same variety.

Vegetables made a fine show, the prizes offered by Messrs. Sutton and Sons, and Webb and Sons being keenly contested.

Non-competitive exhibits comprised about 80 bunches of herbaceous perennials from Mr. N. Lovis, Leversdown, Bridgwater, Somerset; carnations, centaureas, zonal geraniums, statice, etc., from Taplin and Sons, Newton Abbot, Devon; alpine plants, sweet peas, and border flowers in variety, from F. Eames, Frome; about 50 well-posed gatherings of sweet peas, from Messrs. Toogood, Southampton; and a fine assortment of delphiniums from Mr. A. A. Walters, Bath.

Edgware Horticultural Society.

JULY 11.

The executive of this society may well be congratulated on the splendid results of their vigorous and well-devised policy. Instead of providing, as in the case of many local societies, a host of small classes, in which the competition is limited to residents in the respective districts, ample provision was made for local requirements, and several classes were provided of a special character in which the competition was open to the whole of the United Kingdom. There were, for example, six open classes for roses, including two with a silver challenge cup and a cash prize as the premier award, and five open classes for sweet peas, with two challenge cups, each of the value of ten guineas. As the result there was an excellent exhibition of miscellaneous subjects, and magnificent displays of roses and sweet peas.

Roses were staged in large numbers, and in a condition considerably in advance of those previously staged this season at English exhibitions, the rains of the previous week having greatly improved the quality of the blooms. The principal trade class was that for thirty-six blooms, in which a silver challenge cup, of the value of ten guineas, and a cash prize was offered as the premier award. There was a keen contest for the first place, and in the result Messrs. D. Prior and Son had the premier award made in their favour, their blooms being of great excellence. Messrs. R. Harkness and Co., Hitchin, followed closely for second place with a fine collection, the bloom of Horace Vernet being so meritorious that it was awarded the N.R.S. silver-gilt medal for the best bloom in the show, and the silver medal for the best bloom staged in the first and second classes. Messrs. Frank Cant and Co., Colchester, were a good third. The firm last named was first for twelve teas with superb blooms, and for a collection of garden roses, which made a rich display of colour. Messrs. B. R. Cant and Sons, Colchester, were second for twelve teas with finely developed blooms, and in the class for garden roses Messrs. W. and J. Brown, Stamford, were second with an excellent collection.

There was a keen competition for the premier award, which included a silver challenge cup, in the amateurs' class for twenty-four blooms, and the winner thereof was Mr. E. B. Lindsell, Bearton, Hitchin, who had superbly developed blooms of well-known varieties. Mr. W. Leggett, Colchester, was successful in obtaining second place, and the Rev. J. H. Pemberton was third. Mr. Lindsell was first also for twelve teas with an excellent box of blooms, that of Madame Jules Gravereaux being exceptionally good; Mr. W. Leggett, who was second, also staged blooms of high quality. Mr. J. Hart, Potters Bar, was first for six teas; Mr. W. Fowler and Mr. Judd, Edgware, were first and second for four bunches of garden roses with good arrangements; Mr. Fowler obtained premier honours for garden roses; and in a second class for garden roses Miss B. Langton and Mr. H. R. Darlington, Potters Bar, were first and second respectively. In the class for five blooms of any one variety, to be shown in vases, Mr. J. Hart and Miss B. Langton were the most successful exhibitors. For twelve blooms, distinct, Mr. A. Merck was first, with Miss B. Langton a close second.

Sweet peas were of high quality, and contributed in such large numbers that they nearly filled a marquee of huge dimensions. One of the most important of the classes for these fragrant flowers was that for twelve named varieties, nine sprays of each, open to amateurs residing within three miles of Edgware. There were thirteen collections, all good, and of these three were of quite exceptional excellence. Mr. H. K. Judd, Glenhervie, Edgware, the energetic hon. secretary, was successful in winning the first prize, consisting of a ten guinea silver challenge cup and £1 10s. in cash, with a collection remarkable alike for the splendid development of the sprays and the high quality and rich colouring of the blooms. The varieties included Audrey Crier, King Edward VII., Sybil Eckford, Nora Unwin, and Helen Lewis; Mr. C. S. Layton, Thornton, Harrow Weald, was second, with a collection of exceptional merit; and Mr. R. Blair, Oakleigh House, Harrow, who was third, also had flowers of great merit.

The entries were very numerous in the class for twelve varieties, twelve sprays of each, and at the head of the several competitors was Mrs. A. Tigwell, Harrow View, Greenford, who had finely developed sprays tastefully set up; Mr. Percy Cottam, Kings Langley, was second, with flowers of high quality; and Mr. E. Bennett, Cedar Park Road, Enfield, was a good third. In a second class for twelve varieties, in which there was no limit to the number of sprays, and any light foliage could be used, Mrs. A. Tigwell was again first, with a collection possessing much merit; Mr. Scaramanga was second with good flowers of high quality that lost much in staging; and Mrs. Arnold Steer, Oak Lodge, Hatch End, was third with flowers of comparatively small size, but very effectively staged. Very interesting was the class for four vases of sweet peas, to comprise one vase each of blue, white, yellow or buff, and crimson or scarlet. There was a strong competition, and at the head of the numerous exhibitors was Mr. H. K. Judd, with splendidly developed flowers of Mrs. Collier, Nora Unwin, Queen Alexandra, and Helen Pierce.

There was but one entry in the great trade class for twenty-four vases of sweet peas, distinct, and this was staged by Messrs. W. and J. Brown, and was of so high an order of merit as to fully merit the ten guinea silver challenge cup and cash prize that were awarded it.

Groups arranged for effect were finely shown by Mr. Blair, and Mrs. A. du Croz, one being remarkable for its caladiums and the other for crotons. Gloxinias were so well bloomed as to be as near perfection as we can hope to see them, and Mr. A. Merck and Mr. H. K. Judd, who were first and second, may be congratulated on the success they have achieved. Table decorations formed a strong and attractive feature, and Miss B. Langton and Mrs. Howard Williams were first and second with beautiful arrangements of roses.

There were an immense display of vegetables, and the Misses Crossman and Mr. J. Rayner were the most successful of the exhibitors in the two classes for collections.

The miscellaneous contributions included collections of roses from the Harrow Nursery Company, Harrow-on-the-Hill; Mr. J. Lion, Stanmore; Messrs. W. Cutbush and Son, Highgate; and Messrs. W. and J. Brown.

Southend Horticultural Society.

The annual summer exhibition of this flourishing society was held at the Palace Hotel, Southend, and proved even more successful than was the splendid gathering of last year. The products in competition for the large number of prizes were so numerous as to fill the ball-room, the winter garden, the white drawing-room, and various corridors, and they were as a whole of exceptional excellence.

Roses, which are grown with exceptional success in and around Southend and Westcliffe-on-Sea, were splendidly shown by residents in and near these two popular resorts, as well as by growers from a distance. The most important of the rose competitions was that for the challenge cup, offered as the premier award in the open class for forty-eight blooms. Here Messrs. F. Cant and Co., Braiswick Nurseries, Colchester, were first with blooms equally remarkable for their large size, high colour, and superb finish. Especially noteworthy were the blooms of Florence Pemberton, Dean Hole, Mdme. Constant Soupert, and Hugh Dickson. Messrs. B. R. Cant and Sons, Colchester, were a capital second, and Messrs. D. Prior and Son, Colchester, third. Messrs. Frank Cant and Co. were also first for a collection of garden roses, and very beautiful they were in their various shades of colouring. Messrs. B. R. Cant and Sons obtained premier honours for eighteen teas and noisettes with superbly developed blooms, and Messrs. Frank Cant and Co. followed closely for second place. Messrs. B. R. Cant and Sons were also successful in occupying the post of honour in the classes for twelve trebles, twelve blooms of any one hybrid perpetual, and twelve blooms of a hybrid tea. Amateur rosarians were in strong force, and staged blooms of remarkably high quality. In the division open to amateurs, irrespective of the number of plants grown, Mr. W. Leggett was first for eighteen distinct varieties, for six trebles, for twelve teas and noisettes, and for eight teas and noisettes, three blooms of each. Mr. H. Robins, Rev. F. R. Burnside, and Mrs. Barnes were also successful in this division. In the division open only to amateurs growing not more than 250 plants, the most successful exhibitors were Mr. S. Winn, Mr. G. W. H. Armstrong, Mr. A. J. Walker, Mr. A. T. Petty, and Mr. A. Talbot. The National Rose Society's medals were awarded as under. For the best H.T., to Mr. W. Leggett, for Dean Hole; for the best H.P., to the same exhibitor, for Horace Vernet, and for the best T., to the Rev. F. R. Burnside, for White Maman Cochet. Arrangements of roses were admirably shown by ladies and nurserymen, and in the class for the latter Mr. W. G. Hatch was awarded the gold medal, Mr. A. Davey the silver-gilt medal, and Mr. H. Robins the silver medal offered as the first, second, and third prizes.

Sweet peas were staged in considerably increased numbers, and in one of the two classes for twelve bunches, Mr. Hull was first, and in the other for the same number of bunches Mr. F. E. Belcher obtained premier honours. Messrs. Saltmarsh and Sons obtained first place in the class for nine vases of these fragrant flowers. Mr. A. J. Walker, and Mr. Brown exhibited well in the class for carnations and picotees, and Mr. W. A. Voss and Mr. E. Hill staged zonal pelargoniums in a cut state in excellent form.

The successful exhibitors of groups of plants were Mr. A. Davey, Rev. R. Stuart King, and Mr. Burles, and of baskets of plants Messrs. Saltmarsh and Sons, Rev. R. Stuart King, and Mr. A. Epps; Mr. A. W. Voss, Dr. G. F. Jones, Mr. A. Epps, and Mr. J. B. Steer were also successful in one or more of the plant classes.

Fruits and vegetables were plentiful and good. Mr. W. T. Meekings, Mr. J. Burles, Mr. A. Epps, Mr. G. Murrell, and Mr. E. J. Elford were the most successful of the exhibitors in the open classes for fruits; and the prize-takers in the open classes for collections were Mr. W. T. Meekings, Rev. R. Stuart King, Mr. E. Elsdon, Mr. G. Murrell, and Mr. T. D. Coe.

Both amateurs and cottagers also exhibited well in the classes set apart for them, and their contributions greatly enhanced the interest and attractions of the exhibition. The arrangements were admirably carried out by Mr. E. A. Watts, the hon. secretary.

R.H.S. Gardens Club.

The first annual general meeting of the club was held on the evening of the 8th inst., in the old Charles Dickens' room at Carr's Restaurant, in the Strand. In the unavoidable absence of Mr. Wright, who remained busy at Holland House, the chair was taken by Mr. F. J. Chittenden, the director of the laboratory at Wisley, and the following Chiswickites and Wisleyites were present: Messrs. E. M. Bear, A. du T. Bottomley, Thomas Bevan, A. P. Caldwell, G. S. Damsell, J. Fraser, T. Frazer, W. J. Jennings, J. T. Ledger, E. Miller, N. A. Phillips, G. Pyman, W. K. Reed, H. V. Richardson, H. F. Robson, H. L. Robson, H. E. Seaton, G. E. Sery, H. Spooner, R. J. Wallis, B. Wynne, and G. S. Yeoman. Students journeymen, foremen, etc., were thus represented from the time of Mr. Wynne, who entered the gardens as a student in 1866. After an excellent supper the rules of the club were drawn up and approved and the officers for the ensuing twelve months elected. It was decided to publish at an early date a list of past and present members of the R.H.S. staff, and in order to make this as complete as possible will all who have any remembrances of old Chiswickites please communicate with the hon. secretary, Mr. R. J. Wallis, R.H.S. Gardens, Wisley, Ripley.

United Horticultural Benefit and Provident Society.

The quarterly meeting of this society was held at the Horticultural Hall, Vincent Square, on Monday evening last, with Mr. Thomas Winter in the chair. Six new members were elected, making a total increase of 45 this year. The usual quarterly grants were made to old age members on the benevolent fund. The amount of sick pay for the month was £41 18s., which is rather heavy for this period of the year. The meeting closed with a vote of thanks to the chairman.

OBITUARY.

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MR. B. GREAVES.

We regret to record the death of Mr. Benjamin Greaves, which occurred at his residence in Arthur Street, Horsham, after a long illness. Mr. Greaves, who was in his 75th year at the time of his death, had been for forty years head gardener at Broom Hall, Dorking, and he retired from his charge about four years ago. Mr. Greaves was held in high respect by his late employers, and also by those who served under him.

Sweet Peas.—Do not allow seed pods to form if a continuous supply of bloom is required. As the latest sown plants advance see that sticks are placed to them. Rows or clumps must be well mulched with decayed or half-rotted manure, otherwise should the season prove a hot, dry one, they will be soon over. Note any of the new varieties and compare them with the older ones, as it does not always follow that the newest are the best.—E. F. H.

FORCING RHUBARB WITH ETHER.

Rhubarb is a plant that is being forced for winter use more and more every year. The method of forcing is very simple. Good strong, thoroughly established, three or four-year-old clumps are dug in the fall. These are stored in boxes or cold frames until required for use. They are then taken into the forcing house and placed close together in boxes or in beds underneath the benches. Soil is thoroughly packed between the clumps and a covering of from two to six inches of soil placed over them. The temperature of the house is kept between 50 deg. to 60 deg. and water applied when necessary. In about four or five weeks' time the rhubarb is ready to cut.

Methods of Etherisation.

In the experiments at Cornell on the forcing of rhubarb by the use of ether, the usual methods of culture were practised. The experiment was started on December 26, when three clumps of etherised and three clumps of unetherised rhubarb were placed in boxes in a dark mushroom house. Care was taken to have both lots as nearly the same weight as possible. The effect of the ether was very pronounced, the shoots of the etherised clumps being ready to cut fully five days before those of the unetherised clumps. Not only were the shoots of the etherised clumps earlier than those of the unetherised, but there were also a great many more of them. Four cuttings were taken from these two lots of rhubarb, and a comparison made between the weight of the edible stalks produced by the etherised and unetherised lots. The results were decidedly in favour of the etherised lots. The first cutting was made on January 20, when the etherised clumps yielded three pounds one ounce of edible stalks, and the unetherised clumps one pound six ounces. At the second cutting, which was made on January 26, the etherised lot yielded two pounds nine ounces, and the unetherised two pounds two and a-half ounces. The third cutting, made on February 3, showed no gain in favour of the etherised lot, as both lots yielded one pound thirteen ounces. In the fourth cutting, made on February 10, there was once more a slight increase in yield in favour of the etherised lot, it yielding one pound ten ounces, and the unetherised lote one pound seven and a-half ounces. There was, therefore, from the four cuttings a total gain of two pounds four ounces in favour of the etherised lot, which is equal to an increase of about 33 per cent. due to etherisation.

Cost of Etherisation.

The expense of etherisation is not as much as might be expected. The initial cost for a thoroughly air-tight box need not be great. Any well-made box may be used if the cracks are covered over with felt paper and the cover made to fit as closely as possible. Such a box can be made by any handy man at a very slight cost. Commercial sulphuric ether such as is required for etherisation, costs about 75 cents (about 3s. 1½d.) a pound, which quantity is sufficient to etherise 30 good-sized clumps of rhubarb. Thus the cost of the process is so little that it is more than covered by the five days' gain in time, which means a considerable saving of labour and often a better price for the rhubarb. The extra quantity of rhubarb produced by etherisation is clear gain. — "Canadian Florist."

TRADE NOTE.

Some handsome auricula-eyed sweet williams we have received from Messrs. C. S. Daniels and Son, of Wymondham, Norfolk, give ample evidence of the beauty and usefulness of these fine hardy flowers, and show that the Messrs. Daniels have taken great pains to select and perpetuate none but the best colours, finest flowers, and robust constitutioned varieties.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

BITTEN BUDDLEIA LEAVES.—R. C. W., Bristol: There are no traces of insects on the leaves of Buddleia variabilis sent, and we can only conclude that the holes and bitten margins are due to the depredations of earwigs, weevils, or chafers. A night inspection would probably reveal the cause of the damage.

SWEET PEA EXHIBITIONS. — F. J., Derby: There are several exhibitions forthcoming, at which sweet peas are the chief feature. At two exhibitions they are the only feature, i.e., at the National Sweet Pea Society's show at Westminster, on July 24, and at Wolverhampton, on July 29. The N.S.P.S. holds a provincial show at Dublin in conjunction with the R.H.S. of Ireland on August 5, and sweet peas are a great feature of the Shrewsbury Fete on August 19.

THE MADEIRA VINE.—S. W. B., Kingston: The Madeira vine is a quick-growing tuberous-rooted climber that succeeds well—almost too well in a cool greenhouse, but is not a success out of doors, except in quite the South of England. Keep the tubers quite dry during winter, and repot them in spring when growth commences, and you will have abundance of elegant greenery for the roof of your cool-house all the summer and autumn. The botanical name is Boussingaultia baselloides.

DAMAGED GRAPES.—T. B., Essex: The vines are evidently in a very bad way, due, in some measure perhaps, to an inefficiently drained vine border, and also to incorrect treatment. Mealy bug is present, and this pest it is almost impossible to get rid of or keep under at this season of the year, but you must tackle it with a soft brush and methylated spirit. Much of the damage is due to scalding of the berries, brought about by failure to commence ventilation early and gradually. The blackened stems of some berries suggest "shanking," and indicate an unhappy state of affairs at the roots, or it may be induced by overcropping. Please consult p. 546 with reference to scalding, and write us further concerning the other matters.

JUDGING ALLOTMENTS.—J. F. K.: The points to consider in judging allotments are the cropping, the condition and character of the crops, neatness, and freedom from weeds. The crops that have been taken off the ground previous to the date of judging cannot be taken into account. In pointing the several crops you will, of course, give a greater number of points to the crops of first-rate importance, such as potatoes, peas, cabbages, and onions, than to the crops of kinds that are of less value to the persons by whom allotments are usually held. Mr. J. Wright, V.M.H., has arranged an admirable system of pointing for the allotments and cottage gardens of Surrey, and the maximum points allowed are as follows: Superior work, orderly crops, and clean plots, 20; peas, 10; potatoes, 10; onions, 10; winter greens, 10; hardy fruits, 10; flowers, 10; broad beans, 8; runner beans, 8; kidney beans, 8; beet, 8; cabbages, 8; carrots, 8; cauliflowers, 8; parsnips, 8; turnips, 8; vegetable marrows, 8; asparagus, 6; celery, 6; cucumbers, 6; leeks, 6; lettuce, 6; rhubarb, or seakale, 6; tomatoes, 6; artichokes, 4; red cabbage, 4; shallots, 4; spinach, 4; herbs, 4; radishes and cress, 4; unenumerated, 4.

MILDEW ON APPLES.—L. L., Salisbury: Spray the bushes with a weak solution of potassium sulphide, taking care to moisten every portion of leaf, fruit, and stem. Examine the roots of the trees, and if the soil is dry give a copious watering, followed shortly by a good soaking with liquid farmyard manure. A second spraying may be advisable, and it may be followed by a good hosing after five or six days.

SLUGS IN ORCHID HOUSE.—W. P. G., Everton: Place a ring of cototn wool round the base of each spike, as slugs will not crawl over this. Persistently hunt for the slugs after dark, using a bright lantern to aid in detecting the pests, and a tin of brine or paraffin to place them in when caught. Traps of bran, lettuce leaves, and cabbage leaves should be placed at various points on the stage, and under it, and these should be frequently examined. Sufficient care is not always exercised in the preparation of sphagnum moss for orchids: tiny slugs and eggs of snails are often allowed to pass, and thus cause future trouble.

WEAK VINE LEAVES.—E., South Wales: We have been expecting to hear from you again. We imagine the same cause will continue to operate unless you can get to the root of the matter. Position of the house, altitude, nearness of trees, and condition of the roof of the vinery should all be studied carefully, and their bearing upon the vines considered. It is not at all unlikely, we think, that a tree intercepts too much of the sunlight, and consequently the wood does not ripen well in dull seasons.

ROSES.—S. C. H., Chiswick: Apparently the Gloire de Dijon rose was not well rooted, or it may have been planted too late in the season, and consequently the plant has not gained sufficient vigour to produce new growth. Under the circumstances it would have been better to cut back the strong growths, and we suggest that you do this now, and if new growths are made they must be lightly protected with bracken during winter, as they will hardly have time to ripen up properly. In the case of Crimson Rambler rose, the side shoots needed for decoration should be cut close back to the main stem, and when flowering is over the whole of the flowering branch may be cut cut to make room for the new rods that are doubtless already many feet long. Regarding the pergola, of course so much depends upon the amount of shade the trees give, but no doubt roses would succeed in the sunnier parts, and other useful climbers could be planted where there is less sun. Bone-meal is a useful autumn dressing for roses. Hybrid tea roses are far and away more free flowering in the autumn than are the hybrid perpetual varieties. Glad to hear of your successes; we are always willing to help you, as far as possible.

DAVALLIAS FOR HANGING BASKETS.—S. J., Exeter: Almost all the davallias may be brought into service for cultivation in baskets. Most beautiful of all is D. tenuifolia Veitchi, not, unfortunately, one of the best to grow, though it is well worth a little extra trouble, and a position in the stove. D. bullata and D. canariensis may be grown quite cool, though they develop best in a moderately warm house. Others and larger-growing species, suitable for large ferneries, are D. polyantha and D. Mooreana (pallida). The finely divided D. dissecta and D. elegans are useful for smaller structures, and are very light and elegant.

ANTS.—G. W. R., St. Neots: There is no great difficulty in disposing of ants if the nest is get-at-able, and not in close contact with the roots of plants. Petroleum poured into their nests will quickly dislodge them, as will a decoction of quassia chips and a solution of alum; and ants may be banished from plant and fruit houses by means of pieces of coarse sponge and castor sugar. The pieces of sponge are laid down in suitable places, and have a little sugar sprinkled over them, and when the ants have crowded into them, as they soon will do, dip the sponges into water as near boiling point as possible.

NAMES OF PLANTS.

T. C., Barnes.—Sedum album.

M. P.—Sedum stoloniferum, often known in gardens as S. denticulatum.

S., Nottingham.—The Bird Cherry, Cerasus Padus. The other matter we are attending to.

R. M., Epsom.—1, Lathyrus latifolius; 2, Clematis montana; 3, Campanula carpatica; 4, Buddleia globosa.

A. W. G., Cardiff.—We cannot undertake to name florists' varieties of flowers. The rose appears to be Leuchtstern, but is very small.

N. T. N., Reading.—1, Picea nobilis; 2, Olearia Haasti; 3, Spartium junceum; 4, Weigela rosea; 5, Taxodium distichum; 6, Rosa multiflora.

C. M., Portmadoc.—1, Spiræa discolor; 2, probably S. canescens; 3, S. Bumalda; 4, Leycesteria formosa; 5, Deutzia crenata fl.-pl.; 6, Tropæolum polyphyllum.

NEW BOOKS.

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BULLETIN DE LA SOCIETE FRANCAISE D'HORTICULTURE DE LONDRES.

(66, Long Acre, W.C.)

This annual publication of an interesting and useful society has now reached its nineteenth number, and the contents are, as usual, full of readable and instructive matter. We notice for the first time an article in English that will be welcomed by those who are interested in French gardening, viz., "The Intensive Culture of Vegetables, French System," by M. P. Aquatias, who deals in a methodical way with the various details of the system. A double-paged plan of a French garden is given. Other readable matter worthy of a note is the article headed "La fête Schneider," which deals with the three meetings held in England and France to celebrate the promotion of Mr. George Schneider to the rank of Officier du Mérite Agricole. There is also a full account of the annual dinner in January last, at which Mr. Harry J. Veitch presided. Reports of the monthly meetings and the text of the papers read by the young members are supplied in accordance with the invariable rule. Other matter purely official, such as the annual report, financial statement, list of members, etc., find a place in the Bulletin. Several illustrations adorn its pages, and we notice the frontispiece is a portrait of Mr. Thomas Bevan, an old friend and supporter of the society. Taken all in all, the past year's work is a source of great satisfaction to the officers, and we compliment our old friend Mr. Geo. Schneider, the worthy president, on the success of the society, both here and abroad.

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FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (July 18) contains the following:

TURNIP FLY.
LETTUCES IN SUMMER.
THINNING FRUIT.
HOW TO PACK FRUIT.
INFREQUENT CALVING.
LIGHT, AIR, AND MILK.
MILKING TRIALS AT THE ROYAL SHOW.
HORSES IN HOT WEATHER.
WARBLE FLY.
PIGS IN SUMMER.
LIVE STOCK NOTES.
FATTENING FOWLS.
GROWING TURKEYS.
CONSTRUCTION OF A TRAP-NEST.
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MARKETS.

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Flowers.

Flowers of good quality are scarcely so abundant as of late, and the demand is falling off owing to the holiday season.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	5	0	to	9	0
Alstroemerias	per doz. bun.	2	0		3	0
Arums	per doz.	2	6		4	0
Asparagus	per doz. bun.	1	6		6	0
Carnations	per doz. blms.	1	6		3	0
,,	per doz. bun.	8	0		12	0
,, Malmaison	per doz. blms.	8	0		12	0
Cattleyas	per doz.	8	0		10	0
Coreopsis	per doz. bun.	1	6		2	6
Croton leaves	per bun.	1	0		1	6
Cypripediums	per doz. blms.	2	0		3	0
Eucharis	per doz.	4	0		5	0
Forget-me-not	per doz. bun.	2	0		3	0
French fern	per doz. bun.	1	0		3	0
Gaillardias	per doz. bun.	1	6		2	6
Gardenias	per doz.	1	6		3	0
Gladiolus Colvillei	per doz. bun.	7	0		10	0
Gypsophila	per doz. bun.	3	0		5	0
Iris, Spanish	per doz. bun.	3	0		6	0
Ixias	per doz. bun.	3	6		6	0
Lilium auratum	per bun.	2	0		3	0
,, candidum	per bun.	2	0		3	6
,, speciosum	per bun.	1	6		2	6
,, longiflorum	per bun.	2	0		4	0
Lily of the Valley	per doz.	6	0		12	0
Marguerites, white	per doz. bun.	3	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	3	0		4	0
Odontoglossums	per doz. blms.	2	0		3	0
Pæonies	per doz.	1	6		3	0
Pelargoniums	per doz. bun.	4	0		6	0
Pyrethrums	per doz. bun.	2	0		4	0
Roses	per doz.	1	0		6	0
Smilax	per doz. trails	3	0		5	0
Spiræa	per doz. bun.	5	0		8	0
Statice	per doz. bun.	5	0		6	0
Stocks	per doz. bun.	3	0		4	0
Sweet Peas	per doz. bun.	1	6		2	6
Tuberoses	per doz. blms.	0	4		0	6

Fruits.

Strawberries are lasting well, and there is a brisk demand for them, and for cherries, currants, and peaches.

		s.	d.		s.	d.
Apples, Australian	per case	6	0	to	14	0
,, Tasmanian	per box	7	6		16	0
Apricots	per box	0	9		1	3
Bananas	per bun.	5	0		12	0
Cherries, French	per ½-sieve	3	0		7	0
,, English	per ½-sieve	5	0		8	0
Currants, red	per ½-sieve	3	0		4	6
,, Black	per ½-sieve	4	0		5	0
Figs	per doz.	2	0		6	0
Gooseberries	per ½-sieve	2	0		3	0
Grapes, English (new)	per lb.	1	0		4	0
,, Belgian	per lb.	0	9		1	3
Lemons	per case	6	0		18	0
Melons, Guernsey	each	0	9		2	0
,, English	each	1	0		2	0
Nectarines	per doz.	3	0		15	0
Oranges	per case	9	0		30	0
Peaches	per doz.	3	0		18	0
Pears, Australian	per box	3	6		5	0
Pineapples	each	2	0		6	0
Plums, French	per box	1	0		1	6
Raspberries	per doz. pun.	5	0		7	6
Strawberries	per peck	1	6		3	0

Vegetables.

The demand for salading continues, and peas and greenstuffs find a ready sale.

		s.	d.		s.	d.
Artichokes	per doz.	1	6	to	1	9
Asparagus	per bun.	0	9		3	0
Beans, broad	per bush.	1	6		2	0
Beet	per bush.	1	3		2	0
Cabbage	per tally	2	6		4	6
Carrots	per doz. bun.	1	6		3	0
Cauliflowers	per doz.	1	0		2	0
Cucumbers	per doz.	1	6		3	0
Greens	per bag	1	0		2	6
Horseradish	per doz. bun.	9	0		12	0
Lettuce, cos	per score	0	9		1	0
Mint	per doz. bun.	1	6		2	0
Mushrooms	per doz. lb.	6	0		8	0
Onions, spring	per doz. bun.	1	0		2	0
,, Valencia	per case	7	0		8	6
Parsley	per doz. bun.	1	0		1	6
Peas	per bush.	1	6		4	0
Radishes	per doz. bun.	0	4		0	8
Spinach	per bush.	1	3		1	6
Tomatoes, English	per doz. lb.	2	0		3	6
,, Guernsey	per doz. lb.	2	0		3	3
Turnips (new)	per doz. bun.	1	6		3	6
Vegetable Marrows	per doz.	2	0		4	0

LONDON POTATO MARKETS.

Ample supplies of new potatoes are now forthcoming, and the demand is good.

		s.	d.		s.	d.
Old Potatoes	per ton	60	0	to	75	0
Jerseys	per cwt.	5	0		5	6
Cherbourg	per bar.	4	6		5	0
St. Malo Giants	per cwt.	4	6		5	0
English, Kent	per bush.	5	0		6	0
,, Lincoln	per cwt.	6	0		8	0
,, Puritans	per cwt.	5	0		6	0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
1908. July 5 to July 11.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 5—Sunday	1 0	58	56	68	56
,, 6—Monday	4 30	62	56	73	52
,, 7—Tuesday	9 20	64	56	72	54
,, 8—Wednesday	1 40	60	57	63	57
,, 9—Thursday	7 35	60	55	69	54
,, 10—Friday	0 35	63	60	65	53
,, 11—Saturday	2 40	62	60	69	57
Means	3 55	61	57	68	55

Date.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
1908. July 5 to July 11.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
July 5—Sunday	—	64	63	59	51
,, 6—Monday	—	63	63	59	42
,, 7—Tuesday	—	63	63	59	46
,, 8—Wednesday	0·12	64	63	59	52
,, 9—Thursday	0·24	61	62	59	50
,, 10—Friday	0·08	61	62	59	52
,, 11—Saturday	—	61	62	59	55
Means	(total) 0·44	62	62	59	50

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

TUESDAY, July 21.—Royal Horticultural Society; committees meet at 12 o'clock; lecture at 3 p.m.; Scientific Committee at 4 o'clock.

National Rose Society, at Manchester.

WEDNESDAY, July 22.—National Carnation Society, Westminster.

Cardiff Horticultural Society; two days.

THURSDAY, July 23.—Royal Ulster Society's Flower Show; two days.

Dunfermline Rose Show; two days.

FRIDAY, July 24.—National Sweet Pea Society, Royal Horticultural Hall, Westminster.

SATURDAY, July 25.—Winkfield Horticultural Society.

CATALOGUES RECEIVED.

BARR AND SONS, COVENT GARDEN, W.C.—An extremely useful and well-arranged catalogue of hardy perennials, alpines, and aquatics. Information as to the best positions for hardy plants adds to the value of the list.

AMOS PERRY, ENFIELD, MIDDLESEX.—Aquatics now form a prominent group of hardy plants, and no one has exhibited them better than Mr. Perry, whose catalogue of these subjects is an unusually complete one.

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WALTER VOSS AND CO., LIM., MILLWALL, LONDON, E.—This catalogue of fertilisers and insecticides is one that every cultivator should keep at hand. It is a valuable work of reference in respect of insect and fungus pests, as well as a catalogue of useful remedies and appliances.

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Jan. 4.—ISLES OF SCILLY (Illustrated).
11.— ,, ,, Bulb Industry.
Feb. 8.—HORSHAM GARDENS (Illustrated).—Denne Park, Leonardslee, Holbrook Park.
15.—HORSHAM GARDENS (Illustrated).—Warnham Court, Warnham Lodge, South Lodge, Wimblehurst.
March 7.—THE GARDENS OF CORNWALL (Illustrated).—Tremough, Trelissick, Rosehill, Penjerrick.
14.—THE GARDENS OF CORNWALL (Illustrated).—Carclew, Trebah, Enys, Penmorvah.
April 11.—NORWICH GARDENS (Illustrated).—Gunton Park, Blickling Hall, Westwick Hall, Shotesham Hall.
18.—NORWICH GARDENS (Illustrated).—Dunston Hall, Crown Point, Town Close House, Ashwellthorpe Hall, Oakland House, Boyland House.
May 2.—GHENT CENTENARY FLOWER SHOW.
16.—BRISTOL GARDENS (Illustrated).—Barrow Court, Ashton Court, Downside, Elmfield.
23.—BRISTOL GARDENS (Illustrated).—Cote House, Down House, The Priory, Old Sneed Park.
June 30 } 6 } THE TEMPLE SHOW (Illustrated Report).
27.—PERTHSHIRE GARDENS (Illustrated).—Dupplin Castle, Freeland, Moncreiffe House, Dunkeld House.
July 4.—PERTHSHIRE GARDENS (Illustrated).—Kinfauns Castle, Seggieden, Murthly Castle, Meikleour House, Ballathie, Pitfour Castle.
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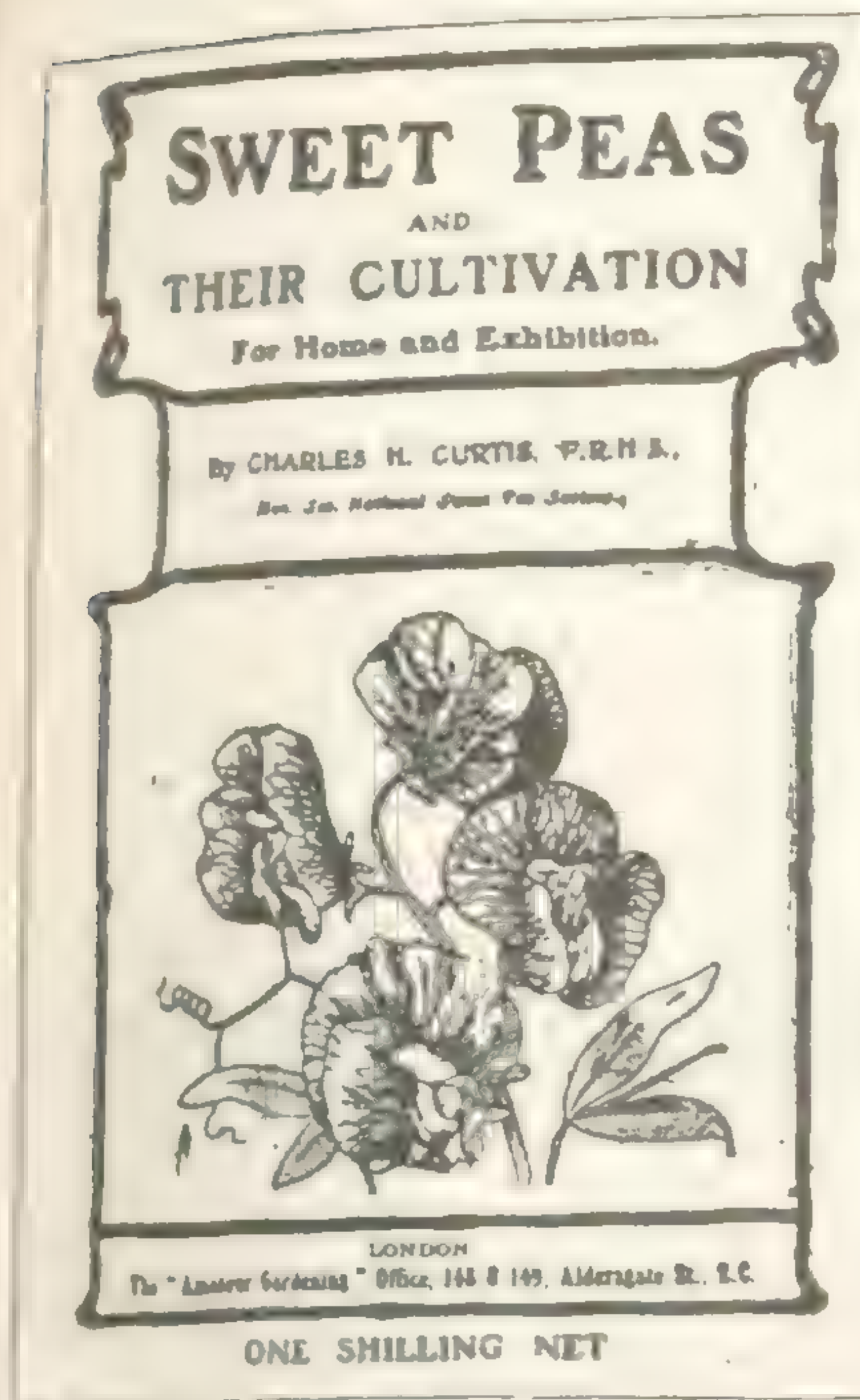

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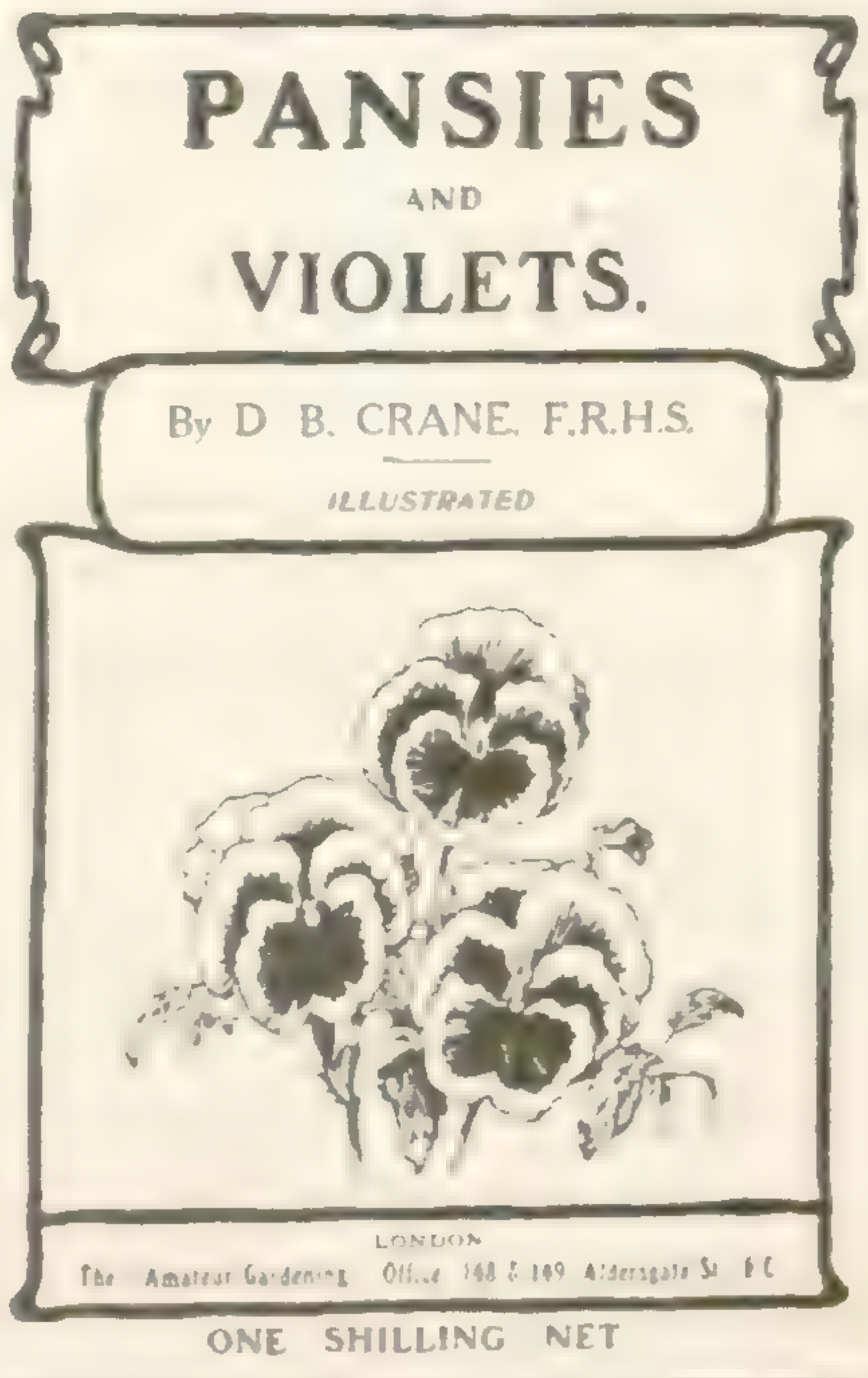

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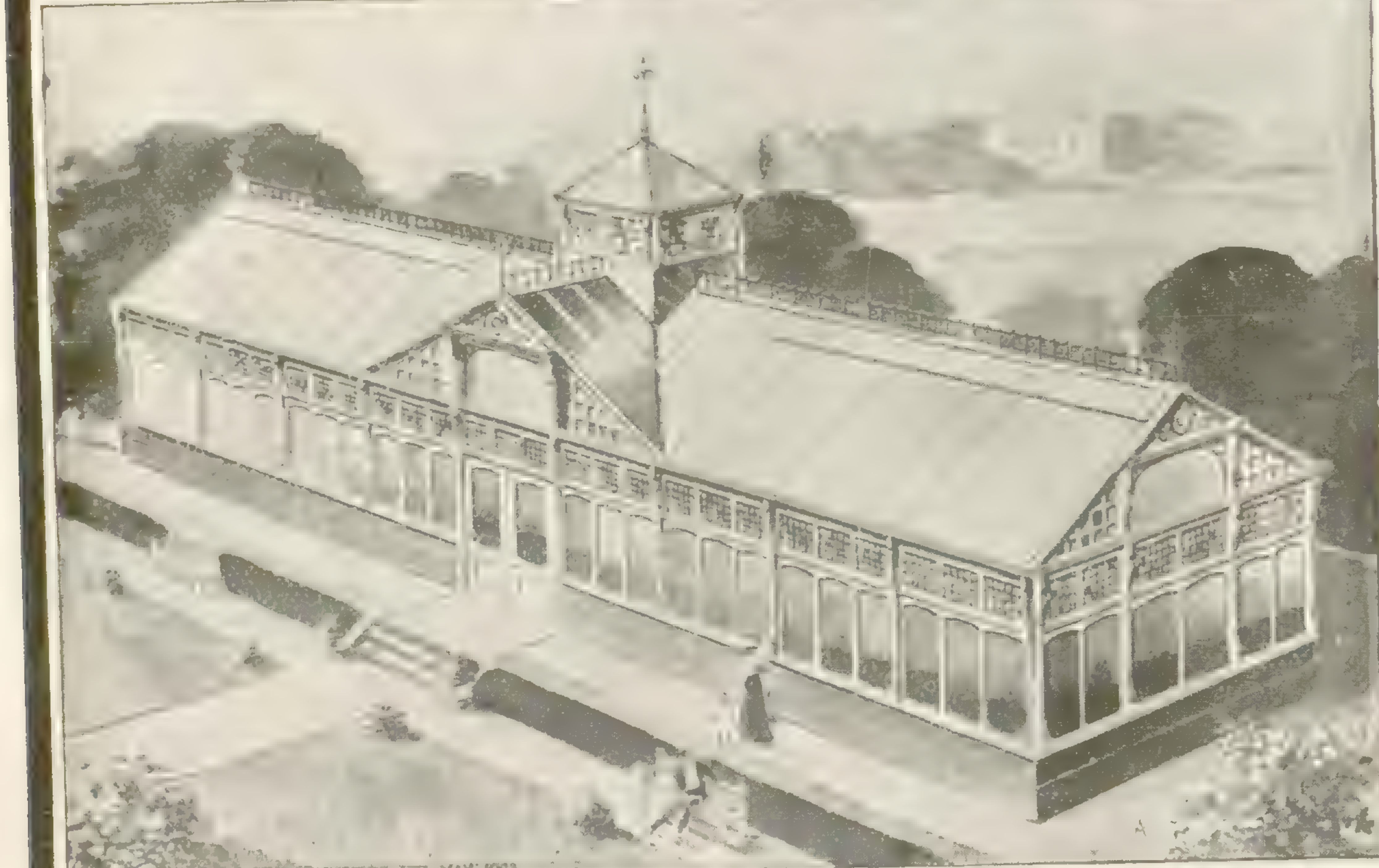

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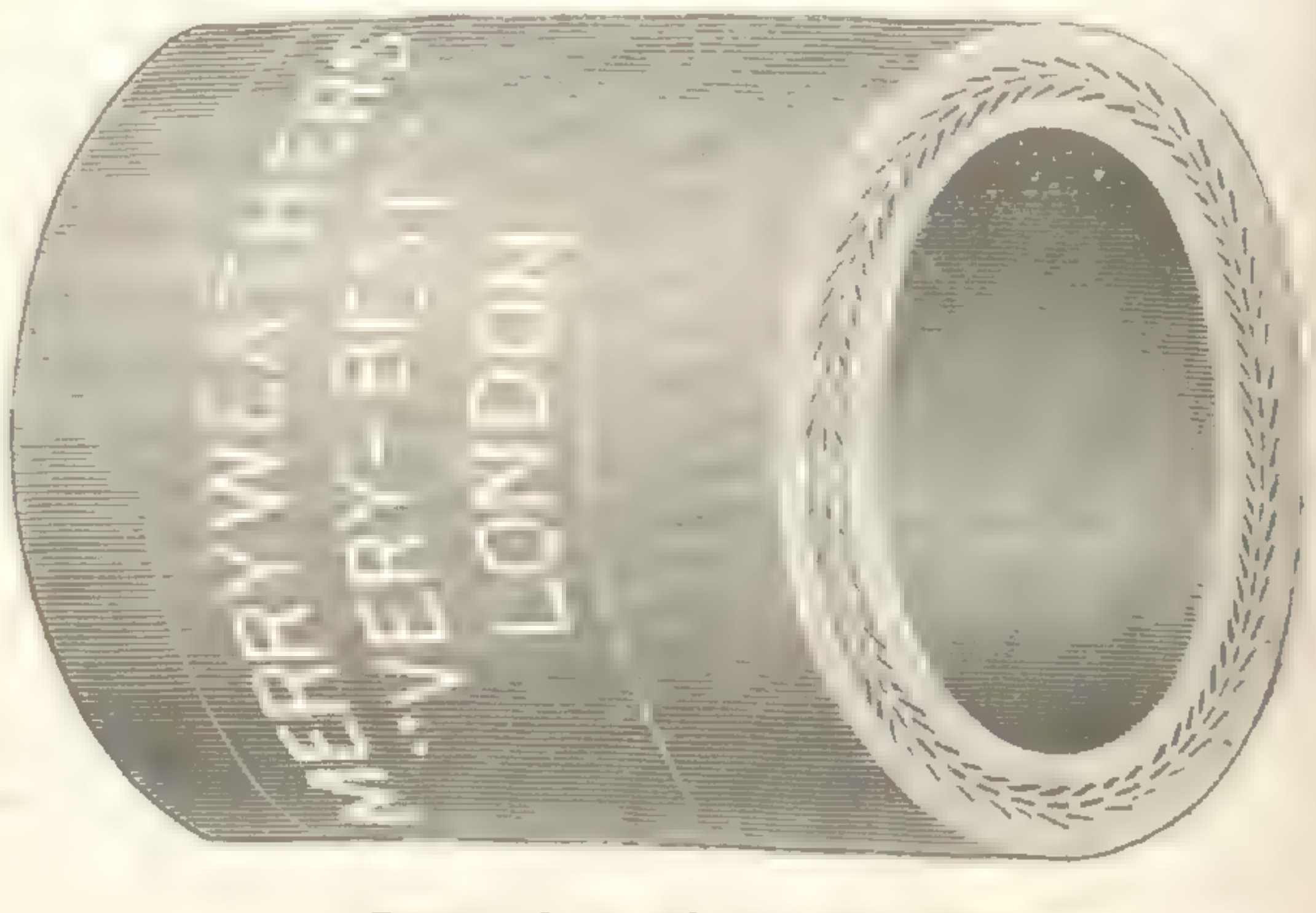

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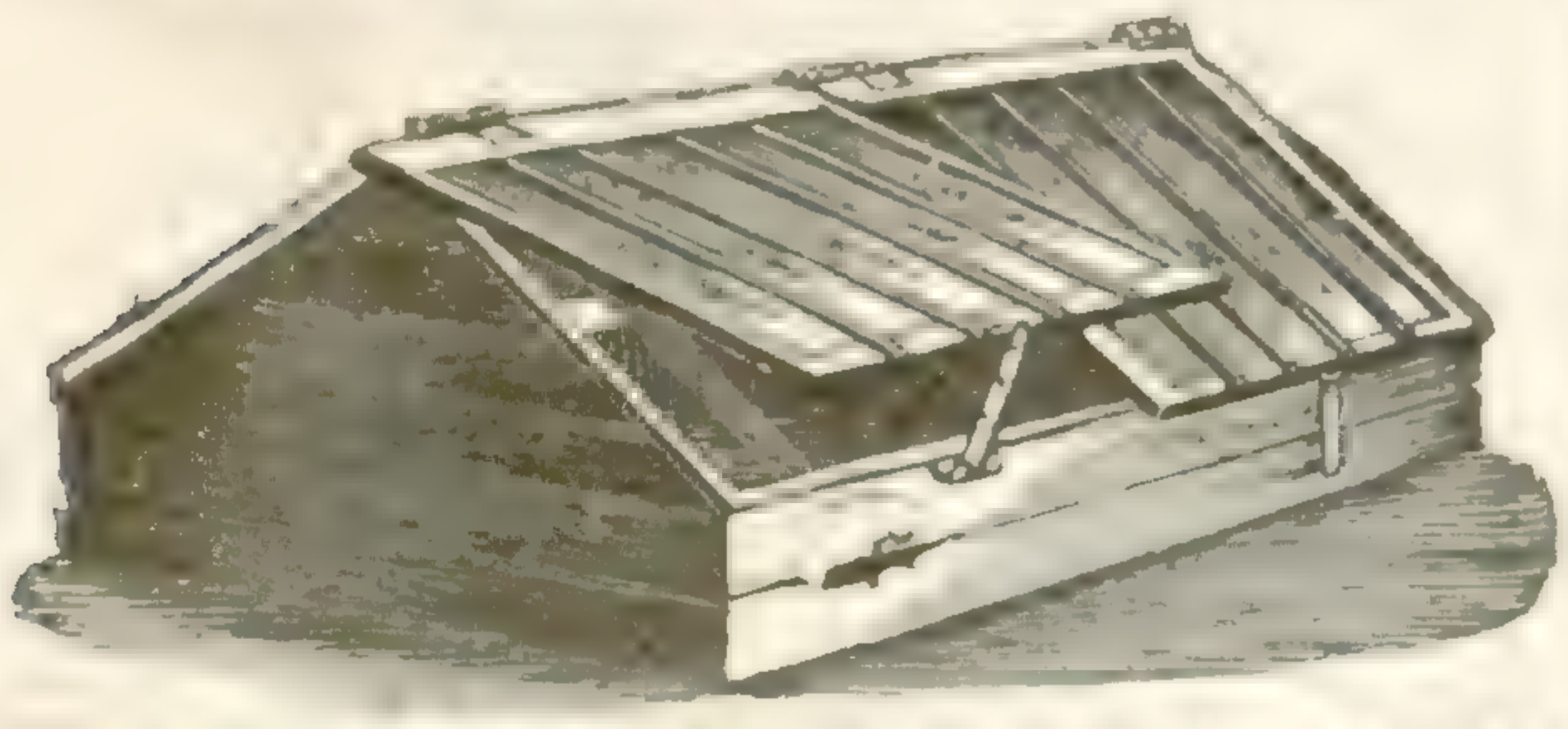

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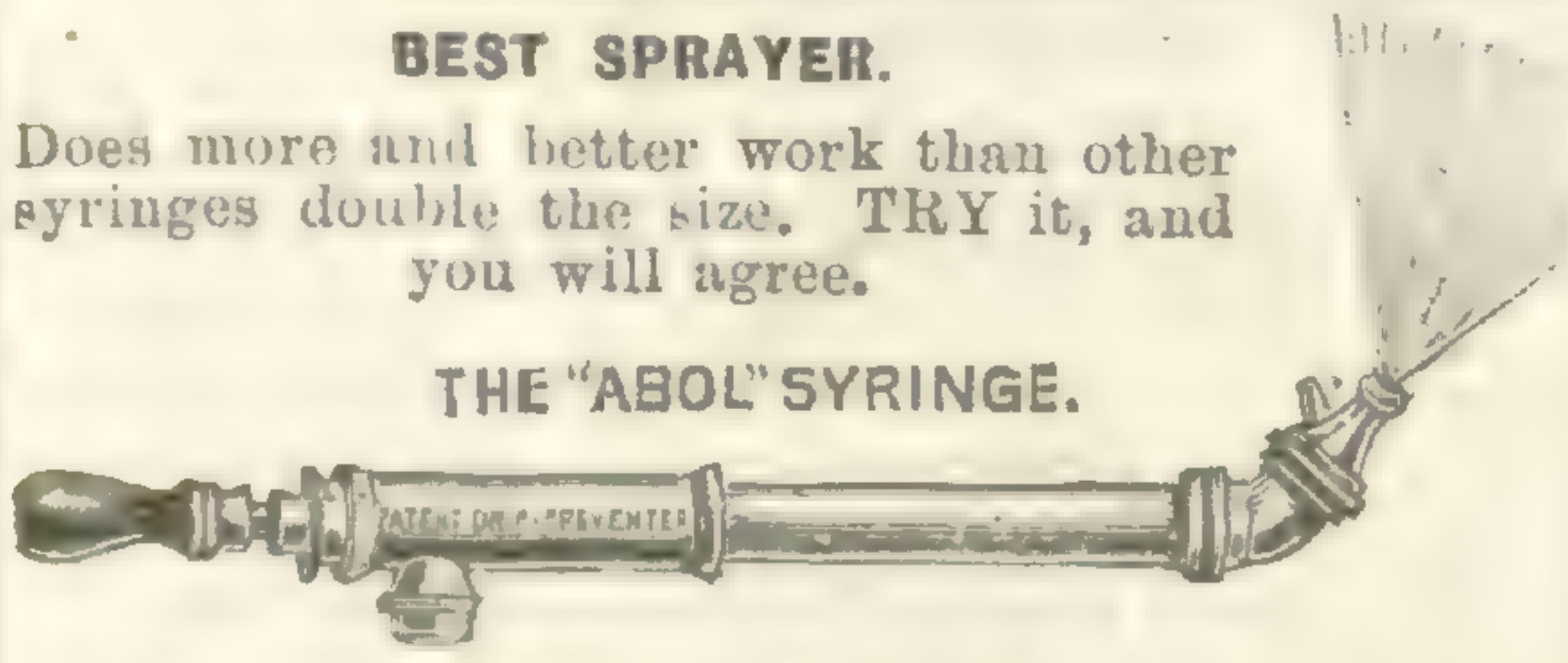

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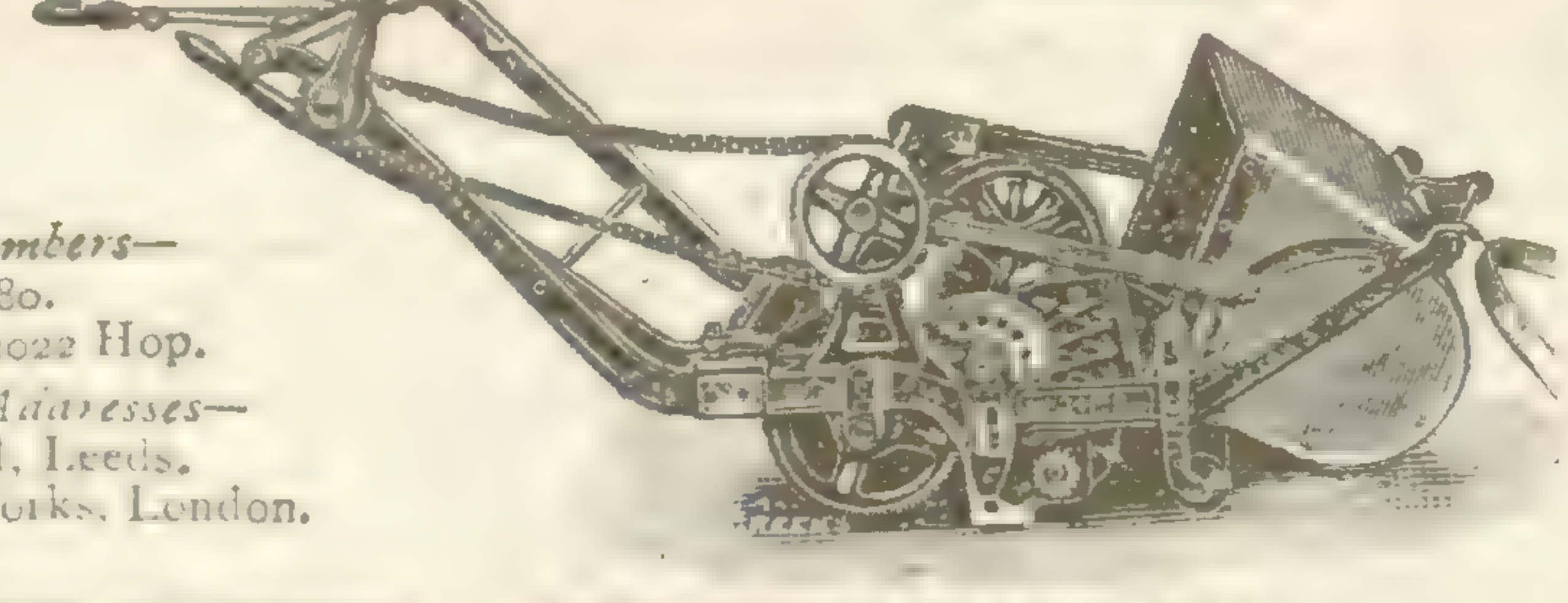

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"ABOL" SYRINGE, best sprayer, try it and you will agree. Sold by Nurserymen, Seedsmen, Ironmongers, etc. Full particulars from E. A. WHITE, LIMITED, Paddock Wood, Kent.

PULLETS, February-hatched, 3s. each, laying; three months old, 1s. 3d. each; 14s. 6d. dozen. Live delivery anywhere. VARNEY, Angel Lane, Stratford, Essex.

A TREATISE on the CULTIVATION of AMERICAN PERPETUAL FLOWERING CARNATIONS, by our Expert, C. H. Taudevin, F.R.H.S., 1s., free. Specially NOTICED and RECOMMENDED by the PRESS. See our Catalogue of 1908 Novelties, etc. Our speciality is PLANTS in POTS at Reasonable Prices. Sample plant, 1s., free. CASH ORDERS 10s., free, UNITED KINGDOM. YOUNG and CO., HATHERLEY, CHELTENHAM. Established 1890.

FERNS, FERNS, FERNS, Etc. — Foliage and Blooming Plants for stove, greenhouse, and garden. Wholesale list or amateur catalogue No. 100, free. 5,000 cases sent off yearly. J. E. SMITH, London Fern Nursery, Loughborough Junction, S.W.

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St. Albans,
LARGEST IMPORTERS AND GROWERS OF ORCHIDS IN THE WORLD.

FORGET-ME-NOT.—Royal Blue.—A brilliant deep blue, remarkably free flowering. Sow now to obtain grand effect next April and May. 6d. and 1s. per packet. ROBERT VEITCH and SON, Royal Nurseries, Exeter.

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Striking character, holds the premier position amongst carnation specialists. In casks, 5 cwts., £4; 1 cwt., 18s. 6d.; ½ cwt., 10s.; tins, 3s. 6d. each. Carriage paid on 7s. 6d. orders and upwards.
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WEBB and SONS, The King's Seedsmen,
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AMERICAN PERPETUAL CARNATIONS. —Blooms all the year. During JULY ONLY, SPECIAL COLLECTIONS, SPECIAL PRICES. Strong, healthy plants, in POTS, ready to POT on. Not surplus stuff. Splendid chance for Making Good Collections at Little Cost. Free for Cash, anywhere UNITED KINGDOM. Sample plant, free, 1s. Send for Catalogue. YOUNG and CO., CARNATION SPECIALISTS, HATHERLEY, CHELTENHAM. Established 1890.

LOOK OUT FOR MY SPECIAL EXHIBIT OF FERNS at the following Flower Shows: York, Hanley, Wolverhampton, Nottingham, Cardiff, Handsworth, Manchester, Shrewsbury, Derby, etc. ELLISON, F.R.H.S., 5-7, West Bromwich.

DOBBIE'S LIST OF VEGETABLE AND FLOWER SEEDS for present sowing, and Exhibition Requisites, post free on application. DOBBIE and CO., Royal Seedsmen, ROTHESAY.

WM. DUNCAN TUCKER and SONS, Lim., Horticultural Builders, 27, Cannon Street, London, E.C.; Works, Tottenham. Conservatories, Winter Gardens, Vineries, Peach-houses, etc. Catalogue gratis.

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HARDY CLIMBERS IN POTS; EXTRA-SIZED CLIMBING ROSES IN POTS.
HARDY HERBACEOUS PLANTS.
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(See back page.)

CLAY'S FERTILISER is UNSURPASSED for all Horticultural Purposes.
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PORTABLE IRON and WOOD BUILDINGS, Stables, Loose Boxes, Pavilions, Open-air Shelters, Motor Houses, Poultry Houses, Larders, Potting Sheds, Greenhouses, Sheep Troughs, Dog Kennels. Large Catalogue, 1d. stamp. J. T. HOBSON and Co., Timber Importers, BEDFORD. Established 65 years.

THE PATENT THOROUGHPIN. —For fixing up and letting down strained wire instantly by hand. No loose parts; simple and cheap. HOWLAND, Patentee, Thame. Thousands in use.

THOMSON'S CELEBRATED MANURES.
For full advertisement see page iii.

GARDENERS LOOKING FOR THE BEST and CHEAPEST SHADING to paint outside glass, to stick on all the summer, should ask for Richards' Sunshade, in dry powder to mix with water. Simple, cheap, and effectual. Gardeners anxious for the best Fertiliser should ask for Richards' "XL ALL" for pot plants, fruit trees, kitchen garden, and lawn. Ask your nurseryman or seedsman for my small pink price list of the world-renowned XL ALL Specialities, Fumigators, Compounds, Insecticides, Weed Killers, etc. Supplied from N., S., and Florists throughout the world. Be sure that you get the original patented inventions—XL ALL.—G. H. RICHARDS, 234, Borough, London, S.E.

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Lilies, Cottage & Darwin Tulips, rare Bulbs, Plants.

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The largest Growers in the United Kingdom.

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Every Description of Glasshouse.

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Immense Stock, in small pots, for late planting.

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Many Large Specimens and Rare Varieties.

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Oxford.
Prince's Oxford Roses. Illustrated Catalogues Free.

FRANK CANT & CO.,
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The World-famed Champion Rose Growers.

GEO. BUNYARD & CO., LTD., Maidstone, Kent.
Long Climbers and Dwarfs in Pots for immediate planting.

ALEX. DICKSON & SONS, LTD., Royal Irish Nurseries, Newtownards, Co. Down; also Oakley Park, Blackrock, Co. Dublin, and Uplands, Ledbury, Herefordshire.
The Celebrated Champion and World-famed Irish Roses.

R. H. BATH, LTD.,
The Floral Farms, Wisbech.
The best new and standard varieties of Roses.

RUSTIC WORK.

G. W. RILEY,
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Summer Houses, Arches, &c., &c.

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JAMES CARTER & CO., Seedsmen to H.M. the King, 237, 238, and 97, High Holborn, London.
Tested Flower and Vegetable Seeds.

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GEO. BUNYARD & CO., LTD.,
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All the best New and Old. (Catalogue free.)

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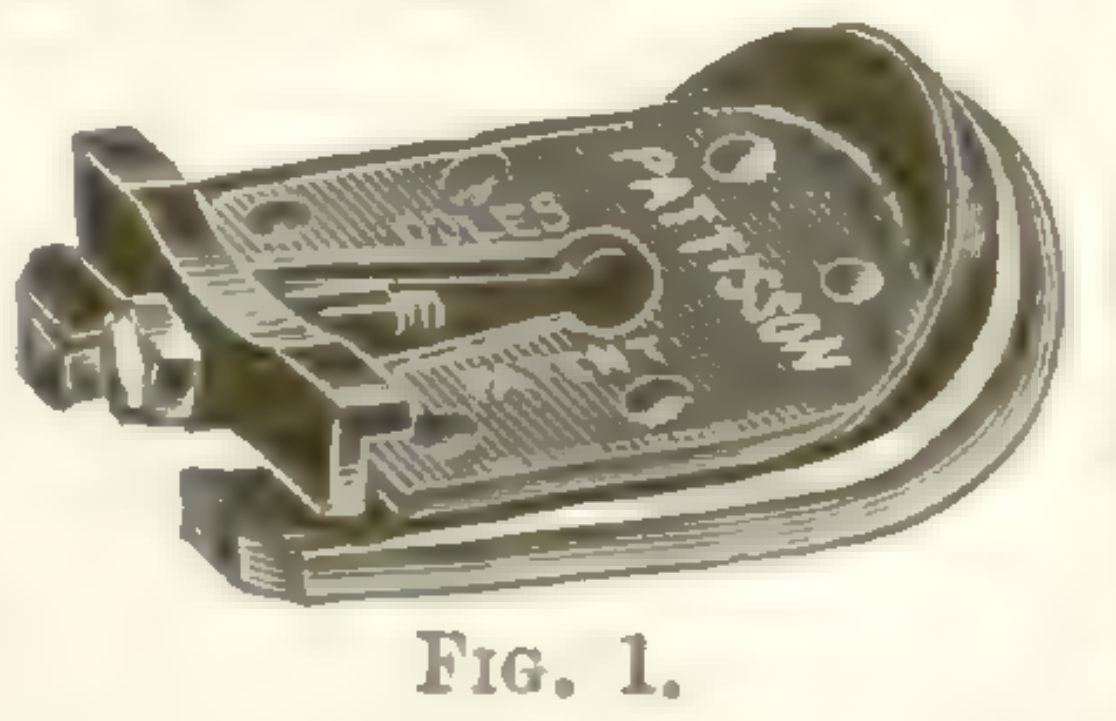

FIG. 1.

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Silver Medal—Royal Horticultural Society.

HUNDREDS OF TESTIMONIALS.
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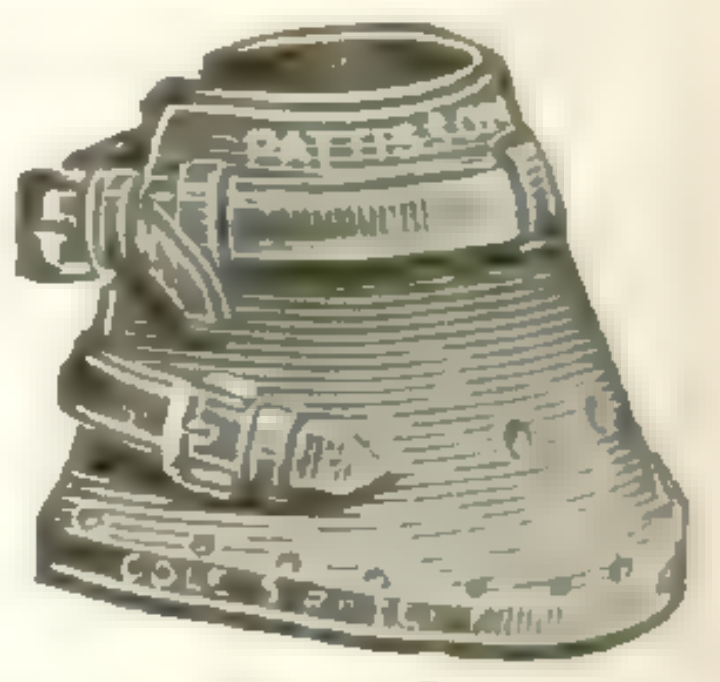

FIG. 2.

Illustrated Price List from—
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The Yokohama Nursery Co., Ltd.,

YOKOHAMA, LONDON, NEW YORK.

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Illustrated and Descriptive Catalogue sent on application.
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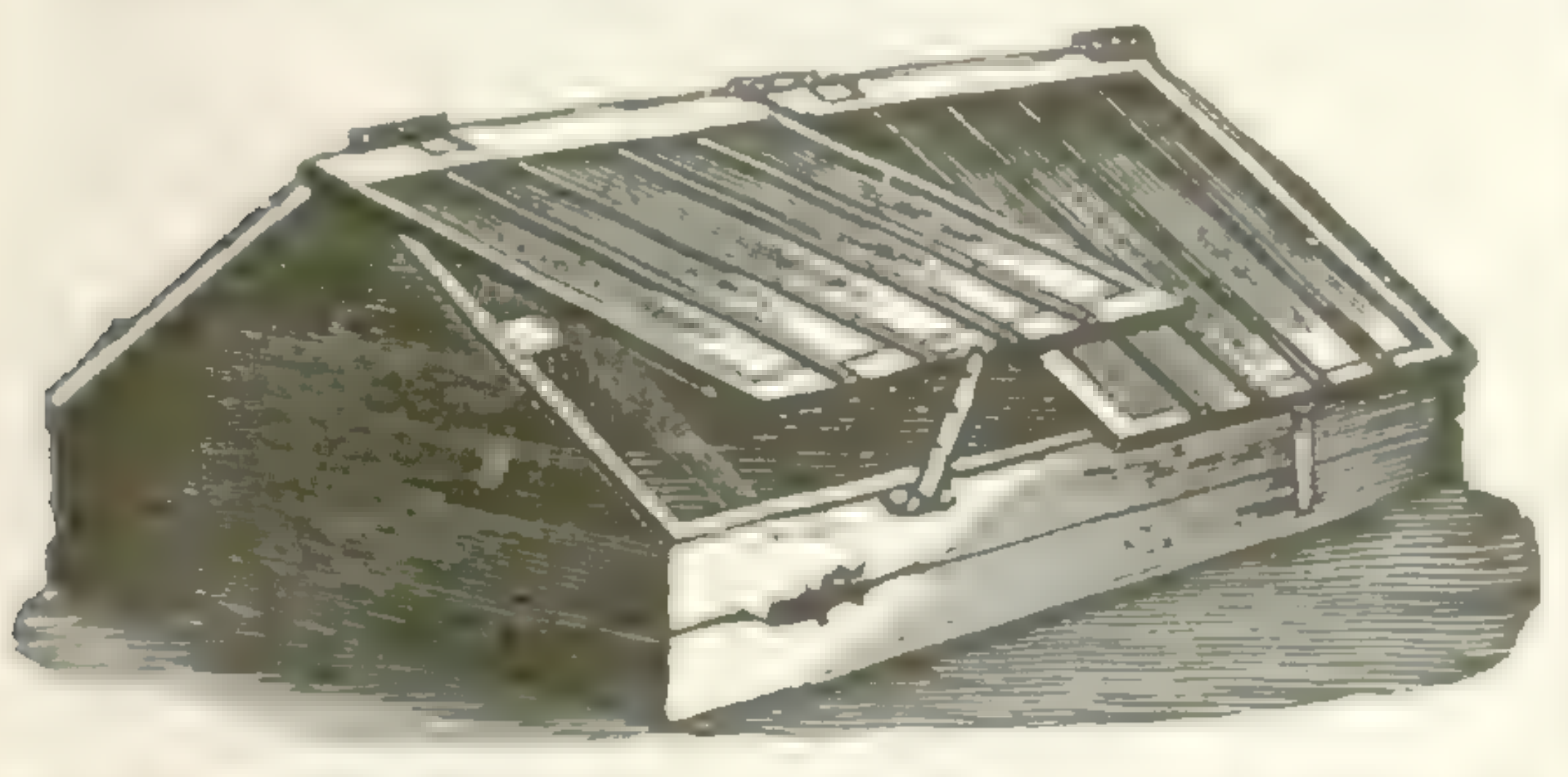

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6ft. " 4ft. "		2	5	0
6ft. " 5ft. "		2	15	0
12ft. " 4ft. "		4	0	0
12ft. " 5ft. "		4	15	0
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Larger sizes at proportionate prices.

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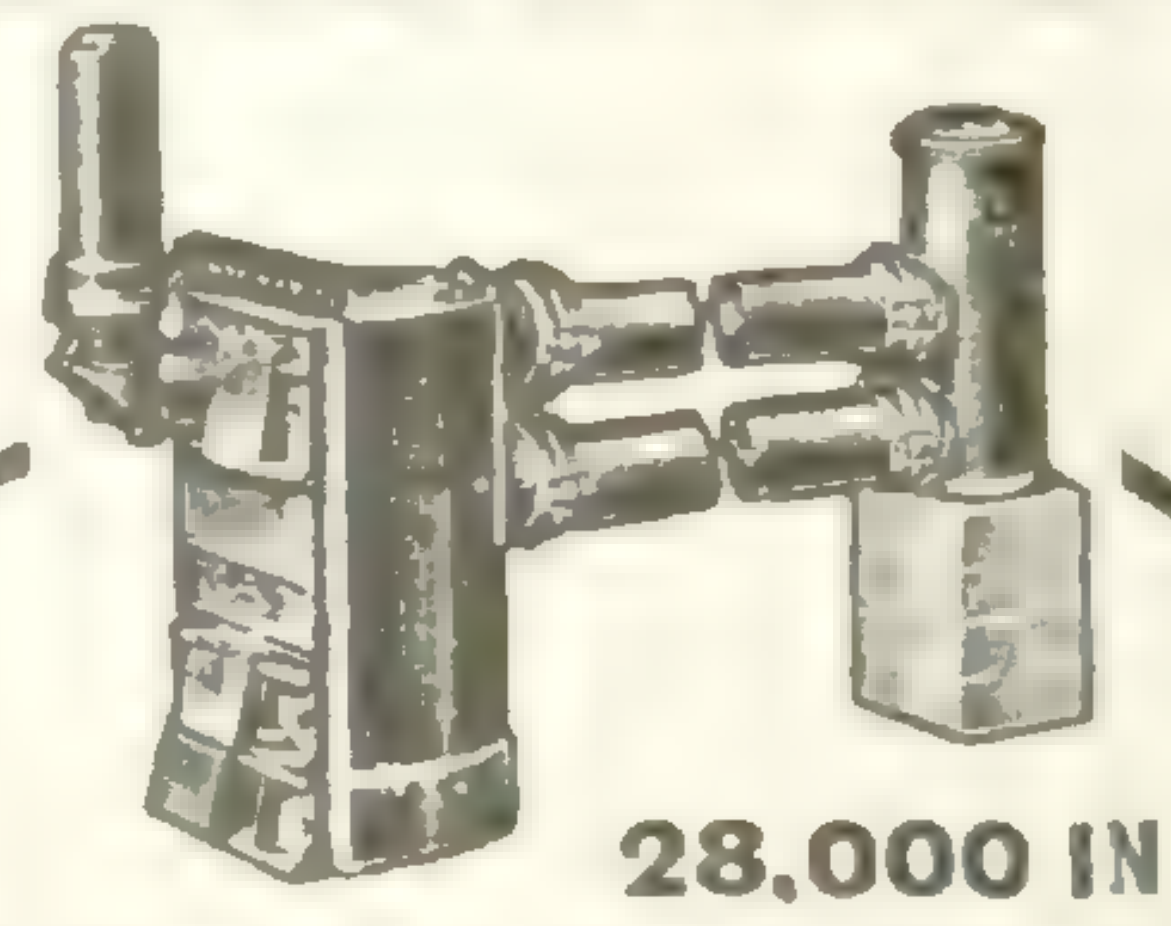
The Loughborough BOILER



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No. 1, to heat 50 ft. of 4 inch pipe,	**£2**	**17**	**0**
" 2, " 100 " " " "	**£4**	**2**	**6**
" 3, " 200 " " " "	**£5**	**10**	**0**

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Complete Apparatus, from **£4 8 0.**

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EXCELLENT REMEDY FOR MILDEW. KILLS CATERPILLARS AND ALL KINDS OF APHIS.

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Save Money by Using the most Economical Sprayer. THE "ABOL" SYRINGE.

BEST SPRAYER.

Does more and better work than other syringes double the size. TRY it, and you will agree.

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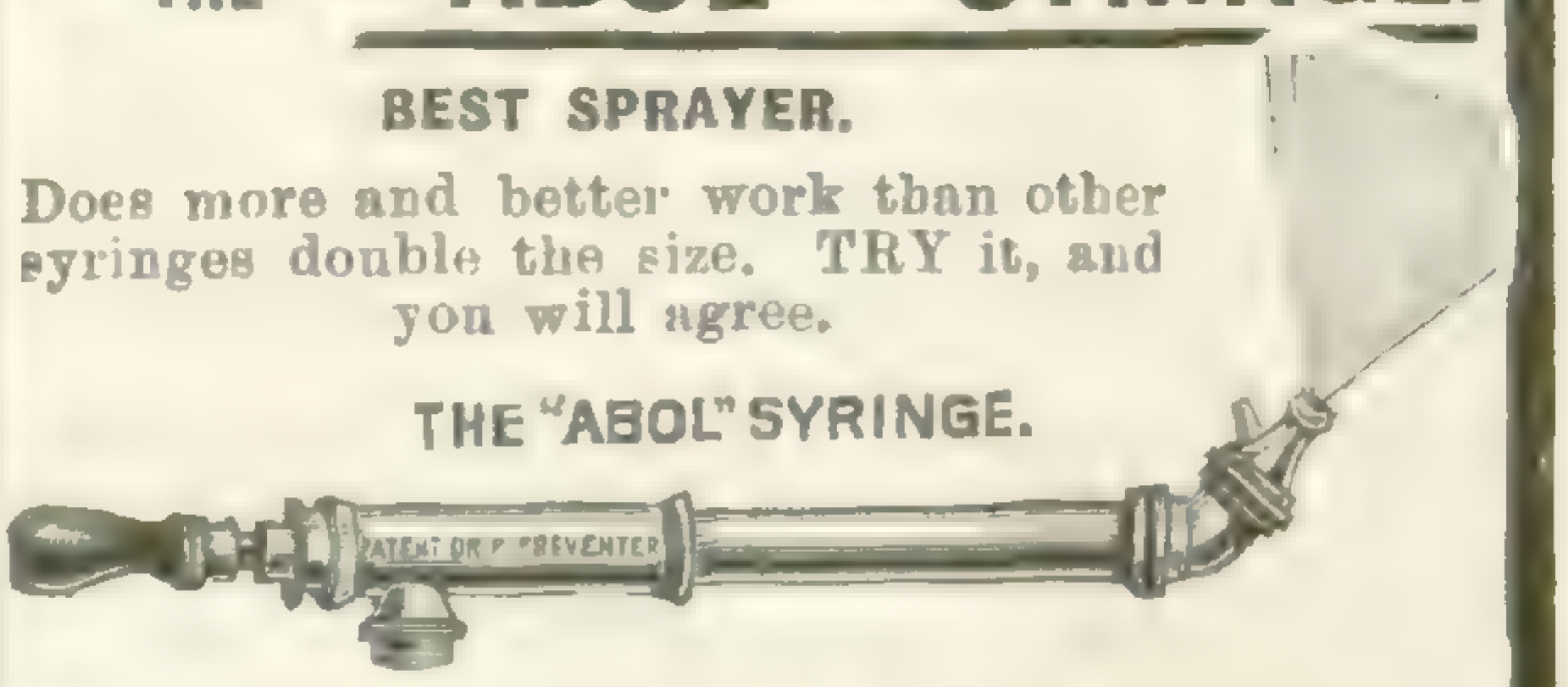

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Of all Seedsmen, Florists, and Ironmongers; or by post on receipt of remittance from the Sole Manufacturers,

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Hop and Fruit Growers, **Paddock Wood, KENT.**

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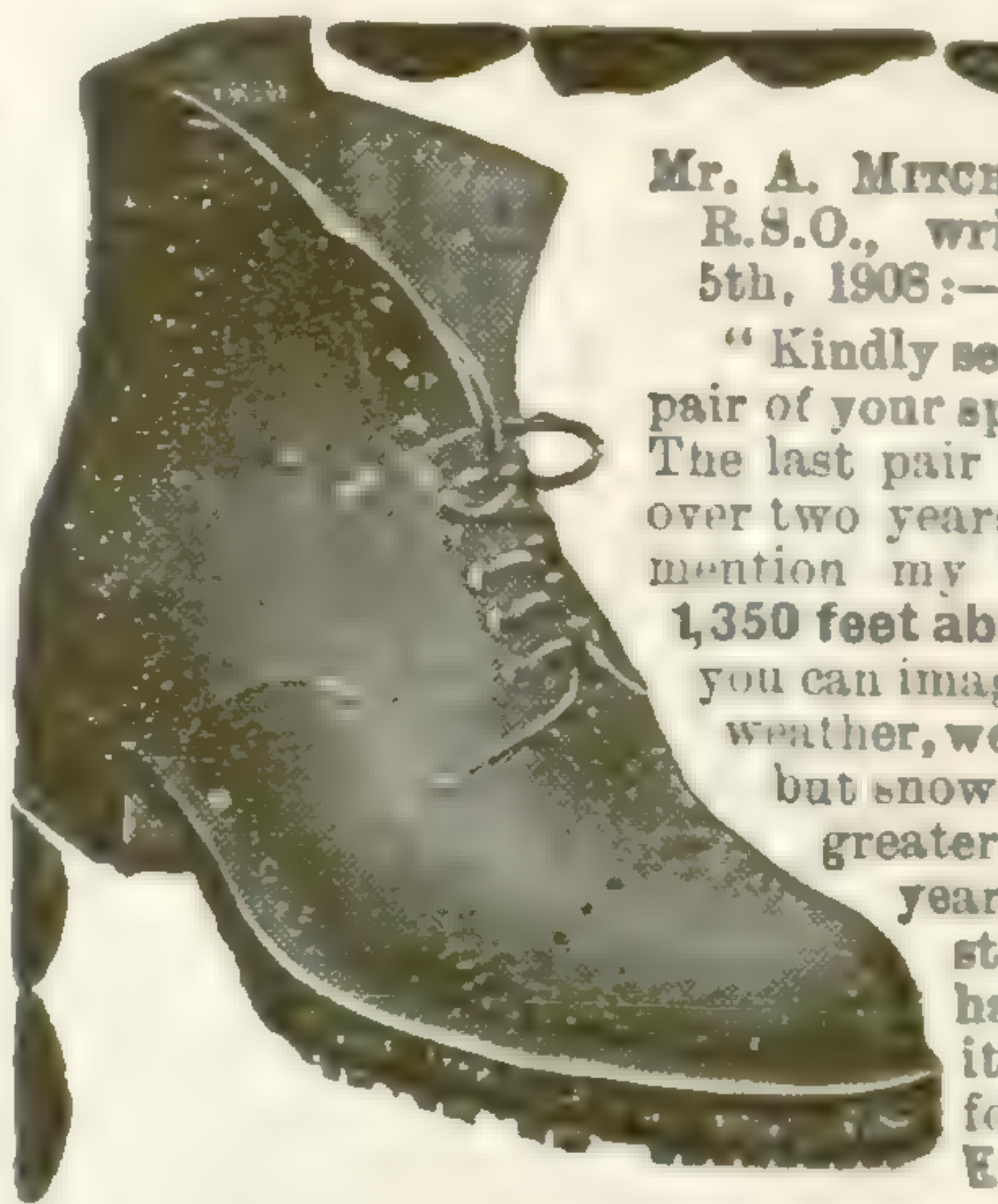

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WILL STAND HARD WEAR.

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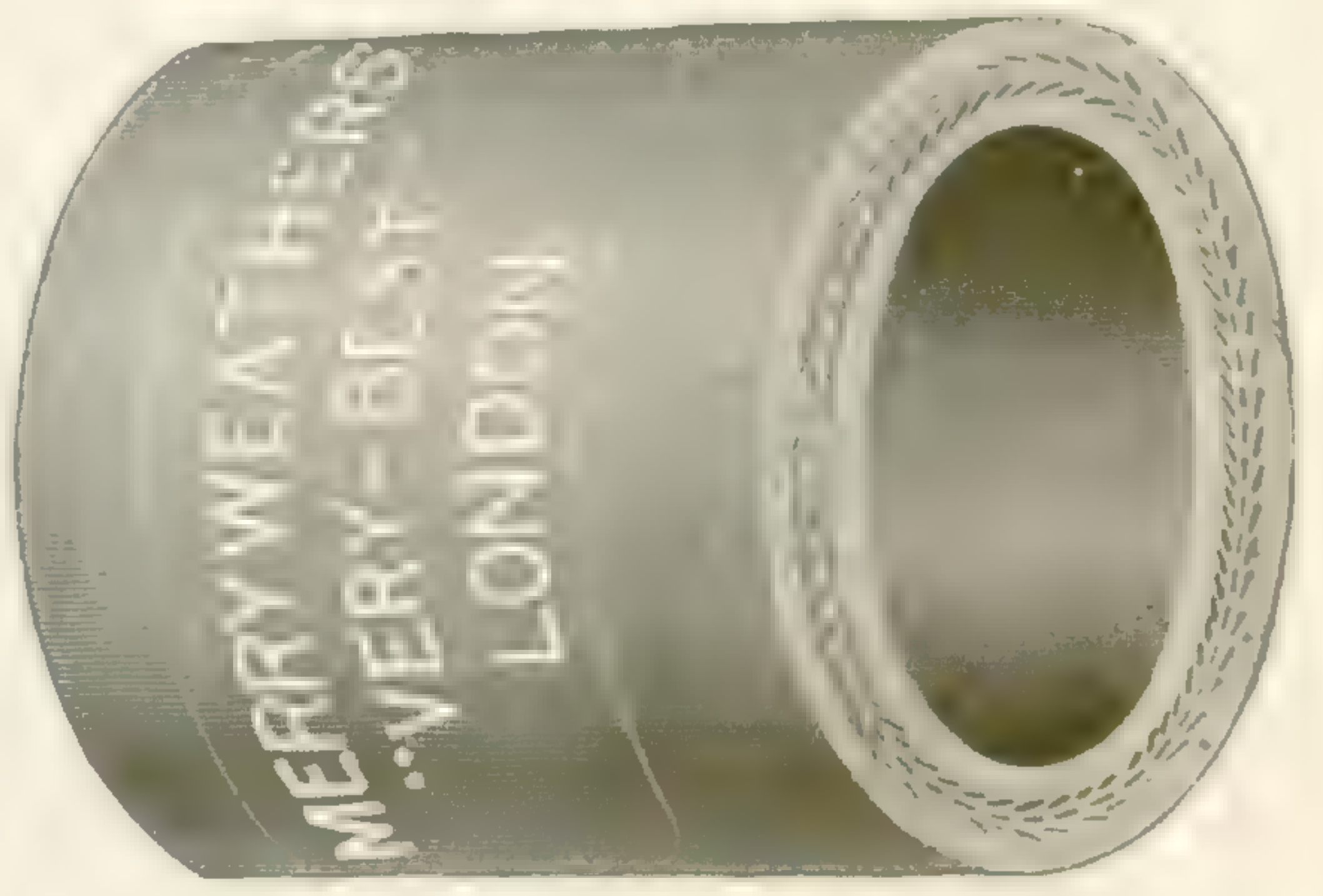

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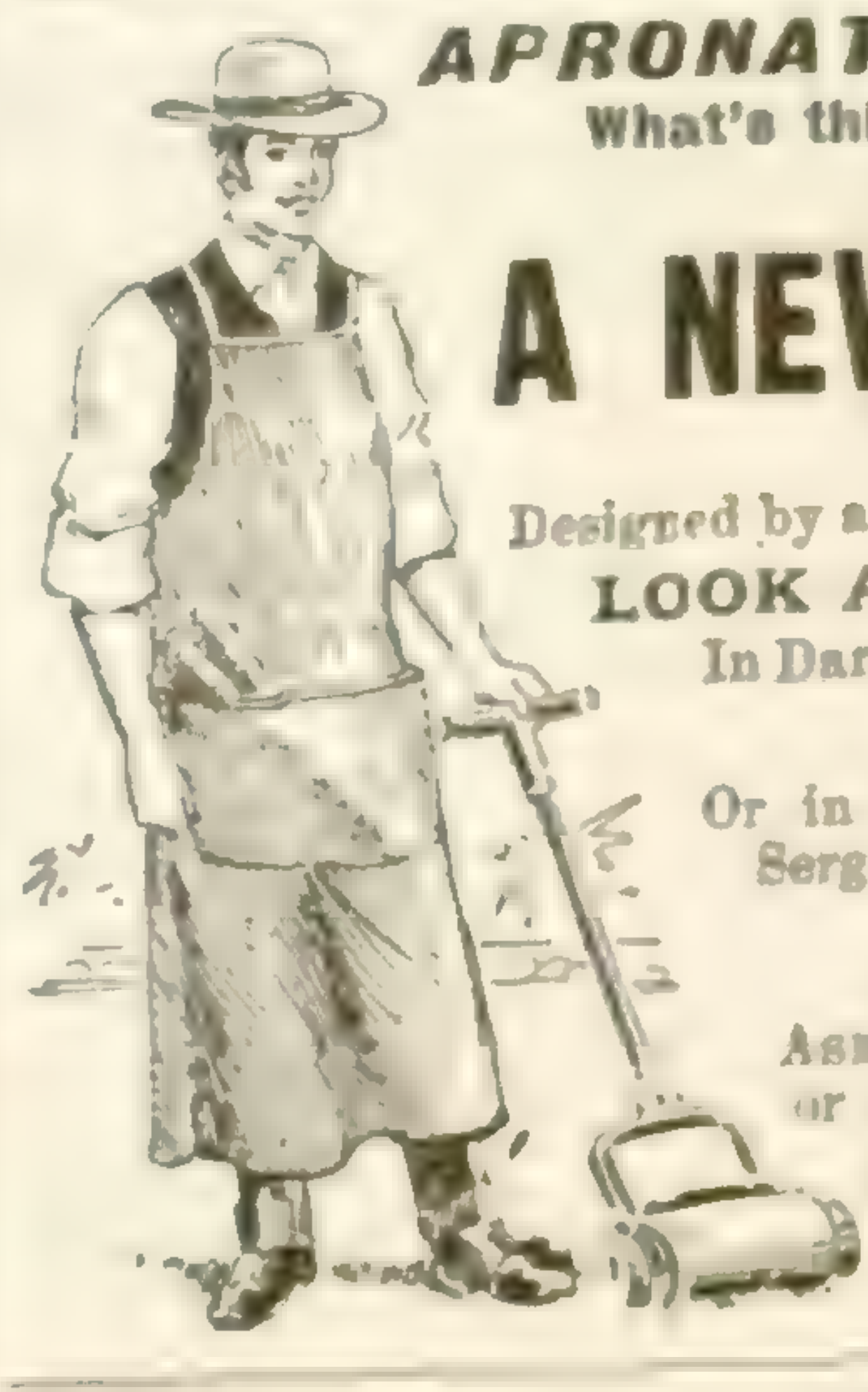

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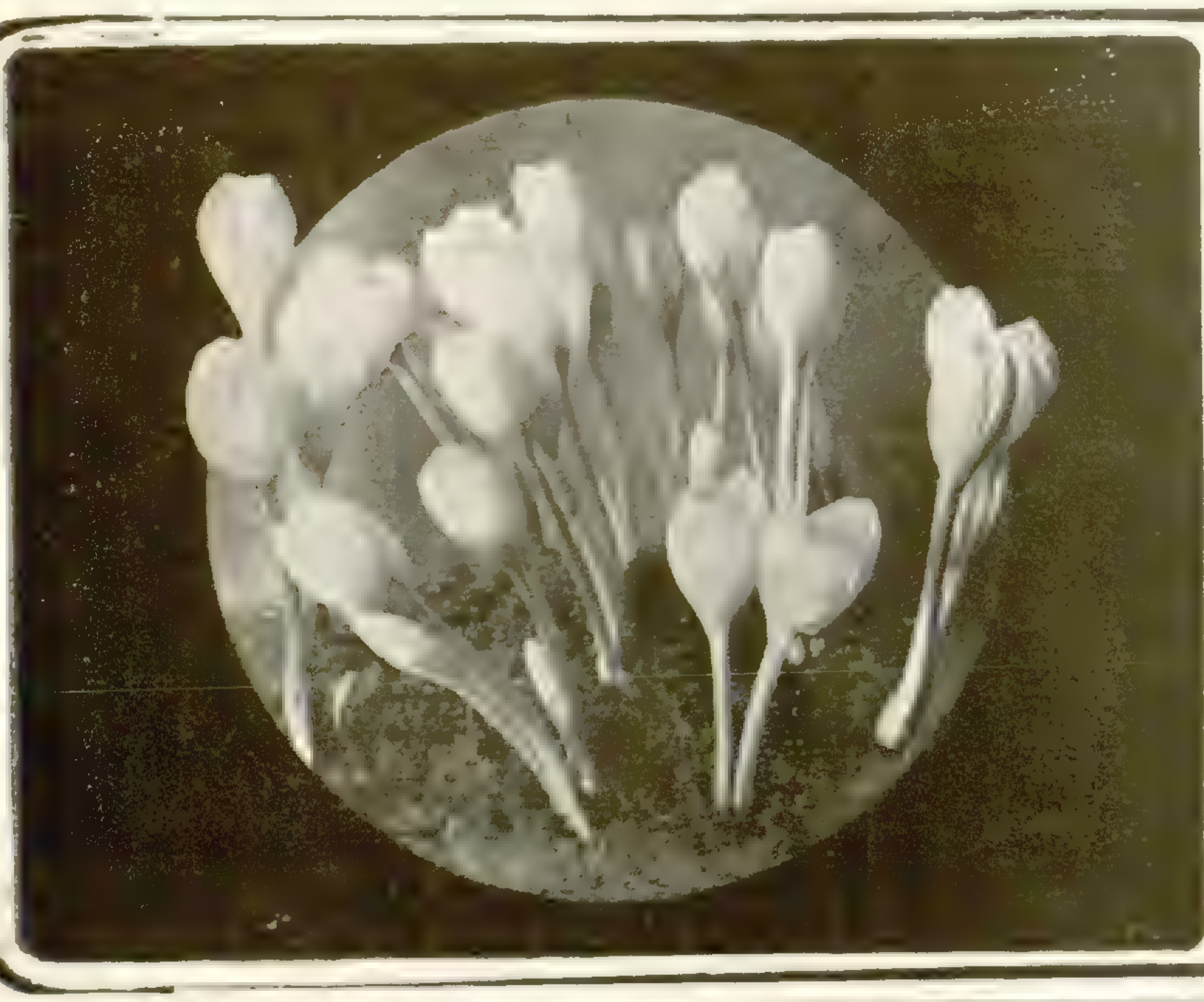

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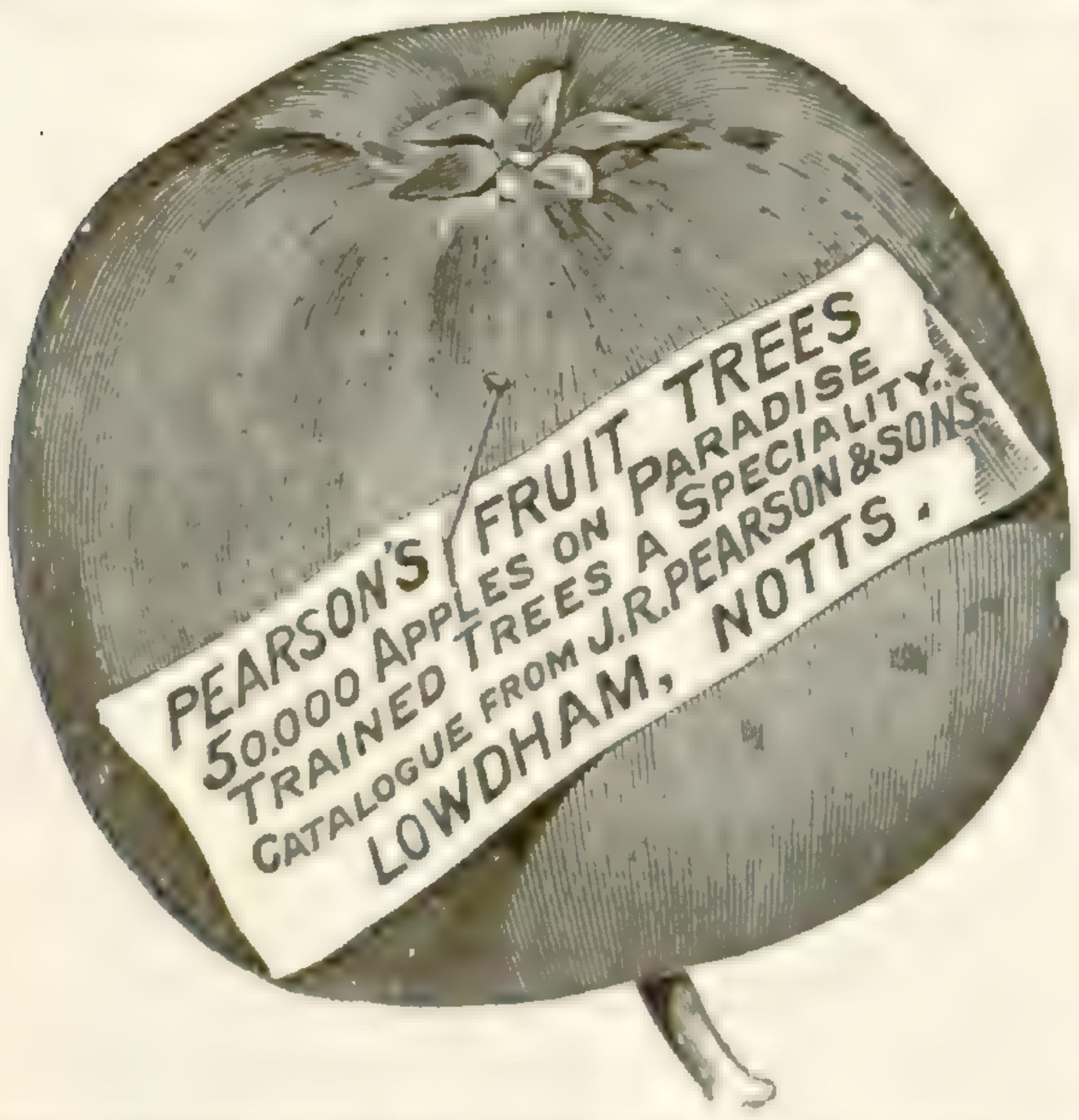
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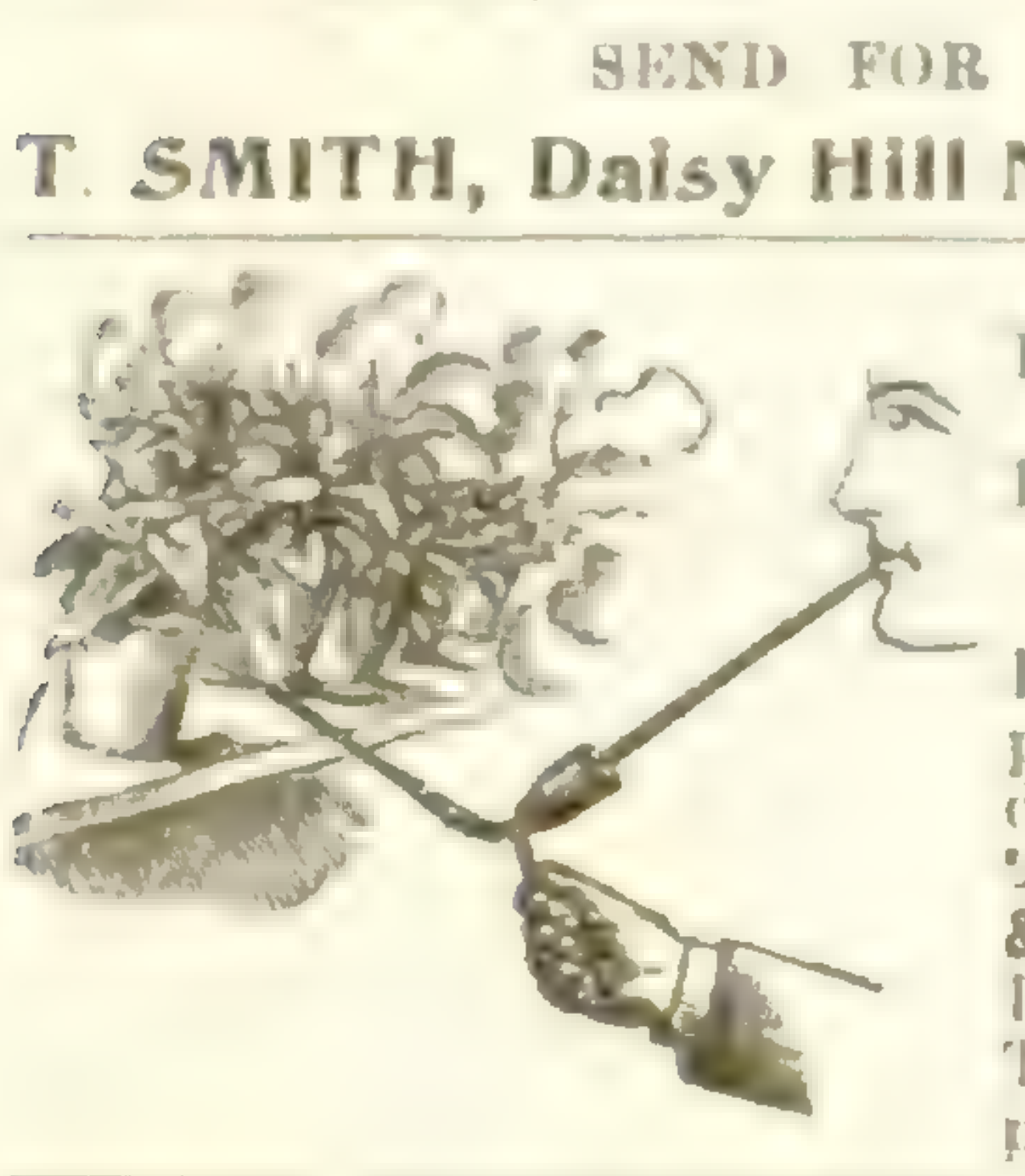

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VOL. LI.—No. 2,856. SATURDAY, JULY 25, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The Cult of the Sweet Pea.

Nine years cannot well be said to form a very considerable part of the history of a flower that has been in cultivation in this country upwards of two hundred years, yet within this period the sweet pea has undergone such marked improvement in the size, form, and colours of the flowers, and in the development of the flower spikes, as to have had its value in the garden increased at least a hundredfold. At the present time it is of considerable interest to recall to mind the high state of development to which sweet peas had attained in 1899, as the result chiefly of the splendid work accomplished by the late Mr. Henry Eckford during the twenty preceding years. We mention 1899 because in that year steps were taken for the first time to give greater prominence to these fragrant flowers by organising an exhibition wholly devoted to them. The improvements that had been effected had greatly increased their popularity, and they were rapidly making their way to the great exhibitions, but in the majority of cases they were not staged in such manner as to convey an adequate idea of their grace and beauty. Appreciating the importance of improved methods of staging, and of bringing into prominence the finest of the varieties in the several shades of colour, we suggested in the Gardeners' Magazine of March 25, 1899, the desirability of holding a special exhibition of sweet peas. This suggestion would appear to have at once attracted the attention of those who were interested in these flowers, for, in the following summer, as stated in these pages on several occasions, Mr. W. Cuthbertson and the late Mr. Richard Dean, when on a visit to Messrs. Hurst and Son's trial grounds, casually discussed the question of holding such exhibition. As the practical outcome of the discussion at Kelvedon a meeting was held at Edinburgh in September of the same year, with Mr. George Gordon in the chair, and it was then decided to hold an exhibition in 1900, the bicentenary of the introduction of the sweet pea into this country, and to take the steps necessary to bring it to a successful conclusion. It is now a matter of history that the bicentenary celebration was a splendid success, that the formation of the National Sweet Pea Society followed, and that the popularity of the sweet pea has increased with such rapidity as to surprise even the most sanguine, and to create a large industry in their seeds and flowers. A brief sketch of the work that has been accomplished by the National Sweet Pea Society could hardly fail to be of interest, but it must now suffice to state that the society is a splendid example of what can be accomplished by a special society in the cause of the flower to which it owes its existence when conducted on well-defined lines. From the first those responsible for its management have kept steadily in view the object for which the society was founded, and in carrying out that policy with due vigour have proved to demonstration the advantage of a combination of amateurs and members of the trade in the conduct of work of a national character. The society has held annual exhibitions, as in the case of other special societies, but within a very short period of its foundation it recognised the fact that there was other work of far-reaching importance to which it would be necessary to give attention as soon as the funds at its disposal would permit. The executive was not slow to see that the preparation of a list of too-much-alike varieties would have to be prepared for the guidance of cultivators, that an endeavour should be made to reduce the list of varieties in cultivation by the elimination of those superseded by more recent introductions, or unequal to varieties which had preceded them in matter of time. In both directions such excellent work has been accomplished as to place all who are interested in sweet peas under a debt of gratitude to the society. Not less important has been the manner in which the society has dealt with novelties. Anxious to encourage raisers of new varieties to the fullest possible extent, it was foreseen that unless the utmost care was exercised in the making of awards to new introductions that both the society and the raisers would suffer. Not only is it desirable that new varieties should be superior to those in cultivation, but it is essential they should be thoroughly fixed, and the fixing of a new sweet pea is so slow as to be rather trying to the patience of a raiser who is successful in obtaining a form that shows a considerable advance upon others in the same line of colour. Yet it is not less to the interest of the raiser than to the cultivator that mixed stocks should not be placed in commerce, for were that to be done to any appreciable extent there would at once be a decrease in the demand for new varieties. As we have

[Photo: Maull and Fox.

REV. F. PAGE ROBERTS.

fully informed our readers, the society has of late years had trials of sweet peas in the gardens of University College, Reading, and these, which have been conducted by Mr. C. Foster, the horticultural director, have been models of what such trials should be. These trials have proved of immense value in determining the relative merits of novelties, and this year only those varieties included in the trials are eligible for awards. In the examination of the new varieties at Reading the Floral Committee imposed a severe test by ruling out all that included more than 5 per cent. of variation from the type. This test, if rather severe, will impress upon raisers the importance of fixity of stock, and give that confidence to growers which is so necessary to a brisk demand for novelties, and thereby prove highly beneficial.

The Rev. F. Page Roberts has for so long a period occupied a prominent position among the leading amateur rosarians in this country, that it is quite unnecessary we should refer to his work among the roses otherwise than in the briefest manner. We might remind our readers that when resident at Diss he devoted for many years special attention to tea-scented roses, and obtained premier position for these varieties in many a keen contest. Mr. Page Roberts was indeed so successful with the teas that there can be no question as to his having done much to set the high standard which now obtains among these roses at the public exhibitions. Since becoming rector of Strathfieldsaye Mr. Page Roberts has given increased attention to roses of all classes, and it is difficult to imagine anything more delightful to the rosarian than to spend two or three hours with him in the charming rose garden he has formed. Here we find dwarfs and standards representative of the finest of the exhibition hybrid perpetuals, hybrid teas, and teas, and glorious masses of the most beautiful of the garden roses. Especially deserving of mention is the pergola over which the finest of the ramblers run riot and produce a beautiful display of colour. Much attention is also given to the cultivation of hardy perennials, and at Strathfieldsaye, as at Diss, the various eremuri are grown with a degree of success that might well be described as exceptional.

The Sherwood Cup Competition at Holland House. — Dr. Douglas L. Freeland, of Delamere, Snodland, Kent, writes:—I have read with interest the note, on page 528, in the last issue of the Gardeners' Magazine, and, as one of the two who competed for this cup, I think it is only fair that you should publish the following remarks: I entered for the competition at least eight days before the show, to comply with the schedule of the R.H.S. From that time until the 7th we experienced continuous and exceptionally bright sunshine every day, accompanied by north-east winds and cold nights. The consequence was that roses lasted no time, and when cut did not stand well. In my case the blooms had to be cut on the afternoon before the show, as I had to travel to London that night, so as to be at Holland House by 7 a.m. I was made to understand that there would be an ample supply of vases for exhibitors, but, upon my arrival at the show at 7 a.m., the only ones available were six inches high; the consequence was I was unable to use more than a quarter of the flowers I had with me, so that my exhibit, to my mind, was not nearly imposing enough. Judging was timed to take place at 10 o'clock, but it was nearly 12 before my flowers were looked at. This speaks for itself, for any rosarian knows how differently roses look at 12 o'clock in a hot tent that have been staged for the judges at 10. Although the flowers put up may not have been considered worthy of a ten guinea cup, in my humble opinion a great deal of credit was due to any amateur who was able to stage twenty-four bunches of roses on July 7, in a season admittedly extraordinarily early. Two points of interest to me were that the competitors for this cup were placed in different tents at considerable distance from one another, and the rapidity with which they were judged. In your note you express regret at the absence of the leading rosarians in the competition, but I think that this can be accounted for from the fact that we have had an unusually early rose season this year, so that most of our blooms were over before the 7th. As I had entered for the cup at a time when my prospects appeared bright, I did not consider that it would be good form to show the white feather at the last moment, so this explains my reason for staging flowers which were considered "unworthy" of the award, and it was done at considerable trouble and expense, not solely in the hope of winning a ten-guinea cup, but to show my devotion to the flower I love so dearly.

Plant Growth.—It is a matter of common knowledge that plant growth proceeds with great rapidity after thunderstorms following closely upon a period of great heat and drought, and accompanied by a heavy fall of rain. It is not, however, common for the "shoots of plants" to spring "upwards so quickly that the rate of growth could be marked by an observant watcher." This Mr. Owen Greening tells us in "The Standard" was his experience recently, and in his reference to the matter he asks, "Does not the electric energy effect some changes in the air as grateful to the senses of plants as in the known phenomenon of ozone formation to ourselves?" This question, in the light of the results of experiments that have been made with a view to determine the effect of electricity upon plant growth, might perhaps be answered in the affirmative. It might also be suggested that electricity has some influence upon those who are able to mark "the rate of growth" by the eye alone in rhododendrons growing in the open.

Plant Reproduction. — Mr. C. Sherry, of the Glasgow Botanic Gardens, is reported to have stated in the course of a paper read before the Andersonian Naturalists' Society on "Natural and Artificial Modes of Propagation," that "the importance of buds in the propagation of plants, although well-known to botanists, was comparatively little attended to by propagators in general." Also that "their value could hardly be overestimated, as they possessed an amount of independent vitality, and might be induced to give origin to new individuals." Surely Mr. Sherry could not have been properly understood by the reporter, for it is hardly possible he could have suggested that the general body of propagators do not appreciate the value of buds as a means of increase. In the case of roses alone, millions of plants are annually raised in the United Kingdom by means of buds; and in the propagation of fruit trees, of which many hundreds of thousands are annually raised in this country, buds are almost exclusively used. Many ornamental trees are also propagated by means of buds, as also are potatoes, and many other useful and ornamental plants. Supposing Mr. Sherry has been correctly reported, it would be interesting to ourselves, as to a large section of our readers, if he would tell us how "buds might be induced to give origin to new individuals." The question of bud sports has received much consideration from scientists and practical cultivators, and all who have studied have as yet had to confess their inability to assign a cause for their origin, and suggest a course of procedure by which they might be induced.

Nightingales in the Midlands.—We are informed by a correspondent that for some time past a nightingale has been heard singing at night at Haigh, near Wigan. The bird's song has so charmed the residents in the district, many of whom belong to the mining classes, that they are up before sunrise to enjoy the melody. Some weeks previously a nightingale was heard in the neighbourhood of Ashton-in-Makerfield, and during the time of its stay large crowds went to hear the bird's song. It is unusual for the nightingale to go so far north.

Gardeners' Visit to a Famous Rose Garden.—A few days' since the members of the Burgess Hill Gardeners' Association visited the gardens of Cambrian House, Burgess Hill, the residence of Mr. G. A. Hammond, who as so well known is one of the leading amateur rosarians in Sussex. The visitors having fully enjoyed the roses, which were in great beauty, were entertained by Mr. and Mrs. Hammond at tea on the lawn, and prior to leaving the gardens accorded a hearty vote of thanks to their host and hostess.

Exhibition of Preserved Fruits and Vegetables.—On November 26 and 27 next, the Royal Horticultural Society will hold their annual exhibition of home-bottled and preserved fruits and vegetables, and now that the fruit-preserving season has again arrived, it may give added zeal to the lovers of this useful domestic art to prepare fruits for award at this exhibition. Dried or bottled fruits of any kind may be shown, subject to the conditions of (a) there being no chemical preservative, or (b) artificial colouring matter used, (c) of their being tasted by the judges, and (d) provided they have been grown in the British Islands. The schedule contains classes for bottled fruits, home-dried or evaporated fruits, preserved vegetables, jams, fruit jellies, and cheeses, and miscellaneous appliances, preserving bottles, etc. One class is specially attractive, and it is believed quite original. It invites for exhibition three bottles of British-grown fruit (of which one must be raspberries) bottled and shown by amateurs. These will be examined by the judges and left in the care of the society until November, 1909, and a silver cup and other awards given.

London and Dublin Sweet Pea Exhibitions.—The Gardeners' Magazine of August 1 will contain a full and illustrated report of the London exhibition of the National Sweet Pea Society, to be held in the Royal Horticultural Hall, Westminster, on Friday, July 24, and the issue of August 8 will contain full and special reports of the Sweet Pea Show and the R.H.S. of Ireland Show, to be held in Dublin on August 5.

British Gardeners' Association.—The next outing of the London branch will be to Finsbury and Waterlow Parks, on Saturday, August 8. Members will assemble at the Station Gates, Finsbury Park, at 3.30 for 3.40 p.m. The floral display is exceptionally good this year. All professional gardeners are invited to this outing. Those unable to join the party at the appointed hour will, on inquiry, be informed of the direction the party has taken. The members expect to arrive at Waterlow Park at 6.30 p.m.

WATERING PLANTS IN POTS

On looking at this headline some may say, "Watering plants in pots! any fool can do that!" Let such read no further, for these notes are not intended for them. But let any amateur leave his pot flowers to the care of a friend when he is away from home for a week or two, and when he returns he will probably find that there is a wrong as well as a right way of watering. Perhaps the younger readers of this paper may learn something from the experience of one who was watering plants in pots before they were born, and has been at it ever since.

In the first place, as a general rule plants in pots should not be watered unless they are dry. The plants often stand in a row, and some may be dry and some damp, and it is a temptation to run the can over all of them. The result is that, after a little time, those pots which do not get dry so quickly as the others—either because they contain smaller or less vigorous plants, or because the drainage is not quite so free—soon begin to have a caked surface, and this becomes green, and most plants soon cease to be healthy in such circumstances. Besides this, it is a good thing for plants to get fairly dry occasionally, as the absorption of most of the moisture in the contained earth means that air takes its place —air which is so necessary to the germ life of the soil which is preparing food for the plants by breaking down organic substances, and air which is so necessary to prevent the soil becoming sour, a condition which is alike bad for the germs and for the roots of the plants. This principle of allowing the soil to become dry must not be carried to excess, especially with subjects like chrysanthemums, which, if once allowed to get into a very drooping condition lose their lower leaves and look bare for the rest of the season. Farmers say that iron is the best manure you can give the soil, meaning that it does the land a deal of good to get so dry that it wears away, and occasionally breaks, the ploughshares.

In the next place, when plants are really dry, do not think that if you just fill them with water up to the brims that that is all that is necessary till the next day, for that is a great mistake. The soil contracts when it gets very dry, and the result often is that the water runs through the pot by the easiest channel, and the mass of soil is scarcely touched except for a quarter of an inch at the surface. Anyone can prove this for himself by turning out such a pot half an hour after it has been watered. When plants in pots are very dry they should be watered a second time after an interval of an hour or so, and, assuming that this is done in the evening, they may with advantage be watered again in the early morning in very hot weather. Only in this way can pot plants stand very hot weather without injury. In ordinary weather a thorough soaking will be found to last two days with most things, which is better than half watering them every day.

Standing pots in saucers of water is bad, the plants drawing up the water with their roots at the bottom of the pot instead of through the medium of the soil, and the result is generally seen in weak, unhealthy growth. When plants in small pots get excessively dry, as is often the case with those indoors which are not regularly attended to, it is a good plan to immerse the whole pot for an hour or so.

Bear in mind that rain, unless it is very heavy or prolonged, does not sufficiently moisten the soil in pots that are very dry, especially if the plants have large leaves. I had a striking illustration of the popular idea on this subject some years ago. Having to leave home for a week or so, I arranged with someone to water some pelargoniums which were in pots in window balconies. On my return I found them as dry as dust and apparently dying. On inquiry I found they had not been watered during the last few days (which were very hot ones) because there had been some heavy rain, or what was regarded as such, two or three nights previously!

As regards giving plants in pots liquid manure, experience and discretion are alike necessary. To give liquid manure to them when they are very dry is not only wasteful—so much of it running through the soil to no purpose—but it may injure the plants, as in taking up the amount of water they need to make good the loss of the day they will have to absorb more of the fertilising elements than is good for them, the water containing them being their sole source of supply, and the result will be an unhealthy appearance, and possibly death. Thus the giving of liquid manure should only be done when the soil is damp, or, in very dry weather, after the soil has been thoroughly soaked in the way recommended above. It should be borne in mind that pot plants cannot stand liquid manure so strong as those in the open ground, as all the roots are brought into contact with the manure in the former case, while in the open ground only a part of the roots ordinarily come into contact with the liquid manure, besides which it becomes more diluted with the water in the soil, assuming it is not given when the soil is very dry. Plants are often killed by the last half-pint in the can when the liquid has not been kept well stirred.

ALGER PETTS.

A RARE HORSE CHESTNUT.

A search through various nurserymen's catalogues fails to find any mention of the Indian horse chestnut (Æsculus indica), whose great merit is that it flowers after all the others are past. It is apparently quite a tree in stature, the somewhat upright habited branches being clothed with leaves a good deal after the manner of those of the common horse chestnut, but with the leaflets more wide-spreading, while the stalks and midribs are red. The flowers, and the manner in which they are borne, also bear a good deal of resemblance to the common kind, the main point of difference being that the panicle is a good deal narrower, being in fact almost a spike. From its late-flowering qualities this horse chestnut is well worthy of cultivation, but, as above-mentioned, it is almost, if not quite, impossible to obtain it from the nurseries. A native of the Western Himalayas, Æsculus indica is said to have been first introduced in 1828, but afterwards lost till reintroduced in 1844. No mention of the horse chestnut family at this season is complete without a word in favour of the July flowering Æsculus parviflora, far better known in many gardens as Pavia macrostachya. This, which is but a shrub in growth, pushes up suckers so freely as to soon form a mass or clump. The leaves are unusually wrinkled, and of a particularly deep-green tint, while the long spikes of slender white flowers present quite a bottle brush-like appearance, owing to their long prominent stamens.

W. T.

ASTILBE QUEEN ALEXANDRA.
A beautiful pink-flowered hybrid, shown at the meeting of R.H.S. on Tuesday last.

SWEET PEAS TO PERFECTION.—The new work, SWEET PEAS AND THEIR CULTIVATION FOR HOME AND EXHIBITION, by C. H. Curtis, hon. secretary, National Sweet Pea Society, contains full information as to the selection, planting, and general management of sweet peas. The price is 1s. net (by post, 1s. 2d.), or bound in cloth, 1s. 6d. (by post, 1s. 8d.), from W. H. and L. Collingridge, 148, Aldersgate Street, London.

NEW BOOKS.

◆

VEGETABLES FOR HOME AND EXHIBITION.

By Edwin Beckett, V.M.H., F.R.H.S. (Simpkin, Marshall, Hamilton, Kent, and Co., London.) Price 5s.

One of the most important of the many changes that during the past quarter of a century have been made in connection with the gardening art, is unquestionably that by which an immense improvement has been effected in the cultivation of vegetables, and in the manner of presenting them to public notice. During the period coincident with the development of glass culture, the production of vegetables was regarded as a quite secondary matter in the education of the young gardener, and consequently skill displayed in the management of the kitchen garden failed to secure other than a small measure of appreciation; and when vegetables were contributed to the various exhibitions, they were usually presented in such manner as to contribute but little to the attractions of the gatherings. Happily, during the past twenty-five years there has been a steady and continuous change in the views held with regard to the position of vegetables in the economy of the garden. It is now fully recognised that a thorough acquaintance with the various kinds, and their cultural requirements, is essential to success in garden management, and that the production of abundant supplies of high quality is not less important than is the provision of plentiful supplies of fruits and flowers. As the result of this recognition, gardens have been made more productive, and tables better supplied with vegetables than was formerly the case. With a higher appreciation of vegetables as evidence of skilful garden practice, there came a desire to present them at the public exhibitions in a more attractive manner than had for so long a period been considered all sufficient, even by the leading exhibitors, and on all sides strenuous efforts have been made to so stage vegetables as to ensure their contributing their full share to the attractions of the display of which they form so important a part. These efforts have not only been strenuous, but they have been highly successful; and no longer do we see the collections relegated to the more obscure parts of the exhibitions, but find them where they can receive prominent attention, and be fully utilised as object lessons in the art of vegetable culture.

We have been induced to thus briefly refer to the great change that has been made in the views held by practical horticulturists with regard to the growth of vegetables for the purpose of enabling us to say that Mr. E. Beckett, whose new book on vegetables we have now before us, has, by example and precept, contributed in no small degree in bringing it about. For the greater part of the period of time to which reference has been made, Mr. Beckett has taken a leading part in the vegetable competitions at the chief exhibitions, and he has shown again and again that the finest quality is not only consistent with high cultivation, but that it is coincident therewith; and that it is possible to exercise taste in the disposition of the several kinds upon the exhibition table. He has thereby greatly assisted in dispelling the illusion so tenaciously held both in and out of the garden, that exhibition specimens were more or less unprofitable, and in the matter of quality decidedly unsatisfactory. We can remember the time, and that not so far distant, when the opinion was held by some who occupied prominent positions in the world of horticulture, that potatoes with shapely tubers were inferior in table quality to those having tubers characterised by a certain amount of roughness. These views are now changed, and Mr. Beckett has full justification for indulging in a feeling of satisfaction that he has been able to assist in bringing about the change.

By a large proportion of our readers it will be remembered that some nine years ago Mr. Beckett published a book on vegetables, which was at once acknowledged to be one of the best works on the cultivation of the occupants of the kitchen garden. The edition was large, but, owing to the popularity to which it very quickly attained, it rapidly passed through the publisher's hands, with the result that it has been out of print for some time. Instead of following the usual practice of making sundry additions and corrections for the purpose of bringing the book up to date, Mr. Beckett appears to have waited until he could write a more comprehensive and more freely illustrated volume than that which preceded it and brought so much credit to him. As the former work was a record of his own practice as carried out at Aldenham, the present volume rests, so to speak, upon the same foundation, and, for soundness of teaching, will not be less valuable. In other respects it is distinctly superior, all the subjects that have a place in its pages being dealt with in greater detail; and, in addition to the illustrations of the finest types of the several kinds, there are numerous illustrations of such operations as trenching, and making celery trenches, as carried out by Mr. Beckett in the gardens under his charge; and also of gold medal and other collections of vegetables contributed to the leading exhibitions, which are especially deserving the attention of those who are desirous of learning how to stage vegetable collections in the most tasteful manner.

In addition to the chapters on vegetables, there is one on herbs that forms an interesting and useful feature of the book; and there are freely illustrated chapters in which fungoid diseases and insect pests are so fully treated as to place the reader who has mastered the instructions given, in the best possible position to prevent attacks, and to effectually eradicate any of the pests that may have become established.

It is not necessary to speak of "Vegetables for Home and Exhibition" in further detail, but it is essential we should state, in no uncertain manner, that the work is so comprehensive in character, so admirable in the treatment of details, and so thoroughly sound in its teaching, that we heartily congratulate those in need of guidance in the practice of vegetable culture on having such a valuable mine of information placed at their disposal. We no less heartily congratulate Mr. Beckett on the success he has achieved in producing a work that will long occupy a foremost place as a text book on the cultivation of vegetables.

THE UNHEATED GREENHOUSE.

By K. L. Davidson ("Country Life," 20, Tavistock Street, Covent Garden, W.C.) Price, 8s. 6d.

While we are not able to agree with the author that it is an open question whether a tenth part of the pleasure can be obtained from a heated greenhouse all the year round that may be found in the successful management of one that is wholly unheated, we are in full agreement with him that unheated plant houses may be made a source of continual enjoyment. As the author speaks of the heated house being dangerous to health, it may be that he has not sufficiently differentiated between the structure devoted to the cultivation of tropical plants, and commonly known as the plant stove, and the greenhouse as generally understood in gardens. The latter structure is usually, if not invariably, devoted to plants from temperate regions, and requiring but little, if any artificial heat beyond that which is necessary for keeping them safe from frost, and drying up any redundant moisture in the atmosphere during the autumn and winter months. In such structure as this the temperature should not at any time be at a point at which it could be regarded as dangerous to plant-lovers having a weakly constitution, for it would be most hurtful to the plants that properly belong to the greenhouse.

"It is well from the starting point," writes the author, "to have a clear understanding of what is meant by a cold greenhouse. It is one in which it is neither convenient nor desirable to have a fixed heating apparatus, and in which it is only intended to prevent the temperature from falling below 35 degrees, or in other words, to keep out the frost." Proceeding, he states: "The term 'fixed' is used advisedly, for, though there may be cases of glass corridors, or of a large glass garden in which an ordinary fixed flow and return pipe might answer better than a removable apparatus, it must be borne in mind that the main principle of the unheated greenhouse—except during the two dead and dark weeks which precede and follow the shortest day, or on the occasion of a sudden fall of temperature, or of damping fog—is to keep it cool enough for the plants of temperate regions which alone are suitable to be grown in it. It goes without saying that the mere shelter of glass will not keep out severe frost. Therefore, some means of raising the temperature under certain conditions of weather to be considered later are not forbidden in the cold greenhouse."

In reading thus far we confess to a keen sense of disappointment because, in looking at the title of the book, we naturally supposed that the book had been written for the purpose of advising the amateur, and the professional gardener also, on the management of glass structures devoted to plants that can be successfully grown without the aid of artificial heat. Instead, we find the author dealing with the greenhouse as that structure is understood in every garden in the United Kingdom, and suggesting that a method of heating other than by the conventional boiler should be adopted. We are told that "such unheated glass-houses are not in favour," and we confess they are not, because those who understand anything of plant-growing know also that structures provided with temporary contrivances for heating give rise to considerable trouble, and not a little anxiety. If, however, the author intends to imply that greenhouses in which no more artificial heat is used than is necessary for keeping out frost are not in favour, we can only say that his experience differs from ours. The greenhouse of this character is just as popular as it was at any period in the history of gardening in this country, and if "the grand specimens of hard-wooded plants which were the pride and glory of a past generation" have disappeared, it is because gardeners carry out the wishes of their employers and grow such subjects as are more suitable for the decoration of indoor apartments and the supply of cut flowers than were the heaths, pimelias, eriostemons, and similar subjects on which past generations lavished their skill. It is quite true "the professional gardener, as a rule, pins his faith to boilers and pipes," and he does so because he is acquainted with the advantages resulting from their use. But he certainly does not "look askance at the plants which will thrive in a temperature lower than from 60 to 80 degrees." It is not quite clear to what plants reference is made, because a little farther on the author states that his "plea is not for unheated greenhouses, as against hot houses," because, he observes, "we cannot do without the lovely flowers of the tropics—the allamandas and dipladenias, the palms and the orchids—which are such a delight to all flower-lovers."

It is matter for considerable regret the author should have selected the title he has done for his work, and then endeavoured to show that a greenhouse in which the necessary artificial heat is supplied by a temporary apparatus is unheated. This we regard as unfortunate, because the furnishing and management of the greenhouse, as ordinarily understood, is discussed with a freshness that is none too common in garden literature, and the book contains an immense amount of information that is clearly and pleasantly stated. The author suggests a large number of extremely beautiful plants for the greenhouse that are not usually seen in that structure, and gives particulars of their cultural requirements that, if carefully acted upon, will enable the cultivator to achieve a high degree of success. As a guide to the "cool" greenhouse, the book is of great excellence, and can be strongly recommended to those who are in need of information relating to such structure.

BEGONIAS AT KEW.

During a walk round Kew one cannot fail to be struck with the important part that the begonia plays in the embellishment of our gardens, as the uses for which the different kinds may be advantageously employed are now multifarious.

Several of the original tuberous-rooted species are brought together in the T range, and it is very interesting to compare them with the garden forms of to-day, all of which have originated from about half a dozen distinct species, natives of the Andean region of South America.

Of these there are now flowering at Kew Begonia boliviensis, with narrow, light scarlet petals; Begonia Pearcei, for which we are indebted to the various shades of yellow and orange; and the vermilion-coloured Begonia Davisi, whose introduction in 1876 led to the formation of a smarter class of tuberous-rooted hybrids than had existed up to that time. Full of interest, too, is the white-flowered B. Dregei, whose thickened rootstock can, however, scarcely be called a tuber. This species is a native of South Africa, and in conjunction with the distinct B. socotrana, it yielded B. Gloire de Lorraine, unquestionably the most popular begonia of to-day.

Another South African kind, but with true tubers, is B. Sutherlandi, one of the most graceful of begonias, whose small coppery orange-coloured flowers are borne in great profusion. A quarter of a century ago a very popular species was B. Frœbeli, from Ecuador, but as far as I know it did not prove of any value to the hybridist, and is now seldom met with. At Kew, however, it furnishes a pleasing reminiscence of bygone days. The Mexican B. gracilis, known often as B. Martiana or B. Martiana gracilis, with upright branching stems, and bright rose-coloured blossoms is an exceedingly pretty tuberous-rooted begonia, but one that, as far as I know, will not intercross with the South American kinds. The last of these tuberous-rooted species to mention is B. Baumanni, from Bolivia, whose flowers are of a rosy-red colour.

From the three species B. boliviensis, B. Davisi, and B. Pearcei, to the numerous hybrids with both single and double flowers, in whose production they have played such an important part, is the next step. As bedding plants they are invaluable, and equally so for the embellishment of the greenhouse or conservatory at this season. The looser growing forms are seen, too, at their very best when grown in suspended baskets, as in most of them the flowers have a drooping tendency. When one compares the sturdy-growing, large-flowered forms of the present-day with the three species just mentioned, the great extent to which our gardens are indebted to the hybridist is then very evident.

There is also quite a long list of species whose roots are of a fibrous nature, and many of these, with their hybrids are very beautiful. Unsurpassed in many ways is B. semperflorens, of which there is now a long list of forms. The tall-growing B. semperflorens gigantea is of great value for flowering in early spring. Next come the varieties which are of a dwarf habit of growth, and whose leaves acquire a bright red tint under the influence of the summer's sun. These are now largely used for bedding purposes. Lastly, must be mentioned the varieties with double flowers, which, when first sent out by M. Lemoine, of Nancy, a dozen years or more ago, were thought to have a great future before them. These expectations have, however, scarcely been realised, though a group or two in No. 4 greenhouse at Kew shows them in a very favourable light.

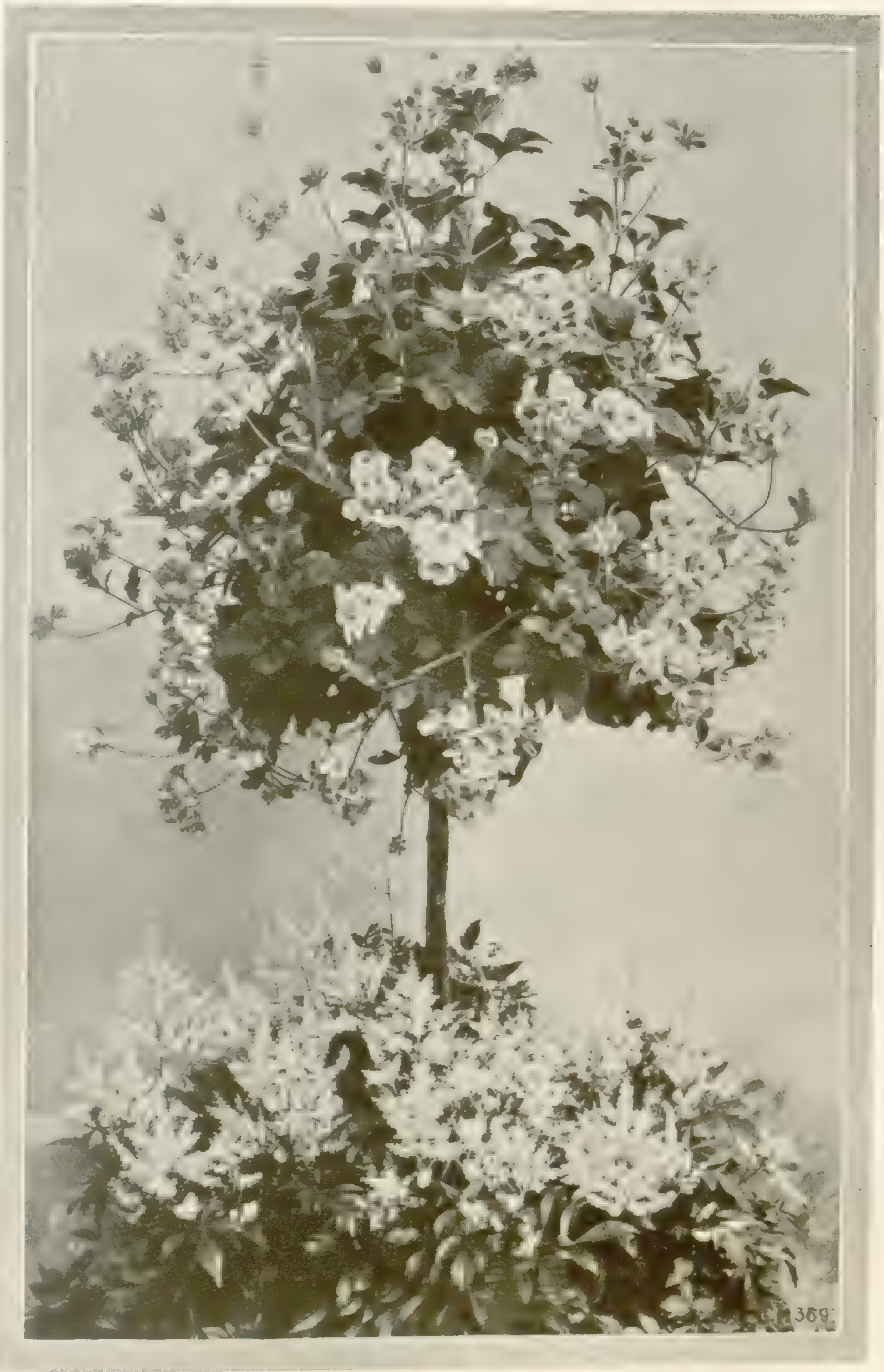
Another fibrous-rooted variety, B. Knowsleyana, with a profusion of small white blossoms, is in the greenhouse employed as a carpet for some upright-growing fuchsias, and the effect is certainly very pleasing. Begonia glaucophylla or undulata, whose flowers are of a reddish-salmon colour, is one of the best of all plants for large hanging baskets in a warm conservatory, while it is equally at home when clothing a wall. Begonia coccinea, too, whose shoots are pushed up after the manner of a bamboo, is seen to great advantage when planted in a prepared bed in the greenhouse, and trained to a pillar or to furnish a screen at the end of the structure.

This by no means exhausts the list of fibrous-rooted kinds in bloom, for there are several in a warmer structure than the conservatory. In conclusion, a few words must be spared to direct attention to the high position occupied by begonias as foliage plants alone. The most marked in this respect are the different varieties obtained by the intercrossing of B. decora, B. Rex, and B. Bowringiana, though some of the other kinds are scarcely less beautiful.

K.

STANDARD SPECIMENS OF PELARGONIUM CLORINDA.

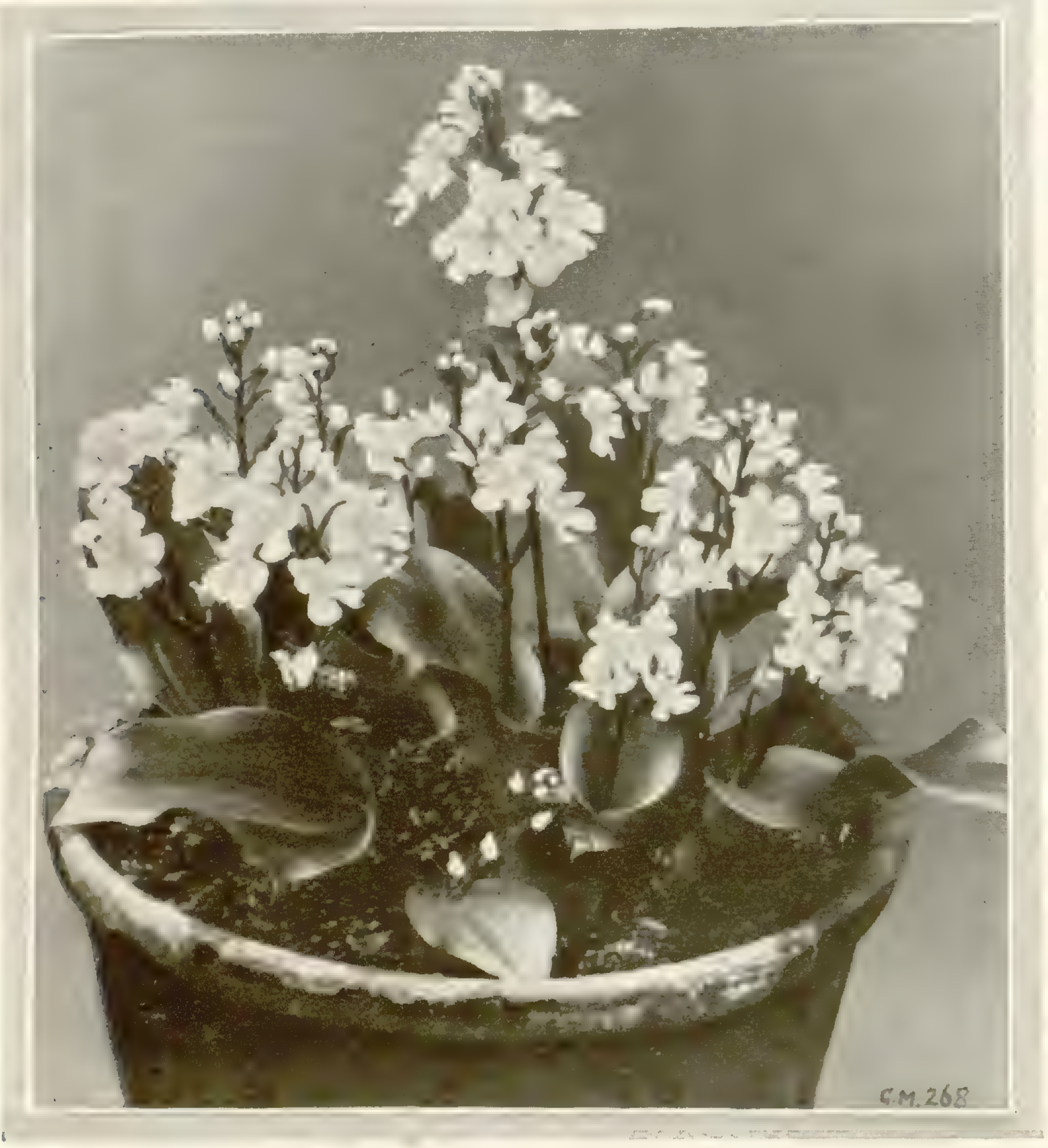
Among the very numerous varieties of pelargoniums introduced during recent years, I know of none superior to Clorinda for decorative purposes. This variety was brought before the public by Messrs. H. Cannell and Sons. I cannot speak from personal knowledge of its parentage, but the Swanley firm describe it as the result of a cross between a Cape pelargonium and Pelargonium quercifolium. It is a robust grower, extremely floriferous, blooming profusely throughout the whole of the winter and spring. The colour is a beautiful deep pink or rose, and the flowers last for a considerable time before fading; these latter and the foliage are alike pleasantly scented.



STANDARD SPECIMEN OF PELARGONIUM CLORINDA
As grown by Mr. E. Beckett, V.M.H. Flowers, bright rose.

When I first saw this pelargonium I was so impressed with it that I took the earliest opportunity of procuring a few plants, and, owing to its robust constitution I felt convinced that it would be most desirable for growing in standard form, and in due course I gave practical expression to my convictions. As the result, we exhibited a large group of standard specimens at the Temple Show in May last. The specimens shown have brought me many congratulatory letters from various parts of the United Kingdom and several from the Continent, and numerous inquiries as to our method of procedure.

The specimens exhibited, one of which is illustrated herewith, were raised from cuttings two years ago, and grown on in the ordinary way, running them up until the desired height was reached. The points of the leading growths were then pinched out and the heads formed. These were placed in the open during last summer, pinching the growths occasionally to procure as many shoots as possible, and arranged in cool houses during the winter months. Early in the new year they were shifted into 8in. pots, and placed in a late vinery, a small wire being fixed round the head to train the shoots into position. After the vines had started freely into growth, the plants were removed to a light span-roofed house, and liberally fed with diluted farm yard liquid, and, except tying in the shoots and regulating the growths occasionally they required but little further attention.



A LOVELY SOUTH AFRICAN ORCHID (CYNORCHIS COMPACTA).
Flowers white with crimson spot on the lip.

Fortunately this variety with us has resisted the attacks of the green aphis, and no other insect pests troubled them. During the flowering season the plants must be freely exposed to light and air, or the colour of the flowers will be very pale. During the autumn months the foliage takes on a beautiful rose-coloured tint much resembling some of the autumnal colours in the open. I am convinced that this pelargonium is well adapted for almost any purpose under glass. For training up the rafters or on the back walls of houses in pots or planted out, for growing as small decorative plants, trained into pyramids, and for hanging baskets, it should prove of great service. For bedding purposes, I have had no experience with it, but have heard accounts of its behaviour in the flower garden. One gentleman, who is no mean authority, assured me that it was one of the finest things he had in his flower garden last year, and that he has this season planted it more extensively, while I have been told by others that it has not proved a success. Cuttings root most freely from the hard wood under glass at any season of the year, and I strongly advise all who may not be acquainted with it, and have to provide flowers throughout the winter, either as pot plants or in a cut state, to lose no time in procuring this desirable variety.
E. Beckett, V.M.H.

Aldenham House Gardens.

FRUIT PROSPECTS IN SCOTLAND.

The general fruit prospects are this year better than they have been for a considerable time, and all concerned have reason to feel satisfied at the outlook. With the exception, perhaps, of the gooseberries, the fruit crop promises to be a heavy one. The gooseberries, however, suffered from the frosts in May just when the buds were appearing, and this has resulted in the quantity of fruit on the bushes being rather meagre. What berries there are, however, are of good quality, and fairly large and equal in size. A few have already been picked hereabouts, but these have only been for cooking purposes, and as it is most profitable to ripen the fruit picking will not be general until about the middle of this month. Black currants, too, have suffered from the effects of the frosts in spring, although not to the same extent as gooseberries, due to the fact that they are a little later. This crop, however, is quite an average one, both as regards quantity and quality, the berries giving promise of turning out both large and juicy.

The best and richest crop in these Northern regions this year is that of red currants, but what a pity it is that there is so little of these delicious fruits cultivated. The weather all along seems to have been particularly well suited to them, with the result that the bushes are looking extremely well, and are bearing a crop that is exceptionally heavy. A few samples of English black and red currants are now on sale here, but the Scottish demand for this kind of English-grown fruit is not great. The home-grown is regarded as much superior to the English, and, on account of the greater amount of acid in the berries, it is always keenly sought after. Besides, the English growers pick red currants in the bunches, whereas the Scottish nurserymen and gardeners pick them clean.

Raspberries are also looking well, and there is every appearance of an exceptionally good crop of them. Like the black currant and red currant, this fruit will not be thoroughly ripe until nearly the end of July. Rain, which was so greatly required, did fall a little in the early hours of last Saturday morning, but more is wanted, as the ground is much too dry for the good of the crop, but should we have a fairly good fall this week there is every indication of the yield being a rich one.

Cherries are exceedingly promising, as also are apples. There are also most favourable reports of peas and cucumbers, and the potato crop promises exceedingly well. Altogether, the outlook of the market gardener in the North of Scotland is a very bright one, and his prospects generally are better this season than for a number of years.

Aberdeen. W. Kelly.

CYNORCHIS COMPACTA.

This dainty little South African orchid has been in flower at Kew for the past two months, and will probably last another month at least. The flowers are borne on erect, many-flowered racemes four to eight inches high, and are pure white, with a few faint crimson spots on the lip, and from half an inch to three-quarters of an inch in diameter. The leaves, which make their appearance contemporaneously with the flowers, are elliptic or elliptic-ovate, erect when young, arching over and reaching a length of six to nine inches when adult; light green in colour, and glabrous.

The plant dies down annually about the beginning of May, and should be then kept only slightly moist until the end of autumn, when growth recommences. The underground tubers, formed annually, are from one to three inches long. These, as winter approaches, should be shaken out of their old compost and repotted in a mixture of turfy-loam, leaf-mould, and sand, in equal proportions. The pans in which they are grown should be well-drained, and a number of tubers be placed together.

This species has been successfully grown for the past nine years in a cool house at Kew, and has never failed to produce an abundance of flowers each spring.

The genus to which C. compacta belongs is an exclusively African one, and is closely allied to habenaria. About thirty species are known, and several of these are at present in cultivation, the chief being C. Lowiana, C. purpurascens, and C. villosa, all of which have purple flowers, and require tropical treatment.

C. P. Raffill.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe. Fifth Edition, revised to January, 1908, and including the new varieties.—Full details on timing and stopping for Northern, Southern, and Midland growers, selections of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

THE YELLOW AURICULA.

It is rather curious, but it is a fact, that as soon as the "florist" sets about improving any class of plants, his "improvements" generally run counter to that of Dame Nature herself, and the auricula is no exception. There are two species of primula regarded as being the parents of the garden auricula, namely, Primula auricula and P. Palinuri. The latter was published as long ago as 1835, and is the subject of plate 3,414 of the "Botanical Magazine." It has bright yellow flowers, and white, mealy calyces. P. auricula is also figured in "Botanical Magazine," tab. 6,837. It is more widely spread in its native haunts than any other species of primula, and the flowers are also clear yellow, the segments of the corolla are notched, and the flowers very much smaller than those of the garden auricula. The evidence is all in favour of this being the species from which have been derived our beautiful garden auriculas.

We may look backwards for two hundred years, and it will be found that all who have tried to improve the auricula during that period have ruthlessly stamped out the yellow selfs. One or two were in existence early in the nineteenth century; one of them, named Stadholder, I had in cultivation for several years, but it was of poor constitution, and the flowers were far behind the quality of the best dark-coloured violet and red selfs. Very few of the auricula fanciers have cared to cultivate the yellow selfs; there is no reason for this except custom, fashion, or one generation of fanciers blindly following each other.

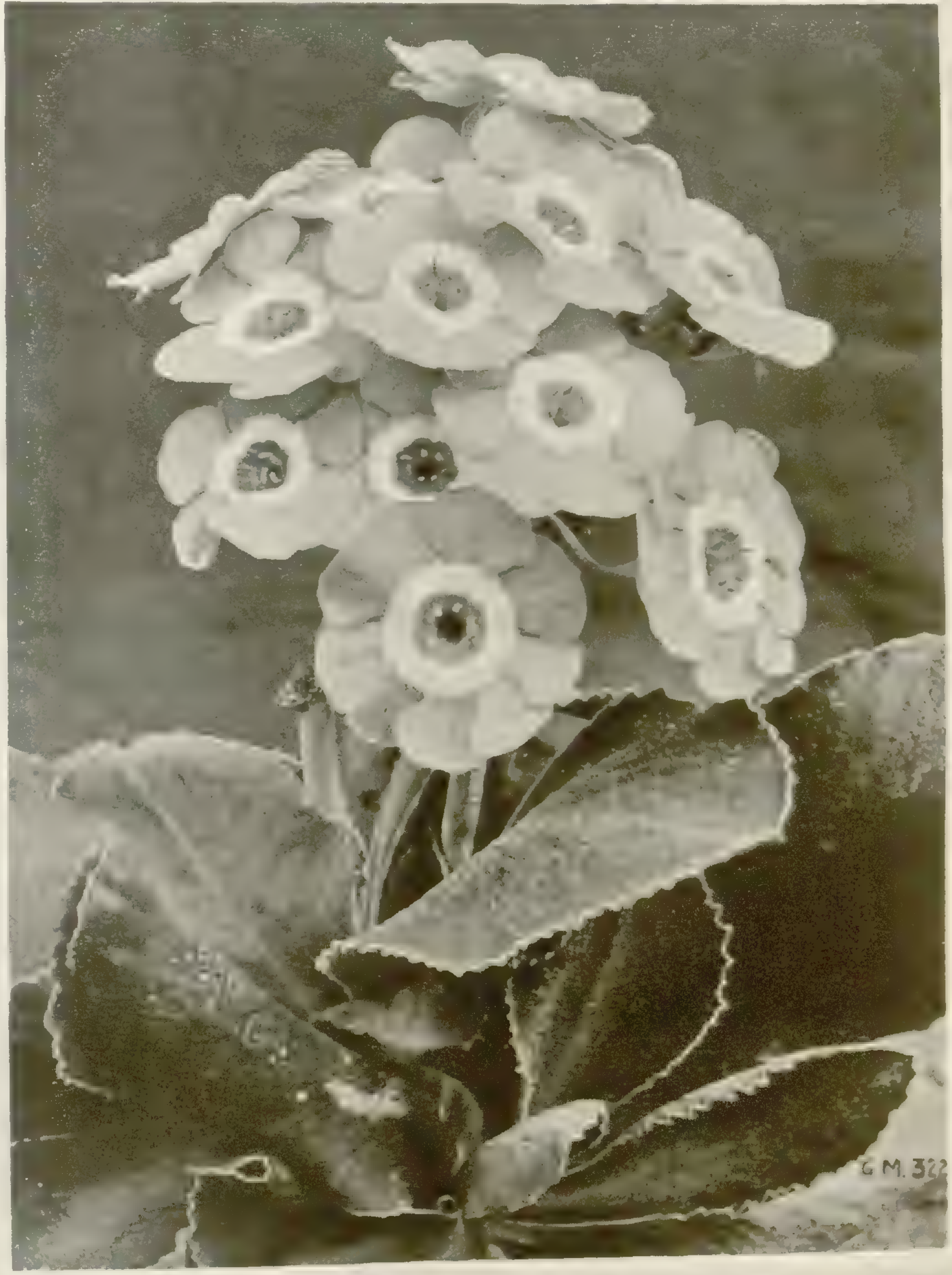
It will certainly add to the interest of our collections of these charming flowers if we can obtain yellow self-colours as large in size, and equal in form and substance to the best selfs. I have raised hundreds of yellow selfs, but for about twenty years failed to obtain any of sufficient merit to compete with the best coloured selfs. Recently we have crossed the best yellows with the best of the high colours, and in that way I obtained one named Daffodil, which was favoured with the A.M. of the R.H.S. The flowers are rich yellow and of handsome form. Later, I obtained one equal in form and quality to the very best in any class of auricula; it was in flower on May 1, and was named May Day. This obtained the A.M. of the R.H.S in May of the present year, and in the spring of last year received the A.M. of the Royal Botanic Society.

The editor of the GARDENERS' MAGAZINE has a quick eye to a good flower, and asked permission to have it photographed, and this it need hardly be said was readily given. We have now reached as high a standard of excellence in this colour as in any other, and probably greater improvements will be made in the future.

Auriculas are as easily cultivated as any other garden flower, and there is no reason why they should not be grown in every garden in the country. I heard a member of the Council of the Royal Horticultural Society remark that if he could grow one flower only it would be the auricula.

J. DOUGLAS.

Edenside, Great Bookham.



A BEAUTIFUL NEW YELLOW SELF AURICULA (MAY DAY).
Raised by Mr. J. Douglas, V.M.H.

Pelargoniums.—These will now have passed their flowering season, and should be exposed to sun and air, to ripen their wood previously to cutting down, but a little before and after this is done let the soil in the pots to dry. When the cuts are dried, and somewhat healed over, give the plants a little water, and keep them closer and warmer till they break.—T. B. FIELD.

BORDER CARNATIONS.

The cold, wet, and late spring was very trying for border carnations, and consequently the plants made little growth, and as this weather was followed by several weeks of brilliant sunshine and drought, the grass for layering purposes is not quite what one would wish for the purpose of increasing the stock by layers. A few recent showers have done much to revive the plants, but as the flowers are beginning to open there is not much promise of good blooms.

I am, of course, writing of the weather we have experienced in South Devon, where, while showers fell near us, yet we escaped the much-needed rain. In localities where the rainfall during the past month has been scanty, I fear the flowering period will be shortened, and therefore preparation should be made for layering the necessary stock for next season's requirements. It is essential that the layers be put down early to have them well rooted for early autumn planting, that they may be established in their new beds before winter sets in.

The old flower stems having been removed, some finely sifted soil, with a goodly proportion of sand added to it, should be prepared and placed in small mounds around the base of the plants, and pressed firmly. Those shoots intended to be layered should have some of the leaves removed to enable the longitudinal cut to be made, which forms the tongue for layering. The cut should start from just below a joint, and be extended about an inch and a-half lengthways, and should be fairly through the centre of the stem. Layering pins should be at hand, and when the tongue is made, the shoot should be securely pegged down, keeping the tongue well open while pegging down is being done.

The process of layering is quite simple, yet, like many other simple things, it requires to be properly done, as it is from the basal part of the tongue that the roots are formed, and the non-rooting of layers after being put down is largely due to not leaving sufficient substance to form roots. After layering the growths the mounds of soil should be kept well watered if dry weather prevails, but when watering care should be taken that the soil is not washed away from where the layers are pegged.

Carnations should be planted in a fresh site each season, only allowing the plants to remain one year in the same bed. The preparation of the beds or borders should be started in good time, so that the rooted layers may be planted by the end of September or early in October if soil is in good condition and weather favourable; never plant when the land is wet or sticky, avoid the use of strong manure if the ground is in good condition, and if the soil is heavy work in some lime previous to planting. Deep planting in heavy land should be avoided, or the losses during winter may be severe.

Border carnations are generally considered to be hardy enough to pass through our ordinary winters with safety. This, however, largely depends on the kind of soil in which the plants art grown. In a moderately light, well-drained soil the plants will pass through the winter satisfactorily, but in heavy, moisture-holding land, dependence can only be made on some of the hardiest varieties. Of course, if the layers are potted up and wintered in a frame most varieties may be grown. We can only grow about eight varieties to pass through the winter in the open, and these include Ruby, Mary Morris, Ketton Rose, Mrs. Eric Hambro, Robin Measures, and Mrs. Reynolds Hole. Yellows, fancies, and other newer kinds have to be wintered in a frame, and we have found from bitter experience the necessity of this protection.

It is for this reason we rely largely on the tree varieties, as these give far better returns, and a more extended season of flowering. Properly handled, there is a great future in store for the tree carnations for outside culture.

In making a selection of border varieties to be grown entirely in the open, the nature of the soil wherein the plants are to be grown must be considered The fact of good blooms being staged on the show boards is no criterion that the variety will produce as fine blooms in any kind of land. It is therefore wise when selecting any varieties to enquire under what conditions and in what soil the blooms were produced.

Poltimore Gardens. T. H. SLADE.

"CARNATIONS, PICOTEES, AND PINKS," will tell you plainly how to propagate and grow these favourite flowers to perfection. The work is freely illustrated with plates of leading varieties, and explanatory diagrams as to layering taking cuttings, fertilising blooms, etc. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

A SUGGESTION FOR THE WILD GARDEN. [Photo: W. J. Mitchinson.

Water lilies, as grown at Mullaboden, Ballymore Eustace, Ireland.

THE WILD GARDEN—IV.

Water in any form greatly increases the attractions of the wild garden, whether it be a lake, a little pool, a stream, or merely a tiny runlet trickling from the higher to the lower levels of the grounds. Water demands, for floating on its surface, spreading over its moist margin and standing in its shallows, a type of vegetation entirely distinct from that which flourishes on dry ground.

Of this class of plants there is, fortunately, no lack, but there is need for the exercise of great discretion in the selection of the subjects, for there is no greater mistake than overburdening a sheet of water and its environment with a too varied assortment of species and varieties. This admonition has already been emphasised in regard to the wild garden as a whole, but it applies with especial force to ponds, particularly if they are of small extent. If we study Nature, as we should ever do in the wild garden, we shall find that in the ordering of her water schemes, especially if they are small, she is content to severely limit her materials. Little ponds and basins are often seen, which are so filled with water lilies that the surface of the sheet is entirely hidden. This is altogether wrong, for the chief beauty of water is that it should be a clear mirror in which the drifting clouds and neighbouring trees may be reflected.

Water lilies are among the loveliest of our hardy plants, but, like other good things, they may be easily overdone. In large lakes all the known varieties may fittingly find a place, but small ponds are better with but one or two of the finest. Crowding is equally objectionable in the surroundings of a sheet of water as on the surface itself. A lake with bare banks, on which not a single tree, shrub, or plant is growing, loses much of its possible charm, but one entirely shut in by tall vegetation is still more disappointing, since the water is hidden from sight. The spot from which the fullest extent of the lake can most easily be viewed should always remain unplanted, and open spaces should here and there be provided with well-grouped water-loving plants disposed naturally about them. For floating on the surface of the water no plants surpass the water lilies, of which there are now great numbers of beautiful varieties, the Marliacea hybrids being as lovely as any. Other plants with floating blossoms are the Cape pond weed (Aponogeton distachyon), which, in the south-west is in flower in almost every month in the year, and bears white blooms, and Villarsia nymphæoides, which produces a profusion of bright yellow blossoms.

There are numbers of plants that will beautify the water-margin with flower and foliage. Of flowering subjects some of the primulas are especially valuable, the stately Primula japonica, often over three feet in height, delights in moisture, and will flourish with its roots continually submerged. The type is deep-rose in hue, and there is a white variety. P. rosea also appreciates damp, and is seen at its best when growing in porous soil by the waterside, where a group in full flower provides a charming picture in the spring of the year. P. sikkimensis is another water lover, and is very pretty when seen in quantity, holding its pale yellow, drooping, fragrant flowers on tall stems by the side of a stream or lake. The herbaceous spiræas are among the best of flowering plants for grouping around the margin of a lake. Spiræa gigantea, or camtschatica, is the most superb of the race, often attaining a height of seven feet, and is very handsome when bearing its great heads of foamy plumes, often nearly two feet in length. S. palmata is a beautiful plant bearing large feathery panicles of bright rose-crimson flowers, whose rich tint has a striking effect by the waterside. S. venusta is another pretty spiræa with flesh-pink flowers, and S Aruncus with its variety Kneiffi may also be employed.

Of irises there is the Japanese I. lævigata, or Kæmpferi, with glorious flowers, sometimes nearly a foot across. I. sibirica grows well in shallow water. Of this there are several named varieties, the white Snow Queen being the best. I. Pseudacorus, the yellow waterflag of our damp meadows, has a very handsome variegated form that is especially attractive in the early summer, but in the autumn loses its variegation. I. orientalis, I. aurea, and I. Monnieri will also grow in fairly damp ground. Lobelia cardinalis is a native of North America, where it grows in moist woods. When grouped in large masses by the waterside, as it should be, it forms with its brilliant vermilion blossoms a splendid sight in the late summer. The yellow Loose-strife (Lysimachia) and the big purple Loose-strife (Lythrum) are good waterside plants, the variety superbum of the latter being a great improvement.

The common monkey flower, mimulus, delights in moisture, and, when planted on the bank of a stream, will generally invade its bed and spread over the water. It has become naturalised in many parts of England. The globe flowers, trollius, grow by the stream sides in their native lands. T. europæus is a native of our islands. Attractive species are T. altaicus, T. asiaticus, and T. caucasicus. The lately introduced Orange Globe is the finest of the family, having very large blossoms of a deep orange hue. The Willow herb, Epilobium, bears upright spikes of deep rose-coloured flowers and flourishes in any damp spot. A colony an acre or two in extent is a handsome sight when in full bloom. There is also a white variety. Calla æthiopica, the Arum lily, will grow well in a foot of water and flowers early in June. A Cornish lake (at Trellisick) is surrounded on two sides by these plants, and when they are in full bloom a thousand flowers might be cut without their being missed. Ranunculus Lingua, the great Spearwort, bears large yellow flowers, and will grow in a foot of water, and Menyanthes trifoliata, the Buckbean, and Pontederia cordata will also flourish in water.

Of foliage plants the Gunneras come first. G. manicata is the finest, its giant leaves being often ten feet across. It flourishes best when planted in rich soil on the margin of a lake, where a great clump standing on the brink, with its noble foliage reflected in the still water, is a glorious sight. Rodgersia podophylla is a very handsome plant, revelling in moist ground, where its deep bronze leaves parted into five deeply-divided lobes are most effective. In the summer it throws up a branching flower spike with heads of feathery, ivory-white blossoms. Saxifraga peltata, though a native of California, is quite hardy, as it is underground all the winter. In the spring it produces from its leafless crown tall flower heads, sometimes three feet in height, bearing loose clusters, six inches in diameter, of pale pink flowers. Later on the large, handsome, deeply-cut leaves are perfected, a foot across and carried on stalks eighteen inches in length.

S. W. FITZHERBERT.

A SUCCESSFUL EXAMPLE OF THE USE OF WATER AND MOISTURE-LOVING PLANTS
In the gardens of Lockinge Park, Wantage.

THE BEST DWARF ROSES FOR THE GARDEN.

The following are the varieties that obtained the first, second, and third places in the ballot for the Nickerson Cups, offered for the best crimson, pink, white, and yellow roses of dwarf growth:

Hugh Dickson, H.P.—Raised by Mr. Hugh Dickson, and distributed in 1904, this brilliant crimson rose obtained premier position in its class with 33 votes. The flowers are of high quality, and the growth vigorous; a fine variety for standards.

Ulrich Brunner, H.P.—A rose well known for its vigorous habit and the large size and effectiveness of its light crimson flowers, which are delightfully fragrant. It was second in the class for crimson roses with sixteen votes. One of the best roses for bush and standard culture, and specially adapted for suburban districts. Raised by M. Levet, and introduced in 1881.

Richmond, H.T.—A brilliantly-coloured, free-blooming rose, raised by Messrs. E. G. Hill and Co., and introduced in 1905. Especially useful for bedding and for the supply of flowers for decorative purposes. It was third for crimson roses with eight votes.

Caroline Testout, H.T.—One of the finest of garden roses, and placed first for pink roses with 34 votes. MM. Pernet fils-Ducher were the raisers, and introduced the variety in 1890. The bright pink flowers are of high quality, and produced freely and continuously throughout the season. Valuable for beds and standards.

Madame Abel Chatenay, H.T.—As was generally anticipated, this fine rose followed Caroline Testout closely for second place in the class for pink roses. The number of votes was 21. The raisers were MM. Pernet-Ducher, and the year of introduction was 1895.

La France, H.T.—One of the best known of the roses of dwarf growth, and bearing pink flowers, and until Caroline Testout and Madame Abel Chatenay were introduced it was the most popular of the hybrid teas in its line of colour. It was raised by M. J. B. Guillot fils, and distributed in 1867, and obtained the third place in the class for dwarf pink roses, with 14 votes. La France is so generally known that there is no occasion to refer to it otherwise than briefly, and we shall not do more than suggest that, while the other two varieties mentioned above are in some respects superior to it, La France is sufficiently distinct from them, and so highly meritorious as to still deserve a prominent place in the garden.

Frau Karl Druschki, H.P.—Raised by Mr. Lambert, and introduced in 1900, this fine rose quickly attained to a high degree of popularity, and is unquestionably the best of all the white roses for general culture. It was placed first in the class for white roses with 54 votes. It is valuable for standards and beds.

White Maman Cochet, T.—A beautiful white tea-scented variety, placed second in the class for dwarf white roses with 10 votes. It originated with Mr. Cook, an American grower, and was introduced in 1897, and is of much value.

Viscountess of Folkestone, H.T.—An excellent bedding rose, with flesh-coloured flowers raised by the late Mr. H. Bennett, and introduced in 1886.

Madame Ravary, H.T.—A charming rose, raised by MM. Pernet-Ducher, and introduced in 1899. It obtained premier position in the ballot for yellow roses with 29 votes. It is a fine garden rose, and especially suitable for standards. The flowers are orange-yellow and highly effective.

Marie van Houtte, T.—One of the finest of the teas for the garden, this variety was placed second for yellow roses with 15 votes. It was raised by M. Ducher, and introduced in 1871.

Souv. de Pierre Notting, T.—Although failing to fully realise expectations, this is a useful variety. The colour is a rich shade of yellow, and the flowers are of good form. The habit is good, and the flowers freely produced. It was raised by MM. Soupert and Notting, and introduced in 1902; and obtained third place for yellow roses with 10 votes. V.

VIEW OF THE NATIONAL SWEET PEA SOCIETY'S TRIALS,
Conducted by Mr. C. Foster at the University College Gardens, Reading.

NOTES ON STRAWBERRIES.

This has been one of the best strawberry seasons on record, notwithstanding that some injury was done in places to such early varieties as Royal Sovereign and Vicomtesse Hericart de Thury from their "crown" buds being killed by frost on April 23, when 9 deg. were registered here, with the thermometer protected by a screen.

Strawberries, like other garden produce, cannot be obtained in the best of condition unless special pains are taken in their culture; and, moreover, even then the soil must be of a suitable description. Rather heavy garden soil, placed in an open position, deeply broken up (two spits deep), and well dressed with short farmyard manure, is the kind of tillage required. The ground may be prepared as described during autumn or winter, and, after an early crop, say, of peas, has been taken from it, be dug and rather finely broken over one spit in depth before the plants are bedded out. It is not advisable to plant upon newly trenched land, as in this case the plants would not root so readily, and are liable to suffer from drought. Neither can they be so satisfactorily supplied with water, as when planted on ground that has become more consolidated.

Plants should be raised by layering runners, as soon as they can be obtained, in 3in. pots, and in purchasing runners those prepared in this way are much to be preferred to those lifted from the ground. This reference to purchasing rooted runners reminds me of some remarks made with respect to the deterioration of Royal Sovereign. In our case this variety has of late years become more or less badly affected with spots on its leaves, caused by a fungus. The growth becomes weaker year by year, and fewer runners were produced, which, owing to our requirements, especially for forcing purposes, was to us a serious matter. We, however, last season on several occasions sprayed both the old and young plants with a solution of sulphide of copper, and this year, so far, the beds are almost free from the disease, but whether this is the result of the spraying or owing to the dry state of the weather, I am not prepared to say.

Until now our stock of Royal Sovereign has, year after year, been raised from our original stock, purchased when the variety was first distributed. Last summer we secured a fresh stock of plants from a distant nursery, and planted them under similar conditions as were those raised here. They have this year grown stronger, cropped better, and produced many more runners than have our own plants. I recollect some years ago being asked for some runners of Vicomtesse H. de Thury by a gardener friend in Sussex, who said his stock of that variety had "run out." He wrote the following year to say the plants we sent him had succeeded as well as possible, and he was discarding his old stock. These facts suggest that in the case of strawberries, as is known in some other subjects, a change of stock is at times desirable.

The finest fruits of strawberries from all points of view are invariably obtained the first year after the beds are formed, though the second year's crop is the heaviest, and the fruits under good management are also of splendid quality, especially if the trouble is taken to thin it. In the private garden it pays to thin dessert strawberries as well as to support them with stakes, though these operations take up much time. In wet seasons particularly, staking greatly saves damage from slugs. Watering occasionally with diluted liquid manures during dry weather, from the time they commence to grow until their fruit begins to colour contributes considerably to success. But to ensure the best results it must be thoroughly done. In wet seasons suitable soluble compound manures answer a similar purpose, and in any case mulching with straw or something of its kind, avoiding short grass, is necessary.

Varieties of strawberries, like those of apples, peas, potatoes, and tomatoes, have become perplexingly numerous, at any rate, to the inexperienced grower of a few; but perhaps if for no other reason than in order to maintain the vigour in the plants it is desirable to continue to raise seedlings; besides, occasionally a real acquisition turns up, as in the case of Royal Sovereign. T. Coomber.

The Hendre Gardens.

INDIGOFERA GERARDIANA.

Of the numerous species of Indigofera this is the best for outdoor culture as it is of a showy character when in bloom, and of decidedly elegant appearance throughout the growing period by reason of its dainty foliage. It is a native of the Himalaya, and under natural conditions assumes the proportions of a large shrub. In many parts of the country, however, it is affected by cold in the open ground, and dies to the ground line each winter. The root-stock, however, lives through the most severe weather we experience in the British Isles, and sends up large numbers of annual shoots, which during summer grow between 2 and 3ft. in length and bear an inflorescence from nearly every leaf axil.

In the warmer parts of the country it grows into a bush in the open border and blossoms freely, whilst it may also be grown against a wall. The leaves are pinnate, and 3 to 4in. long, the leaflets being small and oval. The flowering period commences early in July, and lasts for about six weeks. The rosy-purple flowers are small and pea-shaped, and borne in dense racemes 3 to 4in. long. It thrives in loamy soil, and is increased by means of cuttings during summer, the cuttings being inserted in sandy soil in a warm propagating case. It is advisable to place it in permanent quarters as early in life as possible, as it does not transplant well when large. W. D.

Kew.

SWEET PEA JOTTINGS.

Splendid rains have occurred over the whole of the southern counties, and also in many, if not most, other parts of the country, and if only bright weather prevails from the beginning of the present week there will be many fine flowers forthcoming on July 24. Entries for the great show have come in freely, but these is not the rush there was in 1907, when everyone had good flowers as a result of the cool, moist conditions that prevailed.

INSPECTING THE SWEET PEA TRIALS AT MESSRS. HURST AND SONS' GROUNDS AT KELVEDON.

The medal of the National Sweet Pea Society continues to give the greatest satisfaction. The silver copies were recently sent to the several societies now in affiliation with the parent society, and from practically every one of the newly-joined societies a few words of kindly comment upon the beauty and uniqueness of the medal have come with the acknowledgment of receipt. It may be interesting to note that the medal I carry on my watchchain, and which I, like all other members of the jury, received in connection with the Ghent Quinquennial Show of 1903, was the basis of the design of the N.S.P.S.'s medal. The drawing from which the model was made was executed by Miss Wilkinson, of Regent's Park, through the kind offices of Mr. E. F. Hawes.

In the present issue three illustrations serve to show the style and extent of the trials of sweet peas at Reading, Kelvedon, and Mark's Tey. At Reading the photographer caught Mr. Breadmore and myself in the act of tendering our congratulations to Mr. Stark on the success of his new variety George Stark. At Messrs. Hurst and Son's trials a whole crowd of sweet pea notabilities came within the scope of the lens at the upper portion of the trial grounds, while at Messrs. Dobbie and Co.'s grounds at Mark's Tey the extent of the trials is very evident, though from a pictorial point of view it was unfortunate that the foreground of the photograph consisted of dark varieties of sweet peas. A large number of photographs were taken for the N.S.P.S. and a selection of these will be reserved for reproduction in the Sweet Pea Annual for 1909.

At many of the leading flower shows it is now quite the thing to set apart a tent for sweet peas, and this is invariably well filled with the charming and fragrant blossoms. At Woodbridge the other day sweet peas were admirably shown. Dr. Gosling, Captain Cautley, and Messrs. G. Stark and Son carrying off the leading awards. Dr. Gosling is, to me, a new competitor, and he knows how to grow and also how to stage sweet peas. An interesting class was for the best bunch of a 1908 novelty, and the award fell to a bunch of St. George. In the same class there was a bunch of the newer George Stark, but a recent hailstorm at Great Ryburgh had spoiled the flowers. I wonder now, whether, had the flowers been of equal merit with those of St. George, the judge would have placed the medal variety of 1908 before the medal variety of 1907? Hardly, I think, considering George Stark is not yet in commerce.

I have received no good reports from users of nitro-bacterine. In some cases the seeds were soaked in a bacterial solution, and in others the ground was watered with a solution. On the other hand, I have received no evil reports of its use, but if readers of these notes who have tested nitro-bacterine for sweet peas would kindly send me a few notes of the behaviour of treated rows as against untreated rows I shall be very grateful. So far as I can gather at present the results are negative, and it would appear that on highly cultivated ground nitro-bacterine serves no purpose, good or ill, in connection with sweet pea culture. Chas. H. Curtis.

INSPECTING THE SWEET PEA TRIALS AT MESSRS. DOBBIE AND CO.'S NURSERIES, MARK'S TEY.

Annuals.—As the earliest of these pass out of bloom they should be cleared off, and if there is a reserve substitute others for them, special care being taken not to disturb the roots more than is necessary. Keep all weeds down, and keep the Dutch hoe freely at work among all things as much as possible.—E. F. Hazelton.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

CATTLEYA HOUSE.—The bright sunlight of the past few weeks has been most beneficial to cattleyas and allied genera. Every encouragement must be given to assist the plants to mature their growths during the next few weeks. I find it a good plan to give a little ventilation from the roof at night, when the outside conditions are favourable. This will assist the drying of the atmosphere, and will also help to harden and mature the growth as it develops. Any roof ventilation should be taken off before damping is commenced in the morning. Where roof ventilation is given the leeward ventilators only should be used, thus avoiding the possibility of direct draughts. All plants (excepting those that will be coming into flower shortly) that are emitting new roots and require repotting should be attended to before the roots become too far advanced. There is less danger of the roots being broken when repotted in their early stage of rooting than is the case afterwards. Such plants as will produce their flowers immediately the growth has developed should have their repotting deferred until after they have passed out of flower.

INSECT PESTS.—At the present season insect pests are perhaps more troublesome than at any season of the year. Thrips are the most troublesome pests we have to contend with. Owing to the heat and drought experienced a short time ago trees outside have become infested with thrips, and as they are easily dislodged from the leaves by the wind they are carried, either through the open ventilators into the houses, or lodged on the outside roof, where a shower of rain carries them into the soft water tanks. I was surprised after a recent shower to observe the large number of black thrips that were floating on the surface of the water in the tanks. This fact shows the necessity for constant and close observation to enable us to take the necessary steps to prevent injury to the plants. Fumigation appears to have but little effect, but with regular spraying, or spraying when the insects are observed, this pest will be effectively kept in check. Scale insects, especially the small white kind, attack the young growths of many of the autumn-flowering kinds, especially Cattleya labiata. In this species they appear in a very small state immediately the leaf becomes expanded, and if they are not removed they cause an indention in the leaf that leaves a permanent disfigurement. It is a delicate operation to dislodge these insects, a piece of soft stick carefully pointed is the best means of removal. Where they attack the pseudo-bulbs and rhizomes between the bulbs carefully sponging is the best means, we find, for their removal, using a weak solution of soft soap mixed in rain water.—H. J. Chapman, Oakwood Gardens, Wylam-on-Tyne.

CONSERVATORY AND GREENHOUSE.

ZONAL PELARGONIUMS FOR WINTER.—Whatever the value of these plants in the flower garden, there can be no question as to their utility for winter blooming, their bright and telling colours lighting up the greenhouse when it is most needful. Now is the time for potting up a stock for next winter. The plants should be potted in good loam of a fibrous character, to which has been added a little dried cow manure and plenty of leaf-mould and sand. After potting, they should be stood outside in the full sun, and kept well on the dry side until root action is free, when a fairly liberal allowance is necessary. So treated they make a stronger growth than in frames, owing partly to the fact that more room can be allowed. They are almost sure to push flower buds at once, but these should be pinched out. The plants may stand in the open until the middle or end of August, according to the weather, when protection must be given. At all times under glass a good circulation of warm, dry air must be kept up about the plants, these being stood as close to the roof as possible, and no shading allowed at any time. If more convenient, they may be brought on in batches to ensure a succession of blooms for several months. The double flowered varieties require rather more warmth to induce them to open freely than do single ones, but in a house in which a temperature of 60 deg. at night is maintained, and kept fairly dry, both will be satisfactory.

CLIMBERS. — These will form a special feature just now, and there should be a good many things in bloom. Bougainvillea glabra will do well if planted out in the borders of a warm conservatory where it can grow near the glass in a light position. In a cool light house Solanum jasminoides is very effective. The tacsonias and passion-flowers require much room, and the growths to be thinned and regulated during growth. In a cool corner Clianthus puniceus and lapagerias (red and white) are at home, the latter to be planted in a well-drained bed of loam and peat. Camellias and oranges are beautiful wall plants. The former should have a cool, shady position. When plants are grown in a circumscribed space the quality of the soil or compost is very important. Some have an idea that heat and moisture will do anything, but those who are of this opinion will soon find out that something is lacking in their work when compared with the work of others who study soils and composts. Good loam, peat, and leaf-mould is an absolute necessity, and if it cannot be obtained locally it should be had from some other source.

CRASSULA COCCINEA.—This useful greenhouse succulent has, from some cause or other, ceased to be popular. A few years ago it was one of the most brilliant specimens in collections of stove and greenhouse plants at the exhibitions. When grown in a greenhouse its season of flowering is from Midsummer to the end of July, and we are all well aware that at that period there is not so much variety in plants that flower naturally as there is in May and early June. If six or eight strong shoots are placed around the edge of a 4in. pot they will soon root, and if shifted into 6in. pots in the spring they will produce many heads of blooms. The plants do not need very large pots, and good specimens may be grown in pots of from 8 to 10in. in diameter. The old plants may be kept of useful size for many years by cutting out the old straggling growths after flowering.

MIGNONETTE.—The first batch of seed should now be sown either in the flowering pots or in small-sized 60's. Thin out the seedlings early, and stand the pots in a cool frame, and give a sharp look-out for slugs; they are always troublesome at this season of the year.—T. B. Field, Ashwellthorpe, Norwich.

THE FLOWER GARDEN.

WALKS should be kept in good condition. In many cases after a prolonged spell of drought the surface gravel becomes loose, and if there is much traffic some of the larger stones will work to the top. When this occurs not only is the appearance unsatisfactory, but the walks are uncomfortable to walk upon. Where this is the case give a good rolling immediately after rain has fallen, and thus again secure a smooth, firm surface.

BOX EDGINGS should now be clipped, and in doing this be careful to cut as level a surface as possible, and the best guide is a garden line tightly stretched at the proper height. By cutting now second growth will at once be produced, and have a pleasant appearance throughout the season. Should a few growths become unduly long they can be easily removed. The same remarks apply to yew, holly, privet, and other hedges, unless in very late districts where growth is still active, in which case clipping may be postponed. Where topiary work is practised cut the figures and designs into as perfect a shape as possible.

CLIMBING ROSES.—As those on arches, pergolas, pillars, and walls pass out of bloom the wood that has flowered should be cut quite out down to the strongest growth nearest the ground, to insure vigorous growths for flower production next season. By cutting this wood out immediately after flowering succeeding growth has a better opportunity of maturing and ripening. Where roses are rambling through and over trees or other objects, the same practice should be adopted, but when growing over a dense shrub growth should only be shortened. When planted near the front of a clump of shrubs growth may be brought out and tied to some support, afterwards being carefully worked back into or over the shrubs.

CLIMBING PLANTS.—Many climbers may be treated as advised for roses. Young plants should be carefully attended to, and supported and trained as may be necessary. Even with the free-growing rambling types of clematis due care should be taken to prevent their becoming tangled masses, which would otherwise soon occur; watch carefully that nothing suffers from drought, this being more likely to occur with climbers planted near walls than with plants in the open. The walls not only prevent the whole of the fall of rain reaching the roots, but also, to some extent, acting as an absorbent.

IVY.—Where ivies have quite covered their allotted space, and young growths are either projecting or hanging loose, they should be cut quite off.

CARNATIONS.—As these pass out of bloom no time should be lost in proceeding with the work of layering. Remove the old flower stems; carefully clean the beds before commening to layer; cut out small weakly growths not required or strong enough for layering.

LILIUMS.—See that these are well supported before the buds become heavy, and guard against drought. A mulching of well-rotted manure will be helpful, or a watering with liquid manure should the weather be hot and dry.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

MORELLO CHERRIES.—These trees, trained fan-shape on north walls, should have attention, and the shoots required for filling up space and the formation of neatly trained trees must be made secure. Train them straight from the base, and leave ample room in the ties or shreds to allow for the swelling of the bark. Some of the shoots not wanted may be shortened back to within a few buds of last year's growth. Do not train the shoots too thickly; what is wanted for the production of heavy crops of large fruit is firm medium wood. A good tree ought to be well furnished from the bottom to the top with clean, healthy, fruitful wood. Netting the trees to protect the fruit from birds must be done early. A good plan is to run wire-netting along the bottom at three feet from the walls, and then hang on the fish netting so that the bottom rests on the wire. It is marvellous how effectually the wire-netting prevents the birds getting beneath the nets. The roots must not be overlooked. If the borders have been properly made a good soaking of liquid manure in dry weather will greatly assist the fruit in gaining size, and the development of the wood for next year's fruiting.

STRAWBERRY BEDS.—When the fruits have all been gathered, remove the nets, and if runners are not required for layering, clean the beds. All weeds should be removed, runners cut away, with a portion of the lower leaves. After clearing the beds lightly prick up the soil to the depth of a couple of inches, this being essential on land that has been much trampled upon and is likely to crack open in dry weather. Should the land be light and porous, give a good dressing of manure, placing it well about the roots. Mulching at this season will greatly help the new growths. Do not forget when planting to make a good bed of Givon's Late Prolific. This variety I grow rather largely, and last year planted a nice batch on the same border (early) as Royal Sovereign. The latter with me were fine, and the Givon's equally so, thus giving a capital succession, the fruits being large, firm, and of excellent colour and flavour. I shall plant more of this variety this year. Leader is remarkably productive, and for size amongst the largest, though the flesh and flavour are not of the best quality. — H. Markham, Wrotham Park.

REQUIEN'S PENNYROYAL OR CORSICAN THYME.

Mentha Requieni (syn. Thymus corsicus) is one of the most delightful of small aromatic herbs in any garden, and is sometimes known by Linnæus's name of Thymus corsicus. Why the great botanist gave it the name of Thymus is difficult to conceive, as the little plant is not thyme-scented, but strongly aromatic of peppermint, and thus properly called Mentha by Bentham. It is so minute that it would be overlooked but for its strong scent of peppermint, which is at times perceptible without touching it, but which is at once made evident if the herb is touched with the hand or even with one's garments in passing along. It clings as closely to the soil as any moss, and makes a covering of small green leaves, which can hardly be said to rise above the surface of the earth. On this carpet are produced many tiny violet or purple flowers, so small as almost to require the microscope.

Its value lies mainly in its odour, but it is all the same a delightful little plant which likes shade and a fair amount of moisture, although these are not absolutely necessary. It is not entirely hardy in the coldest gardens in severe winters, but is generally enduring enough when established in all but the stiffest and coldest soils. In some gardens Mentha Requieni has become thoroughly established, and I know one place in the south-west of Scotland where it has become naturalised amid the grass of the flower garden, and there must be thousands of plants, these apparently holding their own amid the short grass with the greatest ease. This little mint can be increased by division or by means of seeds if these are procurable.

S. Arnott.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

JULY 21.

The display at Vincent Square on the same date was a comparatively small one, carnations and hardy flowers predominating.

FLORAL COMMITTEE.

Hardy flowers were largely shown by Messrs. Barr and Sons, Covent Garden, whose water lilies and phloxes were the chief features. Mr. Amos Perry, Enfield, contributed a lovely lot of water lilies, the beautiful Lychnis cognata, L. Haageana hybrids, and some choice new seedlings of Chrysanthemum maximum. Phloxes, choice gladioli, the bright-fruited Coriaria japonica (A.M.), and the yellow-fruited C. terminalis, with other good things were set up by Mr. Maurice Prichard, Christchurch. Mr. G. Reuthe's contribution was a large one, and consisted of hardy flowers in great variety, including spiræas, campanulas, and liliums. Messrs. T. S. Ware, Feltham, made a very bold display of hardy flowers, their Chrysanthemum maximum King Edward VII., and the scabiouses being very good. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, showed the elegant Buddleia variabilis Veitchi, Solanum Wendlandi, and a very fine lot of Malmaison and perpetual carnations in great variety.

Messrs. Jas. Veitch and Sons, Chelsea, submitted a showy lot of annuals that served to illustrate Mr. Watkin's lecture during the afternoon. The coreopsis, candytufts, poppies, and godetias attracted a good deal of attention. This firm also had the lovely blue Delphinium macranthum in another group, together with carnations, the fine Solanum Wendlandi, greenhouse rhododendrons, and cannas. In other parts of the hall they had a brave show of phloxes, Isatis glauca, campanulas, etc., and a group of pyramid and dwarf fuchsias.

Against a green background, and arranged chiefly on the ground level, Messrs. W. Cutbush and Son, Highgate, N., had a novel and very attractive exhibit of carnations, perpetual, border, and Malmaison varieties, arranged in vases of varying heights. Mr. R. Bradford, gardener to E. H. Brown, Esq., Highwood, Roehampton, put up a very artistic group, exhibition style, in which crotons, carnations, gloxinias, palms, liliums, etc., were gracefully and tastefully associated. Messrs. Eggett and Son, Thames Ditton, showed a few varieties of hardy ferns, and Messrs. William Bull and Sons, King's Road, Chelsea, showed a group of stove foliage plants. Messrs. Phillips and Taylor, Bracknell, Herts, staged border carnations in variety, and Messrs. Kelway and Son, Langport, attracted a good deal of attention with their exhibit of gladioli, though it was a too early date to find the spikes at their best.

Pink spiræas and Humea elegans were shown together by Messrs. R. and G. Cuthbert, Southgate, N. Drooping fuchsias, mostly triphylla hybrids, and all of great beauty, were well shown by Messrs. H. Cannell and Sons, Swanley; these ought to make fine rafter plants, and be equally useful for baskets. Hydrangea grandiflora alba was also well shown by the Swanley firm. Messrs. G. Bunyard and Co., Maidstone, had a big bank of hardy flowers, phloxes, liliums, and pentstemons forming the chief items. Fuchsias were also well shown by Messrs. H. B. May and Sons, Edmonton, who also had the tender nephrolepis and a bank of ixoras.

Carnations, border varieties, were beautifully shown by Mr. Dutton, Iver, Bucks, whose long-stemmed blooms of Goldfinder, Grenadier, Rony Buchanan, Queen of Scots, Mrs. Robt. Morton, Isinglass, Lord Napier, Germania, Daffodil, and Bookham Clove, etc., vied with the perpetual varieties in size and elegance. Mr. A. F. Dutton had to divide his exhibit into two parts, and it was the part devoted to perpetual varieties that was the chief attraction to many people. Mr. James Douglas, Great Bookham, Surrey, had a lovely lot of border and other carnations: Robt. Berkeley, Ann Hathaway, Lord Steyne, Hercules (Malmaison, A.M.), Eleanor, Splendour (A.M.), Cardinal (A.M.), and Celestial were particularly good. Sinningia hybrida Dr. M. Masters, a pink, semi-pendulous, gloxinia-like gesneraceous plant, from Mr. Ernst Benary, Erfurt, Germany, gained an A.M.

The fringed single begonias shown by Messrs. Sutton and Sons, Reading, attracted no small amount of attention, by reason of their beauty of colouring and elegance of form. Sweet peas were exquisitely shown by Messrs. J. Carter and Co., High Holborn, London, who had a light temple of brass-work with suspended vases and baskets of flowers; beneath the temple were vases of sweet peas; smilax and asparagus supplied the necessary greenery, and the whole made up the most elegant display in the show.

New pink astilbes, raised by Mr. Arends, Ronsdorf, Germany, were a leading feature. Several of these are crosses having Astilbe Davidi as one parent. Astilbe Arendsi Ceres (A.M.), with lovely plumes of graceful rose-pink, is a real beauty; and A. A. Pink Pearl, pearl-pink, is equally beautiful, and quite distinct. This race cannot fail to become popular.

Very lovely—indeed, beautiful beyond description—was the big flower of Nelumbium speciosum Osiris (F.C.C.) shown by Mr. Jas. Hudson, V.M.H., gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton. It was a huge pink flower, glowing to cerise on the outside of the petals, and in the heart of the flower a glow of cream-pink surrounded the golden stigma and stamens. Mr. Hudson also sent up Nymphæa gigantea Hudsoni, the fine blue lily that gained a F.C.C. five years ago.

ORCHID COMMITTEE.

There were not many orchids on view on this occasion; indeed, this is almost a "close time" for orchids. Messrs. Hugh Low and Co., Enfield, showed the graceful Platyclinis filiformis, Cynoches chlorochilum, the comparatively rare Oncidium Lanceanum, and a few other things. Mr. G. Thwaites, Chessington, Streatham, showed Odontioda Thwaitesi (A.M.), that gave evidence of Cochlioda vulcanicum parentage.

Mr. Burkinshaw, Hessle, sent a fine form of Cattleya Warscewiczi named Rochford's var. From Sir Trevor Lawrence's collection Mr. White brought up Angræcum augustum (A.M.), with long-spurred white flowers, and Epidendrum costatum. Cypripedium Vipani roseum, with three flowers, came from Mr. J. Brooks, gardener to W. M. Appleton, Esq., Weston-super-Mare. A form of Stanhopea Wardi was submitted by Lord Rothschild, Tring Park, Tring (gardener, Mr. Dye), who showed a spike of nine big flowers. Several bolleas were shown by Mr. J. Birchinall, Alderley Edge, Cheshire, but these have outlived their former popularity.

Messrs. Charlesworth and Co., Bradford, had a few good things, and their superb form of Stanhopea tigrina (F.C.C.), brilliant crimson and cream, was the great attraction. Odontoglossum Ossulstonei, O. Rolfæ, Pachystoma Thompsoni Gentilii, Oncidium Lanceanum, Odontoglossum Uro-Skinneri alba, O. Eleanor, and Cattleya F. W. Wigan, were also included.

Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester, had a few good orchids on view, notably Cattleya Warscewiczi Frau Melanie Beyrodt, Cattleya Lord Rothschild, Miltonia vexillaria superba, the rare Dendrobium Regium, and Cattleya Hardyana.

FRUIT AND VEGETABLE COMMITTEE.

The chief exhibit before this committee consisted of a splendid display of culinary peas, admirably set up by Messrs. Dobbie and Co., Rothesay. The pods were regularly arranged in oval wicker baskets, and there were about four dozen varieties, one basket of each, with a small bowl of shelled peas beside most of the baskets. The leading varieties were Fillbasket, Rentpayer, The Laxton, Gradus, The Sherwood, Exhibition Marrowfat, Prince of Peas, Duke of Albany, Bystander, Telephone, and Dr. McLean.

The twelve varieties of cabbage lettuces shown by Messrs. J. Veitch and Sons, Chelsea, made an educational exhibit of great value. Acquisition, Summer Gem, Imperial, and Crystal Palace were notably good varieties. Peas were largely staged by Messrs. J. K. King and Co., Coggeshall, but as they were shown flat on the table the exhibit, though interesting, was not attractive. Messrs. Spooner and Sons, Hounslow, sent a box of the bright Early Red Margaret apples.

CERTIFICATES AND AWARDS.

First-class Certificates.—To Nelumbium speciosum Osiris, from Mr. J. Hudson, V.M.H., gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton; to Stanhopea tigrina superba, from Messrs. Charlesworth and Co., Heaton, Bradford.

Award of Merit.—To Astilbe Arendsi Ceres and A. Arendsi Pink Pearl, from Mr. George Arends, Ronsdorf, Germany; Sinningia hybrida Dr. M. Masters, from Herr. Ernst Benary, Erfurt, Germany; Begonia Kewensis, from Messrs. Jas. Veitch and Sons, Chelsea; Coriaria japonica, from Mr. Maurice Prichard, Christchurch, Hants; border carnations Splendour and Cardinal, and Malmaison carnation Hercules, from Mr. Jas. Douglas, Great Bookham, Surrey; Odontioda Thwaitesi, from G. Thwaites, Esq., Chessington, Streatham; Angræcum augustum, from Mr. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

MEDALS.

Silver-gilt Flora.—Messrs. Jas. Veitch and Sons, Chelsea.

Silver-gilt Banksian.—Messrs. Jas. Carter and Co., High Holborn; Mr. James Douglas, Great Bookham, Surrey.

Silver Knightian.—Messrs. Dobbie and Co., Rothesay and Marks Tey.

Silver Flora.—Mr. Alexander, gardener to Lieut.-Colonel Holford, Westonbirt, Gloucester; Mr. Bradford, gardener to E. H. Brown, Esq., Highwood, Roehampton; Messrs. Wm. Cutbush and Son, Highgate; Messrs. H. Low and Co., Enfield; Messrs. H. B. May and Sons, Edmonton; Mr. Amos Perry, Enfield; Mr. M. Prichard, Christchurch; Mr. G. Reuthe, Keston; Messrs. G. Bunyard and Co., Maidstone; Mr. James Douglas, Great Bookham; Messrs. T. S. Ware, Lim., Feltham.

Silver Banksian.—Messrs. H. Low and Co., Enfield (orchids); Messrs. Charlesworth and Co., Heaton, Bradford.

Birmingham.

The second of the two summer exhibitions promoted by the Birmingham Botanical and Horticultural Society was held in the Exhibition Hall of the Botanical Gardens, Edgbaston, on the 11th inst., and proved to be a success. The show was indexed as one for a competition in roses, sweet peas, and hardy herbaceous flowers; but the visitors were rather disappointed to find not a single exhibit of roses, and only one of herbaceous flowers, this being accounted for by the recent wet and rough weather, which marred the roses especially. Sweet peas, however, served in a considerable measure to fill the show, and in a like manner the non-competitive contributions helped.

There was a keen though not a strong competition in the class for sweet peas, nine varieties, not more than thirty stems in each vase. Mr. T. Parry, gardener to A. Hughes, Esq., Puckwood Grange, Knowle, led with a capital lot, and most tastefully arranged; second honours fell to Mr. W. Marple, Penkridge, Staffs, for good blooms, but the arrangement was hardly up to the artistic style usually evolved by that grower; third position was assigned to Mr. W. King, gardener to A. E. Butler, Esq., Elmdon, Selby Hill; and a fourth prize was awarded Mr. J. Sceany, Harborne.

A vote of thanks was accorded Mr. W. H. Morter, Cannon Hill Public Park, for three fine specimens of Nephrolepis todæaoides.

The non-competitive exhibits atoned for the sparse display in the competitive section. Mr. J. Deacon, gardener to the Right Hon. Joseph Chamberlain, M.P., Highbury, brought a grand bank of Malmaison and tree carnations in pots, the flowers of the former being especially fine, and we noticed such sterling varieties as Princess of Wales, H. J. Jones, Old Blush, Maggie Hodgson, and Sir Charles Freemantle as the best; the whole was backed with a wide bordering of tree carnations; a special gold medal was awarded; and a like award went to Messrs. Bakers, Codsall Nurseries, Wolverhampton, for one of their noted displays, consisting principally of climbing and other roses effectively set up, and flanked by sweet peas, early-flowering gladioli, Iris Kæmpferi, etc.

Mr. C. H. Herbert, The Nurseries, Acocks Green, deservedly annexed a silver-gilt medal for a collection of herbaceous flowers most tastefully and lightly arranged; an award of merit was accorded to Galega officinalis Her Majesty, a great improvement in colour, robust, and of tall habit; a similar award went to a hardy border pink, named Progress; it is sweetly scented, colour a blush pink, stout and smooth-edged petals. Mr. Robert Sydenham sent a fine collection of sweet peas, most effectively set up; also early-flowering gladioli and English irises; a silver medal was granted. Messrs. Richard Smith and Co., Worcester, were awarded a silver medal for a collection of roses, Kæmpferi irises, water lilies, and herbaceous flowers. Messrs. W. H. Simpson and Sons, Chad Valley Nurseries, Edgbaston, made an imposing display of sweet peas, and in which St. George was conspicuous; silver medal. Messrs. Heath and Sons, Cheltenham, set up a rock garden planted with interesting alpines; bronze medal. A similar award was accorded Mr. J. Webb, gardener to W. Byng Kenrick, Esq., Metchley Lodge, Edgbaston, for a creditable display of greenhouse plants, including finely developed gloxinias, francoas, tuberous begonias, Lobelia tenuior, and caladiums. It may be remarked this was the young grower's first essay on a comparatively large scale in the exhibition arena.

Gloucester Rose Show.

JULY 14.

On the above date the Gloucestershire Society held its annual exhibition in a large marquee erected in the Spa Field, Gloucester. The morning opened with showers, but the after-part of the day was enjoyable, and a large attendance resulted. Entries for roses reached 150, while 115 were sent in for sweet peas. A very excellent quality was manifest, the blooms in the open classes being regarded as a fair average, taking into account the variable weather of the previous three weeks. In the open amateur section were any number of grand flowers, and the popularity of Maman Cochet was demonstrated in the class for six of one variety of tea rose, where five competitors staged White Maman Cochet. The National Rose Society's medals went to Mr. R. Foley Hobbs, Thornloe, Worcester, for Mrs. Theodore Roosevelt; to Mrs. B. Bonnor, Barnwood, for a White Maman Cochet; and to Mr. G. R. Orpin, Gloucester, for a big Bessie Brown.

In summarising the awards in the seven divisions for roses, it may be stated the Messrs. A. Dickson and Sons, Newtownards, Ireland, secured in the open-to-all sections the premier awards (challenge cup value £30, won outright), for forty-eight single trusses, twenty-four trebles, twelve dark and twelve light roses of any one variety. Messrs. John Jefferies and Son, Cirencester, led for thirty-six single trusses, six vases of five blooms each, and a dozen bunches of garden roses. Mr. Henry Drew, Longworth, Berks, was awarded premiers for eighteen teas or noisette, and twelve trebles; and in the open amateur classes Mr. F. Dennison, Rosecroft, Kenilworth, was placed first for two dozen single trusses and twelve trebles; Mr. Foley Hobbs second in both classes. Mr. Conway Jones was strong in the classes for a dozen single trusses, six trusses of any variety of tea with White Maman Cochet, and nine bouquets of garden roses; Mr. Dennison second in the two last-named classes. Among the county amateurs, Mr. G. R. Bonnor, Barnwood, headed the list for eighteen varieties (cash and piece of plate), six of one variety, nine teas or noisettes, and twelve bunches of sweet peas. Three tables were decorated with roses and foliage by Miss M. B. Smith and Miss L. A. Nicholas, Gloucester, and Miss M. D. Watson, Cheltenham; and for a basket of roses, the award fell to Mrs. W. H. Pickford, Mr. A. V. Wright, and Miss M. D. Watson.

There were thirty-two awards in the classes for sweet peas. In the county division, Mr. W. J. Thorpe, Hucclecote, led for eighteen varieties; while for city residents, Mr. W. H. Pickford secured the award for nine varieties; Mr. J. Orpin led for six; Mr. W. J. Gordon-Canning was first in another class for nine, and also first for one bunch of a scarlet variety; Major Timms led for one bunch each of pink and blue; and Mr. E. Remes scored for six varieties (cottagers), and one bunch each of orange and lavender. Miss A. L. Mercer, Sandhurst, secured the special prize for a display.

Woodbridge.

The quaint old Suffolk town of Woodbridge is always en fête for its summer flower show, and the numbers of flags that adorn the winding and hilly streets, and the amount of bunting and flags that adorn the houses, show how keenly everyone is interested in this function. Mr. J. Andrews, the erstwhile secretary, is still the moving spirit of the Woodbridge show, and in the capacity of show director he has a welcome for all and sundry, and once a person has competed at Woodbridge, Mr. Andrews makes it difficult for him to ever stay away.

The exhibition on July 15 was a very fine one, both in extent and quality. There were numerous tents variously devoted to sweet peas, roses, fruit and vegetables, plants and groups, flowers and decorations, and cottagers' produce, and these were arranged around a spacious meadow at Woodbridge Abbey, kindly lent by Colonel R. J. Carthew, J.P. The weather was threatening, and there were one or two showers, but on the whole it was fairly good, and the attendance seemed excellent.

SWEET PEAS.

One whole tent was devoted entirely to sweet peas. The premier award in the leading class for six bunches was won by Dr. G. V. Gostling, Needham Market, with lovely bunches of George Herbert, Mrs. Hardcastle Sykes (N.S.P.S. silver medal), Evelyn Hemus, Frank Dolby, Helen Lewis, and Etta Dyke; there were a dozen entries, and Captain Cautley, Bury St. Edmunds, and Mrs. Wainwright, Claydon, Ipswich, came second and third respectively.

Dr. Gostling scored in another class for six bunches, and was here followed in order by Miss Snell, West Hill House, Ipswich, and the Rev. E. T. King, Glemham Rectory. Dr. Gostling also won the award for three bunches of striped and fancy varieties with Prince Olaf, Jessie Cuthbertson, and Sybil Eckford. Mr. C. W. Platten had the best bunch of a new variety in Evelyn Hemus. For a display of sweet peas, Captain Cautley was easily ahead with fine bunches and lovely blooms of Constance Oliver, Princess Victoria, St. George, Olive Ruffell, etc.; Lady Farren, Great Bealings, coming second, and the Rev. E. T. King third.

The silver cup for fifteen bunches of sweet peas, distinct, was won by Messrs. G. Stark and Son, Great Ryburgh, with a set remarkable for brilliant colouring coupled with good size; George Stark, H. Lewis, Mrs. Duncan, Olive Ruffell, Mrs. Pitt, Mrs. Collier, and Frank Dolby were very fine; Mr. T. Cross, Bury St. Edmunds, was a very close second, only missing the cup by about two points; Messrs. Saltmarsh and Son, Chelmsford, third; and Mr. Taylor, gardener to A. E. Long, Esq., Hurts Hall, Saxmundham, fourth.

In the Eckford classes, Mr. Robertson, gardener to Sir Ronald Lane, Colton Hall, led for a blue variety with D. R. Williamson; Dr. Gostling led for a lavender variety with Lady G. Hamilton; Mr. Showell for an orange variety with Henry Eckford in grand colour; Mr. Showell for a pink variety with Gladys Unwin; Dr. Gostling for a scarlet variety with Queen Alexandra; and Mr. Showell for a white with Nora Unwin.

ROSES.

In the premier class for roses (open), Messrs. Frank Cant and Co., Colchester, led the way for thirty-six blooms, with fresh, clean flowers of Captain Hayward, Bessie Brown, Frau Karl Druschki, Horace Vernet, Ulrich Brunner, etc.; Messrs. B. R. Cant and Sons, Colchester, second; and Messrs. D. Prior and Sons, Colchester, third. These competitors came in precisely the same order in the class for two dozen blooms, the first set containing Fisher Holmes and Lady Moyra Beauclerc in good form. Messrs. F. Cant and Co., Messrs. B. R. Cant and Sons, and Mr. R. C. Notcutt, Ipswich, were placed as named for two dozen bunches of garden roses, and this class made an excellent showing.

In the amateurs' section, Mr. W. Leggett, of Colchester, and Mr. R. Steward, Saxingham Old Hall, were first and second respectively for two dozen flowers, and each showed well. For a dozen varieties, Mr. Leggett showed exceptionally well, and led, followed by Dr. F. H. Cooke, and Mr. R. Steward. Mr. Leggett was also first for twelve teas, and Mr. Steward scored for six teas. Captain H. H. Travers, Long Stretton, led for twelve varieties, six varieties, and six teas, in the smaller section; while in the local classes Mr. Robertson, Woodbridge, scored for six bunches of garden roses, followed in order by Mr. R. Don, Hasketon, and Mr. W. Pipe, Rushmere.

DECORATIONS.

Table decorations are a great feature at Woodbridge, and in some cases there were a dozen entries in a class. In one class first prize was awarded to Miss S. M. Kemp, Woodbridge, for hypericums and maidenhair fern; Miss M. Snell second with pink sweet peas; and Mrs. Butcher, Ipswich, third with deep pink carnations. The two latter tables we liked better than the first one. The first prize basket was one of clarkia and gypsophila from Miss Hayward, Thorofare. In the class for a wild flower table decoration, Miss Farren, Bealings House, Woodbridge, won with a design in honeysuckle, dog roses, and grasses. First prize for a circular table was won by Miss Harwood, Colchester, with a beautiful arrangement of roses of the Mdme. Ravary type; Mrs. O. G. Orpen, Colchester, second with Lady Gay roses well set out; and Miss S. M. Kemp, Woodbridge, third, with cattleyas and lælio-cattleyas.

The best table decoration of roses was adjudged to be the one of pale yellow blooms from Miss M. Snell; Miss Hetherington, Ipswich, second, with pink roses; and Mrs. Butcher, Ipswich, third, with large pink roses. Mrs. Waller, of Dove Place, Woodbridge, had the best epergne, a pretty exhibit of yellow sweet sultans, and the same lady had the best bowl of sweet peas. First prize for a vase of flowers fell to Mrs. J. H. Saville, Woodbridge, for an elegant arrangement of Chrysanthemum maximum.

Baskets of roses were very fine, Mrs. Martin, Eye, leading, and Mrs. J. H. Saville coming second, both showing pink roses. Mrs. Saville scored for a basket of sweet peas with white and scarlet flowers, but in this class we noticed several competitors had not placed the flower stems in water or wet sand, hence in a few hours they were drooping badly.

FLOWERS.

Mr. R. C. Notcutt, Ipswich, had a very fine group of hardy flowers, gaining first prize therewith; his Romneya Coulteri was particularly fine; Mr. C. Jacoby, Ipswich, second. For two dozen bunches of hardy [illegible] Mr. Andrews gained first place with [illegible] and a splendid bunch of Chrysanthemum maximum The Speaker. For [illegible] bunches, Mrs. Warnes, Bramsford, [illegible] secured the premier award, with Mr. [illegible] second. In the class for nine bunches [illegible] Mr. J. S. Clarke, gardener to W. Pipe, Esq., The Lodge, Rushmere, led, followed by Mr. [illegible], gardener to Dr. Cooke, Birch, [illegible].

Dahlias were fairly good for so early a [illegible], and Mr. O. G. Orpen led for six cactus [illegible] with popular kinds, and Mr. R. [illegible], Hasketon, was second. First prize for [illegible] was won by Mr. A. Andrews, who had grand bunches of zinnias, French pink [illegible], shirley poppies, larkspur, and gladiolus.

GROUPS AND PLANTS.

Mr. T. King scored for a group of tuberous begonias, and he had a fine bank of well-grown plants; Mr. C. F. Marnes, Hasketon, second. For six double begonias, Sir R. [illegible], Bealings, led, and Mr. Robertson had the best six single varieties. Achimenes were best shown by Mr. T. King, who was second to Mr. Robertson for a group of [illegible], the latter showing splendidly. Mr. H. Grant, The Grange, had the best group of miscellaneous plants, and was followed in order by Mr. A. Andrews and Mr. T. King. Mr. H. Gall, Thorofare, had the finest exotic ferns, and Colonel Carthew the best hardy ferns.

Several non-competitive groups were forthcoming, and these materially assisted in making a gay display. Mr. R. C. Notcutt, Ipswich and Woodbridge, was a large exhibitor; Messrs. R. Wallace and Co., Colchester; Messrs. J. K. King and Co., Coggeshall; Messrs. Hobbies, Lim., Dereham; and Mr. J. Williams, Ealing, all contributed of their best.

FRUIT AND VEGETABLES.

Fruits were very good. Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone Park, Ipswich, led for a collection of dessert fruit, with good Foster's Seedling grapes, Dymond peaches, Brown Turkey figs, Laxton's Leader strawberries, and a melon; Mr. H. Rogers, gardener to Lord Rendlesham, Rendlesham Park, second; and Mr. A. Andrews, gardener to the Hon. W. Lowther, Campsea Ash, third. Mr. T. King, gardener to J. A. Berness, Esq., Melton Lodge, led for two bunches each of black and white grapes, and Mr. T. Turpin, gardener to Lady M. North, Glenham Hall, was second.

For strawberries, in a keen competition, Mr. Taylor, gardener to W. E. Long, Esq., Hurt's Hall, Saxmundham, scored, with Dr. Hogg and Ganton Park; and Mr. Robertson, [illegible] Hall, second, with Dr. Hogg and [illegible]. Mr. Rogers led for peaches, and Mr. Messenger for a single dish of strawberries.

In the vegetable classes Mr. A. Andrews, Mr. Simpkin, gardener to Mrs. Ogilvie's Trustees, Mr. T. King, Mr. Gaviett, Saxmundham, and Mr. G. Todd, Halesworth, were the leading prizewinners.

National Rose Society.

JULY 21.

This northern exhibition was held during glorious weather in the exhibition house of the Royal Botanical Gardens, now known as the White City, Old Trafford, Manchester; this is the sixth visit from the National Society in 28 years. The competition throughout was good, although many of the blooms showed the strain of unfavourable weather experienced of late; the blooms were of fair size, and the dark varieties were conspicuous for their fine colouring.

For thirty-six blooms, distinct, nurserymen, Mr. Hugh Dickson, Belfast, secured the premier award with a bright stand of fair-sized blooms; especially good were Mrs. S. [illegible], Earl Dufferin, Gustave Piganeau, Comte de Raimbaud, Comtesse de Ludre, Madame Melanie Soupert, Caroline Testout, Horace Vernet, Hugh Dickson, Mildred Grant, Frau Karl Druschki, Mamie, Mrs. Theodore Roosevelt, and Chas. J. Graham; Messrs. A. Dickson and Sons, Newtownards, second with fine Ben Cant, Chas. J. Grahame, etc.; third, Messrs. R. Harkness and Co., Hitchin.

For seventy-two blooms, distinct varieties, Mr. Hugh Dickson was again to the fore with an even collection, and amongst the best blooms were Mamie, Alfred Colomb, Comtesse de Ludre, Duke of Wellington, Ulrich Brunner, Killarney, Liberty, Auguste Rigotard, Horace Vernet, Victor Hugo, Beauty of Waltham, Marquise Litta, J. B. Clark, Earl of Warwick, Exquisite, and others; Messrs. A. Dickson and Sons followed with many fine blooms, and Messrs. Frank Cant and Co. took the remaining award.

For twenty-four distinct varieties, three blooms of each, Messrs. A. Dickson and Sons secured the chief award with a very telling stand, Messrs. Frank Cant and Co., and Mr. Hugh Dickson following. For thirty-six blooms, distinct varieties, the prizemen were Messrs. W. H. Frettingham, Nottingham; King's Acre Nursery Company, and G. and W. H. Burch, Peterborough.

For sixteen varieties three blooms of each, Mr. W. H. Frettingham led, having good blooms of Duchess of Bedford, Horace Vernet, Prince Arthur, Lord Macauley, etc.; second, Messrs. G. and W. H. Burch; third, King's Acre Nursery Company. For eighteen teas, distinct, Mr. G. Prince, Longworth, led with smart flowers, the chief being Mrs. Edward Mawley, Bridesmaid, Comtesse de Nadaillac, Medea, Golden Gate, Souv. de P. Notting, etc.; Messrs. Frank Cant and Co., Colchester, and Mr. H. Drew, Longworth, took the remaining awards. For twelve teas, distinct, Mr. J. Mattock, Oxford, proved the winner, staging good blooms of Mrs. E. Mawley and Bridesmaid.

OPEN CLASSES.

The class for twelve new roses brought out a strong competition, Messrs. Frank Cant and Co. proving the winners with J. B. Clark, H. Armytage, Wm. Shean, Chas. J. Grahame, Countess Annesley, etc.; second, Messrs. A. Dickson and Sons; and third, Messrs. B. R. Cant and Sons. For twelve blooms of any white or yellow rose, Messrs. Frank Cant and Co. won with a good box of White Maman Cochet; second, Messrs. A. Dickson and Sons; third, King's Acre Nursery Co., each staging Frau Karl Druschki. For twelve of any light pink rose, Mr. Hugh Dickson scored with Mrs. Theodore Roosevelt; second, King's Acre Nursery Co. with Mrs. J. Laing; third, Messrs. F. Cant and Co. with Dean Hole. For twelve crimson roses the prizetakers were Mr. Hugh Dickson with a beautiful stand of Hugh Dickson; King's Acre Nursery Co., with Alf. Colomb; and Messrs. G. and W. H. Burch with Horace Vernet.

In the class for twelve vases, five blooms in each, Messrs. A. Dickson and Sons led with a well-arranged lot, Duke of Wellington being exceptionally fine; Messrs. D. Prior and Sons, and Messrs. G. and W. H. Burch were placed as named. For twelve distinct varieties of teas or noisettes, three blooms of each, the awards went to Messrs. F. Cant and Co., G. Prince, and H. Drew.

Eighteen distinct varieties of decorative roses were good, and here Messrs. Frank Cant and Co. won with a fine bank in which Hiawatha, Encariate, Perle d'Or, Minnehaha, and L'Ideal were charming. For twelve distinct varieties under the same conditions, the awards went to Mr. J. Mattock, Messrs. Frank Cant and Co., and Mr. G. Prince.

AMATEURS.

For two dozen blooms, distinct varieties, for the Jubilee Challenge Trophy, Mr. E. B. Lindsell secured the coveted award, having good blooms of Mrs. Mawley, Alfred Colomb, Horace Vernet, Duchess of Bedford, Mrs. J. Laing, A. K. Williams, etc.; Mr. W. Boyes, Derby, and Mr. N. Dennison, Kenilworth, were placed second and third. For thirty-six blooms, distinct, Messrs. R. and L. Park, Bedale, took leading honours, having good blooms of Victor Hugo, Horace Vernet, Mildred Grant, Liberty, etc.; second, Rev. J. H. Pemberton, and Mr. H. V. Machin third.

For nine blooms of any one rose, except a tea or noisette, Mr. H. Dennison led with richly-coloured Horace Vernet. Mr. C. S. Speight and Mr. H. V. Machin also secured awards.

For six distinct varieties, three blooms each, Mr. C. S. Speight had the winning stand, and for six blooms of any rose, except a tea or noisette, Mr. G. Speight led with Her Majesty, Mr. C. Burgess being second with Alfred Colomb.

Mr. M. Whittle secured the leading prize for twelve varieties, distinct, and for nine blooms, distinct, Mr. E. Russell led.

For nine blooms in the smaller growers' section, Mr. M. Upton had the best, and Mr. A. M. Buxton won in the class for six varieties. For twelve blooms of teas or noisettes, distinct varieties, Mr. R. S. Park, Bedale, led, having good blooms of White Maman Cochet, Constance Soupert, etc., and Mr. W. Leggett and Mr. W. Boyes took the remaining awards. For nine blooms Mr. W. S. Paul took the lead.

For nine blooms, confined tô limited growers, the Rev. J. H. Pemberton took leading honours, and for six blooms Mr. W. M. Upton had the leading stand. For six blooms of one variety, Mr. M. Whittle led with Nota Bene.

For six distinct varieties, not more than seven trusses of each variety, the Rev. J. H. Pemberton and Mr. H. V. Machin were placed first and second. Mr. C. Burgess scored in the local classes.

MEDALS.

Gold.—To Mr. Hugh Dickson, for Simplicity, a new large, pure white single variety, that stood well through the bright sun and heat. To Messrs. A. Dickson and Sons, for G. E. Waud, a bright crimson hybrid tea; and to Messrs. B. R. Cant and Sons for White Dorothy Perkins.

Silver.—Mr. W. Boyes, for the best H.T. with Mildred Grant; Mr. E. B. Lindsell, for the best tea or noisette, with Mrs. Mawley; and Mr. H. V. Machin, for a rose other than a H.T., T., or noisette. Mr. Hugh Dickson, for a grand bloom of Hugh Dickson and also for a hybrid tea, with the Lyon Rose

National Carnation Society.

The National Carnation Society is in its thirty-second year, and so cannot be called juvenile. So far as its exhibitions are concerned, it seems to have lost the freshness and vigour of youth, because in recent years its displays have not come up to the old standard of extent and excellence. Of course, it must be said that the present season has been by no means favourable to the full development of fine, clean flowers of the border varieties, and, as a consequence, the show suffered considerably in the matter of quality. In the leading classes for blooms on boards, the competition was very limited, no new exhibitors coming forward to cross swords with the older men. Mr. Blick again did well, and a fine feature of the show was the way that old veteran florist, Mr. James Douglas, V.M.H., stood out ahead in so many classes; he had nine firsts in one division, and secured a silver cup thereby with the maximum of points.

As a spectacle the show was materially helped, one had almost written redeemed, by the non-competitive displays. We believe there is still a great future for border carnations, and we should like nothing better than to see the society and its exhibitions flourishing.

PREMIER DIVISION.

There were only three entries of eighteen show blooms, and first place was secured by Mr. Arthur R. Brown, King's Norton, with fair-sized examples of Master Fred, Thalia, Admiral Curzon, Mrs. T. Lord, J. S. Hedderley, Sportsman, George Melville, Lord Salisbury, Guardsman, Meteor, Arthur, Chas. Henwood, Reliance, Sarah Payne, and Robt. Houlgrave. The ground colour was not very clear in any case; Mr. C. Blick, gardener to Martin R. Smith, Esq., Hayes, Beckenham, second; and Mr. Hayward Mathias, Medstead, third. Mr. Hayward Mathias, Medstead, secured first place for eighteen self carnations, with moderate blooms of Ensign, Carabas, Mrs. Charrington, W. H. Parton, Mrs. Flight, Her Grace, Miss Willmott, Daffodil, Sir Bevys, Mrs. Eric Hambro, W. H. Parton, Cantor, Medoc, and Nymph; Mr. C. Blick second, and Mr. A. R. Brown third; three entries.

Premier place for eighteen fancy carnations was won by Mr. C. Blick, who had gorgeous blooms of Father O'Flynn, King Coffee, Rhea, Hengist, Outlaw, Mohawk, Linkman, Highland Lass, Mrs. Leo. Hunter, Erl King, Mandarin, Pasquin, Hercules, Lord Steyne, and Deerslayer; Mr. A. R. Brown second, and Mr. H. Mathias third; three competitors. Mr. Blick led for eighteen white-ground picotees with small but clean, bright specimens, all unnamed; Mr. A. R. Brown was a good second; and Mr. H. Mathias came third. For yellow-ground picotees, eighteen blooms, Mr. C. Blick was a good first, and his set consisted of Lady Flightly, Mrs. Oldfield, Sophia Western, Montezuma, John Ruskin, Leonora, Coquelin, Agnes, Clara Clemens, Lady Gascoigne, Exquisite, Her Majesty, and Regal; Mr. H. Mathias second, and Mr. A. R. Brown third.

For eighteen undressed self blooms in vases, Mr. James Douglas, Great Bookham, led the way, and among many good things had Ann Hathaway, Etna, Nevada, Amy Robsart, Carnival, and Miss Willmott; Mr. A. R. Brown second, and Mr. Chas. Turner, Slough, third. For a similar number of undressed fancy carnations, Mr. James Douglas again led the way with handsome and bright flowers, followed in due order by Mr. C. Blick and Mr. H. Mathias.

Mr. C. Blick gained first place for eighteen undressed yellow-ground picotees, his best being Valhalla, John Ruskin, Mark Twain, and Peter Pan; Mr. H. Mathias second. In the class for a dozen selfs, fancies or picotees, three blooms of each, in vases, Mr. C. Blick was first, making a good display with Mandarin, Pasquin, Agnes Sorrel, Douce Davie, Father O'Flyn, etc.; Mr. J. Douglas second, showing Celestial, a bright yellow-ground fancy; Mr. H. Mathias third. Mr. A. R. Brown was first, Mr. B. Nash, gardener to H. R. Taylor, Esq., Cheam, second, and Mr. J. Fairlie, Acton, third, for six of any bizarre or flake, Mrs. T. Lord being the premier variety. For six blooms of a white-ground picotee, Mr. A. R. Brown led with Mrs. Chaundy, very fine; Mr. B. Nash second, and Mr. R. G. Rudd, King's Norton, third.

The class for five undressed blooms, selfs, brought out a good competition, and Mr. R. Morton, Woodside Park, scored with Mrs. Eric Hambro; Messrs. Phillips and Taylor, Bracknell, second; and Mr. B. Nash third. For five fancies, similarly staged, Mr. A. R. Brown led with Margaret Thurston, finely shown; Mr. C. Blick second with Mandarin; and Messrs. Phillips and Taylor third. For five fancies, other than yellow grounds, Mr. C. Blick led with The Nizam; Mr. B. Nash second, and Mr. R. Morton third, with the same variety. For five yellow-ground picotee blooms, Mr. C. Blick led with clean, bright examples of John Ruskin; Mr. Morton second, and Mr. B. Nash third.

LOWER DIVISIONS.

In the second division, the chief awards for bizarres and flakes were won by Mr. B. Nash, Mr. C. H. Herbert, Acocks Green, Birmingham, and Messrs. Phillips and Taylor. Mr. R. G. Rudd scored for twelve selfs, and showed a fine Miss Willmott in his stand; Mr. B. Nash second, and Messrs. Phillips and Taylor third. Mr. Rudd annexed the premier award for twelve yellow-ground fancies, and he showed well; Mr. C. H. Herbert second; and Messrs. Phillips and Taylor third. Mr. C. H. Herbert Mr. Rudd, and Mr. Nash shared the awards in the order of their names in the class for white-ground picotees, and though the flowers were small, they were clean. The order of merit for a dozen yellow-ground picotees was Messrs. Phillips and Taylor, Mr. Nash, and Mr. C. H. Herbert.

Mr. R. Morton led for a dozen undressed selfs, in vases, and was followed in order by Mr. Nash and Mr. Rudd, but there were no first-rate flowers in the class. Mr. Morton was also successful for twelve fancies, in vases, and was followed here by Mr. Rudd and Messrs. Phillips and Taylor. For yellow-ground picotees, similarly displayed, Mr. Morton was once more successful, with Messrs. Phillips and Taylor and Mr. Rudd second and third respectively. Much better blooms were seen in the class for nine selfs, fancies, and yellow-grounds, three blooms of each, Mr. H. Lakeman, Thornton Heath, winning with a heavy set of Rony Buchanan, Mr. Guy Sebright, Pagon, Sport, Erl King, Bridegroom, Mrs. W. Heriot, Paganite, and Douce Davie; Mr. R. Morton second, and Messrs. Phillips and Taylor third.

In the third division the principal prizewinners were Mr. G. D. Ford, Acocks Green, Mr. A. H. Beadles, Sydenham; Mr. J. J. Sheldon, South Woodford; Mr. C. Alcock, Liverpool; Mr. C. A. Philbrick, Reading; Mr. J. J. Keen, Southampton; Mr. C. A. Linzee, Alresford; Mr. E. Charrington, Limpsfield; Mr. A. Best, Andover; Mr. H. S. Bartleet, Shooter's Hill; Mr. A. G. Russell, Woodeaton; and Mr. L. G. Gryspreedt, Croydon, Mr. Ford being specially successful.

In the fourth division, open to amateurs who do not employ a gardener regularly, the leading prizewinners were Mr. J. H. Linington, Newport; Mr. L. G. Gryspreedt; Mr. C. A. L. Brown, Hatfield Peveril; and Mr. E. Answorth, Acton, who practically secured all the awards.

OPEN CLASSES.

Several open classes were provided for nine blooms of one variety in a vase. For a pink or rose variety, Mr. J. Douglas led with Miranda; for a white variety Mr. Douglas was first with Amy Robsart, and Mr. C. Turner second with Lady White; for a dark-red Mr. J. Douglas led with grand flowers of Agnes Sorrell, and Miss Shiffner was second with the same variety; Mr. Douglas led for a yellow variety with Daffodil in grand condition, Miss Shiffner second with the same variety; for a scarlet variety Mr. Douglas led with the new Premier, and Miss Shiffner was second with H. Cutbush. For a yellow-ground picotee Mr. Douglas scored with Peregrine, and he led for a buff self with Marmion, for a fancy with Pasquin, and for any other fancy than a yellow-ground with King Edward VII., white and crimson, a bold flower.

Mr. Hayward Mathias had the best vase of carnations and picotees, and Mr. J. Fairlie, Acton, was second; for a vase of seedlings Mr. B. Nash was an easy first, and for button-holes Mrs. H. L. Sell, Luton, and Mr. A. G. Russell, Woodeaton, were the chief prizewinners.

Mr. C. Blick had a very handsome group of carnations and foliage plants, the gorgeous fancy carnations harmonising well with the bright crotons; he won first prize, and Mr. Chas. Turner, Slough, came second. Mrs. C. Blick was placed first for table decorations with a design in pale-yellow picotees; Mrs. C. H. L. Brown, Hatfield Peveril, second with deep rose-pink flowers, and Mrs. H. L. Sell, Luton, third with blush and white flowers.

NON-COMPETITIVE.

Mr. Bradford, gardener to E. H. Brown, Esq., Roehampton; Messrs. H. B. May and Sons, Edmonton; Messrs. Eggett and Son, Thames Ditton; Messrs. W. Cutbush and Son, Highgate, N.; Mr. Maurice Prichard, Christchurch; Messrs. Thos. S. Ware, Lim., Feltham; Messrs. James Carter and Co., High Holborn; Messrs. Phillips and Taylor, Bracknell; Mr. A. F. Dutton, Iver, Bucks; Mr. James Douglas, Great Bookham; and Messrs. Hugh Low and Co., Bush Hill Park, Enfield, all kept over their exhibits from the R.H.S. meeting of the previous day.

Mr. H. Miller, Harrietsham, Kent, showed several vases of self carnations, and Mr. J. Williams, Oxford Road, Ealing, showed carnations in his rustic flower stands. Mr. Wm. Sydenham, Melbourne, Derbyshire, contributed a bright display of carnations, showing popular border varieties and numerous gay seedlings.

Brentwood Horticultural Society.

JULY 16.

The exhibition of this society was, as usual, held in the grounds of Middleton Hall, which occupies a position in one of the most pleasant parts of Brentwood, and, horticulturally, it was a decided success; financially, it must have been otherwise, for it rained more or less heavily throughout the afternoon.

Roses had ample provision for them, and as they were well represented both in numbers and quality, they constituted an important and delightful feature. In the strong competition in the trade class for thirty-six blooms, Messrs. F. Cant and Co., Braiswick Nursery, Colchester, was first with a collection of finely developed blooms, and thereby became the winners of the valuable silver challenge cup; especially noteworthy were the blooms of Comte de Raimbaud, Charles Lefebvre, Bob Davidson, Horace Vernet, Dean Hole, Captain Hayward, Frau Karl Druschki, Earl of Warwick, and Maman Cochet; Messrs. R. Harkness and Co., Hitchin, second; and Messrs. B. R. Cant and Sons, Colchester, third, both firms staging excellent blooms. In competition for the prizes for twelve varieties, three blooms of each, the firm last named was a capital first, and Messrs. F. Cant and Co. followed for second place. Messrs. B. R. Cant and Sons were first also for twelve teas, staging superbly developed blooms of well-known varieties; and Messrs. F. Cant and Co. exhibited well for second place. The last-named were first for six bunches of garden roses with an attractive collection. In the amateurs' division, Mr. W. Leggett, Malton Road, was exceptionally successful, his chief successes being the winning of the silver challenge cup in the class for twelve roses, the first prize for twenty-four roses, distinct, the first for twelve roses of one colour, the variety being Dean Hole, and first for twelve teas. The Rev. J. H. Pemberton obtained premier place for garden roses, and exhibited successfully in several other classes; Mr. H. Pope and Mr. F. Davy were also successful exhibitors of roses.

Of sweet peas there was a large and beautiful display, and chief among the successful exhibitors in the principal classes were Mr. F. W. Medcalf, Mill House, Brentwood; Mr. Paul, High Street, Brentwood; Mr. J. G. Ward, Brentwood; Mr. H. Robarts, Ponders, Margarethen; and Mr. A. Geary, Brentwood. Mr. Burrell, gardener to W. Duffield, Esq., Broomfield, was first for twelve varieties of zonal pelargoniums, three trusses of each, and in the class for twelve carnations Mrs. Pilkington, Hutton Hall, Hutton, occupied the first place with superb blooms. Mr. J. Britton, Brentwood, was awarded premier honours in the class for twelve bunches of hardy flowers, and Mr. J. Burrell was second, both collections possessing much merit.

Groups arranged for effect were of great excellence, and that for which Mr. H. Holloway was awarded the first prize evinced taste of a high order; Mr. J. Bradley second. There was a strong competition in the class for decorated fireplaces, and Mr. Holloway and Mr. Turner were first and second with tasteful arrangements.

Fruit was less plentiful than might have been expected, but that staged was of excellent quality. Mr. J. Burrell was first for collections and for a dish of black grapes; Mr. Britton was first for white grapes; and Mrs. Pilkington first for melons. Strawberries were splendidly shown by Mr. F. Davey, Warley Mount, Brentwood, who was first in each of the two classes; and Mr. Rossiter was first for cherries. Table decorations were numerous, and of a high order of merit; and chief among the exhibitors were Miss King, Coggeshall, who was first in two of the classes for decorated dinner-tables, and in the class for tables decorated with wild flowers, Mrs. Hume, Ingatestone, was first with an exquisitely beautiful arrangement.

Vegetables constituted a great feature, for in addition to the many fine collections exhibited by gardeners and amateurs, there were numerous collections, and hundreds of single dishes from cottagers, all more or less meritorious. Mr. E. Barker, gardener to Lady Neave, Dagnam Park, was successful in winning the first prize in the class for eight kinds, and Mr. Holloway, gardener to Mrs. Baxter, Hutton Park, was a close second. In competition for Messrs. Sutton and Sons' prizes for six kinds, Mr. Barker, Mr. H. Turner, Brentwood, and Mr. H. Wilson, Brentwood, were first, second, and third respectively. Mr. Barker and Mr. Bradley exhibited potatoes in exceptionally good condition. Mr. Holloway had the best tomatoes, Mr. Barker the best cucumbers, and Mr. Bradley the best salads.

Cardiff Gardeners' Association.

A large number of members of the above society availed themselves of the kind invitation of Messrs. William Tressider to visit their City Nurseries, Llandaff, recently, where they were cordially received and entertained by Messrs. F. and R. Tressider on behalf of the firm. A long time was spent in viewing the forest trees, which, it was gratifying to note, were, with a few exceptions, raised from seed at their own nurseries, amongst which the Japanese larches were extremely fine. Notwithstanding the recent drought, the ornamental and fruit trees, the roses and herbaceous borders were seen to the best advantage. At the close Mr. Malpass proposed, and Mr. Mountney seconded, a hearty vote of thanks to Messrs. Tressider for the kind reception extended to the members.

FORTHCOMING ENGAGEMENTS.

SATURDAY, August 1.—Auldearn Horticultural Society.
MONDAY, August 3.—Carshalton Horticultural Society.
Weybridge Horticultural Society.
Andover Horticultural Society.
Atherstone Horticultural Society.
TUESDAY, August 4.—Royal Horticultural Society; Meeting of Floral, Fruit, and Orchid Committees at noon; General Meeting, 3 p.m.; Scientific Committee, 4 p.m.
Leicester Flower Show in Abbey Park, two days.

TO ROSARIANS.—The Rose Walk at Purley is now nearly completed, and may be seen by those interested at any time. It is within a mile of Purley Station, towards the upper end of Foxley Lane, at considerable elevation, though itself almost level ground.

About six thousand rose trees were planted last season with the greatest care.

The trees, comprising some 400 varieties, were chosen after a personal inspection from the nurseries of Messrs. Benj. R. Cant and Sons, of Colchester, winners of the N.R.S. Championship for many years, and of the Purley Challenge Cup this season in a very strong class.

The beds, 2ft. 6in. deep, were formed of clay, fibrous top spit, and manure, and the chalk subsoil adds the necessary qualification of perfect drainage, while Purley is noted for its pure air which every rose grower knows is a sine qua non of success in his favourite hobby. The general scheme is for decorative effect, free blooming garden varieties of bush roses being flanked by ramblers and other climbers, but that a fair sprinkling of exhibition sorts are included may be gathered from successes already scored at the local shows.

The 27 plots which front Rose Walk, and which comprise an area of about two-thirds of an acre each, are enclosed at the sides and rear by hedges, belts of trees, climbing roses and herbaceous plants.

In order to afford protection a picturesque lodge has been built at each end of the "Walk," and iron entrance gates are being hand wrought at the estate smithy.

With regard to the road itself, an attempt has been made to construct the finest carriage way in the whole district, and no expense has been spared to realise that aim. The sewer, gas, and water mains, electric light cable and telephone wires have been laid and branches in each case taken across the road to the respective plots in order to prevent that constant "picking up" which spoils so many good roads. Surface water drains are laid, gas lamps erected and fire hydrants fixed, while granite kerb and channel line the carriage way, which is covered with such heavy coatings of flints that it should keep its hard, smooth surface for many years. The above particulars, coupled with a glance at the road, will at once convince the visitor that no expense or trouble has been spared to produce one of the most delightful spots for a gentleman's detached residence that can be imagined.

The price of the plots in this portion of the Upper Woodcote Estate, with plan and any further information, may be obtained by applying to Mr. W. L. Winborn, Keeper's Cottage, Furze Lane, Purley.—[ADVT.]

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

MILDEW ON ROSES.—C. S. S., Winchester: Your roses are suffering from a very bad attack of mildew, and unless means are taken at once to clean the trees they will suffer considerably. Spray the roses with a mixture of two ounces of liver of sulphur in three gallons of water, adding one tablespoonful of liquid glue to each gallon to make the mixture adhesive. In the course of a week or ten days it may be necessary to spray again, using half an ounce of liver of sulphur to one gallon of water.

PEA AND BEAN ROOTS.—S. J., Wrexham: The statement is perfectly correct. Peas and beans should never be pulled up when the crop has been gathered, but be cut down to the ground line, leaving the roots in the soil. The bacteria that inhabit the nodules on the roots of these and other leguminous crops store up nitrogen, consequently the ground will be all the richer if the roots are left in it. Of course, digging can proceed, if necessary, at once, or the surface may be roughly forked and levelled for late green crops.

SCAB ON APPLES.—R. H. N., Chelmsford: It is quite useless to spray now for the cure of apple scab. Gather up and burn all infested leaves and fruits as they fall, and in winter the trees must be given two good dressings of the caustic soda and potash solution, to be followed, in early spring, as soon as the leaves have expanded, with a spraying of a weak—about half strength—Bordeaux mixture.

DESSERT APPLES FOR NORTH WALES.—G. F. H., Bangor: Varieties of dessert apples that are known to be useful for cultivation in the North Wales district are: Adam's Pearmain, Allington Pippin, American Mother, Baumann's Winter Reinette, Beauty of Bath, Blenheim Pippin, Chas. Ross, Cockle's Pippin, Cornish Aromatic, Court Pendu Plat, Cox's Orange Pippin, Devonshire Quarrenden, Dutch Mignonne, Fearn's Pippin, Gascoyne's Scarlet, Hubbard's Pearmain, Irish Peach, James Grieve, Kerry Pippin, King of Tomkin's County, King of the Pippins, Lady Sudeley, Lord Burghley, Melon Apple, Mr. Gladstone, Red Astrachan, Ribston Pippin, Sturmer Pippin, The Rival, Washington, Wealthy, and Worcester Pearmain.

NEW ROSE FOR COMPETITIVE PURPOSES.—B. S. B., Lancaster: If the class is for new roses of 1908, then a variety not yet in commerce could not be admitted, although it had gained an award this season. The same thing holds good with sweet peas; novelties of 1908 are taken to mean varieties catalogued in the 1908 seed catalogues, some of which are, of course, sent round before the new year.

BOXES FOR ROSES.—S. D., Epping: We cannot do better than quote the National Rose Society's regulation with reference to boxes for roses, and at the same time urge you to join the society now you propose to take up rose culture seriously: All blooms exhibited (except where specially directed in the schedule to be shown in vases or otherwise) must be staged in boxes of the regulation size, viz., 4in. high in front and 18in. wide, and of the following lengths, all outside measurements: For 24 blooms 3ft. 6in. long, for 18 blooms 2ft. 9in. long, for 12 blooms 2ft. long, for 9 blooms 1ft. 6in. long, and for 6 blooms 1ft. long. In the above boxes for single blooms the tubes must be 5in. apart each way from centre to centre of the tubes. For 8 trebles 3ft. 6in. long, for 6 trebles 2ft. 9in. long, and for 4 trebles 2ft. long.

EQUAL PRIZES.—P. S. W., Wolverhampton: It is the general rule at exhibitions that when two competitors have exhibits of equal merit, and both merit a prize, that the higher prize shall be added to the prize next in order, and the sum be equally divided between them. Thus, if two competitors are granted equal first prizes, then the first and second prize should be lumped and equally divided between these two competitors; no second prize should be awarded, but the next exhibit in order of merit should win the third prize.

COOKING APPLES FOR NORTH WALES.—G. F. H., Bangor: The following varieties of cooking apples are recommended for the North Wales district: Alfriston, Annie Elizabeth, Baron Wolseley, Beauty of Kent, Beauty of Stoke, Belle de Pontoise, Bismarck, Bramley's Seedlings, Cellini, Cox's Pomona, Duchess of Oldenburg, Dumelow's Seedling, Ecklinville, Emperor Alexander, Gloria Mundi, Golden Noble, Golden Spire, Grantonian, Hoary Morning, Hollandbury, Keswick Codlin, King Edward VII., Lady Henniker, Lane's Prince Albert, Lord Derby, Lord Grosvenor, Lord Suffield, Malster, Mank's Codlin, Mère de Ménage, Newton Wonder, Peasgood's Nonsuch, Potts' Seedling, Royal Jubilee, Sandringham, Stirling Castle, Stone's, Striped Beefing, The Queen, Tower of Glamis, Wareham Russet, and Warner's King.

CHRYSANTHEMUM YEAR BOOK.—M. R. F., Eye: The National Chrysanthemum Society has not undertaken the publication of a chrysanthemum year book this season for purely financial reasons. A year book was issued early in 1907, and it contains many very useful and instructive articles on chrysanthemum culture. We believe some copies of this year book are still to be had 1s. 3d., post free, from Mr. R. A. Witty, St. James Villa, Swain's Lane, Highgate, N.

NEW STRAWBERRY.—W. R. P., Canterbury: The variety appears to be an excellent one, but we very much doubt whether it is sufficiently distinct from a good stock of Royal Sovereign to merit a new name. Earlier fruits sent when the crop was at its best would have better enabled us to form an opinion of the variety, but, unfortunately, so many of our correspondents send us the last flowers or last fruits, or, in the case of apples and pears, very inferior samples, and expect us to form a proper opinion of the crop thereby or to give the correct names, as the case may be. This may be a compliment to us, but such procedure does not tend to correctness of judgment. The strawberries were firm, of good flavour, and beautifully packed. If the plants crop well, and are free from mildew, then the variety is well worth perpetuating, but we should need to see the crop growing before we decided whether the variety was worthy of distribution under a new name.

ONE PENNY WEEKLY, by post 1½d.

FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (July 25) contains the following:
COW-HOUSES IN SUMMER.
CABBAGE PLANTS FOR SALE.
CELERY FOR THE EARLY MARKET.
TOMATO DISEASES.
FORCED STRAWBERRIES.
ASPARAGUS FOR MARKET.
HEDGE-TRIMMING.
SEED-GROWING IN ESSEX.
STIMULATING THE ROOT CROPS.
SEASONABLE NOTES ON POULTRY.
INDIAN RUNNER DUCKS.
MILKING IN THE FIELD.
DUTCH CATTLE IN ENGLAND.
COWS FOR BEEF.
THE HOUSEHOLD.
HELPFUL HINTS.

SOLD BY ALL NEWSAGENTS.

OFFICES: 148 and 149, ALDERSGATE STREET, London.

NITRATE OF SODA FOR EARLY CHRYSANTHEMUMS.—G. C. H., Purley: On light and poor soils nitrate of soda is an excellent manure for early-flowering chrysanthemums if judiciously applied. It is an excellent plan to give a dressing during showery weather, or to thoroughly water it in and follow the next day with a surface hoeing. The best method of applying nitrate of soda is to mix one part of the nitrate with four parts of dry, finely-sifted soil, such as old potting soil, turning the whole four or five times to ensure thorough mixing; use one pound of the mixture to every eight square yards, spreading it as evenly as possible. Three or four dressings may be given during the season, but a fortnight should elapse between any two applications.

WITHERED APPLE SHOOTS.—T. E., Selby: We cannot be at all certain as to the cause of the mischief, unless we have an opportunity of inspecting some of the shoots that have withered. Judging from the meagre evidence contained in your letter we suspect the disease from which your apple trees are suffering is that known as the Brown Rot (Sclerotinia fructigena). One familiar result of an attack is seen in the shrivelling or mummification of the fruits, these hardening and hanging on the trees through the winter. Infected shoots, spurs, and fruits should be cut off or picked and burned, and weak Bordeaux mixture should be sprayed on the trees just as the leaves expand in spring time. A thorough winter dressing should also be given when the trees are quite dormant. Send us some of the infected shoots.

NAMES OF PLANTS.

R. H., Slough.—Curculigo recurvata.

R. J. H., Royston.—Begonia Martiana.

F. F., Bournemouth: Calandrinia Menziesi.

D. E., Long Eaton.—1, Lupinus arboreus; 2, Cupressus Lawsoniana albo-spica.

C. N. G., Ewell.—1, Zygadenus elegans; 2, Platycodon Mariesi; 3, Cimicifuga racemosa.

L. F. W., Ipswich.—1, Camassia Cusicki; 2, Trichosanthes anguinea; 3, Lagenaria vulgaris.

M. L. B., Northampton.—1, Rosa multiflora; 2, Ricinus Gibsoni; 3, Melianthes major.

C. H. M., Manchester.—1, Hieracium lanatum; 2, Empetrum nigrum; 3, Begonia heracleifolia.

R. B. T., Scarborough. — 1, Hypericum Moserianum; 2, Phlomis fruticosa; 3, Hoya carnosa.

N. F., Penarth.—1, Acacia lophantha; 2, Grevillea robusta; 3, Asparagus deflexus; 4, Panicum plicatum.

OBITUARY.

Mr. George Walker.

With regret we record the death of Mr. George Walker, head gardener at Waltham Hall, Grimsby, the residence of Sir George Doughty, M.P., which occurred under peculiarly painful circumstances. The deceased, who was in his 26th year, was appointed gardener at Waltham Hall about four months ago, appears to have been much worried because he was unable to accomplish so rapidly as he could wish the work he desired to carry through, and so in a fit of despondency he committed suicide.

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METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.
Height above Sea-level, 150 feet.

DATE. 1908. JULY 12 TO JULY 18.	SUNSHINE.	TEMPERATURE OF THE AIR.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 12—Sunday	3 5	59	55	67	55
„ 13—Monday	0 10	54	53	63	54
„ 14—Tuesday	3 40	60	55	63	51
„ 15—Wednesday	5 50	62	56	66	52
„ 16—Thursday	0 5	62	59	63	55
„ 17—Friday	4 30	60	56	64	56
„ 18—Saturday	0 50	56	54	63	55
Means	2 35	59	56	64	54

DATE. 1908. JULY 12 TO JULY 18.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
July 12—Sunday	0·09	62	62	59	54
„ 13—Monday	0·19	62	62	59	52
„ 14—Tuesday	0·05	61	61	59	47
„ 15—Wednesday	0·08	61	61	59	48
„ 16—Thursday	0·59	61	61	59	53
„ 17—Friday	0·25	60	61	59	54
„ 18—Saturday	0·13	60	61	59	54
Means	(total) 1·38	61	61	59	52

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GARDENER (Head), where three or more are kept, or FOREMAN on Nursery; life experience in all branches; age 32. BUTLER, 32, High [illegible], Swanley Junction, Kent.

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GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. [illegible], Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working, where two or more are kept); thoroughly experienced in vines, stove and greenhouse plants; early and late forcing, fruit, flower, and kitchen garden; good references; age 48; no family; life abstainer. E. [illegible], 52, Mersham Road, Thornton Heath, Surrey.

GARDENER (Head or good Single-handed); good practical experience in all branches, grapes, melons, cucumbers, peaches, stove and greenhouse plants, flower and kitchen garden; age 41; married, no family. Apply W. F., Office of this Paper.

GARDENER (Head or good Single-handed where help is given); life experience Inside and Out; good references; middle age; widower. [illegible] 17, [illegible] Road, Lavender Hill, London, S.W.

GARDENER (Head or good Single-handed with help); life experience Inside and Out; [illegible] place 5 years; good characters. HOWELL, [illegible] Lodge, Tingrith Manor, Woburn, Beds.

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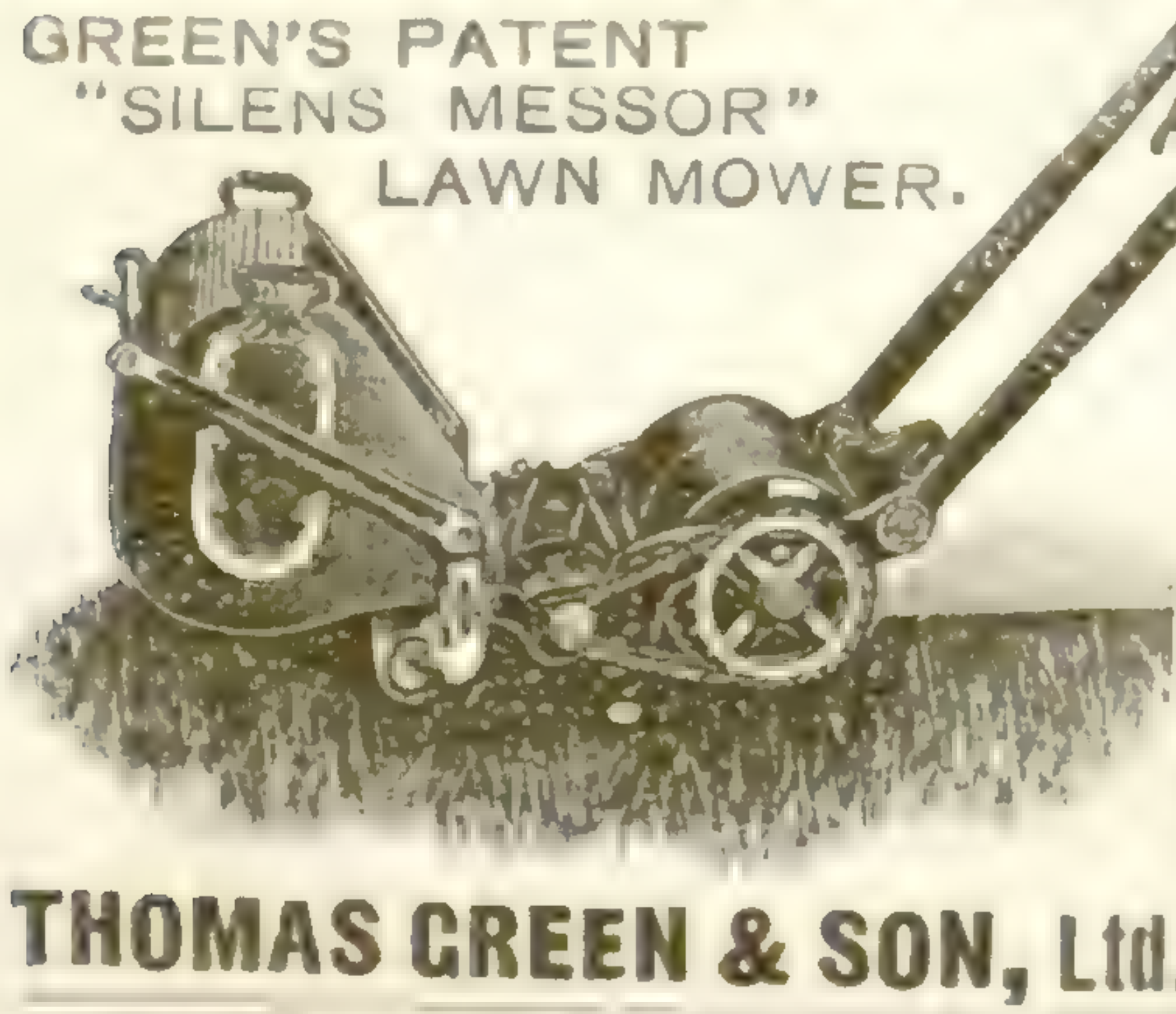

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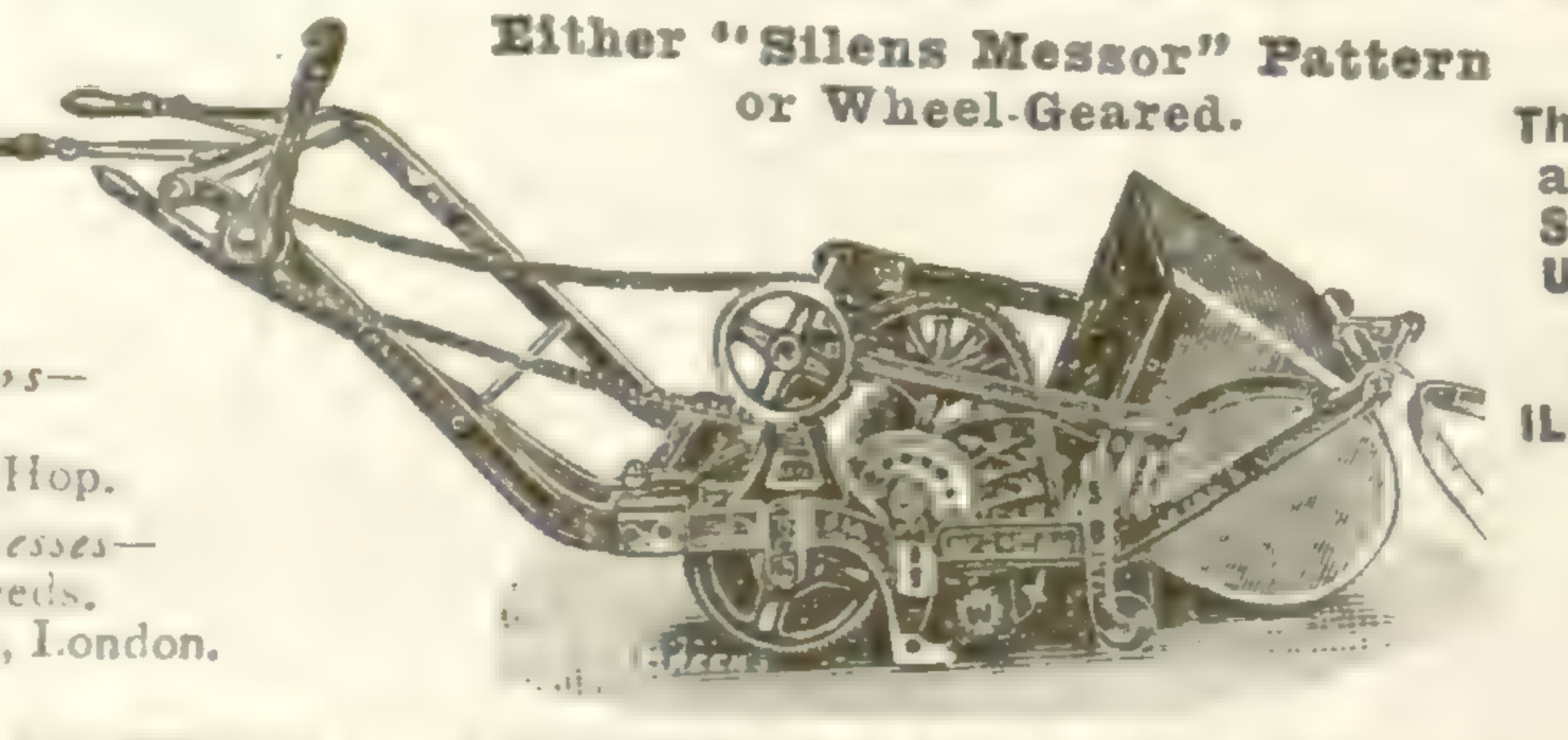

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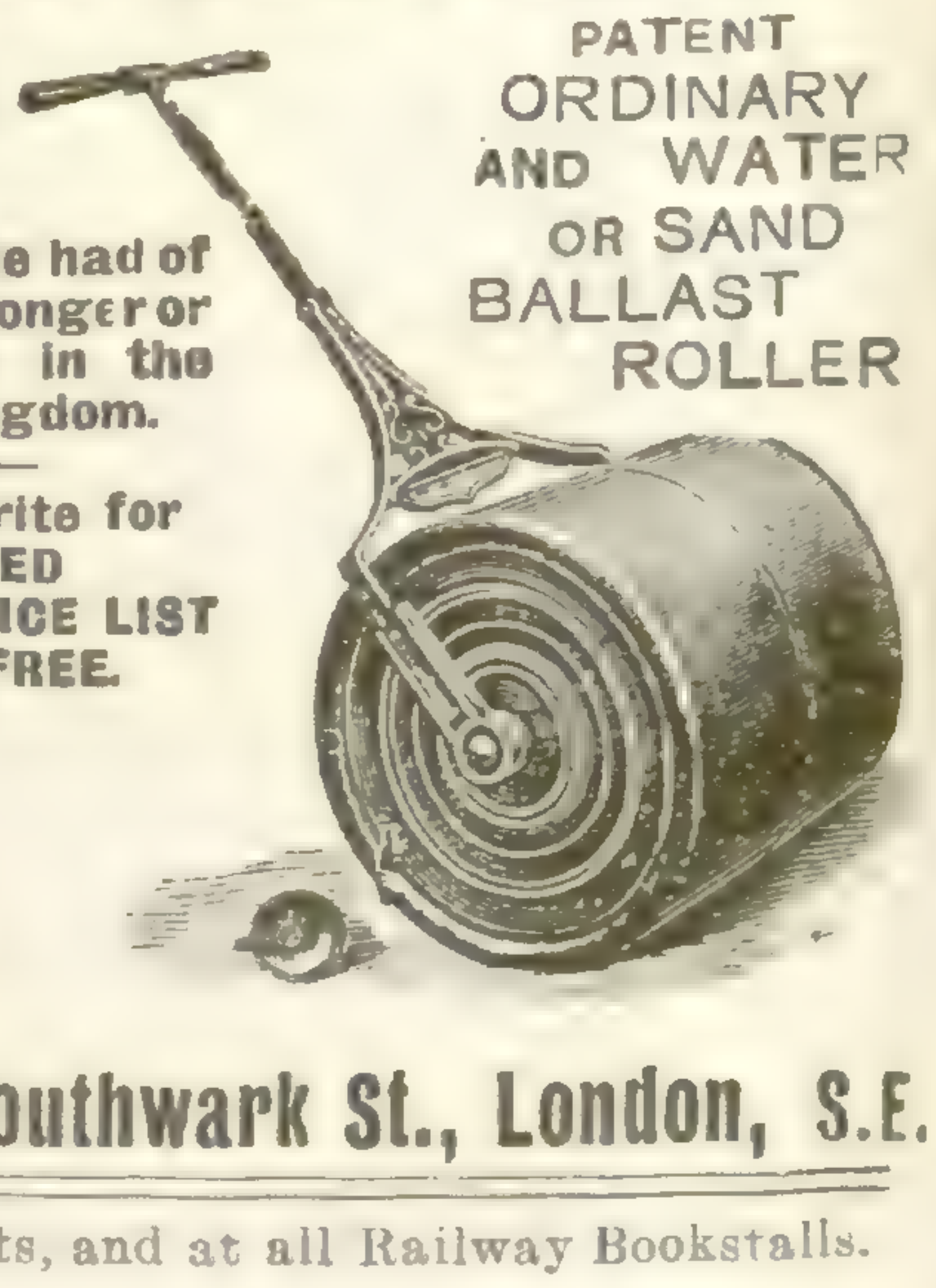

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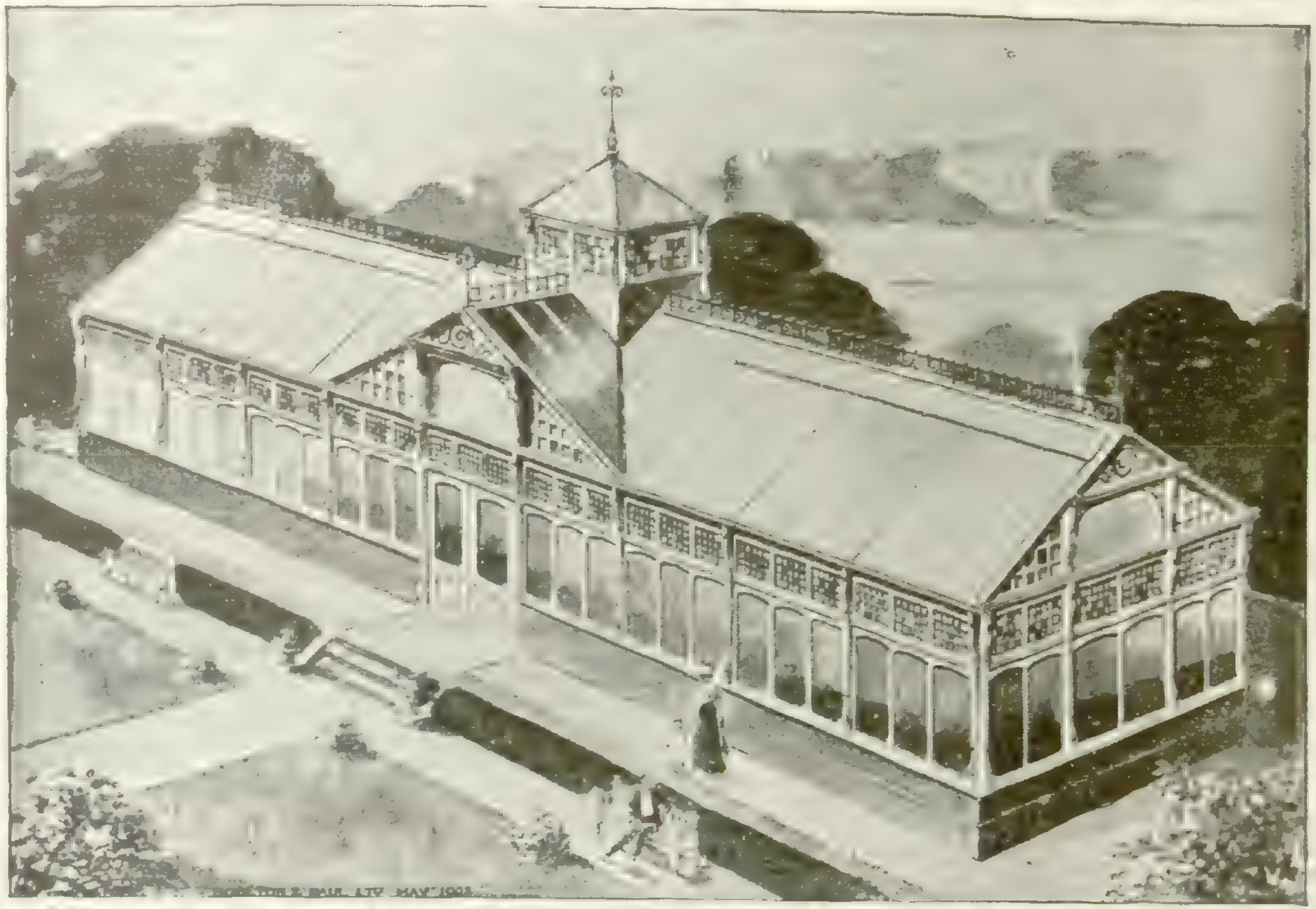

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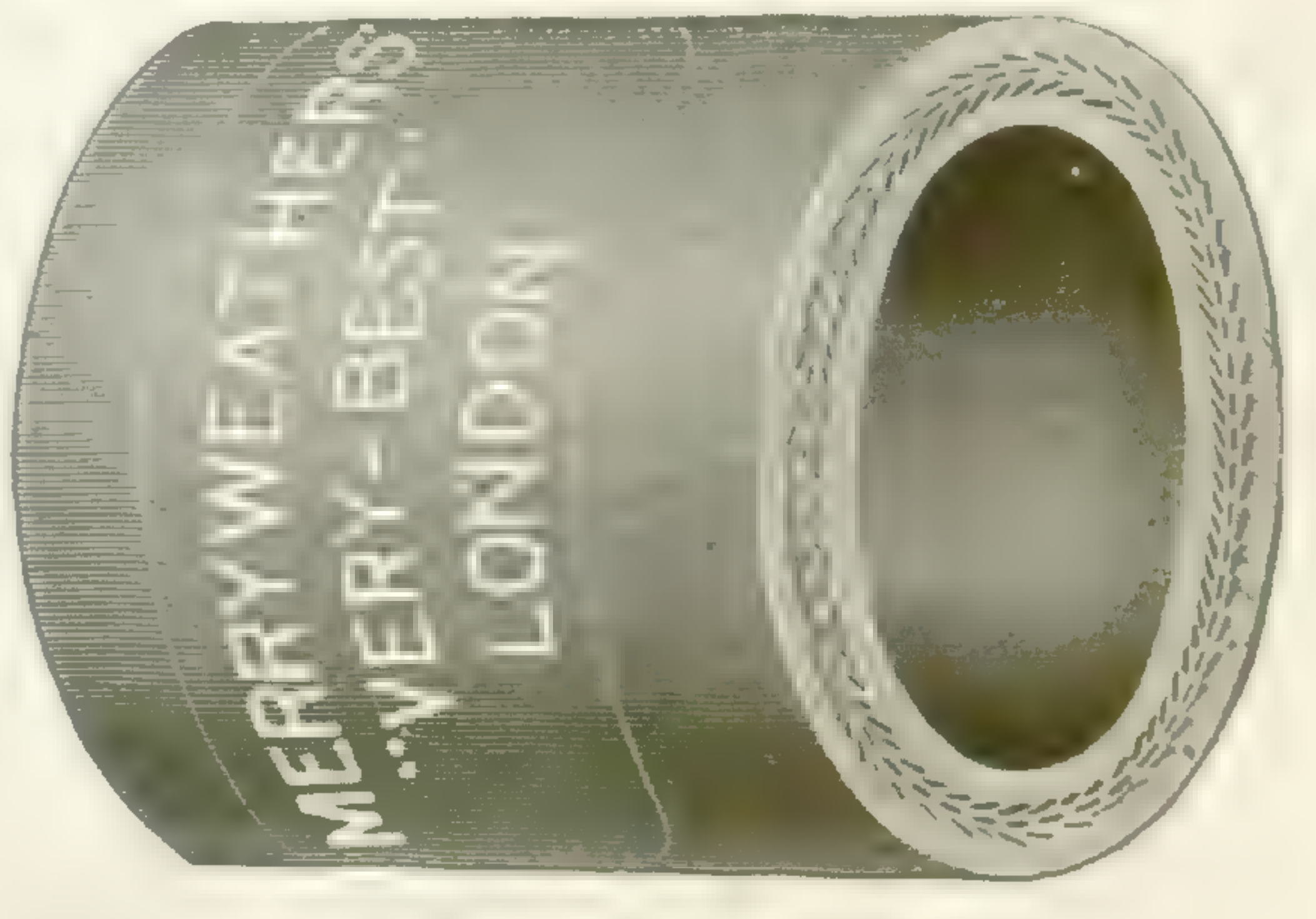

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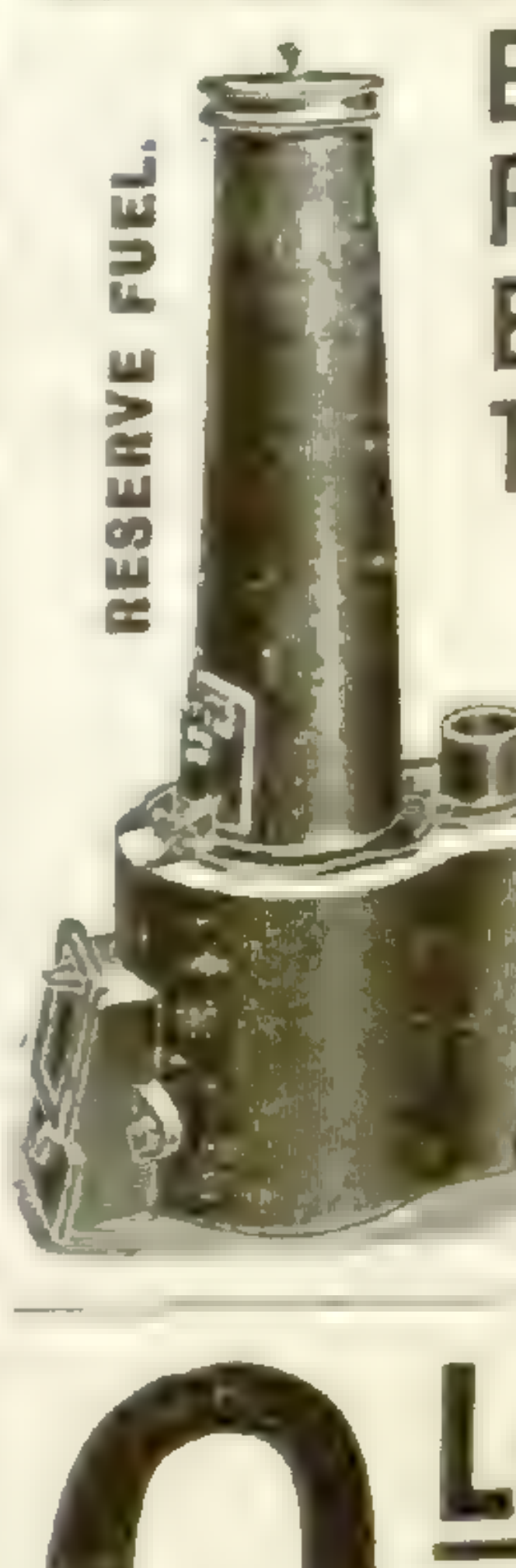
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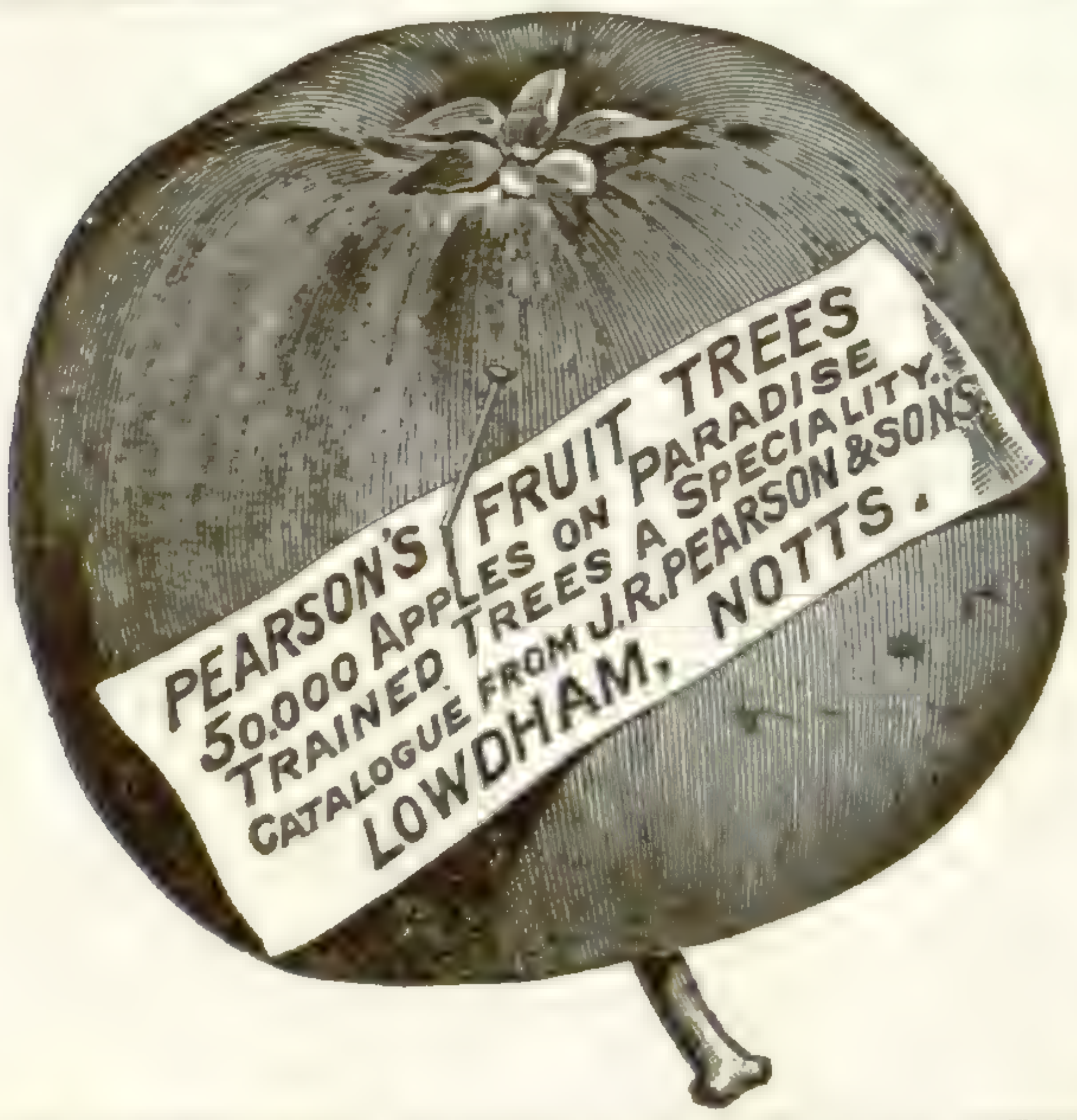
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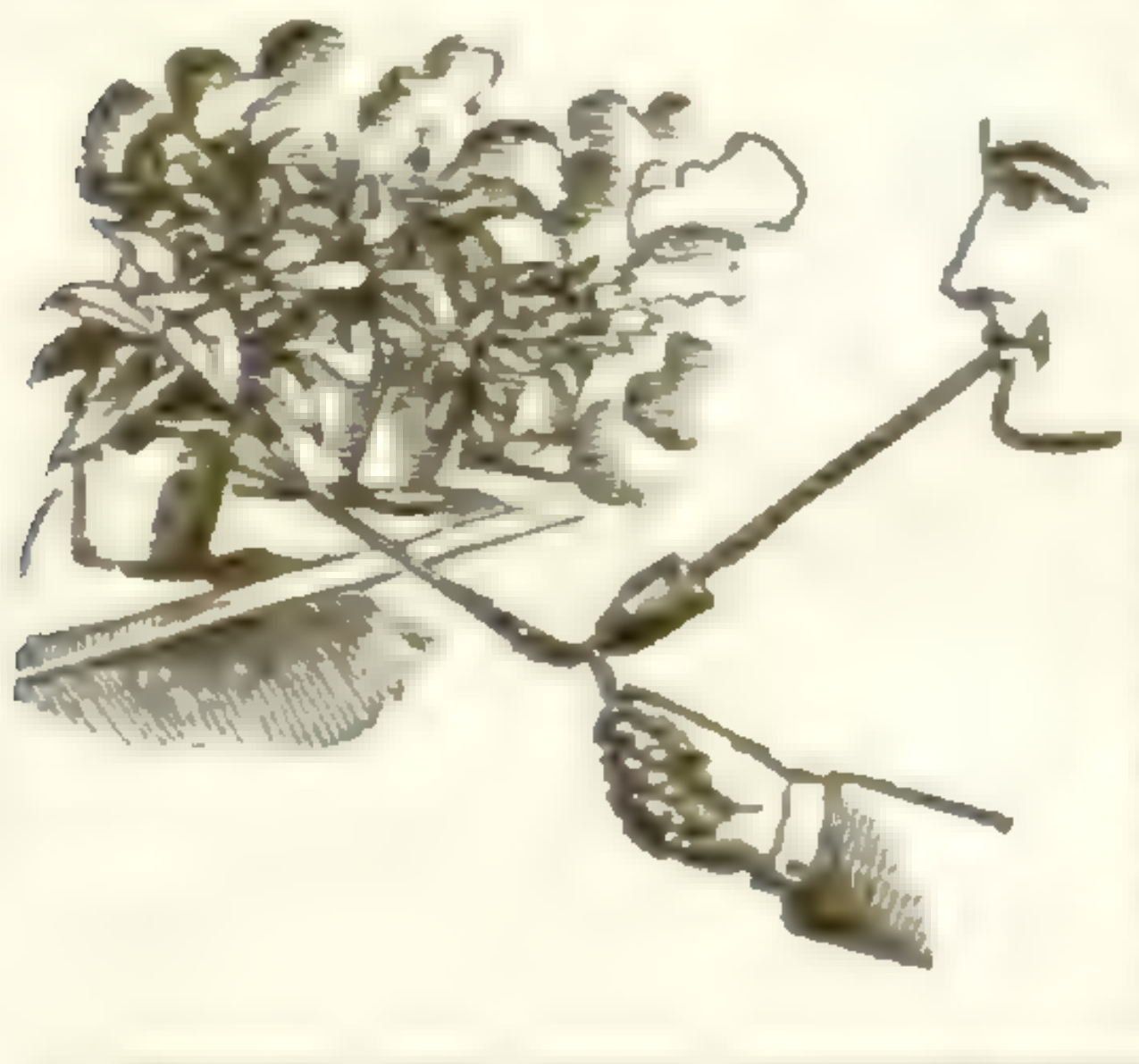

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THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

From Seaweeds to Roses.

To the ordinary mind it would seem to be an absolute impossibility that there can be any connection between the sometimes beautiful and sometimes weird growths which fringe our coasts and inhabit the shallower parts of the ocean and the brilliant roses which are flooding our gardens with resplendent tints. Nevertheless the evolutionist will tell us, and tell us truthfully, that the rose and all other flowering plants are the outcome of slow modifications and adaptations to changing conditions as the surface of the earth has changed its character. It is now generally accepted that life first appeared in the warm ocean waters at a time so inconceivably remote as to utterly defy definite computation. Simple at first as are the very lowest types of the present day, such as the amœba, a mere microscopic jelly-like mass, yet capable of slow movement and of absorbing any nutriment in its course through any part of its body, these organisms gradually assumed different types, becoming more and more complex in structure and presently the two great tribes, the vegetable and the animal, separated, and pursued distinct lines of development. All these, however, we must presume were aquatic; the earth at that period must have been constantly tossed and riven by earthquake throes and volcanic outbursts: flooded now by torrents of lava, and now by overwhelming invasions by the ocean due to similar catastrophic upheavals of the ocean bed. Under such conditions it is obvious that life in any form on the land had little chance of survival, and still less of any evolution on the slow progressive lines which shapes creation. In the ocean, on the other hand, the chance of survival was great, and that of destruction merely local. Presently, however, this tempestuous phase of terrestrial conditions gave place to more stable ones, and the coastal forms of life began to adapt themselves here, there, and yonder, to, first, amphibious conditions, and eventually to purely land ones. In this way there seems to be no doubt that some of the ocean vegetation became modified to suit terrestrial conditions, at first in damp, humid, marshy environments which constituted a preliminary stage to drier ones, and in our ferns and their allies the mosses, horse-tails, liverworts, and lichens we nowadays still see as it were the several grades or stages through which the transformation had been effected prior to the evolution of the seed-bearing plants by modifications of the spore-bearing ones, and the consequent ushering in of the age of flowers. Professor F. O. Bower, Regius Professor of Botany to the University of Glasgow, in his recently published work, "The Origin of a Land Flora," has brought together a vast mass of data showing, as far as possible, how this transformation has been effected by gradual modifications and adaptations of structure to meet new needs, until primordially simple forms have assumed greater and greater complexity in order to fit them the better for reproduction and dissemination, the two great factors essential in the competitive struggle for existence. In this book he points out that the ferns and their allies aforesaid inherit to this day the necessity for a watery environment at the reproductive stage of their existence, and as this formed a barrier to progress, some of the members of these associated tribes contrived to so far modify the fertilising operation bit by bit until the pollen tribe was perfected, one sort of a spore becoming the pollen grain and another the embryo seed, between which two connection was effected under conditions afforded by a dry and even arid environment. Some of the plants so modified required outside aid to carry the pollen, and hereupon began that wonderful interaction between insect and plant, the former exercising choice and the latter increasing its charm to secure a visit, until there arose that wealth of bloom with which we are happily familiar in wild plants. Man then steps in as a selective factor, and thus puts the final touch to the long evolutionary process which links in one unbroken chain the lowliest seaweed with the loveliest Queen of Flowers. When considering such a transformation, what must we think of that wonderful Creative Power which guided it throughout, and has brought it to such marvellous perfection?

MR. W. BOYES.

Mr. W. Boyes, whose portrait we have the pleasure of presenting to our readers in this issue, has long occupied a prominent position among amateur rosarians, and during the period he has devoted his leisure to the cultivation and exhibition of roses he has enjoyed the respect of all who, like himself, have a strong affection for these flowers. It is not necessary to recapitulate Mr. Boyes' many successes, for, as an exhibitor, he is widely known, but it may be said that in staging he has invariably aimed at high quality, and endeavoured to present his roses in such manner as to fully display their many attributes of beauty; and that, while a good winner, he has invariably accepted his defeats with the best possible grace. For many years Mr. Boyes resided at Derby, and he did much, by his counsel and example, to promote the cultivation of roses in the Midlands. He has also taken an active part in the work of the committee of the National Rose Society, of which, reckoned by years of service, he is one of the oldest members. Since his removal to Middleton-on-the-Wolds Mr. Boyes has been elected the hon. local secretary of the National Rose Society for Duffield, and in this position he has done such excellent service as to show that the National Rose Society is well represented in the north-east of Yorkshire.

Asparagus Fern.—A correspondent is very indignant because his collection of ferns was disqualified at a recent local flower show, owing to the inclusion of an "asparagus fern." He suggests that in disqualifying the collection the judges showed a remarkable want of knowledge of plants, and he writes, "If the 'asparagus fern' is not a fern, I should like to know what it is." It must be very unpleasant to have one's collection of plants disqualified, and we can, to some extent, understand our correspondent's feelings in the matter; but we cannot understand anyone including the "asparagus fern" in a competitive collection of ferns. The plant is not a fern, but an asparagus, probably Asparagus Sprengeri, and therefore the collection was properly disqualified. We have during the current season seen two collections of ferns in which this elegant asparagus was included, and in one case the collection was disqualified, and in the other the asparagus was overlooked. It is so easy a matter to distinguish ferns from flowering plants that there is really no excuse for confounding asparagus and ferns, and it would be difficult to find one for the absurd popular name that has been given the ornamental asparagus.

Meeting of British Association.—The meeting of the British Association will this year be held at Dublin, under the presidency of Mr. Francis Darwin, F.R.S., Reader in Botany at the Cambridge University, and has the promise of being one of the most successful gatherings the association has yet held. An excellent programme of scientific papers and discussions has been prepared, and numerous social functions have been arranged. Mr. Darwin will discuss in his presidential address the problem of the inheritance of acquired characters, previously passing under review the movements of plants that are to be used as illustrative of stimulus and reaction, establishing the modern view that morphological changes are regulated in similar manner, and restating Hering's important thesis that memory is a universal function of organised matter. Dr. F. F. Blackman is the president of the botanical section, and in his address will discuss the manifestations of the laws of physical chemistry in the living organism, and he will insist upon the importance of critical quantitative work upon vital processes, and will discuss the data relating to growth, assimilation, and respiration, and the acceleration of reaction velocity by temperature. The meetings of the botanical section is likely to prove of more general interest than usual. Professor Dixon, of Dublin, is expected to contribute a paper on the mechanism of the ascent of water in tall trees. Professor Bose, of Calcutta, will give an account, with demonstrations, of some of his investigations on the mechanical and electrical responses of plants; the Cambridge Botany School will contribute papers on the utilisation of the carbon dioxide of the atmosphere by green plants, and there will be a discussion on the origin of dicotyledons. The section devoted to educational science should also prove of interest to those concerned with horticulture. There will be a discussion on the several aspects of education in rural districts; Professor Miall and Professor J. A. Thomson, will deal with Nature study; Miss L. J. Clarke and Professor Houston will discuss the advantages of school gardens, and the methods by which they may be utilised in creating an interest in rural occupations.

Destruction of Dodder.—It is a matter of considerable interest to know that the dodder, which does much damage annually to the clover crop, can be destroyed by spraying with a solution of sulphate of iron. According to Dr. Hiltner, director of the Munich Botanical Institute, a plot was, in 1906, sown with red clover seeds containing 2,000 seeds of dodder. The latter germinated freely, and the plants grew so vigorously that they soon spread over the clover. In August it was sprayed with an 18 per cent. solution of sulphate of iron, with the result that the clover had so black an appearance that one might have thought it was ruined. After a short while, however, it made new growth, and grew at least as well as the portion which was left unsprayed. The latter was ultimately still more checked in its growth by the spreading dodder. The dodder entirely disappeared from the sprayed plot, though it afterwards made its appearance, to a small extent, in consequence of fresh infection from the adjacent plot. It is necessary the solution should be applied by means of a sprayer to ensure it falling with some force on the ground and reaching the growths of the dodder that are attached to the clover under the surface. An application with a watering can was unsuccessful.

Early Potatoes in Ireland.—The cultivation of early potatoes has been greatly extended in Ireland within the past few years, and the results have fully justified the views of those who have urged upon growers the importance of early potatoes as a paying crop. Early potatoes for market are chiefly grown in County Dublin and in the more favoured districts in the south-western counties, and are found more profitable than the various other crops grown. The majority of the crops have been sold at prices ranging from £40 to £50 per acre.

Visit to Messrs. J. K. King and Sons' Seed Farms.—A few days since a party of French landowners and farmers visited Messrs. J. K. King and Sons' seed farms and experimental grounds at Coggeshall, and, favoured by fine weather, the various crops were seen under the best conditions. The visitors were under the guidance of Messrs. G. Jourdain and E. Cassez, two of the leading professors of agriculture in France, and were received at Purley's Farm by Mr. H. T. King, the head of the firm. They then proceeded to make a tour of the several farms, and were evidently much interested in the many objects of interest that came under their notice. As growers of garden and farm seeds of all descriptions Messrs. King occupy eight farms in the Coggeshall and Chappel districts for the production of such seeds as can be the most successfully grown in the district, and for experimental purposes. The methods of procedure in the cultivation of the several crops were explained by Mr. Millard as the visitors proceeded from field to field, and the splendid condition of the cereals, the healthy growth of the various roots, and the heavy crops of cabbage, radish, and turnip seed were much admired. Of special interest to the visitors were the great breadths of nasturtiums, godetias, clarkias, etc., now producing glorious displays of colour, and the large collection of finely grown sweet peas, which also is highly attractive. In the course of their visit they were afforded an excellent opportunity for obtaining an insight into the course of procedure by which new varieties are raised and fixed, and the purity of stocks maintained. The party was entertained at luncheon by Messrs. King, and at the close thereof Professor Jourdain spoke in appreciative terms of the courtesy shown by the firm, and of the instructive and pleasant character of the visit.

R.H.S. Exhibition of Forced Bulbs.—The council of the Royal Horticultural Society have decided to make the meeting for March, 1909, a general one for the exhibition of collections of forced spring-flowering bulbs, with a view to specially demonstrating which varieties (daffodils, for instance) are the best suited for forcing. Exhibits of small collections are invited from amateurs and the trade, and medals will be awarded according to merit. The council have also accepted a series of prizes from the Dutch Bulb Growers' Society, at Haarlem, for hyacinths, and these will be competed for at this meeting. There will be four classes for hyacinths, in three of which the competition will be limited to amateurs and gentlemen's gardeners, and in the fourth nurserymen can alone compete. The amateurs' classes are for eighteen and twelve hyacinths, distinct, and for four pans containing hyacinths, ten bulbs of one variety in each; the four varieties are to be of "distinctly different colours." There are six prizes in the first class, ranging from £6 to £1; five, ranging from £5 to £1, in the second; and in the class for pans there are four prizes, ranging from £4 to £1. The trade class is for a collection of hyacinths in pots, pans, or glasses, and the prize offered therein is the gold medal of the Dutch Bulb Growers' Society.

Dublin Flower Shows.—As previously announced, the Royal Horticultural Society of Ireland will hold its summer exhibition in Dublin on Wednesday next. The provincial show of the National Sweet Pea Society will be held in association with this important gathering, and as this will be on a comparatively large scale, it is regarded with much interest in Ireland. A report of the two exhibitions will be given in our next issue.

Cricket on Grape Vines.—We learn from their "Journal" that the Board of Agriculture received an insect taken on a grape vine, and this, on examination, was found to be the common Cricket (Gryllus domesticus). This insect affects warm places, hiding during the day, and coming out to feed at night. The common food is bread and bread crumbs, and moist vegetable matter. As no previous case was known of harm done by the cricket to vines, the correspondent was asked whether, after further observation, he was absolutely satisfied that the damage complained of was due to crickets, and not to vine weevils. In reply, the Board were informed that a cricket was observed on a leaf by lamplight, the position of the leaf was noted, and the cricket left undisturbed: in the morning the leaf was found to be eaten in several places. Crickets were also observed on buds, and it was found that the buds were eaten just when they opened. After the leaves became older and tougher they did not appear to be touched.

THE GARDEN AS A HOME.

As the years pass men and women learn more of the value of outdoor living, with no screen of roof between them and heaven, no barrier of glass window shutting out pure breezes, and the modern "cure" that is most popular is, undoubtedly, that of the open-air. Children grow brown, rosy, and strong by playing all day in the garden, so though their elders cannot often enjoy twelve consecutive hours of pastime their very work may sometimes be capable of accomplishment out of doors. Now is the season to adopt the beneficial habit of making a home of the garden.

"The sun is high in heaven, the skies are
bright,
And full of blessedness.
. . . .
And every day that goes
Is a full-scented, full-blown garden rose."

But there must not be lacking outside the house certain of those comforts that are to be found within; we must have shade from scorching heat, enough warmth to maintain a sufficient temperature of the body when it is still, screens from draughts, easy seats, a table at which to work, and a stool for the feet. The scene spread out around should be not only beautiful but sweetly perfumed.

Breakfast is a meal that ought to be taken out of doors in all suitable weather. If there is a chilly wind a summerhouse or tent facing south will prove a cosy shelter; if the breeze comes from the south chairs and table can be set beneath some tree, or, if sunheat is not excessive, on the unshadowed lawn or gravel. Should there be a south-west gale blowing it will be well to take advantage of the north-east side of a fence or wall.

An umbrella-shaped canopy of tiffany, mounted on a frame of bamboo sticks and without any handle can be easily made in any size from six to twelve feet across, and is most useful to suspend from the branches of some giant oak, cedar, lime, or other tree, to serve as a protection to the breakfast table; it will prevent sun-rays from glinting through sparse foliage, and caterpillars from descending by swinging webs. To begin the day happily is a great boon, and to begin it in the fair garden is the sweet way of providing ourselves with cheering influences. As Thoreau, that great lover of Nature, wrote: "There will be so much the more air and sunshine in our thoughts."

An elaborate midday meal, or late dinner, cannot often be laid out of doors without entailing a great deal of extra labour, yet when it is possible—that is to say when space can be spared and cost does not matter—one of the new movable summer-houses, those little pavilions that can be turned upon a pivot so as to face in any direction, should be put up near the house. If it can be located on the lawn just outside the real dining-room the distance to carry dishes will not be much greater.

Surely the tea-table is never seen at so much advantage as when set in a rose-arbour? Now that Ramblers are so largely cultivated a large square or round shelter can be built of these, supported only on a few rows of hop poles with others laid across to form the roofing foundation. Either autumn-blooming roses should be added, to ensure late blossom, or cobæas, or other summer climbers must be associated with the Ramblers. A farmhouse garden known to me possesses each year a commodious arbour of scarlet runners and canary creeper, combining two kinds of service with beauty—the yield of shade and crop.

If there is a pergola of any kind that is the garden's best feature a portion of it can be used as an arbour; curtains of green linen should be made to fit the space between two of the pillars at one side, then to shut off a further stretch of the walk at one end, and also to provide a roofing, thus affording sufficient shelter. The curtains can be furnished with small rings to slip over nails fixed in the pergola wood, then they are quickly put up and taken down again.

Supper, the lightest repast of the day, is never so refreshing as when partaken of in the garden. No longer is there need for any roof, since the brightest light of the moon will be an unmixed boon; shield from cold winds we must have, and the shelter, whether of building, wall, fence, evergreen mass, or hedge, should leave a wide dry space of flooring, for turf will be moist and far too cool. Close by the seats, or the favourite nook for chairs, let us possess beds of nicotianas, verbenas, evening primroses, stocks, and mignonette. The tiny annuals Matthiola bicornis and Schizopetalon Walkeri may form the edgings, and not far away sweet briars, honeysuckles, jasmines, and lilies should flourish.

M. H.

LIGULARIA MACROPHYLLA.

The subject of this note is a hardy herbaceous perennial belonging to the natural order Compositæ, and it is generally cultivated in gardens under the above name, though it is now placed under Senecio in the Kew Hand List, where it is named Senecio Ledebouri. It is an old plant in gardens, and when established it sends up quantities of spikes densely furnished on the upper part with yellow flowers, presenting a very stately appearance in the garden during July and August. The height of established specimens is about 3ft.; but the flower stems stand clear above the foliage and invariably reach five or six feet high.

The leaves are a distinct feature; they are in the form of large paddles and of a bright glaucous green colour, being borne upon long footstalks which arise from the crown, and in specimens these cover a diameter of six feet or more.

Although the several parts attain their greatest dimensions when growing in moist positions, it is, however, one of the best subjects for ordinary borders, provided the ground is deeply worked and liberally enriched at planting; and when come to flowering strength it seems remarkable that each season's effort should eclipse the last, even when no addition has been made to the soil or assistance given in the form of artificial manures.

This old species, in spite of the host of splendid additions to this family in recent years, is yet able to maintain a position in gardens as one of the most distinct of hardy plants, and one which amateurs can always regard as an acquisition to their collection. It is propagated by division and seeds, and while the former has generally to be relied upon to obtain a stock, the latter method forms a ready means of increasing the same. The seeds should be sown thinly in shallow drills in the open ground early in summer, and if thinned to a distance of 12 or 15 inches apart, the seedlings may remain two years in the seed bed before transplanting, a process they resent at all times, and it will generally be found that by division, two, and sometimes three years elapse before the plants have sufficient strength to make an effective display.

Thomas Smith.

Walmsgate Gardens, Louth.

HORTICULTURE AT THE FRANCO-BRITISH EXHIBITION.

The part that horticulture plays in a great exhibition like that at Shepherd's Bush is no mean one, for the proper display of many and beautiful buildings depends very largely upon their surroundings. Moreover, after an inspection of thousands of paintings and photographs, after the excitement and noise of wonderful machinery, and even after the quiet and deeply interesting contributions from Canada and New Zealand, and the wonderful displays of English and French Applied Art, all in huge palaces, it is an immense relief to come out into the sunshine and let one's eyes wander over green lawns and beautiful flowers.

The avenue trees at Shepherd's Bush are not an unqualified success. Some of the poplars have done as well as could be expected, but in some of the rows the limes and poplars are by no means happy, though if they are allowed to remain for another exhibition a year hence they should give a better account of themselves.

In the following notes a few of the displays set out in the great exhibition grounds are briefly reviewed, but those not now referred to will be discussed on future occasions.

The first of the horticultural exhibits that greets a visitor who enters from the Shepherd's Bush end is one of cacti and succulents, arranged on two large tables in the corridor by Messrs. H. Cannell and Sons, Swanley. Along the centre the various cereuses are set up. and in front of these are rows of echinocacti bristling with spines, the downy but spiny Opuntia microdasys, a good Echinocactus ornatus, a pair of E. Grussoni, and numbers of specimens of the old man cactus (Pilocereus senilis), a species that on each occasion we have been present has attracted a great deal of attention.

One of the chief garden features is to be found in the large open space between the four great buildings devoted respectively to Music, French Applied Art, Women's Work, and British Applied Art. Right across the centre Messrs. Jas. Carter and Co., High Holborn, have a series of beds on grass, the several lawns being intersected by broad walks. Palms, tall cordylines, phormiums, standard bays, and acers stud the lawns and relieve the display from flatness. The lawns are all, of course, the result of Carter's lawn grass seeds. The beds are variously planted, and zonal pelargoniums have been extensively employed. Petunias, Kochia scoparia, pyrethrums, lobelias, pansies, and violas, tuberous begonias, double annual chrysanthemums, and numerous other useful summer flowers that may be easily raised from seeds are here to be found, the whole making an interesting and effective display in which the International Prize pansies and the fine self-coloured and veined petunias were specially good.

In the two large open spaces across this same square, but in the opposite direction, Messrs. Sutton and Sons, Reading, have an imposing exhibit. In the panels, worked in blue lobelia and pyrethrum, is the emblem "Sutton's Seeds," with dwarf antirrhinums on either side. Lawns made from Sutton's grass seeds surround big beds of tuberous begonias. Large beds are filled with marguerites and liliums, and others contain splendid displays of Superb petunias, the fancy striped varieties being especially attractive. Sutton's Perfection pansy is largely used for bordering, and the Reading firm's strain of garden dianthuses and godetias add their quota to the general effect. Round one of the broader pieces of water is a border of scarlet double pelargoniums, white marguerites, blue violas, and variegated cocksfoot grass.

Beyond the displays already noted, in another large square, M. R. Goyer, Limoges, France, has beds of cannas and Musa ensete, the former not yet at their best. M. Goyer contributes a collection of clematises and numerous large beds of roses, the latter including the yellow Soleil d'Or, edged with Madame Norbet Levavasseur, Prince de Bulgarie, Mrs. H. Cutbush, the very free-flowering Kaiserin Augusta Victoria, at present rather spoiled by the free use of sulphur as a mildew cure.

Messrs. Millet and Son, Bourg la Reine, Paris, contributes a large and artistically disposed collection of irises, montbretias, and gladioli, but this must be visited later. Messrs.Charles Molin, Place Bellecour, Lyons, shows roses extensively, and, like others, shows Prince de Bulgarie largely, but here, too, for the moment, the evidence of sulphur is unpleasant. Gladioli between the roses will contribute an autumn display, as will the collection of dahlias. Messrs. J. B. Guillot and Sons, Monplaiser, Lyons, are large exhibitors of roses, both standards and dwarfs, but they are not yet in good bloom.

Around the Ville de Paris building numerous well-known French nurserymen and seedsmen have made displays. Rhododendrons and other evergreens from Messrs. Moser and Sons, Versailles, make a good setting for other things, and more groups of this character would be useful in other parts of the grounds.

Messrs. Vilmorin, Andrieux, and Co., Quai de la Megisserie, Paris, have a sunken garden, edged along the central path sides with boxes of various annuals, chrysanthemums and tropæolums figuring largely. The beds on the flat are filled chiefly with varieties of begonias of the semperflorens type, and these are now very pretty. On the sloping banks similar plants have been used in a very elegant festoon design. Herbaceous plants set out in grass by Messrs. Cayeaux and Le Clerc, Quai de la Megisserie, Paris, will be at their best at a later date, as they are chiefly autumnal bloomers. Roses are quite largely shown in this part of the grounds, but they are planted very closely together, and in many cases the various labels are much too prominent. M. Ad. Rothberg, Gennevilliers, France, has beds of roses, standards and dwarfs, consisting of popular varieties. M. Bruant, Poiteres, has filled several beds with gay zonal pelargoniums and heliotrope, etc.; behind the "Ville de Paris," and close by their exhibit we notice a pagoscope, the thermometrical instrument for notifying a fall of temperature likely to be harmful, and thus giving a grower an opportunity of providing shelter; this is from Mr. T. G. Phillips, 2, Charterhouse Street, E.C.

M. Abel Chatenay, Vitry, contributes a collection of lilacs, and Messrs. Croux and Sons, of Chatenay, have some handsome blue Atlantic cedars, golden acers, and silver euonymuses, M. Aug. Nonin, Chatillon-sous-Bagneux, has a summer bedding arrangement of fuchsias, zonal pelargoniums, calceolarias, marguerites, etc., close to the building devoted to "Iron and Steel."

The most interesting of the several exhibits made by French nurserymen are those composed entirely of trained fruit trees. These are arranged all round the City of Paris Gardens in double rows. One can but admire the vast amount of time, patience, and skill expended in the production of these perfectly-trained examples. Messrs. Croux and Sons, Chatenay, have wonderful goblet-trained pears and cherries, oblique palmette plums, demi-palmette pears, and horizontally-trained pears with six rows of branches as regular and true as if cast in a mould. The double and single Y cordons, the palmette verrier specimens and those in which the branches have been crossed diamond or lozenge fashion, all show the effect of great skill and patience. M. Lecointe, Louveciennes, Seine et Oise, is another extensive exhibitor of trained trees, and notable in his set are pears trained in pyramidal outline, but with the branches tied out on a series of flat tables; and a pyramidal pear tree trained so that the branches are in five perfectly true vertical series, so that one could stand within any two rows right up to the main stem. M. H. J. Leconte, Snr, Aux Beagis, Seine, has finely trained specimens, but a number of the examples have died.

Two other very fine exhibits of these beautifully trained fruit trees—a sight well worth seeing by British gardeners, and especially by amateurs who make a hobby of fruit culture—are made by Messrs. Pinguet-Guindon, of Tours, and Messrs. Nomblet-Bruneau, of Bourg-la-Reine, Seine. The latter has a set in specially fine condition, and one that includes, beside the other firms referred to, tall standard goblet-trained plums and cherries.

NEW PLANTS, ETC.

◆

ASTILBES.

Arendsi Ceres.—This is a very beautiful astilbe, obtained by crossing A. astilboides floribunda with A. Davidiana. The colour is deep pink, very like that of the variety Queen Alexandra. The plants shown were about 2½ft. high, very graceful and effective. A.M., R.H.S., July 21. Mr. E. Arends, Rousdorf, Germany.

Arendsi Pink Pearl.—This differs from the above in having paler colouring, the shade being bright pearly pink. The spikes seem to last longer, or, in other words, the flowers open more slowly than in the case of some varieties. This is of similar parentage to Ceres.

CARNATIONS.

Cardinal.—A large sized and finely formed border carnation, of brilliant clear scarlet colour. A.M., R.H.S., July 21. Mr. James Douglas, Great Bookham.

Splendour.—Another border variety, of the finest form, and with very smooth petals; colour, rich purple crimson. A.M., R.H.S., July 21. Mr. J. Douglas.

Hercules.—An interesting carnation, obtained by crossing the Malmaison variety Maggie Hodgson with a tree or perpetual variety. It has large flowers, is very fragrant, has a non-splitting calyx, and is rich deep red. A.M., R.H.S., July 21. Mr. James Douglas.

CORIARIA JAPONICA.

A beautiful shrub, that is hardy in favoured southern localities. C. japonica differs materially from C. terminalis, as it produces an abundance of racemes of small fruits that are of a reddish hue at first, but presently they turn to a dark purple hue as they ripen. Branches carrying numerous fruiting displays are very attractive. A.M., R.H.S., July 21. Mr. Maurice Prichard, Christchurch, Hants.

ROSE, LADY GODIVA.

This lovely Wichuraiana rose bears soft salmon-pink flowers in clusters of large size. The flowers are fairly double. A.M., R.H.S., July 21. Messrs. Paul and Son, Cheshunt.

BEGONIA KEWENSIS.

This should prove a useful begonia for basket culture, owing to its semi-pendant habit, and its method of producing its white flowers in dense drooping clusters. A.M., R.H.S., July 21. Messrs. Jas. Veitch and Sons, Chelsea.

SINNINGIA DR. M. T. MASTERS.

This is probably a bigeneric hybrid between a gloxinia and a gesnera, and is, as we have already pointed out, very like a gloxinia, with flowers that droop from the apex of the footstalk. The flowers are of medium gloxinia size, bright carmine in colour, heavily shaded with crimson in the throat. Now that gloxinias are so fine, this plant, though interesting, is hardly needed. A.M., R.H.S., July 21. Mr. Ernst Benary, Erfurt, Germany.

NELUMBIUM SPECIOSUM OSIRIS.

One of the loveliest flowers we have ever seen. It is of large size, measuring fully ten inches across. The broad segments are of a delightful pink shade, deepening to rich cerise towards the apex, and merging into a yellow-pink glow around the circle of golden stamens and central yellow stigma. An exquisite aquatic for a tropical house, or where the water can be heated. F.C.C., R.H.S., July 21. Mr. Jas. Hudson, V.M.H., gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton.

STANHOPEA TIGRINA SUPERBA.

A magnificent form of a well-known old orchid, that has, unfortunately, gone out of fashion during later years. The very large fleshy flowers are creamy-yellow, heavily stained and blotched with vivid crimson, both colouring and size being an advance upon the type. F.C.C., R.H.S., July 21. Messrs. Charlesworth and Co., Heaton, Bradford.

ANGRÆCUM AUGUSTUM.

An interesting species with white flowers borne in two ranks on an arching spike. The flowers are of moderate size, and each has a long slender green spur. A.M., R.H.S., July 21. Mr. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking.

ODONTIODA THWAITESI.

This differs from recently raised odontiodas in having a rosy-lilac lip, and rosy-purple sepals and petals, the colouring at once suggesting the parentage, i.e., Cochlioda vulcanica and Odontoglossum Harryanum. A.M., R.H.S., July 21. Mr. R. G. Thwaites, Chessington, Streatham.

SWEET PEAS.

George Stark.—A very handsome and brilliant scarlet sweet pea, that is a splendid waved counterpart of the popular smooth variety named Queen Alexandra. F.C.C., and silver medal as the best novelty, N.S.P.S., July 10, at the Reading Trials. Messrs. George Stark and Son, Great Ryburgh.

Mrs. Andrew Ireland.—A beautiful bicolor sweet pea, with very bold, wavy, bright rose-pink standard, and broad blush white wings. F.C.C., N.S.P.S., July 10, at the Reading trials. Messrs. Dobbie and Co., Rothesay.

Mrs. Henry Bell.—A delightful pink variety of salmon shade, wavy, but with a standard inclined to hood a little. Very graceful and pretty. F.C.C., N.S.P.S., July 10, at the Reading trials. Mr. Robt. Bolton, Warton, Carnforth.

BULBOPHYLLUM BINNENDIJKII.

An attractive species of striking character, bearing large flowers, from seven to ten on a spike; the sepals and petals bright green spotted with brown, the lip pale green suffused and marbled with red-purple. This bulbophyllum was discovered on the mountains near Buitenzorg, and made its appearance in London in the spring of 1807 under the name of B. Ericssoni, Kraenzl, when it obtained considerable attention. "Bot. Mag.," t., 8,187.

KÆMPFERIA KIRKII VAR. ELATIOR.

A beautiful variety of Kirk's Ginger that would probably obtain considerable attention were tropical plants more popular than is at present the case. It is a native of British and German East Africa, attains a height ranging from fifteen to eighteen inches, has handsome oblanceolate leaves, and bears its flowers on erect spikes, four or five on each; the flowers are about three inches in diameter, and have a white tube, bright rose-pink lobes, and yellow staminodes marked with red. "Bot. Mag.," t., 8,188.

SAXIFRAGA BRUNONIANA.

A distinct and interesting species, having a wide range in the Himalaya mountains at an elevation ranging from 9,000 to 13,000ft. The growth is rather thin, and the flowers are bright yellow and borne on erect spikes with red stems. From the lower leaves of the flower stems thread-like runners bearing leaf-buds at their tips are produced, and as these are red, as in the case of the stems, they contribute to the attractions of the plants when in bloom. The species has proved hardy on the rockery at Kew, but, according to Mr. W. Watson, it appears to best advantage when grown in a pan and given the protection of an unheated structure. "Bot. Mag.," t. 8,189.

PUYA VIOLACEA.

A handsome bromeliad from Chile, having long narrow leaves, arranged in dense clusters, from which rise the rather tall much-branched flower spikes. The flowers are comparatively large and of a rich violet hue. Puya violacea "was first raised from seeds in the Jardin des Plantes in 1833, and flowered for the first time at Neuilly in 1847." "Bot. Mag.," t. 8,194.

STRAWBERRIES IN 1908.

Strawberry plants came through the winter fairly well, but a few varieties lost their foliage owing to the snow and frost—but they all started into growth freely and have given good average crops—specially heavy and fine in North Kent, where the berries have been larger than with me. A friend in the Southampton district says the crop there all came in at once, owing to the very hot weather, and values fell so low that although the crop was double that of 1907, its value was less. But in fruit like strawberries the weather, both for picking and consumption, is a most uncertain factor.

No particular variety has stood out in the front this year; Royal Sovereign and Sir Joseph Paxton still remain our leading and reliable sorts. The earliest we gathered was Leo XIII., which came four or five days before any other, and as the flavour is excellent, with rich pine suggestion, and fair sized berries, I think it will prove valuable for first pickings; it also remains a long time in fruit. In Laxton's recent introductions Reward maintains its position as a handsome dark fruit, of large size and fine flavour. I fear my land is too light for The Bedford, or Bedford Champion to show themselves to advantage, as they have only given a moderate crop, but with some fine large berries. Progress, which was poor last year (a wet time), has this season been very good in size and crop; its remarkable vigour of foliage should enable hybridisers to obtain greater strength in such splendid flavoured kinds as Frogmore Late Pine, Countess, etc.

Laxton's Latest has borne out the good opinion I formed of it in 1907, and has produced very fine four-sided fruits, solid all through; it, however, is not productive, and must remain a connoisseur's garden sort. [illegible] and Cropper have not been established with me long enough to warrant an opinion, and the strawberry is so fickle that one hesitates to write of novelties till they have been tried in various soils, and probably these high-bred fruits want first-rate culture, which in our open fields we cannot give them.

Fillbasket has produced an enormous crop but came in the dry and hot weather and lost flavour, while next to them the old Filbert Pine had an equally fine crop of the richest quality. These two sorts would pay for thinning out. The orange-red colour of Filbert Pine is against it, but few in its season can compare with it in flavour.

Givon's Late Prolific has been extra fine and is one every garden should contain, its large rich fruits, just complete the season of big berries. It should be planted one and a half feet apart in the rows, when its ample foliage would protect the fruits more than when a wider row is made. The dis[illegible] Kentish Favourite I am unable to [illegible] from Leader. The fruits are alike [illegible], but the former may be more vigorous in foliage. Louis Gauthier, with its cockscomb, whitish-pink fruit is becoming a great favourite, both forced and in the open. It is one of the heaviest bearers and has a distinct and pleasant flavour when not left too long on the plant. Some fruits have measured five inches round. President Loubet, of the Waterloo type, is good, but not a heavy bearer. Laxton's New Perpetual, of good flavour in July, I have not yet proved, but Antoine de Padoue is so far the best autumnal fruiter. The older St. Joseph is smaller, but full flavoured. The foreign kinds, President Carnot, La Productive, and General Chanzy, are of no value here. The finest strawberries I have seen this year were those in the collection from Mr. Coomber, the Hendre Gardens, at the Holland House show. Each variety was at its best, and a credit to the grower. Mr. Jas. Hudson grew Reward very finely indeed, showing handsome fruits, wedge shaped, of rich colour, and attractive flavour.

We began to pick on June 16, six to eight days earlier than in 1906-7, and finished July 16—a short season, owing to the forcing weather. The beds were very healthy and we have had no mildew. The season has again emphasised the importance of deep and rich cultivation, for where this has not been given the fruit has failed in quantity and quality.

Mr. C. E. Shea tells me he has entirely adopted the one-year system, and finds the crop is earlier and the berries much larger than from two-year-old beds. I recommend this idea, but late sorts, such as Waterloo and Givon's Late Prolific, should be retained for two years, as in the one-year-old plants the foliage is so thin that the plants do not properly lengthen out the season.

George Bunyard.

Maidstone.

NEW SWEET PEA MRS. H. BELL.

Awarded F.C.C., in the N.S.P.S. trials at Reading. Flowers of large size and exquisitely coloured cream and pink.

Nita Weldon is the correct name of the beautiful new rose figured in our issue of July 11, under the name of Meta Weldon. It would be an immense advantage were the National Rose Society to place the names of the new varieties on the boxes immediately they have been judged, instead of waiting until the award cards have been filled up later in the day.

CUT FLOWERS IN SUMMER.

The fashion of decorating, not only the dinner table, but various parts of the house, with cut flowers has now become so widely, one might say universally, adopted, and the demands for material for the purpose have become so exacting, that no man can expect a garden to have the appreciation of the ladies of his household unless there is an ample supply of flowers with which they can indulge their fancies. The mere man, though possibly getting as much enjoyment out of the contemplation of the table decorations at meal times as anyone, yet refrains from expressing much appreciation for fear of giving excuse for more extended raids upon the garden. The only suggestion I can make for protecting, at least to some extent, the most prized parts of one's garden, is to grow plenty of material elsewhere, solely for the purpose of supplying the house.

FIRST PRIZE VASE OF SWEET PEAS.
Exhibited by Miss Jessie Cuthbertson, at the N.S.P.S. Show.

Roses.

Some are born with a truly artistic sense, knowing how to arrange flowers to the best advantage from their early years, while others learn from observation of the methods of their friends and acquaintances. It is the season, however, when more pleasure may be derived from the exercise of restraint than from the gratification of the desire to display the profusion of the season within the house. Let us take the rose as an instance. Some like to have large open bowls crammed full with, perhaps, twenty or thirty exhibition blooms, all with short stems, and massed together. Tastes in this matter differ very widely, and it is unwise to lay down any hard and fast rules, but this much may be said, namely, that, if one of the objects to be kept in view in arranging flowers is to preserve as much as possible of the natural grace of the flowers, this way of using roses quite defeats that object. It has been said that hybrid perpetuals do not lend themselves to cutting with long stems and plenty of foliage, as the latter is not attractive, and if this is so it would be better to confine their use to that of specimen blooms in small glasses on the table. On the other hand, with teas and hybrid teas, where the foliage of the summer shoots is only less beautiful than the flowers themselves, no arrangement can improve upon two or three sprays of the same variety, with foliage and young shoots of the same, arranged in a silver or china bowl, or wide Munstead glass, with plenty of room to display the beauty of both flower and foliage fully. The polyantha section, sweet briars, Chinese and rugosa roses (the foliage and buds of these two being especially beautiful), and the numerous decorative varieties we now have in gardens, may all be treated in the same way very effectively, and with economy of material at the same time.

Sweet Peas.

Next to the rose, the sweet pea has, perhaps, of recent years, become the most commonly used flower for indoor decoration, at least at this season. A mistake is generally made in growing sweet peas so thickly that they do not grow strongly enough to furnish that abundance of strong laterals for cutting which is desirable. We generally see them cut with their flower stems only, and arranged in small vases or bowls, with the ubiquitous gypsophila, or, what is worse, scores of blooms of various shades of red, pink, and purple, tucked together into a trumpet vase. I venture to assert that an infinitely preferable way is to cut sprays a foot to eighteen inches long, with tendrils and unopened buds, and to arrange these rather loosely in an open bowl, with the help of some floral aid contrivance. The reds and purples do not mix well together, and, in general, not more than one or two varieties should be put in the same receptacle. Though one variety only in an arrangement can hardly be improved upon, yet a mixture of two or three of the various delicate shades of this flower may well call forth all the taste and skill of the colourist.

Lilies.

Lilies are a very large family, and though not many species succeed sufficiently well in ordinary gardens to furnish much material for cutting, most of us can get an abundance of Madonna—perhaps the most beautiful—as well as tiger, Turk's cap, orange, and nankeen lilies. Lilies, in general, should be cut with two or three feet of stem, and arranged in vessels suitable to such majestic flowers. The stems should be slit up a few inches, and immersed in a good depth of water, their duration being increased if, previous to arranging, the stems are put in warm water. White lilies, when they have to be carried some distance by hand, should have the anthers wrapped in a little tissue paper. They are, unfortunately, too strongly scented for a small room, or for any room that is not well ventilated.

Carnations.

The carnation needs to be well grown to provide good material for cutting, as it is not effective on short stems—except as single blooms in small specimen glasses—and long stems, if weak, are not suitable. Cutting carnations means a sacrifice of many buds, though these add greatly to the beauty of the arrangement, the buds of few flowers being of more beautiful form than those of this favourite flower. Tall vases are best for them, either trumpet or funnel-shaped, the side or lip lending some support to the stems. Where these flowers are plentiful, especially those of any one variety, there is nothing more beautiful than an arrangement in a fancy basket, in a vessel of water, of course, the sides of the basket, if sloping outwards at the right angle, lending support to those stems which need it. **Alger Petts.**

(To be continued.)

Antherozoids is the name given to the fertilising organisms of ferns and their allies, and although extremely minute, are of extreme interest to students of life forms, since although generated within vegetative cells, and undoubtedly truly vegetable in character, they behave precisely as microscopic members of the animal kingdom do, so far as independent locomotion, by means of active cilia or swimming hairs are concerned, and even give evidence of volition by steering in certain definite directions towards a desired goal, i.e., the seed to be fertilised. It is certainly one of the most striking scenes in microscopical investigation to catch one of the antheridia or capsules containing these bodies in the act of bursting, and sending out its score or so of slender-looking tadpole-like swimmers into the dewdrop provided for their accommodation on the underside of the "prothallus" or flowering scale. The field of view is immediately filled with moving organisms, which, had their origin not been ascertained, would never be taken for vegetative ones. We have already spoken of volition, though it seems impossible that such minute organisms can have a will of their own and act upon it; yet skilled observers have noted that if a tiny touch of malic acid be placed on the prothallus, these little bodies steer for it. This acid, it may be said, has been used as a lure because its presence has been traced in the archegonia at the base of which lies the embryo seed which it is their function to fertilise.—C. T. D

ASSOCIATIONS FOR THE FORMATION OF SMALL HOLDINGS.

The Small Holdings and Allotments Act of [illegible] session authorises local authorities, with [illegible] consent of the Board of Agriculture, to [illegible] small holdings and allotments to any association formed for the purpose of creating or promoting the creation of small holdings or allotments, and so constituted that [illegible] division of profits amongst the members [illegible] association is prohibited or restricted [illegible] sections 9 and 21 (3) of the Act.)

With the view of facilitating the formation of such associations, and of enabling existing societies to alter their rules in order to bring them within the requirements of the Act, the Board of Agriculture have, in consultation with the Registrar of Friendly Societies, drawn up the following rules (which we reprint from the Board's "Journal") which must be adopted by any association or society desiring to hire land from a local authority under the Act:—

Small Holdings and Allotments.

(1) The objects of the society shall include the business of creating, or promoting the creation of, small holdings or allotments, and encouraging their proper cultivation, with power to acquire land from local authorities acting under the provisions of any Act for the time being in force relating to small holdings or allotments, or from any other person or body, to adapt any land so acquired for small holdings or allotments by the erection of dwelling-houses or other buildings or the execution of any other improvement, and to let the land to members of the society to be cultivated by them as small holdings or allotments.

Small Holdings and Allotments Accounts.

(2) Separate accounts shall be kept by the society of all receipts and expenditure of the society under the Rule headed "Small Holdings and Allotments." The receipts shall be applicable for the following purposes and no other purpose, whether during the existence of the society or on dissolution:—

(i) For payment of the expenses of managing land acquired under the said rule, including payment of rent, rates, taxes, and other like outgoings;

(ii) For payment of expenses of repairs or improvements from time to time made by the society on such land;

(iii) For payment to the general account of the society of interest at the rate of £5 per cent. per annum on all capital expenditure by the society on the acquisition or adaptation of such land.

(iv) For recouping capital expenditure by the society on improvement or adaptation of the land within such period as is reasonable, having regard to the probable duration of the improvement or work of adaptation;

(v) For forming a reserve fund not exceeding [one] year's annual value of the land, and so that such reserve fund shall be available for any purpose authorised by this Rule but for no other purpose;

(vi) For prizes for the encouragement of the proper cultivation of the land; and

(vii) For creating or promoting the creation of small holdings or allotments generally.

Nothing in this Rule shall prejudice or affect any right or remedy of any creditor of the society.

The advantages of letting land to an association need very little emphasising. The local authority will receive its rent in a [illegible] from the association, and will be relieved of a good deal of the responsibility in connection with the management of the land. The association will select its own tenants, supervise the cultivation of the land and collect the rents from its individual members. It will be to the interest of every member to see that the tenants are carefully chosen, and that the land is well farmed.

By adopting the foregoing rules existing societies can become land renting societies under local authorities, and so widen considerably their sphere of usefulness. Accordingly the Board have been in correspondence with the Agricultural Organisation Society and the Co-operative Union in the belief that the far-reaching organisation of these bodies forms the best channel by which practical effect may be given to the special provisions of the Act to which reference has been made.

The Agricultural Organisation Society of Dacre House, Dacre Street, Westminster, S.W., has hitherto done useful work in promoting the formation of local agricultural trading societies on co-operative lines, and under its auspices such societies have been established in various parts of the country for the purpose of enabling farmers to purchase their requirements and to sell their produce by organised co-operative methods. By arrangement with the society the two special rules drawn up by the Board have been incorporated in the Model Rules which the society issues for the guidance of those desiring to form a local society of the nature indicated. A society formed on the basis of these rules will therefore not only qualify as the tenant of land under a local authority, but will at the same time be in a position to offer its members the advantages to be obtained from co-operative methods of business.

In the case of the Co-operative Union and industrial co-operative societies generally, still greater benefits may be expected to result from the use of the powers given by the Act. These societies already possess the machinery to enable them to handle large quantities of agricultural and market garden produce, and, flourishing as they do chiefly in the large centres of industrial population, they can provide a ready market for such produce.

The fact that some of the industrial societies have acquired by their own efforts, and already manage successfully, considerable areas of land, is a good augury for the successful development of the agricultural side of the co-operative movement. It is therefore a matter of satisfaction that the negotiations between the Board and the Co-operative Union have resulted in an active movement on the part of the latter body to encourage industrial co-operative societies to avail themselves of the opportunities given by the Act.

NEW SWEET PEA GEORGE STARK.

Awarded F.C.C., and silver medal in the N.S.P.S. trials at Reading. Flowers large, the standards waved, and the colour rich scarlet.

PRUNING FRUIT TREES IN SUMMER.

There is much to be said for and against the practice of summer pruning. Among the advocates for such work are necessarily practical fruit growers, who, from past experience, have found the advantages derivable from such detail in the improved condition of their trees and crops. There are many trees, we know, that would well repay summer pruning—large bush and pyramid trees of the garden, for instance, which have to forego the attention because in so many instances the staff is insufficient.

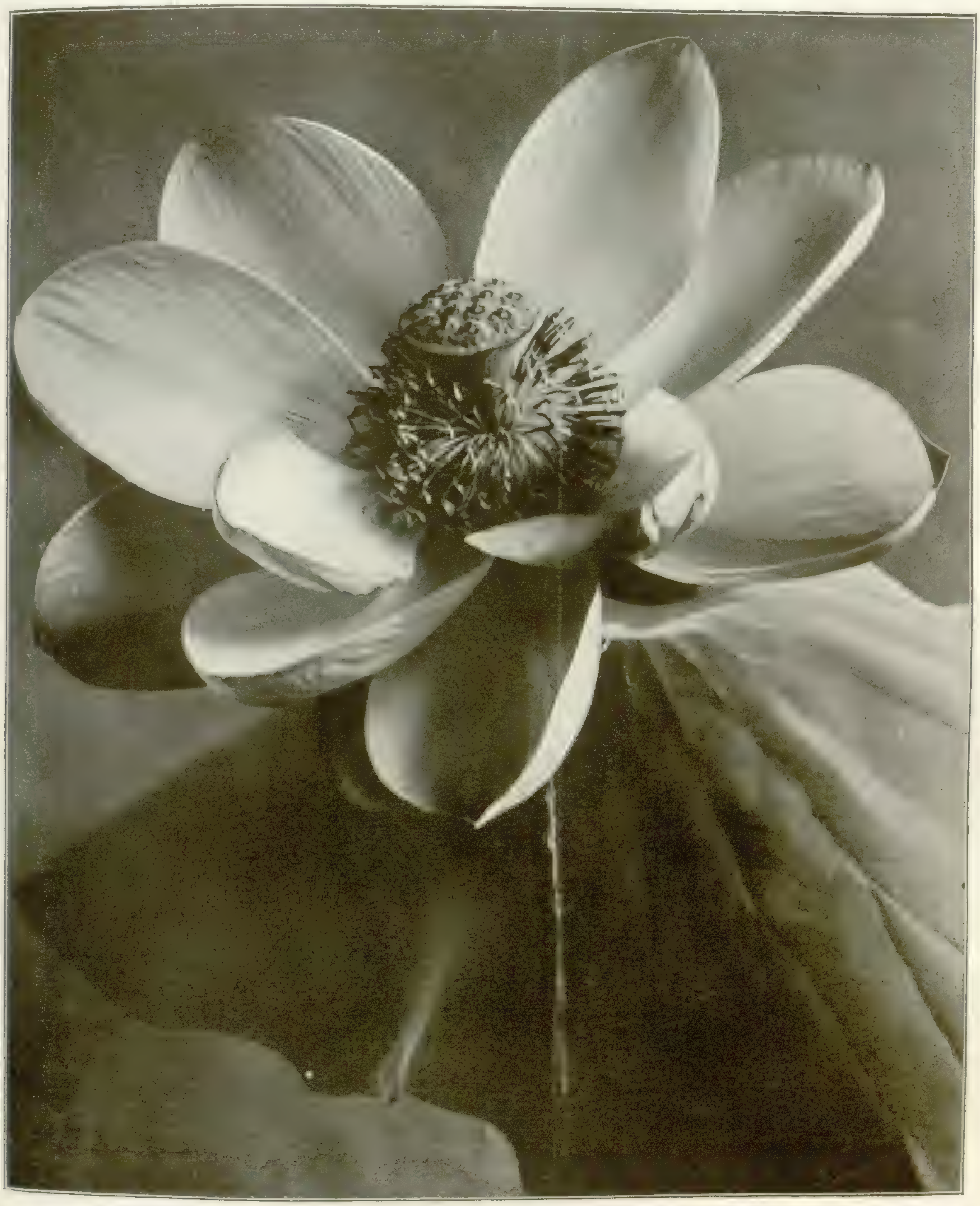
NEW SWEET PEA MRS. ANDREW IRELAND.
Awarded F.C.C. in the N.S.P.S. trials at Reading. Flowers large, with waved standards, and attractively coloured carmine-pink and blush.

Summer pruning is practised principally on wall-trained, cordon, and espalier trees, and sometimes even these make heavy demands on the staff. Those who abuse summer pruning are persons, who, without adequate knowledge, practise it without discrimination, and in this way often do more harm than good. By too early a curbing of the summer shoot, vital forces are directed to the basal buds, causing them to start into growth at a time when Nature otherwise decrees they should remain dormant. In the case of a full-grown tree, it would be better to avoid pruning altogether than to carry it out at an early period of the summer. Judgment, too, must be brought to bear upon the variety of tree to be dealt with.

Except in the case of trained trees not much attention is devoted to apples, as a rule, in the matter of summer pruning, yet much advantage would accrue from the removal of surplus sprays, which both obstruct the passing sun-ray, as well as hinder the full maturity of the advancing fruit-spur. Beside, a much more ready estimate of the space can be made when the leaves are present on the branch than is possible in winter, when they are pruned in a nude state. It is usually regarded as essential to cut the spare shoots from wall surfaces, no matter what the kind of tree, and it is equally necessary in the case of bush and pyramidal trees.

We find it a good practice in the case of wall trees to prune the lower half early in July, deferring the completion some ten days or a fortnight. In this way there is very little sign of secondary growth from the pruned spurs, because the upper part of the tree converts the passing sap into wood tissue without much enforced effort. Much depends on the weather in regard to the action of sap movement, the passing summer has been one that has tended to lessen exuberance of leaf shoot, except where trees are deeply rooted, and the soil heavy and moist. It was quite safe to prune plums, pears, and cherries by the second week of July, but apples need more time to allow them to finish their summer course. It is a quite reasonable condition that apple growth should be later, when one remembers these are, perhaps, the latest of our garden trees to start in spring. It is therefore a good policy to defer the pruning of these trees until all others are finished. The points of the shoots themselves are the best guide in deciding on this summer work, not only in the case of apples, but of other fruits also. When it is seen that the last leaf is forming at the point of the shoot, pruning may be proceeded with without any apprehension with regard to the possible ill effects from the bursting of basal buds. There is no possible gain in shortening back these green shoots to the first bud, even should the condition of the tree make it possible to do so. At least four leaves should be left when pruning, shortening these again in winter. It is, of course, not these current shoots now pruned that become fruit spurs for next season's fruit productions. Thus, while the summer's growth, acting under the force of a tropical sun may apparently be complete, a heavy soaking of rain and change of temperature may stimulate the growth, and in such case the closely pruned tree would run riot, much disturbing earlier prospects.

Nailing of reserved shoots follow closely on the pruning; then there is less danger of breaking stubborn leaders, the wall is neat, and, moreover, the growth is then in the best position for maturing its wood tissue. Such work commences with peaches and nectarines, which are the first trees to demand this attention. It is particularly desirable to nail or tie in the shoots of sweet cherries, because, often, these grow very awkwardly, and unless they are brought into position while they are flexible, ugly-formed branches become inevitable. Morellos are often left unpruned, so that nets, when placed over them, are kept well away from the ripe fruit, which have such attractions for thrushes and blackbirds. Certainly, the thinning of these lateral shoots can be made prior to the placing on of nets, even when nailing is deferred. There is always a large surplus of green summer shoots in Morello cherries to be dealt with at some time, and the advantage is all in favour of the tree, if these are removed in July. Apricots need to be especially remembered early,for they are so liable to gumming that the less they are pruned in winter the better. Very strong shoots are better cut back early in the season, so that the wounds heal over quickly. Many advocate the pinching of apricot shoots in order to maintain a freedom from branch troubles, but in some gardens, whatever course is taken, the mysterious collapse of branches continues. Where [illegible] out of doors a thinning of summer shoots admits additional air and sun, which is most beneficial. Figs need, broadly speaking, a treatment suited to local conditions. There are some soils which do not encourage coarse growth, consequently a difference in practice is permissible. Usually they fruit freely near the coast, and are not so much influenced by winter's frost; indeed, they succeed as bushes in the open garden.



NELUMBIUM SPECIOSUM OSIRIS.

Exhibited at the R.H.S. Meeting, July 22, when it was awarded a F.C.C. Flowers large, and the colour rich rose.

[illegible], and wire-trained gooseberries need the same attention as is paid to other [illegible]. The removal of all surplus [illegible], followed by the training of the [illegible] shoots, seems to accelerate the growth of the fruit, and it also expedites [illegible] the work of gathering, rendering it a really simple matter compared to [illegible] from bush-grown trees. Both trained and bush currants, red and white, may advantageously be given similar treatment. [illegible] by an early thinning of superfluous shoots that the crop ripens quicker, which is a marked advantage, because often it is found that much of the raspberry crop is gone before the currants are ready for gathering. The need for protection may be felt more keenly in this case, because the exposure of the fruit to sunshine and air makes bird molestation more easy. Wire enclosures dispel this fear of fruit loss attendant on the pruning away of the protective growth. In the case of currants, the main, or leading, growths are not shortened, but only the side laterals. Black currants are better thinned after the crop is cleared, then the older fruiting branches can be cut clean out to give room to their successors.

W. Strugnell.

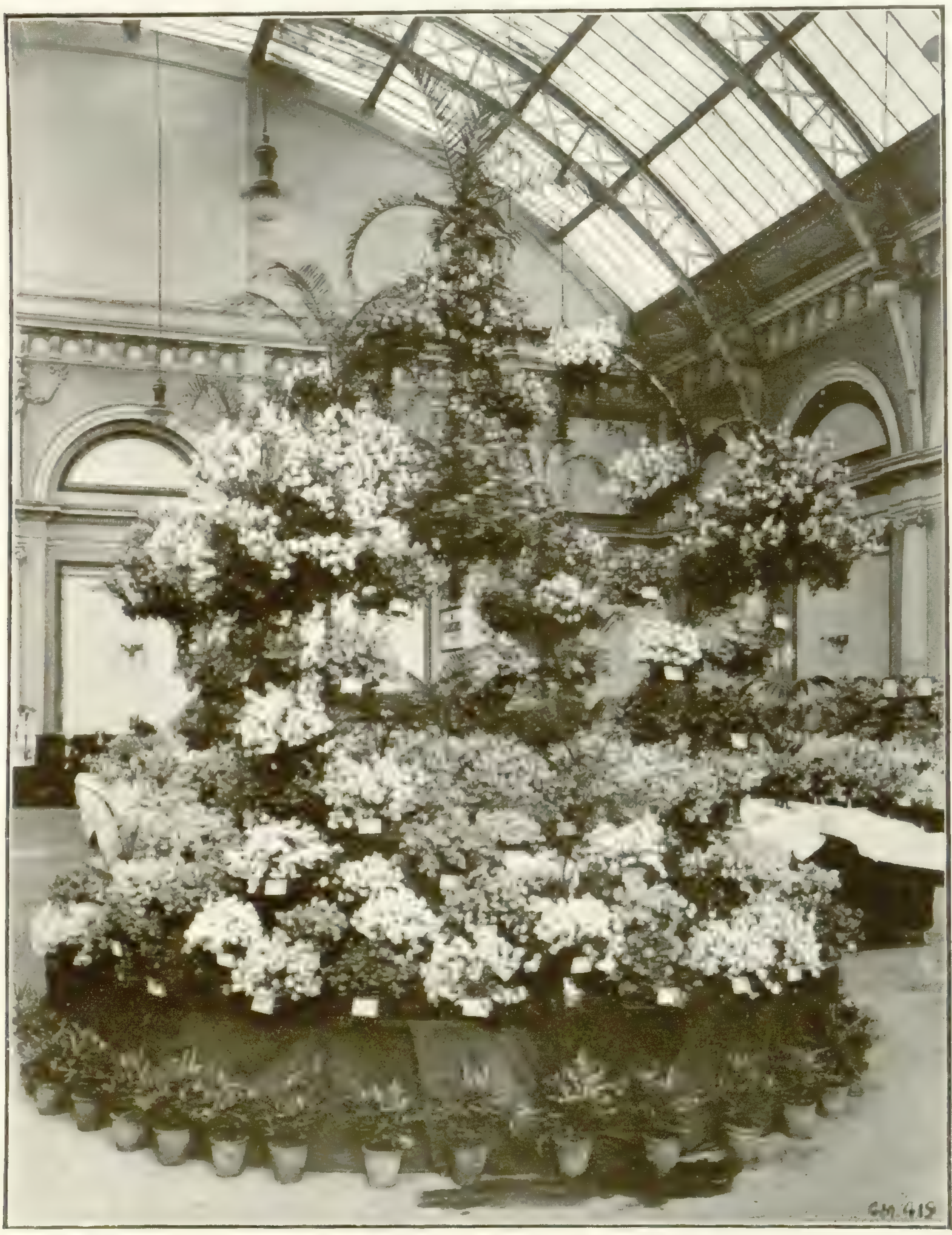
Rood Ashton Gardens.

PROFITABLE FRUIT GROWING for Cottagers and Small Holders of Land.—By John Wright, V.M.H. A Gold Medal Essay, written for the Worshipful Company of Fruiterers. Fully illustrated. Price 1s., by post 1s. 3d., from W. H. and L. Collingridge, 148 and 149. Aldersgate Street, London.

DWARF CAMPANULAS.

The marked interest associated with this most diverse section of the campanula family, and the utility of the several members for filling various positions in the flower garden, is sufficient recommendation for a closer study of the group by all gardeners who are desirous of using the various hardy subjects to the best advantage. For the creation of a summer display of blossom in the rock gardens the campanulas are unsurpassed, and the soft blues, lilacs, purples, and whites which are found amongst their charming colours produce a delightfully cool and pleasing effect when they are at their best. With the majority of the campanulas culture is comparatively easy, and, though a few species give a little additional trouble, the majority are at home in a fairly cool and well-drained position. Though the dwarf bell-flowers generally like a cool root run, yet they may be classed as sun-lovers, and are not adapted for culture where much shade obtains. An especially good position for these campanulas is that portion of the rock garden known as "the sunken valley," where they can obtain a cool root run and a good amount of diffused sunlight. Moreover, if the valley runs east to west, one can also obtain positions in which the various species and their varieties can obtain the amount of sunshine which they may seem to especially desire.

The quiet beauty of a good collection in full blossom will astonish those who are not acquainted with the majority of the dwarf forms.



A BEAUTIFUL ARRANGEMENT OF SWEET PEAS
Exhibited by Messrs. J. Carter and Co., at the N.S.P.S. Show.

The labour spent during recent years among the dwarf campanulas has resulted in a twofold benefit, in that new species have been introduced to cultivation, and many charming hybrid and varietal forms have been raised. For instance, the varieties of the Carpathian Bell-Flower, C. carpathica, at one time practically limited to the well-known alba, are now supplemented by such forms as Riverslea, a deep-hued gem, White Star and Little Gem, two pretty white forms of distinct appearance, and when you add to these such daintily coloured varieties as China Cup, cælestina, and grandiflora, one is able to better understand the possibilities of any one species. With reference to the unbounded potentialities of the raising of hybrid forms, one has only to note the charming hybrids in present day culture. Stansfieldi, for instance, is a hybrid between carpathica and Waldsteiniana and G. F. Wilson; Hendersoni, Fergusoni, and other useful gems are of hybrid origin. When one remembers that many species remain as yet practically untouched by the hand of the hybridist, it at once becomes apparent that much remains to be done in this direction.

The very distinct species, such as the dainty C. Zoysi, the effective C. Raineri, the recently introduced C. nana, C. cenisia, a brilliant little gem from Mont Cenis, the rare Caucasian C. collina, C. excisa, and a host of others, with their varied forms and characteristics would undoubtedly respond to the work of the hybridist in the creation of interesting and pretty novelties.

Perhaps I may not be deemed as being too critical if I speak of the need for closer study, and a more widely extended culture of the dwarf campanulas. It is impossible, I know, for the average cultivator to delve deeply into every group in Flora's kingdom; the vast range of subjects would not permit of the detailed systematic study necessary to obtain a full acquaintance with each group, but with the spread of the love of hardy subjects the gardener must perforce obtain as much knowledge as possible of the plants which he will have to deal with. In the study of the principal groups of hardy perennials the campanulas will certainly call for due attention.

The pleasure and knowledge derived from the culture, and from noting the special requirements of the rarer forms, will awaken one to the fact of the vast interest which pervades the whole group. To be acquainted with the soft blue bells of Zoysi peeping out of the rock clefts, the rare lanata, with its downy, saffron, pink-tinged blossoms, the varied types of Raineri, the blue and violet of Waldsteiniana, the rare yellow petræa, the pretty alpina, with its blue flowers of the barbata type, and the many other equally charming forms, is but to realise something of the importance and surpassing beauty of the dwarf campanulas.

In closing, may I briefly refer to the value of the free-growing forms for adorning rock edgings to the pathways? To see a walk, edged with rock-stones, over which are clambering and trailing the campanulas, with their myriads of soft-hued blossoms, is but to realise the value of these plants for such a purpose. Added to this, the fact that the blossoms last fairly well, and that the plants seldom become weedy in appearance, one can quickly appreciate a few of the merits of the dwarfer bell-flowers.

P. S. Hayward.

NOTES ON PEAS.

During the summer months, when plants are in full growth, it is well from time to time to note any peculiarities they may have, as it is impossible to remember every little variation. This is especially advisable with vegetables, as they vary so much, and there is such a number of them, that unless one takes special notes of each it is difficult to know which to grow. As all gardeners like to cultivate the best, this appears to be the only way for them to inform themselves as to their merits and distinctive qualities. Many things are sent out with laudatory descriptions, and one sees them at shows in splendid form.

If notes are taken of every particular during the growing season for comparison much useful information will be obtained. Peas this year, especially in the early part of the season, were anything but promising, for the slugs and cold winds kept them very much in check. Indeed, until the warmer weather set in there was much difficulty in recording their progress. Here we do not usually grow round-seeded varieties, as they do not find favour in the house, but this season, by way of comparison with some of the older forms, a few of the newer round-seeded kinds were tried. Side by side with the old Blue Express we sowed, on March 17, Giant Blue Express, a new type sent out by Messrs. J. Carter and Co. this year. A careful examination of the growth was made from time to time, and the results noted, so that we knew exactly how things were progressing. From the same quantity of seed the produce of the new form was more than double that of the old variety. Blue Express, as all know who have grown it, is very productive, but the pods are so small that it takes a large number and a long time to fill a bushel with them, whereas with the new form the pods are more than double the size of the old type, and the plants are quite as prolific. Sown on March 17 the pods were ready to gather on June 20. This is certainly a poor man's pea, and it would do well for allotments, and field cultivation for market supplies.

Side by side with the foregoing were two other round-seeded peas. The old Lightning, and a new form known by the name of Giant Lightning. The new form is as much superior to the older one as the Giant Express is over the other. We have also several others, notably one raised by crossing Duke of Albany with Early Morn. This grows to the height of about six feet, pods large and well filled, much resembling the first-named parent, but it is a fortnight earlier, coming in at the same time as Edwin Beckett. A variety raised from Duke of Albany crossed with Prior is very similar, but about a week later. Both varieties are excellent. Reading Record is a good dwarf early variety, which grows about two feet high; but, in my opinion, the best pea that Messrs. Sutton and Sons have sent out for a number of years is King Edward. The haulm and pods are of a dark green hue, the former being about four feet high, and very robust, while the later are produced in pairs, which makes it an enormous cropper. This is a good second early, the flavour being all that one could desire. It is very interesting to watch the growth of these different varieties, especially when one has grown them from the time they were introduced.

ATTRACTIVELY ARRANGED COLLECTION OF SWEET PEAS
Exhibited by Messrs. E. Webb and Sons at the N.S.P.S. Show.

Peas being so easily cross fertilised, like potatoes, soon deteriorate, therefore it is necessary to raise fresh stocks, otherwise they would in time go back to the wild forms; growers have, therefore, great cause to be thankful to those who have taken so much pains to improve the stocks. Many of our leading seed firms go to great trouble and expense in obtaining these improved varieties, but as all gardeners are not able to test them until they become popular, it would be well if those who have the opportunity of doing so would give a faithful report of their merits, regardless of the party who introduced them.

A pea that we hear or see but little of is Gladstone. This is a fine variety for mid-season or late use. It has a good constitution, resists the mildew in dry seasons, is very prolific, producing peas of fine colour and flavour; those who have not grown this variety would do well to give it a trial. Dreadnought, is also a most excellent variety, of medium habit, sown the same day as Quite Content, side by side, does not grow more than half its height, and is quite a fortnight later. The haulm is very dark, and pods and seed are deep green. It is very prolific, resisting the mildew in hot weather.

The rainfall with us has been light, while the temperature has been as high in the daytime as in most places; eleven times this year it exceeded 80 degrees in the shade, once 92 degrees, and once 86 degrees, which are trying temperatures for peas, especially on poor ground, and where water is a consideration. There are several fine varieties sent out from Wordsley, but these I must leave for a future time, as some of them are not at their best at present. There are also several beans I hope to draw attention to later on.

H. C. P.

A Beautiful Golden - leaved Tree.—One of the best-known of our variegated trees is that form of Acer negundo, whose leaves are freely variegated with white, it being an especial favourite for planting in villa gardens. Beside this, it is often grown under glass, and employed for various decorative purposes. In addition to the white variegated form, there is a variety aureum variegatum, in which the variegated portion, instead of being white, is of a golden hue. A third variety is A. negundo californicum aureum. In this the leaves are entirely of a rich golden tint, that is, when so situated that they are fully exposed to the summer's sun. A feature of great merit is that the foliage does not scorch, even in very hot weather, as many golden-leaved trees do. Instead of this, the more brilliant the sun the deeper does the yellow of the leaves become. It is certainly one of the very best small trees with golden foliage that we have, and for villa gardens or in similar positions, where a large tree would soon outgrow its allotted space, it is just the thing. Although it can now scarcely be regarded as a novelty, it is by no means so generally met with as its merits entitle it to be. Where trees with bright-coloured foliage are desired, this and the white variegated form, and the dark purple-leaved Prunus Pissardi, form a very effective group.—W. T.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

ONCIDIUMS.—The cool growing oncidiums are all more or less attractive subjects, but it is with the O. superbiens section I wish more particularly to deal. In this section is included the popular O. macranthum, O. serratum, O. loxense, etc. These form useful subjects for decorative and exhibition purposes, and in O. macranthum we have an easily cultivated and free-flowering plant that should have a place in every cool orchid house. There is no great variation among the plants of this species, and they may be procured in an imported state, or as established plants, for a modest outlay. The whole of the species included in this group will practically thrive under the same conditions as that usually provided for the successful cultivation of Odontoglossum crispum.

POTTING.—Plants that have recently passed out of flower will have their young growths advanced to the stage when new roots are being emitted from the base. I consider this to be the most suitable stage at which to attend to any repotting necessary. I would advise caution before repotting is attempted, for practically the whole of this class of orchids resent being disturbed for the purpose of repotting, therefore unless the potting compost is in an advanced stage of decay, or the plants require more root room, it is advisable not to disturb them more than is absolutely necessary. The decaying compost may be carefully picked out from among the roots without disturbing those roots that have become attached to the sides of the pots, and fresh drainage and compost worked in its place. If carefully done the plants may be kept for several years in the same pot. Where repotting is necessary, turn the plants carefully out of their pots. If the compost is well wetted previously to turning the plants out, it will be found that the roots adhering to the sides of the pots are more readily detached. All the old compost having been removed, cut away all dead bulbs and decaying matter about the base of the plants. The pots selected should be ample large, and two-thirds should be filled with drainage, which may be either broken crocks or prepared bracken roots.

THE POTTING COMPOST we find suitable consists of two parts fibrous brown peat, broken into fairly large lumps, the remaining compost consisting of about equal portions of oak or beech leaves, broken up and passed through a half-inch sieve, and chopped sphagnum moss, with sufficient sand added to render the whole porous. The compost should be pressed moderately firm, and the surface may be covered with a layer of chopped sphagnum moss. The plants should be well watered with rain water as soon as repotting is completed, taking care to wet the compost through. The plants should then be staged where they may be shaded from glaring light until the roots push into the fresh material. I find it a good plan to spray the freshly potted plants once or twice a day, as this not only assists in retaining the bulbs plump, but also acts as a restraint to insect pests.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

BEGONIA GLOIRE DE LORRAINE.—Examples of this useful begonia ought to be transferred to their final pots without further delay; pots of 6in. or 7in. diameter will be quite large enough. The plants must be handled with care so as not to damage the roots; the soil should be lumpy and porous, and a small quantity of well decayed manure thoroughly incorporated with it will be found of great assistance in promoting luxurious growth. I have noticed that this begonia makes rapid progress during August and September if a thoroughly moist atmosphere and even temperature are maintained. The paths and stages may be occasionally damped down with liquid manure, and shade must be given during the hot weather. Plants trained in pyramidal form, carefully looping the side shoots to the centre stake, are excellent. As soon as the pots are well filled with roots give regular applications of weak liquid manure, with an occasional change of some approved chemical fertiliser and clear soot water. The latter imparts a healthy, glossy dark green colour to the foliage, which is much appreciated. The flower buds should be removed as soon as they make their appearance until about a month or six weeks before the plants are expected to be at their best. This begonia is easily grown from very small plants, and is most useful for table decoration during the winter months. If good strong cuttings taken from the base of the old plants are now placed singly in small pots, and allowed to remain in them during the winter, they will prove most valuable.

FITTONIAS.—An autumn batch of this useful dwarf edging plant ought to be raised for winter stock, and if three or four cuttings are rooted near the edges of thumb pots, and afterwards transferred into 60-sized pots, they will soon develop into useful plants for winter decoration. I have also found fittonias most serviceable for filling the groundwork of hanging baskets; it is well, however, to observe that they succeed best when their roots are kept moist.

PANICUM VARIEGATUM. — Another supply of this serviceable trailing and edging plant should be raised for autumn use.

PANCRATIUMS.—As these pass out of bloom they ought not to be ripened off too quickly; the foliage must not be allowed to droop or flag for want of water. I prefer to ripen off the plants by a gradual reduction of temperature and water, and as soon as the foliage has ripened off the pots should be turned on their sides and examined at intervals with a view to watering them if necessary, remembering that the bulbs must not be allowed to shrivel.

GENERAL REMARKS.—Now that the season is becoming somewhat advanced, attention must be given to late summer potting, which operation ought to be completed at the first opportunity. Batches of winter-flowering subjects will also require regular and careful attention in respect to feeding with artificial manures or liquid manure. Carefully examine all the plants for insect pests, which must be eradicated immediately.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

STRAWBERRIES.—Runners that were placed in small pots a few weeks ago will be ready for putting into their fruiting pots (or, at least, the majority of them). The weather has been suitable for quick rooting, and ere this the runners should have been separated from the parent plant and stood together in the open on a bed of ashes. The soil should consist of good fibrous loam, old spent mushroom bed manure, a little bone-meal and soot, and old mortar rubble or plaster, to keep it open. The pots should be well drained, and have some rough turf placed over the crocks. Have the soil in a suitable condition, neither too wet nor too dry, and any plants that are not fit to pot, place on one side for a week or two, as nothing is gained by potting too soon; neither should they become pot-bound while in the small pots, as they do not then readily take to the new soil. When potted, stand them in beds on coal ashes, where they can be damped over if necessary.

MADRESFIELD COURT GRAPE.—This is, perhaps, one of the most difficult grapes to cultivate, and especially to colour; the bunches usually come out too large, and are most difficult to finish. If wet weather prevails, and the roots are partly outside, these should be covered up with old lights to keep off excessive rains; after they have started to colour, all plants should be removed from the house, and plenty of air be admitted whenever possible; and in dull, wet weather, such as we recently had, the pipes should be always warm, so that ventilation can with safety be left on at night, as a free circulation of air will be the best means of colouring this grape. The laterals should be allowed to run at will if the vines are strong. Mrs. Pince and Mrs. Pearson are planted in the same house as Madresfield Court here, and as they require more water, it is difficult to get these to mature properly.

LATE MUSCATS.—In cold soils the roots of these grapes are best inside; they must not be over-cropped, and watering should be done carefully and on fine days. Keep a good warmth in the pipes at night, with a little ventilation at the top when favourable. If the weather is dull the vines will require additional care to get them to finish up before short days set in. Robins are very destructive in the vinery, and soon spoil the bunches; therefore wasp netting should be put over the ventilators, but this keeps the air out to some extent.

MONSTERA DELICIOSA.—This is now giving some good fruits; we have it planted out and running up the back wall of the banana house, where the temperature is suitable for it. Six good fruits are ripening, about 12in. long, and these are of pineapple flavour; more young fruits are showing on two side shoots. The roots from the stem cling to the wall, and therefore no tying up is needed. The monstera revels in plenty of heat and moisture, and the foliage is large, handsome, and of good colour.

MELONS.—The late batch will now be growing strongly, and if given the assistance of bottom heat by means of leaves and long litter, they will be greatly benefited. Watering should be done very carefully in dull weather, especially when melons are in bloom. Keep up a good heat in the pipes, and admit a little air by the top ventilators. For a late crop good free setters should be grown, and should not be over-cropped.

PEACHES AND NECTARINES IN POTS.—As soon as the young wood has done growing the plants should be placed outside, plunged in ashes, and syringed on bright, warm days. They should not be allowed to become dry at the roots. Liquid manure may be given liberally. If any are sickly the fault will be generally found at the roots or drainage; give the trees an open position with some shelter from strong winds.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

ONIONS.—Autumn-sown onions that were transplanted to permanent quarters in the spring will soon be finishing, and these will derive much benefit if the necks are twisted or bent down to check the upward flow of sap, and help to plump up the bulbs. Any of the earlier varieties that are already matured should be pulled up to dry, so that the skins may become hard before storing. If the weather is at all showery the bulbs should be placed in a cold frame facing the sun, and be given all the air possible. Onions that were sown and planted out from boxes are growing vigorously since the welcome rains came, and they should be given weak liquid manure about once a week, and have a little soot dusted over them occasionally to give colour to the foliage and keep insects at bay. The Queen onion is almost ready for harvesting, and is a very useful sort for early use, and the ground where it has occupied can be utilised for other things.

WINTER GREENS.—These may still be put out wherever there is a vacant piece of ground. Savoys that are planted at this date make very useful heads for a late supply. The planting of broccolis and kales should now be completed, and firm ground will give the best results.

RIDGE CUCUMBERS.—These should be encouraged by weak applications of liquid manure at least once a week. Do not allow the shoots to become over-crowded, nor let the fruits become too old before cutting, as fresh young fruits are the most serviceable.

CELERY.—The maggot of the celery fly has been very prevalent in this district this season. The only remedy which I have found to answer is picking out the affected parts of the leaf and burning them, and frequently dusting the plants with old soot when the dew is upon them. By this process I have managed to check it. Plants intended for August and September supply will now be well advanced, and should have all suckers removed. Some of the best roots should be selected and wrapped round with brown paper to hasten blanching, and at the same time they can be more liberally fed with liquid manure and artificials. It will also be found by this time that the surface of the trenches are a mass of roots that will be greatly benefited by a top-dressing of soil cut down from the sides of the trenches. This top-dressing will be highly beneficial, and also tend to keep the plants from bolting.

CARROTS that have germinated well, and are for pulling young in the autumn, may be thinned out to three inches apart. Then, after showers of rain, apply a dusting of soot and destroy all weeds as soon as they appear. If a cold frame is available another sowing of an early forcing variety should be made which will be most serviceable later on.

MUSHROOMS.—When there is a plentiful supply of material a bed should be made up at once, choosing a north aspect, making the bed ridge-shaped, and adding to the manure a fair quantity of good rich loam from an old pasture. During wet days the mushroom house should be thoroughly cleaned out, limewashing the walls, and putting the stages in good repair if necessary. Throw open doors and windows so that everything may [illegible] sweet and clean, and in readiness for making the beds. Collect manure daily and keep it well turned over.

WINTER ONIONS.—About August 10 is a very suitable date to sow for this [illegible] If sown very much earlier there is [illegible] a possibility of a good many plants [illegible] to seed; and if sown much later, the seedlings do not become strong enough to survive the severe weather in winter. [illegible] seeds on good trenched soil which has [illegible] well manured, and make the ground [illegible] treading when sowing the seeds. [illegible] A1 and Giant Lemon Rocca are two [illegible] varieties for winter.—T. W. BIRKIN[illegible] Hatley Park Gardens.

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EXHIBITIONS AND MEETINGS.

◆

National Sweet Pea Society.

The eighth London exhibition of this flourishing society was held on Friday, July 24, in the Royal Horticultural Hall, Westminster. The display was an extremely pretty one. All round the sides of the hall were ranged the non-competitive exhibits, twenty in all, from the leading sweet pea specialists. In the centre of the hall Messrs. Carter and Co., High Holborn, made a delightful exhibit, and just inside the main entrance there was a large arch decorated with sweet peas of all colours.

Down the centre of the hall the decorated dinner-tables and the tables of flowers entered in the Burpee Cup competition were arranged alternately, and along one half of the hall they were flanked by the epergnes, [illegible], and large vase exhibits. The rest of the hall space, and the annexes, were filled with the exhibits in the general classes, the class for small growers more than filling one annexe. The quality of the flowers was high throughout, and came as a surprise to many, who expected that the late date and the very hot weather of late June and early July would produce a small show and poor quality. The attendance was large, and must have pleased the executive body.

TRADE EXCLUDED.

The special audit class is for fifteen bunches of sweet peas, distinct, selected from the twenty specified varieties that headed the select classes in the audit of 1907. The premier award—the Sutton Challenge Cup, a gold medal, and cash—was won by Mr. A. E. Usher, gardener to Sir Randolf Baker, Bart., Ranston House, Blandford, with very bright, clean, and substantial blooms of Mrs. Hardcastle Sykes, Helen Lewis, Frank Dolby, John Ingman, Sybil Eckford, Jeannie Gordon, Mrs. Walter Wright, Helen Pierce, [illegible], America, Black Knight, Dorothy Eckford, Mrs. Collier, Countess Spencer, and King Edward VII.; second prize fell to Mr. Thos. Jones, Bryn-Penylan, Ruabon, who had splendid long-stemmed spikes; third to Mr. T. Stevenson, gardener to E. Mocatta, Esq., Woburn Park, Addlestone; fourth to Mr. J. Vickers, gardener to W. B. Rawnsley, Esq., Well Vale, Alford, Lincs.; and fifth to Mrs. A. Tigwell, Greenford, Middlesex. The [illegible] scored for twenty-four bunches, [illegible] winning Messrs. C. C. Morse and [illegible] award with a strong set that consisted of King Edward VII., Lord Nelson, John Ingman, Frank Dolby, Helen [illegible], Evelyn Hemus, A. J. Cooke, Betty, Mrs. Alfred Watkins, Evelyn Byatt, Sybil Eckford, Horace Wright, America, Etta Dyke, Janet Scott, Jas. Grieve, Emperor, Cream Spencer, Queen Alexandra, Mrs. W. Wright, Mrs. W. Rawnsley, Henry Eckford, Duke of Westminster, and Sutton's Marbled Blue. Mr. J. T. Tubb, Oakbank, Seale, Sevenoaks, secured the second prize; and Mrs. A. J. Norris, Sonshaw, Chipstead, Surrey, came third, and all showed well.

The Eckford Cup class is always a most popular one and this year there were fifteen competitors. It was expected that Mr. T. Jones and Mr. T. Stevenson would put up a great fight for this handsome trophy, and this they did; but their calculations were upset by an entirely new grower and exhibitor, Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking, who won the cup and gold medal with a dozen of the finest bunches one could wish to see, and, although the spikes had ample stems, these were not gross; the varieties were King Edward VII., Lord Nelson, John Ingman, Helen Pierce, Mrs. Hardcastle Sykes, Mrs. Collier, Nora Unwin, Audrey Crier, Prince of Asturias, St. George, Frank Dolby, and Helen Lewis; Mr. T. Jones came second with fine flowers on very long stems; Mr. A. E. Usher came third; and Mr. T. Stevenson, last year's champion, had to be content with fourth place. For a dozen bunches of new Eckfordian varieties, Mr. Usher was awarded the second prize. For nine bunches, Mrs. A. Tigwell led with Audrey Crier, Dora Breadmore, Dudley Lees, Elsie Herbert, Etta Dyke, George Herbert, Helen Lewis, J. T. Crier, Mrs. C. W. Breadmore, Prince of Asturias, Tweedy Smith, and Vera Jeffery; Mr. E. Keith, Wallington Gardens, Cambo, Morpeth, was a good second.

In the Horace Wright Bowl competition, limited to nine bunches of garden varieties, selected from a given list, Mr. Basile, gardener to the Rev. T. McMurdie, Woburn Park, Weybridge, led with splendid examples of Dorothy Eckford, Helen Pierce, Dora Breadmore, Countess Spencer, King Edward VII., Jeannie Gordon, Mrs. W. Wright, Janet Scott, and John Ingman; Mrs. A. Tigwell was a good second. Mr. Prophet, gardener to E. Broad, Esq., Rosehill, St. Blazey, Cornwall, gained first place for six bunches, his admirable set consisting of Mrs. Collier, Prince Olaf, Mene Christie, Mrs. Hardcastle Sykes, The Marquis, and St. George, all very bright and clean; Mr. A. E. Usher came second; Mr. Thos. Jones third; and Mr. R. Wright, Halsell Lane, Formby, fourth.

For six bunches, distinct, any varieties, Mr. Broad led the way with Etta Dyke, Lord Nelson, Evelyn Hemus, Henry Eckford, Mrs. Chas. Foster, and George Herbert; Mrs. Tigwell was a close second, and was followed in order by Mrs. E. H. Pellier, Manor House, Abbots Kerswell, Devon; and Mr. R. Wright. The best three bunches of Miss Millie Maslin came from Mr. E. Keith, with Mr. M. Y. Green, The Lodge, Eynsford, second; Mr. W. L. L. Loat, Cumnor Place, Oxford, third; and Mr. W. Lintott, Marden Park, Woldingham, fourth. Mr. Keith, Mr. Loat, Mr. M. Y. Green, Mr. A. E. Usher, and Mr. Lintott secured prizes, as mentioned, for three bunches of Herbert Smith. For a bunch of Devonshire Cream, Mr. Usher, the Rev. J. B. Shackle, Dropmore Vicarage, Maidenhead, and Mr. G. Aitkens, gardener to H. Yorke, Esq., Erdigg Park, Wrexham, secured the awards.

OPEN CLASSES.

In the Classification Class, the prizes are given by Messrs. Hurst and Son, for eighteen bunches. Mr. A. E. Usher secured the chief award with excellent flowers of Mrs. W. Wright, Jeannie Gordon, Evelyn Hemus, Romolo Piazanni, Mrs. Hardcastle Sykes, Sybil Eckford, America, Queen Alexandra, Horace Wright, Helen Lewis, Dorothy Eckford, Countess Spencer, Black Knight, Dora Breadmore, Helen Pierce, Marbled Blue, John Ingman, and Frank Dolby; Mr. C. W. Breadmore secured the second place; Messrs. Saltmarsh and Son, Chelmsford, third; and Messrs. G. and A. Clarke, Dover, fourth. Mr. Usher also annexed the first prize for two bunches each of Mrs. Alfred Watkins, E. J. Castle, Nora Unwin, Evelyn Byatt, Gladys Unwin, A. J. Cook, and Frank Dolby; Mrs. A. Tigwell was again a good second; and Messrs. Jones and Son, Shrewsbury, came third. Messrs. Watkins and Simpson gave the prizes in this class.

Messrs. Cooper, Taber, and Co.'s prizes for two dozen varieties, distinct, were won in order by Mr. C. W. Breadmore, Messrs. Saltmarsh and Son, Messrs. G. Stark and Son, Great Ryburgh, and Messrs. G. and A. Clark. Mr. Breadmore's varieties were waved Mrs. Kenyon, Navy Blue Spencer, Mrs. C. W. Breadmore, Helen Pierce, Henry Eckford, Mrs. Hardcastle Sykes, Helen Lewis, York Jubilee, George Herbert, Marjorie Linzee, Kathleen MacGowan, Tweedy Smith, King Alfonso, Constance Oliver, Elsie Herbert, A. N. Dickson, Mrs. Collier, Countess Spencer, Marjorie Willis, Seedling Bicolor, Etta Dyke, Duchess of Sutherland, Silas Cole, and Lavender George Herbert.

For a dozen bunches, Mr. Silas Cole, gardener to Earl Spencer, Althorp Park, Northampton, scored with beautiful blooms of Gladys Cole, Mrs. Hardcastle Sykes, John Ingman, Silas Cole, Earl Spencer, Lady Sarah Spencer, Lady Althorp, Miss Delia Spencer, Lord Althorp, and two seedlings; Mr. Hopkins showed well for second place; Mr. G. M. Edwards, The Cedars, Addlestone, came third; and Mr. G. Humphries, Kington Langley, was fourth.

WAVED VARIETIES ONLY.

In the class provided by Mr. Felton and Miss Hemus for twelve bunches, distinct, to include at least six of Miss Hemus' varieties, Mr. A. E. Usher won the first prize (a rose bowl) with Paradise Regained, King Edward VII., Marjorie Willis, St. George, Lucy Hemus, Dudley Lees, Hester, Evelyn Hemus, Sutton's Queen, Helen Lewis, Paradise Carmine, and White Paradise; Mr. Thos. Jones was second. For one bunch each of Clara Curtis, Mrs. Henry Bell, Purity, Helen Lewis, Mrs. Hardcastle Sykes, and John Ingman, Mr. Bolton's prizes were won in order by Mr. E. Keith and Mr. Andrew Hoggan, Strathyre, Busby, Glasgow, both northern growers. The best six bunches, distinct, were splendid specimens of Elsie Herbert, The Marquis, Primrose Spencer, Helen Lewis, Bobby K, and Prince of Asturias, shown by Mrs. W. E. H. Pellier; Mrs. A. Tigwell second; Mr. W. L. S. Loat third; and Mr. E. Watford, Netherfield House Gardens, Weybridge, fourth; this was a good class, and in it, as well as for three bunches, Messrs. Hobbies provided the prizes. For three bunches, Mr. M. V. Green led with Audrey Crier, Nora Unwin, and Rosy Morn; Mr. Prophet second; Mr. T. Stevenson third. The best three bunches of Paradise came from Mr. E. Keith, who was followed in order by Mr. W. Marple, Penkridge, Staffs, Mrs. A. Tigwell, and Mr. W. L. S. Loat, and all showed well.

THE BURPEE CLASSES.

Unusual interest centred around the three classes provided by Mr. W. Atlee Burpee, Philadelphia, U.S.A., who offered a splendid silver cup as first prize for a table of the Countess Spencer varieties, arranged on a space 4ft. by 3ft., not more than one bunch or basket of a variety admitted. Mr. Robt. Bolton, Carnforth, won this magnificent trophy for the first time, with beautiful flowers of Helen Lewis, Countess Spencer, Tom, Primrose Spencer, two new seedlings, Mrs. Hardcastle Sykes, Audrey Crier, Constance Oliver, Mrs. Henry Bell, The Marquis, Evelyn Hemus, Nancy Perkin, Mrs. Chas. Foster, John Ingman, and Purity, all admirably set up; a very close second was Mr. Silas Cole, who had beautiful bunches of Earl Spencer, Mrs. Hardcastle Sykes, Silas Cole, John Ingman, Lord Althorp, Lady Sarah Spencer, E. C. Waud, Gladys Cole, Althorp White, Miss Delia Spencer, Helen Lewis, Lady Althorp, Althorp Countess, Miss Lavinia Spencer, and a seedling; Mr. A. E. Usher third.

For six bunches of the Countess Spencer type, Mr. S. Cole scored with White Spencer, Primrose Spencer, Countess Spencer, Silas Cole, Lord Althorp, and John Ingman. Mr. T. Stevenson came second, and Mr. Thos. Jones third.

Eighteen competitors staged one bunch each of Burpee's Primrose Spencer and Burpee's White Spencer, and here Mr. Basile won the premier award with two grand bunches, his Primrose form being one of the finest bunches in the whole show. Mr. Thos. Jones second, and Mr. Hopkins third.

SMALL GROWERS.

The prizes in the small growers' classes were keenly contested, and in almost every case the popular varieties were submitted. There were nineteen entries of twelve bunches, distinct, Mr. E. M. Allen, Sandhills Cottage, Formby, winning first prize with a very fine set of Countess Spencer, Lord Althorp, George Herbert, Frank Dolby, St. George, Mrs. Henry Bell, Chrissie Unwin, Silas Cole, Etta Dyke, Mrs. Hardcastle Sykes, Helen Lewis, and Evelyn Hemus—a set that would not have disgraced a

Hopkins, a Jones, or a Stevenson; Mr. G. Stevenson, Chadworth Cottage, Esher, second; Mr. S. Hibbins, Ashford, Middlesex, third; and Dr. E. V. Gostling, Needham Market, fourth. For six bunches, Mr. F. J. Harrison, Ulverston; Mr. J. F. Beale, Brierly House, Sidcup; Mr. E. T. Baker, Brigstock Road, Thornton Heath; and Dr. G. S. Leggatt, Selhurst Road, South Norwood, secured the awards in the order of mention. For six bunches with waved standards, Mr. F. J. Harrison was again first, followed by Mr. G. Davidson, Quadrant Road, Thornton Heath, and Mr. E. T. Baker. For a bunch each of a white, crimson, and blue variety, the awards fell in order to Mr. Harrison, Dr. Gostling, Mr. A. H. Hatting, The Nest, Hornchurch, and Mr. S. Hibbins. In the class for three bunches, distinct, Mr. E. M. Allen again led from twenty-one other competitors; Mr. S. Hibbins, Mr. L. H. Hatting, and Dr. Gostling taking the other awards. Mr. Allen was also successful for three bunches of waved varieties, with Bobby K, George Herbert, and Mrs. Henry Bell; Mr. G. A. Hill, Mr. Harrison, and Mr. Hibbins secured the remaining awards.

DECORATIVE SECTION.

The table decorations were fairly good throughout. Miss N. H. Cole, Feltham, secured the first prize with a pleasing design in pink and white flowers, associated with smilax and small ampelopsis leaves. Miss Jessie Cuthbertson, Mark's Tey, second; Mrs. A. Robinson, Park Hill, Carshalton, third; and Miss C. B. Cole fourth. In the epergne class Miss C. B. Cole again led with cream and pink flowers skilfully and gracefully arranged with grasses; Miss Jessie Cuthbertson second, Messrs. G. and A. Clark third, and Mrs. H. L. Sell, Luton, fourth. In the vase class Miss Cuthbertson led, and was followed in order by Miss C. B. Cole, and Mr. T. Cross, Bury St. Edmunds.

NON-COMPETITIVE.

There were many beautiful non-competitive displays, and to these awards were made as follows:—

Special Gold Medal.—Messrs. James Carter and Co., Holborn; Messrs. R. H. Felton and Son, Hanover Square, W.

Gold Medal.—Messrs. Dobbie and Co., Rothesay; Messrs. E. W. King and Co., Coggeshall; Messrs. G. Stark and Son, Great Ryburgh; Messrs. Hobbies, Lim., Dereham; Messrs. H. Cannell and Sons, Swanley; Messrs. Bakers', Codsall.

Silver-gilt Medal.—Messrs. E. Webb and Sons, Stourbridge; Mr. W. J. Unwin, Histon, Cambs; Mr. C. W. Breadmore, Winchester.

Large Silver Medal.—Messrs. Jones and Son, Shrewsbury; Mr. Henry Eckford, Wem, Salop.

Silver Medal. — Messrs. Jarman and Co., Chard; Mr. Robert Sydenham, Birmingham; Messrs. G. and A. Clark, Dover; Mr. W. J. Godfrey, Exmouth; and Mr. Wm. Deal, Kelvedon.

DINNER AND EVENING MEETING.

At the close of the exhibition the committee, judges, and a few guests dined at Fumigalli's Restaurant, Victoria Station. Mr. Wm. Cuthbertson presided; several ladies were present. Dr. and Mrs. Miller and Mr. A. M. Kirby, all from America, were guests of the evening.

After dinner and the usual loyal toasts Dr. Miller neatly proposed "Success to the National Sweet Pea Society," and in so doing expressed his great admiration for British parks, and for British florists, and his surprise at so large and beautiful an exhibition as that of sweet peas from which they had come. Mr. W. P. Wright, chairman of the Floral Committee, replied to the toast.

The next item on the programme was a most interesting one, and consisted of a presentation to the hon. secretary, Mr. Charles H. Curtis. This consisted of a beautiful album of photographs of sweet peas, and sweet pea notabilities, and a cheque for £60, subscribed by the officers and members of the society. The inscription in the album ran: "To show their appreciation of his services as their honorary secretary, this album along with a purse of sovereigns was presented to Charles H. Curtis, Esq., by the members of the National Sweet Pea Society, 24th July, 1908. Wm. Cuthbertson, President."

In a very kindly speech the President referred to the ever increasing work that fell on the secretarial shoulders, and to the great increase of membership and prestige the society had gained during recent years, and to the enthusiasm and activity of the hon. secretary. Mr. Curtis, in accepting this handsome testimonial, said that words failed him with which to convey adequately to the officers and members his sense of the great honour they had paid him. He did not despise money, he was delighted with the album, and still more pleased to hear, as the President had hinted, that Mrs. Curtis was to share in the presentation.

Mr. Edward Sherwood then presented Mrs. C. H. Curtis with a gold bracelet, as a token of the members' appreciation of the services she had rendered to the society by assisting her husband. The other toasts were: "The Judges," proposed by Mr. T. Stevenson, was replied to by Mr. Kirby. "The Competitors and Exhibitors," proposed by Mr. C. Foster, was responded to by Mr. Wm. Deal and Mr. R. E. Felton. "Donors of Special Prizes," was proposed by Mr. J. S. Brunton, and Mr. Robert Sydenham responded. Mr. S. B. Dicks proposed "The Ladies," to which Mrs. Miller most ably responded. "The Chairman," given by Mr. H. J. Wright, was duly honoured.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, July 21.

Present: E. A. Bowles, Esq., F.L.S. (in the chair); Prof. G. S. Boulger; Rev. W. Wilks; Messrs. Fawcett, Hales, Worsdell, Bennett-Poë, Fraser, and Chittenden (secretary).

PELORIC PANSY.—Mr. Hales exhibited flowers of pansy showing regular peloria. Many had but four petals, others had five, and each petal was spurred. Only one plant out of a batch of seedlings had exhibited this phenomenon, which appears to be very rare in the pansy, though well known in Linaria, etc.

MYOSOTIS.—Mr. Bowles exhibited an inflorescence of the common forget-me-not from the plant which he showed last year, and which then had the calyx much enlarged; this year, however, the calyx was of normal size.

CYPRIPEDIUM WITH DOUBLE LIP.—From H. J. Allwood, Esq., of Acocks Green, came a specimen of Cypripedium Lawrenceanum, normal in all respects except in the labellum, which was double, as though it had been cleft deeply in its very early stages of growth. This, and a curious form of Cattleya Harrisoni, were handed to Mr. Worsdell for further examination.

BLUE SWEET PEAS.—Mrs. Biffen, of The Gables, Histon, Cambridge, sent specimens illustrating blue forms of the "Spencer" type of sweet pea, together with an account of their pedigree:—

> The various blue shades of waved peas have resulted from crosses between Zoe, a medium blue pea, and Paradise, John Ingman, and an unnamed rose-coloured variety practically identical with the original Countess Spencer. A similar series as far as colour goes, but less waved, has been given by a cross between Zoe and Gladys Unwin. Navy Blue crossed with Paradise has also given the same series, and it is probable that any shade of pink or deep rose and Navy Blue would also give them. In each case the first generation was a deep purple blue with deep blue wings. The self seeds from these purple hybrids (Zoe x John Ingman) gave a rather complex generation consisting of bronze purple, purple with blue-purple wings, navy blue, Zoe blue, Zephyr blue, pale blue, lavender (probably Mrs. C. Foster), John Ingman colour, deep rose, pale rose (various shades of), tinged white. These various colours were present in both flat and waved forms, and farther as flakes on a white ground. The cultures raised were not sufficiently large to give reliable statistics, so the figures are not quoted here.

The behaviour of each of the types mentioned in the third generation has been traced in some detail, but attention is only called here to the blue shades. Anyone who has grown the mixtures known as Prince of Asturias, Rosie Adams, The Marquis, Silas Coie, etc., can readily trace the gometic constitution of the heterozygous purples, whilst the pink and rose shades behaved much as the first stocks of Countess Spencer. It should be noted, though, that each of these purples can apparently be obtained in a fixed form.

The various blue shades either bred true to type or gave definite series of "sports" in definite proportions. The analysis of the whole set of statistics has not been completed yet, but the colours are given in the order of their frequency.

Zoe shade.—(1.) Breaks into Zoe, navy, Zephyr, bluish pink, pale blue, and pale pink. (2.) Gives the blue series just mentioned and no pinks. (3.) Breeds true (Zoe, Countess form of, specimens exhibited).

Navy shade.—(1.) Breaks into navy, Zephyr, and the same two pink shades as the above. (2.) Gives navy and Zephyr. (3.) Breed true (specimens exhibited).

Zephyr shade.—(1.) Breaks into Zephyr and pale pink only. (2.) Breeds true (specimens exhibited).

Pale blue.—(1.) Throws Zephyr (no case yet met with). (2.) Breeds true (specimens exhibited).

The Spencer, the Unwin, and the flat standard types all behave in the same fashion, and what evidence has been obtained at present shows that the corresponding flaked colours give the same results. A few of the flaked types were exhibited for comparison with the whole colours. It should be noted that flaking is not visible in either parent. When it appears it has always acted as a simple recessive to the corresponding whole colour. Thus a deep purple flake might split into purple, blue, and pink types, but each would be flaked and no self colours would occur.

It is rather a curious fact that whilst a long series of pinks, orange, white, and yellow shades are known in a fixed condition, no waved blues have yet appeared in commerce with the exception of Mrs. C. Foster. This latter is heterozygous, and may be left out of account. It would seem to point to the fact that the Spencer forms are not so readily cross fertilised by bees as is generally stated. If they were so, we might fairly expect that the blue shades would be as well, or, knowing the partiality of bees for blue flowers, better represented than the pinks.

Chipping Norton and North Oxon Rose Show.

JULY 16.

Very showery weather attended the holding of this society's fifth exhibition. Fortunately, the shelter of the Borough Town Hall had been secured, otherwise the heavy rains would have rendered an outdoor show most uncomfortable. The entries created a record, but several traders were unable to compete owing to the weather. Nearly 1,[illegible] specimen blooms were staged, and it was noticeable that several dark roses were presented in great number, notably Horace Vernet, which variety secured two medals. Twelve classes were open, and a like number limited to local productions.

In the class for forty-eight blooms (two dozen H.P.'s, one dozen each of T. or N. and H.T.), the challenge cup, £30, and cash [illegible] was secured and won outright by Messrs. Alex. Dickson and Sons, Newtownards, Ireland, with large blooms; very fine [illegible] Duchesse de Morny, Pierre Notting, [illegible] Drew, Gustave Piganeau, J. B. Clark, [illegible] of Dufferin, Caroline Testout, Florence [illegible]berton, Horace Vernet, Reynolds Hole, Marchioness of Dufferin, John Cuff, Mrs. [illegible] Kennedy, Mrs. J. Laing, Dean Hole, Dr. O'Donel Browne, etc.; Messrs. F. Cant and Co., Colchester, second, staging grand ex-

examples of Hugh Dickson, Mrs. Theodore Roosevelt, Lady Moyra Beauclerc, J. B. Clark, Mildred Grant, Pride of Waltham, White Cochet, F. K. Druschki, Horace Vernet, Dean Hole, Caroline Testout, Mad. J. Gravereaux, Bob Davison, Mrs. E. Mawley, William Shean, and Oberhofgartner Terks; Mr. John Mattock, Headington, third. For two dozen single trusses, the chief award went to Messrs. A. Dickson and Sons, whose Horace Vernet (selected as the N.R.S. medal), F. K. Druschki, Duchesse de Morny, Dupuy Jamain, and Marchioness of Dufferin, were very noticeable: the second prize going to the King's Acre Nursery Company, Hereford, and Mr. H. Drew, Longworth, Berks, third. For a dozen trebles, four boxes were staged, Messrs. A. Dickson and Sons leading, the King's Acre Nursery Company second, and Mr. H. Drew third. For two dozen teas or noisettes, Mr. H. Drew scored a premier with a strong set, and Mr. J. Mattock was a good second.

For a dozen H.T.'s, Messrs. A. Dickson and Sons once again headed the list, their flowers being very fine, and among others were Papa Lambert, Gladys Harkness, F. Pemberton, Mrs. W. J. Grant, George Dickson (new), and W. E. Lippiatt; Messrs. F. Cant and Co. second, with J. B. Clark, Killarney, W. Shean, and C. J. Grahame. For a dozen roses of any one variety, Messrs. Dickson and Sons were first for both dark and light forms, with Horace Vernet and Bessie Brown; Messrs. F. Cant and Co. second for J. B. Clark and Dean Hole; Mr. H. Drew third for light roses with White Cochet; other forms staged were Queen of Spain (2), Her Majesty, Dean Hole, and Earl of Dufferin.

In the amateur section, Mr. F. Dennison, Rose Croft, Kenilworth, set up a very excellent box of four dozen blooms; very beautifully formed were C. J. Grahame, the two Cochets, F. K. Druschki, G. Piganeau, Mildred Grant, Ulster, Horace Vernet (N.R.S. medal bloom), Comtesse de Nadaillac, Bessie Brown, Helen Keller, Dean Hole, and W. Shean; this exhibitor also led for six trebles, and a dozen of any variety (F. K. Druschki). For a dozen forms, the first award fell to Mr. H. W. G. Morris (hon. sec.), who was strong with Mamie, Victor Verdier, White Cochet, and F. K. Druschki; Mr. W. N. Rowell, Ivy-[illegible], and Mr. W. Hughes, Hook Norton, taking the lower cards. For twelve teas, Messrs. G. Mace, H. W. G. Morris, and W. N. Rowell divided the honours with excellent blooms; and for nine varieties and six of one variety, the awards went to Messrs. G. Mace, C. Surman, and S. E. Groves, Milton-under-Wychwood. A large number of boxes of six, one variety, were staged, six prizes going to F. K. Druschki, and two to Maman Cochet, in classes for amateurs limited to the number of trees grown. A very good class was the one for eighteen blooms, not less than twelve varieties, Mr. W. Guy, Kingham, leading with good flowers of Bessie Brown, F. K. Druschki, Lady Moyra Beauclerc, Kaiserin A. Victoria, Queen of Spain, Mad. C. Joigneaux, and White Maman Cochet; Mr. C. F. Richardson, Chastleton House, second, his F. K. Druschki being selected as the N.R.S. medal bloom.

Eighteen bouquets of garden roses were admirably set up by Mr. John Mattock, who secured the £3 prize with a varied collection. For a basket of roses, Miss Cooper received the only award made, she also winning first for a vase of roses.

Handsworth Horticultural Society.

JULY 24 and 25.

The annual floral fête of the Handsworth Horticultural Society was held under the most favourable auspices; the weather was fine, the character of the exhibition high, and the attendance of visitors large.

There were five contestants in the class for a group of plants arranged for effect, with [illegible] straight fronts, to occupy an [illegible] square feet. The first prize was [illegible] a silver challenge cup, value 10 guineas, to be won two years in succession, or three times in all. The effect presented by the five groups was very imposing, and the premier award was made in favour of Messrs. Cypher and Son, of Cheltenham, whose arrangement was of an exceptionally high order of merit, and remarkable for the beautiful orchids it contained; Mr. J. S. Macdonald, gardener to G. H. Kenrick, Esq., Whetstone, Edgbaston, was a close second; the third prize fell to Mr. W. Vause, Leamington; and the fourth to Mr. G. Hancox, West Bromwich.

Messrs. Cypher were facile princeps for twelve stove and greenhouse plants (first prize £10), with two grand specimens of Statices profusa and intermedia, Ixora Duffi, I. salicifolia, I. Williamsi, Bougainvillea Cypheri, Allamanda Hendersoni, Allamanda nobilis, Clerodendron Balfouriana, Erica Aitoniana, and E. Parmentieriana; Mr. W. Vause, Leamington, was placed second with a collection of good specimens.

For a collection of fruit, not more than twelve kinds, winner to receive a silver challenge cup value 20 guineas, must be won three years in succession or four times in all before becoming the property of the winner, each collection to be decorated with flowering or foliage plants, Mr. J. H. Goodacre, Elvaston Castle Gardens, was the winner, having seventeen bunches of white and black grapes, nine fine melons, two dishes of apples, four large dishes of peaches, two of nectarines, two of plums, and one of figs; Mr. T. Bannerman, gardener to Lord Bagot, Blithfield Hall, Rugeley, was the only other exhibitor, and was awarded second prize. These two exhibitors were also alone in the grape classes. For six bunches (three black and three white), Mr. Goodacre was to the fore with well-finished Muscat of Alexandria, possessing the desirable amber tint, and Madresfield Court, fine bunches, good in size of berry and colour; Mr. Bannerman second with very fine bunches, with large, uniform berries, and perfect bloom.

There was a very keen contest in the class for floral table decorations (orchids excluded); there were fifteen tables, all possessing more or less merit; Miss M. Clarke, Sparkbrook, Birmingham, scored with an elegant combination of light-pink hybrid tea roses and a profusion of slender spikes of Francoa racemosa; second, Mr. S. Gibbs, gardener to Miss Normansell, Edgbaston, with light pink sweet peas; and third, Miss E. Jenks, Codsall, with an artistic arrangement of pink peas.

The roses were capitally staged, excepting that in several instances evidence of unfavourable weather was apparent. For twenty-four varieties, distinct, Messrs. A. Dickson and Sons, Newtownards, were awarded the first prize for finely developed blooms; Messrs. Perkins and Sons, Coventry, were a very close second with neat and fresh flowers; third, King's Acre Nurseries, Hereford. For twelve roses, distinct, Messrs. Perkins were first with a superb lot; second, Messrs. A. Dickson and Sons; and third, Mr. Geo. Prince, Oxford, both staging good blooms. For twelve bunches garden roses, distinct, Messrs. G. Prince, W. Mattock, and J. Townsend and Sons, Worcester, were placed in the order named, all with excellent exhibits. For twelve tea roses, distinct, Messrs. A. Dickson and Sons, J. Townsend, and G. Prince were the respective winners.

Sweet peas formed a good feature, the contest keen, and the blooms of high quality. In the class for twenty-four bunches, Mr. T. Parry, gardener to Alfred Hughes, Esq., Knowle, was placed first with a splendid lot of flowers, excellently staged; second, Mr. A. Langston, Droitwich; third, Mr. Geo. Turley, jun., King's Heath. Hardy border flowers were effectively staged, but carnations and picotees were not numerously shown. In the class for twelve yellow-ground carnations or picotees, distinct, Mr. G. R. Rudd led with very good blooms; second, Mr. G. D. Ford. For twelve white-grounds, Mr. A. R. Brown, King's Norton Nurseries, scored with a superb stand; second, Mr. R. G. Rudd, with excellent flowers. For twelve bunches of violas, Messrs. W. Pemberton and W. Chipman were the respective winners.

In the gardeners' class for a group of plants, arranged for effect, Mr. Joe Winter, gardener to C. A. Palmer, Esq., scored with an attractive presentment possessing considerable originality; second, Mr. W. Tompkins; and third, Mr. E. Collett. In the gardeners' division there was also a large display of plants, cut flowers, fruits, and vegetables. Non-competitive exhibits were numerous, and of much merit.

Chippenham Rose Show.

JULY 15.

Early closing day enabled a large number of the residents of this "milk and flour" district to visit the fifth exhibition of the "queen of flowers." Fortunately the rain clouds had rolled by, cheering the hearts of the executive, who the past two seasons had experienced wet days. The show was located in Mr. Cleaver's grounds, near the Great Western Railway Arches. A good attendance was noticeable during the afternoon, and during the evening hours there was a crowd.

Nurserymen's classes were well filled with exhibits of high quality, the competition being keen, as there were ten cups and several medals offered. Entries were a few less than last year. The Colchester, Cirencester, and Hereford firms were in force, but Mr. John Mattock secured the cup for the most points in division 1; Mr. W. S. Chapman, Warminster, was awarded the King's Acre Nursery Cup (and a gold medal) for the best box in the amateurs' section, with two dozen single trusses of fine form and size; and Rev. G. T. W. Henslow, Stanton St. Quinton, won the President's cup for the highest number of points in the amateur division.

The schedule provided fifteen open classes for roses, the whole of the awards (two firsts and two seconds) for local traders going to Mr. Geo. Humphries, Kington Langley, who put up two dozen single trusses, twelve H.P. or H.T., twelve T. or H.T., and six trebles; he also scored premiers for nine bunches of sweet peas and a table decoration. The N.R.S. silver medals were awarded as follows: To traders, premier H.P. or H.T., the King's Acre Nursery Company, Hereford, for Horace Vernet; tea or noisette, Messrs. F. Cant and Co., Colchester, for Mrs. E. Mawley (a remarkable bloom). To amateurs, H.P. or H.T., Rev. G. T. W. Henslow, for Marie Verdier; T. or N., Mr. W. T. Coleman, Kington Langley, with a fine development of White Maman Cochet.

In the trade classes Messrs. F. Cant and Co. were first for forty-eight single trusses (winning the Wiltshire Ladies' Challenge Cup); eighteen teas or noisettes, and twelve of one variety of T. or N. Mr. John Mattock, Headington, was placed first in the classes for thirty-six single trusses, eighteen H.P.'s or H.T.'s, twelve bunches of garden roses, a basket of roses, bouquet of roses, and a vase of roses. Messrs. B. R. Cant and Co., Colchester, led for a dozen trebles, Messrs. J. Jefferies and Son, Cirencester, taking second prize for thirty-six singles and eighteen varieties. In the amateur section Mr. W. S. Chapman was first for two dozen singles and four trebles; Rev. R. Powley, Upper Scudamore, led for twenty-four teas; and Miss Ashe presented the premier nine bunches of garden roses. Amateurs limited to a ten-mile radius, included Rev. G. T. W. Henslow, who led in the classes for two dozen singles, eighteen H.P.'s or H.T.'s, and twelve teas or noisettes.

The cottagers produced any number of plump blooms, Mr. William Smith, Box, scoring firsts for eighteen singles, six trebles, and vase of roses. Miscellaneous premier awards for which classes were provided included pansies from Mr. L. Lent, Cumnor Place, Berks; herbaceous perennials, liliums, and table plants, from Messrs. W. and J. Stokes, Hilperton Marsh; begonias (single and double varieties), and strawberries, from Mr. J. Pitts, gardener to Colonel Sir A. Neeld.

Non-competitive exhibits comprised an extensive collection of herbaceous perennials and hybrid water lilies from Messrs. Barr and Sons, Surbiton (certificate of merit); roses and border flowers, from Mr. A. A. Walters, Bath; roses, from Messrs. Geo. Cooling and Sons, Bath, and the King's Acre Nursery Company; seedling sweet peas, from Mr. L. Loat, Cumnor; and a grouping of pot plants, arranged by Mr. Richardson, florist, London Road, Chippenham.

Huyton and Roby.

JULY 23.

The annual summer exhibition of this society was held in the grounds adjoining the public offices in charming weather, the exhibits showed a decided advance upon those of previous years, and the society is to be congratulated upon its efforts in the furtherance of horticulture. Only the first prize in the chief of the classes can be noticed out of the very extensive schedule. To the group class Mr. J. George, gardener to Thomas Henshaw, contributed an artistic arrangement, which included well-grown palms, ferns, crotons, carnations, etc. For the best stove or greenhouse plant in flower this exhibitor led with a well-flowered specimen of Clerodendron Balfouriana. Mr. George was also first for four caladiums with large plants. Mr. H. McFall, gardener to Mrs. Harding, had well-grown plants, which secured the leading awards for three ferns and a single specimen, two palms, and for a foliage plant. Mr. D. Hunter, gardener to W. D. Roberts, Esq., staged a fine pyramidal fuchsia. Mr. E. Bridge was again victorious with zonal pelargoniums. Mr. W. Lyon, gardener to Miss Preston, secured the chief award for a well-grown begonia. Mr. J. Copple, gardener to T. Biddulph, Esq., had the best coleus.

Mr. J. Burrows gardener to W. H. Crook, Esq., led in the class for twelve roses, and Mr. T. Bagnall, gardener to C. F. Boston, Esq., in the smaller class.

Fruit was of good quality, and Mr. W. Oldham, gardener to J. Beecham, Esq., secured premier honours for a collection, staging Madresfield Court Grapes, Hero of Lockinge melon, Gros Mignonne peaches, and Violette Hative nectarines. Mr. D. McKelvie was a good second. Mr. W. Oldham had the best white grapes, the variety Buckland Sweetwater, and Mr. D. McKelvie the best black, with Black Hamburgh.

The vegetables were excellent, Mr. J. George being the most successful exhibitor for the collection; Mr. H. McFall second.

Pereskia Godseffiana. — This pereskia is apparently a form of the old West Indian Pereskia aculeata that has long been employed as a stock on which to graft epiphyllums, but from an ornamental standpoint has not been considered of any account. The variety Godseffiana is remarkable for the rich coloration of the leaves, which are marked in a varying manner on the upper surface with red, yellow, and green, the underside being uniformly purplish crimson. As heat and sunshine are so necessary to bring out its brightest features, this pereskia must not be grown in a shaded structure, but for furnishing the sunny end of a warm house it should prove a decided acquisition. Given a very hot dry summer, it may perhaps be a useful bedding plant; at all events, in warm, dry soils. Grown in a suspended basket in a light position the colour will be well developed, and another advantage is that being of a half-succulent nature, it is not likely to suffer if the soil about the roots is allowed to become dry, a thing which frequently happens when baskets are suspended in a lofty structure. Apart from all these considerations, there is no doubt that under the influence of a tropical sun it would form a really brilliant feature. With regard to its culture, I have had no practical experience of Pereskia Godseffiana, but the typical form is so little exacting in its requirements that there is no doubt this variety will prove of easy culture.—W. T.

ANSWERS TO CORRESPONDENTS.

DAMAGED GRAPES.—F. B., Essex: The low night temperature would contribute to the failure, but the chief cause of shanking is overcropping in your case. The remedy is obvious.

SCORCHED CUCUMBER LEAVES.—S., Isle of Wight: There is a thinness about the leaf sent which we do not understand, provided the usual conditions of heat and moisture are provided. The leaf suggests great heat and lack of moisture. Perhaps the foliage is too close to the hot-water pipes. Send us several leaves showing various stages of the scorched appearance.

STRAWBERRIES FOR MARKET.—J. T. J., North Wales: Some strawberries do well in one district and not in another, and at the moment of writing we cannot tell whether the varieties mentioned do well where you live. However, a little careful inquiry would, doubtless, elicit the information from local gardeners. Sir Joseph Paxton and Royal Sovereign are the two best market strawberries, and, given a few selected sites, the latter comes quite early. Givon's Late Prolific is a fine free-fruiting late variety, that is ready just as Royal Sovereign finishes. Laxton's Latest is another good late strawberry, with very dark-coloured rich fruits. For general market use we cannot recommend an earlier variety than Royal Sovereign.

VINE LEAVES.—E., South Wales: Overcropping is probably the cause of weakness. Stop the drip. When growing freely give frequent light surface dressings; remove the old inert surface soil when preparing the vinery for next season, and add rich, sound material that will encourage roots to the surface.

WIRING SWEET PEAS.—R. S., Luton: We have looked through the regulations for exhibitors in the schedule of the National Sweet Pea Society, and we find no reference whatever to wiring flowers. We remember, some years ago, several competitors used wires pushed partly up the flower stems to secure additional length and elegance for the sweet peas arranged in the decorative classes. In many cases the stems were quite out of water, and so the flowers soon withered, and, as a consequence, the regulation that "the flower stems must be in water or wet sand" was made. Wiring is distinctly objectionable, and we have no doubt that the authorities will take steps to stop such a practice.

MARKETING FRUIT AND VEGETABLES: M. E., Lechlade: A very useful and handy book, dealing with the packing, grading, and marketing of fruit and vegetables, and one that is especially suitable for small holders, is Mr. R. L. Castle's "Packing and Selling Fruit and Vegetables," 1s. 3d.. post free, from the GARDENERS' MAGAZINE Office, 148, 149, Aldersgate Street, E.C.

ONE PENNY WEEKLY, by post 1½d.

FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (August 1) contains the following:
MARKET GARDENING.
FRENCH CULTURE.
THE POTATO CROP
MILKING MACHINES.
DUST IN THE DAIRY.
LIVE STOCK NOTES
THE COTTAGER'S PIG.
WORMS IN STOCK.
SEASONABLE NOTES ON POULTRY.
RED CLOVER.
SECOND CROP OF HAY.
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OFFICES: 148 and 149, ALDERSGATE STREET, London.

WINTER-FLOWERING SWEET PEAS.—G. L. C., Limpsfield: The sweet peas referred to in the article that appeared in our columns recently belong to a distinct race that is, as yet, not widely grown. Seed can be obtained, however, through the leading seedsmen, as several of the wholesale houses hold stocks. A sowing should be made in September to secure flowers at Christmas or the New Year. Your plan should prove successful, but a little more warmth, permitting ventilation during the dull, cold weather, would be an improvement.

HEART AND DART MOTH.—G. F. H., Monkton: The specimen sent is a small one of the Heart and Dart Moth (Agrotis exclamationis). The dull lilac, yellowish-marked caterpillars of this moth are voracious feeders, and very few crops in the kitchen garden escape their attention. Cabbages, turnips, and leeks they seem especially fond of. A full fed caterpillar enters the soil and makes for itself an oval cell of earth, wherein it changes to the chrysalis form, and from which it emerges as a moth about June of the following year. The grubs do an immense amount of damage by eating through the crown or collar or root, as the case may be, and they feed at night, hiding beneath soil lumps, etc., during the day. It is quite certain that one of the best means of keeping crops free from the pest is thorough surface cultivation; hoeing unearths the grubs, and if it does not kill them it exposes them to the kindly (or deadly) offices of the birds. Where there has been an infestation gas liming is the best method of cleaning the land, after the crop has been gathered.

CARNATION FLY.—F. P. J., Norwood: This pest (Hylemyia nigrescens) is extremely difficult to combat; indeed, as the Board of Agriculture recently pointed out, the only measures practised hitherto with any success being of a preventive character. For example, finely powdered soot or lime may be scattered over the plants when they are wet with dew; this may prevent egg-laying by the flies. A mixture of soot and lime, in the proportion of one bushel of lime to three bushels of soot, may also be used. Egg-laying may also be prevented by spraying the plants with a paraffin and soft soap emulsion, or carbolic acid and soft soap, as advised for the celery fly. Growers have found the carnation fly a very troublesome enemy, and some believe that mixing soot with the soil previous to layering acts as a preventive.

UNSATISFACTORY MEADOWS.—R. M., Leicestershire: The meadows under your charge have probably become impoverished owing to your having taken several crops of hay from them in consecutive years, and if this be the case, they will steadily decrease in fertility, unless steps are taken to enrich the soil. Phosphatic manures are the best to apply to grass lands, and if the soil is heavy they will suffice; but where the soil is light a potash manure should be used in addition. On heavy soils phosphatic manures promote the growth of clover and other leguminous plants, and these collect nitrogen in considerable quantities from the air by means of their root nodules. Bone-meal and basic slag are both excellent fertilisers for grass land on heavy soils, but the last named is preferable, being more quick in action. We suggest that in the autumn you give the meadows a dressing of basic slag at the rate of 10cwt. per acre; and if the soil is light, apply in addition a dressing of either muriate of potash or kainit, the former at the rate of two cwt., and the latter at the rate of six cwt. per acre. When the fertility of the grass land has been restored, it may be maintained in excellent condition by a dressing every third year of basic slag at the rate of four or five cwt. per acre, supplementing this, if your soil is light, with an application of kainit at the rate of two cwt. per acre. If you have a liberal supply of farmyard manure available, you might give a good dressing of that instead of the potash manure.

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Food
for Infants,
Invalids,
and the Aged.

The particular and important feature of Benger's Food is that it can be prepared to suit any degree of digestive power, according to the directions on each tin. In this way it wins back health and strength.

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RATS & MICE.

Harmless to other Animals and Birds.
Single Tube, 2/-; 3 Tubes, 5/-. Post Free
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And of all Chemists.

ABOLISH ALL KINDS OF APHIS, CATERPILLARS AND MILDEW,
FROM YOUR
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TRY IT, YOU WILL NOT BE DISAPPOINTED.
Half-pint, 1/-; Pint, 1/6; Quart, 2/6; Half-gall., 4/-; Gall., 7/6.

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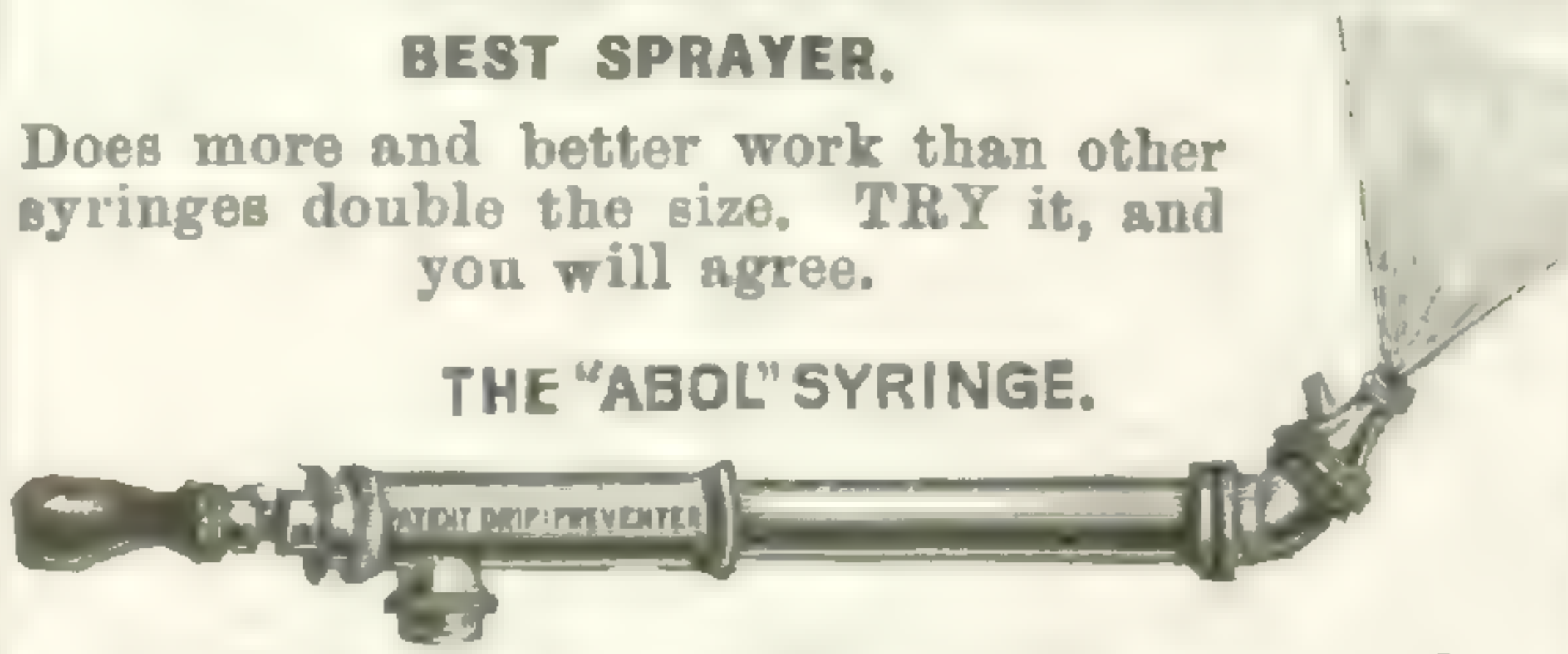

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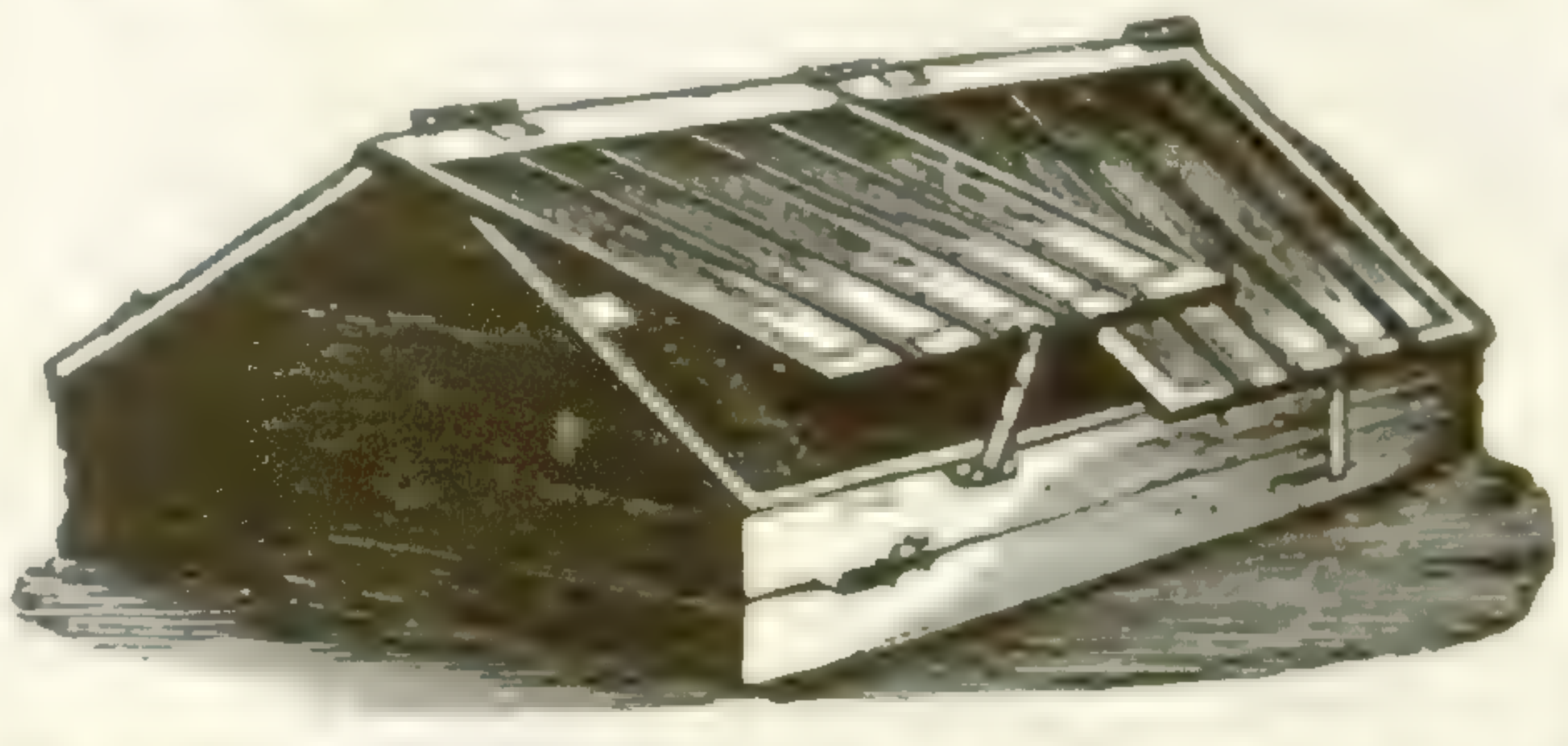

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Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices.	2	0	0
6ft. ,, 4ft. ,,		2	5	0
6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,	Carriage Paid.	4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

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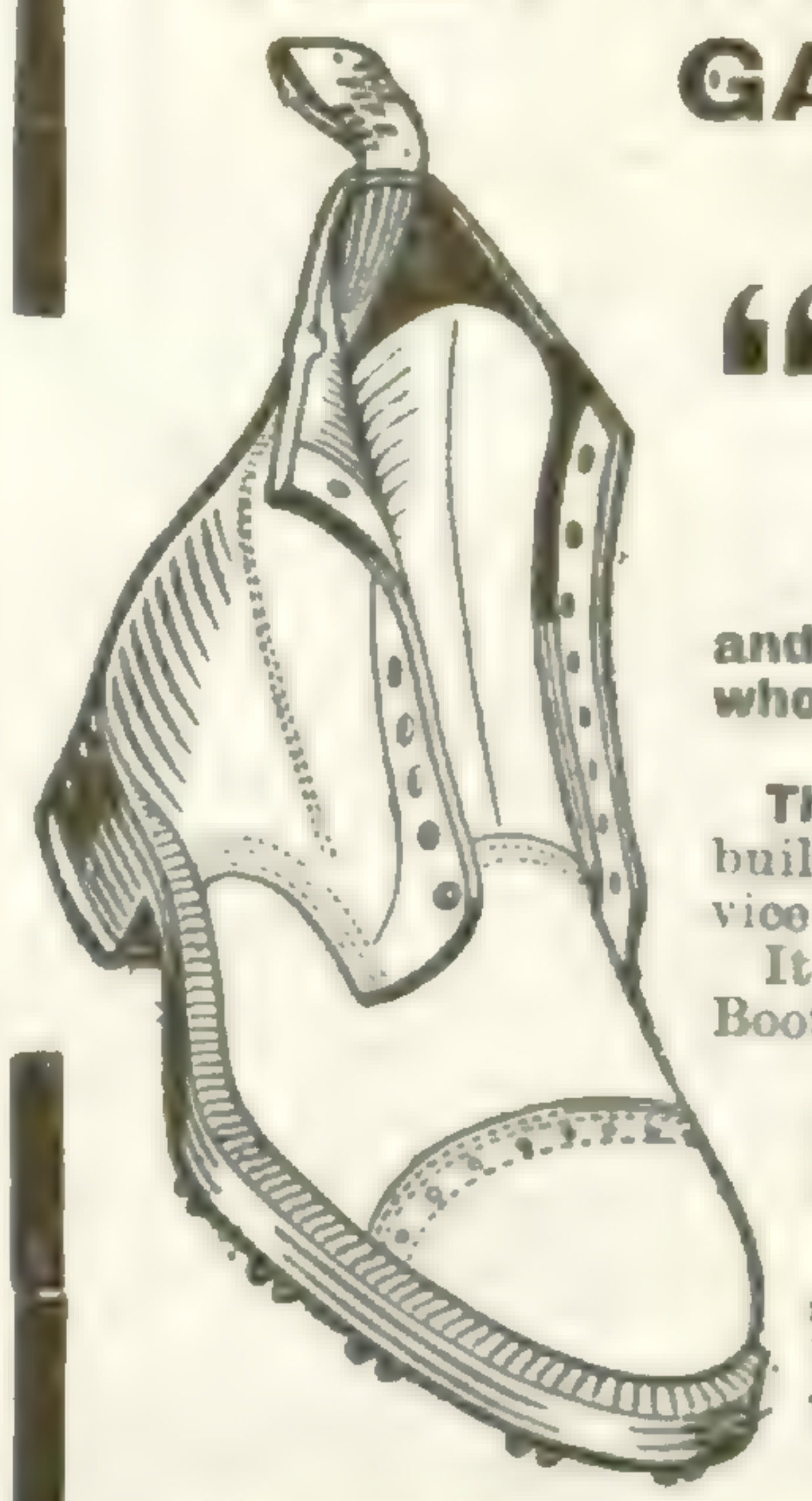
WHO WEARS THE WELL-KNOWN
"FIFE"
BOOTS (Regd.)



and you talk with a man who is generally enthusiastic over his footwear.

The Gardener's "Fife" is built to give service—as it's service you require and pay for.

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The Pioneer of the "Boots-by-Post" Trade.

LIQUID WEED KILLER
(POISONOUS).

One gallon will make 51 gallons, sufficient to dress 200 to 250 square yards. **PRICES—Carriage Paid.**

1 gallon,	3/6; drum,	9d.	10 gallons,	26/-; drum,	5/-
2 ,,	6/6; ,,	1/6	20 ,,	50/-; cask,	5/-
5 ,,	14/-; ,,	2/6	40 ,,	90/-; ,,	5/-

Drums and casks refunded when received carriage paid at Liverpool.

POWDER WEED KILLER.

Prices—No. 1 Tin ...	2/-	Five No. 2 Tins ...	28/-
No. 2 ,, ...	6/6	Ten ,, ,, ...	52/6

Twenty No. 2 Tins .. 100/-.

No. 1 Tin makes 25 gallons, sufficient to dress 80 to 100 square yards.

No. 2 Tin makes 100 gallons, sufficient to dress 330 to 400 square yds. Carr. pd.

No charge for Tins. No empties to return.

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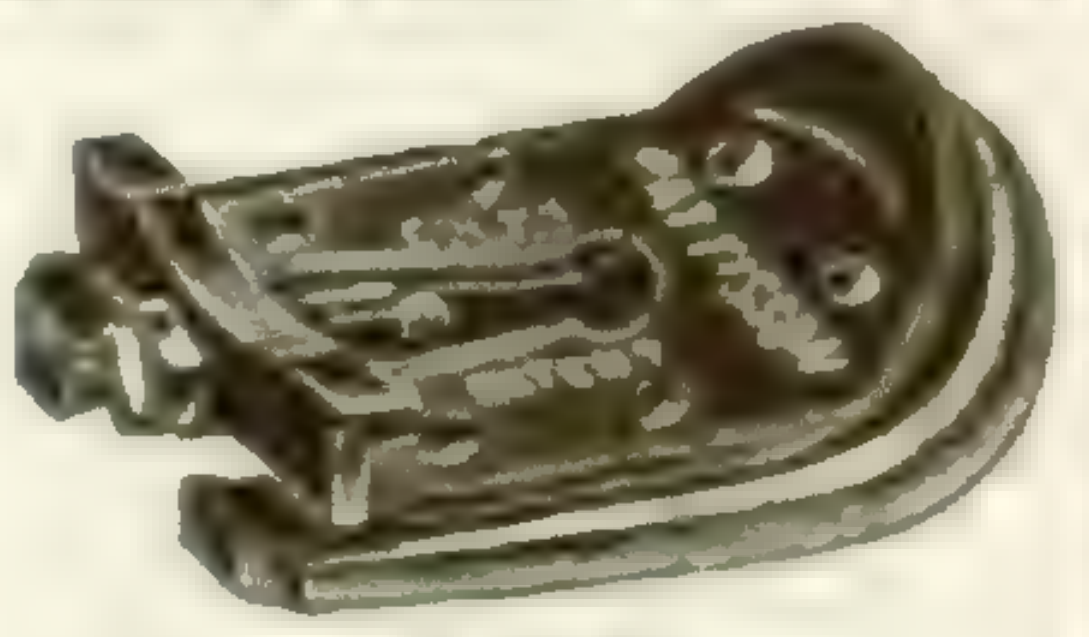

Fig. 1.

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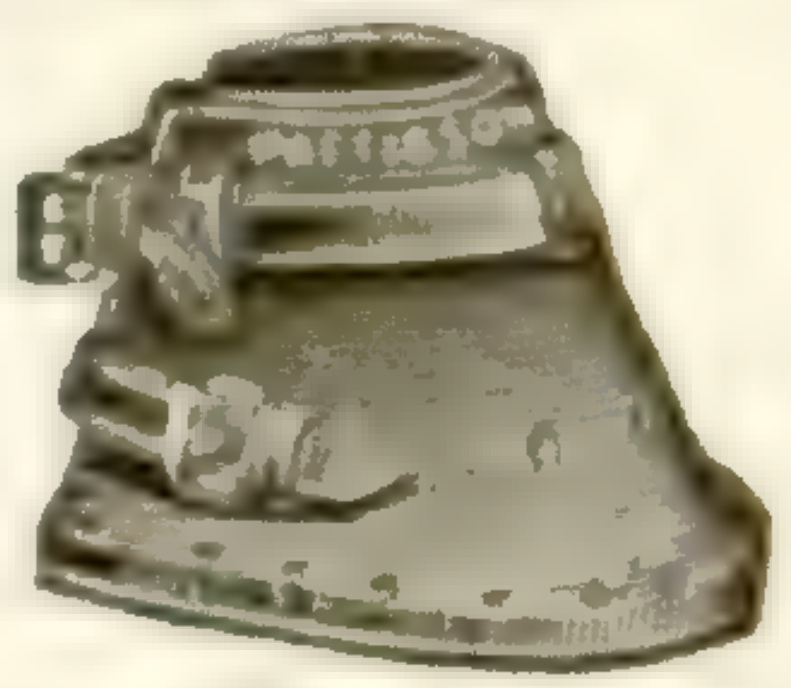

Fig. 2.

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⁂ If a receipt is required for amounts under 10s. a stamped envelope should be forwarded.

NAMES OF PLANTS.

J. J., Wimbledon.—Arenaria balearica.

F. E. F., Newton Abbott.—1, Calceolaria violacea.

A. C. P., Theale.—The Bladder Senna —Colutea arborea.

L. O., Frinton.—1, Lilium chalcedonicum; 2, Heliopsis lævis; 3, Lantana hybrida; 4, Solanum Seaforthianum.

C. S. R., Morpeth.—1, A good Cattleya Warscewiczi; 2, Cypripedium Schlimi; 3, Abutilon megapotamicum.

S. B. T., Warminster.—1, Olearia Haasti; 2, Spartium junceum; 3, Francoa sonchifolia; 4, Fuchsia triphylla.

W. L. C., Saxmundham. — 1, Mussænda frondosa; 2, Specularia perfoliata; 3, Potentilla fruticosa; 4, Hibiscus rosa-sinensis.

W. E. G., Saltash.—1, Sidalcea Listeri; 2, Indigofera Gerardiana; 3, Swainsonia galegifolia; 4, Anchusa italica; 5, Streptosolon Jamesoni.

I. J. K., Tewkesbury.—1, Miltonia Roezli; 2, Nephrodium decurrens; 3, Cuphea Roylei; 4, Rophala corcovadensis; 5, Passiflora cœrulea; 6, Utricularia montana.

P. S., Repton.—1, Pilea muscosa; 2, Acer Negundo variegata; 3, Tigridia pavonia; 4, Chrysanthemum maximum; 5, Lathyrus grandiflorus.

J. L. W., Faversham.—The sweet pea was not in a proper condition for identification. The crinum is C. Powelli, and the one represented by a photograph is probably a form of C. latifolium.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. July 19 to July 25.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 19 Sunday	2 10	57	54	63	55
,, 20 - Monday......	2 10	59	56	68	47
,, 21—Tuesday ...	5 55	57	56	71	49
,, 22 Wednesday.	12 55	65	59	74	50
,, 23—Thursday ...	9 50	66	61	76	54
,, 24—Friday	11 25	69	64	78	52
,, 25—Saturday ...	4 25	67	62	76	56
Means	7 0	63	59	72	53

Date. 1908. July 19 to July 25.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	Temperature of the Soil. At 9 a.m. At 2 ft. deep.	Temperature of the Soil. At 9 a.m. At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
July 19—Sunday	—	60	60	59	52
,, 20—Monday......	—	59	60	59	42
,, 21—Tuesday ...	—	60	60	59	44
,, 22—Wednesday.	—	61	61	59	44
,, 23—Thursday ..	—	63	62	59	49
,, 24—Friday	—	64	63	59	49
,, 25—Saturday ...	—	65	63	59	52
Means ...	(total) —	62	61	59	47

MARKETS.

◆

COVENT GARDEN.

Flowers.

Business is not very brisk just now. Supplies are ample.

		s. d.		s. d.
Adiantum cuneatum ...	per doz. bun.	5 0	to	9 0
Alstrœmerias	per doz. bun.	2 0		3 0
Arums	per doz.	2 6		4 0
Asparagus	per doz. bun.	1 6		6 0
Carnations	per doz. blms.	1 6		2 6
,, ...	per doz. bun.	8 0		12 0
,, Malmaison	per doz. blms.	8 0		12 0
Cattleyas	per doz.	8 0		10 0
Coreopsis	per doz. bun.	1 6		2 6
Croton leaves	per bun.	1 0		1 6
Cypripediums	per doz. blms.	2 0		3 0
Eucharis	per doz.	4 0		5 0
Forget-me-not	per doz. bun.	2 0		3 0
French fern	per doz. bun.	1 0		3 0
Gaillardias	per doz. bun.	1 6		2 6
Gardenias	per doz.	1 6		3 0
Gladiolus Colvillei	per doz. bun.	6 0		10 0
,, large flowered ...	per doz. spks.	1 6		2 6
Gypsophila	per doz. bun.	3 0		5 0
Ixias	per doz. bun.	3 6		6 0
Lilium auratum	per bun.	6 0		9 0
,, candidum	per bun.	1 0		2 6
,, speciosum	per bun.	1 6		2 0
,, longiflorum	per bun.	2 0		3 0
Lily of the Valley	per doz.	6 0		10 0
Marguerites, white	per doz. bun.	3 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	3 0		4 0
Odontoglossums	per doz. blms.	2 0		3 0
Pelargoniums	per doz. bun.	4 0		6 0
Pyrethrums	per doz. bun.	2 0		4 0
Roses	per doz.	1 0		6 0
Smilax	per doz. trails	3 0		5 0
Spiræa	per doz. bun.	5 0		8 0
Statice	per doz. bun.	4 0		6 0
Stocks	per doz. bun.	3 0		4 0
Sweet Peas	per doz. bun.	1 6		2 0
Tuberoses	per doz. blms.	0 4		0 6

Fruits.

Soft fruits are abundant and good, and there is a brisk demand.

		s. d.		s. d.
Apples, Australian	per case	6 0	to	14 0
,, Tasmanian	per box	10 0		16 0
,, English	per ½-sieve	2 0		4 0
Apricots	per box	0 9		1 0
Bananas	per bun.	4 0		10 0
Cherries	per ½-sieve	2 6		8 0
Currants, red	per ½-sieve	3 0		4 0
,, Black	per ½ sieve	6 0		7 0
Figs	per doz.	1 0		3 6
Gooseberries	per ½-sieve	2 0		4 0
Grapes, English (new)	per lb.	1 0		3 0
,, Belgian	per lb.	0 9		1 3
Greengages	per ½-seive	4 0		7 0
Lemons	per case	6 0		16 0
Melons, Guernsey	each	0 9		2 0
,, English	each	1 0		2 0
,, Valencia	per case	9 0		12 0
Nectarines	per doz.	3 0		10 0
Oranges	per case	9 0		30 0
Peaches	per doz.	3 0		12 0
Pears, Australian	per box	3 6		5 0
Pineapples	each	2 0		6 0
Plums	per ½-sieve	3 0		7 0
Raspberries	per doz. pun.	5 0		7 6
Strawberries	per doz. pun.	4 6		7 6

Vegetables.

A steady demand is amply met.

		s. d.		s. d.
Artichokes	per doz.	1 6	to	1 9
Beans, broad	per bush.	2 0		4 0
Beet	per bush.	1 3		2 0
Cabbage	per tally	1 6		2 6
Carrots	per doz. bun.	1 6		3 0
Cauliflowers	per doz.	1 0		3 9
Cucumbers	per doz.	1 6		2 6
Endive	per doz.	1 6		1 9
Horseradish	per doz. bun.	9 0		12 0
Lettuce, cos	per score	1 0		2 0
Mint	per doz. bun.	1 0		1 6
Mushrooms	per doz. lb.	6 0		8 0
Onions, spring	per doz. bun.	1 0		2 0
,, Valencia	per case	7 0		8 6
Parsley	per doz. bun.	1 0		1 6
Peas	per bush.	3 0		4 3
Radishes	per doz. bun.	0 4		0 6
Spinach	per bush.	1 3		1 6
Tomatoes, English	per doz. lb.	2 6		4 6
,, Guernsey	per doz. lb.	2 0		3 0
Turnips (new)	per doz. bun.	1 6		3 0
Vegetable Marrows	per doz.	0 10		1 0

LONDON POTATO MARKETS.

Trade is dull and old potatoes have finished.

		s. d.	s. d.
Jerseys	per cwt.	4 0	5 6
Cherbourg	per bar.	3 6	4 6
St. Malo Giants	per cwt.	3 6	4 6
English, Kent	per bush.	4 0	5 0
,, Lincoln	per cwt.	4 0	6 0
,, Puritans	per cwt.	4 0	4 6

FORTHCOMING ENGAGEMENTS.

The Editor is always glad to receive intimation of exhibitions, and copies of schedules.

MONDAY, August 3. — Carshalton Horticultural Society.
Weybridge Horticultural Society.
Andover Horticultural Society.
Atherstone Horticultural Society.

TUESDAY, August 4.—Royal Horticultural Society; Meeting of Floral, Fruit, and Orchid Committees at noon; General Meeting, 3 p.m.; Scientific Committee, 4 p.m.
Leicester Flower Show in Abbey Park, two days.

WEDNESDAY, August 5.—National Sweet Pea Society; Exhibition at Dublin.
Royal Horticultural Society of Ireland.
Burwash Horticultural Society.
Haywards Heath Horticultural Society; visit to Bueshall Gardens.
Clutton Flower Show.
Ardingley Floral Society.
Burwash Horticultural Society.

THURSDAY, August 6.—Bluntisham Horticultural Society.

FRIDAY, August 7.—Whitley Horticultural Society.

TUESDAY, August 11.—Clay Cross Horticultural Society.
Exmouth Horticultural Society; two days.

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Employment THE GARDENERS' MAGAZINE Register.

The charge for an Advertisement INCLUDES A FREE ENTRY ON THE REGISTER. Immediate Notice must be given when an engagement is secured.

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GARDENER (Head Working); life experience in all branches; twelve years' excellent character, nine previous; life abstainer; married, two children, youngest 13. Address C. SEYMOUR, 29, College Road, Hayward's Heath, Sussex.

GARDENER (Head Working), age 47; good practical experience in all branches, Inside and Out; many years as Head; can have good references. H. TURNER, Fineshade, Stamford.

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GARDENER (Head or good Single-handed); good practical experience in all branches; grapes, melons, cucumbers, peaches, stove and greenhouse plants, flower and kitchen garden; age 43; married, no family. Apply W. F., Office of this Paper.

GARDENER (Head or good Single-handed, where help is given); life experience Inside and Out; good references; middle age; widower. G. B., 17, Eversleigh Road, Lavender Hill, London, S.W.

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GARDENER (Single-handed or with help); willing to be useful; good references; married, 3 in family. Apply WALTER LYONS, 2, Hastings Villas, Lower Caversham, Oxon.

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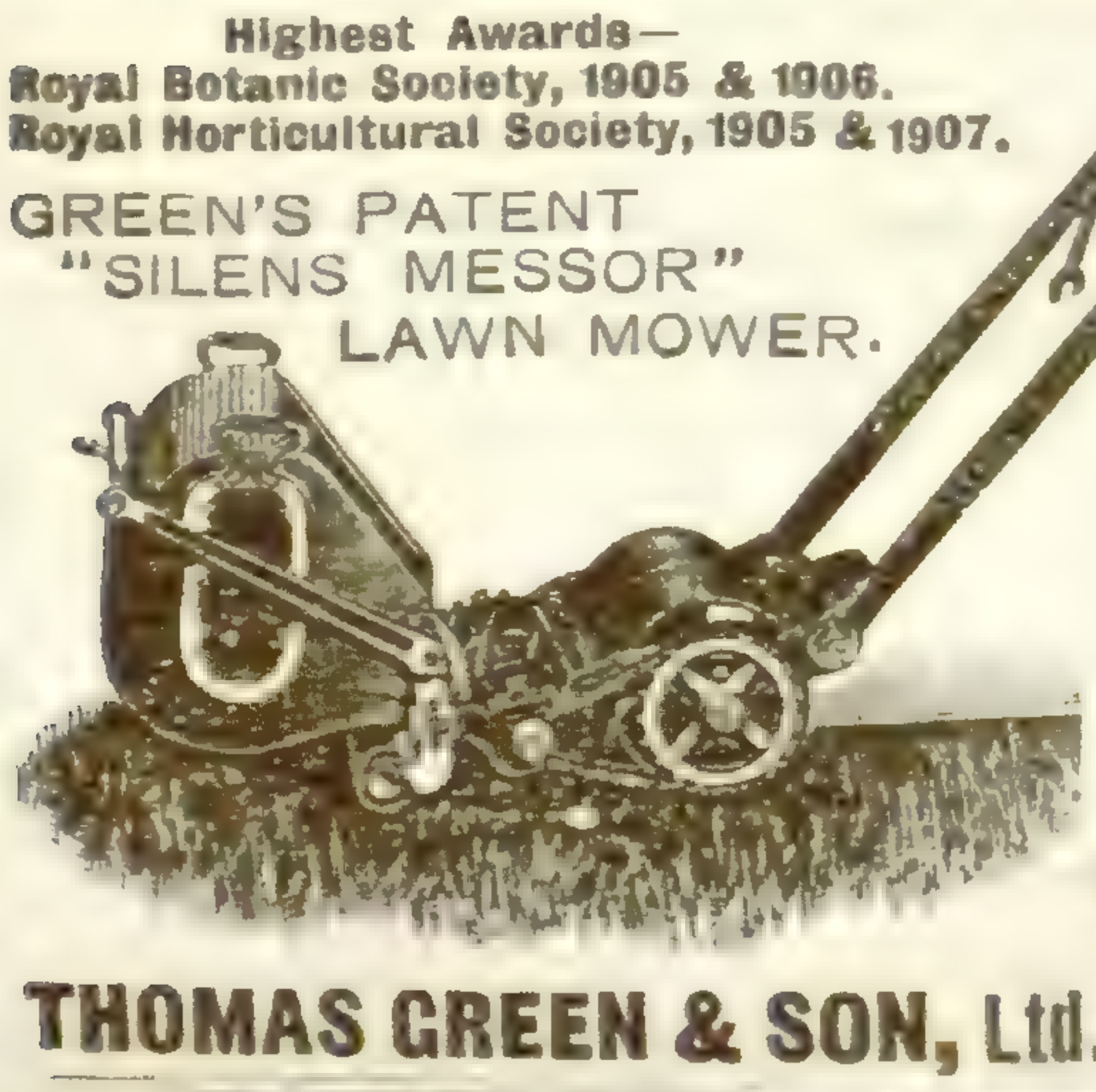

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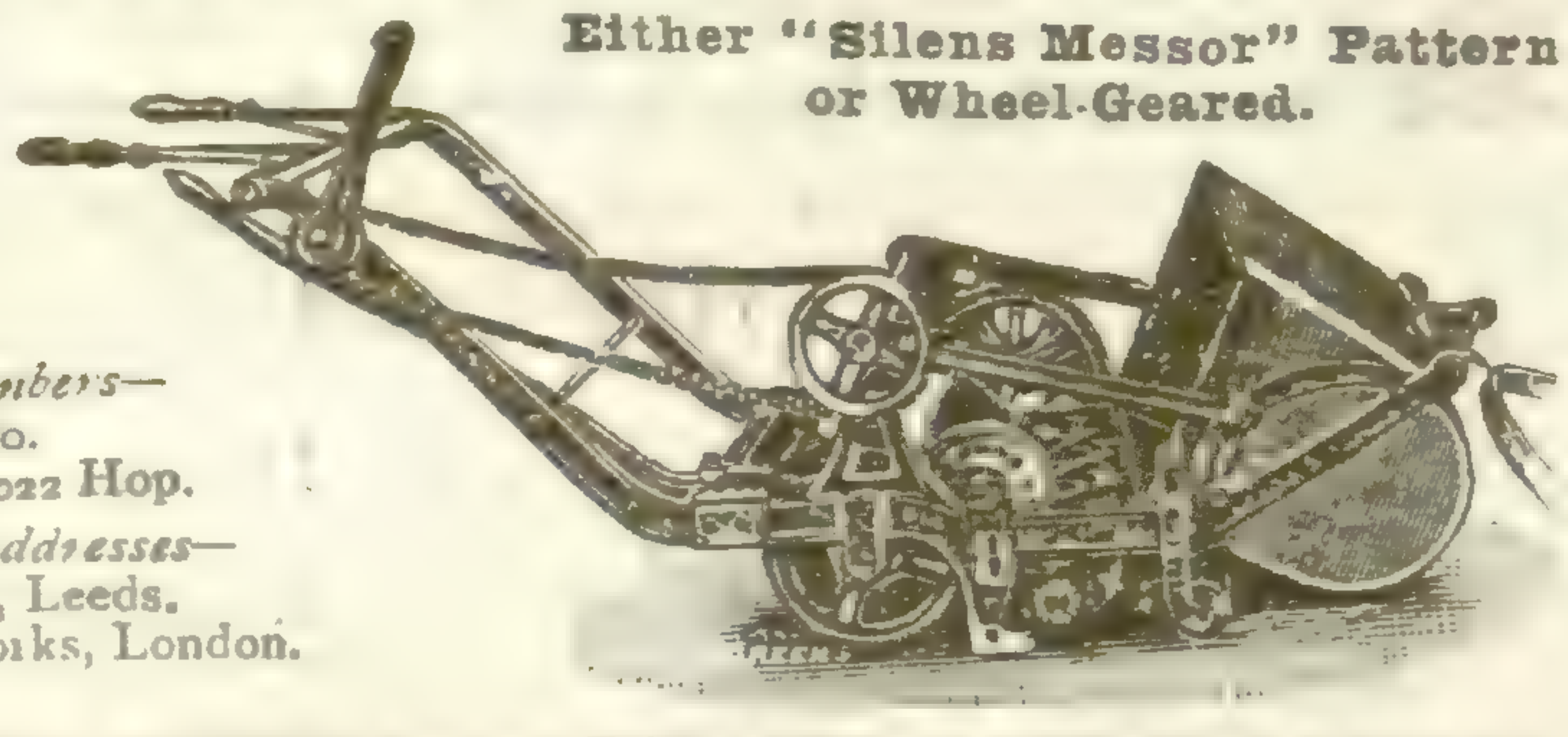

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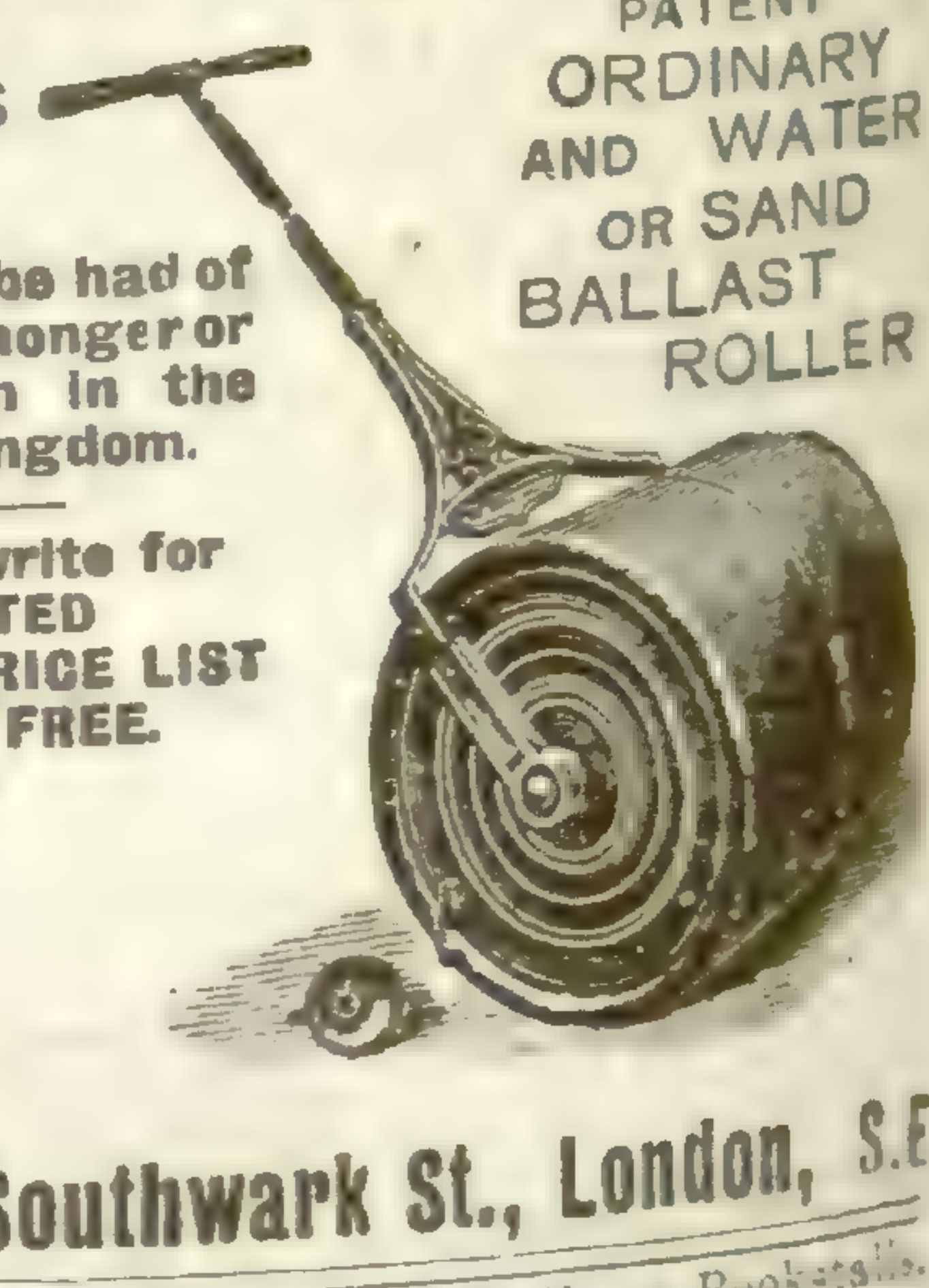

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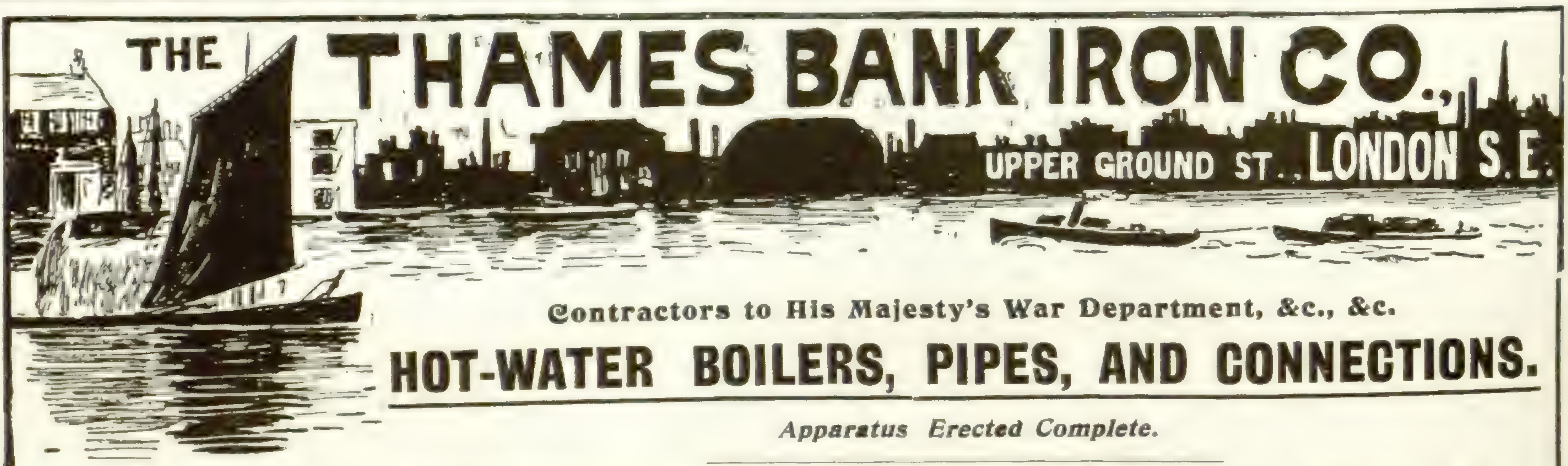

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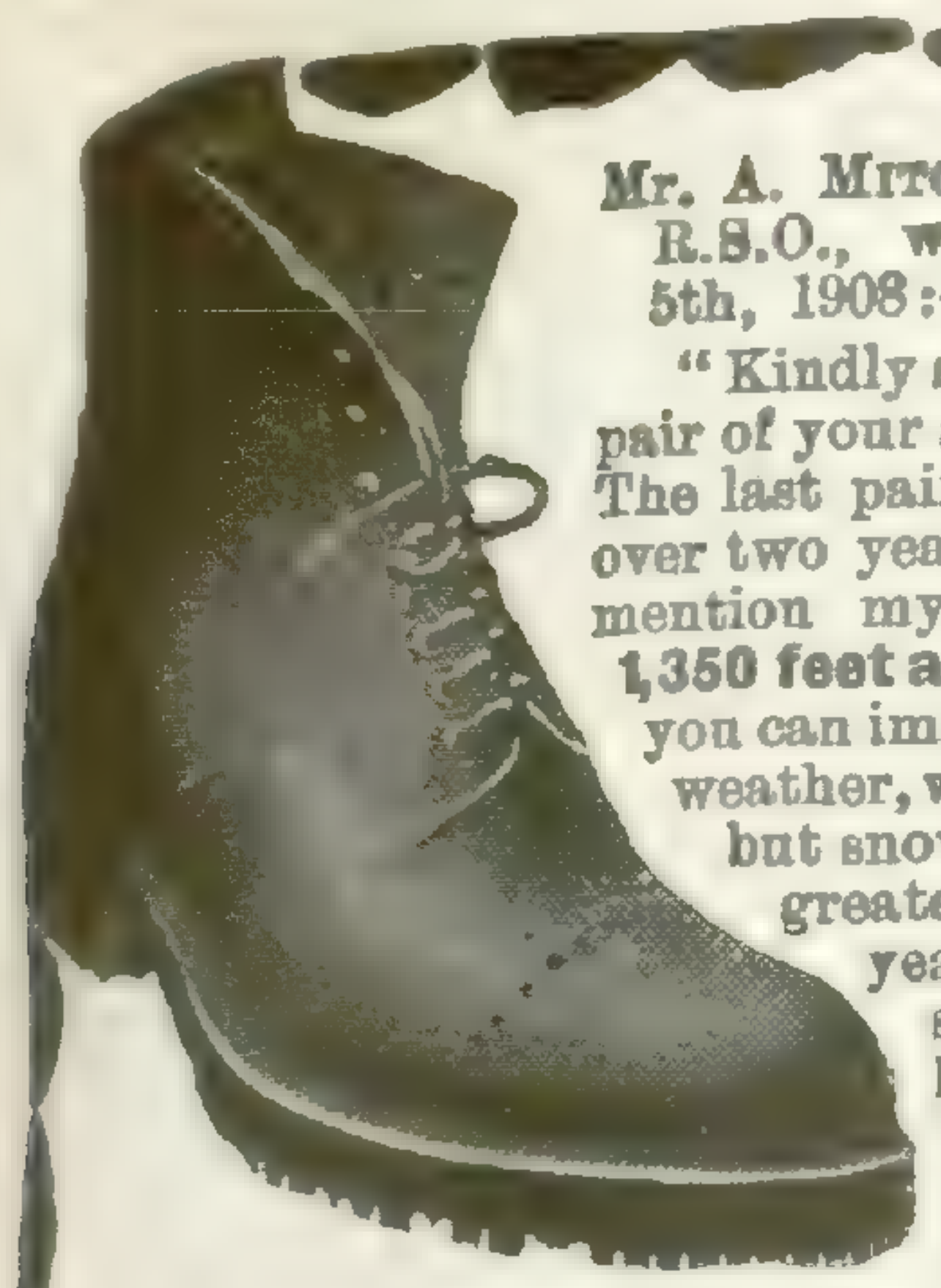

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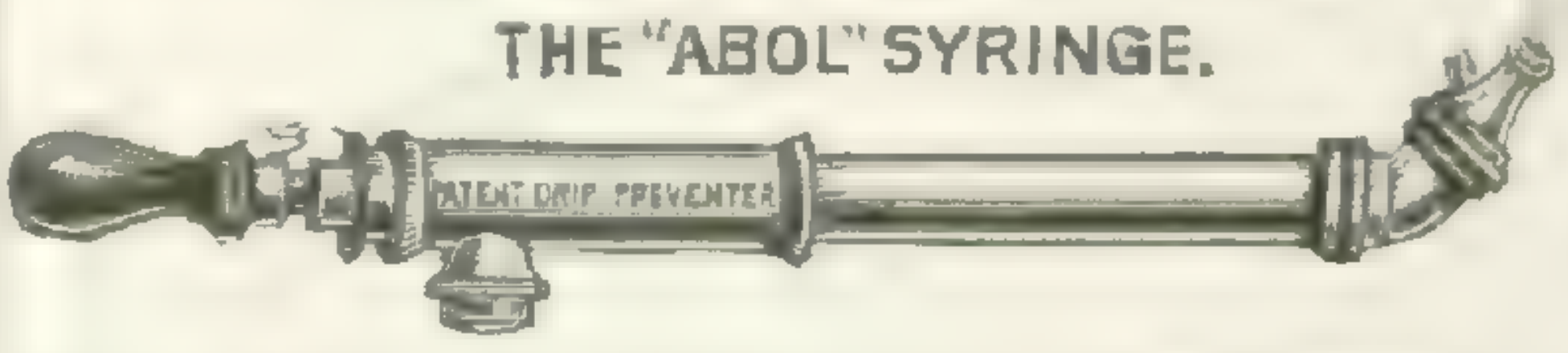

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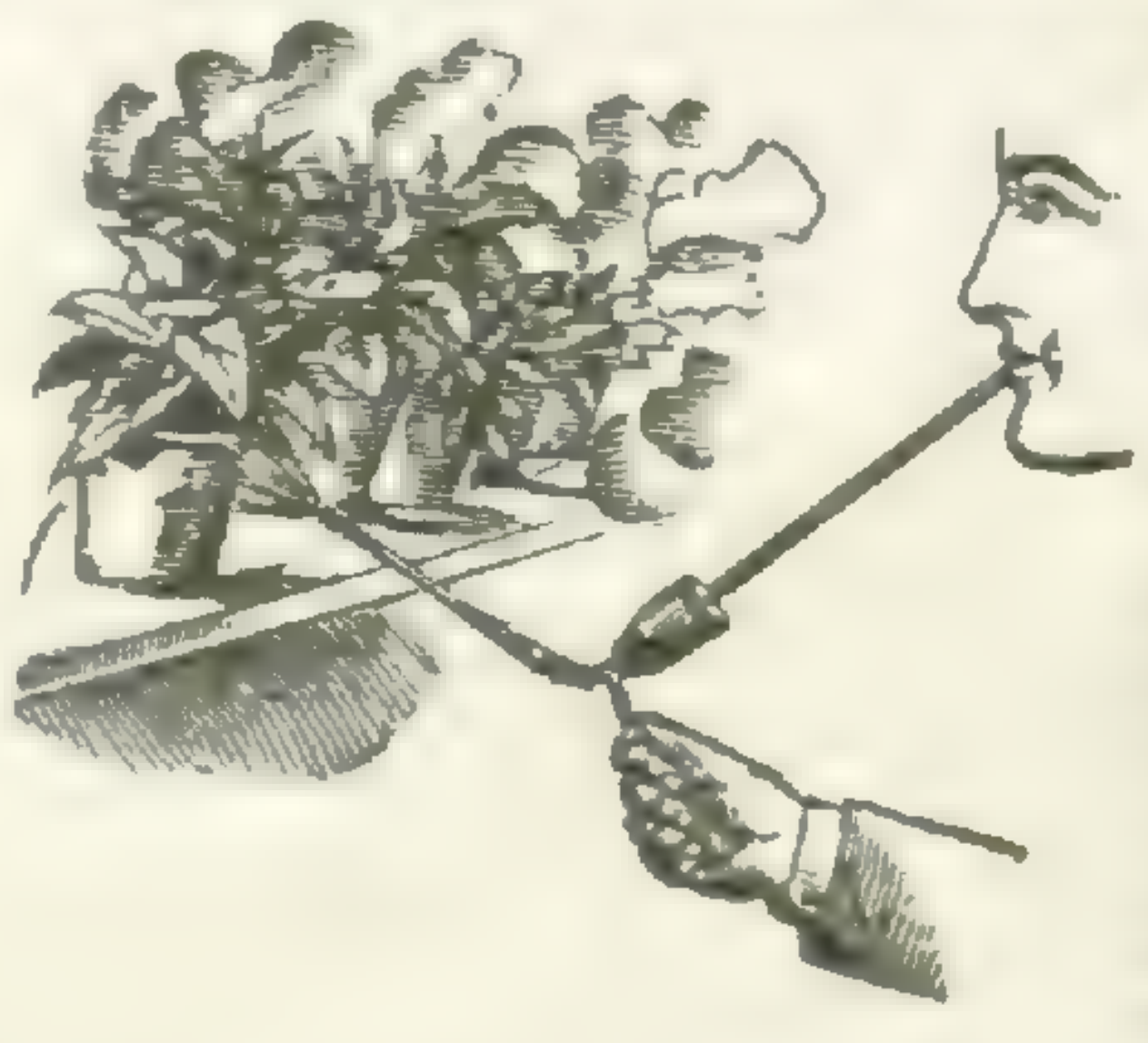

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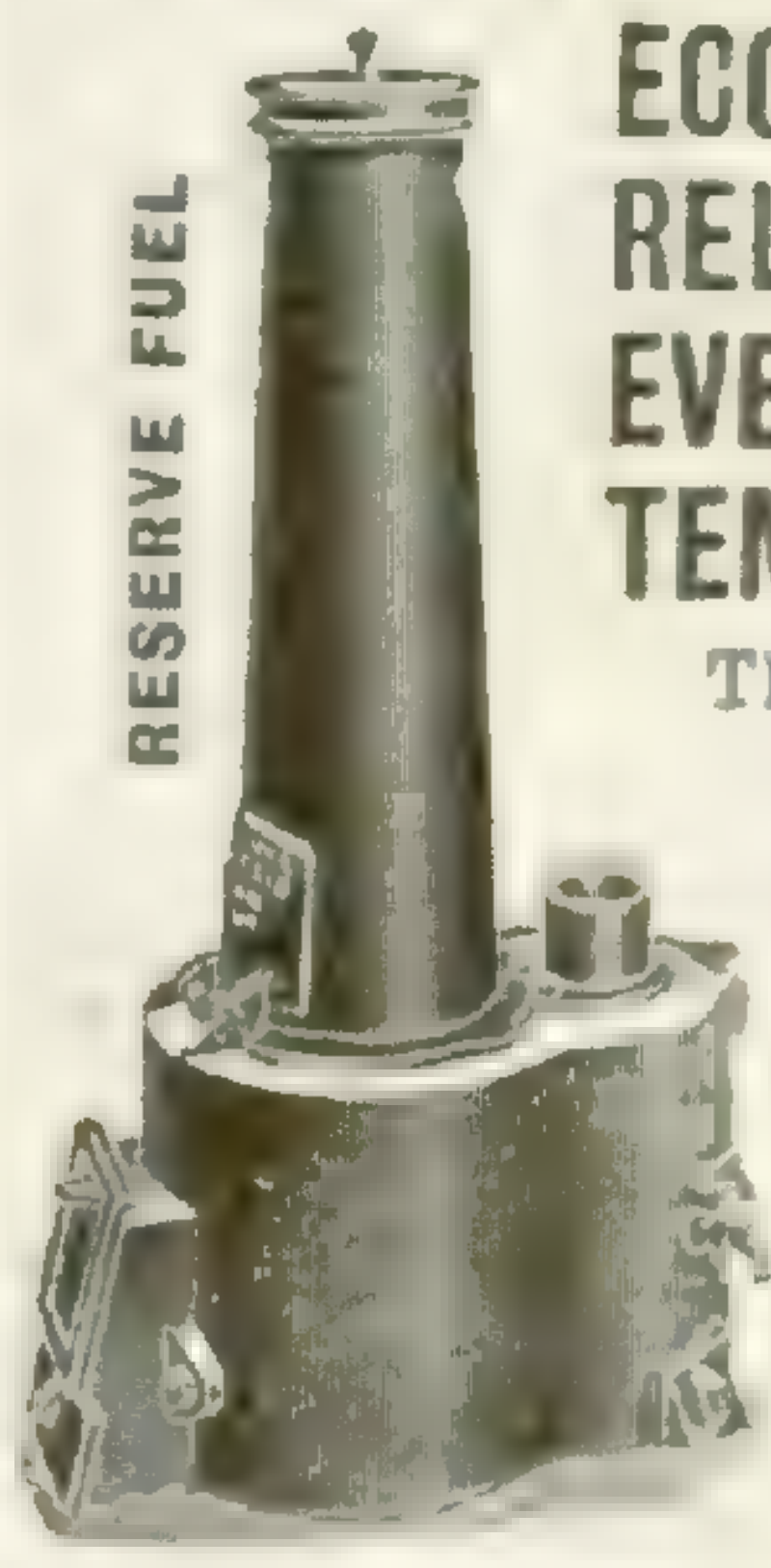

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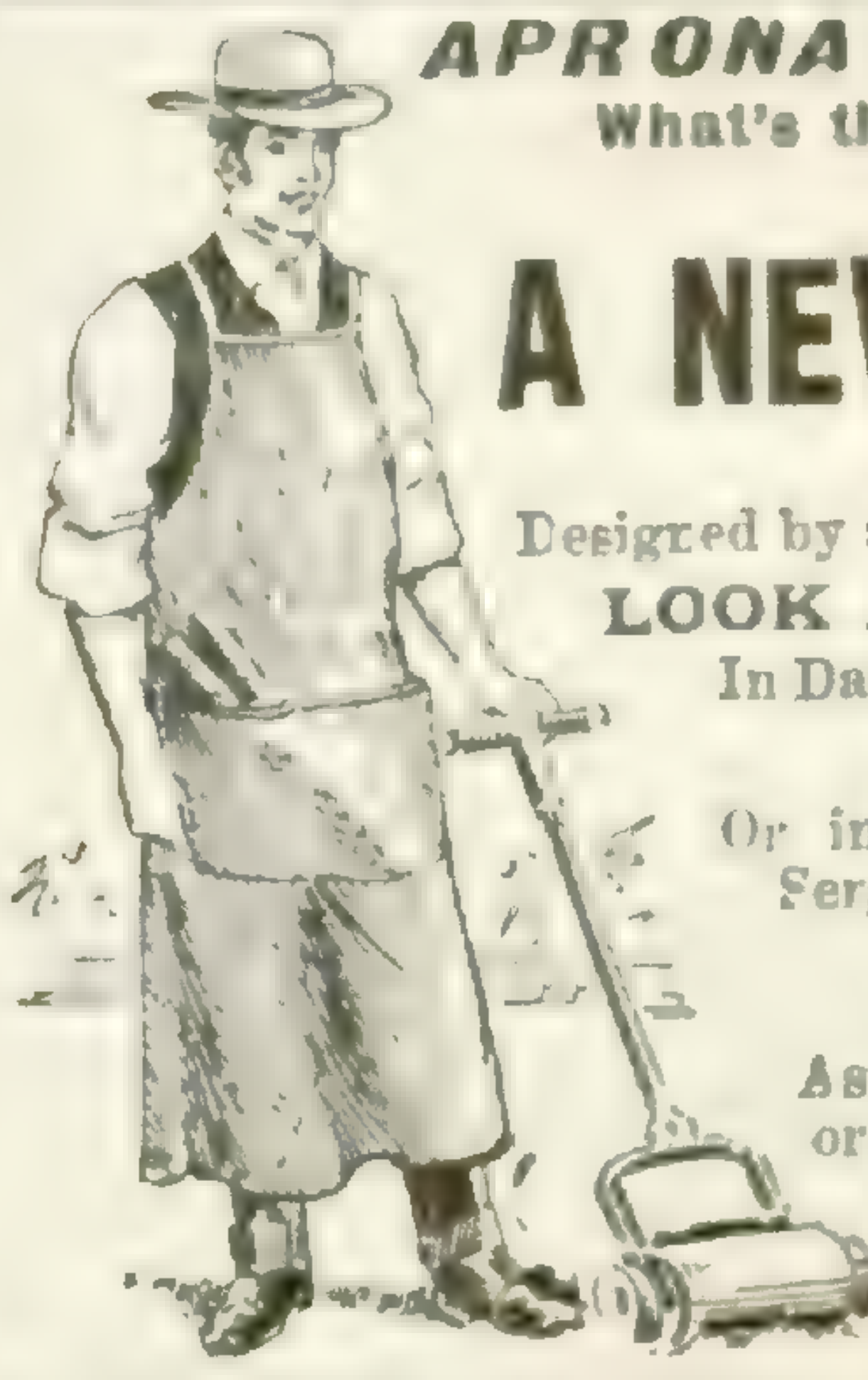

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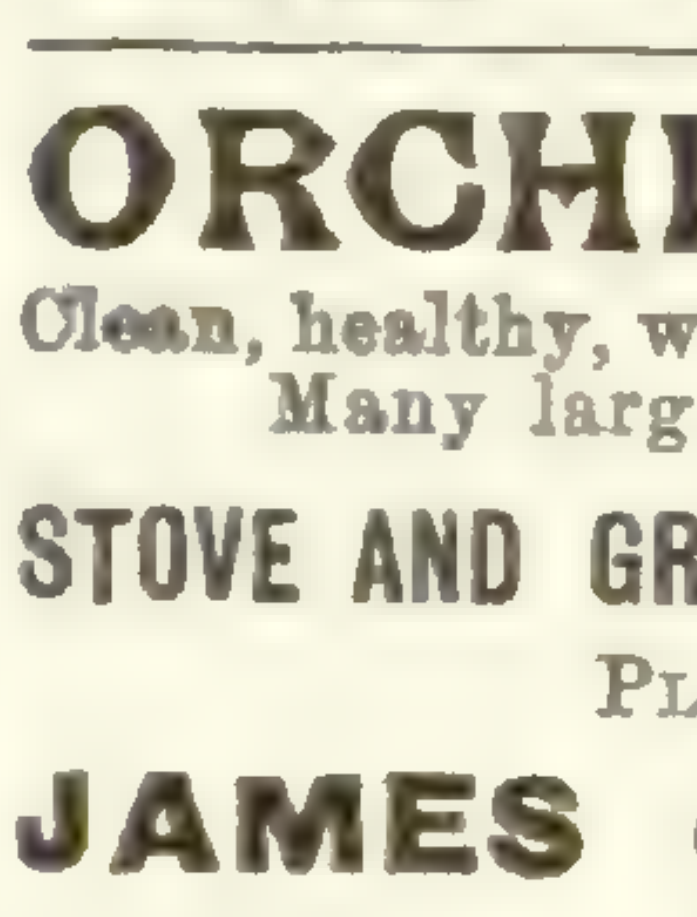

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VOL. LI.—No. 2,858. SATURDAY, AUGUST 8, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Curiosities at Flower Shows.

Within a comparatively recent period many improvements have been effected in the conditions under which the exhibitions of the smaller local societies are held, and as the result the usefulness of these gatherings has been greatly increased. Schedules are now more carefully drawn, and with a clearer statement of the regulations governing the competitions, a considerable proportion of the difficulties with which exhibitors and judges had to contend have been removed, or so materially lessened as to render it a comparatively easy matter to surmount them. Greater regard is now paid to the importance of punctuality, and the judges, instead of having to wait an hour or more before commencing their duties, are, as a rule, able to enter upon them within a few minutes of the time stated in the schedule. This is as it should be, in the interest of all concerned, and especially in that of the exhibitors, who, strangely enough, like to remain in the tents as long as possible. It is sometimes asserted that exhibitors must have considerable grace allowed them, but surely if exhibitors at the large shows can complete their arrangements by the prescribed time, those at small ones should be able to do so. We have no doubt as to their ability in this respect, and for the information of those responsible for the exhibitions at which the old order still obtains, we would mention that there is less bustle when the tents are cleared at the time fixed than when exhibitors are allowed to remain an hour or so afterwards. Another noteworthy improvement is that made in the methods of staging adopted by cottagers, who contribute so freely of the products of their gardens and allotments to the lesser shows. Not so many years ago they paid but little regard to the quality of their products, or to neatness in staging, but now the quality is usually high, and the arrangement tasteful. Although so much improvement has been effected, it is necessary that those who are responsible for the management of flower shows should be ever on the alert, and to make from time to time such alterations in the rules as may be rendered necessary by the changes that are continually in progress. We have been impressed by the necessity for this being done by a few "curiosities" that have come under our notice during the present season. One of the greatest of the curiosities has been the inclusion of Asparagus Sprengeri, popularly known as the "asparagus fern," in collections of ferns. To enable the judges to deal effectually with a matter of this description does not require any alteration in the regulations, and we refer to it for the purpose of pointing out that judges fail in their duty when they allow an asparagus to be shown as a fern, because the exhibitor possibly did not know that it was not one. We have also noticed at several exhibitions a tendency on the part of some of the exhibitors to increase their collections of vegetables in a manner not contemplated by the schedule. In each case the class was for "a collection of vegetables, six kinds," and the exhibitors who deviated from the usual course included a second variety of one or more of the kinds, and they did so without risk of being disqualified. There was not any stipulation as to the number of dishes or of varieties, and as there was no limit as to quantities, the only justification for disqualification would have been "custom," and that would have been unsatisfactory. The practice of duplicating varieties in collections in which the number of kinds is fixed could be easily checked, and checked it certainly should be by adding "One variety of each" and we would strongly advise this addition being made. The word "herbaceous" is not a curiosity in schedules, but its free use therein has given rise to the curious practice of judges giving awards to collections of flowers staged in classes for "herbaceous plants" of which several are not herbaceous, i.e., do not die down every year. It it quite time this curiosity should be banished from flower shows, and we suggest that they happens, the judges interpret the schedule strictly, disqualification follows, and much unpleasantness arises. The time has come when the use of "herbaceous" should be discontinued, and "perennials" be substituted. Were this to be done makers of schedules would obtain exactly what they wish to have contributed to their shows, and we suggest that they should ask for "Twelve bunches of cut flowers, hardy perennials," and to make it quite clear that they require the flowers of hardy perennials as ordinarily understood, it will be advisable to add, "Flowers of trees and shrubs excluded." Another "curiosity" that has been met with on several occasions has been the inclusion of such plants as petunias and verbenas in collections of annuals, and within the past few weeks we saw a collection of twelve to which a first prize had been awarded that contained the flowers of nine plants of this class. An annual is defined as a plant that completes its life cycle within the year, or to give a fuller definition, an annual is "a plant that is raised from seed, blooms, and ripens its seeds, and dies down within the year." Therefore, when prizes are offered for annuals the flowers of plants that are strictly annual in duration should alone be allowed, and it is the duty of judges to see that perennials which can be raised from seeds sown in the spring, and flowered

MR. JOSEPH BURTON.
Superintendent of Public Parks, Leicester.

in the following summer, do not receive prizes. It is in all cases advisable to closely follow the regulations, as when awards are made to collections that do not comply therewith there is a possibility of exhibitors, in the course of a few years, failing to pay due attention to them, and with a loose system of staging the risk is ever present of difficulties arising on the day of the show. Annuals, by reason of their distinctness and beauty, and the facility with which they can be grown, are deserving of all the encouragement they could well receive, and no other flowers should take their place in classes specially provided for them.

Mr. Joseph Burton, whose portrait we give herewith, has long occupied an important position in the management of the Leicester public parks, and in the exercise of his skill, judgment, and taste has contributed in no small degree to the fame which the town so deservedly enjoys for the beauty and interest of its fine open spaces. Mr. Burton, who obtained his horticultural training in some of the leading establishments in the United Kingdom, received an appointment in the Abbey Park soon after it was opened, and this was held with so much credit to himself, and advantage to the town, that on the retirement of Mr. John Burn some years ago, he was appointed by the Parks Committee, of which Mr. Councillor Hawkes is the chairman, to the important position of superintendent, an appointment which has been amply justified by the splendid condition of the beautiful Abbey Park, the breezy Victoria Park, and the other open spaces under his charge. In addition to his other duties Mr. Burton is the superintendent of the Abbey Park Flower Show, which, annually held on the Tuesday and Wednesday following the August Bank Holiday, has so grown of late years that it has now become one of the most important of the horticultural exhibitions held in the provinces. This exhibition, although not associated with the Corporation finances, is under the management of the Parks Committee, who have taken, and continue to take, a generous view of the requirements of the public in the matter of open spaces, and have endeavoured, with much success, to foster a taste for gardening among the masses. Here, as in his other duties, Mr. Burton has achieved much success, and by no one is his splendid services more highly appreciated than by the members of the excellent committee under whose control the public parks of Leicester have been placed.

The August Bank Holiday, as in the case of that associated with Whitsuntide, was favoured with exceptionally fine weather, and in all parts of the country full advantage was taken of such opportunities as presented themselves for enjoying the beauties of the country, and the charms of the public parks and gardens. In and around the Metropolis the public parks and gardens were crowded throughout Monday, and, according to the official returns, there were upwards of 98,000 visitors to the Royal Gardens, Kew. It is estimated that between 70,000 and 80,000 persons visited Hampton Court, and that about the same number went to Epping Forest.

Club Root in Brassicas.—For some years past experiments of a comprehensive character have been conducted on the Cockle Park Farm under the direction of Professor Gilchrist, chief of the Armstrong Agricultural College, Newcastle, for the purpose of determining the best remedy for club root in turnips, cabbages, and other allied crops. The prevention and cure of the disease caused by the slime fungus Plasmodiophora brassicæ is a matter of considerable practical importance to both the gardener and farmer, for many thousands of pounds are annually lost owing to the ravages of this fungus. Lime has long been recognised by cultivators as the only material that is effectual in combating the disease, but it is not generally known that the beneficent effects are only obtained under certain well-defined conditions. According to the results obtained in the Cockle Park experiments, a dressing of lime of about ten tons per acre the first year, followed by dressings of five tons and two and a-half tons in the third and fourth years, have been the most effective. In the third and fourth years dressings of lime mud, at the rate of ten tons per acre, at about one fifth the cost of the ten tons of lime, have been very effective. It has been fully demonstrated at Cockle Park that some time elapses before the lime is able to check the spread of disease to any appreciable extent. The lime must have time to become thoroughly incorporated with the soil before it can have a repressive effect upon the fungus. From the particulars given of the plots in 1904 and three following years, we learn that there was not a turnip free from disease on any one of the plots in the first year. The following year there were a few sound roots in the plots that had been limed, and in the third and fourth years there were marked improvements. The results obtained suggest the advisability of growing on ground infected with the germs of the club root disease, crops not subject to it for at least one year after the dressing of lime has been applied.

Southwark Park's New Lake.—The new lake in Southwark Park is rapidly nearing completion. The work was begun at the end of January, and over a hundred men, selected from the ranks of the unemployed, have found work and wages here. The London County Council has spent about £2,000 on material for this new lake, and it proposes to purchase twenty skiffs, and place them on the water ready for the opening day, August 29.

Electricity in Gardening.—In a very interesting account of the effect of electricity on growing crops, Sir Oliver Lodge states that the experiments which have been carried out on a farm near Evesham during the past few years for the purpose of determining the influence of electricity on plant growth, have proved so successful that the experimental apparatus has been replaced by a permanent installation. Impressed by the results obtained by Professor Lemström, a distinguished Swedish scientist, in the course of his experiments a few years since, and the results obtained by themselves in the course of some preliminary experiments they conducted at Bitton, Mr. J. E. Newman, of Gloucester, and Mr. R. Bomford, of Salford Priors, determined to conduct some experiments on a large scale. They applied to Sir Oliver Lodge for advice and assistance, which he gave, and sent his son, Mr. Lionel Lodge, to superintend the experiment. The method adopted was to stretch over the field in which the experiment was carried out a number of wires on poles high enough for loaded wagons to pass under the wires. The wires are supported on the posts by high tension insulators, are thirty feet apart, and extend over the whole area under experiment. The system of conductors was then connected at one post with a generator supplying positive electricity at a potential of about 100,000 volts, and with sufficient power to maintain a constant supply of electricity at this kind of potential. "Leakage," we are told, "immediately begins, and the charge fizzes off from the wires with a sound which is sometimes audible, and with a glow which is sometimes visible in the dark." In 1906 an increase of 40 per cent. was obtained in the yield of red, and 30 per cent. of white wheat, over crops growing in the control plots. Strawberries and raspberries were treated electrically on another plot, and the first-named fruits showed an increase of 33 per cent., while the latter showed a marked improvement in the new canes, but hardly any in the old. It is further stated by Sir Oliver Lodge that Mr. J. E. Newman, in his experiments at Bitton, in 1904, obtained the following increases per cent.: Cucumbers, 17; celery, 2; carrots, 50; beet, 33; strawberries (five year plants), 36 and strawberries (one year plants), 80. In broad beans there was a decrease of 15 per cent., but the crop was ready for gathering five days earlier, and cabbages were ready ten days earlier, but in tomatoes there was no difference.

Instructor in Horticulture in Cheshire.—The Cheshire County Council have appointed Mr. A. Calderbank, gardener to A. H. Crossfield, Esq., M.P., Glenfield, Altrincham, as county instructor in horticulture, and superintendent of the experimental gardens at Holmes Chapel. Mr. Calderbank is well known as a successful exhibitor and judge, and has been greatly sought after as a lecturer. He takes a great interest in hybridising and raising new plants, and his genial manner should prove helpful to him in his new sphere.

The Tree Question in United States.—A writer in an American contemporary estimates the standing timber of the States at between fourteen hundred and two thousand billion feet. He adds: If we use forty billions per annum, we can run thirty-five to fifty years at the present rate, provided we do not have any waste. If we use one hundred billions per annum our timber will last fourteen to twenty years, on the same basis. If we use one hundred and fifty billions per annum in nine to thirteen years our timber will be all gone! We have now about 165,000,000 acres in our national reserves. If we had three times that much we should not have enough. If it costs twenty acres a Sunday or forty acres a week, or 2,080 acres a year to print one daily newspaper, what does it cost in acreage to print all the newspapers in all the cities and towns of America? Add to this the enormous editions of our magazines. The total staggers the imagination, and yet the amount of timber cut for pulp in the United States annually is less than five per cent. of what is cut for lumber. Last year we made more than 315,000,000 lead pencils. A lead pencil is not very large, but the total number of lead pencils required 7,300,000 cubic feet of cedar. We have cedar enough to last us just twenty years. More than 100,000 acres of timber, in the whole United States, are cut over every working day. We use many times more timber per capita than any other nation. We have left not over 450,000,000 acres bearing commercial timber.

Gooseberry Mildew in Kent. We learn that the destructive American gooseberry mildew has broken out badly in some parts of Kent, and that the County Council authorities are making strenuous efforts to prevent the disease from spreading.

DUBLIN FLOWER SHOWS.

Royal Horticultural Society of Ireland.

The annual autumn exhibition of this important Irish society was held in various parts of the University buildings on Wednesday, August 5. Competition in the several sections devoted to fruit, flowers, and vegetables was not so keen as might have been expected, but the quality in several of the rose classes, grapes, hardy annuals, double tuberous-rooted begonias, and small fruits was excellent, and compensated largely for the comparative lack of contestants. The provincial exhibition of the National Sweet Pea Society was held in association with this show, and of this a report will be found in another column. The arrangements, in the hands of the newly-appointed secretary, Mr. E. Knowldin, were admirably carried out.

The weather during the past few weeks has been the reverse of favourable to roses, but many really superb blooms were staged in the single truss and other classes. For seventy-two blooms, Mr. Hugh Dickson, Belfast, was a splendid first with a bright, fresh set, among which Ben Cant, Madame Eugene Verdier, Etienne Levet, Hugh Dickson, Her Majesty, Suzanne Marie Rodocanachi, and Bessie Brown, were conspicuous; Messrs. Alexander Dickson and Sons, Lim., Newtownards, were second, with Mrs. John Laing, Frau Karl Druschki, Mildred Grant, Ulrich Brunner, and Queen of Spain as some of their best. The same order was maintained for twelve distinct varieties introduced since 1904, Mr. Hugh Dickson showing Joseph Hill, J. B. Clark, Mrs. Stuart Clark, and Hugh Dickson in fine form; while Messrs. A. Dickson and Sons had Joseph Hill, Queen of Spain and Hugh Dickson in good condition. Messrs. A. Dickson and Sons were the only exhibitors in the class for twenty-four teas, and were awarded the premier prize.

Mr. W. H. Calvert, Helens Bay, was first for twenty-four blooms, not less than twelve varieties; his Madame Hoste was magnificent in form and colour, while Ulrich Brunner, Frau Karl Druschki, and Hugh Dickson were also good; Mr. J. S. B. Sarnior, Helens Bay, Co. Down, was second. In the class for twelve hybrid teas, Mr. R. J. C. Mannsell, Celbridge, was first with J. B. Clark and Lyon Rose as his best blooms; Dr. O'Donel Browne, Naas, was a good second. A novices' class for twelve blooms was won by Mr. T. F. Crozier, who had splendid Niphetos and Betty. An amateurs' class for twelve found Mr. A. Panton, Clontarf, to the fore, with Mr. S. S. Miller, Dartrey, following. For six roses shown in vases, the Hon. Mrs. Barry, Castleknock, was the only exhibitor, and received the first prize. In the class for a table of roses, arranged for effect, Mr. Hugh Dickson was a splendid first, and Messrs. A. Dickson and Sons, Lim., a most creditable second.

Captain Lewis Reall, Old Connaught Hill, Bray, was first for a collection of hardy cut flowers. Romneya Coulteri was the best bloom; the Right Hon. Lord Plunket, Bray, was second. Dr. O'Donel Browne was a grand first for twelve bunches of annuals, and the Hon. Mrs. Barry was second. Mr. H. J. B. Clements, Calbridge, was first for twelve vases of asters, with superb blooms; Mr. S. H. Cochrane and Mrs. Blyth were second and third as named.

In the class for twelve zonal pelargoniums, single trusses. Mr. Ernest Bewley, Danum, Rathgar, was first, and Mr. F. V, Westby, Roebuck Castle, a good second. Mr. E. Bewley also was first for double zonal pelargoniums and for plants in pots, showing strongly in each instance. For thirty-six tuberous-rooted begonias Mr. G. C. Stapleton, Killiney, was first with superb blooms, and Mr. R. H. Stubber, second. For twelve Mr. T. F. Crozier, Stillorgan, was first, and Mr. R. J. C. Mannsell second. Mr. R. H. Stubber, Durrow, won for twenty-four cactus dahlias with Mrs. Edward Mawley, Mrs. Winstanley, J. H. Jackson, Dreadnought, and Gabriel among his best. Mr. C. M. Doyne, Govey, took the second place. Mr. W. Ross, Dalkey, went ahead for six vases of cactus dahlias. Messrs. A. Armstrong and H. F. Carroll were respectively first and second for twelve vases of carnations or picotees, neither showing very strongly. For twenty-four bunches Mrs. Tackberry, Ballsbridge, received the premier award.

The Lady E. Howard, Bury, secured the leading prize for two bunches of white grapes with Muscat of Alexandria, splendid alike in colour, size, and bunch. Mr. F. V. Westby was second, and the Earl of Meath third. For two bunches of Black Hamburgh Messrs. F. V. Westby, W. Fry, and E. Bewley were the successful exhibitors, in the order here given. In the class for any other black Mr. E. Bewley was first with finely-finished Madresfield Court, and Lady E. Howard, Bury,second with Appley Towers. In the smaller fruit classes Mrs. Goodbody, the Right Hon. Lady Annaly, the Earl of Drogheda, Mrs. Blyth, Miss Roberta F. M. Doyne, Lady Rathdonnell, Mrs. Morgan, Mrs. M. Coffey, the Earl of Meath, and Messrs. R. White, T. Walsh, W. Murphy, J. B. Clements, H. O. Broomhead, S. H. Cochrane, and F. V. Westby all staged excellently. For a collection of six vegetables Mrs. Hone, Raheny, was first, and Dr. O'Donel Browne second.

Non-competitive exhibitors were well represented, and the plants and flowers staged were of excellent quality. Messrs. Hogg and Robertson, Dublin, showed gladioli in fine variety and condition. Messrs. W. Ramsey and Son, Balls Bridge, arranged a group comprising crotons, palms, liliums, roses, sweet peas, and begonias. Messrs. W. Watson and Son, Dublin, contributed carnations, sweet peas, roses, Kochia scoparia, and Asparagus Sprengeri. Messrs. A. Dickson and Sons, Newtownards, exhibited splendid bunches of such hardy plants as phloxes, pyrethrums, pentstemons, veronicas, and others, with Chrysanthemum Mrs. Lothian Bell in grand condition. Mr. W. Usher, gardener to Mrs. Keith, Brennanstown, Cabinteely, staged well-grown tydæas, caladiums, and palms. Messrs. W. Drummond and Sons, Dublin, had gaillardias, alstromerias, roses, funkias, coreopsis, and sweet peas. Messrs. Dicksons, Lim., showed fine phloxes, liliums, pentstemons, snapdragons, roses, and gladioli. Messrs. J. Carter and Co., Holborn, had an attractive group containing asters, larkspurs, gladioli, and mignonette, with tomatoes, peas, onions, cucumbers, turnips, carrots, cauliflowers, and vegetable marrows.

National Sweet Pea Society.

PROVINCIAL SHOW, DUBLIN,

AUGUST 5.

The second provincial show of the National Sweet Pea Society, held at Dublin on August 5, in conjunction with the Royal Horticultural Society of Ireland's Autumn Show, was a great success, and proved once again the popularity of the fragrant annual. The quality of the flowers, considering the lateness of the date, was wonderfully good, and the competition in most of the classes was excellent.

The show was held in the University Buildings, Earlsfort Terrace.

IRISH GROWERS.

The most attractive class in the section devoted to Irish growers only was the one for twelve bunches, distinct, the premier award being the Dickson Cup, presented by Messrs. Alex. Dickson and Sons, Newtownards and Belfast. There were twenty-one competitors, and the most successful one was Mr. E. Cowdy, Greenball, Longhall, Co. Armagh, who had fine bunches of magnificent blooms of Mrs. Hardcastle Sykes, Menie Christie, H. A. Linzee, Prince of Asturias, Crimson Spencer, Yellow Spencer, John Ingman, The Marquis, Helen Lewis, Evelyn Hemus, and Marjorie Willis. Second prize fell to Mr. King, gardener to Lord Dunleath, Ballywater Park, for Audrey Crier, Queen Alexandra, St. George, Sutton's Queen (fine), Helen Lewis, Countess Spencer, Mrs. Collier, John Ingman, White Spencer, Marjorie Wells, and King Edward. Miss Osborne, Dardistown Castle, Drogheda, third; and Mr. Mitchison, gardener to Col. the Hon. C. F. Crichton, Mulleboden, Ballymore Eustace, fourth.

The N.S.P.S. silver medal for six bunches, distinct, was won by Mr. Davies, gardener to Mrs. Goodbody, Obelisk Park, Blackrock, who scored with Mrs. Hardcastle Sykes, Helen Lewis, King Edward VII., Countess Spencer, Queen Alexandra, and Etta Dyke; Mr. H. J. R. Digges, Dunkerron, Eglinton Road, Donnybrook, second; and Mr. A. Phipps, St. Anne's, Teremure, third. The class for three bunches, distinct, created for small growers, brought out six competitors, and here the silver medal offered (with cash) as a first prize, fell to Mr. James Hall, Moy, Co. Tyrone, for Countess Spencer, Dorothy Eckford, and Helen Lewis in fine condition; Mr. Simmons, gardener to F. V. Westby, Esq., Roebuck Castle, Dundrum, second; and Miss A. L. M. Smyth, Newtown, Drogheda, third.

Two classes were set apart for Irish growers who had never previously won a first prize for sweet peas at a show of the Royal Horticultural Society of Ireland, but they were permitted only to show in one of these classes. For a dozen bunches, distinct, the silver medal and first prize was won by Mr. Reid, gardener to J. L. Richardson, Esq., D.L., Lissue, Lisburn, Co. Antrim, with bright, substantial blooms of Queen Alexandra, Mrs. Hardcastle Sykes, St. George, Mrs. Collier, Countess Spencer, Henry Eckford, Lord Nelson, Frank Dolby, Helen Lewis, Dorothy Eckford, Black Knight, and Miss H. C. Philbrick; second prize was awarded to Mr. Sutton, gardener to the Marquis of Ormonde, Kilkenny Castle, Kilkenny, for an excellent showing; Mr. J. Furzell, gardener to Captain Green, The Curragh Grange, The Curragh, third. The best six bunches, distinct, came from Mr. Davies, gardener to Mrs. Goodbody, whose varieties were Countess Spencer, Queen Alexandra, Dorothy Eckford, Frank Dolby, Helen Lewis, and George Herbert. There were a dozen entries, and Miss S. C. White, Glew Druid, Shankill, came second, and Mr. Ahern, gardener to R. J. C. Mannsell, Esq., Oakly Park, Celbridge, third.

PROVINCIAL CUP CLASS.

For the first time the National Sweet Pea Society offered a handsome Provincial Challenge Cup (presented by E. J. Edwards, Esq., Eastcote, Middlesex), for a dozen bunches of sweet peas selected from America. Audrey Crier, Black Knight, Dorothy Eckford, Earl Cromer, White Waved, Frank Dolby, Gorgeous, Gladys Unwin, Henry Eckford, Helen Lewis, Helen Pierce, Horace Wright, King Edward VII., Lord Nelson, Mrs. Collier, Princess Victoria, Queen Alexandra, Queen of Spain, Etta Dyke, and Mrs. Hardcastle Sykes—a fine selection. There were nine competitors, and here Mr. T. Stevenson, gardener to E. Mocatta, Esq., Woburn Place, Addlestone, Surrey, came first, and brought the cup back to England with a beautiful fresh set. The second prize fell to Mr. King, gardener to Lord Dunleath, Ballywater Park; Mr. James Reid, gardener to G. T. Richardson, Esq., Lissue, Lisburn, was a good third, with Mr. L. Quinane, gardener to H. E. White, Esq., Clonaglera, fourth.

TRADE EXCLUDED.

The Edmondson Cup class for eighteen bunches, distinct, was very popular, and there was a keen competition for the Edmondson Challenge Cup (presented by Messrs. Edmondson Brothers, Dame Street, Dublin, and the gold medal of the N.S.P.S. There were eight entries, and Mr. Cowdy, Greenball, Longhall, was the winner with lovely specimens. Mr. J. Mitchison was a good second, and he had Rose Spencer very fine; Mr. T. Proctor, Zealand Conyers, third.

There were but four entries in the Special Audit Class for fifteen bunches, selected from the varieties that headed the list in their colour classes in the 1907 Audit. Premier place fell to Mr. King; Mark McDonald, Esq., N.B., Portaferry, Co. Down, came second, his Jeannie Gordon being very good; Mr. Caster, gardener to Mrs. Alfred West, Kilcroney, Bray, third; and Mr. Murphy, gardener to Lady Barrington, Glenstal, Limerick, fourth.

The best twelve bunches, distinct, came from Mr. Kirk, gardener to H. J. B. Clements, Esq., Killadoon, Celbridge; Mr. J. Milne, Gortnagrena, Naas, second; Mr. Mitchison, third; and Mr. J. Quinane fourth.

In the class for six bunches, distinct, provided by Messrs. Dobbie and Co., Rothesay, to consist of at least three of the following varieties—The Marquis, Princess Victoria, Prince Olaf, Menie Christie, and Hannah Dale, there were eight competitors; here Mr. Stevenson carried off the premier award.

Mr. Mitchison scored in the class for six bunches with a very clean, creditable set of Clara Curtis, Mrs. Hardcastle Sykes, Purity, Helen Lewis, John Ingman, and Mrs. Henry Bell (very fine); Mr. Andrew Hoggan, Strathyre, Busby, came second. In this class Mr. R. Bolton, Carnforth, gave the prizes. In the class for six bunches, distinct, to include one bunch of Devonshire Cream, Mr. G. H. Mackereth's prizes were won by Mr. W. Moran, Maudlins, Naas.

For Mr. H. J. Wright's prizes for six bunches of sweet peas, with waved standards, Mr. Milne, gardener to O'Donel Browne, Esq., M.D., Gortnagreena, Naas, led.

OPEN CLASSES.

In the open division Mr. C. W. Breadmore, High Street, Winchester, was the only entrant in the classification class for eighteen bunches, each to represent a colour class in the N.S.P.S. classification.

Messrs. C. C. Morse and Co.'s prizes for twelve bunches of sweet peas, distinct, waved standards, were won by Mr. C. W. Breadmore, who staged Elsie Herbert, Audrey Crier, Mrs. C. W. Breadmore, Mrs. C. Foster, King Alfonso, Marjorie Linzee, Etta Dyke, George Herbert, Primrose Waved, and Kitty Crier.

SINGLE BUNCHES.

In the class for Sutton's Queen there were eleven entries, Mr. Cowdy leading, and Mr. D. Behan, gardener to Mrs. Robertson F. M. Doyne, Seafield House, Gorey, second. There were two entries of Audrey Crier, Mr. Doran and Mr. Davies coming first and second. Mr. Quinane led for Etta Dyke, followed by Mr. Doran. Mr. Quinane was the only exhibitor of one bunch of Mrs. C. W. Breadmore, and he gained first prize.

For one bunch of any white variety Mr. T. Stevenson led with Nora Unwin; Mark McDonald, Esq., second, with Burpee's White Spencer. For a blush variety Mrs. Hardcastle Sykes won first place for Mr. Stevenson, and Mr. Doran. For a crimson variety Mr. Cowdy scored with Queen Alexandra, and Mr. James Hall, Moy, Co. Tyrone, came second with King Edward VII. Mr. Hall and Mr. C. W. Breadmore secured the prizes for a cerise variety, with Coccinea.

For a rose or carmine variety Mr. J. Simmonds scored with George Herbert, and Mr. Andrew Hoggan came second with good John Ingman. Pink shades were well represented, Mr. Stevenson winning with Paradise, and Mr. Doran coming second with Countess Spencer; thirteen entries. For an orange variety Mr. Stevenson led with Helen Lewis in fine colour; Miss J. Cullinson, second with the same variety.

For a buff variety, Mr. Stevenson scored with Mrs. Collier, and Mr. King was second with the same variety. In the lavender class Mr. Stevenson led with Frank Dolby, and Mr. C. W. Breadmore came second with Mrs. C. Foster. In the blue class, Mr. Cowdy led with Lord Nelson, and Mr. Jas. Hall came second with the same variety. For a mauve variety, Mr. Stevenson won with A. J. Cook, and Mr. Doran came second with The Marquis. The best purple was Duke of Westminster, shown by Mr. J. Parleton, Mr. Jas. Hall coming second. Mr. Stevenson scored for a maroon variety with Black Knight, and Mr. Davies followed with the same variety. Mr. Jas. Hall had the best magenta, a George Gordon; Mr. Breadmore second.

Mr. Stevenson led for a picotee-edged variety with Evelyn Hemus, Mr. Doran coming second with the same variety. For a red-flaked variety, Mr. Davies led with America, and Mr. Breadmore came second with Jessie Cuthbertson. For a blue-flake, Mr. Hall scored with Marbled Blue, and Mr. Breadmore came second with the same variety.

The best bicolor was Jeannie Gordon, shown by Mrs. J. Cullinan, Mr. Stevenson following with the same useful variety. For a marbled variety, Mr. Breadmore scored with the fine Helen Pierce, and Mr. Doran was second. Mr. Stevenson led for a fancy with Sybil Eckford, and Mrs. Cullinan came second with this variety.

FLORAL DECORATIONS.

There were eleven dinner-tables decorated with sweet peas, and the designs were good, indifferent, and very bad. First prize was awarded to Mr. J. W. Parker, Tintagel, King's Road, Knock, Belfast, for a fine arrangement of pink and orange flowers.

NON-COMPETITIVE.

There were not very many non-competing exhibits of sweet peas, but those staged added materially to the extent and beauty of the display. The best exhibit was without doubt the one set up in one of the gallery halls by Messrs. Alex. Dickson and Sons (gold medal). Mr. C. W. Breadmore, Winchester, had a goodly display in the spacious gallery (silver-gilt medal).

Mr. Robt. Bolton, Warton, Carnforth, had an unfortunate position, in a semi-dark corner, near the staircase, but he had a fine display; this stand could have only missed the gold medal by a very little (silver-gilt medal). Messrs. Hogg and Robertson, Mary Street, Dublin, had a display of sweet peas in considerable variety in the large hall (silver medal).

SIBERIAN IRISES.

Although Iris sibirica has responded in full measure to the hybridist's art, inasmuch that where four varieties once composed the group there are to-day twelve or more, these later hybrids are such great improvements on the earlier forms that the species is unrepresented in many gardens of note.

It is decidedly an artist's flower, possessing that excellence of form that is fortunately a characteristic of most grassy irises, save our native one, and it is probably the most floriferous that can be grown. Its easy adaptation to all manner of soils and positions is so marked that one may regard it as practically amphibious; it will grow actually in water and also on a dry bank; it will thrive in a root run of rich peat and leaf-soil, and struggle bravely to live in a running sand or obstinate clay, and succeed. The reason for neglect of such an accommodating plant is not easy to discern. Probably typical Iris sibirica, the wilding of Asia, is not so attractive as many irises; its flowers are small, but profusely borne, and literally borne in sheaves, and what they lack as individuals they make up collectively, providing a haze of blue that distance improves rather than diminishes, and if it had no other use, typical Iris sibirca would still be the blue flower, par excellence, for the bold informal grouping that has become almost a law in waterside planting.

One finds in various parts of the country ponds and watercourses within the boundaries of private estates that would be utterly spoiled in the rugged aspect and freedom from restraint that constitute their most charming features, if they were converted into gardens containing hundreds of different plants. If the planter studied for a while the way in which Nature clothes broad expanses of water and its margins with hundreds of willow herb, meadow sweet, and lythrum, sedges, and rushes, he would forego the hundreds of units, and welcome a few hundred Iris sibirica as a means of transplanting to the waterside a note of blue few other plants can give in such a happy way. What the squill does for woodland, the neglected Iris sibirica can do for the waterside.

Nor is this all. The man whose mind is so attuned that every warm colour note can appeal to him, will welcome the broad patch of ruddy brown seared foliage in winter, and when the floral display has passed, he will find pleasure in the forest of round-headed stems studding the grey-green foliage that glints as though burnished in the sunlight. If he delights in wild waterfowl he will value Iris sibirica as "cover." If he desires variety of colouring, there is the lovely white form that is not one whit more costly than the blue, and in these two colourings he has no cause to fear a garish display that does not accord with the environment.

For the garden proper, whether plant border, formal pond, or shrubbery belt, there is a choice of variety that should satisfy the most exacting. A giant blue will be found in Baxteri, whose fall petals are very broad, white, with blue reticulation, and the foliage weeps. Alba grandiflora is just as great an improvement upon the white sibirica. Its flowers have broad, fall petals, with a touch of gold and bronze at the throat. Lactea has soft white flowers, with ruddy spathes and ruddy-veined "fall" petals, and it grows to a yard in height. Thalia is similarly habited, but there is a faint flush of lilac throughout the flower that proves very attractive.

The dwarfer section that have sprung from the Japanese I. orientalis, are splendid garden plants everyone can appreciate. Typical orientalis is quite good. It has weeping foliage in spreading tufts, conspicuous bracts stained with claret-red that have earned for it the name sanguinea, now superseded; and large blue flowers, with articular "fall" petals, twice the size of the upper ones, and they nestle among the taller leaves. A form of this, with its flowers well up above the foliage, is a Japanese seedling named Blue King or Purple King. It has pale violet flowers of perfect finish that are superior to any other "Siberian" iris. Still another, and in this case the best white, is Snow Queen. It has pure white flowers, broad-petalled, and of perfect finish, the white being relieved by a signal patch of yellow. The plant is so robust as to suggest hybridity with Iris Kæmpferi, the foliage being particularly broad and stout, the flowers upstanding and massive.

Snow Queen, Blue King, or Purple King, Thalia, and Alba grandiflora are worthy of the best position the garden affords; the others are accommodating plants the gardener may use just where he thinks they will look their best. Cultivation in respect of Iris sibirica is simply accommodation—the rarer sorts where they can be looked after, the commoner sorts where they can look after themselves.

G. B. Mallett.

SWEET PEAS TO PERFECTION.—The new work, Sweet Peas and their Cultivation for Home and Exhibition, by C. H. Curtis, hon. secretary, National Sweet Pea Society, contains full information as to the selection, planting, and general management of sweet peas. The price is 1s. net (by post, 1s. 2d.), or bound in cloth, 1s. 6d. (by post, 1s. 8d.), from W. H. and L. Collingridge, 148, Aldersgate Street, London.

CUT FLOWERS IN SUMMER.

(Concluded from page 590.)

Poppies.

Having referred—and space permits of little more—to the rose, the sweet pea, the lily, and the carnation—typical of the season of sweet-smelling flowers—a few more must be briefly noticed. Poppies, especially the Iceland and the Shirley varieties, which, properly treated, provide some of our most graceful indoor decorations. They need to be cut in the early morning, before the sun is on them, taking care to cut those blossoms only which, it can be seen from the stamens, have opened the same morning, and putting them into water, preferably warm, before the milky sap has time to dry on the cut ends. In this way they will often last a couple of days without hanging their heads or shedding their petals. Here again, as in sweet peas, I would not advocate the use of extraneous matter for a setting, unopened buds being beautiful in themselves, and sufficient for the purpose, but if something must be added wild grasses in flower can hardly be improved upon.

Violas.

Violas, or tufted pansies, have become very popular of recent years, though probably they are not generally regarded as adaptable subjects for cutting. This, however, is a mistake. When growing in a somewhat damp or shady place, and becoming straggling in growth, long stems may be cut off from the root, or as much shorter as may be wished, and arranged a few together in trumpet-shaped vases, or a large number of pieces in a wide-mouthed vessel, with the help of some floral aid contrivance. With a little care an effect may be obtained as of a well-grown plant set in a vase. They may be all of one colour, though a mixture of china blue and yellow is very fine. Those who try this once will do so again.

Annuals and Biennials.

There are some useful subjects for cutting amongst the annuals, especially when they are autumn-sown, so as to have longer and stronger stems. One of the best of these is the tall double larkspur, which, in the damp summer of 1907, grew five feet high with me, and produced an abundance of material for cutting from the end of June to the beginning of August. The annual chrysanthemums, too, provide a great quantity of blossom, especially C. coronarium, if given plenty of room. C. segetum, the wild corn marigold, also makes immense plants under good cultivation, its yellow flowers mixing well with the blue flowers of love-in-a-mist or Delphinium Belladonna, or the pink and purple flowers of the larkspurs. Among others that might be mentioned are the miniature annual sunflowers (varieties of Helianthus cucumerifolius), coreopsis (cut with large sprays of flowers and buds), scabious, lupins, jacobæas, eschscholtzia, etc. One of the secrets of success with all annuals grown to provide material for cutting, is to give them plenty of space and good cultivation, another secret being early sowing, if possible in the autumn.

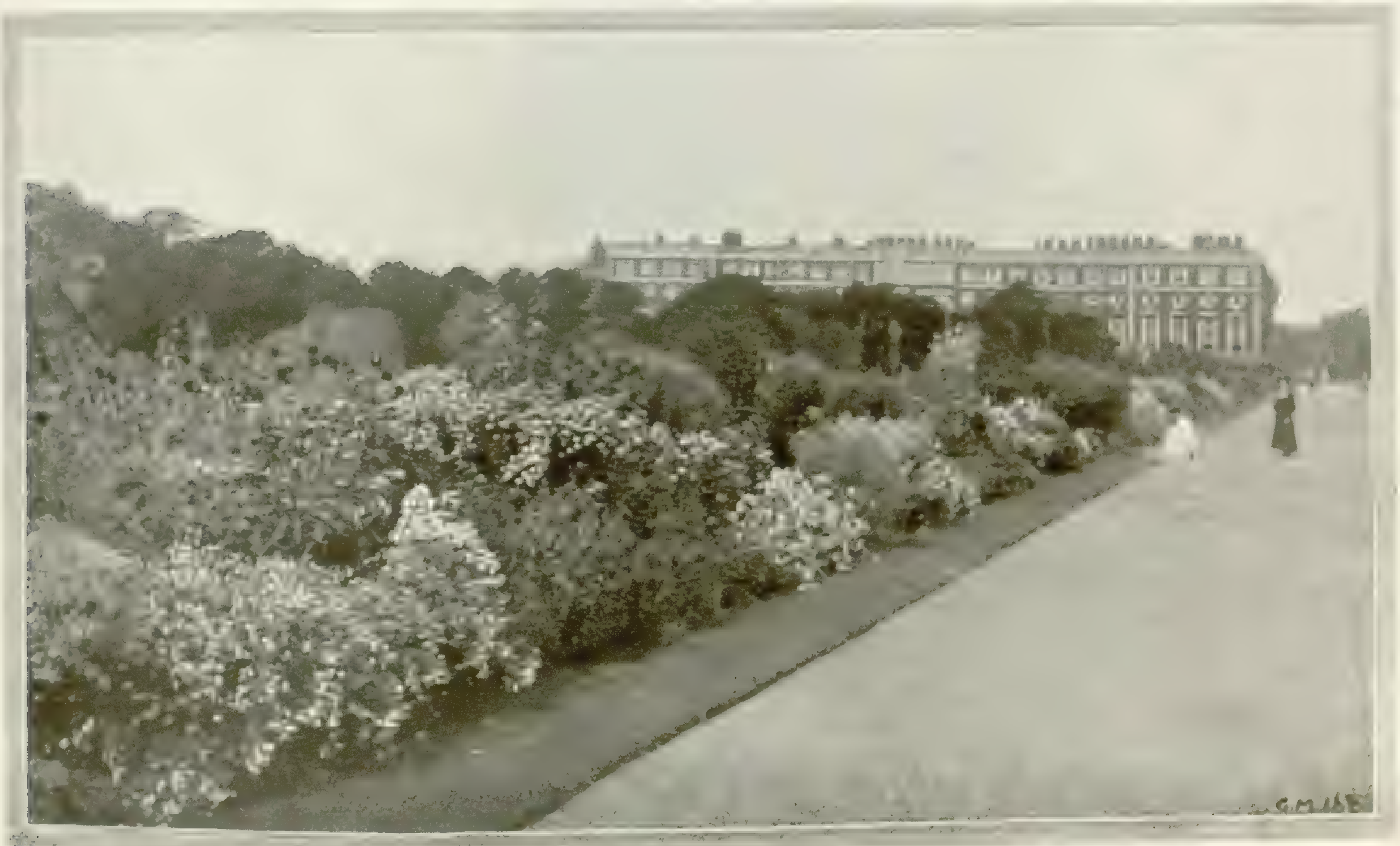
Some biennials claim notice, notably the gaillardia, treated as such. Sown in June, or earlier, it produces a ceaseless supply of flowers for cutting from June to September. The grandiflora hybrids are the best, especially those with a glowing crimson centre and a deep golden edge. Another good biennial is one of the pure yellow flowers referred to, Coreopsis grandiflora. It should be sown in May or June, and after flowering done away with.

The hardy perennials must have brief mention. The white everlasting peas, cut with long sprays, and mixed with sweet williams, produce an effect which is good both in colour and form. The great family of perennial sunflowers, including the nearly allied heleniums, rudbeckias, etc., produce flowers which last better now than a month later. The thalictrums, especially T. angustifolium and T. flavum, produce a beautiful effect with the Cambridge blue delphiniums, especially the smaller growths of D. Belladonna. Achillea Ptarmica fl.-pl., especially the variety called The Pearl, is quite a change, with its pure white double flowers, from most of the flowers of this season. This, and the various forms of Chrysanthemum maximum, mixed with sober-hued subjects like the sea hollies, or the paler colours of campanulas, make a good composition. Alstromerias, with their various colours of soft shades, are a contrast to the preceding, all colours going well together.

Alger Petts.

THE HERBACEOUS BORDER AT HAMPTON COURT.

On Monday last, when many thousands of people were enjoying a brief holiday in Wolsey's grand old palace at Hampton Court, or in its fine gardens, the long herbaceous border that extends in a line with the garden front of the palace was the subject of considerable attention and admiration. Whether the northern end be inspected, or whether the portion that extends down to the river is considered, there is much to admire, interest, and instruct in every yard of the border. The walls are amply clothed with clematis, roses, Polygonum Baldschuanicum, passifloras, jasmines, Tecoma radicans, and other beautiful climbers, while the border proper is the home of a whole host of summer and autumn-flowering plants, with groups of tender subjects planted to heighten the general effect. We have on a previous occasion pointed out the one weakness of this extensive floral display, i.e., its narrowness. A yard more of width would make a wonderful difference, but even as it is the border is a fine feature, and one of the most attractive of the many attractive garden features at Hampton Court. Another great attraction is the famous vine, with its two hundred clusters of black grapes.



SOUTHERN PORTION OF THE LONG HERBACEOUS BORDER AT HAMPTON COURT.

THE SOLIDAGOS.

The solidagos, which add much to the attraction of the flower garden late in summer, do not need a rich soil. Under natural conditions they are rampant growers, and thus heavy manuring would but induce excessive growth. To obtain the best results they must be divided and transplanted every year, placing them, if possible, in fairly heavy or retentive soil. By division and transplanting you not only keep the golden rods fresh and young, but you obtain dwarfer plants, which are better habited and better flowered. If any doubt the correctness of this statement, may I urge him to test it for himself. I have had old established clumps grow to twice the height and produce but half the blossom of my annually lifted and divided plants. In addition, the old-established clumps generally lose the greater portion of their foliage during the summer heat, and become less attractive. Of course, the height of some of the taller solidagos would exclude them from small borders, but even this difficulty may be overcome by stopping the growths late in the spring. Last season I treated several plants in this manner, taking out the point of each growth when about two feet high. The result was to effectually check the shoots and encourage them to produce later a host of young growths from the axils of the upper leaves. These soon assumed the form of flowering shoots, developing into shapely heads of "gay gold."

NEW SWEET PEA, CONSTANCE OLIVER.

Received an A.M. in N.S.P.S. trial at Reading. Bright pink, with cream-yellow at base of wings and keel.

Solidagos revel in a moderate amount of moisture in the soil, and are pre-eminently sun-loving, so give them your sunniest positions, where they will have room for their development.

There are several species and varieties in cultivation, and with a little care in selection, one can have golden rods in blossom from July to the end of September. A notable variety which received the R.H.S. Award of Merit was shown as late as October 9 and October 15, under the name of Golden Wings. It is probably a seedling from the late-flowering S. sempervirens, but may be regarded as a much finer form. It is a tall grower, and by reason of its graceful habit and lateness, it should find a place in many gardens.

S. serotina is a handsome species with dark stems and large pyramidal heads of flowers. S. multiradiata, which is sometimes regarded as a variety of sempervirens, is a charming form, with large branching heads of blossom. S. ulmifolia, sometimes known as S. multiflora, is a showy and interesting species.

S. virgaurea and its varieties rank among the best known of the golden rods, the flower heads are of very compact formation, and the habit of the plants is close and bushy. Cambrica and nana are the principal varieties, and S. prostrata—a dwarf creeping Norwegian species—is regarded by some as a variety of virgaurea.

Other notable solidagos include the well-known Canadian Golden Rod, S. canadensis. S. Shorti, a strong golden-hued form, blooms in September, and may be regarded as one of the best. S. Buckleyi is a dwarf, sturdy, yet withal showy species from the Rocky Mountains, and the giant S. rugosa or S. altissima will complete a group sufficiently large to permit of a useful selection being made. It may be remarked that the nomenclature of the genus is somewhat confused, and rather apt to mislead by reason of the variation in different lists, but apart from this, planters of herbaceous borders would do well to bestow a little attention on the showy golden rods.

P. S. Hayward.

NEW PLANTS, ETC.

SWEET PEAS.

Constance Oliver.—Another delightful sweet pea, bright pink, with a charming creamy-yellow glow at the base of each segment. A.M., N.S.P.S., July 10, at the Reading trials. Mr. W. Lumley, Dawn Nurseries, Denvilles, Hants.

Paradise Ivory.—Pale cream-yellow, with a blush or pink tinge showing faintly and evenly all through. A pretty flower. A.M., N.S.P.S., at the Reading trials. Miss Hemus, Holdfort Hall, Upton-on-Severn.

TILLANDSIA BLOKII.

A handsome species of large growth, fully developed specimens attaining a height of five or six feet. The leaves have a length of thirty to forty inches and a breadth of six inches, and are pale green freely blotched with purple-red. The flower stems are erect and freely branched, the bracts bright crimson, and the flowers rich yellow. The origin of the plant appears to have been unrecorded, and the first time it was exhibited in Europe was at the Ghent Quinquennial in 1898. It has since flowered at Glasnevin, and the specimen figured was supplied by Mr. F. W. Moore, V.M.H. Under cultivation it takes, according to Mr. W. Watson, these big tillandsias about twenty years to reach a flowering size. "Bot. Mag.," t. 8,192.

WILD ROSES.

How many people of these flower-decked islands, not excepting even those who spend the greater part of their lives in the perpetual society of wayside blossoms, are aware that in Great Britain alone we have at least six or seven different species of hedgerow roses? The professional botanist will go further and assure you that this number very inadequately represents the true extent of the large family of British roses, and this without entering a single garden beyond that which Nature herself has planned and planted. But, except for purposes of scientific study, none of us need bother about the endless divisions and sub-divisions into which enthusiastic students like Hooker, with his twenty-nine varieties, have split up the obviously distinct sorts that can be named offhand by the ordinary dabbler in British wild-flower study. Life is too short to attempt to follow the endless ramifications of each floral family, and no one, unless he becomes a specialist in some particular order of botany, can hope to unravel all the mysteries of innumerable crosses between the members of each genus.

But nearly every one of us has the opportunity each summer of forming a closer acquaintance with the wild flowers of wayside and coppice, and few people who have not yet tried to increase their knowledge of the little everyday blossoms that grow around them, have any idea how fascinating, even to an urban mind, the study of Nature's garden can become. One could hardly make a better beginning than with the emblem of England, as one may justly describe the hedgerow rose.

The dog rose—the Rosa canina of the botanist, who might surely have given it a prettier name—was growing wild in England long before the hand of man ever attempted to set out a garden, and it grows to-day all over the country, brightening our wayside hedges with its myriad blossoms from early in June to late in August, and caring nothing for the showers of dust that every passing vehicle scatters on its comely face. Everybody knows this rose, but not everybody can distinguish it from a rather near relation—the white-petalled field rose (Rosa arvensis) as it is called. The petals of the dog rose proper are always pink, five in number, and notched: the field rose is colourless, and bears its blossoms, not singly as the dog rose usually does, but in clusters, so that when you pick it, you get a whole posy of buds and blossoms with a single stroke of the knife. It is to these two roses in particular that we owe the welcome appearance of the brilliant scarlet "hips" that brighten the hedges of every country lane long after the leaves have fallen, and supply such a feast for the birds during severe weather.

Much less common than either of the foregoing, though still widely distributed, is the Scotch or Burnet rose, which has earned its Latin title of Rosa spinosissima on account of its prickly stem, which is covered all over with multitudes of straight spikes that vary in their composition from practically harmless glandular hairs to extremely offensive thorns and bristles. One may go far and never be introduced to this hostile little shrub, whose favourite habitat is the open heath on sandy or chalky soils, especially within reach of the salt-laden breezes of the ocean. Its flowers are either white or pink, and its fruit, instead of being pitcher-shaped, as in the case of the dog-rose, is nearly globular. It blossoms, too, at an earlier date than the others, and does not last in flower so long.

And now we come to the sweetest of all our native roses—the sweet briar. By any other name than Rosa rubiginosa it would doubtless smell as sweet, but, as all the world knows, it owes its fragrance rather to its leaves than to its blossoms. The scent of the sweet briar is one of the first things to arrest one's attention during a country walk in spring, and in some of the chalky lanes of Hampshire and Sussex the perfume is almost overpowering when the young leaves first begin to open. Except in the South of England the sweet briar is not a common plant, and if it were not for its fragrant leaves, its presence would often go undetected even where it is quite common, for it loves to grow in company with other members of its family, whose blooms are far more conspicuous than the little pink rosettes of the sweet briar.

There is no need to bewilder the inexperienced student of wild flowers with a description of other varieties of roses which he is hardly likely to meet with. The differences between some of them are so slight that no one but a learned botanist would detect them, and they could only be shown on paper by an elaborate system of diagrams and copious explanations. And even were any enterprising enthusiast to master to his satisfaction the subject of roses proper, he would then be only at the beginning of his task. The order of the Rosaceæ is an almost inexhaustible family, for besides including all the varieties of plum, cherry, blackberry, strawberry, apple, hawthorn, and medlar, it embraces among the smaller plants such large sub-families as the spiræa (of which the meadow-sweet is the most familiar), the potentillas (represented by the cinquefoil and silver-weed), and such familiar weeds as salad-burnet, and herb bennet.

East Sussex.

NEW SWEET PEA, PARADISE IVORY.

Received an A.M. in N.S.P.S. trials at Reading. Pale cream-yellow with pink suffusion

ARMERIA LAUCHEANA.

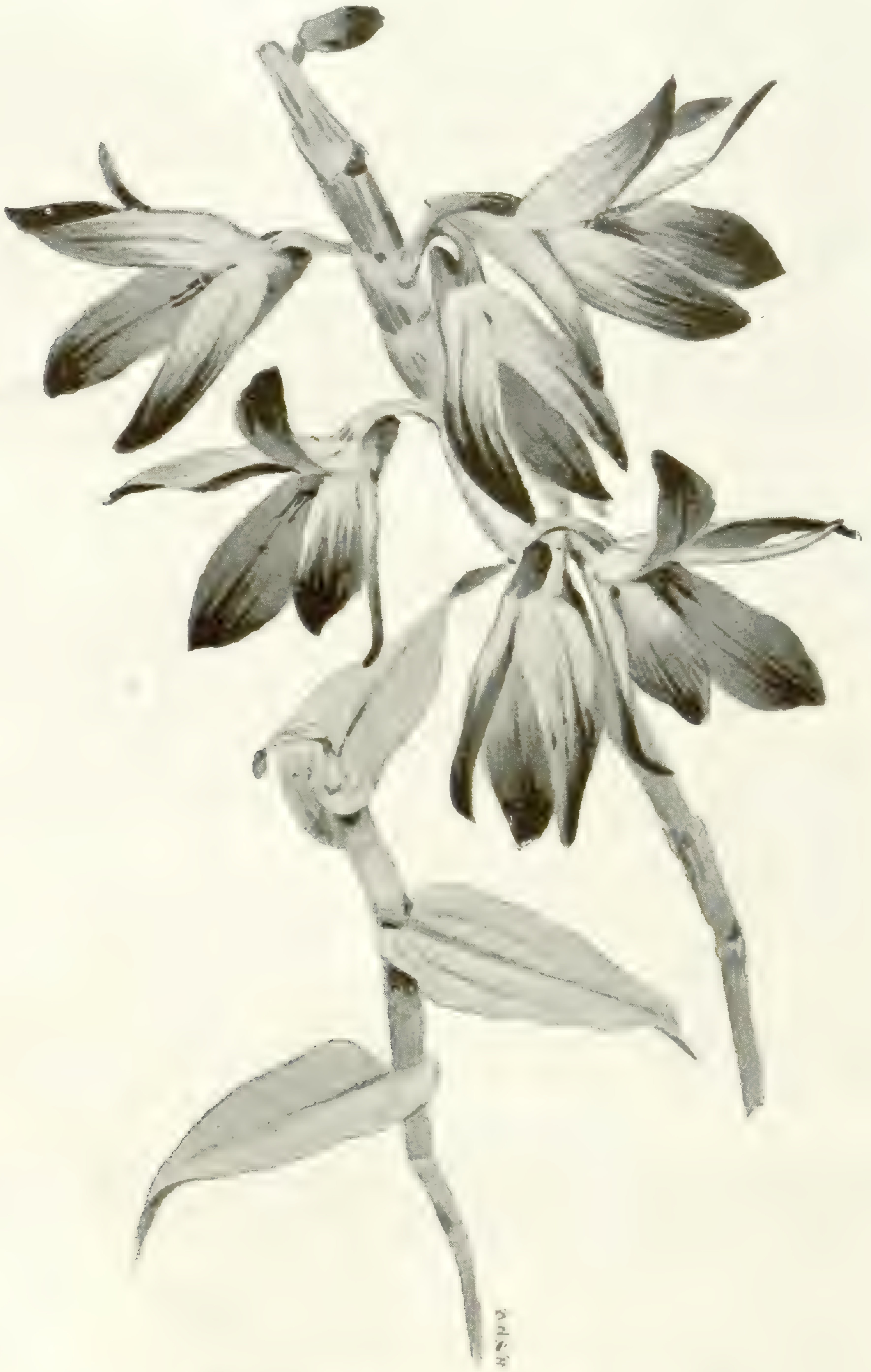
As edging or rock plants the armerias, or thrifts, are deservedly held in high favour, and in places where they do well they are sometimes usefully employed as edgings to borders or beds, especially where there is a stone margin over which they can grow, this "stiffening" them up considerably, and giving them that support they should have when grown as edgings, although this is not essential.

None of the varieties of Armeria maritima, the well-known thrift, or sea pink, of our own coasts, is better for an edging than that variety called A. m. Laucheana, although most commonly called A. Laucheana alone. The white variety, maritima alba, is pretty in its way, but for brilliant colouring there is no other thrift I know which equals the first-named form. Its flowers are called crimson—a term which is difficult to improve upon, although one accepts it with some reluctance, as it has a tinge of deeper hue about it which makes it more inclined to purple. It is very dwarf—about six inches high only—and of close growth and easy to grow.

I have had at times various other varieties to test alongside of my own plants of A. Laucheana, as I have known it for many years, and none of these was equal to it in colour. Last year a friend sent me one which he said was the deepest coloured one he knew. It was disappointing to find that it was paler than this old Laucheana. This year I bought plants of a form called purpurea, but it, also, is lighter and much less effective. If any reader purchases a thrift as A. Laucheana which is of poor colour, he may blame the nurseryman, much as I deprecate blaming that much-harassed individual, and not me, as the true plant is of excellent colour, and is as yet unsurpassed in this respect by any other species or variety.

It is easily increased by dividing it up in spring or autumn, and I observe that seeds are sometimes offered for sale. Let me caution the reader not to depend upon all the seedlings coming true to colour. I have self-sown seedlings beyond the reach of other varieties which are far inferior in point of colour to this good plant. It is not very particular as to soil, but should have sun, although this is not quite essential.

S. Arnott.



DENDROBIUM VICTORIA REGINA. ½

Leeks.—Another batch of these may now be planted, and, if all the best positions are being filled up, some may be put out between the potato rows, and these come in very useful in the late spring.—T. W. B.

DENDROBIUM VICTORIA REGINA.

We have in D. Victoria Regina one of the most distinct and pretty species found in the whole genus. It was introduced from the Phillippine Islands in the year 1897, and received an Award of Merit when exhibited by Mr. T. Statter on August 10 of that year. The deep blue and white flowers characteristic of the species are an attractive feature, and always the subject of admiration to those interested in orchids. When first imported it was generally distributed throughout orchid collections in this country, and was exhibited extensively for a year or two afterwards, but it appears to have now almost disappeared, for we rarely meet with it in cultivation. It appears from the first to have been by no means an easy plant to deal with, for those who did succeed with it generally differed widely in their methods of culture.

I distinctly remember a fine plant, which, I believe, is still in a vigorous state, in Sir Trevor Lawrence's garden, where Mr White succeeds in growing it under practically cool conditions. The plant we have here flowered satisfactorily last autumn, having been suspended in a basket from the roof of the plant stove during the time it has been in my charge. With such varied conditions it is difficult to advise what methods are likely to be successful, and I think the whole matter must be left to the discretion of the grower. I find it a species that must not be kept severely dry when in a dormant state, but when growing have liberal supplies of water, indeed, almost aquatic conditions of moisture are desirable, and at no period of the year should atmospheric moisture be withdrawn. When the flowers expand, if the plants are removed to cooler conditions, they last for a long time in perfection.

H. J. Chapman.

Oakwood Gardens.

A ROSE NOTE.

When budding standard briars the growth on which the bud is being inserted should not be shortened, as this would cause an undue flow of sap to the bud, and produce premature growth. The object should be to secure a freshly united but practically dormant bud until the following season; if the bud starts into active growth this season, and sharp frosts follow, it would in all probability be destroyed. When budding, bind up closely, but guard against binding over the bud; if raffia is used it will work easier if kept damp; this can be done by cutting it into required lengths and keeping it in a vessel of water. Growths that buds are being taken from should also be kept in water. So far the growth of roses has been very satisfactory, and the rosarian may rejoice in a good season if genial weather continues. Richmond is proving a good acquisition, and if the new Mrs. J. Lowe merits all that is said for it, it will be another desirable variety. The good, well-tried Caroline Testout still seems one of the best roses, and other favourites, such as Viscountess Folkestone, Gruss an Teplitz, Mrs. Sharman Crawford, Gloire Lyonnaise, Killarney, and others of that section, retain the affection of growers, especially in localities that are not kind ones for roses. Ours is not a good rose district, and many varieties are not a success with us, Mrs. W. J. Grant, Bessie Brown, Perle d'Or, L'Ideal, the common China or monthly, Laurette Messimy, and other weak-growing ones being quite a failure. Gloire Bourg de la Reine, tried in two beds for the first time this year, is so far doing very well.

E. F. Hazelton.

Knowsley Gardens.

THE PAVIAS.

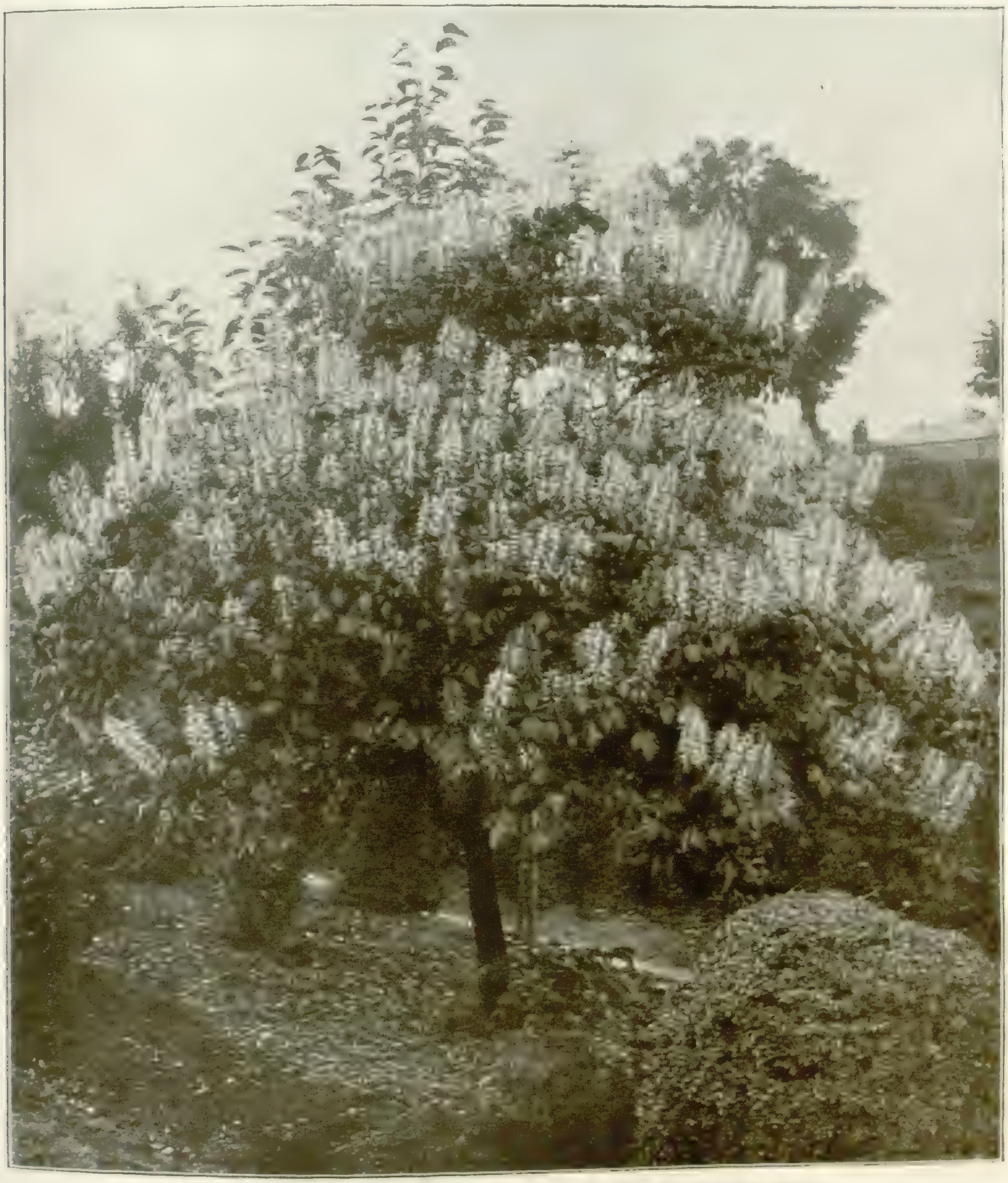
Although, correctly speaking, the genus Pavia is obsolete, the name is still recognised in some commercial establishments, in consequence of which certain trees and shrubs are known under this name only in various parts of the country. The plants that are included under this generic title are, strictly speaking, species of æsculus, and do not differ to any material extent from the common horse chestnut. The name was originally adopted for several species on account of their smooth, spineless fruits, comparatively low stature, and smaller leaves and flowers than are possessed by such trees as Æsculus hippocastanum, Æ. indica, etc. There are, however, numerous intermediate stages between the two groups, and scientists nowadays recognise but the one genus—Æsculus. In the present article pavia is kept up simply as a guide for those who are in the habit of keeping the name distinct; correctly, however, all should be called æsculus.

Several species blossom at a later date than the ordinary horse chestnut, and on this account alone, are admissible in the garden, whilst one species, P. macrostachya (Æsculus parviflora), of which an illustration is here given, is one of the best late summer flowering shrubs we possess. All thrive in ordinary garden soil, and, though they attain the greatest dimensions in that of good quality, they give a fairly good account of themselves in that of a sandy nature. Some ripen seeds in this country, and propagation may be effected by their means, though it is usual to graft or bud them on to stocks of a stronger-growing species, a method which is not free from defects, for stock and scion grow at different rates, and ugly swollen bases result. One species, P. macrostachya, suckers freely, and increase of stock may be obtained by detaching these suckers and planting them separately.

The kinds included under this heading are all of North American origin, and are as follows: P. californica, P. flava, P. glabra, P. Lyoni (hybrid), P. macrostachya, and P. rubra.

P. californica (Æsculus californica), commonly called the "Californian horse chestnut," forms a low-growing, bushy-headed tree rarely exceeding 20ft. in height in its natural habitat. Under cultivation it forms very little trunk, but the head has a very wide spread. The leaves are five-parted, and distinct in appearance. The flowers are borne in dense racemes in July. They are white in colour, and are peculiar by reason of the terminal blossom opening some days in advance of any other. It was first cultivated by Messrs. Veitch, and blossomed in July, 1858, for the first time in England.

P. flava is known as the "Yellow-flowered horse chestnut" and "Sweet Buckeye." It



A FINELY-FLOWERED SPECIMEN OF PAVIA MACROSTACHYA
In Messrs. J. Veitch and Sons' Nurseries, Coombe Wood.

is distributed from Western Pennsylvania to Georgia and Texas, where it is said to inhabit rich and fertile valleys. At its best it forms a tree of considerable proportions, being met with up to 80ft. in height. Large trees are scarce in this country, though, if planted in good soil, there is no reason why it should not attain its largest size. The leaves are handsome and composed of usually five, occasionally seven, leaflets. The flowers are yellow, and borne in upright racemes in April and May. Its correct name is Æsculus flava, and in addition to the name which heads this description, it has a great many synonyms. A variety is known under the name of purpurascens, which has red and yellow flowers. It is sometimes spoken of as Pavia discolor. Other varieties are sanguinea and Whitleyi.

P. glabra, the Ohio Buckeye, forms a low tree with a spreading head. The leaves are rather larger than those of P. flava, and are glabrous. The flowers are not very conspicuous, being of a greenish yellow shade. It grows rapidly when young, and flowers in a small state. Among other synonyms, it has been known as P. ohioensis and P. pallida. There is a specially strong-growing variety known as arguta.

P. Lyoni is a somewhat rare plant, and is considered to be a hybrid between Æsculus Pavia (syn. Pavia rubra) and Æsculus (Pavia) flava. It is not a very strong-growing plant, resembling most closely the first-mentioned species.

P. macrostachya (or Æsculus parviflora) is a good plant, and a glance at the accompanying illustration is sufficient to convey an idea of its floriferous nature to those who do not know it. The picture does not, however, represent the plant as it is usually met with, for, instead of forming a single stem with a large head, as seen in the picture, it grows into a large, wide-spreading bush, suckering freely, and increasing in width rapidly. The specimen here shown has probably been grafted or budded on to a stem. The leaves are large, rather thin in texture, glabrous, and composed of five or seven leaflets. The flower heads are borne freely during July and August, and may be anything up to a foot in length. The flowers are white, relieved by reddish anthers. It is a native of the South-eastern United States, and an invaluable shrub for late summer.

P. rubra, the Red Buckeye, has been named and renamed many times, one authority being responsible for no less than five different names. It is a not well-known plant, and is rare in cultivation. It forms a small tree with a bushy head of rather weak growth. The leaves are rather small, and five-parted. The flowers are red and produced rather sparingly in small racemes.

Although several other chestnuts have been mentioned under the name of Pavia, those in the above list are the ones usually referred to. W. Dallimore.

Kew.

Ferns.—In the fernery most of the season's growth will be in a forward condition, and to prevent the new fronds damping off the plants should be divested of most of their remaining old fronds. Adiantum fragrantissimum, and A. cuneatum hold a foremost place as pot plants, their light green elegant fronds are most attractive when grown in pots for house decoration. We have some nice plants in 6in. pots, they are good growers, doing well in sandy loam with a little peat. I find many of these free-growing ferns grow amazingly when the pots are full of roots, if watered frequently with liquid manure, but treated thus they are of no use to pot on.—T. B. Field.

ROUND THE VILLAGE GARDENS.

It does not matter what the name of the village is, nor where it is situated, but suffice it to say that it exists, and is typical of scores of other old world places to be found in every county of this fair land of ours. It possesses its Manor House, the gardens of which enjoy a fame of more than local character, a grey old church and rectory, a few habitations tenanted by what are called "better-class folk," and for the rest, well, the village is made up of cottages, most of which look half as old as time itself, and in some cases are occupied by the third or fourth generations of the families who were the original tenants. Every cottage, of course, has its garden, and in addition there is a field of allotments, which was provided by a former squire, where the villagers can hire 20 rod plots at a rent that is by no means excessive. No one remembers the time when the cottage gardens in the village were not well kept in a general way, but a new spirit was introduced some years ago, when, as the result of a general meeting, and a good deal of discussion amongst the women at home, and the men under the yew tree which stands at the corner of the straggling street, and where, by the way, many a knotty question has been fought out, it was decided to start a horticultural society and have an annual flower show. That spirit has grown, the annual event is known in the village as "our show"; the sturdy men folk look upon it as being something peculiarly their own.

At some future time I may be privileged to describe the show, but my office now is to say a word or two about the gardens; and what I know about them was gathered a few days ago when I was asked to judge them for prizes offered by the society. I felt a sense of responsibility in undertaking the task, because there is a certain freemasonry amongst the villagers, who visit each others' gardens on Sunday evenings to compare notes, and they have competed long enough with each other to know pretty well which is the best. Still, they are content to abide by the decision of the "genelman who comes to judge," and, though there may be some secret heart-burnings when the results are made known, these are kept in the background when the successful ones receive their prizes from the hands of squire's lady on show night.

"I didn't think o' puttin' th' garden in this time," said one grey-headed old fellow who hobbled down the path after me, while I was taking down notes of the different crops, "but th' old woman said I'd better. You see, I be eighty-five, and I can't do it as well as I used to, though I keeps potterin' about, and should be alright if it worn't for these plaguey rheumatics. I'm powerful fond of a bit o' gardenin', and 'ave bin all my life, but I can only potter about like now."

Just then a grey head and a wrinkled face appeared at the cottage door, and a time-worn female voice explained: "Bless you, sir. I can't keep him out o' th' garden, and he'd put it in if only to show some o' th' young 'uns as he ain't worn out yet. But when you've done, sir, would yer mind comin' and 'avin' a look at my bits o' flowers. They ain't quite what they would ha' bin, but its bin so dry, and I can't carry water same as I'd used to do." You can picture the flower garden—just a border in front of the cottage door, containing a mixed medley of old-fashioned things that seem to belong absolutely to cottage gardens, a honeysuckle clambering over the doorway, and bright scarlet geraniums peeping at you through the window. "Come in, sir, an' 'ave a look," was the genial invitation, and I stepped on to the stone floor that was spotless. "There, sir, wot do you think o' that for a geranyium?" said the old lady, taking hold of a pot that had been coloured outside with raddle till it was almost as red as the flowers. "I'm going to put that in th' show, and it'll take a good 'un to beat it. I've growed it from a slip as my daughter brought me when her youngest was a baby, and he's five come Michaelmas." But time pressed and I could stay no longer. "Good-day, sir," said the old pair in chorus, "and please God we hope to see you round again next year."

A pathetic instance occurred at the next garden we visited. A man met us at the gate with a troubled look on his face. "It's no good you goin' round this time, sir," he said, "as I ain't bin able to do anything. We put th' garden in as usual, and then she took ill. She's up there" (pointing to the upper window) "and th' doctor says there ain't no hope, but she doesn't know it, and if she thought I hadn't done th' garden, and it worn't bein' judged, she'd be troubled like, so p'raps you'll just walk round, so as I can tell her you've been." It was not much to ask, and I willingly assented, listening all the while to apologies for the unavoidable neglect. It was a real trouble to the man that the garden was not what he would have liked, but "she doesn't know," he said, as he rubbed a tear from his cheek with the back of his rough hand. There is pathos in garden judging sometimes.

In a keen competition the highest points were gained by an agricultural labourer who earns fourteen shillings a week, and I never hope to see a better cottage garden. "It's a wonder how he does it," said his wife, after she had instructed a child of about eight to look after little Teddy, and see that the baby didn't fall in the wash-tub. "He starts work at six, and often ain't done before dark, but he loves his garden, and he's in it every mornin' afore four o'clock all through the spring and summer." There was evidence of the love in the cleanliness, order, system, and appearance of every crop. "Thank you, sir," said the women when I paid her a well-deserved compliment, "he works hard and deserves all he gets, but I don't know what we should do without th' garden on his money, wi' six children to pervide for. There ain't much for th' public-house, sir, and it wouldn't go there if there was, 'cos he wants nothing but his garden in his spare time, and I 'elps him after th' little 'uns are in bed."

Evidence of the ruling floral passion was to be seen when we called on the individual who mends the shoes in the parish, for there we found a spare little man attired in his professional apron looking over the top of a pair of bright rimmed spectacles at a sweet pea flower, which he held in his hand. "That ain't bad for a novice," he said, "four flowers on a stalk, and I 'ope to 'ave a lot like it for th' show. I'm goin' to see if I can't take th' shine out o' that police-constable down the road, who I hear is a don hand at sweet pea growing." The shoemaker had given up a square piece of ground in front of his shop entirely to his favourite flower, and these were grown in clumps, twenty varieties in all, so he informed us, every hole trenched three feet deep with a barrowful of good manure in the bottom, and a "bit o' summat else to encourage 'em." There were not many flowers on the vigorous plants, but there was a purpose in this, for they had been pinched off, and the man of leather informed me if I hap pened to be in the village on show day he would show me a few.

At most of the calling-places the men were away at work, but the women took care that nothing was overlooked in the inspection, and one of them spoke her mind emphatically on the value of competitions. She didn't expect to get a prize because they hadn't been able to get the garden quite up to the mark, but she was determined that it should be put in, because the last two seasons they hadn't entered it, her husband had been a bit slack, and she hadn't had half the vegetables for the children as when the garden was in competition. "He's got something extra to work for now," she said, "and whether he gets a prize or not, there'll be more stuff in th' garden. I can't keep the children well fed wi'out plenty o' vegetables." This was a plain statement, made by a woman who was speaking her mind, but it was as good a testimonial for the utility value of cottage garden competitions as anybody could wish for.

Being the middle of the day the allotment field was almost deserted, but conspicuous cards marked the plots that had to be judged. Apart from the numbers, however, these were hardly necessary, as the plots in competition were so marked from the rest, and, as we were coming away, one man, who had evidently been watching our movements from the other side of the hedge, sidled up in an unconcerned-looking manner (but with an apparent air of anxiety nevertheless), and, "beggin' pardon," asked if we had seen "his marrers, as they were at the back of the rhubub," and might be overlooked. We assured him on the point, and he went away happy.

With episodes cropping up at every place of call, the round of inspection was continued, and with the genuine good-heartedness of country folk, that was destitute of any idea of bribery, many an offer of a glass of home-made wine or cup of tea was made, and, apart from seeing some excellent gardening, the opportunity was not lost of observing some traits in the human side of garden competitions. H.

LUPINUS MOERHEIMI.

This handsome and useful lupin differs from the true polyphyllus forms in its manner of growth, this being very much more compact and erect, so much so that supports for the spikes are rarely necessary. The other point of difference is worthy of note, and this is that the lower flowers, which are the first to open, are very long lived, and they remain fresh until practically all the blooms have expanded, and by this means a very effective length of flower is produced for a long time. In polyphyllus varieties the lower flowers have faded some time before the topmost flowers have opened. L. Moerheimi is very free flowering, and of a beautiful soft pink hue. Some idea of its freedom and effectiveness may be obtained from the accompanying illustration, which represents a batch of plants growing in Messrs. G. Bunyard and Co.'s nurseries at Maidstone.

Dahlias.—Continue to tie in or support all growths to prevent damage by winds and storms. Disbud if large or exhibition blooms are required, and keep well supplied with moisture. The beautiful cactus type, in most varieties, still seems too modest to show above the foliage as one would desire, thus hiding many of its charms. The scarlet [illegible] is one of the least offenders in [illegible].—E. F. Hazelton.

LUPINUS MOERHEIMI.
In Messrs. G. Bunyard and Co.'s Nurseries, Maidstone.

WORK FOR THE WEEK.

CONSERVATORY AND GREENHOUSE.

WINTER CARNATIONS.—The violent thunderstorms which have prevailed lately, accompanied by heavy downpours of rain, and sometimes of hail, have made it difficult to prevent plants outdoors becoming saturated. This is one of the worst things that can happen to carnations, as the soil is turned sour with the superabundant water, and rendered unfit for the roots. Should the weather continue so unsettled, I should advise the early removal of the plants into their winter quarters, or into sunny frames, keeping them cool for the time being, and using very little shade. Great care in the use of the water-pot will be necessary, the object being to induce hardness of growth without absolutely stunting it altogether. No artificial manure should be given at present; this will be better applied when the plants are entirely under control.

POT ROSES.—Often at this busy season roses in pots are neglected. The plants are probably forced into flower early in the year, and when this is over and the plants once more turned out of doors, little attention is paid them beyond occasional watering. Plants treated thus are seldom worth the ground they cover, and can never be profitable in the future. A rose that has been forced into bloom three or four months before its natural time, should be treated considerately for that very reason, and if carefully tended, kept free from weeds, and watered as necessary, good results may reasonably be looked for another year. A great point with pot roses that have been forced at the present time, is giving them plenty of room in an open spot where the sun may have ready access to the branches, and so thoroughly ripen them; and this ripening should be done as early as possible. Weak liquid manure should be given at every other watering, as the pots are now full of roots. Take care that none of the plants become dry enough to permit of the soil contracting from the side of the pots. Should this occur it must be remedied at once, otherwise the water will pass away rapidly without benefit to the plants. Greenfly must be kept down, or it will do considerable damage. A little soft soap dissolved in soft water nearly boiling, to which a little paraffin has been added, will make an excellent insecticide at a trifling cost for syringing the plants. If repeated two evenings in succession, this will invariably effect a clearance, even when the plants are badly infested.

MARGUERITES, OR PARIS DAISIES.—Cuttings of the white and yellow, inserted in sandy soil at once, and kept moderately close, moist, and lightly shaded for the first fortnight or so in a cool frame or pit, will seldom fail to root at this season, and will make grand stuff for either bedding or pot culture next spring. These succeed almost equally well in pots, boxes, or just dibbled out closely in a bed of light sandy soil; but for convenience sake, one of the two first methods is to be preferred.

CHRYSANTHEMUMS.—Be on the look out for, and try to ward off, the attacks of mildew by frequently dusting underneath the foliage with black sulphur, which is best done early in the morning while the dew is on them, or during evening after the plants have been syringed. Damping over the plants with the syringe or garden engine three or four times during hot weather is most beneficial, especially after the buds are taken, as it materially assists them to swell kindly. Watch minutely for rust, and isolate any which may be affected, placing them well away from the main batch; pick off any traces and burn immediately.—T. B. Field, Ashwellthorpe, Norwich.

THE ORCHID HOUSES.

STANHOPEAS.—The numerous members of this genus are not so extensively cultivated as their merits deserve. They form a class of orchids easily grown where the ordinary conditions of a plant stove are available, and they occupy but little space, as they are best suited when grown in baskets and suspended from the roof. The varieties of S. occulata, S. tigrina, and S. Wardi, that have recently passed out of flower, should now be examined, and repotted where necessary. They do not require annual repotting, and many of them resent being disturbed, so should be left alone, unless the potting compost is decayed or the plants have outgrown their baskets.

WHERE REPOTTING IS NECESSARY carefully turn the plants out of their baskets, pick away the decayed compost, and remove any dead bulbs and roots at the base of the plants. The pseudo-bulbs should be carefully examined, and any scale or other insect pest should be cleaned away. Baskets of suitable sizes having been selected, the drainage must be carefully placed, as the flower scapes are generally produced from the base of the pseudo-bulbs, and they penetrate through the potting compost, and find an exit through the drainage and the bars at the bottom of the baskets, so that if the drainage is laid in flat there is every possibility of the spikes being obstructed.

THE POTTING COMPOST should be of a durable nature, and we find good fibrous peat and chopped sphagnum moss, with a few broken leaves intermixed, a suitable material, sufficient broken crocks and sand being added to render it porous. This compost should be pressed moderately firm, and when potting is completed water with rain water, wetting the compost through. Repotted plants should be shaded from too strong light until the new roots get established in the compost. Lightly syringing overhead two or three times a day in bright weather will assist the plants to keep plump. Where plants do not require repotting, any dead pseudo-bulbs may be removed, and the decaying portions of the compost also; this latter may be replaced with fresh compost.

TO INCREASE THE STOCK.—This is best done by divisions made at the time of repotting, the rhizomes having been severed between the pseudo-bulbs, the leading growths and back bulbs attached may be potted up separately. There has been very little hybridising done among stanhopeas, so that there is every possibility of the production of new kinds, if anyone is sufficiently interested to undertake the work. There also appears to be no reason why bigeneric hybrids should not be procured. There can be no doubt that if we could combine the quaint and attractive features of the stanhopea with some of our more showy orchids the result would be a welcome addition to our gardens. The resting period of stanhopeas is generally prolonged throughout the winter months, so that after growth is completed and root action has ceased, only sufficient root moisture is necessary to keep the pseudo-bulbs in a normal state; every facility must be afforded during the resting season to enable the plants to thoroughly mature their pseudo-bulbs, or satisfactory flowering will be impossible.—H. J. Chapman, Oakwood Gardens.

THE FLOWER GARDEN.

FLOWER BEDS.—These should now be at their best, and proper care should be given to retain them in good condition as long as possible. Do not allow seed pods to form on anything, as this would soon weaken and impoverish the plants, so that they cease to produce fresh flowers. Pick off all old flowers and decaying leaves, and keep everything well supplied with moisture. Carpet bedding plants must be kept well pinched in, and the design strictly adhered to. Now is a good time to consider the effect of the season's summer bedding, and make notes of any desirable alterations for another year, or make a general plan of next season's arrangements. Some of the new introductions may not have quite realised expectations, or the position given them has proved unsuitable, but by arranging now, while the beds are filled with summer occupants, a change of design can more easily be made, and the approximate number of plants required of each variety to carry out the plan can be ascertained.

PROPAGATION.—It is rather early yet to commence the general propagation of bedding plants, but cuttings of any scarce or choice subject may now be taken as opportunity occurs, so as to obtain as many as possible. The last supply or change of established plants in pots may now be put out in the principal beds, where a continuous good display has to be maintained in succession to those now passing their best. Kochia scoparia should now be assuming its best colour, and form a nice contrast to Hydrangea paniculata.

IN THE SUB-TROPICAL GARDEN close attention must be given to see that nothing lacks moisture; a good watering in the evening of a hot day, and gentle syringing overhead will be most helpful. Support anything requiring assistance, and remove any dead or decaying leaves or flower stems which detract from good appearance. Should any specially good variety have appeared among seedling cannas, mark or label it for special care when lifting.

WILD GARDEN.—This should still be attractive and pleasing if suitably planted with foxgloves, mulleins, cranesbills (or geraniums), solidagos, hypericums, lythrums, pernettyas, Cytisus nigricans, and, in the most open spaces, cistus in variety, Colutea arborea, hemerocallis, anchusas, epilobiums in masses, Chrysanthemum segetum, and others. If there is not already a good proportion of these in suitable places, arrange for them to be added during the planting season. The very anticipation of these additions adds zest and charm to the work. The pernettya flowers, although individually not large, are produced in such profusion as to be quite noticeable, and they are followed by the pretty berries in autumn. The fruits of the various barberries are already most attractive.

HERBACEOUS BORDERS.—Continue to pay strict attention here; remove all old flowers and seed pods, neatly stake all flower spikes or growths, and keep everything well watered; a mulching of some sort greatly helps to conserve the moisture around any gross-feeding subject. Delphiniums will soon be over, and any inferior variety may be entirely removed; label all the best for division later on. The border should now be reaching its most beautiful stage; phloxes, helianthus, chrysanthemums, heleniums, erigerons, rudbeckias, monardas, lychnis, and others are all helping the display. Here also notes of any desirable change should be made, such as of lack of harmony in colour, height of plants, or apparent unsuitability of soil.

PANSY SEED may be sown, or if plants from earlier sowings are ready they should now be pricked off in the open border about six inches apart each way. Viola cuttings may now be inserted; these root best if put in a cool, close frame and shaded from the sun. If a frame is not at liberty they may be put in on the open border, and a temporary arrangement made for shading them. The soil should be prepared either by being broken up finely or sifted; if very heavy sifted leaf-soil and sand should be added, with a good sprinkling of sand on top. Take cuttings from three to four inches long, remove the lower leaves, and dibble into well-firmed soil three or four inches apart; sprinkle overhead or water every evening when the weather is at all dry.

PIPINGS OF PINKS may also be taken now, and these must be placed in a cool close frame either in pots or boxes, or in soil in the frame. Shade from sunshine, and keep just nicely moist, but not too wet.

ROSE GARDEN.—Keep close watch for any suckers that may appear, and carefully remove them; where pegging down is practised the old growths should be removed as they finish flowering. Remove all old flowers, and insure a good supply of moisture at the roots.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

RASPBERRY BEDS.—As soon as the crops have been gathered the old canes that have fruited should be promptly removed, so that all the strength possible may be thrown into the fruiting canes for next season. When removing them be careful not to break the leaves of the young growths; sever them at the bottom, and draw them carefully downwards. All young growths not wanted should be removed, leaving, if trained to stakes, from five to seven, if on wires, about six inches apart. Firm, well-matured canes by the end of the season are only secured by light, sun, and air being freely admitted. On light soils, should the weather prove dry, a good soaking or two will greatly assist growth; farmyard liquid, or a good dressing of Clay's, sprinkled over the roots, and then washed in, and, if desirable, another coating of manure will be found very helpful. On deep loam, should the growth be inclined to be coarse, manure should be less used. Our crop this season has been heavy, Superlative being the best, and Antwerp the sweetest varieties.

LOGANBERRIES.—These may be treated much like raspberries, viz., removing the old fruiting wood, and replacing it with fresh healthy growth to fruit next year. Feed these plants liberally on porous soil, and mulch well with decayed manure.

WALL FRUITS.—Peaches and nectarines bearing heavy crops need to be well supplied with nourishment at the roots; a good dressing of some patent manure will greatly assist the trees and the fruits. Do not overcrop the trees; it is far better to reduce the number and get size, in preference to a quantity of flavourless fruit. In dry, hot weather syringe the trees well with clean water; remove at intervals a few growths that can be spared, so that not much pruning is needed in spring. When the fruits have been cleared give the trees a few good syringings with some approved insecticide to free the foliage of red spider, if such be present; in any case, such dressings will be helpful and encourage the wood to fruit better next year. All the early American peaches are better when taken from the trees a little under ripe, and allowed to ripen in a well-ventilated fruit-room. If left to ripen on the trees the outside flesh becomes soft before the inside, near the stone, is fit for eating. When gathering peaches for bottling, or for packing for travelling, the fruit should always be a little under ripe, otherwise they show the bruises, no matter how carefully handled. We pack a very large quantity, and use fine, soft wood wool with every satisfaction.

PLUMS.—Some of the trees this year are bearing heavy crops, in fact, for the last three years our trees, with few exceptions, have borne heavily. We thin the fruits of some sorts as soon as they are fit for tarts, and feed the roots well with liquid manure, both before and after the crops are gathered. Do not forget to preserve some of the young wood, this, tacked to the walls between the main branches, frequently produces a heavy crop when the old spurs fail. All bush fruit of apples and pears, if bearing good crops, will be all the better if well soaked with liquid manure. If other work is very pressing a few of the trees bearing the heaviest crops might be done at intervals until the whole has been completed. — H. Markham, Wrotham Park Gardens.

Berberis Darwinii in Fruit.—When speaking of Berberis Darwinii, we usually associate it with evergreen or flowering shrubs, and it has many points in its favour which place it in the front rank of both these sections. There is, however, another aspect from which we may look at the species, and that is from a fruiting point of view. The fruits are very ornamental when at their best, being of a blue-black colour, or black with a rich bluish bloom. Although a fair quantity of fruit is usually produced, the current year's crop is more plentiful than usual, and every bush is thickly covered, making the plants conspicuous from a considerable distance. B. Darwinii is one of those shrubs which is equally in place planted to form beds in conspicuous places on lawns, or to brighten up shrubberies. In addition to the type there is a dwarf variety of very distinct appearance, which is well worth growing.—W. D., Kew.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe. Fifth Edition, revised to January, 1908, and including the new varieties.—Full details on timing and stopping for Northern, Southern, and Midland growers, [illegible] of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

READING HORTICULTURAL
SOCIETY'S
52ND GREAT OPEN SHOW OF
FLOWERS, FRUIT, and VEGETABLES,
WEDNESDAY, 26th August.

Entries close Saturday, 22nd August.

A handsome NEW CHALLENGE BOWL offered for the first time for Group of Plants. Open to all.

[illegible] exhibits not for competition) invited and same will be duly recognised by awards according to merit.

Full particulars and Schedules may be obtained from the Secretary,
CHAS. J. HOWLETT.
Victoria Chambers, Queen Victoria Street, Reading.

SANDY, BEDFORDSHIRE,
40th ANNUAL SHOW, August 27th, 1908.
PLANTS, FLOWERS, FRUIT, VEGETABLES, Etc., [illegible] CATS, RABBITS, POULTRY, PIGEONS, Etc.
Prizes value £1,000, including £8, £7, and £5 for Ten Stove and Greenhouse Plants; £9, £7, and £6 for Group of Plants. Entries for dead stock close August 20th, 1908. Schedules and Entry Forms of W. GREEN, Sec., Sandy.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

The exhibition held on Tuesday in the Horticultural Hall was small in extent and attended by few visitors, both of which circumstances were no doubt influenced by the [illegible] following a popular holiday. Notwithstanding that the building was not entirely filled, there were many good exhibits, all sections of horticulture being represented by [illegible] groups.

FLORAL COMMITTEE.

Small pot plants of eucalypti were displayed by Messrs. Barr and Sons, King Street, Covent Garden, London, W.C. They were raised from seed sown in January last, and embraced such species as E. globulus, E. [illegible], E. amygdalina, E. coccifera, and E. [illegible]dora. Messrs. Webb and Brand, nurserymen, Saffron Walden, the hollyhock specialists, showed beautiful and improved varieties of this popular flower, none of the plants showing a trace of the disease which has proved such a scourge to the mallow tribe. The [illegible] used by Messrs. Webb and Brand [illegible], one bushel; slaked lime, one bushel; [illegible] flowers of sulphur, and 2oz. of copper sulphate, the whole mixed and dusted over the foliage and stems. The best varieties were Apple Blossom (pink), Miss Lizzie King [illegible], alba superba (white), Venus (salmon), [illegible] Meyer (a delicate shade of pink), Luna ([illegible] yellow), Black Knight Improved [illegible], and Delicate (cream with a faint [illegible] rose). On a table opposite to the hollyhocks was a fine show of gladioli put up by Messrs. Kelway and Son, Langport, Somerset. There were more than 150 vases of these [illegible] flowers, the collection affording a wide range of colouring. As a selection, we may [illegible] Langport White, a new variety; Lady Rachel Bruce, yellow segments and [illegible] tinted lip; Ian Kelway, mauve with [illegible] markings on the lip; Huish Beauty, rose and yellow; Lord Courtney, rose with striped white, and a pale lip; Admiral Togo, [illegible], and Taunton Deane. Choice ferns and small palms were used by Messrs. H. B. May and Sons, The Nurseries, Edmonton, as a setting to groups of Campanula isophylla, ixoras, and Lapageria rosea. The campanulas were about the same number each of blue and white varieties, C. isophylla Mayi, both the white and the blue kinds, being very profuse in flowering. The ixoras were nice plants, dwarf, yet well flowered; and the lapagerias were shown in the white flowered as well as the type form.

Dahlias from Messrs. Jos. Cheal and Sons, Lowfield Nurseries, Crawley, Sussex, reminded one of the approaching autumn, the [illegible] being set off by a number of vases of [illegible]. The dahlias were arranged in [illegible] and single flowered varieties only were shown, the former embracing such fine things as Mrs. H. L. Brousson, Ivy Shoesmith, Lustre, Mrs. Seale, Avoca, and Hilda Shoesmith; whilst of the single-flowered type were seen the peerless Columbine, Kitty, Leslie Seale, and Mrs. T. G. Randall.

A showy exhibit of sweet peas was staged by Messrs. John K. King and Sons, Coggeshall, Essex, most of the best varieties in commerce being represented by good spikes of bloom. Hardy plants and flowering sprays of shrubs were shown by Mr. G. Reuthe, Keston, Kent. Small, but very pretty leaved caladiums were presented by Messrs. W. Bull and Sons, King's Road, Chelsea. The plants were in small pots, three or four being bedded in moss in pans. A row of aralias of the digitata type was at the back.

The great beauty and variety of the garden phlox, P. decussata, was exemplified in a fine exhibit from Messrs. T. S. Ware, Lim., Feltham, Middlesex. They staged large bunches of such handsome varieties as Coquelicot, Flambeau, Espérance, pale mauve with white centre; Leonard de Vinci, Miss Pemberton, reddish orange; Lady Napier, and a fine white kind labelled Friefraulein von Lassburg. A delphinium of the Bella Donna type was exhibited to show its second flowering in the one season. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, staged sprays of Buddleia variabilis, and spikes of blue and white Agapanthus umbellatus. Two fine antirrhinums were shown by Messrs. Dobbie and Co., Rothesay, in Moonlight, yellow with reddish tube; and Brilliant, carmine tube and yellow mouth. Very large spikes of iberis, labelled Snow Queen, were put up by Mr. W. Deal, Kelvedon, and vases of border carnations came from the gardens of W. A. Watts, Esq., Bronwylfa, St. Asaph, North Wales. Mr. T. Challis, Wilton House Gardens, near Salisbury, showed a new border carnation named Countess of Pembroke; the colour is almost white, there being a trace of a pink shade (A.M.).

ORCHID COMMITTEE.

Messrs. Armstrong and Brown, Tunbridge Wells, showed a small but select group. They staged a fine specimen of Cypripedium gigas Sanderiana, with a strong inflorescence carrying six well developed blooms; C. Callo-rothschildianum (C. callosum x C. Rothschildianum), a magnificent plant having two robust spikes, each with three blooms, the largest being eight inches across; the upper sepal is marked with reddish brown lines, and the side petals are blotched with chocolate; C. niveum, C. bella, C. Pankhurstiana (C. speciocissima x C. Harrisonæ), the petals being finely coloured with mauve, the elegant lip being yellowish in the centre, and margin edged with a broad band of rose. There was also a good spike of a fine form of Odontoglossum crispum. Adjoining this group was a small exhibit of choice plants, shown by M. Maurice Mertens, Mont St. Amand, Ghent, Belgium. In the front were seven plants of Miltonia vexillaria, the best having a fine white lip. It was labelled M. v. robusta Victoria. The deepest coloured flowers were those of the variety Dulcis. The odontoglossums in this exhibit were choice; we noticed a plant of O. altrum (O. ardentissimum x O. Halli). The spike had twelve expanded blooms, and three in the bud stage. It has a grand lip, coloured deep claret on a white ground, showing a trace of yellow; beneath the column the lip is a rich yellow. A plant of O. percultum had twelve finely developed blooms, coloured mauve with pale brown spots; the lip is marked with yellow. Other good things in this group were O. Wiganianum, O. amabile, and a richly coloured variety of Cattleya Whitei.

Messrs. Sander and Son, St. Albans, had several uncommon plants in a group of moderate dimensions, and special mention must be made of a grand specimen of the rare Jamaica species—Lælia monophylla. The specimen bore seven flowers. Two remarkably well flowered plants of Lycaste tricolor were shown by J. Bradshaw, Esq., Southgate; one plant of the variety albeus had twenty-nine flowers (F.C.C.). Mr. James Douglas, Edenside, Great Bookham, exhibited a dwarf, small-flowered, unnamed angræcum with paper white flowers.

FRUIT AND VEGETABLE COMMITTEE.

Excellent fruit trees in pots were shown by Messrs. James Veitch and Sons, Chelsea. The group was a very large one, and contained figs, peaches, apples, pears, plums, and gooseberries. The figs were placed at either end of the exhibit; Brown Turkey, Negro Largo, Bourgassotte Grise, and Black Ischia, were all carrying heavy crops. Well-balanced trees of pears Souvenir du Congres, Dr. Jules Guyot, and others; apples Chas. Ross, Gascoigne's Scarlet, and Cox's Orange Pippin; plums Denniston Superb and The Czar, the latter being very heavily fruited; with peaches Royal George, Marquis of Downshire, Prince of Wales, and a magnificent specimen of the variety Thos. Rivers, made an exhibit of considerable importance.

An exhibit of considerable educational value was seen in Messrs. Jas. Carter and Co.'s collection of dwarf beans. A selection of the best kinds as shown embraces those following: Longsword, Wythes' Early Gem, Canadian Glory, Holborn Wonder, Leonard's Stringless, these three last-named being of the stringless type; and Golden Wax, a butter-bean.

CERTIFICATES AND AWARDS.

First-class Certificate.—Sophro-cattleya x Warnhamensis J. M. Black, shown by R. G. Thwaites, Esq., Streatham.

Award of Merit.—Vanda amœna var. Sanderæ (Roxburghi x cœrulea), exhibited by Messrs. Sander and Sons, St. Albans; Carnation Countess of Pembroke, shown by Mr. T. Challis, Wilton House Gardens, Salisbury; Rose Paula, from Messrs. Paul and Son, Cheshunt.

Botanical Certificate. — Listrostachys Whytei, from Mr. White, gardener to Sir Trevor Lawrence, Bart., Dorking.

Cultural Commendation.—Lycaste tricolor albeus, exhibited by J. Bradshaw, Esq., Southgate.

MEDALS.

Silver-gilt Knightian.—Messrs. James Veitch and Sons, Chelsea.

Silver-gilt Banksian.—Messrs. Kelway and Son, Langport, Somerset.

Silver Flora.—Messrs. May and Son, Edmonton; Messrs. Webb and Brand, Saffron Walden; Messrs. Sander and Sons, St. Albans; and Messrs. Armstrong and Brown, Tunbridge Wells.

Silver Knightian. — Mrs. W. H. Plowman, Westminster, for jams, etc.

Silver Banksian.—M. Maurice Mertens, Mont St. Amand, Ghent; Messrs. T. S. Ware, Lim., Feltham, Middlesex; Messrs. John K. King and Sons, Coggeshall, Essex; and Messrs. James Carter and Co., High Holborn, London.

Bronze Banksian. — Messrs. Cheal and Sons, Crawley.

Midland Counties Sweet Pea Society.

Held in the Drill Hall, Wolverhampton, on July 29, the first show of this very enthusiastic young society was a revelation of the hold that sweet peas have upon growers of all grades. The big hall was well filled with beautiful flowers, and in nearly every one of the forty-one classes the competition was keen. Some very fine flowers were shown by Mr. Silas Cole, Mr. W. Marpee, and Mr. T. Jones.

OPEN MEMBERS' CLASSES.

Two classes were open to all members of the society, and here the competition was splendid. In the leading class for two dozen bunches the premier award carried with it the National Sweet Pea Society's silver medal, and this was won by Mr. Silas Cole, gardener to Earl Spencer, K.G., Althorp Park, Northampton, with grand bunches of Sea Foam, Prince of Asturias, Mrs. Hardcastle Sykes, Elsie Herbert, Lady Sarah Spencer, Earl Spencer, John Ingman, Althorp White, Mrs. Dels. Spencer, Lady Althorp, Frank Dolby, G. C. Waud, Miss Lavinia Spencer, Helen Lewis, Silas Cole, Gladys Cole, Countess Spencer, Lord Althorp, Althorp Cream, and several seedlings. Mr. C. W. Breadmore, High Street, Winchester, came second; Messrs. G. Stark and Son, Great Ryburgh, third; and Mr. W. S. Heslington. Littlethorp, Ripon, fourth.

The second open class, for twelve bunches, brought out three competitors, Messrs. G. Stark and Son securing first place withBeauty of Fife, Dorothy Eckford, Enchantress, Helen Lewis, Mrs. C. W. Breadmore, Menie Christy, George Herbert, Mrs. H. Bell, A. J. Cook, Paradise Ivory, F. Dolby, and Jeannie Gordon. Mr. W. S. Heslington second, and Mr. G. J. Kerkland, Burleigh Road, Wolverhampton, third.

TRADE EXCLUDED.

The best eighteen bunches, distinct, were from Mr. C. Barrett, Mancroft Road, Tettenhall, whose leading varieties were Helen Pierce, Mrs. Hardcastle Sykes, Jeannie Gordon, Helen Lewis, and Sybil Eckford. Other prize-winners in order of merit were Mr. W. L. S. Loat, Cumnor Place, Oxford, and Mr. W. S. Heslington. Five competitors came forward in the class for a dozen bunches, distinct, chief honours falling to Mr. W. Leonard S. Loat, Cumnor Place, Oxford, for Helen Lewis, Jeannie Gordon, Lord Nelson, Chrissie Unwin, Frank Dolby, Queen of Spain, and Agnes Eckford in good form and colour. The remaining awards were won by Mr. W. S. Heslington and Mr. Wakeman, Fern Terrace, Finchfield, Wolverhampton.

The class for nine bunches, distinct, proved a very popular one, competitors coming forward. The winning set was set up by Mr. F. W. Kendrick, Eagle Terrace, Tettenhall, Mr. W. E. Lowe, North Street, Shrewsbury, second, and Mr. W. L. S. Loat third. Another popular class was the local one confined to competitors residing within a five-mile radius of the exhibition hall. The class specification was for twelve bunches, distinct. First prize was here won by Mr. H. Bott, gardener to E. J. Forsyth, Esq., The Dell, Tettenhall, who had Prince Olaf, The Marquis, Frank Dolby, and other popular kinds; Mr. F. Davis, Grange Road, Tettenhall, second, and Mr. W. Jones, Bank Cottage, College Road, Tettenhall, third.

For half-a-dozen bunches, distinct, waved varieties only, Mr. William Marple, Penkridge, Staffs, led from six other competitors with splendid blooms of Audrey Crier, Mrs. Chas. Foster, Mrs. H. Sykes, White Spencer, John Ingman, and Paradise; Mr. A. W. Thorpe, South View, Birmingham Road, Lichfield, second; and Mr. W. L. S. Loat, third.

SINGLE BUNCH CLASSES.

Twelve classes were provided for single bunches of sweet peas, one variety only. White sweet peas were best shown by Mr. W. Marple, Penkridge, who scored with Nora Unwin; the best blush or pink sweet pea was a grand bunch of Paradise shown by Mr. W. Marple; Mr. Thomas Jones scored for a scarlet or crimson variety with King Edward VII., grandly shown and in fine colour; the class for a rose, carmine, or cerise variety proved a little troublesome owing to its wide colour scope; Mr. L. S. Loat came first with John Ingman in good form; the best bunch of an orange variety was Henry Eckford, shown by Mr. Thomas Jones.

In the yellow or buff class Mr. T. Jones led with beautiful blooms of Clara Curtis; for a lavender or pale blue variety, Frank Dolby won the first place for Mr. W. L. S. Loat; in the class devoted to blue, purple, and mauve varieties, Mr. Evans, The Gardens, Newbridge Crescent, Wolverhampton, scored with Lord Nelson; for a maroon sweet pea, Mr. T. Jones, Ruabon, secured the chief award with Black Knight; the best bicolor variety was adjudged to be Jeannie Gordon, as shown by Mr. Richard Maybury, Church Cottage, Codsall; for a striped, flaked, or marbled variety, Mr. T. Jones won first prize with a fine bunch of Helen Pierce, the variety mostly shown.

DECORATIVE CLASSES.

The trade were excluded from this section, but non-members were admitted on payment of an entrance fee. The leading class was for a decoration of sweet peas for a dinner table, the space allowed being 8ft. by 4ft. There were six competitors, and the competition was keen. First prize fell to Mr. W. Marple for a design in Paradise sweet peas, a rather tall arrangement; Mr. F. C. Woodward, York Avenue, Wolverhampton, second, with cream and pink; and Miss F. Jeaks, Codsall, third, with a fancy pink form. The best epergnes were those staged by Mr. F. C. Woodward, Miss Jenks, and Mr. J. T. Simpson, Mount Road, Tettenhall End. Bowls of sweet peas were shown by five competitors, the leading awards being secured by Mr. W. Jones, Bank Cottage, Tettenhall; Mr. E. Deakin, Hay Hall, Hay Mills, second; and Miss Thomas, The Highfield, Wolverhampton, third.

SPECIAL PRIZES.

Numerous classes were provided by seedsmen.

Mr. Eckford gave prizes for novelties, and the first prizes were awarded as follows: Mr. R. Maybury, Church Cottage, Codsall, for Mima Johnston; Mr. R. Maybury, for H. J. R. Digges; Mr. T. Jones, for James Grieve; Mr. T. Jones, for May Perrett; Mr. T. Jones, for Princess Victoria; Mr. T. Jones, for The Marquis; Mr. T. Jones, for White Waved; Mr. T. Jones, for Primrose Waved; Mr. T. Jones, for Prince Olaf; Mr. T. Jones, for Hannah Dale; and Mr. T. Jones, for St. George.

Messrs. Bakers' prizes for twelve varieties were won by Mr. Wm. Marple, Mr. T. Jones second, and Mr. W. E. Lowe third. The same firm provided a class for six varieties, open only to gentlemen's gardeners. Mr. T. Davis, Grange Road, Tettenhall, led with fresh flowers of popular varieties.

Mr. C. W. Breadmore gave prizes for nine varieties, and here the awards fell in order to Mr. T. Jones, Mr. C. Barrett, The Gardens, Mancroft Road, Tettenhall; and Mr. W. S. Heslington. Messrs. W. Atlee Burpee and Co., Philadelphia, contributed prizes for six bunches of sweet peas, Countess Spencer type, these being won in order of mention by Mr. W. Marple, Mr. T. Jones, and Mr. W. L. S. Loat, who all showed the Burpee Spencer varieties well.

Mr. H. Bott was successful in Mr. J. E. Knight's class, and Messrs. T. Jones, W. Marple, and W. Maybury secured the awards in order of mention in Mr. Sydenham's class, Mr. Marple coming first for Millie Maslin, and Mr. T. Jones first for Herbert Smith. Mr. T. Jones led in Mr. W. J. Unwin's class, and in Messrs. E. Webb and Sons' competition for nine bunches of twelve spikes each, Mr. A. Ashworth (gardener to H. Shaw), Horsley Hall, Gresford, was a good first, Mr. W. S. Heslington second, and Mr. G. H. Adams, Copthorne Road, Wolverhampton, third. In the class for six bunches, distinct, provided by Mr. H. J. Wright, the prizewinners were Mr. Marple, and Mr. M. J. Foden, 11, Bedford Street, Basford, Stoke-on-Trent. For six bunches of Miss Hemus varieties, Mr. T. Jones was successful.

MEDALS AWARDED.

The following awards were made to the trade displays that did so much to extend and beautify the show:

Gold Medal.—Mr. C. W. Breadmore, High Street, Winchester; Messrs. Bakers, Wolverhampton; Messrs. Jones and Sons, Shrewsbury; Messrs. J. Simpson and Son, Birmingham.

Silver Medal.—Messrs. Dobbie and Co., Rothesay; Mr. J. E. Knight, Tettenhall, Wolverhampton; Messrs. G. Stark and Son, Great Ryburgh; Mr. R. Sydenham, Birmingham; Messrs. T. B. Dobbs and Co., Wolverhampton.

British Gardeners' Association.

At the monthly meeting of the association, Mr. E. F. Hawes in the chair, 17 new members were elected, bringing the total up to 1,325. The solicitors were instructed to proceed with the case in which a member was entitled to £11 as wages. Grants of £2 each were made to the London and Blackburn branches to carry on propaganda work. The cases of lapsed members were considered, and it was decided to strike them off the list of members. They were comparatively few.

Leicester Flower Show.

AUGUST 4 and 5.

The flower shows in the Abbey Park, Leicester, have been remarkably successful from the time of their institution upwards of twenty years ago, but during the past three or four years they have increased by leaps and bounds, both in extent and attractiveness. On this occasion the progress that has been made was most marked, and as a proof of the rapidity with which these exhibitions are increasing in extent and popularity, it may be mentioned that on this occasion there were 316 exhibitors as compared with 257 last year, and that there were 2,700 entries, representing an increase of about 25 per cent. during the past three or four years. Another proof was to be found in the fact that this year the number of judges was increased to twenty. The Abbey Park, in which the flower shows are annually held, is one of the most beautiful and best managed parks in the provinces, and on the two days in which the exhibition is held, is closed to the public except on payment, and the thousands who crowd the tents and the magnificent open space show that the people of Leicester have no objection to paying for admission. The shows are under the management of the Parks Committee of the Leicester Corporation, and the profits derived from them are devoted to providing high-class music in the public parks during the summer months. As for some years past, the Deputy Town Clerk (Mr. J. Staynes) is the hon. secretary of the show, and Mr. J. Burton, the superintendent of the public parks, the superintendent, and the excellent manner in which the arrangements are carried out testify in no uncertain manner to the ability with which the duties of the respective offices are performed.

Roses constituted, as usual, a great and highly attractive feature, for a large number of classes were provided, and in the whole of them the entries were numerous and the competition was of the keenest. The quality of the blooms in the trade classes was hardly so high as we have seen it at Leicester, but this was probably due to the heat of the two weeks preceding the show.

In the open class for thirty-six roses, distinct, Messrs. Alex. Dickson and Sons, Newtownards, occupied the premier position with blooms, not over large, but finely finished; conspicuous in the collection were the blooms of Her Majesty, Frau Karl Druschki, Mrs. J. Laing, Etienne Levet, Alfred Colomb, Lady Basham, Beauty of Waltham, Hugh Dickson, and Dr. Andry; Mr. W. H. Frettingham, Beeston, was second with excellent blooms; and Messrs. Perkins and Son, Coventry, were third. For twenty-four blooms, the exhibitors last named obtained first place with brightly coloured blooms of A. K. Williams, Comte de Raimbaud, Madame Eugene Verdier, Ulrich Brunner, and other well-known varieties; Messrs. John Jefferies, Cirencester, followed closely for second place, staging Madame Jules Gravereaux in especially fine condition. For twelve teas or noisettes, Messrs. D. and W. Croll, Dundee, and Messrs. J. Jefferies and Son were first and second with good blooms. In the class for twelve blooms of one variety, Messrs. A. Dickson and Sons were first with Bessie Brown, and Messrs. D. and W. Croll second with Frau Karl Druschki. Messrs. J. Jefferies and Son scored in the class for twelve blooms of any one tea or noisette, with Marechal Niel, bright in colour; Messrs. D. and W. Croll were second with White Maman Cochet.

Roses were finely shown by private growers, and in the open classes for amateurs and gentlemen's gardeners the Rev. J. H. Pemberton, Havering-atte-Bower, Romford, achieved much success, his blooms being remarkable for their superb finish. He was first for twenty-four roses, distinct, for eighteen roses, for six teas, and for twelve blooms in four varieties, and second for twelve blooms. Mr. F. Dennison, whose blooms had suffered somewhat from the weather, was second for twenty-four, eighteen, and six teas, and first for twelve. Mr. W. Boyes, Middleton, Driffield, was third for twenty-four and eighteen, and was awarded the [illegible] offered for the best bloom in the section, for a perfect example of Marie Baumann.

There was a strong competition in the [illegible] classes provided for roses grown in the county of Leicester, and the more successful of the competitors were Mr. G. [illegible], Market Harborough; Mr. W. Up[illegible], Mr. M. Whittle, and Mr. J. T. Chap[illegible]. We should like to refer to the roses in this section in detail, but space will not admit of our doing more than briefly mention that the above-mentioned were the principal prizewinners.

Sweet peas were largely and finely shown, and constituted an important and highly-attractive feature. There was a very strong competition for the prizes offered by Mr. R. [illegible] for eighteen vases of sweet peas, and the premier award was made in favour of Mr. G. E. Lewis, Ansty, who had splendidly developed blooms admirably arranged. [illegible]k Dolby, Helen Lewis, Primrose Spencer, and Bolton's Pink were conspicuous in the collection. Mr. W. Butter, Oadby, followed closely for second place, his blooms being remarkable for high quality and tasteful setting up. Mr. H. B. Howe, Bushby, and Dr. Phillips, Kibworth, were third and fourth, staging excellent examples of cultural skill. In the class for six bunches Mr. [illegible] Wagstaff was the most successful of the several competitors, and Mr. J. Bates was second, both staging well. For twelve bunches of sweet peas Mr. O. Morris was first for splendidly grown examples of well-known varieties, and Mr. F. W. Wagstaff and Mr. A. Lewis shared the remaining prizes, both staging well.

[illegible] arranged for effect formed a [illegible] feature, and the interest they created was evidenced by the crowded state of the immense marquee devoted to them. At the head of the seven or eight competitors in the class for groups occupying a space of [illegible] feet, superficial measure, were Messrs. J. Cypher and Son, Cheltenham, who were awarded the first prize of £20, with one of the most beautiful arrangements they have yet presented to public notice. The group was rich in colour, but the colours were admirably contrasted, and the plants were so arranged as to produce a light effect. Mr. [illegible]ause, Leamington, was second; Mr. W. [illegible], Coventry, third; and Mr. H. Rogers, Leicester, fourth; and with reference to these it must be said that, although differing in merit, they evinced great taste, and deserved much praise. This year a class was provided for groups occupying 80 feet superficial, and in this the two most successful competitors were Mr. W. Weston, gardener to C. J. Oliver, Esq., Knighton Park Road, Leicester, and Mr. W. S. Bolton, gardener to W. Buckler, Esq., both of whom had effective arrangements.

Miscellaneous plants, in collections of [illegible], were well shown by Mr. H. Keeling, Mr. A. Grace, and Mr. W. H. Steeples. [illegible] the several collections we noticed [illegible] specimens of the fragrant Stephanotis floribunda and several bush specimens of zonal pelargoniums. Fuchsias were shown by Mr. H. Wright, the plants leafy and finely flowered. Of ferns there were several remarkably good collections, the best being that from Mr. W. S. Bolton, who [illegible] fine davallias. Mr. Manning, Dudley, was a close second. Mr. Weston scored with [illegible], his bush-trained specimens being large in size and splendidly coloured. [illegible] was a good second with pyramidal [illegible], also highly coloured.

Hardy flowers constituted a feature of much interest, for in addition to the contributions to the competitive classes, Mr. Bouskill, of Market Bosworth, staged an immense collection, that formed a big bank 50 or more feet in length. Mr. Bouskill was first for twelve kinds, with a collection of exceptional merit, and the second and third prizes were awarded to Messrs. H. Wright and Son, Leicester Abbey, and Mr. Weston, both of whom had [illegible] of much merit. Very attractive were the annuals, and for twelve kinds Mr. [illegible], Industrial School, Desford, was first, and Mr. E. Wright, second, both contributing excellent collections. Many other good collections were staged, and the stocks, for which special classes were provided, were of great excellence. Violas are seldom seen in such fine condition as at Leicester, and Messrs. Pemberton and Son, Walsall, who were first, had splendidly developed blooms, staged in a very tasteful manner. The same firm was also first for fancy pansies. Carnations and picotees were contributed in considerable numbers, and in a high state of development, the principal exhibitors of these flowers being Mr. R. Makepiece, Mr. E. Herbert, Mr. J. T. Ward, Mr. J. Ward, being the most successful of the numerous exhibitors.

Fruit was not, perhaps, quite so plentiful as on some previous occasions, but the quality was high. There were two classes, one for nine dishes, and the other for six dishes. and each collection had to be decorated with plants, flowers, and foliage. Two sets of prizes were offered in each class, one for the fruit and the other for the decorations, and in both Mr. J. H. Goodacre, Elvaston Castle, Derby, was first for fruit. In the class for nine dishes, he was first for decorations, using small salmon-coloured carnations with singularly good effect, and in the smaller class he was second for decorations. In the class for six dishes, Mr. Ireland, Newstead Abbey, Notts, was first for decorations, and in both classes he was second for fruit. These exhibitors, and Mr. T. Sims, Thorpe Satchall, were the most successful of the competitors in the classes for grapes, peaches, and nectarines.

Vegetables were plentiful and good, but we cannot do more than state that Mr. John Hudson was first in the class for twelve varieties, in Messrs. Webb and Sons' class for six kinds, and in Messrs. Sutton and Sons' class for six kinds; Mr. F. Hoe was first in Messrs. Pringle's class for a collection, and in Messrs. Harrison and Son's class for a collection of ten varieties the premier award was made in favour of Mr. Owen, Hurlsten.

Miscellaneous contributions were numerous, and contributed liberally to the interest and attractiveness of the show. We hope to give the principal awards for these in our next issue.

Southampton Carnation Show.

JULY 28.

The tenth annual exhibition was held on the Royal Pier, and was a success in point of quality. Sweet peas were as usual exceedingly fine, and non-competitive exhibits added much to the interest of the display. Mr. C. S. Fuidge, the secretary, made admirable arrangements, and the show was well attended during the day.

For twelve distinct carnations five competed. Mr. C. H. Herbert, Acocks Green, Birmingham, was first with desirable blooms of Gordon Lewis, G. Rudd, Lord Salisbury, Sportsman, Guardsman, R. Houlgrave, Master Fred, Arthur, Meteor, W. Skerring, and J. H. Heddersley; Mr. C. F. Thurston, Penn Fields, Wolverhampton, was a close second with but slightly inferior blooms, and Mr. A. R. Brown, Crompton Nurseries, King's Norton, was third. For six, distinct, Mr. J. Fairlie, 13, Mayfield Road, Acton, W., was first with a good set; Mr. Ransom, gardener to C. A. Linzee, Esq., Bramdean Lodge, Alresford, second.

For twelve distinct white ground picotees five again competed. Mr. A. R. Brown was again successful with handsome blooms of Maud Brown, Lady Louisa, Thos. William, John Smith, Lucy, Fortrose, Brunette, and Pride of Leyton as the best; Mr. C. Thurston second, and Mr. Herbert third. Mr. J. Fairlie, amongst five entrants, won the premier place for six blooms with desirable blooms of popular varieties. Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, a close second.

Six staged in the section for yellow-ground picotees, Mr. A. R. Brown winning with desirable blooms of Archie Brown, Olivia, Victoria, Beatrice, Leonora, and Cymbeline; Mr. Hayward Matthias, Medstead, Alresford, was second, and Mr. Thurston third. As many as seven competed with six blooms, distinct, and Mr. J. J. Keen, 37, Avenue Road, Southampton, was first with Leonora, Goblin, Vera, and Togo in good condition. Mr. Cousens, gardener to J. A. Fort, Esq., Kingsgate Street, Winchester, second.

For twelve dissimilar fancy carnations six entered the list. Mr. C. Herbert won with very fine specimens of Lord Steyne, Eldorado, Sam Weller, Iris, Liberté, Erl King, and Horsa; Mr. H. Matthias was a close second. Seven entered for six distinct, and Mr. J. J. Keen won easily with desirable blooms of Elaine, Sam Weller, and Highland Lass; Mr. J. Fairlie second.

Mr. H. Matthias was the most successful with selfs, winning with good blooms of Her Grace, Daffodil, Miss Willmott, Medoc, and Mrs. Flight in the class for twelve distinct; Mr. C. Thurston second. Mr. Fairlie won for six with desirable blooms.

For twelve distinct of fancy carnations or yellow-ground picotees, undressed, six of each, to be arranged with their own foliage in separate vases, Mr. H. Matthias had much the best exhibit with Baldur, Benbow, Pro-Cooper, Argosy, Plato, Highland Lassie, King Solomon, and Agnes Sorrell. Mr. A. R. Brown second. Mr. H. R. Taylor, Oakleigh, Cheam, won for six with a desirable exhibit.

Ten classes were devoted to one vase each of distinct colours, and here Mr. A. R. Brown won with Snowdrift as a white, Mr. Flight had the best blush or pink in Mrs. F. W. Flight. The rose or salmon class was won by Mr. H. R. Taylor. Mr. Fairlie won for a scarlet with Duke of Norfolk. Cecilia was the best yellow self, staged by Mr. A. R. Brown; white for Mr. Fairlie, Benbow won in the buff or terra-cotta section.

For one vase containing twenty blooms of carnations or picotees on stems not less than twelve inches long, arranged for effect, with their own foliage, nine competed, and Mr. A. E. Usher, gardener to Sir R. Baker, Ranston House, Blandford, was first with a good exhibit.

Premier Blooms.—Bizarre—R. Houlgrave, from Mr. C. A. Linzee. Flake—Meteor, from Mr. C. H. Herbert. Self—Maud Allan, from Mr. Taylor. Fancy—King Solomon, from Mr. A. R. Brown. Heavy edged white picotee—Lady Sybil, from Mr. A. R. Brown. Light edged white picotee—Mrs. C. H. Herbert, from Mr. Herbert. Heavy edged yellow picotee—Togo, from Mr. Hayward Matthias. Light edged yellow picotee—Leonora, from Mr. Brown.

For three varieties of American tree carnations three blooms of each, arranged in separate vases, Mr. Usher secured the leading place with a good exhibit.

Dinner table arrangement with carnation or picotee blooms brought seven entrants. Mrs. E. Ladhams, Fairlea, Bellemoor Road, Shirley, was first with an effective display; Miss E. Burt, Manor House, Winterbourne, second. Mrs. E. Ladhams also won for one vase or stand of carnations or picotees with a good exhibit.

A first-class certificate was awarded to carnation Maud Allan, a yellow self shown by Mr. Taylor.

Sweet peas made a huge display. For eighteen distinct varieties there were five entrants, and Mr. Usher followed up his previous successes with this flower by winning handsomely both in this and another large class. Mr. J. Hughes, gardener to A. P. Ralli, Esq., Twyford, was second. Mrs. R. H. Jeffery, Nursling, had the best decorated dinner table of sweet peas.

Manchester Show.

JULY 30 to AUGUST 3.

The Royal Lancashire Agricultural Society may be congratulated upon this year's innovation in the form of a horticultural exhibition. Liberal prizes were offered, and to these exhibitors responded most heartily, bringing out a collection which should satisfy the council.

For a group of miscellaneous plants of 300 square feet, Messrs. J. Cypher and Sons occupied the premier position with an artistic arrangement; Mr. Holmes, Chesterfield, was second; Mr. J. W. Smith, gardener to J. Brown, Esq., Heaton Mersey, took the remaining prize. For a group of 100 square feet (trade excluded), Mr. J. W. Smith secured the leading prize. Mr. F. E. Hazelton, gardener to the Earl of Derby, Knowsley, had a beautiful group, not for competition, and was awarded a gold medal.

For a collection of hardy perennials, twelve feet frontage, Mr. G. Gibson secured the leading prize with a showy bank of excellent flowers. For twelve stove and greenhouse plants, not less than seven in bloom, Messrs. J. Cypher and Sons led, their flowering plants being excellent, and including Ixora Williamsi, I. Duffi, I. salicifolia Shawi, Erica Aitoniana, Statice intermedia, and S. profusa; Mr. J. Duckworth, gardener to W. Cookson, Esq., Heaton Mersey, and Mr. A. R. Kelly, gardener to H. Brocklehurst, Esq., Fallowfield, took the remaining prizes. For eight stove or greenhouse plants in pots not exceeding twelve inches diameter, Messrs. J. Cypher and Sons were again well to the fore with excellent plants. For six exotic ferns, Mr. W. A. Holmes won with smart, medium sized plants of Nephrolepis todeaoides and N. Piersoni; Mr. R. R. Kelly second.

For six caladiums, Mr. W. Cookson led with good plants; and for six tuberous begonias Mr. J. Howarth, Tollington, had the leading awards. For twelve table plants, Messrs. W. J. Garner, W. A. Holmes, and J. Vickers, gardener to Dr. Brooke, were placed as named.

For six orchids, Messrs. J. Cypher and Sons were again to the fore, staging Miltonia vexillaria, Cattleya Emperor, Vanda suavis, and Lælio-cattleya Radium; Mr. W. A. Holmes, gardener to J. McCarthey, Esq.; Bolton, second. For the best specimen, the Messrs. Cypher won with a fine Epidendrum prismatocarpum; Mr. Holmes second.

For a table arranged for effect, Mr. W. J. Garner won with a charming arrangement of rambler roses, sweet peas, and carnations; Mr. J. Atkinson, Stockport, being second. For one bride's bouquet the prize-takers were Messrs. W. J. Garner, J. Mosley, and R. Robinson. For an arrangement of sweet peas suitable for a dinner table, Mr. A. Aldshead won with pink and white flowers; Mr. R. Robinson and Mr. J. Garner following. Collection of eighteen distinct varieties of sweet peas, Mr. T. Jones, Ruabon, staged in his best style, having Prince of Autumn, Constance Oliver, Menie Christie, Mrs. H. Bell, John Ingman, St. George, Etta Dyke, Helen Lewis, etc.; Mr. T. Bolton, Carnforth, was second. For a collection of twelve varieties, Mr. Bolton led, and Mr. F. J. Harrison was second. For a collection of twelve varieties, trade excluded, the winners were Messrs. T. Proctor, A. Whitley, and B. Birch.

For a collection of carnations, five feet by three feet, Messrs. Youngs, West Derby, won with a charming display, having telling blooms of Lusitania, Viscountess Ebrington, Black Prince, etc.; Mr. R. Robinson second. For a collection of tree carnations, Mr. C. F. Waters, Balcombe, won with fine blooms of The President, Enchantress, Harry Fenn, Mrs. A. Patten, and others. For twelve bunches hardy flowers, Mr. J. Howarth won with a telling display, and Mr. W. Cookson was second.

The best twenty-four roses came from Messrs. A. Dickson and Sons, Newtownards, who won with bright blooms of Her Majesty, Gustave Piganeau, Etienne Levet, Caroline Testout, Marie Rady, A. K. Williams, Annie Wood, etc.; Mr. G. Gibson and Mr. C. Burgess second and third. For twelve blooms, distinct, the winners were Messrs. A. Dickson and Sons, Mr. G. Gibson, and Mr. F. C. Harrison.

For twenty-four blooms of cactus dahlias, Messrs. B. Stringer and Sons won with a telling stand, including Purple Jackson, Mrs. McMillan, Ajax, Monarch, J. H. Jackson, etc.; Mr. W. Woodward, Birmingham, second. For twenty-four show or fancy varieties, Messrs. B. Stringer and Son were again the winners, their best blooms being Crimson King, Mr. Glossock, Chieftan, R. T. Rawlings, etc.

For a collection of twelve dishes of fruit, Mr. G. H. Goodacre, gardener to the Earl of Harrington, Derby, won with a strong stand, having Muscat of Alexandria and Black Hamburgh grapes, Countess melon, Negro Largo figs, Nectarne peaches, Elruge nectarines, Golden Gage plums, Bellegarde peaches, Spencer nectarines, etc.; Mr. J. E. Hathaway, gardener to J. Brennaud, Esq., Thirsk, followed.

In the class for a collection of nine kinds of vegetables, Mr. B. Ashton won with an excellent lot, including Autumn Giant cauliflower, Exhibition runners, Sensation tomato, Masterpiece peas, Monster White onions, etc.; Mr. J. George, gardener to T. Henshaw, Esq., Huyton, second. For a collection of nine varieties, Mr. B. Ashton again had the best; and for a collection of eight varieties Mr. W. Cheesborough, Macclesfield, took the lead.

FOR PRESENT SOWING.

CABBAGE.

JOHN K. KING & SONS' READING DEFIANCE.

The Best ever introduced. Sown now, ready end of May. Splendid Hearts. Exquisite Flavour, Good Quality.

From Mr. JOHN DANCE, Barholm: "I have been a grower of Cabbage for the past 29 years; the last three years I have grown your 'Reading Defiance,' and it has given me the greatest satisfaction. I cannot praise it too highly."

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Very early, dwarf, and distinct. Recommended.

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FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (August 8) contains the following:

SUCCESSIVE CROPS OF VEGETABLES.
MARKETING FRUIT.
APPLE NOTES.
GOOSEBERRY CLUSTER-CUP DISEASE.
CHESHIRE CHEESE.
DAIRY COWS.
SOILING AND PASTURING STOCK.
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ANSWERS TO CORRESPONDENTS.

DUBLIN SWEET PEA SHOW.—E. A. B., Armagh: Particulars were posted to you at once, but we expect they did not reach you in time to be of service. You should have written to the secretary, R.H.S. of Ireland, 5, Molesworth Street, Dublin.

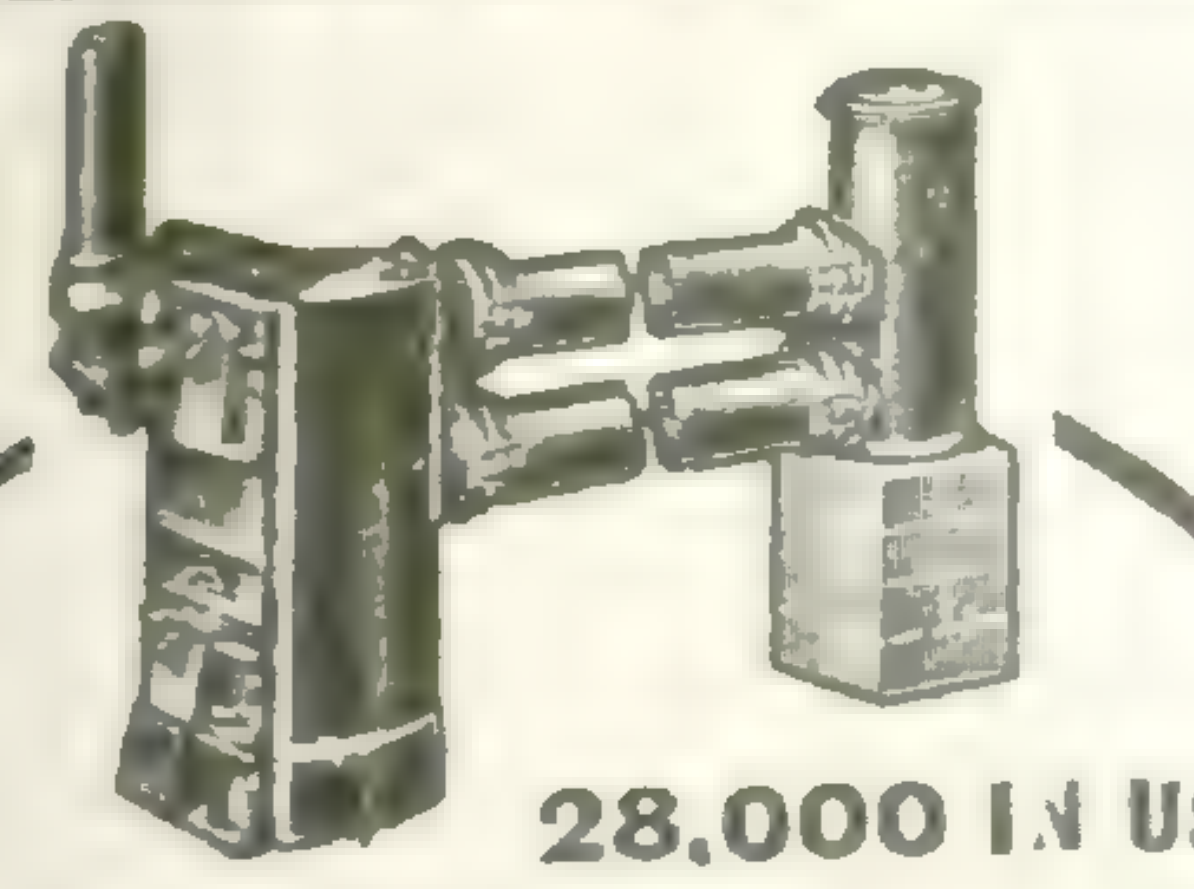
BLACKENED FERN FRONDS.—B. S., Zaraisk: The cause of the blackening is a fall of temperature, combined with excessive moisture in the atmosphere. You will find that if you maintain a suitable temperature, using the ventilators to dispel excess of moisture, that you will not be troubled with blackening of the fronds. You may have noticed that where there is a drip from the roof bars blackening invariably follows after a spell of cold weather and low temperature. Less watering and damping will suffice in cold weather. If the houses lie low and damp, the difficulty is greater, and heating and ventilation must be used together to dispel the moisture.

ZONAL v. IVY-LEAVED PELARGONIUMS.—J. C. B.: The inclusion of a zonal pelargoniums in a class for three ivy-leaved pelargoniums would lead to disqualification, as also would the inclusion of an ivy-leaved variety in a class for zonals. For show purposes as for general use, these two classes of pelargoniums are quite distinct.

SMALL GRAPES.—F. R., Devon: It is too late now to do anything that will make the berries appreciably larger. Nitrate of soda would encourage growth, whereas the finishing and ripening of the growth are matters that will be needing early attention. Your partial failure is, we think, due to overcropping and lack of food. Let us know the condition of the vines, house, and border, and give us some idea of the treatment followed, and we will do our best to set you right for another year. The thinning you have given the bunches should react helpfully upon the vines themselves.

BULBS FOR EARLY FORCING.—F. R., Devon: You may obtain daffodil flowers in November, but it will be very much better if you wait until December before bringing them into bloom; indeed, in all but the larger establishments where there is a huge demand and ample conveniences, Christmas and the New Year are early enough for forced bulbs and tulips. Chrysanthemums and salvias, etc., should fill the bill during November. However, obtain the bulbs as quickly as possible, and at once pot them up and stand them on a hard ash base in the open, covering them with five or six inches of old sifted ashes. If the soil is comfortably moist when potting is done—and it should be done in August—then no water need be given, as the moist ashes will keep the soil from drying. Good daffodils for early forcing are Henry Irving, Queen of Spain, Golden Spur, Sir Watkin, Emperor, Empress, Horsfieldi, Barri conspicuus, Beauty, Stella superba, P. R. Barr, and Victoria. There are other and more expensive kinds of considerable value, but those named will do for a start, and until you gain experience. Let the bulbs remain under the ashes until they commence to make leaves, then remove them to a frame, and from these take them in batches to a warm greenhouse. Hard forcing defeats the end in view; 65 deg. should never be exceeded, and 55 to 60 is better. Do not attempt to force the bulbs until they have had about twelve weeks in which to become thoroughly well rooted. Try a few freesias, potting them two inches deep, but do not cover them with ashes. stand them in a sunny spot out of doors until the weather threatens to be cold, then move them to frames or the shelf of a sunny greenhouse. Potted early, freesias may be had in flower by Christmas. Roman hyacinths may be treated in the same manner as daffodils, but they must be potted early if they are to be flowered early. Due Van Thol, Pottebakker, Vermilion Brilliant, and Mon. Tresor tulips, may be treated similarly, but they need a fairly stiff soil. These may be had at Christmas if potted early.

The Loughborough BOILER



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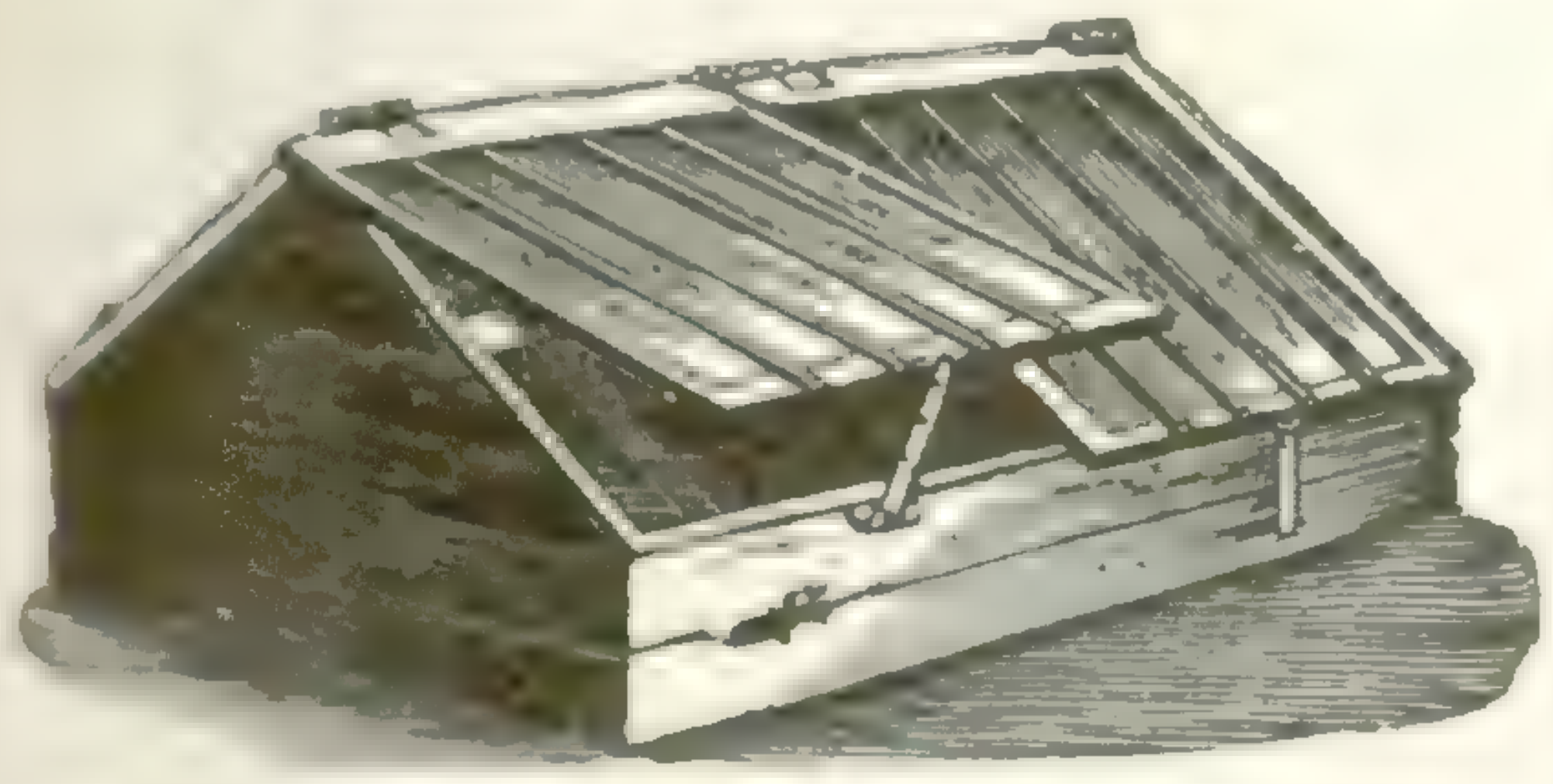

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Sizes and Prices. Glazed and Painted.		£	s.	d.
6ft. long by 3ft. wide	Cash Prices. Carriage Paid.	2	0	0
6ft. " 4ft. "		2	5	0
6ft. " 5ft. "		2	15	0
12ft. " 4ft. "		4	0	0
12ft. " 5ft. "		4	15	0
12ft. " 6ft. "		5	12	6

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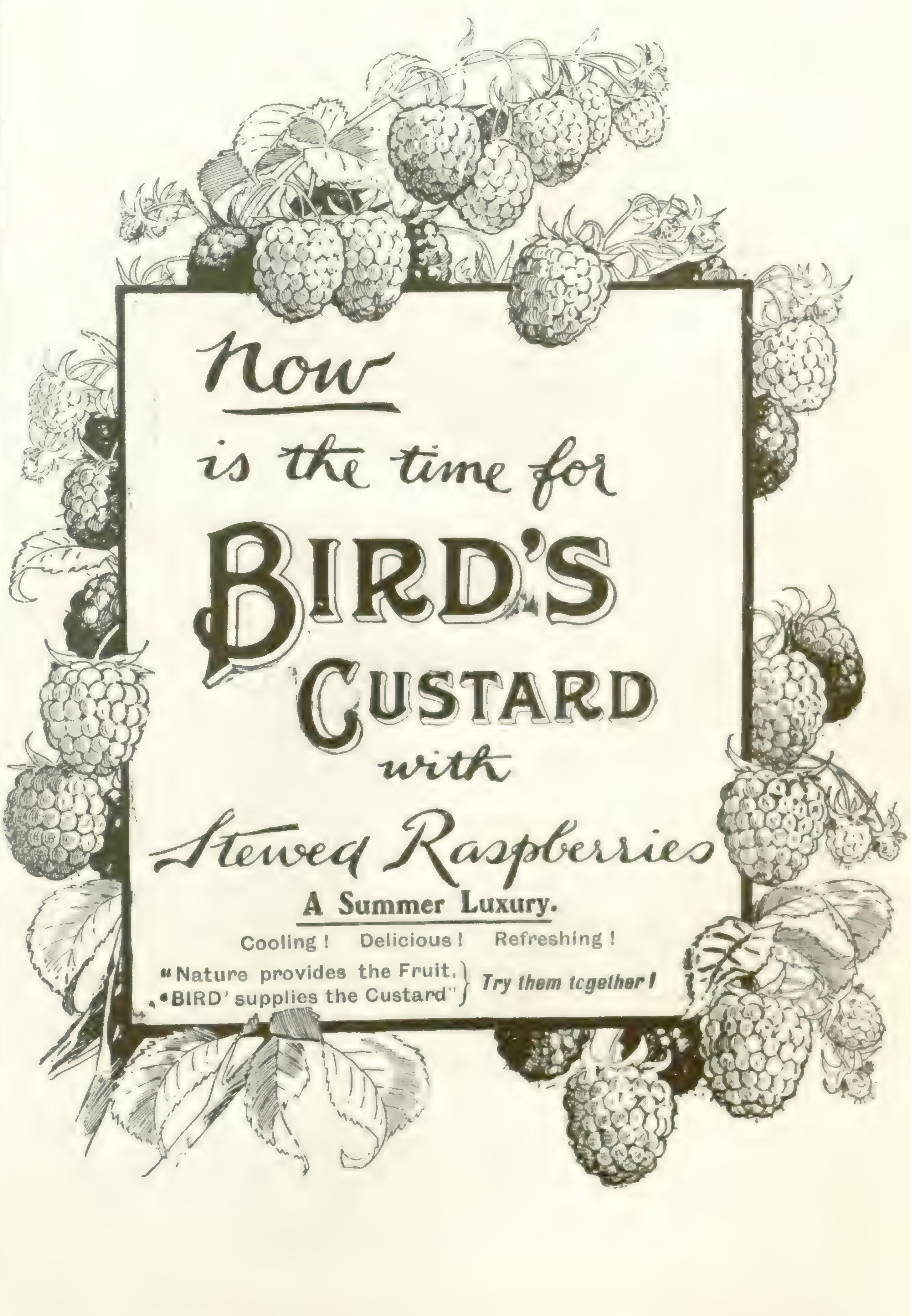

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Harry J. Veitch, Chairman. Alex. James Monro, Manager.

GLOBE ARTICHOKES.—M. C., Wallingford. There are numerous varieties of the Globe artichoke, and our French friends recognise and catalogue a considerable number. This vegetable varies considerably when raised from seed, hence the advisability of propagating by division or suckers from a good stock. A variety with broad-based heads, and rounded, fleshy scales, is far more useful than one with pointed heads and narrow, stiff scales. Your broad variety is one commonly grown in English gardens, but it is hardly so fine as Large Paris Green, so extensively grown around Paris, and frequently seen in greengrocers' shop windows here. Your pointed, coloured variety is probably the Florence artichoke, a variety that is best used when the heads are quite young, these being boiled and eaten whole.

LANDSCAPE GARDENING.—J. Y. L., Savanna: You will readily understand that it is no easy matter to advise you on the evidence of a brief letter and two picture postcards, much as we should like to be of real assistance. Nothing should be done to spoil the splendid natural features of the place, and where trees and shrubs threaten to hide the wonderful stones these should be cut out, leaving only the small plants and tiny shrubs to colour and beautify these features. Cut a path from the lowland up to the top of the bluffs, securing as easy an ascent as possible, and arranging that here and there along the route there are openings among the trees through which the more important views can be obtained. These openings should be by way of surprise and encouragement, but the great panorama should only be obtainable from the summit. If there is room, and a suitable position on the summit, arrange a garden there, using low-growing flowering shrubs and the hardiest of herbaceous and bulbous plants, grouping these in large irregular masses. Such a garden should have as much shelter as art and Nature can afford, because here visitors will rest after the climb, and their surprise and pleasure at the splendid view they find will be increased if rest is provided for them amid beautiful surroundings. Trees that will stand the exposure of sun and wind should be encouraged around such a garden; indeed, no tree or shrub should be removed from this point until you are quite sure its removal will be an improvement. Where a root hold can be found for them various vines should be planted along the cliff face, where they will drape a portion of the stone and not hide any prominent feature. With a fine river at command it should not be difficult to provide pools of water for aquatics and moisture-loving plants at suitable points in the lowland. The extent of the water gardening must depend largely upon the extent of the park, and the ease with which water can be obtained. A waterfall is always an attraction, and if art can be employed to assist Nature in providing one it appears to us you have ample opportunities; the water could flow out from between your natural rock, and be conducted to the lake, and thence to the smaller pools. Plant a double avenue along the river bank, with a central roadway and two side paths, and if favourable situations are available along the route then plant these with groups of various plants and shrubs, filling some of these areas with the gayest of flowers. In the broad, open, low parts allow free stretches of grass land, and plant a few specimen trees, and a few groups of trees where they will develop freely, and where they will mark the boundary line, and eventually give to the park a suggestion of far greater extent than it possesses. A flower garden near the entrance, after passing between the bluffs, seems to be the right thing, but it must be a free, bold affair, or the heights will kill its effect; but the great flower garden feature must be further in the park, where there is ample room for its inspection and enjoyment. We hope these suggestions will be of use to you, and, needless to say, we shall be glad to hear from you, and about your work, at any time.

ROSE NOT FLOWERING.—A. M., Swinton: We do not know why the rose failed to flower. Perhaps cold winds nipped the earlier growths, and so severely checked them that they did not bloom. Do not pinch the strong growths that are being made now, they may flower at the ends next month, but if not you will have some grand shoots for pegging down, and these will flower from every bud next year, and when they have flowered they may be cut hard back. Pinching would result in side growths of no value.

DISEASED APPLE SHOOTS.—E. E., Essex: The apple shoots sent are very badly affected by mildew, caused, no doubt, by the dry weather experienced of late. Spray the trees with a solution of potassium sulphide (liver of sulphur), at the rate of one ounce of sulphide to 2½ gallons of water. A little soft soap in the water will render the mixture slightly adhesive. Spray again in the course of a week or ten days. See that the young trees are not suffering from lack of moisture at the roots, as this lack will encourage mildew by reducing the vitality and working capacity of the leaves. Cold winds also encourage mildew.

NAMES OF PLANTS.

F. G. E., Radnor.—1, Lychnis chalcedonica; 2, Cuphea Roezli.

H. H., Dunstable.—1, Adiantum pedatum; 2, Campanula isophylla.

G. A., Durham.—Evidently both are forms of Odontoglossum odoratum.

C. C., Farnham.—The large flower is probably Senecio clivorum; the other we do not recognise.

S. E. P., Cheriton.—1, Solanum jasminoides; 2, Tecoma Smithi; 3, Asclepias curassavica; 4, Hoya carnosa.

N. L., Ulverston.—1, Levcesteria formosa; 2, Jasminum nudiflorum; 3, Cedrus Deodara; 4, Adiantum macrophyllum.

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MARKETS.

COVENT GARDEN.

Flowers.

Supplies were good, but trade was slow during the holidays.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	5	0	to	9	0
Alstroemerias	per doz. bun.	2	0		2	6
Arums	per doz.	2	6		4	0
Asparagus	per doz. bun.	1	6		6	0
Carnations	per doz. blms.	1	6		2	6
,,	per doz. bun.	8	0		16	0
,, Malmaison	per doz. blms.	8	0		12	0
Cattleyas	per doz.	8	0		10	0
Coreopsis	per doz. bun.	1	6		2	6
Croton leaves	per bun.	1	0		1	6
Cypripediums	per doz. blms.	2	0		3	0
Eucharis	per doz.	4	0		5	0
Forget-me-not	per doz. bun.	2	0		3	0
French fern	per doz. bun.	1	0		3	0
Gaillardias	per doz. bun.	1	6		2	6
Gardenias	per doz.	1	6		3	0
Gladiolus Colvillei	per doz. bun.	6	0		8	0
,, large flowered	per doz. spks.	1	6		2	6
Gypsophila	per doz. bun.	3	0		5	0
Lilium auratum	per bun.	6	0		9	0
,, candidum	per bun.	1	0		2	6
,, speciosum	per bun.	1	6		2	6
,, longiflorum	per bun.	2	0		3	[illegible]
Lily of the Valley	per doz.	6	0		10	6
Marguerites, white	per doz. bun.	3	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	3	0		4	0
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	4	0		6	0
Roses	per doz.	1	0		6	0

Fruits.

Soft fruits are plentiful, and there is a good demand.

		s.	d.		s.	d.
Apples, Australian	per case	6	0	to	14	0
,, Tasmanian	per box	10	0		16	0
,, English	per ½-sieve	2	0		4	0
Apricots	per box	0	9		1	0
Bananas	per bun.	4	0		10	0
Cherries	per ½-sieve	2	6		8	0
Currants, red	per ½-sieve	3	0		4	0
,, Black	per ½-sieve	6	0		7	6
Figs	per doz.	1	0		3	6
Gooseberries	per ½-sieve	2	0		4	0
Grapes, English (new)	per lb.	1	0		3	0
,, Belgian	per lb.	0	9		1	3
Greengages	per ½-seive	4	0		7	
Lemons	per case	6	0		16	0
Melons, Guernsey	each	0	9		2	6
,, English	each	1	0		2	6
,, Valencia	per case	9	0		10	0
Nectarines	per doz.	3	0		10	0
Oranges	per case	9	0		30	0
Peaches	per doz.	3	0		12	0
Pineapples	each	2	0		6	0
Plums	per ½-sieve	3	0		6	0
Raspberries	per doz. pun.	5	0		7	6

FORTHCOMING ENGAGEMENTS.

TUESDAY, August 11.—Clay Cross Horticultural Society.
Exmouth Horticultural Society; two days.

WEDNESDAY, August 12.—Sevenoaks Horticultural Society.
Taunton Deane Horticultural Society; two days.
Balcombe Floral Society.

THURSDAY, August 13.—Brecon Horticultural Society.

SATURDAY, August 15.—Coupar Angus Horticultural Society.

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A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

GARDENER (Head Working); age 45; married, no family, thoroughly experienced in all branches of gardening; a thorough, Practical Man, and can be well recommended; disengaged. Address F. SMITH, Rose Cottage, Mellis, Eye, Suffolk.

GARDENER (Head Working); life experience in all branches; twelve years' excellent character, nine previous; life abstainer; married, two children, youngest 13. Address C. SEYMOUR, 2, [illegible] Road, Hayward's Heath, Sussex.

GARDENER (Head Working), age 47; good practical experience in all branches, Inside and Out; many years as Head; can have good references. H. TURNER, Fineshade, Stamford.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head or good Single-handed); good practical experience in all branches; grapes, melons, cucumbers, peaches, stove and greenhouse plants, flower and kitchen garden; age 43; married, no family. Apply W. F., Office of this Paper.

GARDENER (Head or good Single-handed, where help is given); life experience Inside and Out; good references; middle age; widower. G. B., 17, Eversleigh Road, Lavender Hill, London, S.W.

GROWER in Fruit and Florist Nursery, or Head Working GARDENER; life experience in all branches, Grapes, Peaches, Cucs., Toms., Chrysanthemums, Bulbs, Flower and Kitchen Garden. Good reference; married; age 42; disengaged any time. JONES, Glyndrienog Nurseries, Glanamman, Carm.

LORD and LADY LAWRENCE wish to recommend their late HEAD GARDENER; excellent, all-round; abstainer; age 46; married, no family. Address JOHN PODMORE, Trumpington, Cambridge. (No circulars.)

W. E. SUTTON, Esq., highly recommends his HEAD WORKING GARDENER (a thoroughly practical, trustworthy man); 4 years' excellent character, 12 previous; life experience in all branches; good testimonials; married; age 38; family, two. Apply WM. FRENCH, 12, Mount Ash Road, Sydenham Hill, S.E.

AS GARDENER (Single-handed, or with help), life experience (Inside and Out); can be well recommended from last place; also good previous references; age 44, single. F. GOWERS, Broad Green, Gt. Waltham, Chelmsford, Essex.

GARDENER (Single-handed, or with help), experience Inside and Out, Vines, Stove and Greenhouse Plants, etc.; willing to be useful; married; age 35; 5½ years as single last place; good reference by me. Apply, stating terms. C. H. SMITH, 44, Ravensbourne Road, Catford, S.E. (No circulars.)

GARDENER.—Kitchen Garden Man (Lead or otherwise, or Single-handed) seeks SITUATION; married; age 37; life experience. G. WOODWARD, Ch. Aston Manor, Newport, Salop.

GARDENER (good Second); chiefly Outside; age 26; 9½ years' experience; 3½ years Little Missenden Abbey; well recommended. F. ELDRIDGE, Church End, Weston Turville, Bucks.

GARDENER (Second), or JOURNEYMAN (Inside and Out); age 21; 7 years' good general experience; good references. REED, Wormington Grange Gardens, Broadway, Worcs.

JOURNEYMAN (First).—Mr. C. PAXTON can highly recommend as above, ARTHUR UPTON, Branches Park Gardens, Cowlinge, Newmarket; House and Table Decoration; 8 years' experience; Bothy preferred.

YOUNG MAN as JOURNEYMAN (Inside or Inside and Out); age 20; nearly 4 years' experience at present place; well recommended. H. BLACKMAN, 207, Battle Road, Hollington, Sussex.

WANTED, SITUATION as GARDENER, where one or more is kept; married; no family; age 44; 16 years in last situation; highest references. Address J. BARBER, 55, Victoria Bui'dings, Bath Street, Nottingham.

A. CARSON ROBERTS, Esq., late of The Grove, Dulwich, wishes to highly recommend C. NEALE to any lady or gentleman requiring a steady, reliable young man as UNDER GARDENER, age 20; 3 years present situation; 2 years previous; leaving through change. Apply C. NEALE, 1, High Street, Dulwich Village.

GARDENER (Under), age 19, seeks SITUATION; five years' experience Inside and Out; three years' good character. A. WORSFOLD, Benenden, Cranbrook, Kent.

GARDEN LABOURER requires SITUATION, well up in Kitchen Garden; over 2 years' experience some time ago; anxious to take on again. A. MOON, Blackwater, Hants.

GEORGE GROVES, Temple House Gardens, Marlow, Bucks, wishes to recommend two Young Men as IMPROVERS under a good Gardener; 7 years' experience; ages 22; also a JOURNEYMAN for Inside and Out in a good establishment; age 25; has had 10½ years' experience.

HOUSE and ESTATE CARPENTER, or good HANDY MAN; good knowledge of all-round general repairs, including Hot-water; abstainer; excellent references. W., 48a, Isis Street, Earlsfield, S.W.

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RICHARD SMITH and CO., LTD., beg to announce that they are constantly receiving applications form Gardeners seeking Situations, and that they will be able to supply any Lady or Gentleman with particulars, etc. St. John's Nurseries, Worcester.

SITUATION in Nursery or under Head Gardener to learn Floriculture; had 12 months' experience in Grapes, Tomatoes, and Cucumbers. R. WILLSON, Silver Street, Bradford-on-Avon.

YOUNG MAN (24) seeks SITUATION as GROOM (single-handed or otherwise), in gentleman's stables; used to horses, good rider and driver; highest military references. Apply J. R., 795, Office of this Journal.

YOUNG MAN (18) seeks SITUATION (Inside and Out); 2½ years' good reference, left through place being sold. A. BRENT, 4, Keswick Villa, Salt Hill, Slough, Bucks.

YOUNG MAN seeks SITUATION as FOURTH GARDENER in Kitchen Garden and Pleasure Ground; age 25, single, abstainer, good references, disengaged August 22. H. SIMMONS, The Bungalow, Gandergreen Lane, Sutton, Surrey.

YOUNG MAN, age 21, seeks SITUATION in nursery; nearly 3 years' experience among cucs., toms., and chrysanths.; good reference; willing to learn. A. B., Homewood, Harrow Road, Worthing.

YOUNG MAN, age 21, Inside and Out; 4 years' good character from present situation. V. DEAKINS, 31, Hartfield Crescent, Wimbledon.

YOUNG MAN (28), married, requires SITUATION as SHOPMAN; well up in Wreaths and Crosses; 12 years' experience in Market, good references. L. BROWN, 53, Cranham Street, Oxford.

Situations Vacant.

GENTLEMAN has VACANCY for Pupil on Up-to-date Market Nursery; splendid tuition, moderate premium and wage given. Particulars, apply N. H. RUSSELL, Grange Nurseries, Wickford, Essex.

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For AUGUST 15, 1908.

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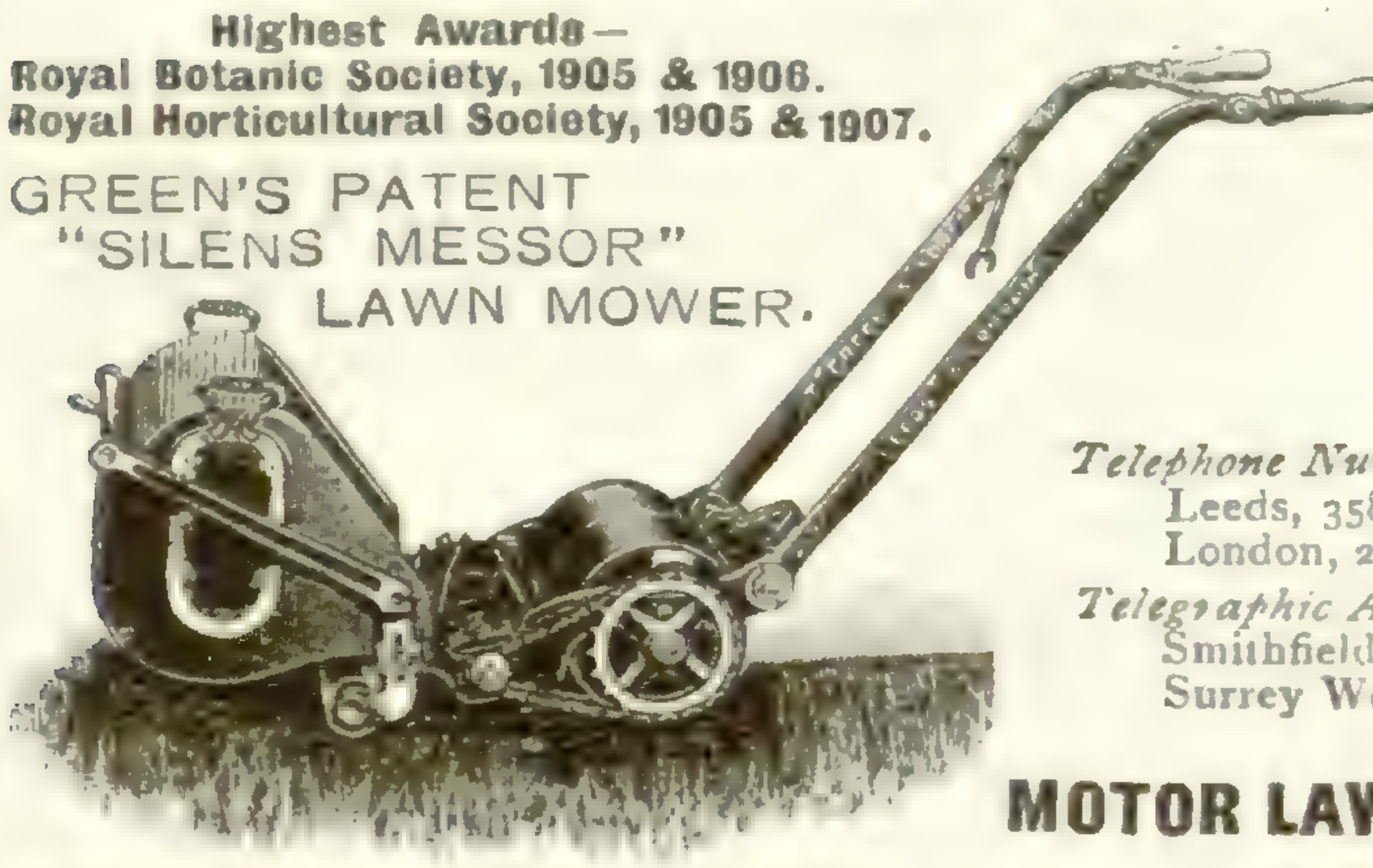

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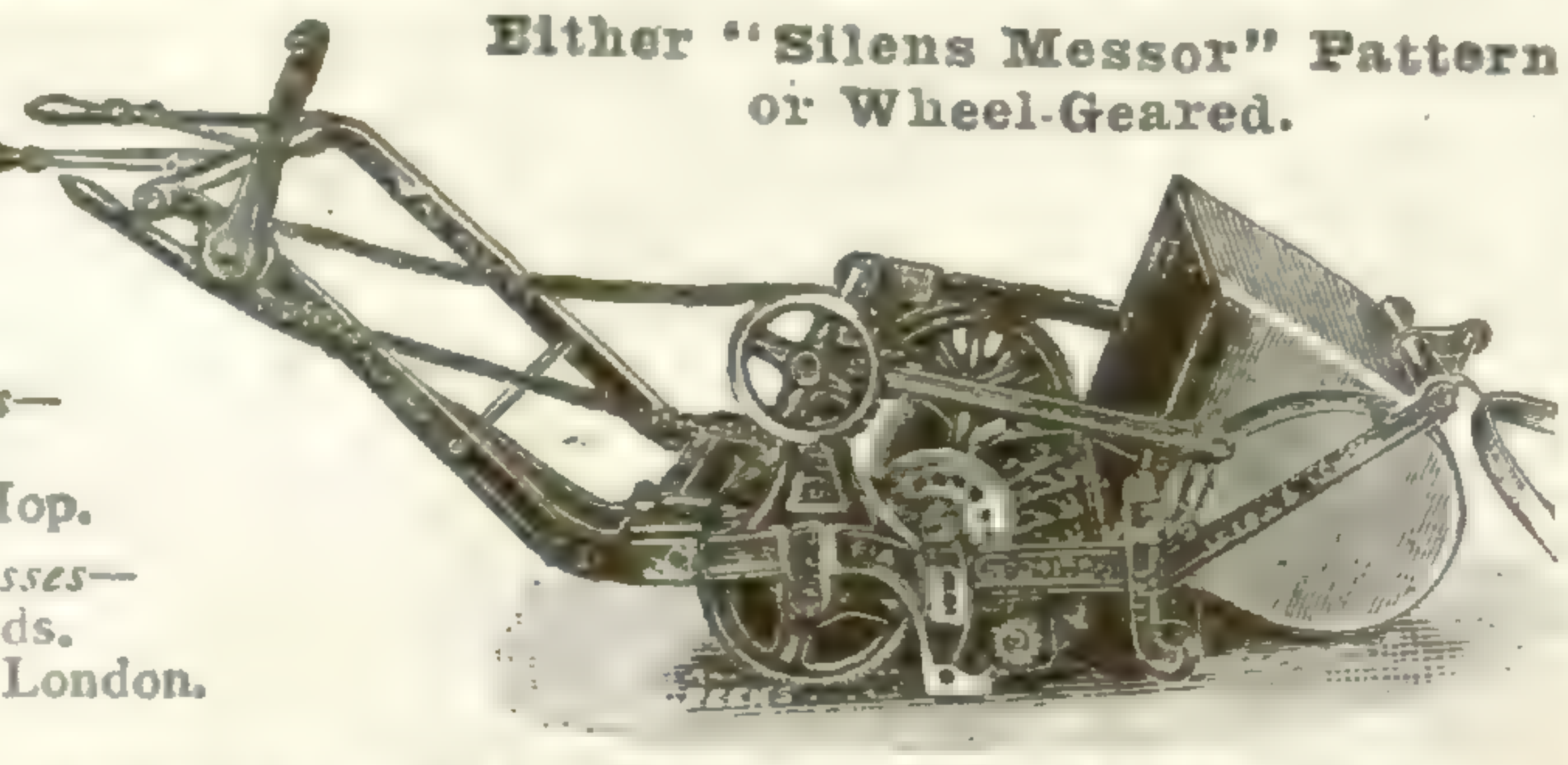

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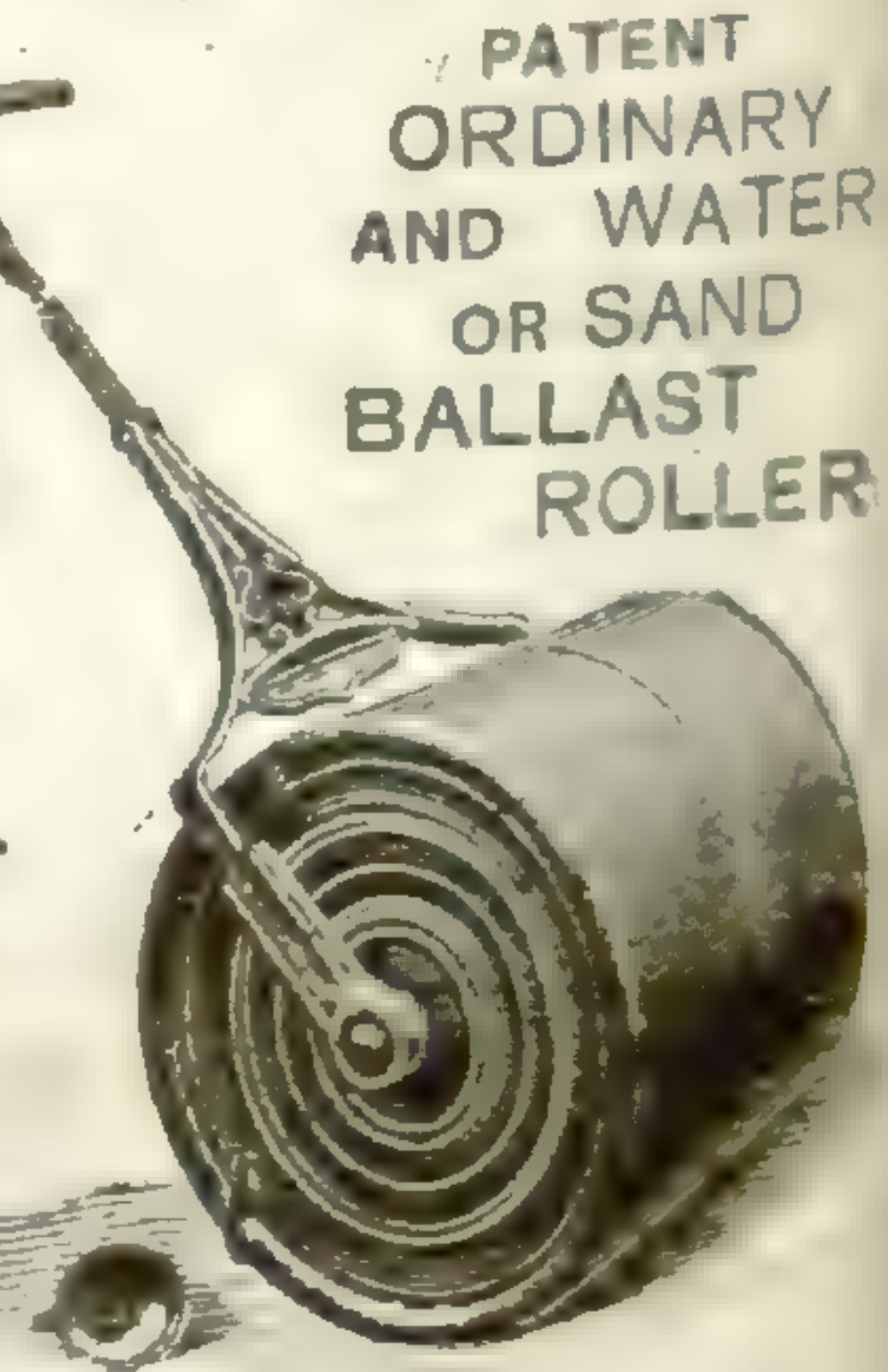

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THE GARDENERS' MAGAZINE.

No. 2,859. Vol. LI.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, AUGUST 15, 1908.

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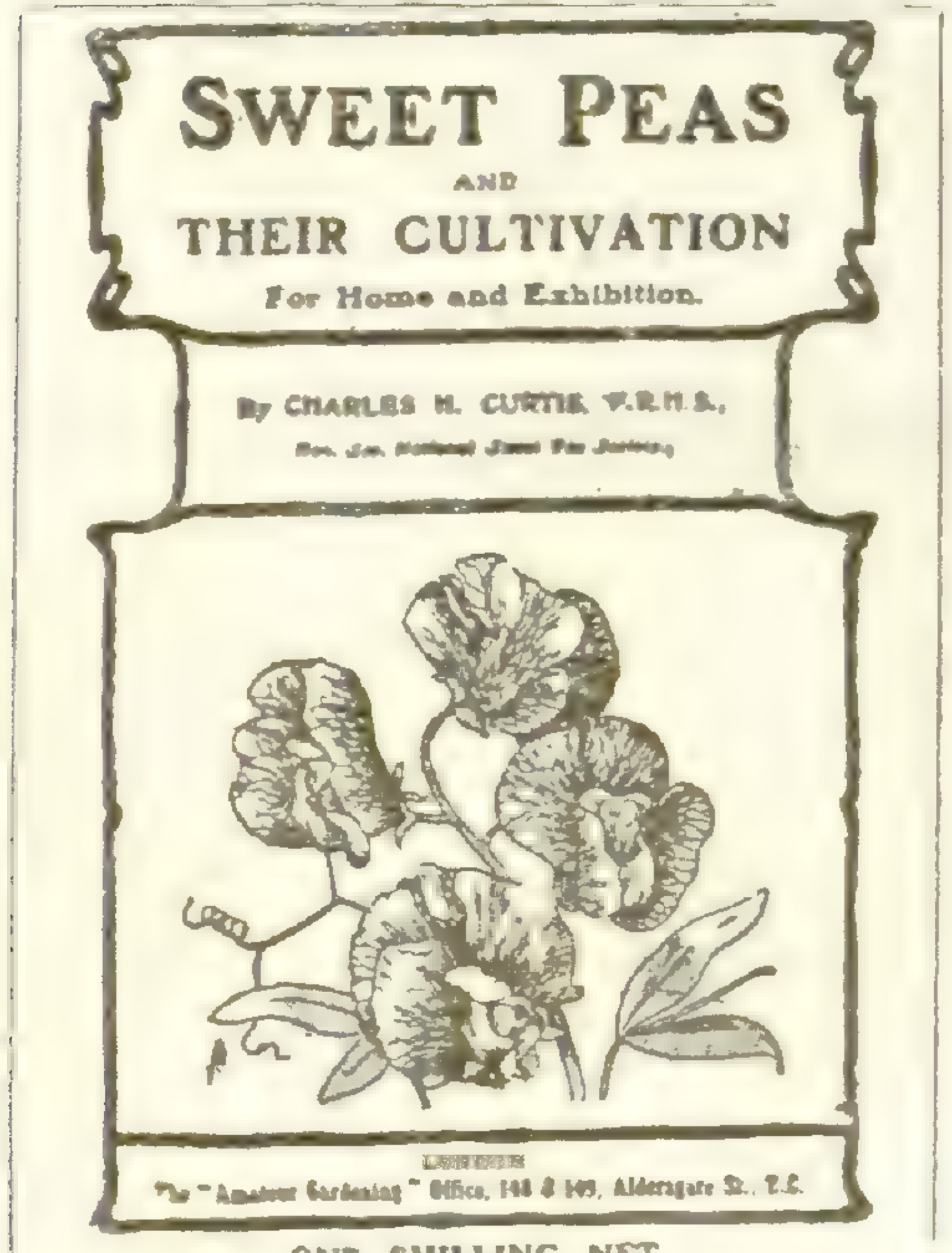
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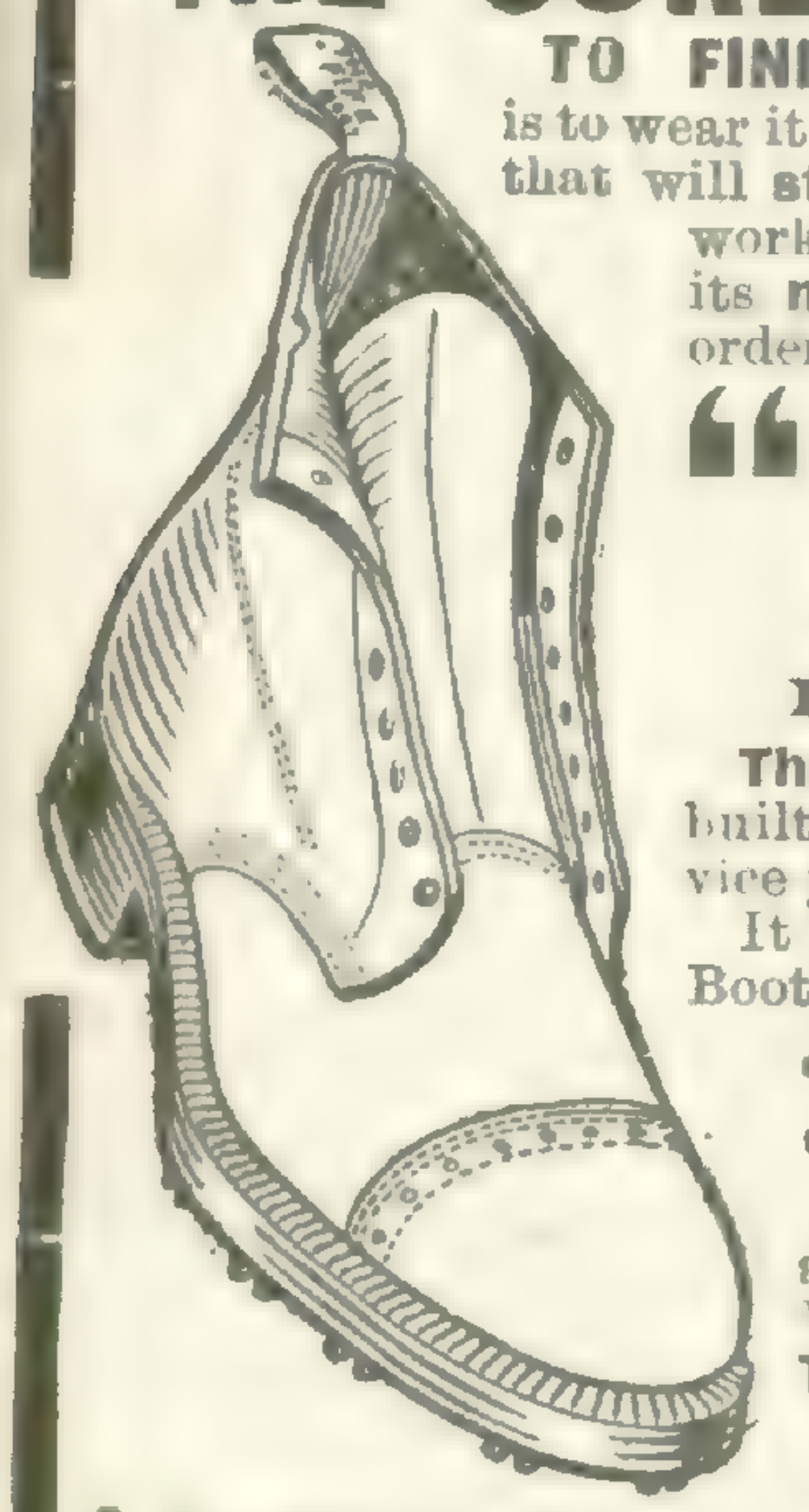

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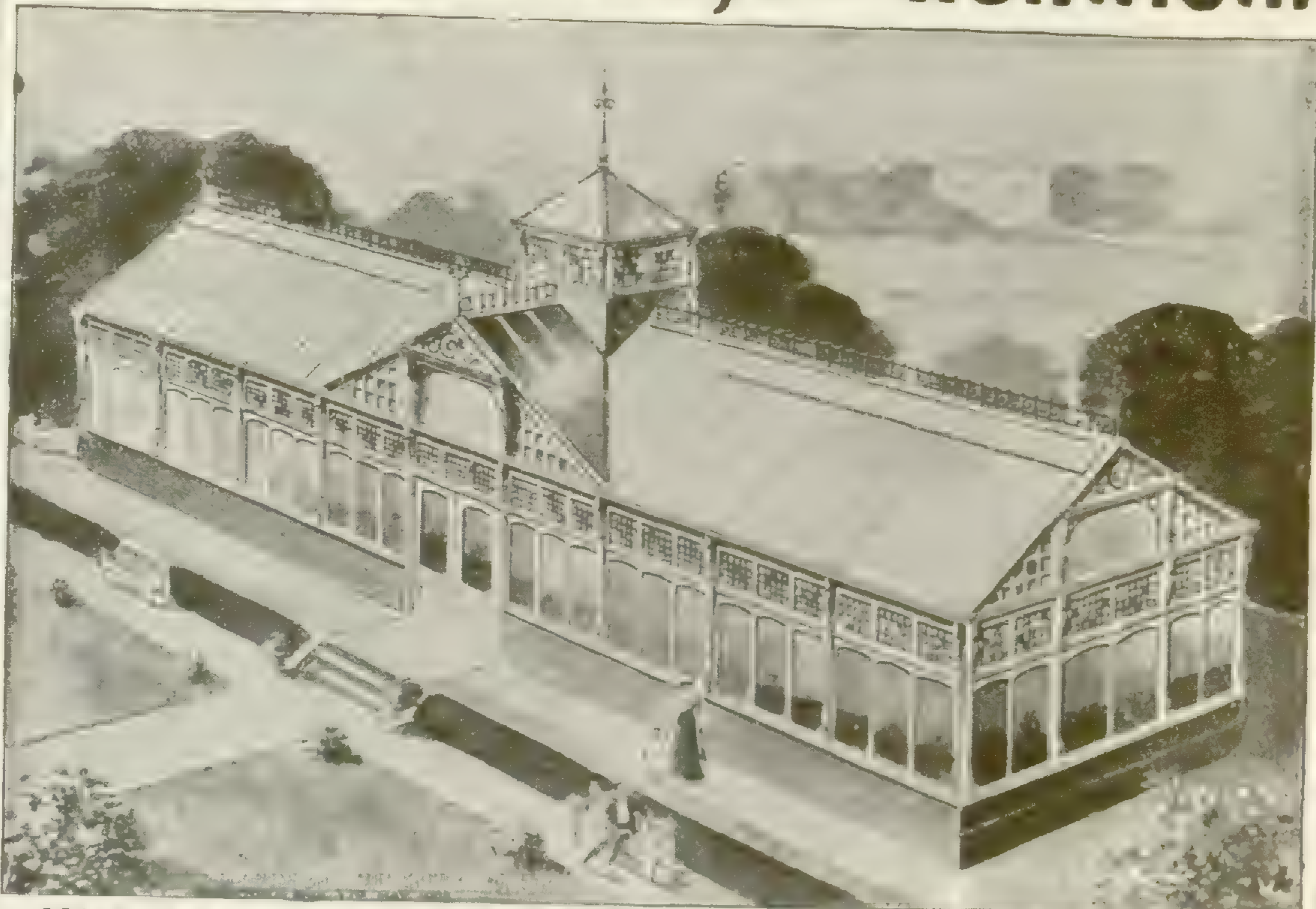

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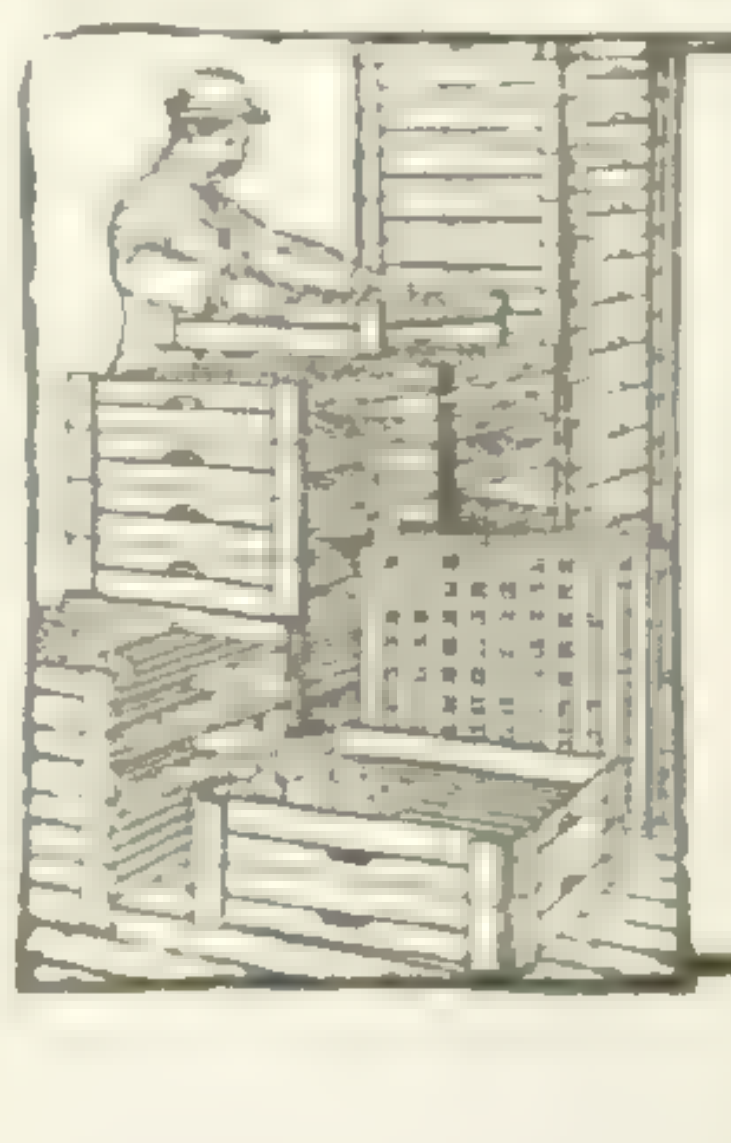

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VOL. LI.—No. 2,859. SATURDAY, AUGUST 15, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Nitrogen.

The nitrogen gas which forms about four-fifths of our atmosphere is a very peculiar one. So far as the animal world is concerned as regards its breathing, it is the other fifth, the oxygen, which is all important, and the nitrogen appears to be merely useful in diluting it, since without such dilution our lungs would be practically burnt up, and we should speedily die of an overdose of vitality. Every spark would become a raging fire, and even the metals would share in the general conflagration in an atmosphere of pure oxygen. On the other hand, an atmosphere of pure nitrogen would be an entirely neutral one; as a mere gas, it does nothing but subdue the force of its active companion oxygen, but to deduce from this that it is quite inert and powerless is seen to be absurd, when we call to mind that it is the life and soul of our highest explosives and the basis of the most corrosive acids known. As regards its utility in other directions we have become aware, in these later days, that it is a most potent factor in plant growth when in combination with other elements; and in this connection it seems a curious fact that vegetation actually bathed in an ocean of nutriment, should often be starved for the want of it from a lack of the power of direct assimilation, so that it has to depend upon bacterial aid in some mysterious fashion before it can derive any benefit from the inexhaustible supply in which it exists. This fact seems the more curious when we consider that plants are capable of utilising directly another gas which forms a very much smaller constituent of the atmosphere, viz., carbonic acid, but here we are not dealing with a pure and simple elemental gas, like nitrogen, but really a compound of a gas and a solid, i.e., oxygen and carbon; and precisely as plants are able to deal with nitrogen compounds in the soil, and break them up and recompose them, so are they capable of seizing upon this aerial compound and doing the same thing. In neither oxygen nor nitrogen is there anything, so far, at any rate, as our present knowledge goes, to break up; they themselves are breakers up, and in these attacks they unite themselves with other elements, forming more or less stable alliances which plants may peaceably dissolve, utilising part and rejecting the balance; or in the case of high explosives the alliance, when severed, involves a shattering of everything which stands in the way of the instantaneous wide separation of molecules due to the transformation of a compact, small, solid or liquid body into an enormously greater volume of heated gas, defying all confinement. It is indeed one of the most curious features of chemical combinations that a gas, oxygen, for instance, of great tenuity, can spontaneously, as it were, compress itself into a very small volume, and ally itself with a solid, as, for instance, when iron rusts it only does so by such an alliance with the oxygen around it. Even without actual chemical combination a gas may pervade a solid in a far smaller volume than it would occupy if free; we have only to burn a piece of coal to see hydrogen gas driven out of it in quantities entirely out of proportion to the volume of the coal itself. The mechanical power which would be required to produce similar compression would be enormous, and can only be approximately gauged by that exhibited when liberation takes place on explosive lines, since the expansive force must be equivalent to that originally required for compression. Having thus glanced at the natural forces embodied in thin, impalpable, and invisible aerial gases, and recognised that the seemingly inert nitrogen is by no means so in reality, we may now consider the wonder embodied in the fact that microscopic bacteria can, in some mysterious fashion, induce the aerial nitrogen to form combinations which enable the plants to utilise it by virtue of their decomposing and recomposing faculty already cited. Obviously the knowledge that they can do this, and do do it, is an immense stride in the right direction, and a deep debt of gratitude is due to those who by careful and assiduous study have demonstrated this fact, and by subsequent experiment have proved that these beneficent bacteria can be propagated and supplied where their services are most required, the result being a great increase in the crops produced, and a prospect of entire redemption of vast areas of otherwise poor and hitherto valueless land for agricultural purposes.

[Photo: Davis and Eickemeyer.

SIR JOSSLYN GORE-BOOTH, BART.

Sir Josslyn Gore-Booth, Bart., whose portrait we give in this issue, has for many years past taken a keen interest in flowers and flower culture, and he has devoted much attention, both as a cultivator and raiser, to daffodils, which attain to a high state of development under the conditions of soil and climate that obtain on his extensive estate, which is situate about ten miles from Sligo. When, on the death of his father in 1900, Sir Josslyn Gore-Booth came into possession of the Lissadell estate, which has an area of about 30,000 acres, he, fully realising the responsibilities associated therewith, at once proceeded to give practical expression to his views with regard to the development of their natural resources. In the preparation and carrying out of his plans he very clearly showed that he was imbued with a desire to assist in the revival of agriculture in the West of Ireland, and to give increased employment to the people in the district, as well as to more profitably utilise his property. Attention was first given to tillage farming and stock breeding, and as evidence of the advanced views held by Sir Josslyn, we would mention that an experiment was at once made in the cultivation of early potatoes for market. This proved so successful that annually an extension has been made in the area under this crop. Being well acquainted with the suitability of the soil and climate for the cultivation of daffodils, or, to be more correct, the various narcissi, a bulb farm was commenced, and this was so great a success that it has been rapidly extended, and immense numbers of bulbs are grown, and these, when they reach a flowering size, and also the flowers, are distributed through the usual trade channels. The Lissadell bulb farm is situate near the sea shore, on the north side of Sligo Bay, and here, in the spring months, great breadths of flowers of all the inexpensive varieties, and of surprisingly large numbers of the majority of the recent and costly introductions may be seen. The establishment of the bulb farm was followed by the development of a commercial garden, a nursery for hardy plants, a forest nursery, a poultry farm, the conversion of his extensive saw mills into a business, and the further development of the barytes mines and mills at Gleniff. From the first Sir Josslyn recognised the importance of the several schemes being conducted on strictly business lines, and the results have fully justified the views he holds on this point. Each department is kept distinct, with an experienced head, and Mr. J. A. Cooper, the agent, is the general manager. Sir Josslyn does not limit his activities to his estate, as evidenced by the fact that he has taken a leading part in establishing several co-operative creameries, is chairman of one of the local railways, a member of the Irish Board of Agriculture, and his interest in sports is shown by the fact that he was one of the first employers in the West of Ireland to give the Saturday half-holiday.

Fruits of Foreign Growth were plentiful in British markets during July, and their value was considerably in excess of that of the fruits imported in the corresponding month of last year. The imports of apples amounted to 46,192 cwt., of the value of £21,082, or an increase in quantity of 12,636 cwt., and in value of £4,011. Of apricots and peaches the imports were 22,362 cwt., of the value of £41,683, these figures representing a small decrease. In the imports of bananas there was a decrease of 46,102 bunches, the aggregate having been 661,429 bunches, of the value of £181,305. Cherries, as the result of the heavy crop in British orchards, were imported in smaller quantities than for several years past, the total imports having been 40,873 cwt., of the value of £41,094, as compared with 68,740 cwt., of the value of £71,759, in the corresponding month of last year. The imports of currants were 91,900 cwt., of the value of £108,785, or a decrease in quantity of 2,854 cwt., and in value of £15,721. Gooseberries, on the other hand, show a small increase, the aggregate imports having been 25,006 cwt., of the value of £13,339. In the imports of grapes there was a relatively large increase, the total having been 8,956 cwt., of the value of £10,925. Lemons and the various kinds of nuts were imported in increased quantities, but in the imports of oranges there was a big drop. Pear imports increased from 13,967 cwt., of the value of £15,307, in July, 1907, to 31,012 cwt., of the value of £38,635 last month, while in the imports of plums there was an increase in quantity of 75,225 cwt., and in value of £91,010, the total having been 110,939 cwt., of the value of £147,239. The total value of the fruit imports for July was £838,024, or an increase of £61,113.

The English Walnut Crop is very heavy this year, and there is a promise of the nuts being of high quality. On a Berkshire farm which recently came under our notice, there are nearly fifty trees which are more heavily laden with nuts than they have been for at least a quarter of a century.

British Association Meeting.—Social functions have a prominent position in the programme of the British Association meeting at Dublin, and are sufficiently numerous to form a good relief to the scientific discussions. On the opening day (Wednesday, September 2) the Lord Mayor and Lady Mayoress will be at home from 3 to 6 p.m., at the Mansion House, in Dawson Street. On the following day the Provost and Senior Fellows will give a garden party at Trinity College, from 3.30 to 6.30 p.m., and on the same day there will be a conversazione at Leinster House, the historic home of the Royal Dublin Society, commencing at 8 p.m. On Friday (September 4) there will be receptions by the Dean of St. Patrick's at his deanery, by the Irish Astronomical Society at Dunsink Observatory, and by Miss White at Alexandra Colleges. Saturday (September 5) will be almost wholly given up to excursions, but the Classical Association of Ireland will give, in the evening, a conversazione in the hall of the Royal College of Physicians. On Monday (September 7) Lord and Lady Ardilaun will give a garden party at 3.30 p.m. at St. Anne's, Clontarf. On Tuesday (September 8) the local committee will give a garden party at the Zoological Gardens, at 3.30 p.m., and at 8.30 p.m. Lord and Lady Iveagh will hold a reception at 8, St. Stephen's Green; and on Wednesday (September 9) Lord Lieutenant and Lady Aberdeen will give a garden party at the Vice-Regal Lodge, Phœnix Park.

Vegetable Imports were considerably smaller in July than in the corresponding month of last year. The imports of potatoes aggregated 891,473 cwt., and of this quantity Germany sent 144 cwt.; France, 565,005 cwt.; Channel Islands, 149,438 cwt.; and other countries, 176,886 cwt. The value of the potato imports was £205,126. Of onions the imports were 593,431 bushels, of the value of £64,182, these figures representing substantial decreases. Tomatoes, on the other hand, were imported in increased quantities, the total having been 171,978 cwt., of the value of £118,634.

Artificial and Natural Modes of Propagation.—In our reference to the paper read by Mr. C. Sherry, at a meeting of the Andersonian Naturalists, we expressed the opinion that he had been incorrectly reported, and, as will be gathered from the following note, we were right in our surmise. Mr. Sherry writes: I am sorry in having incurred the criticism of the Gardeners' Magazine by the few notes which I recently read before the Andersonian Naturalists on "Artificial and Natural Modes of Propagation." The criticism is based on an inaccurate report. What I actually did say was: "The late Professor Balfour, in his 'Class Book of Botany,' states that 'the higher class of plants may be considered as consisting of numerous buds united on a common axis. These possess a certain amount of independent vitality, and they may be separated from the parent stem in such a way as to give origin to new individuals.'" I did not intend to suggest that propagators, as a rule, placed little value on buds as a means of increase, but that the attention of propagators was mostly devoted to certain classes of plants which were more or less of commercial value. The latter, including those referred to by the Gardeners' Magazine, were specially mentioned by me.

Epping Forest Ferns.—Two men were summoned at the recent Epping Petty Sessions for taking ferns from Epping Forest. A cross summons was subsequently withdrawn, and the defendants were fined 10s., and 2s. costs.

A Plague of Butterflies has been recently experienced in Bohemia, and while the insects themselves did no damage to the crops, they deposited millions of eggs upon the various plants, and when the caterpillars hatch out they will, it need hardly be said, do such injury as to inflict heavy losses upon the cultivators whose gardens and fields come within the range of the visitation.

Canadian Apples.—To the annual report of the Ontario Fruit Growers' Association Mr. W. T. Macoun, of the Experimental Fruit Farm, Ottawa, contributes an interesting paper on new fruits, and in his introductory remarks states that in the early part of the nineteenth century, 80 per cent. of the apples in cultivation in North America were European; now scarcely 10 per cent. are of European origin. This means, he says, during the past one hundred years, Americans have found out that fruits originated in the United States are better suited to their conditions than those that are imported. The result is that the European varieties are gradually passing out. When settlement began in Ontario, the nearest source of supply for fruit trees was the United States. For that reason nearly all the varieties are of American origin, such as Greening, King, Spy, Ben Davis, and Baldwin. In Eastern Ontario the growers have developed some excellent apples of Canadian origin, such as St. Lawrence, McIntosh Red, Fameuse, and Baxter.

Conserving Soil Moisture.—We have so persistently advocated surface tillage as an efficient means of checking excessive evaporation from the soil that we are especially interested in what is being done in North America in connection with this important detail. It was long a matter of common belief in America, as elsewhere, that irrigation was the only means by which land in arid climates could be profitably cultivated. Where the conditions are favourable irrigation will yield such splendid results as to give an ample return. But there are many districts where irrigation is impracticable, owing to the deficiency of water or unsuitability of soil, and in British Colombia and the United States there are many large tracts of land that hitherto have not been cultivated owing to the liability of the crops to injury from excessive drought. Professor Campbell has devoted much attention to these lands, with a view to their amelioration, and, as the result of his investigations has formulated a method of procedure by which they can be successfully cultivated without being irrigated. This consists simply in so cultivating the land as to produce a fine tilth to a depth of five or six inches. In America, where the climatic conditions are less variable than in this country, there is less difficulty than here in converting the soil into a fine state, and the benefit therefrom is more marked.

But in this country the advantage of a fine surface tilth is great, and in a dry season it would be difficult to over estimate its value, especially in fruit plantations.

Woodlands of Southern England will form the subject of a paper that will be read by Mr. A. G. Tansley, before the botanical section at the British Association meeting at Dublin next month. Mr. Tansley will deal in his paper with the work that has been done under the direction of the Central Committee for the survey of British vegetation, by which a classification of these woods has been arrived at.

Botley Photographs. — As a centre of the Hampshire strawberry growing district, Botley is of much interest to those who are concerned with the culture of strawberries. We have therefore derived much pleasure from two excellent photographic postcards that Mr. A. Jenkyns, of [illegible], Botley, has kindly sent us. One of these represents the High Street as it appeared on April 25 after the snowstorm, and the other taken during the height of the strawberry season, shows the railway station in which is a long train that is being loaded with fruits from a dozen or more carts and vans.

Which is the Worst Weed?—The question is raised by a correspondent of the "Agricultural Gazette," who puts the field convolvulus, commonly known as "bindweed," or "bellbine," in the first place for badness. Probably, observes our contemporary, farmers and gardeners in different parts of the country would give different answers to the question, as one weed is most troublesome in certain districts and another elsewhere. To reply to the question with good judgment, however, each weed that is in the running must be considered where it is at its worst, from the farmer's or gardener's point of view, due regard being paid alike to the injury it does to cultivated crops, and to the difficulty of extirpating it. But on the latter point the farmer and the gardener would not agree, because, while bindweed, for example, is one of the worst, if not the worst, of all weeds, to destroy permanently in a garden, it is not so in a field, which can be laid down in grass for a time—a plan fatal to this weed. Probably most farmers would declare couch grass to be the worst of farm weeds; but it can be eradicated from a garden with much less difficulty than bindweed can be got rid of—the latter can be permanently destroyed in a field. Any weed can be destroyed in the ground by very frequent and persistent hoeing, as no plant can flourish if never allowed to make growth above the surface. But bindweed roots among the roots of shrubs and flowers, and in rows of culinary vegetables, such as peas, where the hoe cannot be used,or the spade either, without uprooting the shrub, flower, or other plant.

Healthy Occupations.—It has long been a matter of common knowledge that gardening is conducive to health and longevity, and by those well acquainted with rural life, gamekeepers, farmers, and agriculturists are regarded as enjoying much the same advantages in this respect as gardeners. But it comes as a surprise to find brick manufacturers and railway engine drivers and stokers in the same category. In the report of Dr. John Tatham to the Registrar-General on the mortality in various callings, seven classes are included in the healthiest section of all, and these are brick manufacturers, [illegible], engine drivers and stokers on railways, gamekeepers, gardeners, farmers and farm labourers.

SWEET PEA JOTTINGS.

The great exhibition is now only a memory. It was not so large as that of 1907, and this was due more to the curtailment of the schedule than to any other thing. The deletion of all the single-bunch colour classes was a sweeping action on the part of the committee of the N.S.P.S., but some such action was absolutely necessary, because in 1907 the resources of the Royal Horticultural Hall were taxed to their utmost, and the exhibits were uncomfortably crowded. This year there was comfortable room for the flowers, and all were accommodated on the ground floor. As is usual at exhibitions of this character, several competitors dropped out at the last moment, but directly judging was finished the stewards and officers of the society quickly spaced out the exhibits present, and so filled up the few gaps that would otherwise have been apparent.

The arrangement of the exhibition was a great improvement on previous years. We live and learn. The trade displays formed a fine setting or framework for the competitive entries, and down the centre of the hall the dinner-tables and the tables entered for the Burpee Cup made a fine display. Two striking features were the central display by Messrs. J. Carter and Co., and the arch of sweet peas arranged inside the entrance by Messrs. R. H. Felton and Son. Palms of varying size were set along the centre of each long exhibition table, and these relieved the display from flatness. The society's trophies and cups, arranged at the top end of the hall, with the newly certificated sweet peas in front of them, proved a great attraction. This is the first time the society has made a display of its "family plate."

About a hundred and twenty different competitors came forward, several coming from Wales, one from Scotland, several from the Liverpool district, one from Northumberland, and many from the Midlands; but the greater number were southern growers, and their success was remarkable in such a season as this, and proves that, if generous treatment is given, and thin sowing or planting is practised, the sweet pea is accommodating on Surrey sands even in a dry, hot season. Twenty-eight judges got through their work in about three-quarters of an hour or so, and as they began directly after eleven o'clock, and the show did not open until half-past twelve, there was time for the executive to put the finishing touches to a charming display before the public were admitted. About 1,500 bunches of sweet peas were entered in the competitive classes.

Three exhibitors stood out very prominently among the successful ones, and two of them were new members and new exhibitors of sweet peas. When, a few minutes after the opening of the hall, I congratulated Mr. Francis Wellesley on winning the Eckford Cup, he was the most surprised person present, as he had not then reached the exhibit so admirably grown and staged by his gardener, Mr. W. Hopkins. Mr. Edgar Allen, of Formby, a new grower, was also very successful, but the lion's share of leading awards fell to Mr. Usher, gardener to Sir Randolf Baker, Bart., of Ranston House, Blandford. Mr. F. J. Harrison, of Ulverston Show fame, was also very successful, and Messrs. T. Jones, T. Stevenson, C. Breadmore, and S. Cole, gained a fair share of awards. Two ladies, Mrs. Tigwell, of Greenford, Middlesex, and Mrs. Pellier, of Abbot's Kerswell, Devon, showed finely and successfully, the latter bringing up and staging her own flowers. The splendid Burpee Cup Mr. Bolton has taken to Carnforth, and Mr. Basile has, for the second time, taken the Horace Wright Cup back to Weybridge. On the whole, honours have gone round again, and it is a pleasant thing to note how new enthusiasts are coming forward.

Although the exhibition was not graced by the presence of any member of the Royal Family, there were many well-known society folk present, and a large attendance of members of the N.S.P.S. and R.H.S. Sweet pea lovers from the United States, from British Columbia, France, Germany, and far New Zealand were present, and all expressed their surprise at the extent and beauty of the display. Notwithstanding the great attraction of the Marathon race, and the largely increased membership of the society, the takings at the door amounted to £30, as against £28 5s. 6d. in 1907.

Concerning the show, the flowers, the new varieties, and the willing helpers, it were easy to write at some length, but a profound sense of great honour done to me, a very lively appreciation of the goodwill the members of the N.S.P.S. have towards their hon. secretary, and gratitude for the tangible evidences I and mine have received of that goodwill and satisfaction, compel me to add a few words, that will, however, but poorly represent my feelings. To all the members of the society I beg to tender my sincerest thanks for the very generous manner in which they have acknowledged the services I have been able to render as hon. secretary. No other society has accomplished so much in so short a time as the N.S.P.S., and if the enthusiasm of the members continues it ought to be the largest of the floricultural societies in a very few years.

How one's ideas and words are turned topsy-turvy sometimes! I suggested the accumulation of a reserve fund, and Messrs. W. Cuthbertson, Leonard Sutton, and E. Sherwood turned the idea upside down, and made it into a "Curtis Testimonial Fund." If this is the way my brilliant ideas are to be confounded, I must keep my tongue quiet, or heaven only knows what will happen next. But, seriously, I am proud of my association with good-hearted and hard-working officers and committee, and of a young society that acknowledges the work of its hon. secretary—and, believe me, it is no light work—to the generous extent of a beautiful album of views, a cheque for £60, and a gold bracelet for his better half. Here's to you, my friends. May we all prosper.

Since writing the foregoing notes (which limits of space excluded from a previous issue), the second provincial show has also come and gone. As the report of this fine exhibition appeared on page 605, it is not necessary to write much of the display. In general effect, it was not a great success, owing to the fact that the exhibits were arranged in two halls and in the wide galleries of the University buildings. Mr. E. Knowldin and Mr. F. W. Moore did all that was humanly possible to make our show a success, and the sweet peas filled the best positions, and were a great attraction. It is a thousand pities the shows of the Royal Horticultural Society of Ireland are not better patronised, for, with its climate and variety of soils and situations, Ireland can produce the finest of produce, but this is not likely to be exhibited if folks will not come to see it. Of one thing I feel quite sure; if some of our Irish friends were to put as much enthusiasm to the culture of sweet peas as growers this side of the Irish Sea do, they might come over here and win their expenses handsomely, and probably take back a cup or two.

The two outstanding prize-winners at Dublin were Mr. Cowdy, of Greenhall, Longhall, Co. Armagh, and Mr. Thos. Stevenson, gardener to E. Mocatta, Esq., Woburn Place, Addlestone. Mr. Cowdy was a silver medalist in 1907, and this year he won both the Dickson Cup and the Edmonton Cup, in classes open to Irish growers and members. He showed splendid flowers, and set them up beautifully. Mr. Stevenson — whose flowers, cut at 8 a.m. on the Tuesday, were perfect on Wednesday morning, despite their long journey—won the new Edwards Challenge Cup, presented by our present chairman of committee, Mr. C. W. Breadmore.

and Mr. Procter, of Yealand Conyers, were other successful English growers, and once again Mr. Andrew Hoggan, of Busby, did battle right royally for Scotland. Mr. King, gardener to Lord Dunleath, Ballywalter Park; Mr. Reid, of Lisburn, Co. Antrim; Mr. H. J. R. Digges, of Donnybrook; Mr. Davies, of Blackrock; Mr. Sutton, of Kilkenny; and Mr. Mitchison, of Mullaboden, were the leading Irish prize-winners after Mr. Cowdy; but Mr. Stevenson was the hero of the show, as he won fourteen first prizes with flowers that had travelled many hundreds of miles by rail and sea.

There were several disqualifications at Dublin, and it were well to point out here that, while Elsie Herbert and Evelyn Hemus are quite distinct, one having a white ground and the other a cream ground, the two have been placed together in one vase several times this season. At night or in the dim early morning light such a mistake is not hard to make, but exhibitors should always allow themselves sufficient time to carefully examine their exhibits before these are finally left for judgment.

A year or more ago I ventured to assert that the seedsmen who could send out true high-class stocks of known varieties of sweet peas, with a guarantee of 90 per cent. of fixity, would prove more successful in the sweet pea trade, than one who hastened to send out new varieties at a high price, and unfixed. In the "Sweet Pea Annual" of 1908 Mr. W. P. Wright preached a most emphatic little sermon against "mixity," and at the close of the London exhibition the other day, the complacency that is supposed to follow a good dinner did nothing to soften his words or reduce his opinions. As nearly as I can recollect, he said, "Unless raisers are prepared to hold their stocks of new varieties until they are fixed, they will ruin the sweet pea trade and the Sweet Pea Society." I cordially agree. This is the only path along which real danger lies; sweet pea "streak" is as nothing to this.

If raisers will not heed this warning it will be still open to the society to make drastic laws that would hold matters in check; but such laws would be so severe that many raisers would not remain under them, and so a very difficult position would be created. I wonder whether it would be possible for raisers to combine, and agree not to distribute a variety until its fixity, as shown by the Reading trials, reached a certain standard. We all know the great advertising value of novelties, but many of us also know the confidence of the buyer is lost when the novelty, purchased at a high price, is disappointing. Confidence in the flower and confidence in the seller alike suffer.

Chas. H. Curtis.

Nitro-Bacterine.—It would be interesting to know what results have been obtained by the use of the above in the growth of sweet peas. I have been experimenting with it this season with a view to ascertain whether its use would be advantageous. Seeds of one variety were dressed with the mixture, and planted by the side of another variety the seeds of which were undressed. This was done in different parts of the garden, the varieties being properly labelled and noted in our trial book. I am disappointed in seeing no benefit accruing from the use of nitro-bacterine. This, however, may be no fault of the mixture, as I believe the circular sent with it stated that the best results would be obtained where there was a lack of nitrogen. It may be, therefore, that in some soils it may be more beneficial than in others. If this is so, it can only be ascertained by experience, and as bought experience is most appreciated, or should be, that experience is most convincing. Soil constituents are sometimes very perplexing, judging by the growth of some plants, even of the same species, when growing side by side, and in the same kind of soil.—T. H. Slade.

OVERHANGING TREES.

A correspondent writes with reference to his legal rights in relation to trees that overhang his garden, and as the question is one of general interest, we give the following extract from the paper contributed to the "Journal" of the Royal Horticultural Society (Vol. XXX., Part 1) by Mr. H. Morgan Veitch, solicitor, on "The Amateur and Horticultural Law."

The subject of interference by neighbours leads us up to consideration of the remedies available when trees overhang a boundary wall.

If the trees are of such a poisonous nature as to injure a neighbour's horses or cattle which may be likely to feed upon them (in the case of yew trees, etc.), an injunction can be obtained against the person on whose land the trees stand, compelling him to cut the trees back to his own boundary, even if the trees have overhung for more than twenty years. Again, the Courts recently granted an injunction against a landowner who allowed his elm and ash trees to overhang a boundary fence in such a way as to interfere with the growth of his neighbour's crops. The Court held that the neighbour was entitled to protection, and compelled the owner of the trees to cut back the overhanging branches. It will be noticed that in this last case the Court interfered expressly because the overhanging trees caused actual damage to the person owning the land on the opposite side of the boundary fence. The Court would not have been so willing to interfere if the trees caused no damage, or were unsightly, or because some capricious objection was taken to the overhanging. Even in cases where no damage results there is, however, a legal remedy, because if your neighbour's trees overhang your land you are entitled to cut off the overhanging branches, and it has been held that one may cut a Virginian creeper which overreaches in the same way. If you cannot do this without going on to your neighbour's land for the purpose you must be careful to notify your neighbour beforehand of your intention to go on his land with this special object. I must warn you, however, that if you cut off any more than what actually overhangs, you may incur heavy penalties. There is another reported case where a grower allowed thistles to multiply on his property to such an extent as to blow on to his neighbour's land and damage his crops. In this case the grower was restrained by the Court from permitting the nuisance to continue.

In exercising one's rights to cut the overhanging branches of a neighbour's trees it is necessary to bear in mind that the boughs when cut off still belong to the owner of the tree, and it would therefore be wiser to ascertain whether he wishes them to be returned to him. On the same principle it has been held that if trees growing in a hedge overhang another man's land, and the fruit of them falls on the other's land, the owner of the fruit may go in and retake it if he makes no longer stay than is convenient, and does not break the hedge. The owner of the trees has the same right if they are blown down by the wind or fall over by any other inevitable accident. Before going on to one's neighbour's land, however, in order to take back fruit or branches which have fallen in this way, it is necessary first to ask for permission to enter on the adjoining land, but if the request be refused then the owner of the fruit may enter and take his fruit without permission. Of course, it often happens that it would be very unwise to exercise one's strict rights in this respect, because if friction were to arise the owner of the adjoining land might have the trees cut back by way of reprisal, and one therefore comes back to the point that the wise man is he who acts reasonably towards his neighbour without casting round to see what may be his strict rights or how far the law may permit him to cause annoyance.

With regard to trees overhanging highways, it has been said that if the occupier of land suffers his trees so to protrude over the highway as to inconvenience passers-by it is a public or common nuisance, and the trees may be lopped sufficiently to avoid the evil by any of the public passing that way, for anyone may justify the removal of a public or common nuisance which is so remediable; it has indeed been stated that by the old law nobody was bound to cut his trees that overhung the road, and therefore anyone might do it.

It is, however, extremely doubtful whether this can now be taken to be an accurate statement of the law, and I should advise you to be very cautious about accepting it. But even if it be correct, any person who proposes to act as a public benefactor in this matter would do well to bear in mind that the person who abates a public nuisance in this way must show special damage arising from the nuisance, and can only interfere with the nuisance so far as is necessary to the exercise of his own right of passing along the highway, and he must not do any unnecessary damage. Probably the safest plan, therefore, is to invoke the aid of the highway surveyor, who in a proper case can obtain a justice's order under the Highways Acts directing the owner of the offending trees to lop the overhanging branches. If this notice is neglected for ten days the owner is liable to a penalty, and the surveyor is authorised to cut or trim any offending trees or hedges himself, the expenses of so doing being made recoverable from the defaulter; so that a complaint to the local authorities is by far the cheapest and most convenient way to obtain redress.

It is, however, worth noticing that these powers only apply in the case of carriage-ways or cart-ways, and not in the case of footpaths. Moreover, trees planted for ornament and for shelter to any hop ground, house, building, or courtyard of the owner thereof are exempted from the operation of this enactment, and it is expressly provided that no person shall be compelled nor any surveyor permitted to cut or prune any hedge at any other time than between the last day of September and the last day of March.

A question sometimes arises as to who is the owner of a tree standing near a boundary line where this tree grows and expands so as to encroach on to the neighbour's land. If the tree is only growing near the confines of the land of the two parties, then, although the roots may extend into the neighbour's soil, the tree still continues to belong to the owner of that land in which the tree was first sown or planted; but one learned author lays down that a distinction must be made when a man plants a tree upon the extreme limit of his land so that the tree in the ordinary course will necessarily grow on to the neighbour's land. In this case— that is to say, where the tree is planted on the boundary line itself—the trunk must in the natural course of growth stand and grow on the land of both the man who plants it and on the land of his neighbour, and the roots in such case will inevitably penetrate into the soil of each. It is therefore reasonable to assume that the man who planted the tree must have anticipated and intended this result; consequently the tree must be deemed to be the common property of the two adjoining owners. The same author is of opinion that it has yet to be judicially decided beyond any question or doubt whether one proprietor can in the absence of an agreement compel another to have his land burdened with the roots of his neighbour's tree. A right of this kind could only be acquired adversely by an enjoyment which was open and as of right. Still, the law not requiring impossibilities but recognising the course of nature, it seems reasonable to suppose that the right in question may be legally acquired by prescription, i.e., adverse enjoyment, and the author in question remained of this opinion although in one reported case the contrary was suggested by one of the Judges. However, this suggestion was by way of obiter dictum only, and the point was not actually decided.

STANHOPEAS.

The genus Stanhopea include a number of striking and interesting species which are not so extensively cultivated as their merits deserve in prominent orchid establishments. They are, strangely enough, are frequently met with in the ordinary plant stove in gardens where there is often no pretence to cultivate orchids. Stanhopeas are most attractive, and it may appear rather strange that I should say that I have never met with a variety of stanhopea that I did not consider worthy of cultivation. Some are more richly tinted than others, but the quaint characters found in them all renders them most desirable. As I have quite recently referred to the cultivation of stanhopeas in last week's work of the orchid house, I shall now confine myself to an enumeration of some of the best-known and useful among the species and varieties in cultivation.

S. Devoniensis is one of the oldest of the species in cultivation. The flowers are produced generally in twos or threes. The sepals and petals are light fawn-yellow, spotted with purple-brown. The lip white spotted with purple. The horns of the mosochil and the sides of the epichil are ivory-white, with a few purple spots on the basal half of the latter.

S. eburnea is a beautiful species with large ivory-white flowers, with a few purple markings. It is one of the most peculiar shaped and fragrant of the genus.

S. insignis produces from two to four large flowers, very fragrant. The sepals and petals are dull yellow, spotted with purple. The lip white, spotted with purple. The sub-globose hypochil deep purple beneath.

S. Lowi.—This species produces several flowers on the scape, which are large and fragrant. The sepals and petals very pale yellow, the petals dotted with brown-purple in the centre. The lip ivory-white, hypochil globose, with an incurved yellow tooth on each margin; on the upper half inside are rows of suffused maroon spots.

S. Lowi, var. Amesiana, has deliciously fragrant white flowers, the inside of the hypochil being suffused with rose.

S. oculata has large, many-flowered racemes. It is exceedingly variable, but may usually be detected by the numerous ocellated red spots on the light yellow segments. This is one of the most common stanhopeas in cultivation.

S. tigrina is perhaps the most attractive and beautiful of the genus. The flowers are large and showy, also very variable. Sepals sanguineous red, blotched and spotted on the lower portions with yellow. Petals generally yellow. The lip orange-yellow, blotched with maroon-purple, misochil short with white spotted purple horns.

S. tigrina superba.—This handsome variety, of which a characteristic illustration is given herewith, was exhibited at the R.H.S. meeting on July 21 last, by Messrs. J. Charlesworth and Co., Bradford, when it was awarded a First Class certificate by the Orchid Committee. It has exceptionally large and brilliantly coloured flowers.

S. Wardi is a well-known species, with golden-yellow, purple-spotted segments. It is one of the most desirable of the several forms.

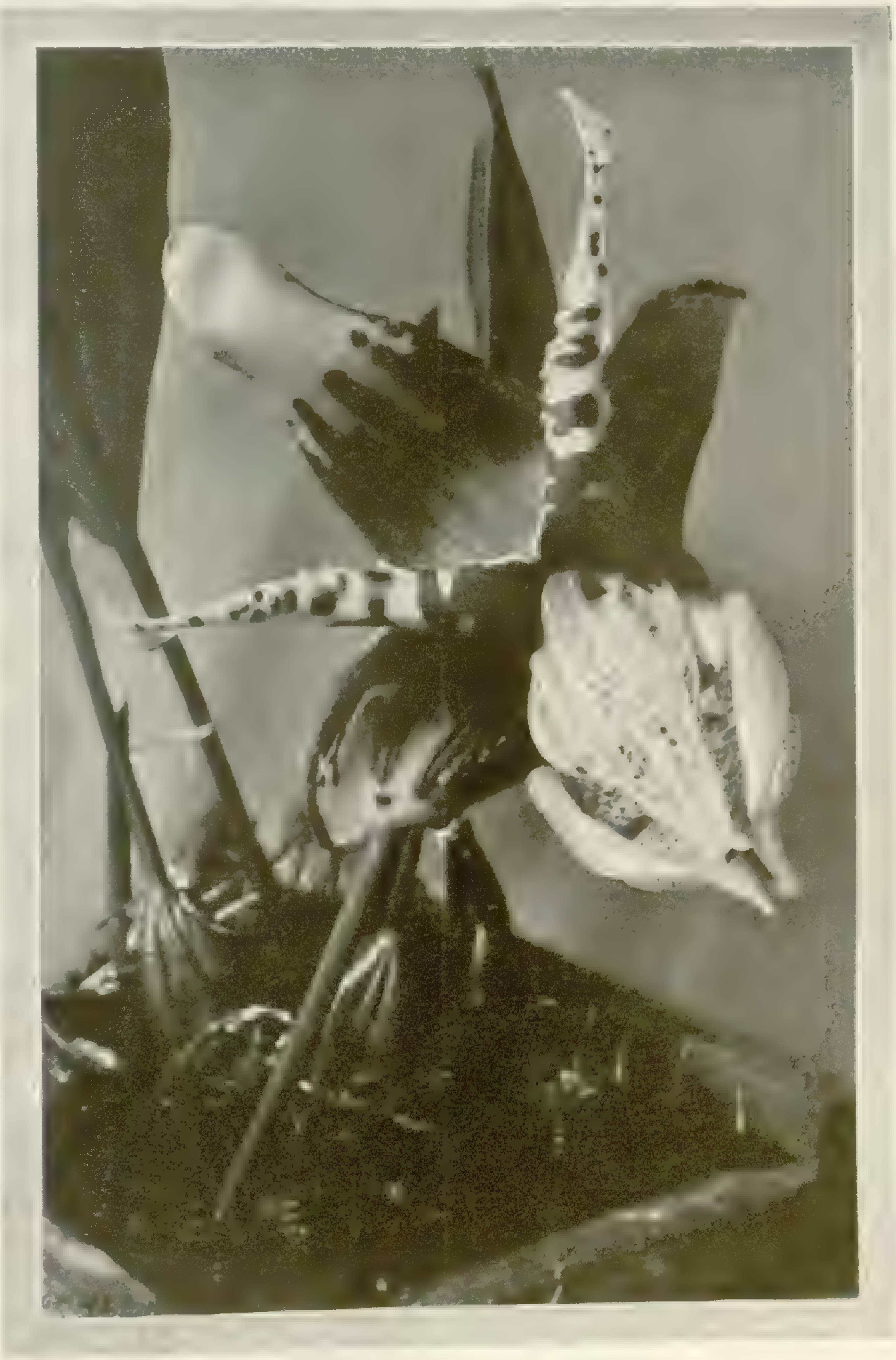
H. J. Chapman.

Oakwood Gardens.

Coleus.—A further stock of these may now be raised from cuttings. These will easily be housed during winter and spring, and will remain in good condition throughout the winter months.—J. Donoghue.

ANNUALS AT KEW.

Throughout the summer a long border at the foot of the wall separating the grounds formerly attached to Cambridge Cottage from the rest of the gardens, has been very gay with a selection of annuals or of plants usually treated as of annual duration. They are disposed in good-sized masses or clumps so that the general effect produced by each kind can be readily seen. Some of them that were very beautiful a month ago are now decidedly past their best, still, even as late as August there is a fine show, and that, too, after the exceedingly hot and dry weather that we have experienced. Chief among those still in good condition are: Verbena erinoides, a native of Peru, with prettily cut leaves, and clusters of lilac-purple coloured flowers; Linum grandiflorum coccineum, one of the showiest of annuals, being quite a mass of its brilliant scarlet flowers; Brachycome iberidifolia (Swan River Daisy), whose deep bluish-mauve coloured flowers are borne in great profusion, and present a decidedly uncommon appearance; Alonsoa Warscewiczi compacta, the orange-scarlet flowers of which somewhat suggest those of a chorizema; Portulacas, in variety, whose bright coloured blossoms are well served by the vivid sunshine we have lately experienced; Tagetas signata pumila, which presents quite a mass of its small golden-yellow blossoms; Tagetes Silver King, pale yellow, and velvety brown; Tagetes Legion of Honour, rich gold, and reddish brown, a striking flower; and Phlox Drummondi in variety.



STANHOPEA TIGRINA SUPERBA.

Awarded F.C.C. at R.H.S. Meeting, July 21. Flowers large and richly coloured, crimson, maroon, and yellow.

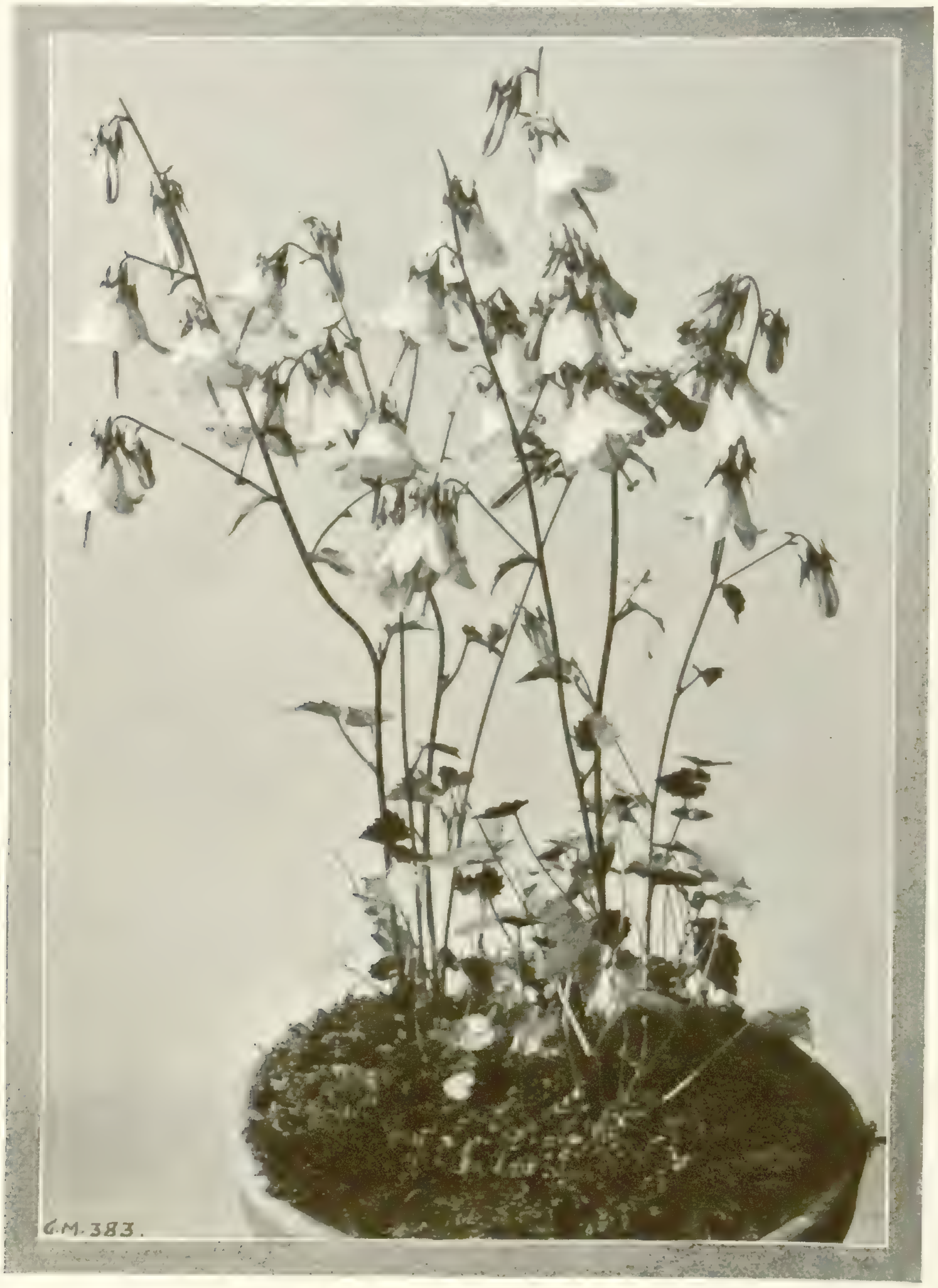
Iberis (candytuft) Empress, a grand variety with massive heads of pure white flowers, and Little Prince, also white, but a smaller grower. The comparatively new Rose Cardinal has but a few flowers left, but a month ago it showed that it was entitled to rank as one of the finest of the candytufts. Linaria Crimson and Gold, the colour of whose flowers is well expressed by the varietal name; Convolvulus minor, in its various shades, among which rich blue and purple predominate; Calendula officinalis (marigold), Orange King, whose colour is indicated by its name; and Meteor, pale yellow, striped with white; Godetia Sunset, one of the most brilliant of all the godetias, the colour being a kind of dazzling ruby crimson; Matricaria inodora plena, plentifully sprinkled with double white daisy-like flowers; Impatiens Holsti, a true perennial, but it may be treated as an annual. In the border its bright vermilion coloured flowers are very effective.

A very pretty but uncommon annual is Emilia flammea, a member of the vast composite family. It is a native of India, and is, I believe, largely grown in many tropical countries. In general appearance it somewhat resembles the double red hawkweed, the closely-packed heads of flowers being about three-quarters of an inch across, and bright scarlet in colour. Apart from these a great variety of annuals are scattered through the gardens disposed in various ways.

A very effective bed is one planted with the compact variety of the American Rose Vervain (Verbena aubletia compacta), which was given an award of merit by the Royal Horticultural Society last year. The bed in question is simply a mass of bright coloured flowers, whose tint is very difficult to define, being a kind of deep rose-magenta. K.

ALSTROMERIAS.

There are but few of our hardy plants that are more useful in the border or for supplying cut flowers than these, and the wonder is more of them are not grown where large quantities of flowers are required for decorative purposes during the hot weather in July, as they last such a long time when cut and put in water. Belonging, as they do, to the lily family, and having the clusters of flowers produced on the upper portion of the stems, make them very valuable for filling large vases. The well-known Alstromeria aurantiaca, or aurea, is a very handsome border plant, and when planted in bold masses is very showy during the latter part of the summer, and where the soil is of a rich, light, loose nature, the roots spread rapidly, and produce stems from three to four feet high, which, if not too overcrowded, grow stout enough to support themselves without any staking. When once established there is no difficulty in keeping up a stock, as the thick fleshy roots run in all directions.



CAMPANULA RADDEANA.
Received an Award of Merit at the Royal Horticultural Society's Meeting on June 23, 1908. Flowers violet-purple.

Where the soil is cold, and of a retentive nature, ample half-decayed leaf-soil and sand should be worked into it to make the whole as light and porous as possible. Should the situation be a wet one, sufficient drainage must be given to allow the water to pass away quickly, as stagnant moisture about the roots in winter would cause them to rot. Some cultivators have an idea that the alstromerias are not hardy, but I have never known the roots suffer in the least during the most severe winters. The white fleshy roots of strong plants are about the thickness of a lead pencil, and being very brittle, are, on that account, difficult to lift in their whole length, but every bit will grow and form a shoot, just the same as seakale and horseradish. In preparing the ground for these roots it is far better to remove a portion of the soil to the depth of three or four inches, then scatter the roots evenly over the surface, and afterwards return the soil that was removed, and cover with two or three inches of decayed manure. The result will be a thicket of young growths the following spring. There is a patch of A. aurantiaca in the garden here, and though it has been dug up several times, and the roots picked out, it comes up as strong as ever each spring, producing an abundance of its richly coloured flowers during the summer.

Though the alstromerias resent a wet position in winter, they require abundance of moisture during the growing season, and if well watered with liquid manure once or twice a week during hot weather the stems will be both stouter and longer, and the flowers larger and more abundant. Where the plants do well the roots are apt to become matted together. When this is the case a portion should be forked out in the winter, when those left will grow stronger and bloom more profusely. If the flowers are allowed to remain on the plants until they fade seed will be produced very freely, and as this will germinate readily when sown in the open ground there is no difficulty in working up a stock in this manner.

In cold, wet districts the soil about the roots should be covered in winter to the depth of three or four inches with half-decayed manure. This will not only exclude the frost, but will help to enrich the soil, so that the shoots will grow more robust in spring. When raising plants from seed scatter the seeds thinly over the surface, and cover the same with light soil to the depth of about two inches; these will form fine clumps in about two years, and though the flowers may vary somewhat in colour from the original, some being lighter, while others are darker, all are very beautiful. There are also several hybrids that are very pretty, but these do not grow with us like the old kind, requiring a warm, sheltered place, whereas A. aurantiaca will grow in the open borders without the least protection whatever, and so increase in size that it is necessary to dig some of the roots up to keep them within bounds.

No garden should be without a few good clumps, as their flowers are most useful at a time when flowers that last are by no means plentiful. If planted at any time during the winter after the foliage has died down, they will make good clumps in the course of the following summer and autumn.

H. C. Prinsep

CAMPANULA RADDEANA.

Among the many campanulas, or bell-flowers, now in cultivation there is surely ample variety even for the most devoted admirer of this indispensable and beautiful genus, which offers few plants not worth growing. Numerous as they are, however, each fresh introduction finds favour, and, provided it is distinct, makes its way into the best gardens. The latest recruit to the ranks of the campanulas introduced to the United Kingdom is Campanula Raddeana, shown at the meeting of the Royal Horticultural Society on June 23, when the Floral Committee gave the exhibitor, Mr. G. Reuthe, an Award of Merit for this campanula. The illustration gives an excellent idea of the plant exhibited, which was between nine and ten inches high, but which would probably have grown a little taller in the open bed or border.

This species was first described by Trautvetter, in the "Bulletin" of the Academy of St. Petersburgh, X. (1866), 395, from specimens from the Caucasus; the specimen illustrated was raised from seeds received from the Ural Mountains. C. Raddeana has small, crenated, oval leaves, and deep violet-purple blooms of drooping habit, and having the yellow pistil projecting beyond the corolla. As will be gathered from the illustration given herewith, this bellflower is of slender habit of growth, and should be a good ornament to the border or larger rockery. It is understood to be perfectly hardy, but has not been sufficiently tested in this country to enable one to speak regarding this with any certainty.

S. Arnott.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in Easily Grown Hardy Perennials, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

SPARROW CATCHING IN SUMMER.

However useful the common house sparrow may be within the confines of a town, where, it may safely be argued, he does some service as a scavenger, there can be no doubt that in rural districts his room is generally preferable to his company. In common with all other living creatures—man not excepted—the sparrow falls a ready victim to temptation directly it comes in his way, for which reason he has by degrees almost entirely forsaken that useful calling for which, no doubt, Nature in her wisdom intended him at the beginning. It is much more agreeable to the sparrow to take his meals comfortably and expeditiously at the gardeners' and farmers' expense, and to fill his crop two or three times a day with corn, than to work laboriously all day long to find a living among the grubs and insects of the garden and field, which require so much catching, and the same thing applies to the seeds which the gardener has sown with so much care, and to the peas in the pod which he has spent so much time in bringing to perfection. The sparrow's first object in life is to provide himself with daily sustenance with the least possible trouble, and here, perhaps, although we must admit that this is a sign of his depravity, he is a little human in his habits; but his degeneration from a once useful position does not end here.

There is, one regrets to say, a marked streak of devilment in his composition, and he finds an outlet for it in a hundred different ways. The proverb which asserts that "Satan finds some mischief still for idle hands to do" might equally well be applied to the sparrow's beak, which is mischievously employed at most seasons of the year in committing damage of one kind or another. In the winter he is perpetually at work among the buds of the fruit trees, and other birds frequently get a large share of the blame which, in this direction, should be laid to the sparrow's charge, and in the spring and summer he is frequently to be observed nipping off the heads of crocuses, primroses, and other flowers. That he is actuated chiefly, if not entirely, by mischievous instincts in so doing, seems to be beyond a shadow of doubt, for, like the rat, the sparrow destroys five times as much as he actually devours, and it is for this reason, even more than on account of his appetite, that the bird has come to be regarded by the majority of mankind as a pest of the worst description.

If it were not for the fact that the sparrow's habits of life make it possible to attack him in a variety of different ways, the scourge of his presence in every part of the kingdom would become intolerable, and it could only be a question of time before certain branches of the farmers' and gardeners' calling were brought to naught. As it is, however, it is possible by waging perpetual warfare upon him, to keep the sparrows' numbers from increasing at their natural rate, although there can be no doubt that in some parts of the country specially suited to him the bird will quickly get the upper hand directly the measures taken for his suppression are in any way relaxed.

A widespread impression still obtains that the only time to catch sparrows in quantity is the winter, but this is a great mistake. By all means let as many be destroyed by nets, shooting, and trapping in various ways during the cold weather, when the birds are more gregarious in their habits, besides being more tame, and, therefore, more easily caught, but it should be remembered that old birds are not so easily caught as young ones, and if the latter can be taken before they grow up a very considerable saving of damage must necessarily be made. The taking of eggs or young birds from the nest is, of course, a most useful proceeding, but to be of real value the operation must be carried out systematically, at regular and frequent intervals. It is also worth remembering that sparrows do least harm when they are occupied in rearing a family. The food which they require for their brood is insectivorous, and although, no doubt, useful, as well as injurious insects find their way into the throats of the nestlings, one may take it that more good than harm is done by a pair of sparrows while they are bringing up a brood of young ones.

But, however careful one may be to destroy all the nests that can be discovered, there will be several that will hatch off successfully, and the real opportunity for reducing the numbers of the birds arises when the young ones have left the nest. For every brood that has been destroyed in the egg or nestling stage there will probably be half a dozen that have managed to evade capture, but these birds may be taken after they have left the nest with even less trouble and waste of time than they could have been before. It is practically impossible to take the old ones at this season, but the young ones are easily caught before they understand the danger of a trap, and when their sole object in life is to satisfy an ever-ready appetite.

PERGOLA AND BOWLING GREENS AT RUSKIN PARK.

For taking young sparrows during the summer there is nothing to equal the cage trap constructed on the self-acting principle. There are various patterns of these, but the best known and most effective are those known respectively as Newton's wire sparrow trap and Gilbertson and Page's basket trap. These should be set (for it is a good plan to have one of each pattern) in any open space where the young birds are likely to find the food placed within them. A little corn or meal, mixed to a crumbly state with water, should be used as bait, some being sprinkled about outside and near the entrance to the traps as well as within. The traps require no attention beyond baiting and the periodical removal of the birds, but it is a good plan not to leave them too long in one position. The captives should be taken away and killed somewhere out of sight, and if one or two are left in the trap as a decoy the efficiency of the contrivance is much increased.

East Sussex.

THE FANCY PELARGONIUM.

The somewhat delicate constitution of this old-time section of pelargoniums militates against its popularity, but at the same time it is gratifying to know that the section is represented in most gardens, and oftentimes in the shape of a collection. It would be idle to say the plants are very showy; in fact, they sink into insignificance when compared with other types, but points in their favour are that the whole character of the plants is ornamental, that they bloom over a very long period, and, further, that shades of colour are found in them that are utterly unknown among other kinds, the intermingling of which, in some instances, is exquisite.

Until recent years fancy pelargoniums were grown in the temperate house, the cool conditions which prevail in the ordinary greenhouse not being thought suitable, but, like many another plant that has been misjudged, they luxuriate in the last-named structure. It will be found that they thrive infinitely better in comparatively small pots, than when given an unrestricted root run, and, provided liberal supplies of liquid manure are given, they will bloom abundantly in a potbound condition.

The best time to repot is at the end of August or very early in September, and a good deal of the old compost should be removed. As regards compost, a quantity, nearly one-third, of short, well-decayed manure may be added to turfy loam, together with powdered charcoal and coarse sand. A thorough syringing morning and evening, given until the plants are re-established, is distinctly beneficial. This opportunity should be taken to remove or shorten growths that tend to destroy the symmetry of the plants, and nothing further beyond this is necessary; but subsequently, as new growths are made, they should be pinched from time to time in order to maintain a bushy compact habit. These pelargoniums enjoy almost entire immunity from insect pests, and it may be pointed out that cuttings struck in early spring, and potted on as they require it, form valuable material for winter blooming. They may be kept in a cold frame during summer, with abundance of ventilation, and, when housed in October, a warm position, free from draughts, together with the soil being maintained in a moist condition only, will ensure a continuous display throughout the dull season.

A few beautiful varieties are Princess Teck, Roi des Fantasies, Mrs. Alfred Wigan, Delicatum, and Princess Helena. I commend the cultivation of these unique plants to amateurs generally.

Walter H. Aggett.

FLOWERS IN THE LONDON PARKS.

At the present moment all the London parks are gay with flowers, and each and every one of them contributes very largely to the pleasure of Londoners, and the many country cousins and foreign friends now in the great Metropolis. How valuable our great public parks and gardens are no one can really tell, but the air space they afford, the restfulness they provide, and the beauty and pleasure they dispense, make up a sum total of usefulness that far outweighs the cost of their upkeep.

Of Hampton Court, which is scarcely a London park, we have already spoken. In Regent's Park there is a fine display of flowers of many kinds, and the great attractions are the huge vases of plants, the sub-tropical beds, and the splendid specimen and other fuchsias. Concerning Hyde Park we have little to say, not because there is any lack of summer beauty there, but because Mr. Gardiner, like the late Mr. C. Jordan, is a past master in the art of decorating a big park, and from Hyde Park Corner to the Marble Arch there is a continuity of splendid beds, and a whole series of floral surprises.

Battersea Park is always a favourite one with us. It has a spaciousness that appeals strongly to every visitor, and its summer displays are varied, distinct, and widely separated. Last season we gave special prominence to the sub-tropical effects and the bolder beds of summer flowers, and now we draw attention to the sunken flower garden near the Bridge Road entrance. This garden is known as the Bull Ring, and it probably has a historical association with the ancient, but not very pleasant, pastime of bull baiting. Be that as it may, there are nothing but pleasant associations with the Bull Ring now, and the beds of flowers here grouped form not the least of the many distinct and beautiful features of summer gardening at Battersea.

At Brockwell Park the various notable features are widely spread, and one of these differs very materially from any feature we have seen throughout the London parks. This is the Shakespeare Garden, and it is arranged within walls, and has radiating straight walks that pass between ample beds and borders, in which are planted examples of every kind of plant and flower and tree mentioned in Shakespeare's works. The association is a pleasing and vastly interesting one. Here is a memorial to our great national poet and writer, and one about which little fuss is made. A teacher, or parent, or friend, with a small party of lads and lassies, and a copy of Canon Ellacombe's "Plant Lore of Shakespeare," would certainly be able to spend a most interesting and instructive half-day in this novel garden at Brockwell Park.

THE SHAKESPEARE GARDEN AT BROCKWELL PARK.

Ruskin Park is one of the smaller spaces, and it is quite juvenile, as compared with the better-known parks. But it is a charming spot, with ample room for games, a splendid old avenue down its centre, beautiful bowling greens, and fine herbaceous borders, a rhododendron and azalea garden, and a very large and substantial pergola that is now being fast taken possession of by the varied climbers planted against it. Ruskin Park should not be excluded from a list of London Parks to be visited.

C.

THE COLOURS OF ROSES.

To the inexperienced gardener a pink rose is but a pink one, a yellow but a yellow, a crimson either light or dark crimson, but directly rose culture is taken up with enthusiasm the grower begins to discern what immense differences there are even in the hues of varieties all described as pink, or red. A familiar example is easy to suggest; compare the bluish-pink of La France with the shell pink of Captain Christy, and it will be at once seen that the latter is a far more delicate shade; I have found it a rose that actually looks well upon a red-brick wall—in its climbing form, of course—whereas La France is utterly spoilt in colour by juxtaposition with red brick. A bed of roses made of alternate standard Captain Christy and bush William Allen Richardson has quite a novel and pleasing colour [illegible], whereas standards of La France [illegible] used would be inartistic, the best accompanying dwarfs being white roses, Frau Karl Druschki, for instance, or rich crimson ones such as Alfred Colomb or Captain Hayward.

THE BULL RING FLOWER GARDEN AT BATTERSEA PARK.

Apricot roses are well shown up by white, or blue flowers massed beneath, behind, or beside them; one of the best rose beds I ever saw was made of bushes of Madame Falcot with a carpet of Royal Blue lobelia. Taller, more robust apricot-orange roses, William Allen Richardson for example, could bear being carpeted with Phacelia campanularia or dwarf cornflowers, while standards would look handsome with tall cornflowers beneath them. White violas as a carpet to a border which contains many climbing W. A. Richardson roses always ensures an admirable show in front of a red brick wall, but where similar roses climbed a stone wall I would use either one of the blue annuals described, or else a blue viola or pansy such as Kaiser Wilhelm.

Cherry coloured roses demand white or pale lemon associates, yet one bed of them carpeted by the lavender-blue viola Blue Gown will give an original and pretty display, some blue asters, or ageratum being added in the centre spaces if the trees are standards. Lemon Iceland poppies are lovely among strong growing bushes of Helen Keller, and these poppies do no harm to roses of even less robust nature; orange Iceland poppies with white roses constitute a gorgeous feature in more than one garden known to me, while white Iceland poppies may be used to advantage with all the deep rose, carmine, or maroon roses as well as with more delicate pink shades, apricot, and yellow.

The shades of tea roses vary in most bewildering ways, for while Sunset is described as apricot its hue is so much duller than William Allen Richardson or Saffrano that it is killed by contrast with these. Sappho is an excellent rose to grow with Sunset, or Sunrise may be chosen. Again, a rose of mingled hues such as Madame Cusin is easily spoilt by its neighbours; the petal ground is a bluish-shaded dull rose, paling off through yellow to white in the centre, and any ordinary pink or crimson rose destroys its peculiar beauty. The rose L'Ideal in a bed of other red roses is utterly out of place, since they will not show its marvellous orange-vermilion flushings, yet it is one of our loveliest varieties.

Reine Marie Henriette is commonly catalogued as "crimson," but its hue is unlike any other crimson rose, I believe; the peculiar cerise-rose of its flowers, especially the half-opened ones, makes it one of the first rose varieties that the amateur can distinguish anywhere. Nothing suits it so well as cream or primrose close by, and though there are violas of the tint I annually sow the hardy little "cream cups," or Platystemon californicum over the surrounding soil. This is an annual with grey-green foliage, of spreading or almost trailing habit, that thrives in dry soil and full sunshine.

No description can do justice to the hues of some roses, yet I think catalogues might be more intelligently worded for the benefit of buyers who are ignorant of the roses named, and I would suggest that extra care should be taken in efficiently describing such new roses as are winners of honours each year, and are therefore destined to play important parts in rose history.

M. H.

POTATO NOTES.

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Potato Disease and Lifting and Storing Crop.

After a period of such excessive heat, as we have experienced this season, the ground will stand at a higher temperature than usual, and should a period of cool, wet weather follow for any length of time the humidity therefrom will be conducive to the spreading of the spores of the potato disease, more especially on strong, low-lying lands. These positions appear peculiarly favourable for attack, and the whole crop is often seriously affected in a surprisingly short time by this most damaging, and often ruinous disease. The spraying system that is now largely carried out, as far as my experience goes, is only partly successful in combating it. It certainly will materially check the progress of the disease, and prevent it taking such an active course as when spraying is not adopted, and as a prevention of virulent attacks I am convinced that it is quite worth the time and expense in applying it.

Where there are any signs, even of the slightest, of the crop being affected with disease, and the tubers are fairly matured, lose no time in having the parts marked out, and the haulms cut and removed from the quarters and burnt, to avoid, as far as possible, further contamination. Lift the affected parts of the quarter first, pick out the damaged tubers, and store the sound ones by themselves, to be used first.

This will principally apply to the early and second early supplies; the late ones will not be sufficiently forward for lifting yet. They are only just developing their tubers, and a great waste will result in taking them up before they have completed their growth. In all cases where disease has attacked the plants very little indeed is gained in leaving them to fall prey to further attack. In the case of seed potatoes it is best to have well-ripened and matured sets, and they must have time in the ground for this to take place, but for eating purposes one often sees crops that would be very much better lifted and stored than remaining in the soil until the autumn rains have had an opportunity of unfavourably influencing them.

Providing ordinary care is used in the taking up and storing of potatoes in not bruising their skins unduly, there are several advantages in removing them from the soil when once they have completed their growth. The site, if necessary, can be used for another crop, the weather is invariably better and drier, and the work be more readily carried out. The tubers of Snowdrop that were lifted as soon as they had reached their normal size, and the skins had set firm enough, kept better and were of higher quality than those lifted later. Scottish Triumph, the best of all winter potatoes, in my opinion, for table quality, on most soils, gave very similar results, but not to the same extent. This variety seems, at any rate in this part of the country, to be a first-rate keeper. In fact, my employers prefer it at the beginning of the year to the new forced ones. The variety Duchess of Cornwall appeared last year to be a good disease-resisting variety, probably a little too large and coarse for a gentleman's table on some land, yet it is a very useful potato, and will be more extensively cultivated when better known, both for its cropping and keeping qualities.

Those who have a suitable potato house in which to store the tubers find it very useful and handy, as on spare days the tubers may be easily examined and all diseased ones promptly removed. Potatoes do not keep specially well in these places, and should the atmosphere be too dry, or charged with an excess of moisture, they become more or less unsatisfactory. A moderately cool, light building, with a good layer of material over the tubers, is the best. Given sound tubers, and they are stored dry, there is no better plan of keeping potatoes than the old method of clamping.

The principal points in clamping are to choose a dry situation, and to give an ample covering of straw, which is a good non-conductor. Keep the sides of the clamp fairly sharp, and finish off the covering of soil in a manner that the rains cannot enter it. This can be done by firmly patting the sides when the soil is sufficiently moist to prevent it adhering to the spade.

In a gentleman's garden possibly the better plan is to store the earliest crops in the potato house, so that the daily supplies may be easily obtained from store, and to clamp the late crops to draw from during the winter, after the first crops have been exhausted. Examination will be necessary from time to time to remove decayed tubers, should decay set in. Even experts are sometimes deceived in finding unexpected decay when apparently the tubers were stored in a sound state, and if not quickly looked to great loss is experienced. In cases of the tubers wintering too moist, a slight dusting of quicklime is effectual in putting them right if applied early. C. Flack.

PUTTING GREENS.

In most establishments of any size it falls to the lot of the head gardener to be responsible for the mowing and general attendance of the cricket ground, tennis lawn, bowling green, and croquet lawn. In many very large establishments the mowing is a very big business. At one of my early situations there were two 48-inch machines required all the summer, besides the hand machines that were used amongst the flower beds; and in two others we had always one 48-inch mower in use as well as smaller ones.

Nowadays more ground can be got over with the wheel machines, but I prefer a heavy English-made mower with rollers which compress the grass and make the lawn so firm. In the time of mowing with scythes, before the art of lawn mowing with that implement was lost, it was always noticed that the more a lawn was rolled with a heavy iron or stone roller the better it looked. I do not know the reason, but a very nice lawn, well mown, is always admired; but it must be borne in mind these grand old lawns are not kept in a high state of perfection without a considerable deal of expense, for grass, like any other crop, wants assistance, and if it is mown regularly and the grass carted away and nothing returned to it the end of it is a yellow-looking, impoverished lawn, perhaps full of weeds, which put an indelible stamp of poverty on the place. My real object, however, is to draw attention to another kind of lawn that comes within the province of the gardener's duties in certain cases, i.e., putting greens on golf links. Though a very ancient game, the game of golf has latterly eclipsed to a great extent lawn tennis, croquet, and bowls, and, of course, most people are drawn into the vortex of anything that is popular.

In our case we were rather inconveniently situated with regard to the accessibility of golf links, to the S.E. it is four miles to the nearest green of a popular club, westward it is 3½ miles to another, and nothward nearly five miles to another. That being the case it was decided to form a new local club, and ground was secured so that the nearest green is just within a mile from us. My employer, who takes a great interest in golf, and is a member of several very large clubs in different parts of the country, was elected first president of the newly-formed club, and on June 24, 1906, we took possession of the ground, which is very hilly, but situated amidst beautiful scenery. I was consulted about forming the greens, and I viewed the site several times, and at last we decided where to make the greens for a nine hole course, as I found we could not emulate Southport, Lytham, St. Anne's, and other places, and have an eighteen hole course, as our boundary was only about one mile in length and about a quarter of a mile wide.

The ground being of an uneven, hilly nature quite different to the ground depicted in the "G. M." of December 21, 1907, to illustrate the excellent article on the "Game of Golf," by C. E. Shea, Esq., I had to inquire what was the very smallest putting green that it would be practicable to play on. I found that thirty feet each side of a square was the minimum, so when a peg was driven into the centre of the proposed site it was measured off fifteen feet from it. I then calculated each site of the nine proposed greens seriatim, as to the probable cost of levelling, and then invited tenders from local jobbing and landscape gardeners for the work, and I found my estimate was very close to all theirs. We had three tenders, and when one was accepted the work was at once commenced. The rough turf was taken off, the site levelled, and in four or five cases drained, and the best turf that could be found was laid level for each green. This work occupied most of the autumn of 1906, and in the winter the greens were left to settle and consolidate. On March 25, 1907, we appointed a very useful practical man, who for several years had worked on a farm, as groundsman, and, under instructions, he commenced at once to put the roughly levelled greens in order. We fitted him up with all sorts of necessary implements for the purpose, and by dint of great perseverance he made the greens ready for a good covering of renovating grass seeds by the end of April. We chose a mixture prepared for golf putting greens, and sowed it on the turf very thickly and covered it over lightly with fine soil, and the result was a very green and luxuriant square of grass in the centre of a comparative waste.

Since then, as time and circumstances have permitted, the greens have been enlarged and avenues or wide paths mown and cleared from one green to another.

The game of golf differs from most games as it is played all the year round, and this fact makes it necessary that the greens should be firm and clean in wintry, wet weather. This is best effected by having each green well-drained so that water does not stand on it.

Of course one feature of the new links was the erection of a pavilion of the usual style for such a purpose, and round that we have planted a great variety of flowering trees and shrubs, and on the verandahs we have trained various climbing plants. Between the greens, in suitable places, we have planted several beds of flowering bulbs, in grass, and from a horticultural point of view we have tried to make the links as interesting as possible. The "G. M." is not a paper in which to discuss the game of golf, that is, how or by whom it should be played, but the greens and the arboricultural details are within its province, and if I have firstly broken the ice perhaps some very experienced golfers will send a few notes on the horticultural embellishment of golf links which will add one more subject of great interest to the very wide field of horticultural subjects the "Gardeners' Magazine" already embraces, and so very ably treats upon.

Perhaps the most interesting part of the whole business is the best method of preserving the putting greens in the highest state of perfection for regular use. This resolves itself into which is the best kind of grass seed tc sow, and also the best kinds of manures to use. Naturally, golf greens cannot be covered with rotten manure at any season of the year, as it would impede the players, so artificial manures seem most appropriate, as they are clean. The name of such manures is legion. At present we have only applied top-dressings of bone-meal.

I found a very considerable diversity of opinion existed amongst the gentlemen who constituted the first committee of management as to how often the putting greens should be mown. Some recommended twice a week, which, perhaps, in showery, warm weather is not too often, but we have found, speaking generally, once a week sufficient, as it is not so necessary for the game of golf to have the grass so very short as in the game of bowls on a well-kept bowling green. If the grass is allowed to grow a little more natural, it is a decided advantage, as very close mowing takes the centre out of every little grass plant, and it has no chance to grow and look green. Many people do not think that turf is really an assemblage of grass plants growing very closely together.

W. M.

Cheshire.

BEETLE REVELATIONS.

(Concluded from page 365.)

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Blue Beetle.

Horseradish, as well as mustard and cress, are occasionally subject to the direful attacks of a small oval beetle of a highly polished blue, or blue-green lustre, about one-sixth of an inch long, which is hemispherical, like a ladybird. Its grub is dirty white, and covered with black, regularly placed swellings and hairs. They both feed on the leaves of the plants, and while not so prominently destructive as some of the other beetles here described must be reckoned with. The beetles hibernate through the winter, and at first feed on wild growths, but a second generation of them appears when summer has well advanced, and these give attention chiefly to cultivated vegetation. About the only effectual remedies are to pull up infested plants and either burn them or bury them very deeply in the soil. Dressings may sometimes be advisable, but are, as a rule, of little consequence.

General Remarks.

As in battle it is considered excusable to praise the good points of an enemy, so we may glance at some of the more striking characters in structure of these unconscious antagonists.

The most noticeable feature of the beet beetle is the comparatively small size of its head in contrast to the bulkiness of the rounded body.

When magnified there is no fear of mistaking the clay-coloured weevil for a bit of earth. Its whole body is densely clothed with tubercles, pits, scales, and hairs symmetrically arranged. These sparkle in a good light like jewels, and almost serve to compensate, through inspection, for the artfulness of the creature's ways.

Parallel lines, pits, and an abundance of neatly upstanding stiff bristles are the conspicuous property of the pea and bean weevil.

What shows as eight yellow dots on the surface of the asparagus beetle when viewed from above are really continuations of pale stripes which border its sides, so that when it is seen sideways, instead of appearing dark with light spots, it stands as a yellow specimen with dark spots.

Although the cabbage gall weevil is so small it is covered with very pretty rows of scales. Its oddest property is the long snout, resembling an elephant's trunk, but having no analogy with that sort of organ. It is really a long throat, and at its free end bears the jaws. Food has to pass along the whole length of this tube before it can be consumed. The antennæ project from its middle instead of from the insect's forehead. The side view given explains how grotesquely this snout-throat looks when inspected sideways.

The blue beetle, although to the naked eye it is apparently merely a hard polished surface, reveals tiny punctures placed along a series of grooves down the wing cases.

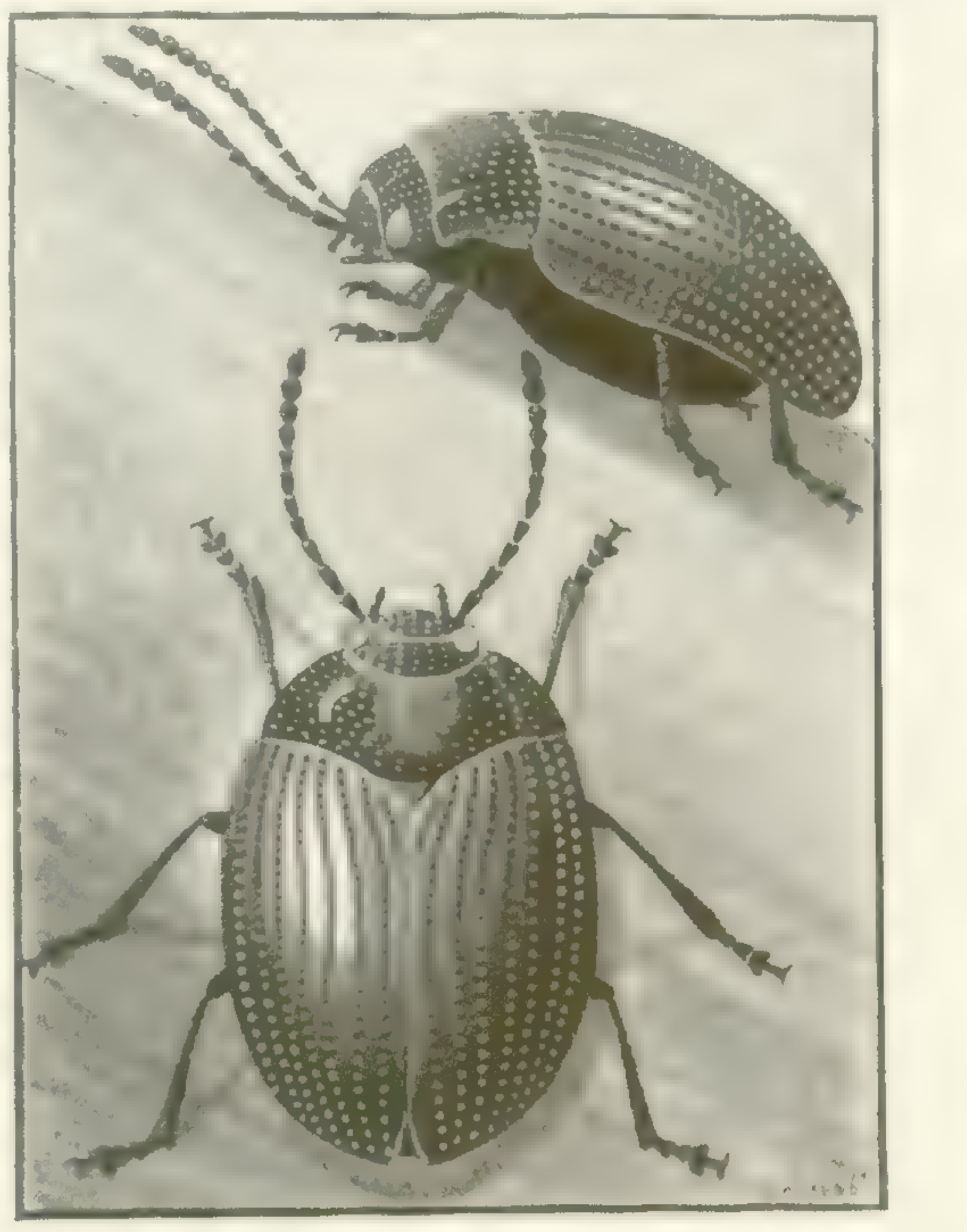
Were the gardener to make a more intimate association with his pests, he would not only be greatly attracted by their quaint beauty, but his observations would tend to strengthen his memory concerning them, and render recognition far easier than is now sometimes the case.

James Scott.

ÆSCULUS CALIFORNICA.

This, the Californian horse chestnut, is a tree of considerable interest, being distinct in habit and general appearance from other species of Æsculus. Although it has been known for upwards of 50 years, and flowering examples were reported as occurring in Messrs. Veitch's nursery in 1858, it never appears to have been widely planted, and is still a rare tree. Under cultivation it forms a low tree with a wide spreading head, whilst Californian grown examples are stated to "rarely exceed 20ft. in height." The branches are strong and rather unwieldy in appearance, and are clothed with five parted leaves, the leaflets being 3 to 4in. long and 1 to 1½in. wide, with serrated margins. On the upper surface they are quite glabrous, whilst on the under side they are slightly pubescent.

The flowers are white and borne in dense terminal panicles, a succession of blossoms being kept up for several weeks. A peculiarity of the inflorescence is the fact of the terminal flower opening in advance of any others, and it is no uncommon thing for the fruit of the terminal flower to be well advanced before the majority of the blooms expand. Like other chestnuts it thrives in ordinary garden soil. Many chestnuts will stand hard pruning to throw height into the trunk whilst young, but in the case of the tree under notice it is inadvisable to prune severely, but rather let the head develop early in life.



THE BLUE BEETLE.
Both insects much enlarged.

Kew. W. Dallimore.

Notes on Hardy Annuals.—Hardy annuals are extremely beautiful and useful additions to the flower garden, and are always in great request for cut flowers, for these reasons every effort should be made to prolong their season of usefulness. Sowing at intervals will give an extended season of bloom, yet where it is only practicable to make a single sowing an enormous difference is seen if the plants are frequently attended to, and all faded flowers and seed pods removed. By this means the strength of the plants is concentrated upon developing the flowers, consequently there are more of them, and finer blooms are produced. Frequently annuals are allowed to develop their growth haphazard, but if some small pieces of brushwood are inserted among them before they close in on each other, the danger from windbreaks is lessened, and they present at all times a neater appearance.—Thomas Smith, Walmsgate Gardens.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

LATE SUMMER-FLOWERING CYPRIPEDIUMS.—The different species and hybrids that may be included under this heading are not so popular with orchid growers as the winter-flowering sections, but they are none the less beautiful, and are exceedingly useful for decorations and for exhibition in the autumn. Their durability is most remarkable, and the flowers are exceedingly useful when cut. The hybrids derived from C. Rothschildianum as one of their parents are particularly worthy of attention, and I would specially mention the different varieties of C. W. R. Lee. These are undoubtedly some of the most free-flowering specimen plants, they bloom with us annually, and produce from four to six flowers on the scape. The hybrids produced from the influence of C. philippinense, such as C. Youngianum superbum, C. Bryan, C. Warnhamsense, and others, also possess free-flowering characteristics, and, as they bloom at a period when there is but few orchids in flower, they are worthy of every consideration. All the forms belonging to this section thrive in a warm intermediate or stove house temperature, and require ample moisture both at the roots and in the atmosphere at all seasons of the year.

REPOTTING REQUIREMENTS are best attended to when the young roots are in an active state, or immediately after flowering, say, about the end of the present month. Annual repotting is not desirable, as the plants more or less resent being disturbed, so that unless the compost is passing into an advanced stage of decay, or the plants have outgrown their pots, they should be left undisturbed. Where repotting is necessary, select pots of ample size to accommodate the plants for at least two seasons. See that the drainage used is clean, and sufficient to fill the pots to nearly one-third their depth. The compost selected should be of a durable nature, with a view to its keeping in good condition for two or three seasons. We find a compost consisting of fibrous brown peat, turfy loam, and chopped sphagnum moss a suitable mixture for these plants, sufficient sand and broken crocks being added to render the compost porous. Make the compost firm about the roots when repotting.

PROPAGATION.—Increase of stock must have attention where there are a number of back growths on the plants that have flowered. In my opinion such growths after root action has ceased are more of a burden than assistance to the plants, and it is seldom they are induced to break into new growth unless the rhizome connecting the growths has been severed. It is a good plan to cut between the growths with a sharp knife a few weeks before the plants are repotted, it will then be found that, in many cases, such separated growths will be emitting breaks from their base at the time of repotting, so that where a larger specimen is desired they may be placed again in the pot with the other portions, or where it is desirable to increase the stock they may be potted up separately. Young growths produced in that way, from this particular section of cypripediums, usually take two seasons to produce growths sufficiently matured to flower. Divided plants should be kept in a warm, moist atmosphere.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

ACHIMENES.—As the earliest batch of achimenes pass out of bloom they ought to be brought to a state of rest by a gradual reduction of water to their roots, and then placed in a position where they will be exposed to the light, with a free circulation of air. As soon as the foliage has become thoroughly ripened, and the roots decayed, the corms may be removed and stored away in dry sand, where they may remain until required again for starting into growth.

ACALYPHAS.—Examples of this useful foliage subject which have lost their leaves at the base, may now be notched and mossed around the stems, and if kept in a brisk temperature, with a moist atmosphere, the tops will quickly form roots, after which they may be taken off and potted up. If kept growing throughout the autumn they will form serviceable stock for the new year. The stems may afterwards be cut into lengths and placed in the propagating pit, where they will soon start into growth again.

BOUGAINVILLEAS that have been flowering in a cool conservatory for a considerable time may, as soon as they have completed their flowering season, be hardened off outside. This practice thoroughly ripens the wood, and the plants, in consequence, are in a better condition for passing through the winter. Although I have observed little or no damage done in cases where bougainvilleas have been subjected to a few degrees of frost, I would recommend them to be stored in a greenhouse where the temperature does not fall below 45 degrees.

CALANTHES.—An application of diluted liquid manure will prove of great assistance to calanthes at this season, when the formation of the new bulbs is almost completed, and the soil has become somewhat impoverished. In cases which have come under my observation where this operation has been neglected the result has been premature ripening of the bulbs and weak flower spikes. As the leaves show signs of ripening the plants ought to be more fully exposed to sunlight.

EUPHORBIA JACQUINIFLORA.—Small plants, raised in accordance with previous directions, are now ready for their final shift into pots from four to five inches in diameter. Large specimens will require pots ranging from eight to nine inches in diameter. A suitable compost for this shift is good fibrous loam and peat in equal parts, with enough coarse sand and charcoal thoroughly incorporated to keep the soil porous. Pot firmly, and shade from the hot sun until the plants have recovered from the check received in repotting. As the season advances thoroughly expose to the light, and keep as near as possible to the glass.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

EARLY POT VINES.—Those intended for early forcing should be well looked after in the matter of watering, and during the hot weather it is an advantage to have the pots plunged in ashes. Syringe them overhead twice a day in bright, dry weather. Liquid manure and soot water may be given.

LATE VINES.—Borders that are well-drained will soon become dry in hot weather, and they should have copious supplies of liquid manure and clear water. As soon as the berries begin to colour a little front air should be admitted during the night; and the ventilation be free through the day. Regulate the growing shoots, and stop before they attain a great length. Examine the bunches for seedless berries, and take out any that may be found. Lady Downes should have the leaves left over the bunches as much as possible, as the berries are liable to scald, especially if the sun shines fully upon them while they are damp in the morning. If the borders are outside they should be watered, and some long litter laid on the surface to check evaporation.

EARLY PEACHES AND NECTARINES.—During hot weather the trees will require an abundance of clear water and liquid manure. from neglect of watering many failures of peach growing occur. Shallow borders should be well mulched with long litter, and the trees be well syringed twice a day. Expose all the shoots to the sun, and if they become crowded with young shoots, a few of them should be thinned out.

PEACH DYMOND.—For a second early cropper this is difficult to surpass, being a free setter, good in colour, and richly flavoured. It will succeed either as a standard, dwarf, or pot tree. If the sun is very hot a slight shading of thin tiffany may be placed on the roof during the hottest part of the day. The fruits should be gathered early in the morning when they are cool.

PINEAPPLE NECTARINE.—This variety, under good cultivation, gives large fruits of good colour and flavour. In watering, this variety requires great care, and water should be withheld when the fruits are ripening, as they are liable to crack. The syringe should not be used freely when they commence to colour.

ORCHARD HOUSE.—Closely attend to watering and mulching, as any relaxation in watchfulness at this time of the year will have unsatisfactory results. Apricots are a good crop, and well repay being planted inside; these are best with a slight shade in hot weather, as the upper side of the fruit ripens before the under, and is liable to scald. These like plenty of moisture after the fruit is gathered. Pears are swelling up fast, and may be given liquid manure. Cherries that have finished growing will be developing up their buds, and should be well syringed and watered. Keep the borders loose on the surface by lightly forking it if it has not been mulched. Where the soil is getting green or stagnant from frequent waterings a little fresh lime may be dusted over them. A sharp look out must be kept for robins, as they soon spoil fruit, especially in dry weather.

MELONS IN FRAMES.—With flow and return hot-water pipes round the frame, good fruits will now be ripening off. A little air may be given at night to maintain a nice temperature. If the plants are strong and in good condition, liquid manure may be given to those swelling their fruits. This should be withheld as soon as they show signs of ripening, or they will crack. A little fresh lime should be placed round the stem of the plant to prevent injury from an excess of moisture. Shade a little in very hot weather. Melons grown in frames are, as a rule, better flavoured than in houses. They cannot be rushed, and consequently take more time to mature and obtain their proper flavour.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

WINTER SPINACH.—The time has now arrived when a good breadth of this most useful vegetable should be sown. If the seed is sown too early the plants develop so quickly that flower stems are likely to form. To obtain good succulent leaves the ground should be well prepared a considerable time beforehand. Sow the seeds in drills two inches deep and about eighteen inches apart, previously giving the drills a good watering if the soil is dry. When the young plants have made one or two leaves give a sprinkling of soot between the rows to prevent wireworm and slugs injuring them. The prickly spinach is one of the best varieties to sow for winter use. Last year I made sowings on south, east, and west borders, but the plants on the east border came through the winter the best.

TURNIPS.—To have a continuous supply throughout the winter it is necessary to make a good sowing at once on a piece of well-tilled ground. Choose such well-tried varieties as Orange Jelly and Chirk Castle, bearing in mind to thin out the seedlings early before they become drawn and weakly.

LETTUCE.—Make another good sowing to furnish plants for the winter's supply. There are a number of good varieties, but I prefer All the Year Round for this sowing; in fact, it is excellent for any season of the year.

FRENCH BEANS.—These are always appreciated whenever they can be obtained, and if some are picked now and placed in earthenware jars, with a little salt between each layer of beans, they will keep very well, and be most useful later on. Some seeds should be sown now in cold frames to come in after the outdoor crop is finished. Osborne's Prolific is suitable for sowing at this period.

RUNNER BEANS are giving excellent produce, and they may be helped by a supply of liquid manure once or twice a week. Later batches should be syringed in the evenings after hot days, which will assist them in setting the pods. Make the rows secure against strong gales by placing extra supports to them.

TOMATOES FOR WINTER.—Those recently potted may still remain out in the open, sheltered from strong winds, but with full exposure to the sun. Place a strong stake to each plant, and keep all sub-lateral growths pinched out.

OUTSIDE TOMATOES.—Plants that are growing at the foot of south walls may be assisted in swelling their fruits by giving them light applications of bonemeal, and occasionally liquid manure. Keep all useless growths cut out.

COLEWORTS.—These should be planted out without delay. If the weather is dry they may be put out towards evening, and be well watered in. Give them a distance of a foot each way.

ENDIVE.—The early batch of endive is coming on rapidly, and blanching must be commenced. If the plants are strong enough they can be tied up with matting, and the smaller heads can have empty flower pots placed over them. This is a good method, and especially later on, when frosty nights are expected.—T. W. BIRKINSHAW, Hatley Park Gardens, Sandy.

GOOSEBERRY "CLUSTER-CUP" DISEASE.

The disease known as Gooseberry "Cluster-Cups" (Puccinia Pringsheimiana, Kleb.) is one of those sporadic diseases which are present during certain seasons in considerable abundance, and then entirely disappears for years. This behaviour on the part of many parasitic fungi is at present inexplicable; there is no reason for suspecting climatic conditions to be the cause, and the requisite host plants are equally available every season.

Characteristics of Fungus.

The fungus forms bright orange patches on the leaves and fruit, the patches eventually being covered with minute cup-like bodies with white fringed edges and filled with orange-coloured spores.

It has been proved that other stages in the life-cycle of the gooseberry cluster-cup grow on living leaves of sedges (carex), appearing under the form of minute brown or blackish streaks resembling in general appearance wheat rust (Puccinia graminis, Pers.). The winter spores produced on sedge leaves infect gooseberry leaves and fruit, and give origin to the "cluster-cup" form of fruit. Although this is undoubtedly true in some instances, the fact that "cluster-cups" appear on gooseberry bushes growing in gardens far removed from the vicinity of sedges, suggests that under certain conditions the "cluster-cup" condition can directly reproduce itself without the intervention of another form of the fungus, as has been proved to be the case with other rusts.

Prevention and Remedy.

1.—The disease, says the Board of Agriculture, rarely assumes the proportions of an epidemic, and the most satisfactory method of arresting its spread is by collecting and burning infected leaves and fruit.

2.—Sedges growing in the vicinity of gooseberry bushes should be cut and burnt in the spring, before the winter form of the rust matures on the leaves.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

SCIENTIFIC COMMITTEE, August 4.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Messrs. Fawcett, Bennett-Poë, Douglas, Holmes, Massee, Crawshay, Fraser, Shea, Saunders, and Chittenden (secretary).

"BLACK-EYE" OF CARNATIONS, ETC.—Mr. Massee, V.M.H., showed flowers of various species of dianthus, including carnations, affected by the fungus Ustilago violacea, which develops its spores in the anthers of different species of Caryophyllaceæ. The fungus is common on wild plants belonging to the order, but is less common on cultivated plants. The mycelium is perennial in the tissues of its host, and therefore it is useless to attempt a cure; affected plants are best destroyed. The host plants can only be attacked when in the seedling stage or in the young shoots, and nothing can be seen of the fungal attack until the fruiting stage is reached in the anthers of the host. It is then known by the blackish dusty mass of spores in the centre of the flower.

AN UNCOMMON FUNGUS.—Mr. Holmes, F.L.S., showed numerous specimens of the curious saprophytic fungus Geaster Bryanti, which had occurred in a dry border recently manured with farmyard manure in his garden at Sevenoaks.

LISTROSTACHYS FORCIPATA. — Mr. Douglas, V.M.H., showed a plant of this rare and beautiful little orchid bearing several of its curious delicate white flowers, the perianth of which is apparently but one cell in thickness. The plant is a native of dense forests at Buea, Cameroons, at an elevation of 4,200ft. (see Kranzl in Engl. Jahrb. xix. 254; Flora Trop. Afr. viii.). A botanical certificate was unanimously recommended for this plant.

SWEET PEAS DYING.—Mr. Fraser also showed sweet peas with prematurely yellowed foliage. The root had been attacked by the fungus Thielavia basicola, a species which is apparently very common this year.

SALIX UNDULATA. — Mr. Fraser also showed two specimens of willow shoots cut from the same bush at different periods in the year. In April the ovary was completely glabrous, but in August the ovary had become pubescent, a character typical of S. undulata.

VARIATION IN PLANTS. — Mr. Shea made some observations upon this subject, exhibiting variegated leaves of a sunflower. Last season one side (that towards the magnetic north pole) had shown variegated leaves, the remainder of the foliage being normal. He had saved seeds from that side of the inflorescence, and the seedlings were weaker and bore variegated leaves throughout, while seeds from other parts of the inflorescence produced quite normal plants. Mr. Shea said that he had observed in other cases that variation had been confined entirely to the side of the plant towards the magnetic north pole.

VARIATION IN DELPHINIUM "CARMINE QUEEN."—From Messrs. Veitch, Chelsea, came inflorescences of this delphinium showing some flowers of a beautiful violet blue, others of a pinkish tinge, and others again streaked and splashed with both colours. All the flowers of some shoots were of one colour, of others the two colours were restricted to separate flowers, and in others the whole of the flowers were of both colours intermingled. It was noticeable that there were no intermediate shades of colour.

VARIETIES OF EPILOBIUM HIRSUTUM.—Mr. Bowles, M.A., showed specimens of the normal form of E. hirsutum, a very hairy form with deeper flowers from South Europe, a form with white petals and rosy stamens, a form with white petals and stamens (the ovary, however, showed the usual red tinge), and a virescent form.

ANTS AND APHIDES.—The following interesting communication was received from the Rev. H. E. Bishop, M.A., Middleton Vicarage, King's Lynn. "Some gooseberry bushes are trained on a north wall in my garden. During the wet weather I noticed that many shoots were encrusted with sand and lime (somewhat in the manner of the case of a caddis worm), and on breaking this away we were surprised to find the shoot covered with aphides and the ants busy among them. After examination we came to the conclusion that the ants had constructed the cases to prevent the aphides being washed away by the rain. The piece broken away was repaired the next day. The upper leaves seemed to serve as a roof, and the sand built round left a clear passage way round the aphides. Since the settled fine weather the casings have been completely cleared away." Mr. Chittenden observed that he had seen a similar thing in a greenhouse, where the ants constructed a covering over aphides on the stem of a cineraria.

Midland Carnation and Picotee Show.

AUGUST 6 and 7.

The eighteenth annual exhibition of this society compared most favourably with its predecessors, both in regard to the quantity and quality of the exhibits, and the attendance of visitors, although confined principally to Midland growers, and only one from the south, in the person of Mr. Hayward Mathias, Alresford; an additional attractive feature was formed by the sweet peas. Much credit was due to Mr. T. Humphreys, the hon. secretary and treasurer, for the complete arrangements of the show.

CARNATIONS.

The self carnations, though in several instances very good, were hardly up to the standard of those staged on certain previous occasions, but this falling off was due to the season, the delicate quality and colouration of the self blooms being apparently more affected by the heat than in the case of the fancies and other kinds. Mr. C. F. Thurstan, Wolverhampton, was the champion in the class for twelve self carnations; his flowers were W. H. Parton, Sir Galahad, Miss Willmott, Edward Kenyon, Mrs. Eric Hambro, Pink Pearl, Carabas, Daffodil, Ensign, Mrs. F. W. Flight, Mr. L. E. Best, and Sir Bevys. Mr. A. R. Brown, King's Norton, was a close second; and Mr. C. H. Herbert, Acocks Green, was a good third. For six selfs the Rev. C. A. Gottwaltz, Droitwich, led with a very good collection, comprising blooms of Helen Gottwaltz, John Pope, Daffodil, Major Galton, Miranda, and Hadzor. The second award was made in favour of Mr. F. W. Goodfellow, Walsall. Mr. Harry Skeels, Walsall, was a close third

For the prizes for twelve fancy carnations there was a keen contest. Mr. A. W. Jones was placed first with fine blooms of Lord Steyne, Sam Weller, Billy Barlow, Professor Cooper, Queen Bess, Mandarin, Bombastes, Liberté, Lara, R. A. Rowberry, and Highland Lass; Mr. A. R. Brown second with good blooms. For six fancies the Rev. C. A. Gottwaltz was accorded premier honours with excellent examples of Lord Steyne, Margaret Thurstan, Cecil Pemberton, Voltaire, Hanno, and Lara; Mr. Harry Skeels was second, and Mr. Goodfellow third.

The bizarre and flake flowers were well represented. For twelve varieties Mr. C. H. Herbert led with grand blooms of Admiral Curzon, Sportsman, Meteor, Gordon Lewis, J. S. Hedderly, Master Fred, William Skirving, C. H. Herbert, Robert Lord, Mr. T. Lord, Lord Salisbury, and Ella; Mr. Brown was second with an excellent collection; the third and fourth prize takers were Messrs. Thurstan and Mathias. For six varieties Messrs. W. Derry, G. D. Ford, and C. J. White were the successful competitors with good examples.

In the six classes for single blooms of carnations Messrs. A. W. Jones, A. R. Brown, C. H. Herbert, C. F. Thurstan, F. J. Spinks, and W. Derry were the principal winners.

PICOTEES.

The white ground picotees were admirably staged. For twenty-four varieties Mr. A. R. Brown was the leader with W. E. Dickson, Maud Brown, Lavinia, Fair Maiden, Fortrose, Brunette, Mrs. Chaundy, Miss Evelyn Cartwright, Duchess of York, Linda, Lady Sybil, Polly Brazil, Amelia Brown, Mollie Dalrymple, Dalkeith, and J. Brocklehurst; Mr. F. W. Goodfellow second, and Mr. G. D. Ford third.

Yellow ground picotees were excellently staged by Mr. A. W. Jones, Stechford, in the class for twelve blooms, distinct, his varieties including Astrophee, Lady Gascoigne, Leonora, Ida, Sophia, Western, John Brocklehurst, Lucy Galton, Penelope, Agnes; Mr. Thurstan was a close second. The third position was assigned to Mr. H. Mathias, Medstead, Alresford, with good flowers. For six blooms the Rev. C. A. Gottwaltz led. There was a large number of competitors in the class for single blooms of picotees and fancies, also a keen competition in the classes assigned to flowers shown without cards, blooms staged in threes, and single vases, carnation foliage and buds only allowed. There was also a keen contest in the amateur classes. Premier awards were allocated as follows: Bizarre, Admiral Curzon, shown by Mr. C. H. Herbert; flake, Gordon Lewis, shown by Mr. C. F. Thurstan; heavy-edged, white ground picotee, Mrs. H. W. Twist, shown by Mr. F. W. Goodfellow; light, or wire-edged white ground picotee, Mrs. C. H. Herbert, shown by Mr. Herbert; heavy edged yellow ground picotee, Togo, shown by Mr. H. Mathias; light edged yellow ground picotee, Brocklehurst, shown by Mr. A. W. Jones; yellow ground fancy, Erl King, shown by Mr. A. W. Jones; self carnation, W. H. Parton, shown by Mr. Parton; fancy carnation, Lord Steyne, shown by Mr. A. R. Brown; yellow ground picotee, Mrs. W. Heriot, shown by Mr. C. H. Herbert.

Blooms staged in threes were an interesting and well-staged class, as also the single vase classes. Amateurs were well represented in the classes for carnations and picotees.

SWEET PEAS.

These contributed largely to the interest and attractions of the exhibition. The prizes were offered by Mr. Robert Sydenham, and in the class for eighteen bunches the first prize—a handsome silver bowl, value £5—was won by Mr. Thomas Jones, Ruabon, who had a selection of the leading varieties, the stout, tall stalks being furnished with bold and bright blooms; Mr. J. Haycock, Wrexham, second; and Mr. E. Deakin, Hay Mills, third.

In the class for six distinct varieties the first prize, a large silver medal, was awarded to Mr. H. King, gardener to A. E. Butler, Esq., Elmdon, Selly Park, who won the coveted prize with a capital set of blooms, well arranged; Mr. E. Deakin, second; and Mr.

John Sceany, Harborne, third. In the class for one bunch of blooms, Miss Nellie Mashin, Mr. Thomas Jones scored; Mr. E. H. Wells second, Mr. E. Deakin third, and Mr. J. Haycock fourth. For one bunch of Countess Spencer, Messrs. J. Haycock, Thomas Jones, and E. H. Wells won in the order of their names. For one bunch of Primrose Spencer Mr. Thomas Jones was awarded the first prize, Mr. John Sceany second, and Mr. E. H. Wells third.

The non-competitive exhibits formed a glorious setting to the contributions to the competitive classes. A gold medal was deservedly awarded to Messrs. Gunn and Son for a grand display of climbing and other roses, phloxes, and other garden flowers. Mr. S. Mortimer, Farnham, had a large collection of show and cactus dahlias, and was awarded a silver-gilt medal. Messrs. W. H. Simpson, Birmingham, were accorded a silver-gilt medal for an attractive arrangement of sweet peas. Mr. Robert Sydenham was accorded a silver-gilt medal for a tasteful arrangement of sweet peas. The champion prize, a handsome silver medal, for the greatest number of points in classes ranging from 1 to 41, was awarded to Mr. A. R. Brown, who had 132 points.

Walsall Florists' Society.

The twenty-ninth annual exhibition of this society was recently held in the picturesque and extensive aboretum (Hanley's Public Park), under much more favourable conditions than that held last year, when the event was completely spoiled by the wet weather.

There were four groups of plants arranged for effect, contributed by well-known Midland exponents, and in a keen contest the "blue riband" fell to Mr. J. G. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, with one of the most artistically arranged creations he has yet exhibited. His crotons were richly coloured, and the fine specimens of C. Warreni were absolutely perfection. There were also finely developed plants of oncidiums in variety, the almost indispensable Fuchsia triphylla (of which Mr. Macdonald is a successful cultivator), with its bright coral-red flowers and dark bronzy-green foliage, and numerous other suitable subjects. The second prize was awarded to Mr. G. Hancox, West Bromwich, for an excellent exhibit, the crotons being noble examples of cultural skill, but, owing to overcrowding, the group did not present the light and elegant aspect of that of his rival. The third prize was annexed by Mr. W. Finch, Coventry, and the fourth by Mr. W. Vause, Leamington. Specimen plants were of an ordinary character, and did not call for special mention. In the open class roses were not numerously shown, but very good examples were staged by Messrs. Perkins and Sons, Coventry, and Messrs. Townsend, Worcester, who were first and second respectively. Sweet peas made a beautiful display. The society's prizes for six bunches were awarded to Mr. W. Marple, Penkridge, who had excellent examples of Primrose Spencer, White Spencer, Phenomenal, Countess Spencer, Dora Breadmore, and John Ingman, all tastefully set up. Mr. T. Parry, gardener to A. Hughes, Esq., Knowle, was second with excellent sprays of Helen Lewis, Nora Unwin, Mrs. W. King, Mr. A. Hughes, Paradise, and Prince Olaf; Mr. E. Deakin, Hay Mills, third. In the class for nine distinct varieties,in which the prizes were offered by Mr. R. Sydenham, Messrs. W. Marple, T. Parry, and A. W. Thorpe, Lichfield, were the prize-takers in the order named, all with meritorious flowers. Dinner table decorations by ladies only constituted a delightful feature. There were twelve competitors, and the arrangements were so good that it was with considerable difficulty the judges made their awards. Pink and white varieties of peas were principally used throughout. The first prize went to Miss L. Deakin, Hay Mills, who selected light rosy pink and cream colours, and Mrs. Marple, Penkridge, a darker pink colour for the second prize.

There were three exhibits of violas, all effectively staged; the premier prize was annexed by Mr. Chapman, New Ascott, with most excellent blooms. Mr. W. Pemberton, Harden Nurseries, and Mr. Ashwell, Walsall, who were second and third, also had good flowers. Mr. C. J. White, Walsall, and Mr. W. Pemberton were the respective winners of the prizes for carnations and picotees. For a collection of flowers of herbaceous plants, Mr. Chipman, of Erdington, won with a well-staged lot, and Mr. W. Pemberton second with a creditable exhibit.

In the open classes for fruit prizes were offered for grapes, and for two bunches of a white variety Mr. T. Parry led with Muscat of Alexandria, full in bunch and berry, but somewhat green; second, Mr. G. Hancox, West Bromwich; and third, Mr. Gibbs, gardener to E. J. Hunt, Esq., Bescot. For two bunches of black grapes Mr. Gibbs won with large bunches and well-coloured large berries of Black Hamburgh; second, Mr. T. Parry, with nearly equal examples; third, Mr. G. Hancox.

In competition for Messrs. Webb and Sons', Wordsley, prizes for vegetables, six distinct kinds, Mr. E. Deakin, Hay Mills, was first, with a highly creditable lot, his Duke of York potatoes being very fine; second, Mr. E.Winchester, Northfield, with a good exhibit.

The trade and other non-competitive contributions greatly enhanced the pictorial aspect of the show.

Royal Botanic Society.

AUGUST 10.

On Monday last the Royal Botanic Society held its 69th anniversary at the gardens, Regent's Park, Mr. C. Brinsley Marley, treasurer, occupying the chair.

The report and financial statement presented by the Council to the Fellows showed that the expenditure was in excess of the income by £470. This was due in part to the sum of £122 having been paid into the sinking fund, and in part to the exceptional repairs. The gross liabilities of the society were £33,915 in 1905, £33,374 in 1906, and £33,733 in 1907, and these figures are of interest as showing that a reduction had been made in two years of £182. The principal liabilities are the debentures, which can only be held by Fellows of the society, the other liabilities being comparatively small. There was a decrease of 98,664 in the number of persons who visited the gardens during the year, and this decrease is attributed to the unpropitious weather. With regard to the prospects of the society, the report states that there is no section of the society's work in which there is not every indication of a period of approaching prosperity. The society is happy in having a united council. The friction arising from inequality of privileges and differences as to the amount of subscription is being done away. The amended regulations as to the use of the gardens by Fellows and their friends have met with unqualified approval. In 1907 only 42 new Fellows were elected. Up to July, 1908, 60 Fellows and members had been proposed for election. Almost as many visitors had visited the gardens up to July, 1908, as visited them in the whole year 1907; and from all quarters the opinion has reached the council that the gardens were never more beautiful or better kept than they are at present. Not even the exceptional interest created by the Franco-British Exhibition has displaced the Royal Botanic Gardens in the estimation of the cultured public.

The report and financial statement were, on the motion of the Chairman, unanimously adopted.

The Duke of Teck and Mr. C. Brinsley Marley were re-elected president and treasurer respectively, and Lord Bredalbane, Lord Howe, Mr. C. Brinsley Marley, Sir W. Dunn, Colonel H. Fortescue, Mr. H. J. Greenwood, Mr. M. Hulton, and Captain J. Sparkes were re-elected members of council.

The meeting closed with votes of thanks to the chairman of council, the officers and staff, and to Mr. C. Brinsley Marley for presiding.

Bishop's Waltham.

JULY 29.

The thirty-fourth annual exhibition was held in the Cricket Field and was a success. In the cottagers' section the exhibits were not so numerous as last year, but in the sections devoted to gardeners and nurserymen there was keen competition. For many years this society has done much to foster the art of arranging flowers for table decoration and in vases, and the neighbourhood has become somewhat noted for tasteful arrangements of flowers in the home. This year to still further this section of the show, the committee made the class an open one, offering the substantial prizes of £5, £3, and £2.

This invitation was readily responded to, sixteen competitors taking part. This, with the other two classes set apart for table decoration and confined to a given radius,brought thirty-one exhibitors, making a huge and interesting display down the centre of the society's marquee. The tables were 6ft. long by 3ft. wide, without any restriction in arrangement excepting that orchids were excluded. After a close inspection, the first prize was awarded to Miss Gertrude Saunders, Wallington, Fareham, who employed a low silver bowl as a centre-piece, with four small trumpet-shaped vases. In this way she did not commit the common fault of overcrowding. The flowers used were Fair Maid carnations, with delightful foliage accompaniment of trails of richly-coloured Ampelopsis Veitchi, croton leaves, Asparagus Sprengeri, and richly-tinted sprays of oak and hornbeam. Taken as a whole it was a charming combination of colour without being in any way overcrowded. Mrs. T. C. Wilson, The Thickets, Bishop's Waltham, was second with Duchess of Fife carnations, arranged in silver bowls, and maidenhair fern and gypsophila. The third prize fell to Mrs. E. C. Peru, Droxford.

For the best decorated table confined to lady members only, there was a spirited competition. Miss Medlicott, Whingarth, Shedfield, was awarded premier place with a pretty combination of pink and white larkspur and suitable greenery. Miss Margery Luttrell, West Leigh, Botley, was second with godetia and clarkia capitally blended.

For the best decorated table with wild flowers nine entered, making a pleasing display. Miss Medlicott again asserted her superiority in winning the first prize with a pretty combination of wild vetch and suitable foliage and grasses. Mr. H. Childs, Meonstoke House, was second. In other sections of the exhibition sweet peas, roses, and herbaceous flowers stood out prominently. In the former Mr. B. Peppler, Bishop's Waltham, won the society's premier prize for twelve bunches with a handsome set. Mr. W. Pawin, Winter's Hill, Bishop's Waltham, won Mr. H. Eckford's prize for twelve bunches; while Mr. W. Cooper, gardener to the Misses Gladstone, Hampton Hill, Swanmore, won Messrs. J. Carter and Co.'s and Mr. R. Sydenham's prizes for six and nine bunches. Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, won first place for six bunches of roses and also for six rambling roses with delightful sheaves of popular varieties. He was also first in the leading herbaceous flower class.

Fruit, if not specially plentiful, was good in quality. For six dishes Mr. Ellwood was first with Madresfield Court and Muscat of Alexandria grapes, peaches, melons, and cherries. Mr. Ellwood also had the best black grapes, staging good Madresfield Court. For four varieties, grapes excluded, Mr. J. Hayward, gardener to F. H. Christian, Esq., Midlington, Droxford, won with a capital set of peaches, nectarines, and melons. Mr. Childs, gardener to Mrs. Macrae, Meonstoke House, was successful in the single dish fruit classes.

Vegetables were a strong feature. Mr. Ellwood won the first prize in the three special classes in which the prizes were given by seed firms, in all cases staging high-class examples of leading kinds. Mr. W. G. May had the premier award made in his favour in the special class for six kinds.

British Gardeners' Association.

Members of the London branch, to the number of about twenty, visited Finsbury Park and Waterlow Park on Saturday, August 8. Meeting at Finsbury Park at 3.30 p.m., the party were conducted by the genial superintendent, Mr. Melville, through the extensive and well-kept grounds, where at every turn much of beauty and interest was to be seen. The herbaceous borders, filled with broad masses of bright, free-flowering subjects, met with high praise, and several varieties of pentstemons were specially noted. The rock garden had lost something of the brightness which characterised it earlier in the year, but it is a well-planned, imposing piece of work, and in spite of the fact that the plants are overshadowed by big trees, they are evidently perfectly happy. Close by the rockery is the lake, upon which many boats bore parties of merrymakers, but we of the garden craft passed on to view a long series of beds cut out on grass, which are filled with an immense number of capital summer bedding subjects.

Of special merit are the standard fuchsias, which occupy a number of beds, carpeted with dwarfer plants. Heliotropes in standard form are also much in evidence here, and their beauty is supplemented by delicious perfume. Eucalyptus, kochias, begonias, zonal pelargoniums, and many other bright subjects are used here in great quantities, and all arranged in the tasteful style, and growing with the sturdiness that betoken the care of a master hand.

Besides its flower beds and borders Finsbury Park contains hosts of magnificent trees and shrubs. Rambling roses and clematis are freely interspersed among the shrubs, and clambering over rough tree trunks add immensely to the charm of the place. In the large conservatory many fine palms, ferns, and other foliage plants are brightened by bold masses of Campanula pyramidalis in its blue and white forms. An inspection of the reserve grounds, where large stocks of plants are being grown for future use, and some hundreds of chrysanthemums coming along for the autumn show in the conservatory were seen, and these completed an interesting and instructive tour.

Before leaving a cordial vote of thanks was passed to Mr. Melville for his courtesy to the party, both he and Mr. Gorham, the foreman being highly complimented upon the excellent condition of everything under their charge.

On reaching Waterlow Park the party was met by Mr. Phelps, the superintendent, under whose direction the park and the propagating department were visited. The flower beds and borders are just now at their best, and some excellent floral effects were seen. On reaching the Swain's Lane entrance we were met by Mr. H. Witty and Mr. Andrews, and were shown over a portion of the bedding arrangements. Votes of thanks were passed to Mr. Phelps and his assistants, who so kindly entertained us, and a most agreeable and profitable afternoon's outing was thus brought to a close.

West Derby.

The seventeenth annual show was held in a field adjoining the Rectory. The weather was ideal, and the entries satisfactory.

Mr. B. Cunningham secured the silver rose bowl, presented by Mr. C. A. Young, for twelve vases of sweet peas, with a good lot. The groups were well arranged, the prize-takers being Messrs G. Osborne, gardener to Dr. [illegible]; Mr. H. Spencer, gardener to A. H. Jones, Esq., and Mr. J. Ogden. Mr. G. Osborne also secured the chief awards for collection of sweet peas, one pot of liliums, two stove or greenhouse palms or cycads, four stove or greenhouse plants, a collection of vegetables, two begonias, six table plants, and four plants—two flowering and two foliage.

For six kinds of vegetables, Mr. T. F. Edgar, gardener to the Rev. G. Stewart, was first. Mr. W. Teal won in both classes for black and white grapes, and for the collection of four kinds of fruits.

Among the exhibits not for competition, Mr. J. Skitt, gardener to Mrs. Bright, staged a fine bunch of Black Hamburgh grapes, weighing 7lb. 11oz., as well as other fruit and cut flowers. Mr. C. A. Young contributed cut carnations and poppies; and Mr. W. Rowlands sent roses, clematis, etc.

Leicester Flower Show.

AWARDS TO NON-COMPETITIVE COLLECTIONS.

As briefly mentioned in our report which appeared in the issue of the 8th inst., non-competitive exhibits contributed liberally to the interest and attractions of this great gathering. We now give the awards made to these collections.

Gold Medal.—Mr. Walter Bentley, Belgrave, for cut roses; Mr. F. Bouskell, Market Bosworth, for collection of cut flowers of hardy plants; Mr. H. Rogers, Leicester, for group of miscellaneous plants; Messrs. Macrimmon and Fulton, Leicester, for cut flowers; Messrs. W. Wright and Son, Leicester, for miscellaneous plants.

Silver Medal.—Messrs. Blackmore and Langdon, Twerton-on-Avon, for collection of begonia flowers; Messrs. Harrison and Sons, Leicester, for cut flowers and vegetables; Messrs. Kelway and Son, Langport, for collection of gladioli; Mr. C. Holden, for sweet peas; Mr. E. Harris, Aylestone, Leicester, for cut roses; Mr. G. Underwood, for sweet peas; Messrs. J. Lamb and Son, Bingham, Notts., for sweet peas; Mr. J. Barrow, Oadby, Leicester, for cut roses; Mr. W. Wright, jun., Syston, for collection of flowers of herbaceous plants; and to Messrs. Wright and Son, for cut roses.

Bristol Gardeners' Association.

A well-attended meeting was held recently at St. John's Parish Rooms, Mr. A. O. Shelton presiding. It was question night, and various questions were asked, such as the best way to kill red spider on vines; cause of asters dying off in beds this summer; best kind of shading where blinds cannot be used; cause of a plum tree dying off in two nights; should Madresfield Court grapes have more heat than generally given; can ants be exterminated; cause of grapes shanking; can an exhibitor stage, in twelve bunches of hardy perennials, a vase of phloxes with three or four varieties in a bunch; and cause of tomatoes dying off when a foot high. A keen discussion followed each question, and the younger members took a great interest in it.

For a basket of sweet peas Mr. Curtis was first, Mr. Morse second, and Mr. Whiting third. Four new members were proposed.

Prescot.

This usual Bank Holiday fixture was held in glorious weather in the charming park of Knowsley, by the kind permission of the Earl of Derby. The entries were just over 500, slightly less than last year.

For a circular group, Mr. J. McFall, gardener to Mrs. Harding, secured the silver cup, the gift of the Earl of Derby; Mr. J. George, gardener to Thomas Henshaw, Esq., was second. For four stove or greenhouse plants, Mr. McFall was the winner, followed by Mr. D. McKelvie, gardener to J. Stone, Esq. In the class for two palms or cycads, Mr. McFall was again the winner; and for one stove or greenhouse flowering plant, he won with Clerodendron Balfourianum; and for one foliage plant he led with a good croton.

For three caladiums, Mr. D. McKelvie won with large plants; and for three stove or greenhouse ferns Mr. W. H. Roberts, gardener to F. Dixon Nuttall, Esq., took the lead. In the class for six gloxinias, Mr. G. Guy, gardener to Dr. Gaskell, was first. Mr. C. Hulme, gardener to W. E. Parry, Esq., had the best four begonias.

In the fruit section, Mr. H. McFall led for four dishes with Black Hamburgh grapes, Royal Sovereign melon, Royal George peaches, and Pineapple nectarines; Mr. Thomas Eaton, second. For two bunches of Black Hamburgh grapes, Mr. W. Oldham, gardener to Joseph Beecham, Esq., scored; and for two bunches of Muscat of Alexandria, Mr. Jas. Parr, gardener to A. C. Pilkington, Esq., took the lead; while for two bunches of any other black variety, the same exhibitor led with Madresfield Court; and for two bunches of any other white, Mr. D. McKelvie won with Buckland Sweetwater.

The best collections of vegetables came from Messrs. J. George, H. McFall, and J. Lowe.

For eighteen roses, Mr. J. George won, having Killarney in good form. Mr. J. Berry was second in three other classes, the first prize-men being Messrs. J. George, C. Houghton, and F. W. Halsall. For eight bunches of sweet peas, Mr. J. Marshall led with a well-arranged collection. For a collection of herbaceous flowers, Mr. C. Houghton won.

Corbridge-on-Tyne Gardeners' Association.

Through the kindness of J. H. Straker, Esq., the members of the Corbridge Society were able to invite the members of the Hexham and Wylam Gardeners' Mutual Improvement Societies, to join them in visiting the beautiful gardens of Howden Dene on Saturday, July 25. Unfortunately, the weather was very unfavourable, rain falling for the greater part of the afternoon, which not only marred the pleasure of the visit, but prevented many from attending.

The roses, which at the present season are the principal attraction, were admired by all, and many useful hints on the cultivation and most suitable kinds of roses to be grown were given by Mr. J. Winder to those who sought the information. After a visit to the flower garden, the members of the different societies were entertained to tea by Mr. Straker. The weather clearing in the evening, Professor Potter, of Armstrong College, Newcastle-on-Tyne, explained the development of various fungoid diseases in plants, and also explained the principles of "Mendel's Laws," and gave a most entertaining lecture on bacteria. These addresses were greatly appreciated, and from the numerous questions that were asked, there can be no doubt that a good deal of instruction was obtained.

Votes of thanks were given and replied to by Mr. Straker and Professor Potter.

VAGARIES OF HAILSTORMS.

The vagaries of hailstorms are very great, and it is a frequent source of perplexity to those specially interested that they should be very destructive in some gardens and nurseries, while others not far distant wholly escape injury, or only have a few squares of glass broken. The hailstorm experienced within twenty miles or so of London on June 4 illustrated these vagaries in a marked manner. This storm did much damage in the nurseries and market-growing establishments in the vicinity of Orpington, Bromley Common, and Sydenham. Then it visited Hoddesdon some twenty miles north of London, where the glass round and about the chimney stacks in the centre of the nurseries was riddled with hailstones. Passing over Turnford, Flamstead End, Cheshunt, Waltham Cross, Enfield Highway, and Ponders End, where the area covered by glass structures is simply enormous, the storm visited Edmonton and Tottenham, and in these districts did much damage in some establishments, and left the others practically untouched. As evidence of the damage that was done where the effects of the storm was fully felt, we would mention that the Nurserymen and Market Gardeners' Hailstorm Insurance Company paid twelve claims for damage to 21oz. glass, and that many nurserymen uninsured lost heavily.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

CREEPING DAHLIA.—R. C. D., Ryde: We presume you mean the plant frequently referred to as the Climbing Dahlia; if this is so, the name is Hidalgoa Wercklei.

SOLANUM WENDLANDI.—R. C. D., Ryde: When grown in a comparatively cool greenhouse, Solanum Wendlandi is practically deciduous. A little more warmth during winter would be beneficial.

EXACUM MACRANTHUM.—R. C. D., Ryde: This beautiful plant is practically biennial, and an intermediate house is essential for its successful culture. It is propagated from seeds sown in heat, and every care must be taken of the seedlings, because overwatering, injury to the stems, and alternated growth are sure to be followed by damping. Fibrous loam, with some peat and leaf-soil suit the plant, but sand must be added to secure porosity, and ample drainage must be provided.

SPLIT PEACHES.—G. B., Dublin: We have submitted the peaches to further examination, and also to other authorities, and the conclusion arrived at is that the fungi present are only saprophytic forms, and in no sense the cause of the trouble. The damage is evidently due to a cultural error, and we expect it may be traceable to a period of drought followed by copious waterings; and, probably, to heavy watering with liquid manure at a period when the trees were not in a condition to use it up owing to their previous dry condition at the roots.

PLANTAINS ON LAWNS.—P., Bath: The ordinary weeding spud is usually efficient as a tool for the eradication of plantains, if carefully and persistently used. We fear you cannot have used the sulphuric acid aright, for this is a never-failing cure. Fix a handle to a wide-mouthed bottle, and put the acid in the bottle; dip a sharply pointed hardwood stick into the acid, and then promptly push it right into the heart of a plantain. Take a fresh dip for each weed, and if wet weather follows, then repeat the dose. The acid should be at full strength.

AMPELOPSIS ON STONEWORK. — F. J. H., Wheatley: It all depends upon what you mean by injurious. If the small-leaved Ampelopsis Veitchi (heterophylla) was allowed to grow over a statue the latter would be spoiled, not merely in effect by reason of the foliage over it, but the surface would be spotted and roughened by the action of the tiny five-fingered branchlets by means of which this pretty climber attaches itself to anything it can touch. There is no doubt the sucker-like ends of these fingers have an acid action, that is shown in tiny marks on stone and brick, and anything upon which the ampelopsis is climbing. This action is not injurious in the sense that it would cause the building to fall about one's ears ere long, but there is no denying the fact that beautiful carving in stone is marred by this action. The plain stonework around the windows of the room where we write is dotted all over with the marks of ampelopsis fingers, and has been for many years, but we only notice this in winter time. The dead portion of the plant around the chimney will do no harm, but we should have it cleaned off all the same, as its presence is a reflection upon the gardener.

WOODLICE AMONG FERNS.—J. N., Llandudno: Woodlice are scavengers, and attracted by decaying vegetation, especially when this is moderately dry. When the ferns next need water, place them in tubs of water for two or three hours, as that will kill or drive out any woodlice that may be harbouring among the bases of the fronds, or among the crocks. Set traps of dry moss in dirty pots near their haunts, and examine these frequently. If they can be traced to a spot near water pipe connections, etc., where no ill results would follow such a course, pour boiling water down, and it will settle them.

HORTICULTURAL TRAINING.—R. H. L., Essex: The lad is not old enough, nor has he enough experience yet to secure admission to Kew. You should apply for particulars of horticultural training to Mr. Chas. Foster, Horticultural Superintendent, University College Gardens, Reading; to Mr. S. T. Wright, Royal Horticultural Gardens, Wisley, Ripley, Surrey; and to the Director, School of Horticulture, Chelmsford Laboratories, Chelmsford.

REAPING MACHINE.—F. C., Brighton: The first reaping machine of any importance was one invented by the Rev. P. Bell, of Carmylie, Forfarshire. Several specimens of his machine found their way to America through various channels, and, with slight variations in make, new machines were soon sent over from America, but these did not meet with success. It soon became known, however, that on Mr. G. Bell's farm in the Carse of Gowrie, the machine invented by his brother had been in use for fourteen years. Trials were instituted, and Bell's machine became fairly well known. This first machine was constructed about 1838, and the first American machines arrived in 1851. Many years later, when a better method of drainage and cultivation produced a more even surface and fairly level fields, lighter machines of American design became popular.

STAPELIA NORMALIS.—C. H., Loughton: We believe you have not the correct plant under the above name, because you refer to the purple violet flowers, whereas Stapelia normalis has dull yellow flowers freely spotted and thinly lined with dark blood-red. Although they need little water during the winter, stapelias do not "dry up," and there is no need to repot them each year. The hot pipe and hot-water treatment are not conducive to good health for any stapelias with which we are acquainted. Plenty of sunshine, a warm greenhouse temperature, little water in winter, and moderate supplies in summer, are the chief conditions for successful stapelia culture. Sandy loam mixed with crushed mortar rubble make a suitable compost. Shallow pots or deep pans form suitable receptacles. Can you send us a specimen?

HARVEST BUGS.—G. B., Dublin, writes: "What is the best treatment for the prevention or cure of the severe itching caused by harvest bugs, and can a garden be freed of them"? Ammonia is a somewhat severe method of allaying the irritation caused by these pests that swarm in garden and field in some districts, but how to free a garden of them we do not know. Can any of our readers help our correspondent?

HIPPEASTRUMS.—G. P., Bournemouth: The bulbs should remain in the pots in which they were flowered until January, and then be shaken out and repotted, six-inch pots being the most suitable for flowering bulbs of average size; for rather small bulbs, five-inch pots will be sufficient; while for those of extra size pots seven inches in diameter will be necessary. Use a compost of turfy loam six parts, and one part each of well-rotted cow manure, leaf-mould, and coarse sand. The pots must be well drained, and the bulbs should be buried to rather more than one-half their depth, and have the soil pressed very firmly about them. A temperature between 55 deg. and 60 deg. will be the best for starting them into growth, and very little water should be given. When the flower stems have attained their full length, and the buds are beginning to expand, remove them to a warm position in the greenhouse, place near the glass, and give an occasional supply of weak liquid manure.

CORRECTION.—A correspondent points out that in our report of Woodbridge Show (p. 580), the prizes for a group of begonias and for single begonias should have been credited to General Sir Richard Farren. Our representative informs us that the plant tent was densely crowded when he endeavoured to make his notes in it, as a shower of rain had just driven everyone under cover. Evidently the beauty of the East Anglian ladies was more dazzling than the prize slips on the class cards.

SHELL-FLOWER.—A. G. R., Islip: As we previously pointed out, there are several plants that bear the popular name of shell-flower. Your plant is Molucella lævis, a labiate from the Mediterranean region. It is hardy, but is best managed as a half-hardy annual, being raised from seed in heat in spring, gradually hardened off, and planted out in May or early June. It prefers a light soil. The plant, especially the large green, netted calyces, are very suitable for skeletonising. Molucella lævis was introduced about 1570, and so is a quite old plant in our gardens.

NAMES OF PLANTS.

A. G. R., Islip.—Molucella lævis.

W. F. B., Nottingham.—1, Eucomis punctata; 2, Galtonia candicans; 3, Fuchsia triphylla.

F. S., Bristol.—1, Muelenbeckia complexa; 2, Cæsalpinia japonica; 3, Tecoma radicans; 4, Tacsonia van Volxemi.

N. G., Hunstanton.—1, Doronicum hungaricum; 2, Fuchsia fulgens; 3, F. Riccartoni; 4, Statice alata.

J. H. C., Carlisle.—1, Veronica virginica; 2, Cotoneaster frigida; 3, Tetragonia expansa; 4, Nertera depressa; 5, Miltonia spectabilis Moreleana.

W. K. A., Leicester.—1, Cornus Späthi; 2, Taxodium distichum; 3, Ceanothus azureus; 4, Buddleia globosa; 5, not recognised; 6, Cupressus macrocarpa.

M. F. P., Uckfield.—1, Karatas humilis; 2, Opuntia microdasys; 3, Gymnogramme calomelanon chrysophylla; 4, Iresine Herbsti aureo-reticulata; 5, Polygonum cuspidatum; 6, Nuphar luteum.

CATALOGUES RECEIVED.

E. H. KRELAGE AND SON, HAARLEM, HOLLAND.—A general bulb catalogue, but one in which Darwin tulips occupy considerable space, as becomes the firm that introduced these fine spring flowers.

WILLIAM BULL AND SONS, KING'S ROAD, CHELSEA.—A neat and illustrated list of bulbs and flowering roots; varieties for early forcing are given prominence.

JAMES VEITCH AND SONS, LIM., CHELSEA.—A well-arranged, well-printed, and well-illustrated catalogue of fruit trees. It includes a list of new fruits, and is altogether a most useful production.

ANGLO-DUTCH NURSERY CO., CASTRICUM, HOLLAND.—This is, to us, a new catalogue; it is printed in English, and contains, in addition to bulbs, an abridged list of hardy perennials.

SIR JOSSLYN GORE-BOOTH, BART., LISSADELL, SLIGO.—A handy, indexed list of daffodils grown on the Lissadell bulb farm; freely illustrated.

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FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (August 15) contains the following:

HOW TO PACK FRUIT.
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FRUIT-TREE PLANTING.
WARTY DISEASE OF POTATOES.
TRIPOLI ONIONS.
SEEDING TIME OF WEEDS.
MANAGEMENT OF MILK.
MILK RECORDS.
COWS FOR AUTUMN CALVING.
MILK PRESERVATIVES.
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NEW PLANTS, ETC.

SOPHRO-CATTLEYA WARNHAMENSIS J. M. BLACK.

A dwarf and handsome form of the hybrid derived from Cattleya amethystoglossa and Sophronitis grandiflora. For its size it has large flowers, and these are of a deep red-purple colour, approaching a crimson shade. The vivid red of the lip and its yellow disc add to the fine colouring of this orchid. F.C.C., R.H.S., August 4. Mr. J. M. Black.

VANDA AMŒNA SANDERÆ.

A distinct and handsome natural hybrid, that differs from the type, and is probably the result of a reverse cross between Vanda Roxburghi and V. cœrulea, the latter being, supposedly, the seed parent. The flowers, borne on a long, stout spike, are creamy-white, veined with violet, with a violet purple lip. A.M., R.H.S., August 4. Messrs. Sander and Sons, St. Albans.

ROSE PAULA.

A tea-scented rose of dwarf habit, and with soft yellow flowers carried on reddish stems. This promises to be an excellent garden rose, and one specially adapted for bedding, by reason of its good habit, freedom, and charming colour. A.M., R.H.S., August 4. Messrs. Paul and Son, Cheshunt.

CARNATION COUNTESS OF PEMBROKE.

A beautiful and fragrant border carnation with finely formed flowers of the palest blush colour. A.M., R.H.S., August 4. Mr. T. Challis, gardener to the Earl of Pembroke, Wilton House, Salisbury.

PRUNUS TOMENTOSA.

A dwarf tree found growing in the mountains of Northern and Western China, from Mandschuria to Szechuen. It is described by Bretschneider as being much cultivated in the neighbourhood of Peking for its edible fruits; but it first became known in Europe from Japan, where also it is cultivated in gardens. The flowers are white, lightly tinged with pink, and these are followed by the ovate fruits, which are about half an inch long, bright red, and edible; it is one of the earliest of the species of prunus to bloom. This, however, is not a point in its favour, for the flowers are quite unable to withstand the effects of the rough weather so frequently experienced in this country during the spring months, and consequently frequently lose their beauty within a short time of their expansion. The shrub at Kew occasionally ripens a few fruits. The species is deserving of a place in large collections, but with so many finer shrubs it cannot be recommended for small gardens. "Bot. Mag.," t. 8,196.

RHEUM INOPINATUM.

A distinct species of moderate growth that should have the attention of cultivators of hardy plants. The leaves are somewhat cordate, five or six inches long, and four or five inches broad, light green above, glaucous green on the under side, and the stems and veins are bright red. The flower spikes are short and compact, the stems and nutlets bright red. This small growing rhubarb was raised at Kew from seeds collected by Captain H. J. Walton, at Gyantse, in Tibet, in the autumn of 1904, and presented by the director of the Botanical Survey of India in 1905. The following year it flowered in the herbaceous border, and has proved quite hardy. "Bot. Mag.," t. 8,199.

PANDANUS HOULLETII.

A handsome screw pine introduced from Singapore in 1866, and flowered for the first time under cultivation in the Jardin des Plantes, Paris, in 1868. According to Mr. Ridley, who has studied the plant in a wild state, it is endemic in the southern part of the Malay Peninsula, where it grows in dense forests. The leaves are long and linear, deep green, tinged with bronze, and the fruits are said to be eatable, and to resemble the pineapple in flavour. "Bot. Mag.," t. 8,197.

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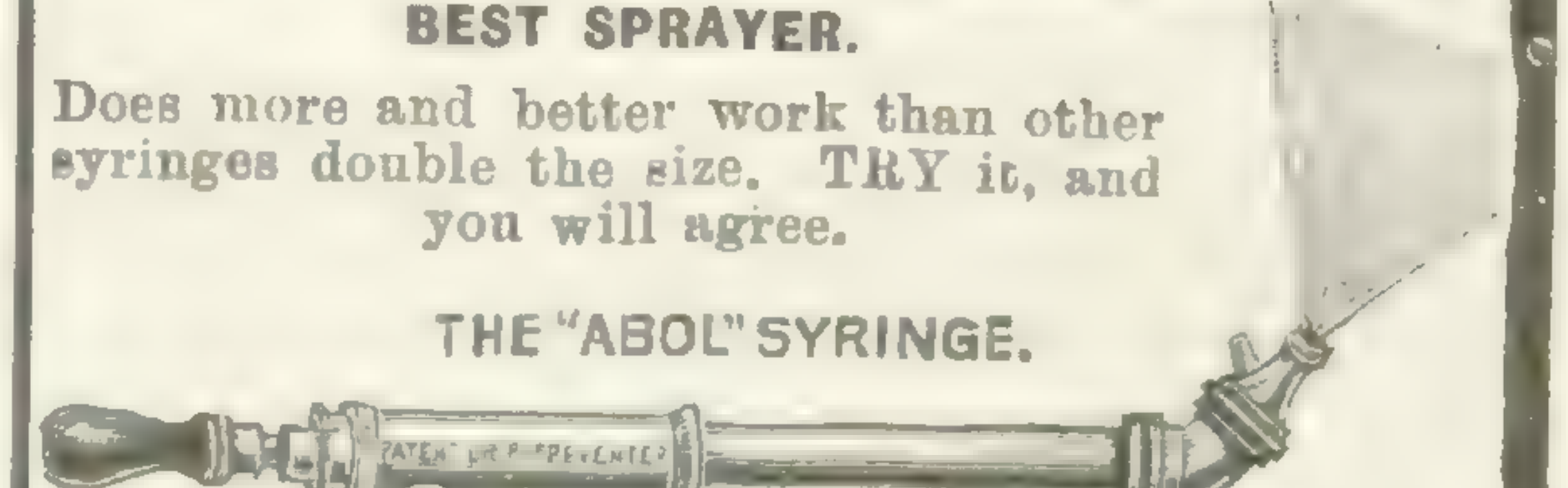

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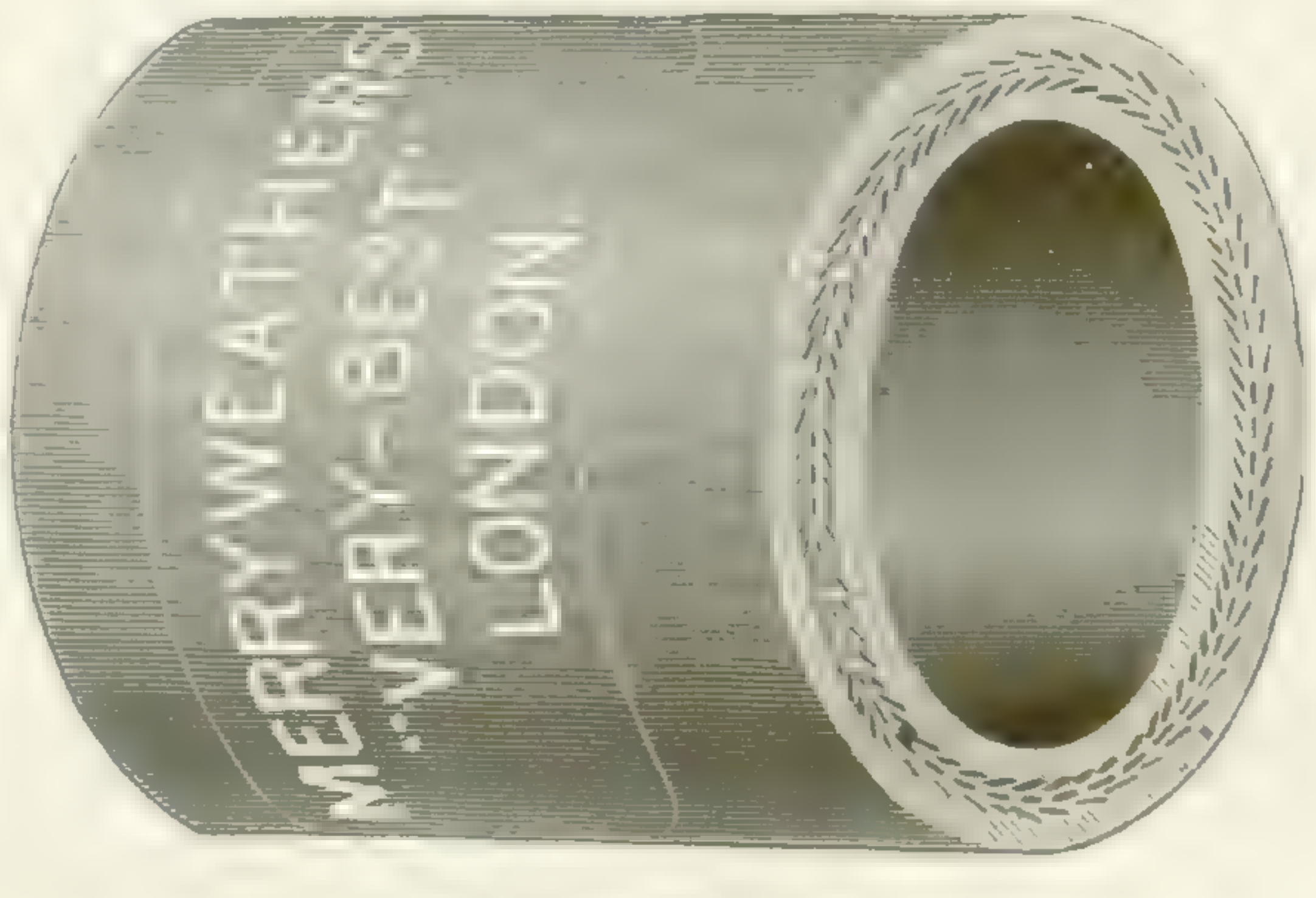

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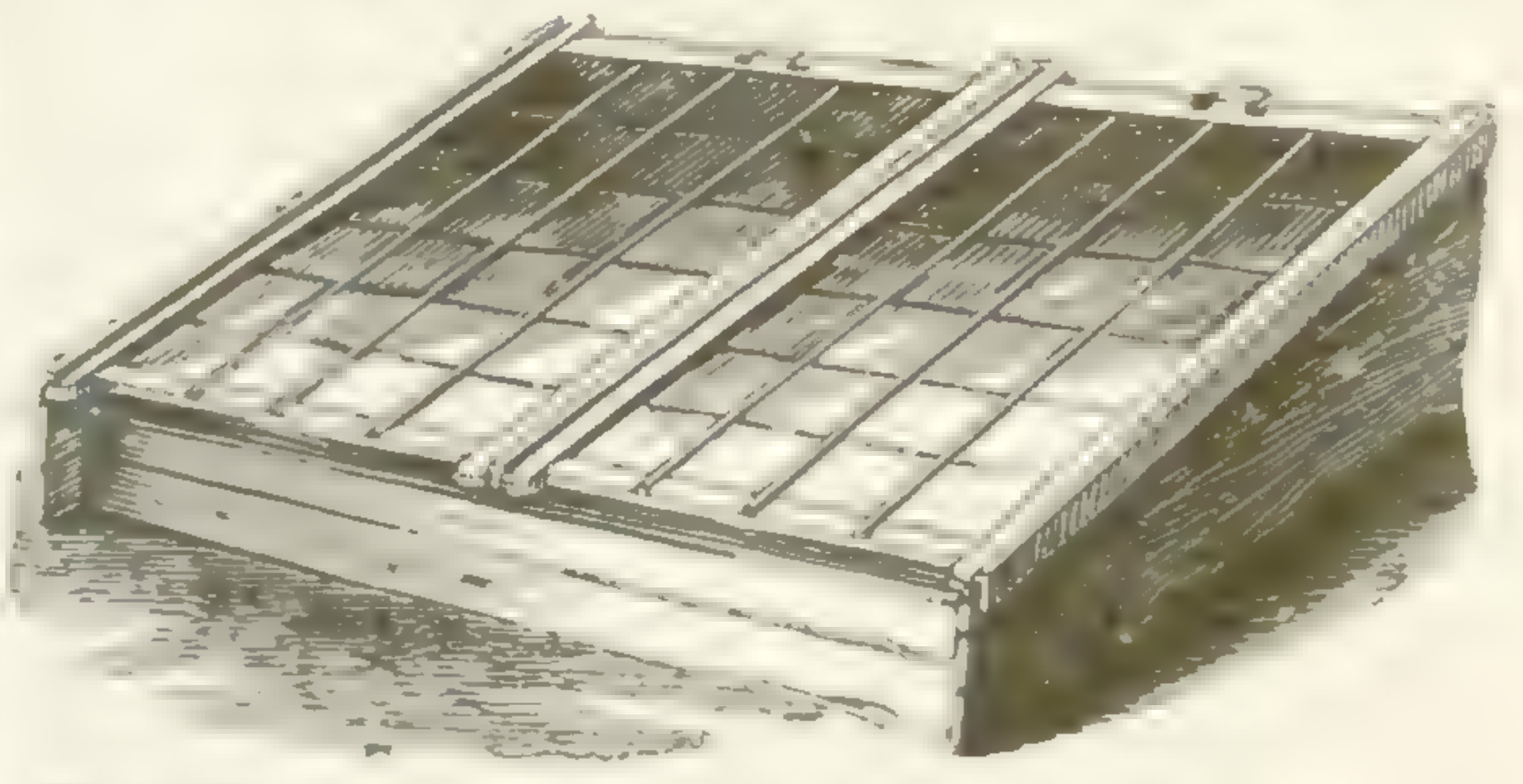

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METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE.	SUNSHINE.	TEMPERATURE OF THE AIR.			
1908. JULY 26 TO AUGUST 1.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
July 26 Sunday	8 40	62	59	75	53
,, 27 Monday......	12 40	64	58	76	51
,, 28—Tuesday ...	8 5	66	60	73	54
,, 29 - Wednesday .	13 20	64	57	74	50
,, 30—Thursday ...	12 5	68	62	82	47
,, 31—Friday	9 35	64	58	73	61
Aug. 1—Saturday ...	13 10	63	55	70	45
Means	11 5	64	58	75	52

DATE.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
1908. JULY 26 TO AUGUST 1.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
July 26—Sunday	—	64	63	60	45
,, 27—Monday......	—	64	64	60	44
,, 28—Tuesday ...	—	65	64	60	51
,, 29—Wednesday.	—	64	64	60	43
,, 30—Thursday ...	—	64	64	60	42
,, 31—Friday	—	66	64	61	57
Aug. 1—Saturday ...	—	65	65	61	39
Means ...	(total) —	65	64	60	46

DATE.	SUNSHINE.	TEMPERATURE OF THE AIR.			
1908. AUGUST 2 TO AUGUST 8.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 2 Sunday	12 25	65	57	72	46
,, 3 - Monday......	12 50	66	59	81	45
,, 4—Tuesday ...	8 20	71	64	78	55
,, 5 - Wednesday .	0 30	60	54	62	58
,, 6—Thursday ...	3 50	59	56	67	55
,, 7—Friday	10 5	60	55	75	55
,, 8—Saturday ...	5 30	56	55	73	51
Means	7 40	62	57	73	52

DATE.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
1908. AUGUST 2 TO AUGUST 8.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Aug. 2—Sunday	—	64	64	61	40
,, 3—Monday......	—	64	64	61	40
,, 4—Tuesday ...	—	67	64	61	48
,, 5—Wednesday.	0·05	66	65	61	56
,, 6—Thursday ...	—	63	64	62	54
,, 7—Friday	—	63	63	62	55
,, 8—Saturday ...	—	64	64	61	47
Means ...	(total) 0·05	64	64	61	49

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Asparagus	per doz. bun.	1 6		6 0
Asters	per doz. bun.	2 0		3 0
Carnations	per doz. blms.	1 6		2 6
,,	per doz. bun.	8 0		10 0
,, Malmaison	per doz. blms.	6 0		9 0
Cattleyas	per doz.	8 0		10 0
Coreopsis	per doz. bun.	1 6		2 6
Croton leaves	per bun.	1 0		1 6
Cypripediums	per doz. blms.	2 0		2 6
Eucharis	per doz.	4 0		5 0
Forget-me-not	per doz. bun.	2 0		3 0
French fern	per doz. bun.	1 0		3 0
Gaillardias	per doz. bun.	1 6		2 6
Gardenias	per doz.	1 6		3 0
Gladiolus Colvillei	per doz. bun.	6 0		8 0
,, large flowered ...	per doz. spks.	1 6		2 6
Gypsophila	per doz. bun.	2 0		3 0
Lilium auratum	per bun.	2 0		4 0
,, candidum	per bun.	1 0		2 0
,, speciosum	per bun.	1 6		3 0
,, longiflorum	per bun.	2 0		3 0
Lily of the Valley	per doz.	6 0		10 0
Marguerites, white	per doz. bun.	2 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 0		4 0
Odontoglossums	per doz. blms.	2 0		3 0
Pelargoniums	per doz. bun.	4 0		6 0
Roses	per doz.	1 0		5 0
Smilax	per doz. trails	3 0		5 0
Spiræa	per doz. bun.	5 0		8 0
Statice	per doz. bun.	3 0		4 0

Fruits.

Apples are daily becoming more plentiful, and these, with grapes, find a ready sale.

		s. d.		s. d.
Apples, Australian	per case	6 0	to	14 0
,, English	per ½-sieve	2 0		4 0
Apricots	per box	0 9		1 0
Bananas	per bun.	5 0		10 0
Cherries	per ½-sieve	3 0		7 0
Currants, red	per ½-sieve	3 0		4 0
,, Black	per ½-sieve	5 0		7 6
Figs	per doz.	1 0		3 6
Gooseberries	per ½-sieve	2 0		4 0
Grapes, English	per lb.	1 0		3 6
,, Belgian	per lb.	0 9		1 3
Greengages	per ½-sieve	3 0		6 0
Lemons	per case	6 0		14 0
Melons, Guernsey	each	0 9		2 6
,, English	each	1 0		2 0
,, Valencia	per case	7 0		10 0
Nectarines	per doz.	3 0		15 0
Oranges	per case	9 0		30 0
Peaches	per doz.	3 0		12 0
Pineapples	each	2 0		4 0
Plums	per ½-sieve	2 0		5 0
Raspberries	per doz. pun.	5 0		7 6

Vegetables.

Salading is greatly in demand; tomatoes and marrows are cheap, and runner beans are becoming plentiful.

		s. d.		s. d.
Artichokes	per doz.	1 6	to	1 9
Beans, broad	per bush.	2 0		3 6
,, Runner	per bush.	3 0		6 0
Beet	per bush.	1 3		2 0
Cabbage	per tally	1 6		2 0
Carrots	per doz. bun.	1 6		3 0
Cauliflowers	per doz.	1 0		3 0
Cucumbers	per doz.	1 6		2 6
Endive	per doz.	1 0		1 6
Horseradish	per doz. bun.	9 0		12 0
Lettuce, cos	per doz.	0 8		1 0
Mint	per doz. bun.	1 0		1 6
Mushrooms	per doz. lb.	6 0		8 0
Onions, spring	per doz. bun.	1 0		2 0
,, Valencia	per case	7 0		8 6
Parsley	per doz. bun.	1 0		1 6
Peas	per bush.	3 0		4 0
Radishes	per doz. bun.	0 4		0 8
Spinach	per bush.	1 3		1 6
Tomatoes, English	per doz. lb.	2 6		4 0
,, Guernsey	per doz. lb.	2 0		3 0
Turnips (new)	per doz. bun.	1 6		3 6
Vegetable Marrows	per tally	3 0		4 0

FORTHCOMING ENGAGEMENTS.

TUESDAY, August 18.—Royal Horticultural Society; Committees meet at 12 o'clock; Lecture at 3 p.m.; Scientific Committee at 4 o'clock.

Brighton Summer Show; two days.

WEDNESDAY, August 19.—Shrewsbury Floral Fete; two days.

Cuckfield Floricultural Society.

Hemel Hempstead Horticultural Society.

THURSDAY, August 20.—Brympton Horticultural Society.

SATURDAY, August 22.—Bonnybridge Horticultural Society.

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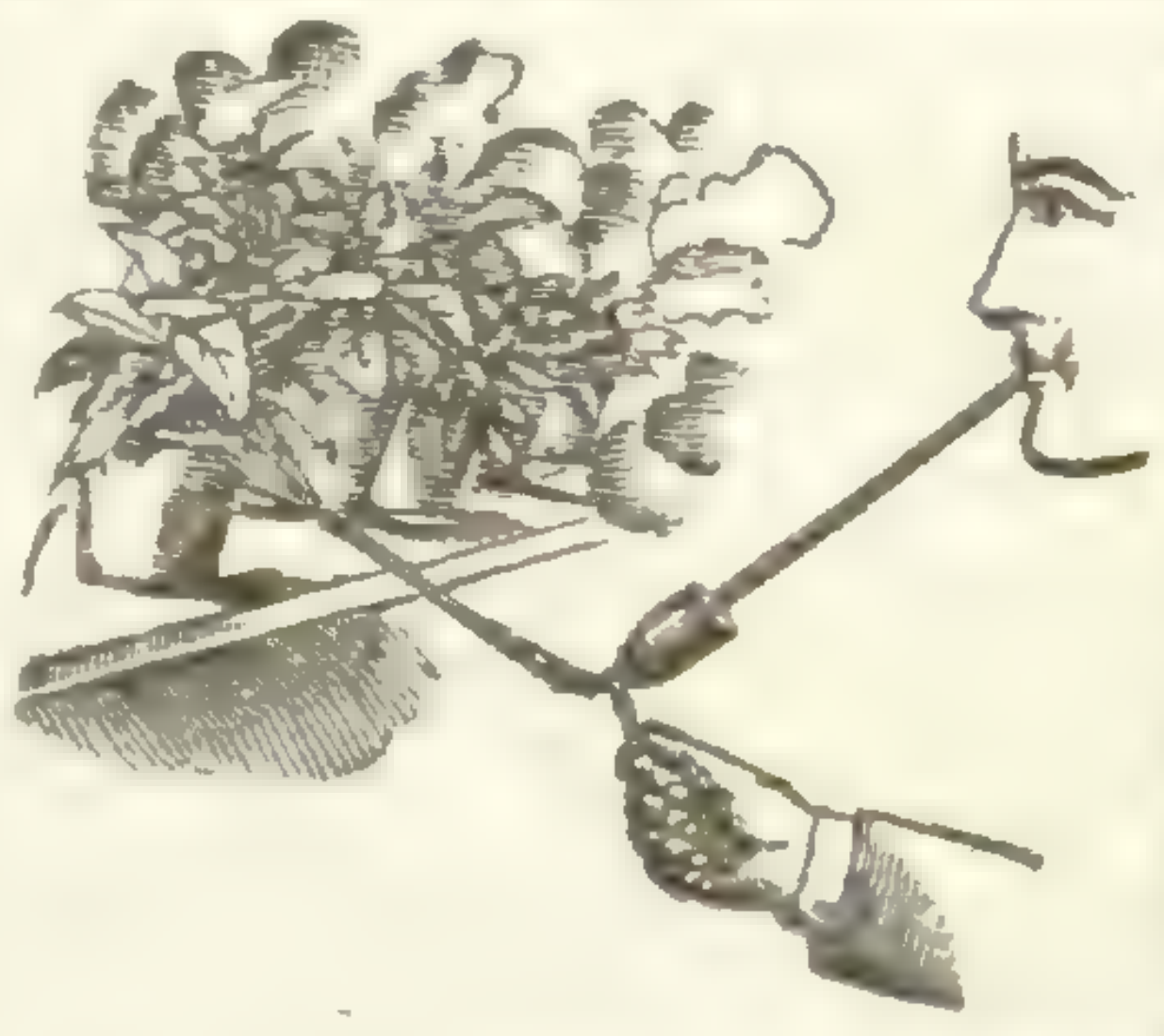

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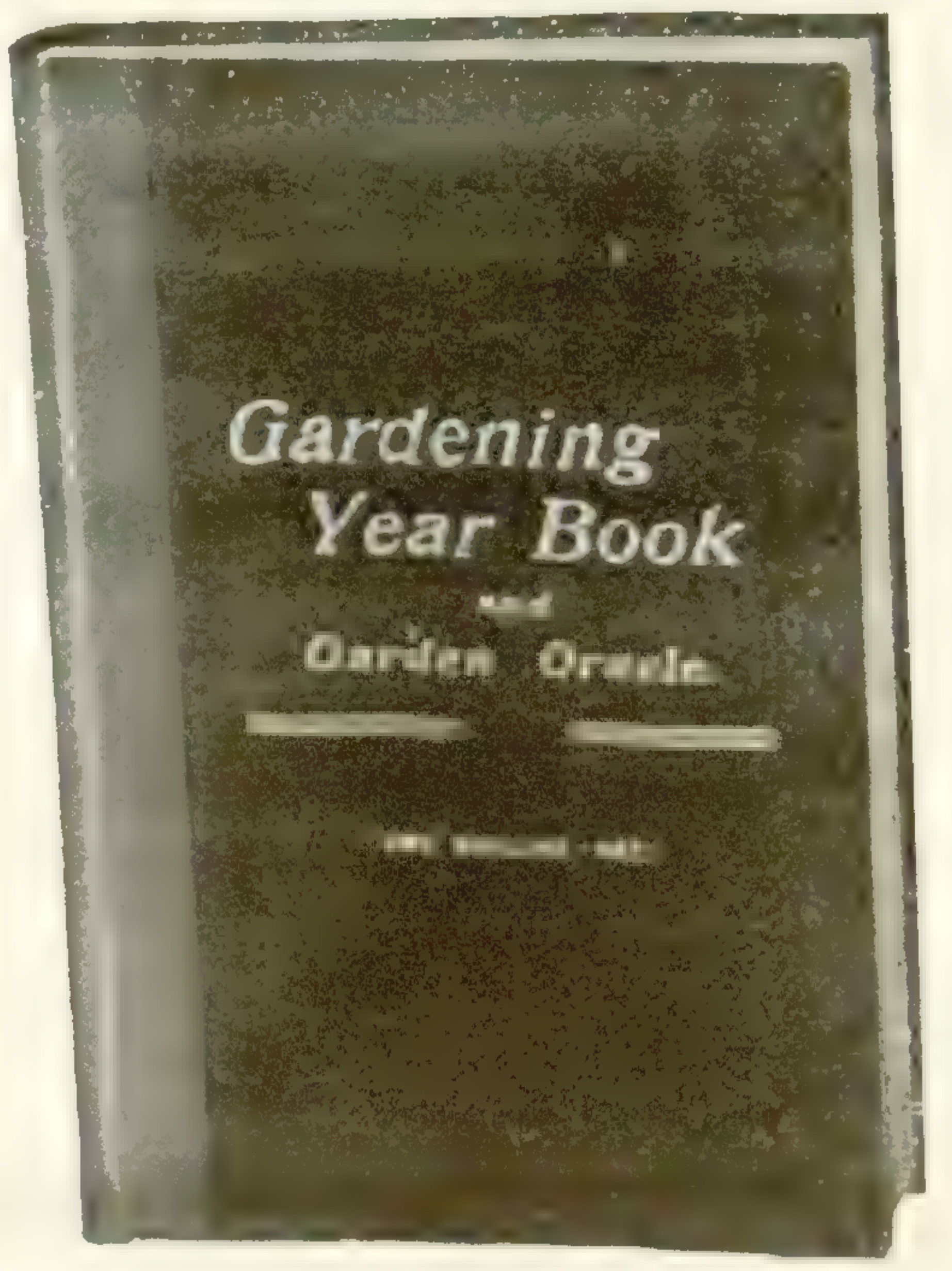

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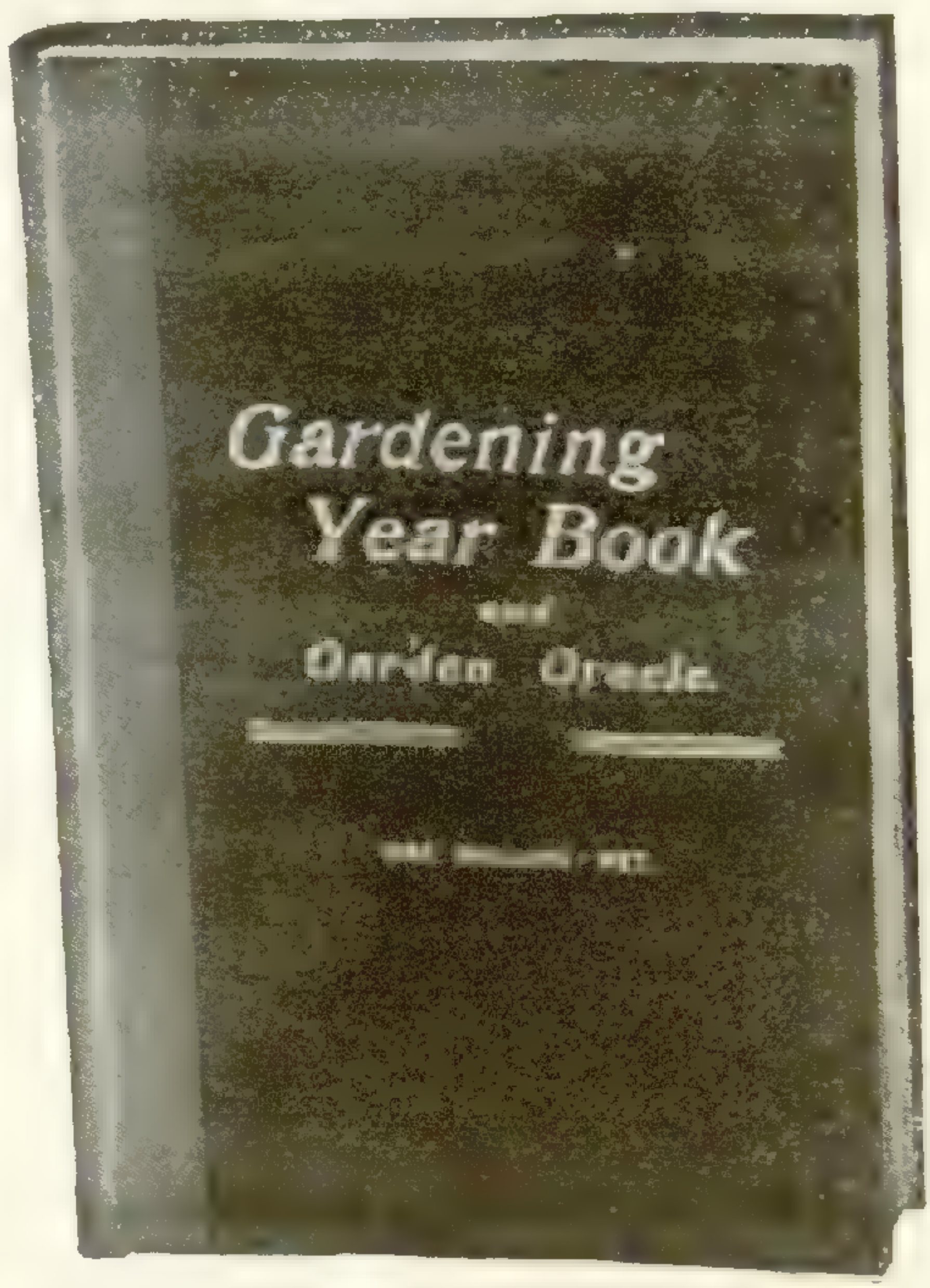

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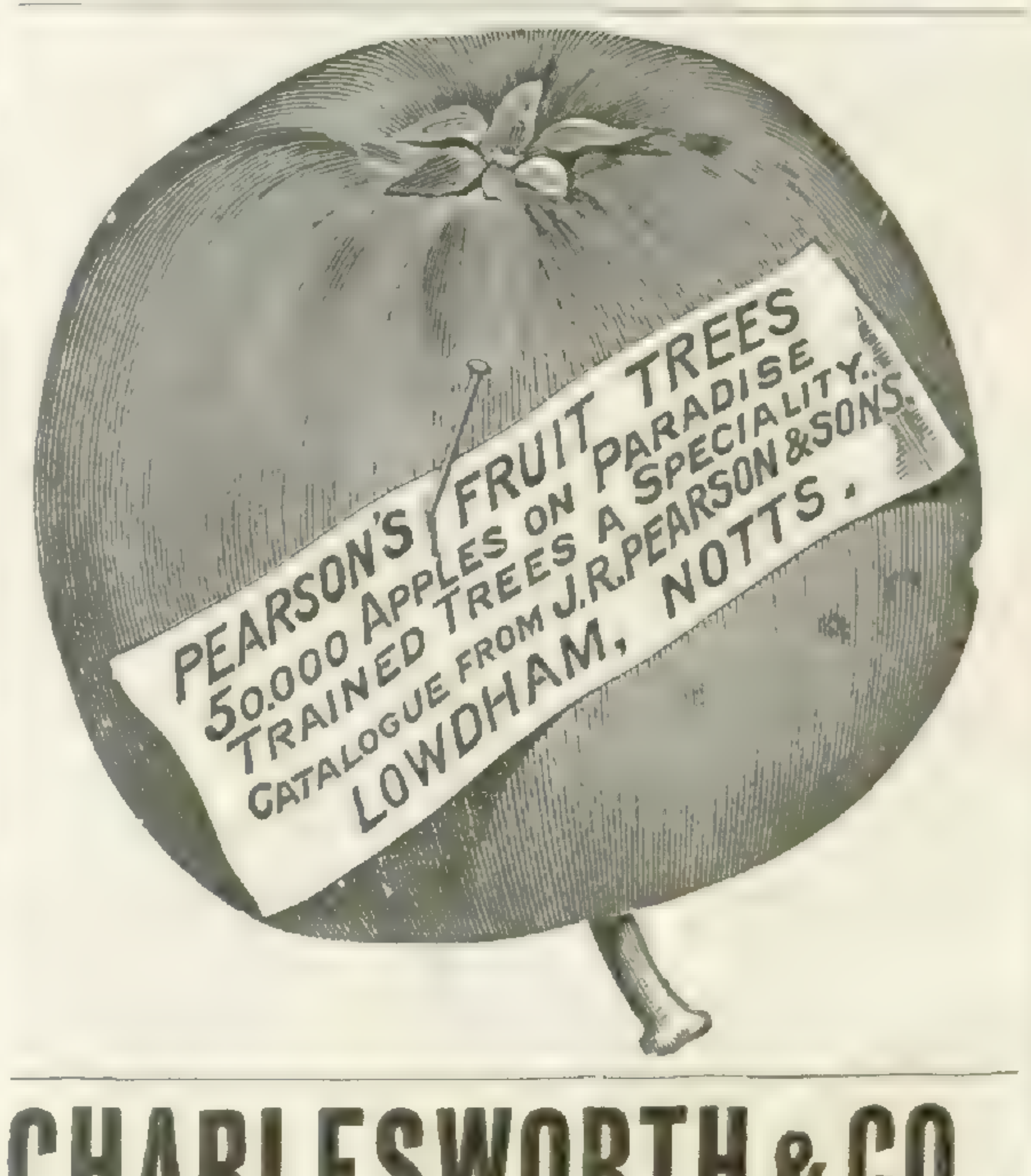
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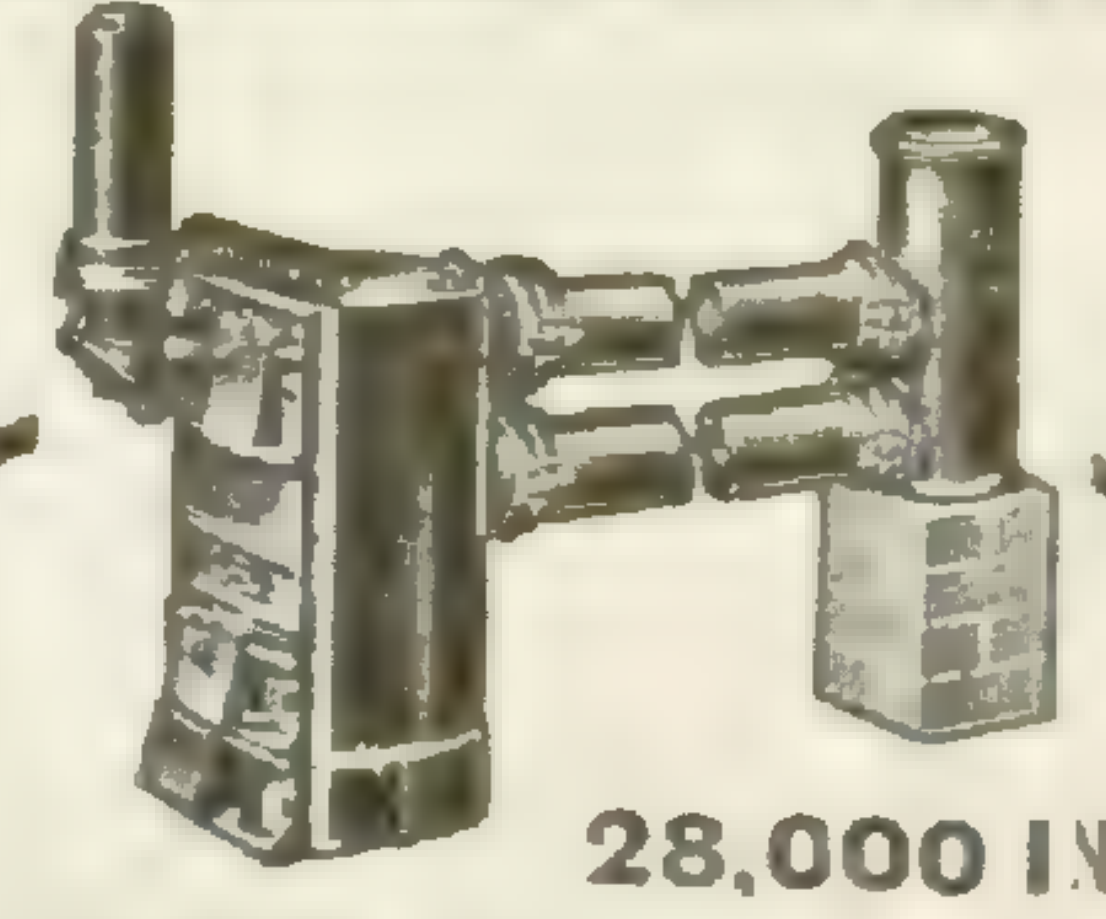

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Iris, Spanish, mixed	0	6	4	6
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Narcis., single, in the finest mixture... ...	1	4	12	6
Narcis., Trumpet, in the finest mixture ...	2	6	20	0
Narcis., double, fine mixture	3	0	25	0
Narcis. Polyanthus, finest mixed	3	6	30	0
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VOL. LI.—No. 2,860. SATURDAY, AUGUST 22, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Leaves and Fronds.

Both the leaves of flowering plants and the fronds of ferns and their allies perform the same office in one respect, viz., they are structures adapted to expose the active cells of which they mainly consist to the light and air to the best advantage according to the environment. From the air both absorb the carbonic acid gas which is one of the chief essentials for growth, and by the light, the cells of both are stimulated, and enabled to work up this, and the material obtained through the roots, into the various forms, structural and chemical, peculiar to the plant concerned. In these two respects their functions are alike, and in the course of evolution we consequently find a certain degree of parallelism in the shape, size, and sub-division of the frond and the leaf, some being simple and undivided, like the Hartstongue and Bird's-nest Fern, and the leaves of the Iris or Funkia, others once divided, like the common Polypody and the Acacia, and so on until we reach the finely-cut foliage of Todea superba, on the one side, and the common Milfoil on the other, all with infinite grades and variations between. Despite this similarity, however, it is curious to note how differently similar types are developed. When the buds of trees burst in the spring, we can immediately see that the incipient leaves have been tightly packed within in a small, but perfect form, and these subsequently grow and expand in all directions until they reach full size. The fern frond, however, begins first as a tiny knob, which becomes lifted upon a stalk, and then, by a process of coiling inward and apical growth, i.e., at the point, a rolled-up ball is produced within which the growing points multiply and together, until, in due course, the coiled-up mass loosens and flattens out, expanding as it does so until the full size is attained. Meanwhile, however, the frond will probably have displayed a faculty entirely foreign to the leaf. Without entering here into detail of varied forms of spore bearing, we may say that, as a rule, there will be found on the backs of the frond dots or rows of small excrescences, green at first, but subsequently developing into groups of brown capsules, so small that a heap of several scores would be no larger than a pin's head. These are popularly known as fern seed, but, in point of fact, minute as these tiny capsules are, they each contain some fifty spores or so, and as large fronds may be literally encrusted with such spore heaps the crop is simply all but incalculable. In this faculty of spore bearing the frond is fundamentally distinct from the leaf. The leaf proper performs no direct reproductive function, it merely collects and prepares material to be worked up in that direction elsewhere in the shape of flowers and seed. The frond makes a short cut, as it were, and devotes such prepared material on the spot to the production of reproductive bodies, i.e., the spores. With very rare exceptions, which we may ignore in this connection, the frond, however, can only go part of the way, and cannot produce a fertilised seed. This has to be done by a quite different form of vegetation, which the growth from the spore assumes, a tiny green scale-like growth, which, small as it is, is capable of bearing what are practically pollen grains and embryo seeds, by whose conjunction a fresh fern is engendered. So much for the frond, now let us return to the leaf. The leaf proper, as we have said, has no direct seed-producing powers, these are delegated to the flowers, but, as all flowers are really modified leaves, this simply means that some leaves have been specialised in a most wonderful manner, and in the process have lost all resemblance to their unmodified associates in colour, make, size, and everything else, including vital function. This fact, however, indicating as it does that despite all appearance it is still the leaf which does the reproductive work, dimly indicates that link in the far distant past when the spore bearer in some cases graded into the seed bearer, and thus by bringing in insect agency for fertilisation, gave birth to all our floral wealth of to-day, wild and cultivated. The fern frond, in fact, is a fossilised conservative type of vegetation, which differs in no essential nowadays from its ancestors of the dim and distant Coal Age, it bore its spores then as it bears its spores now, and it is only to its unknown radical members who found a way out of the rut, and led the way to the future domain of Flora, that we are indebted for our fruits, our blossoms, our cereals, and our vegetables.

MR. H. W. ADNITT.
Co-Honorary Secretary of the Shropshire Horticultural Society.

Mr. H. W. Adnitt, as one of the two honorary secretaries of the Shropshire Horticultural Society, occupies a commanding position in the world of horticulture, and his example is one which secretaries of the leading horticultural societies in the provinces may well desire to emulate. For thirty-three years Mr. Adnitt has, in conjunction with Mr. W. W. Naunton, been responsible for the secretarial work of the Shropshire Horticultural Society, and the splendid success that has been achieved is the best possible proof that it has been carried out with remarkable energy and ability. It is not necessary we should give the history of the society, for that is now well known, and the "Shrewsbury Show" has become a household word wherever an interest is taken in the practical aspects of horticulture. This exhibition is the largest of its kind held in the provinces, it attracts horticulturists from all parts of the country, and the general public pour into the Quarry Grounds in their tens of thousands, over 25,000 having passed the turnstiles on the second day in one year when it rained heavily without break from early in the morning until the gates were closed. As a matter of course the society has a strong committee, but the responsibility for carrying out the multifarious details rests upon the honorary secretaries, and in the conduct of their work Mr. Adnitt, in conjunction with Mr. Naunton, has rendered services in the cause of horticulture that it would be difficult to overestimate.

The Rose Arbour, of which we give an illustration on page 643, is of special interest as an object-lesson in the designing of structures intended to serve the double purpose of displaying the beauty of climbing roses and affording welcome shade in hot weather. Erected at the junction of two walks, it gives an opportunity for relieving the formality of the pergola, of which it forms a part, and thereby contributes materially to the attraction of the rose garden. The lightness and elegance of the arbour is well shown in the illustration, and it can readily be seen that ample space has been provided for passing through the four arches without being inconvenienced by the growths of the roses. This latter is to our mind an important point, for it is not pleasant when visiting gardens, on the occasion of social functions or otherwise, to have one's hat ruffled by the branches of the roses, and it must be still more annoying to ladies to have their hats disarranged, or, it may be, considerably damaged by the rose growths, owing to an insufficiency of head-room. In the arbour a height of seven feet six inches has been provided, and this, as proved by results, has been found sufficient to enable visitors to pass under the arches without having to duck their heads to avoid damage to their headgear.

Cannas at Wisley.—A trial of cannas is this season being held by the Royal Horticultural Society for the purpose of determining the relative merit of varieties for the embellishment of the flower garden during the summer, and the trial plot is now one of the most attractive of the several features. The growth is somewhat less luxuriant than would have been the case had the rainfall more closely approached the normal, but they are blooming freely, and the brilliantly coloured flowers produce a fine effect. The collection was examined by the Floral Committee on the 14th inst., and the following varieties received the distinction of three marks XXX. Fürst Wied, a distinct variety, with handsome leaves and large spikes of scarlet flowers; Metore, the spike and flowers finely developed, and the colour rich orange scarlet; L. E. Bailey, very distinct and effective, the spike and flowers large, the latter rich yellow freely spotted with bright red; Elizabeth Hoss, one of the very best of the yellow red-spotted cannas, spikes and flowers are of large size and the colours clear and rich; Dr. Marcus, a handsome variety with bronze-tinted leaves, and bearing large spikes of finely-formed flowers; and William Saunders, a beautiful variety, the flowers large in size and of good form, the colour rich scarlet. The two large span-roof houses devoted to the cultivation of cannas in pots are especially attractive just now, for the finely-grown plants are blooming with great freedom.

Rambling Roses at Stoke Bruern Park.—The gardens of Stoke Bruern Park, the fine seat of B. W. Vernon, Esq., near Northampton, is rich in features of interest to horticulturists and, indeed, to all who appreciate good gardening; but the feature which this year attracted the largest share of attention is that formed by the rambling roses. These elegant and beautiful roses abound on all sides, and pillars, arches, and other suitable supports have been utilised for the display of their charms. Under the skilful management of Mr. W. Batchelor, they are in the most robust state of health, and have grown vigorously and bloomed profusely, and produced a display of colour of great beauty. The fame of these charming gardens for their rambling roses has extended far beyond the immediate district, and, taking advantage of the generous kindness of the owner, over two thousand persons visited the gardens during the three weeks in which the roses were in full bloom.

Gooseberry Mildew in Essex and Kent.—The Board of Agriculture desire to make it known to growers of gooseberries in Essex that the presence of American gooseberry mildew on gooseberry bushes in a plantation in that county has been confirmed. An Order of the Board requires all occupiers of premises on which the mildew exists to report the presence of disease under a penalty of £10. Gooseberry growers are advised to apply to the Board for a leaflet describing the appearance of the disease and giving the precautions that should be taken. Mr. Alderman G. Marsham, the chairman of the Kent County Council, has reported that an area of 700 acres of fruit plantation in the county has been found to be affected with American gooseberry mildew. The committee had applied to the Board of Agriculture for, and had received, an Order authorising the council to require the destruction of bushes in cases where there was an isolated outbreak in a limited area remote from infected premises, and where such destruction might fairly be expected to result in a check of the disease in that district. The Board had also authorised the payment of compensation out of the County Fund in such cases. The Order of the Board gave unlimited powers to order destruction, but the compensation to be given was limited to half of the value of those bushes which were affected, and to three parts where the bushes were merely in the vicinity of others which were affected. He proposed that the Council should accept the Order, it being understood that it was the intention of the committee to act only in exceptional cases. After considerable discussion, the proposition was agreed to.

Herbaceous Phloxes.—These attractive and highly fragrant flowers have had so many noteworthy additions made to them within recent years that the trial now being held at Wisley is of quite exceptional interest. The dwarf varieties have been largely augmented of late, as the result of the activity of the raisers, and the many fine varieties now in commerce enable cultivators to employ phloxes in positions where the taller varieties would be out of place. When the collection was examined by the Floral Committee a few days since, the following received three marks XXX: Andre Michaux, a dwarf variety, with large spikes and finely-formed flowers, the latter soft-pink, with crimson centre; Jules Cambon, purple, with white centre, very effective; Siebold, orange-scarlet, the flowers large and of fine form; Sesostris, rich purple, the flowers large and of good shape; Lady Tweeddale, a beautiful dwarf pure white variety, the flowers produced in large spikes and of superb form; and General Giovanelli, dwarf, the large rich rose coloured flowers finely formed, and the spikes well developed.

A City Rector's Fern Find.—A paragraph is going the round of the Press to the effect that in 1905, when Senior Dean of Sion College, the Rev. P. Clementi-Smith, rector of St. Andrew-by-the-Wardrobe, discovered a little fern growing in the joint of a leaking pipe against the south wall of the building. The fern was removed to his greenhouse, where it thrived marvellously; it was submitted to the Royal Horticultural Society, and "Mr. Clementi-Smith has been notified that the plant is of the bracken family." As the fern has not died down in the winter "it is believed to be a New Zealand variety." We are sorry to dispel the illusion that the fern is a distinct form from New Zealand; but we have had an opportunity of examining the plant, and have no doubt whatever as to it being the common bracken. The retention of the fronds in a green state during the winter is simply due to the growth having been maintained during that season by artificial conditions.

Gentiana asclepiadea is by no means an unknown plant, yet, notwithstanding its distinctness and beauty, it is not plentiful in gardens. Unlike some of the gentians, there are no great difficulties associated with its cultivation, and consequently, those who plant it under fairly favourable conditions have no occasion to fear any apprehension as to the result. As evidence of the vigorous growth made by this gentian, even when associated with strong-growing vegetation, we have only to visit the Royal Horticultural Society's garden at Wisley, where it is producing a series of extremely beautiful effects. In the rock garden, and in the woodland there are many hundreds of plants, the groups in some cases being eight or nine feet across, and these large masses of rich blue flowers are singularly effective. Gentiana asclepiadea grows to a height of about two feet, the shoots are light and graceful, and bear the large campanulate flowers for about one-half their length. It thrives both in the rock garden and the hardy flower border, but when grown in the former it should be planted at the foot of the rocks or on the lower slopes. Sandy loam, to which a liberal addition of leaf-mould has been made, and peaty soils are the best suited to the production of a strong growth.

Co-operative Flower Show at the Crystal Palace.—The Co-operative Flower Show, to be held at the Crystal Palace on Saturday, August 22, in connection with the Coming-of-Age Co-operative Festival, promises to be very successful. Entries are being received from as far north as Northumberland, and there is every prospect of a very good show at the Crystal Palace. In addition to the flower show the programme includes concerts, choir contests, big co-operative exhibitions, dramatic literature performances, athletic sports, and many other attractions.

GRAND SHREWSBURY FLORAL FETE.

Once more we have to record a wonderful display at Shrewsbury, where, in the Quarry Grounds, on Wednesday and Thursday last (August 19 and 20), there were gathered together some of the finest examples of British-grown fruits, flowers, plants, and vegetables ever seen. Very high quality is shown all through the great show, and anyone bringing poor produce is certain to be left out of the prize list. Fruit was once again magnificent, notably the collections; and the big groups of flowering and foliage plants were another great attraction. The sweet peas were a feature, and the non-competitive displays were magnificent. Then there were the vegetables—an exhibition of themselves, and a grand one at that. Grapes were not so good as we have seen them on some occasions. The cut flowers were very fine, and the vegetables we have never seen so fine anywhere, especially in such quantity.

Messrs. Adnitt and Naunton, with a big committee, continue to do the chief work of the show, and they do it well.

GROUPS.

The groups are grand at Shrewsbury Fête, and in the chief class for a group of miscellaneous plants, arranged on a space of 250 square feet, Messrs. J. Cypher and Sons, Cheltenham, won the premier position for about the twentieth time, with a splendid design, in which there was a charming background of palms, bright crotons, and Lilium speciosum. There were the usual corner mounds, and these were of crotons, cattleyas, and golden showers of Oncidium varicosum; this latter, and O. Marshallianum, were interspersed throughout the group, with Vanda cærulea, Lælia majalis, and Miltonia vexillaria. Lilium speciosum served to lighten the display, and the pretty Fuchsia triphylla was effectively used along the front margin. Mr. W. A. Holmes, Chesterfield, secured the second place, and he had some very fine crotons, but fell short in his flowering plants; Mr. Macdonald, gardener to G. A. Kenrick, Esq., Whetstone, Edgbaston, Birmingham, was a close third, with a pretty arrangement, in which crotons and Fuchsia triphylla and Ixora macrothyrsa figured well.

A severe test of skill is the formation of a big group without the use of flowering plants, but at Shrewsbury the 250 square feet groups of foliage plants are not a bit less attractive than the groups wherein flowers are used. First prize was won by Messrs. Cypher and Sons, Cheltenham, with a bright and noble exhibit, consisting largely of single-stemmed crotons, Dracæna Sanderiana, bamboos, Strobilanthes Dyerianus, alocasias, and caladiums lightly arranged over a groundwork of deep green moss; Mr. J. McDonald was a good second with a very beautiful arrangement, in which brilliantly coloured crotons and acalyphas, the selaginellas, dracænas, and Nandina domestica (very bright), were skilfully used; Mr. W. Holmes, Chesterfield, was third.

SPECIMEN PLANTS.

In the big class for fifteen stove and greenhouse plants, Messrs. Cypher and Sons, Cheltenham, was an easy first, with one of the finest sets they have ever put up; they had grand specimens of Erica Eweriana, Statice intermedia, Ixora macrothyrsa, Rondeletia speciosa, Chironia ixifera, Clerodendron Thompsoniæ, Allamanda nobilis, crotons, and palms, and every plant was perfectly developed; Mr. W. Vause, Leamington, came second, and Mr. Manning, Dudley, third. Messrs. Cypher and Sons led for six stove and greenhouse plants, and here again they had grand specimens, their Statice profusa and Rondeletia speciosa major being superb; Mr. Vause was again second.

Chief honours for thirty stove and greenhouse plants, in ten-inch pots, was well won by Messrs. Cypher and Sons, Cheltenham, with a beautiful set of finely-grown examples, their chief subjects being Ixora coccinea, I. macrothyrsa, I. Pilgrimi, I. Williamsi, Chironia ixifera, Clerodendron fallax, Acalypha hispida, and Statice intermedia; Mr. B. Cromwell, gardener to T. Sutton-Timmis, Esq., Allerton, Liverpool, was a good second, and he showed Stephanotis floribunda, Lapageria rosea superba, Clerodendron fallax, Ixora macrothyrsa, and good crotons, all finely grown.

Mr. W. Vause, Leamington, led for six fine foliage plants, and he showed some splendid crotons, but these were all unnamed; Mr. B. Cromwell was a close second, and he also showed some splendid crotons. The best twelve stove and greenhouse plants, in ten-inch pots, came from Mr. T. Lambert, Brogyntyn Gardens, who had a fine set that included Dipladenia amabilis, Allamanda Williamsi, Clerodendron fallax, Rondeletia speciosa, Pancratium amœna, Chironia ixifera, etc. Mr. W. R. Manning, Dudley, was third.

CHAMPION DECORATED FRUIT CLASS.

In the fruit section a considerable alteration was made this year. The decorated dessert table class, and the big grape class, as such, were omitted, and the chief interest centered round the class for thirty dishes of ripe fruit, in not less than ten distinct kinds, to occupy a space not exceeding 12ft. by 4ft. 6in. The varieties and quantities per dish were left to the discretion of the exhibitors, but not more than four varieties of one kind, or two dishes of one variety, were permitted, and only one variety on a dish. Magnificent prizes were offered, the first being a silver cup, valued at twenty-five guineas, with £20 in cash, and a gold medal; second prize, £17 10s., and small gold medal; third prize, £15, and silver-gilt medal; fourth prize, £10; fifth prize, £8; and sixth prize, £5. We should add that the displays had to be decorated with flowers, foliage, or small plants.

There were five competitors, and the coveter premier award fell to Mr. N. F. Barnes, gardener to the Duke of Westminster, Eaton Hall, Chester, who had a magnificent and imposing exhibit of grandly-grown fruits, splendidly set up—a real champion exhibit. He showed four bunches of Muscat of Alexandria grapes, four bunches of Madresfield Court, four bunches of Appley Towers, the latter very fine; Hero of Lockinge, Earl's Favourite, and seedling melons; superb Emperor Alexander, Washington, Cox's Orange Pippin, and James Grieve applies; grand Souv. du Congrès, Doyenne du Comice, Triomphe de Vienne, and Marguerite Marillat pears; beautiful Barrington (two dishes), Princess of Wales, and Royal George peaches; Pineapple (two dishes), Humboldt, and Elruge nectarines; Brown Turkey and Brunswick figs, Jefferson's plums, and Moor Park apricots. Second prize was won by Mr. J. H. Goodacre, Elvaston Castle Gardens, who was a good second, and his was an imposing exhibit, that was the more effective because unusually large dishes were shown; the Emperor Alexander apples, Triomphe de Vienne pears, and Pineapple nectarines were particularly good in this set. Mr. G. Mullins, gardener to G. Farquhar, Esq., Eastnor Castle, Ledbury, third; Mr. James Gibson, gardener to the Duke of Portland, Welbeck Abbey, Notts, fourth; and Mr. R. Dawes, gardener to the Hon. E. F. Wood, Temple Newsam, Leeds, fifth.

COLLECTIONS OF FRUIT.

In the county class for a decorated collection of nine dishes of fruit, nine distinct varieties, not less than five kinds, there were six competitors, and the premier award was secured by Mr. H. Stowe, gardener to C. F. K. Mainwaring, Esq., Ellesmere, with Muscat of Alexandria and Madresfield Court grapes, Dryden nectarines, finely coloured; Dymond peaches, Moor Park apricots, Beauty of Bath apples, a seedling melon, Brunswick figs, and Transparent Gage plums; Mr. Stowe also secured first prize for his decoration of Gloriosa superba, montbretias, and Francoa ramosa. Second prize fell to an unknown (because unnamed) competitor, who had fine Alexandra Noblesse peaches, Lady Sudeley apples, and Williams' Bon Chretien pears; he was third for decorations. Third prize was awarded to Mr. W. Dawes, gardener to Lord Trevor, Brynkenalt, Chirk; and fourth to Mr. J. Mills, gardener to Captain Heywood Lonsdale, Sharington Hall, who was second for decorations.

In the class for the collection of twelve dishes of ripe fruit, florally decorated, the chief award, £10, was won by Mr. W. H. Cooke, gardener to Lord Belper, Derby, with a good set that consisted of Madresfield Court, Muscat of Alexandria, and Alicante grapes, Emperor Alexander apples, Hero of Lockinge melon, Peasgood's Nonsuch apples, Sea Eagle and Barrington peaches, Magnum Bonum plums, Brown Turkey figs, Duchess d'Angoulême pears, and Pineapple nectarines—a very good, well-balanced set; second for decorations. Mr. G. Hall, gardener to Lady Ashburton, Melchet Court, Hants, was second, his best dishes being of Sea Eagle peaches, Pineapple nectarines, and Lady Sudeley apples; third for decorations; the third prize collection came from Mr. J. Jones, gardener to Miss F. Need, Malvern, and he was a good first for floral decorations, and had a fine dish of Duchess d'Angoulême pears.

GRAPES.

In the leading grape class, for twelve bunches, Mr. J. H. Goodacre, gardener to the Earl of Harrington, was first prize winner, winning the new silver cup and £20 with a fine set of clusters, which were pointed as follows: Black Hamburgh (10),8; Muscat Hamburgh (10), 9; Muscat of Alexandria (11), 9; Madresfield Court (10), 9; Muscat of Alexandria (11), 9½; Madresfield Court (10), 8; Madresfield Court (10), 8½; Muscat of Alexandria (very fine) (11), 10; Muscat Hamburgh (10), 8; Muscat Hamburgh (10), 9; Madresfield Court (10), 9; Muscat of Alexandria (11), 10. The figures in brackets denote the possible points obtainable. Mr. Goodacre secured 107 out of a possible 124, and was third for his floral decorations. Second prize was awarded to Mr. G. Mullins, Eastnor Castle Gardens, Ledbury, who secured 97½ points out of a possible 123, and he was first for floral decorations; his Madresfield Court grapes were fine. Mr. T. Wilkinson, gardener to G. A. Gibbs, Esq., M.P., Tyntesfield, Flax Bourton, Bristol, was third, with 96½ points out of a possible 105, and with very heavy bunches. Mr. W. H. Cooke, gardener to Lord Belper, Kingston Hall, Derby, fourth, with 93 points out of a possible 122. It will thus be seen that Mr. Wilkinson's set was of relatively higher value than any of the others, comparing the points obtained with the possible attainment. Mr. Cooke was second for decorations.

The best four bunches of grapes were good regular clusters of Madresfield Court and Muscat of Alexandria, shown by Mr. T. Lambert, Brogyntyn Gardens, Oswestry; Mr. H. Weaver, gardener to C. G. A. Smith, Esq., Raynor Park, Bangor, second, with Black Hamburgh and finely coloured Muscat of Alexandria; Mr. G. Richardson, gardener to H. St. Maur, Esq., Newton Abbott, third. For two bunches of Black Hamburgh grapes Mr. H. Wilson, gardener to J. Brinton, Esq., Moor Hall, Stourport, scored with finely-coloured examples; Mr. G. Richardson, gardener to H. St. Maur, Esq., Newton Abbott, second; and Mr. A. Ruddock, third; twelve entries. Mr. G. Richardson scored for one bunch of Black Hamburgh with a very big cluster; Mr. T. Wilkinson, gardener to G. A. Gibbs, Esq., M.P., Tyntesfield, Bourton. Salop, second; eighteen entries. For two bunches of black grapes Mr. S. J. Baker, gardener to Sir D. D. King, Bart., Exeter, scored with pretty bunches of Mrs. Pince's Black Muscat; Mr. H. Butcher, gardener to Sir W. Cooke, Bart., Ledbury, second with Madresfield Court. For Madresfield Court, two bunches, Mr. G. H. Hall, gardener to Colonel F. Hayhurst, Middlewich, scored, and Mr. T. Wilkinson, Tyntesfield Gardens, Bourton, second. First prize for Alicante grapes was won by Mr. J. Jones, gardener to Mrs. F. Need, Malvern; and Mr. A. H. Hall came second. In the open class for two bunches of any other black grapes Mr. G. Mullins, Ledbury, scored with Gros Maroc, and Mr. A. H. Hall was second with Black Duke, a big, round-berried variety.

Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, led for two bunches of Muscat of Alexandria, but there were no first-class bunches in the whole competition; Mr. A. H. Hall second, and Mr. G. Richardson third. For one bunch of White Muscats Mr. T. Wilkinson led with the best Muscat bunch in the white class; Mr. J. H. Goodacre second, and Mr. J. T. Curtis, gardener to Sir W. H. Davies, M.P., Stoke Bishop, Bristol, third. In the any other white class Mr. A. Child, gardener to H. A. Attenborough, Esq., Daventry, was first, with splendidly berried Duke of Buccleuch; Mr. A. H. Hall second with Chasselas Napoleon.

In the county classes the best two bunches of Madresfield Court grapes came from Mr. J. Mills, gardener to Captain H. Lonsdale, Shavington Hall, who had rather small, but finely-coloured clusters; Mr. J. Lambert, Brogyntyn, Oswestry, second. For a pair of bunches of black grapes Mr. J. Langley, gardener to the Rev. T. M. Bulkeley Owen, West Felton, led with Gros Maroc, and Mr. H. Stone, gardener to F. K. Mainwaring, Esq., Ellesmere, came second with the same variety.

Mr. W. Dawes, gardener to Lord Trevor, Brykinalt, Chirk, scored for White Muscats with heavy, clean bunches, and was followed by Mr. T. Lambert, gardener to Lord Harlech, Brogyntyn, Oswestry. For a brace of bunches of any other white grape Mr. J. Mills led with small clusters of Duke of Buccleuch, and Mr. G. Davis, gardener to Mrs. F. Alderson, Frankton, came second with Buckland Sweetwater. In the amateurs' classes for grapes Mr. H. Turner, Wellington, led for a black variety, and Mr. E. C. Peele, Cyngfelde, Shrewsbury, led for a white variety.

OTHER FRUITS.

In the various single dish classes for fruits the first prizes were awarded as follows: Mr. G. Mullins, gardener to G. Farquahar, Esq., Eastnor Castle, Ledbury, for cherries, Bigarreau Napoleon; Mr. T. Cooke, gardener to J. Drakes, Esq., Market Rasen, for red plums; Mr. A. Searle, gardener to the Marquis of Northampton, Castle Ashby, Northampton, for Gage plums, with Oullin's Golden Gage; Mr. Langley for yellow plums; Mr. Cook for a white-fleshed melon, with Sutton's Royal Favourite; Mr. Durnell, gardener to R. G. Kenyon, Esq., Pradoe, for a scarlet-fleshed melon, unnamed; Mr. J. Durnell for a green-fleshed melon, with Early Favourite—there were forty-four melons in competition: Mr. H. G. Pritchard, gardener to Major Lloyd, Leaton Knolls, for apricots; Mr. G. Hall, gardener to Lady Ashburton, Romsey, Hants, for nectarines, with deeply-coloured examples of Pineapple; Mr. Pritchard for peaches, with Bellegarde in good condition, but there was nothing extraordinary in the peach class.

FLORAL DECORATIONS.

The bouquet classes are always a splendid feature at Shrewsbury, and this year the old high quality was well sustained. For a bride's bouquet and two bridesmaids' bouquets, Messrs. Felton and Son, Hanover Square, London, W., won the chief award with a bouquet of white phalænopsis, odontoglossums, and pure white Cattleya intermedia, beautifully associated, and bridesmaids' bouquets of blush carnations; second prize fell to Mr. J. E. Knight, Wolverhampton, who used odontoglossums and Enchantress carnations; third prize was won by Messrs. Bottomley and Burton, Elland, Yorks. The best bride's bouquet was adjudged to be a moderate design in orchids, from Mr. H. G. Garner, Altrincham, Messrs. Bottomley and Burton coming second. Mr. Garner led for a hand bouquet with a very bright arrangement of cattleyas, odontoglossums, Oncidium macranthum, etc.; Mr. A. Adstead, Gatley, second; and Messrs. Bottomley and Burton third. For an orchid-excluded bouquet, Mr. Garner was awarded a second prize, but Messrs. Felton and Son were easily first with Marmion and Enchantress carnations. For a dahlia bouquet, Mr. W. Treseder, Cardiff, was, as usual, the premier prize-winner, with a charming design; Mr. Garner second, and Messrs. Pope and Sons, King's Norton, third.

Messrs. Gunn and Sons, Olton, Birmingham, led for a floral harp with a design having a foundation of white asters, with Cattleya Loddigesi, odontoglossums, and cypripediums grouped at the base and top; Mr. W. G. Garner second, and Messrs. Felton and Son third, the latter using Vanda cœrulea effectively, but a little too freely over the white ground. The floral crosses were not a success; Messrs. Gunn and Sons, Olton, were first, Mr. W. G. Garner second, and Messrs. Pope and Sons third. For a featherweight bouquet, Mr. H. Blankway, gardener to Sir A. Muntz, Bart., M.P., Dunsmore, was first, with a design in Cattleya Loddigesi and Oncidium flexuosum; Messrs. Felton and Son second. Messrs. Felton and Son led easily for a floral wreath, with a splendid design in white asters, Cattleya Mossiæ, and Lælio-cattleyas.

The best basket of flowers was a bold one of various orchids, set up by Messrs. W. G. Garner; Mr. O. Robinson, Alderley Edge, second, also with orchids. In the orchid-excluded class, Messrs. Felton and Son led with a long basket of Abel Chatenay roses of perfect colour; Mr. O. Robinson second with anthuriums and francoa spikes. In the epergne or stand class, Mr. O. Robinson was placed first for honeysuckle and Gloriosa superba flowers; Mrs. E. Bird, Newport House, second, with a poor design of pink and red carnations.

There were sixteen table arrangements of sweet peas, Mr. J. Nixon, Alderley Edge, winning with pink flowers, and Mr. A. T. Herbert, Acocks Green, coming second with a similar design, and Mrs. W. Marple, Penkridge, third. In a class for other flowers, Mrs. J. Nixon was again first, this time with gloriosa flowers and francoa sprays; Messrs. Deakin, Hay Mills, second, with sweet peas and francoa sprays.

SWEET PEAS.

Sweet peas filled a whole tent with beauty and fragrance. Mr. J. Haycocks, Wrexham, led in one class for six vases, with fine examples of Henry Eckford, John Ingman, Frank Dolby, etc.; Mr. F. Eaze, Bicton, second. In the trade-excluded class for twelve varieties, Mr. T. Jones, Bryn-penylan, Ruabon, was a good first with Helen Lewis, Evelyn Hemus, Menie Christie, Mrs. C. Foster, Miss Millie Maslin, White Spencer, Nancy Perkins, Mr. Henry Bell, John Ingman, Constance Oliver, Prince of Asturias, and Elsie Herbert; Mr. G. Wilkins, Endit Park, second; there was a grand competition here. In the class for eighteen varieties, provided by Mr. H. Eckford, there was also a close competition, and here Mr. Thos. Jones was again first, winning the cup with splendid flowers of Henry Eckford, St. George, The Marquis, Countess Spencer, Queen Alexandra, Jas. Grieve, Prince Olaf, etc.; Mr. G. Wilkins second, and Mr. E. Jones, gardener to G. H. Robertson, Esq., Gresford, third. For twelve varieties, Messrs. Bakers' class, Mr. T. Jones was once more to the fore, closely followed by Mr. G. H. Banks and Miss T. Arbuthnot, Newtown.

Mr. T. Jones had the best bunch of Sutton's Queen, Mr. Banks coming second, and Mrs. Arbuthnot third.

In Mr. R. Sydenham's class for twenty-four bunches of sweet peas, the competition was again very keen, and here Mr. Thos. Jones added one more to his many premier wins.

VEGETABLES.

Vegetables were grandly staged, and when we state that Mr. E. Beckett won three firsts and the championship prize, it may be taken that the vegetables were good.

Mr. Edward Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts, won the chief award in the society's class for nine kinds of vegetables, with superb specimens of Early Autumn Giant cauliflowers, Quite Content peas, Ailsa Craig Onions, Duke of York tomatoes, Goldfinder potatoes, Superb Pink celery, Perfection carrots, Exhibition runner beans, and Holborn Model leeks; Mr. J. Gibson, gardener to the Duke of Portland, Welbeck Abbey, Notts, second; and Mr. J. Hudson, Leicester, third.

The leading prize-winners in the classes provided by Mr. Sydenham were Mr. S. Baker, gardener to Sir D. Duckworth King, Exeter; Mr. W. H. Jones, Newtown, Montgomery; Mr. E. Deakon, Birmingham; Mr. H. Taylor, gardener to Lord Hatherton, Penkridge, Staffs; Mr. Durnell, gardener to R. Ll. Kenyon, Esq., Oswestry; and Mr. Walker, gardener to Sir W. Honeyman, Whitchurch. In the county class, Mr. J. Cook, gardener to W. J. Levett, Esq., Orleton Hall, was first, and Mr. J. Mills, Shavington Hall Gardens, second.

In Messrs. Webb and Sons' class for nine kinds of vegetables, Mr. Beckett was a splendid first, his onions, leeks, and cauliflowers being extraordinarily fine; Mr. J. Dymock, gardener to G. D. Faber, Esq., C.B., M.P., Wallingford, Berks, second; and Mr. A. Searle, Castle Ashby Gardens, third. Mr. T. Sanderson, Whittington, led in the class for six kinds, provided by Mr. Edwin Murrell, and Mr. J. H. Pugh, Newtown, was second.

Messrs. Sutton and Sons' prizes were keenly competed for, and here Mr. Beckett was to the front with grand produce, his onions, Perfection tomatoes, Best of All runner beans, and Solid White celery being superb; Mr. J. Dymock second, and Mr. Jas. Gibson, Welbeck Gardens, third. For Messrs. Richard Smith and Co.'s prizes, Mr. W. Gaiger, gardener to H. T. Tatham, Esq., Elstree, was the leading prize-winner, staging fine produce.

Messrs. J. Carter and Co.'s prizes were also keenly competed for, and here Mr. J. Dymock scored with a splendid lot of produce, showing the Holborn specialities; Mr. B. Ashton, gardener to the Earl of Lathom, Ormskirk, second; and Mr. A. Searle, Castle Ashby Gardens, Northampton, third.

MEDALS AND AWARDS TO NON-COMPETITIVE EXHIBITS.

Large Gold.—Mr. Amos Perry, Messrs. W. Cutbush and Son, Messrs. A. Dickson and Sons, Lim., Messrs. Clibrans, Messrs. Sutton and Sons, the King's Acre Nurseries, Lim., Messrs. E. Webb and Sons, Messrs. Bakers, Wolverhampton.

Small Gold.—Messrs. T. Rivers and Son, Messrs. W. Artindale and Son, Messrs. Hobbies, Lim., Messrs. Dobbie and Co., Messrs. H. Jones and Sons, Lim., Mr. E. Murrell, Messrs. Geo. Bunyard and Co., Messrs. Gunn and Sons.

Silver-Gilt.—Messrs. R. Wallace and Co., Messrs. Hewitt and Co., Mr. John Forbes, Mr. Robert Bolton, Mr. Henry Eckford, Messrs. Dicksons, Chester, Mr. A. Myers, Mr. Isaac House, Messrs. Kelway and Son, Messrs. Jarman and Co., Messrs. Hugh Low and Co., Mr. Thos. W. Darlington.

Silver.—Mr. Frank Lilley, Mr. V[illegible] Slade, Messrs. Webb and Brand, Mr. John Smellie, Messrs. W. and J. Brown, Mr. [illegible] Thorpe, Messrs. Dickson and Ro[illegible], Messrs. Robt. Sydenham, Lim., Miss [illegible] Thompson, Mr. Wm. Angus, Mr. Geo. [illegible] Messrs. Tom B. Dobbs and Co.

Bronze.—Mr. H. N. Ellison, Messrs. [illegible]chard and Sons, Mr. W. L. Pattison, [illegible] Sankey, Esq., Messrs. G. Stark and Son[illegible]

Award of Merit.—Thos. Taylor, [illegible]dale, Martin, Blackpool. For a [illegible] antirrhinum, to Mr. C. H. Herbert, A[illegible] Green; for perpetual-flowering pink Pro[illegible] to Mr. P. Blair, Trentham Gardens, Sto[illegible] Trent; for white carnation, Mrs. Tom C[illegible]waite; to Messrs. Kelway and Son, [illegible]olus, Golden Measure; and to Messrs [illegible] and Co., for cactus dahlia Sentinel.

*** We are compelled to leave o[illegible] sections of the report devoted to cut [illegible] general plant classes, and non-com[illegible] exhibits until our next issue.

NOTES FROM KEW.

Campanula pyramidalis.

The Chimney campanula, which, according to the books, was introduced into this country as long ago as 1596, furnishes a very attractive feature, both in the greenhouse No. 4, and also in the Temperate House. In both places large masses of the ordinary blue-flowered form and its white variety are employed, and not only do they make a goodly show, but a distinct and lasting one.

Campanula Vidali.

This member of the Canterbury bell family is totally distinct from the preceding, indeed, it is, as far as I know, widely removed from any other of the campanulas. It is of a quite shrubby habit of growth, forming, as it does, a stout, erect stem a foot or thereabouts in height. From the upper part of this stem are pushed out numerous wide-spreading branches, which ultimately reach a height of 2 to 3ft. The upper portion of each branch is elongated into a flower spike, which is furnished with very distinct and striking blossoms. Individually, they are of an elongated bell shape, drooping, and of an ivory-white colour, with a yellow marking at the base of the interior. The flowers are unusually thick and waxlike in texture, and remain fresh for a considerable time. For the embellishment of the greenhouse during July and August it is particularly valuable, and for such a purpose it has long been employed at Kew, but is rarely seen elsewhere. Seeds are readily produced, and from these young plants can be raised in quantity. Cuttings do not strike root very readily, and, even when rooted, they often fail to grow in a satisfactory manner, but seedlings give very little trouble. Campanula Vidali is a native of the Azores, and has been in cultivation for over 50 years, but it is very seldom met with, certainly not so often as its merits entitle it to be.

Lilium sulphureum.

This lily from Upper Burmah has proved to be more amenable to cultivation in this country than some other species from the same quarter of the globe. In some districts it has proved to be hardy, but at Kew it is seen at its best when given the protection of a greenhouse. Planted out in a bed there it has pushed up many stems to a height of 10ft. or thereabouts, and they are just now terminated by several long trumpet-shaped blossoms, of a beautiful pale yellow tint and agreeably scented. Though the above is the correct name, this lily is sometimes met with as Lilium Wallichianum superbum.

Stigmaphyllon ciliatum.

This, the Golden Vine of our cousins across the Atlantic, is flowering very freely in the intermediate portion of the T range, and as a climber for such a structure it would be hard to beat. It is a native of Brazil, from whence it was introduced in 1796. For all this, it is by no means common, though its name is generally to be met with in nurserymen's catalogues. It is a quick-growing climber, whose slender shoots are clothed with oppositely-arranged leaves, cordate at the base, and furnished with numerous hairs on the edges. The flowers, produced in umbels of three to six from the axils of the leaves, are bright yellow in colour, from 2in. to 3in. across, and at a first glance, suggest the blooms of one of the larger-growing oncidiums. This stigmaphyllon is a plant of easy propagation and culture, the main thing being to keep the leaves free from red spider.

Ixora macrothyrsa.

In the same structure as the preceding this ixora is bearing several huge heads of its bright crimson flowers. Exception is often taken to some of the varieties of ixora on the ground that they resemble each other too closely, but this cannot be urged against I. macrothyrsa, as there is no other which can be for one moment confounded with it. A synonym still used at times is Ixora Duffi.

Begonia Kewensis.

This very pretty begonia, raised at Kew, was given an award of merit by the Royal Horticultural Society on July 21 last. It is of a slender, drooping habit, with a profusion of white flowers, and in the Temperate House, treated as a basket plant, is very effective.

Dendromecon rigidum.

This shrubby member of the poppywort family is flowering freely on the wall of the herbaceous ground, the plant itself being apparently very happy in its surroundings, though complaints as to non-success in its culture are often heard. A well-drained soil and a warm, sunny spot suits it best. It forms a freely-branched bush from 3ft. to 4ft. high, but more where protected. The leaves are broadly lance-shaped, and of a distinct glaucous green hue, while the flowers, a couple of inches or a little more in diameter, are of a lovely clear yellow tint, with orange-coloured anthers. A succession of flowers is kept up for a long time.

K.

A LIGHT AND TASTEFUL ROSE ARBOUR, AT THE COTTAGE, BRENTWOOD.

DAFFODIL CULTURE IN FIBRE.

Daffodils are so highly appreciated by the majority of flower lovers for beautifying indoor apartments early in the year, that in referring to their cultivation for this purpose there is not much occasion for dwelling upon their charms with a view to promote an extension of their culture. There are, of course, many homes in which pot or vase-grown specimens are wanting at the period when the season of winter with its dulness and discomfort is passing into that of spring, and it is therefore necessary to suggest the desirability of increased attention being given to growing them in the dwelling-house. The beauty of the daffodils is acknowledged, and the soft shades of yellow of their flowers and the glaucous green of their foliage seldom fail to harmonise with the decorations of the room, and there is no odour to render their presence objectionable in rooms of small size, even to the most sensitive of persons. These are strong recommendations, and to a considerable section of the flower-loving community it will be of interest to know that the bulbs of a considerable number of varieties possessing much beauty are inexpensive, and that their culture in pots and vases is of the simplest. If fibre, to which moderate proportions of broken shell and charcoal have been added, is used instead of the ordinary compost, their cultivation will be cleanly as well as simple, and wholly free from the risk of carpets and furniture being injured by water.

The chief point in commencing the growth of daffodils in fibre is to select varieties that thrive with a restricted root run, bloom comparatively early, possess beauty of a high order, and are withal cheap. Fortunately, the varieties that comply with these conditions are so numerous as to afford a wide range for selection. A few of the varieties suitable for growth in fibre will, however, suffice, experience having shown the importance of limiting the selection to a few of the very best and to grow a considerable number of bulbs of each. This practice not only facilitates attention to the few cultural details, but is a great aid in the production of tasteful effects.

[Photo: J. E. Tyler.

NARCISSUS BARRI CONSPICUUS.
Grown in Fibre and Shell.

The trumpet varieties include several of great value, and from these should be selected Emperor, a bold and handsome variety, with rich yellow flowers; Golden Spur, also with large and effective flowers of a bright golden hue. Excelsior is similar to Golden Spur, but deeper in tone, but is about twenty-five per cent. dearer; Henry Irving, a handsome bright yellow flower, that, like the preceding, is early in flower production. The best of the bicolors are Empress, Horsfieldi, and Victoria, all of which are early, succeed in fibre, and are handsome in appearance. They bloom in the inverse order to that in which the names are arranged, and potted at the same time and grown under the same conditions, they will form an admirable succession. Princess Ida is, perhaps, the best of the inexpensive white trumpets, and a few vases filled with it will give a welcome change. Narcissus Johnstoni Queen of Spain is an exquisitely beautiful trumpet variety, the flowers of medium size, with an elegant trumpet and recurving perianth segments, the colour soft clear yellow. One of the best for fibre culture, Telamonius plenus, can also be recommended; it blooms early, and the large double golden flowers are effective in colour, but they are less as compared with those of the single varieties.

The Incomparabilis section includes several varieties well suited for the method of cultivation under consideration, but Sir Watkin stands out so prominently as to merit the strongest recommendation. From the Barri section should be selected Barri conspicuus, a strong-growing and attractive variety that has the additional merit of being exceptionally low in price, and of special value among the forms of the Poet's narciss is Ornatus, which has large pure white flowers, with scarlet-margined cup. The bunch-flowered or polyanthus narcissi can be grown with much success in fibre, but the flowers are strongly scented, and in rooms their odour may be objectionable to some. Much preferable for indoor decorations are the Poetaz varieties, which originated from crosses effected between Narcissus poeticus and the polyanthus narcissi. The flowers are large, finely formed, have a pleasing fragrance, and are borne in clusters of three or four. Elvira, white, with yellow cup, and Jaune à Merveille, primrose, with yellow cup, are two of the best.

Having made a selection and dispatched the order for the bulbs, the next points for the cultivator to consider are the receptacles in which they are to be grown and the preparation of the fibre. The earthenware vases—so generally used for placing pots in when plants are used for indoor decorations—are admirably adapted for the method of culture under consideration, as there is to be no drainage or holes in the bottom to allow the water to escape. There is room for the exercise of taste in the selection of the vases, but it may be useful to suggest that a plain design is preferable to one of a highly ornate character, and that strong colours should be avoided. Daffodils appear to the greatest advantage when the vases are dull brown or dull brownish-green, as in these hues there is nothing to clash with flowers or leafage. The vases may range from six to eight inches in diameter, and the number of bulbs put in each must be determined by the diameter of the vase and the size of the bulbs. For the smaller size three or four large, and five or six small bulbs will be suitable, while for the larger size six or seven large bulbs, and from eight to twelve small bulbs will be good numbers.

Either cocoanut-fibre refuse or prepared moss fibre may be used, as the daffodils flourish in both. Care must be taken to well separate the fibre, so that it will form a smooth, even mass, and then to well moisten it without making it excessively wet. When this detail has been carried out crushed shell should be well mixed with the fibre in the proportions of one to five. In filling the vases put a layer of medium-sized pieces of charcoal in the bottom, and then fill them to about one-half or two-thirds of their depth with the fibre. Upon this arrange the bulbs at equal distances apart, and then fill in the spaces between them with more of the fibre. This should be pressed moderately firm, and when all is complete the points of the necks of the bulbs should be just visible above the surface. Until the new growth commences the material must be maintained in a moderately moist state, and subsequently the water supply must be increased, but at no time should the supply be so liberal as to cause water to stand in the bottom of the vase. If this should be found to be the case lay the vases on their sides for a time, and in such manner as to ensure it draining away. A large cupboard or a cellar will afford suitable quarters until growth shows signs of activity, when they should be removed to the windows or other light position, and there remain until the flowers are developed. Where a cool glass structure is available it should be utilised, and the vases be placed near the glass, and be protected from frost. A small greenhouse will greatly facilitate the preparation of a stock of fibre-grown daffodils, but very satisfactory results can be obtained when they have to be wholly grown in the dwelling-house. The illustrations given herewith of vases of Emperor and Sir Watkin are evidence of this. L. A.

ANEMONE ALPINA AND ITS ALLIES.

The anemones of the alpine group share with most white-flowered Ranunculaceæ the distinction of being refined and attractive, and albeit some are a little difficult of management, their great charm strengthens one's resolve to overcome cultural disabilities and find for them conditions they need. Here, as in so many cases where repeated failures are recorded, a greater measure of success is secured if quite young plants form the colony. Collected plants, shorn of roots, and shipped to this country, do not thrive unless a year's nursing in a frame follows importation, and even then a strong seedling will outstrip them in the race, and as certainly outlive them.

Where one or two specimens only are grown it is less troublesome to secure established plants in pots any time during spring and early summer, but where wanted in quantity for furnishing broad areas of rockery in their own inimitable way, raising from seeds will prove quite successful and easy if fresh seeds are obtainable. The seeds of most alpine anemones are quite ripe by midsummer, and we can recommend sowing in boxes directly they are secured or gathered, using screened road grit and turfy loam as a compost, placing the seed boxes on the shady side of a fence for the winter without protection of any kind. Germination follows the first heavy snowfall, and as soon as the seedlings begin to show the boxes should be placed in a warm frame to encourage more seeds to germinate, and the growing plants to strengthen. Water only on sunny days, or many seedlings will "damp." They must grow on in the seedling boxes for a year, transplanting in the following April to a cool and shady border, giving a root run of road grit and loam as before. They may remain here till judged strong enough to take care of themselves in the rock garden. A careless, but still efficient, way of sowing is to scrape away the soil from a boulder's base and sow there "on natural lines"; the fittest that survive the seedling stages often repay this slight trouble by growing stronger than transplanted specimens ever do.

Anemone alpina is in many respects the best plant of its group. Established specimens often exceed two feet in height, and yield sheaves of white flowers two inches across, the centres occupied by striking anther clusters, and the reverse of the petals is tinted with blue. Although a common alpine, widely distributed throughout Southern Europe, it is rare one meets with thriving colonies in English gardens, and several square poles covered with this plant in full flower was one of the surprises of a Scottish tour in 1906. Its elegant ferny foliage, silky in appearance, and to the touch, is a study always when grouped in association with the grey of boulders. High alpine forms—densely hairy and of low growth—do not reach the stature under cultivation the plants from the lowland pastures reach; they are more attractive, however, and more typically alpine.

A. decapetala, from North America, very closely resembles a refined sulphur-yellow buttercup in its flowers. Its leafage is vigorous and particularly handsome, but the flower petals are too short, and are half hidden by the large anther cluster. It grows readily at a boulder's base, and on the shady side, and has been effectively used to furnish the ground under thin flowering trees and shrubs usually planted in rock gardens.

A. narcissiflora is a very characteristic plant, and abundantly distinct from others of its group. The flowers are clustered, as in polyanthus narcissi, and erectly held. They are white, with yellow anther clusters, and when produced in quantity from old-established clumps are exceedingly attractive. It likes a firm soil of a gritty description, insomuch that the margins of a gravel walk are preferred to rich vegetable soil. It is a lovely alpine of rare beauty, the European forms being less tall, but more refined, than forms from the Pacific coast ranges. Occasional groups of A. narcissiflora are to be found at the London shows in May and June.

A. polyanthes, from the Himalayas, is a rare plant in gardens, but not at all difficult to manage. The foliage is very robust, and of silky sheen, recalling some of the geraniums. The flowers are pure white, aggregated into umbels, simple and compound, and sometimes in tiers of three. It exceeds two feet in height and diameter, and when fully in blossom is a very fine plant indeed. A cool root run and a gritty but strong soil, summarises its needs. It is a native of one of the wettest spots on earth—Sikkim to Kashmir—and if planted in the rock garden should have cool and moist positions approaching the bog or marsh. Finally, and in many respects the most fascinating of all alpine anemones, comes the European.

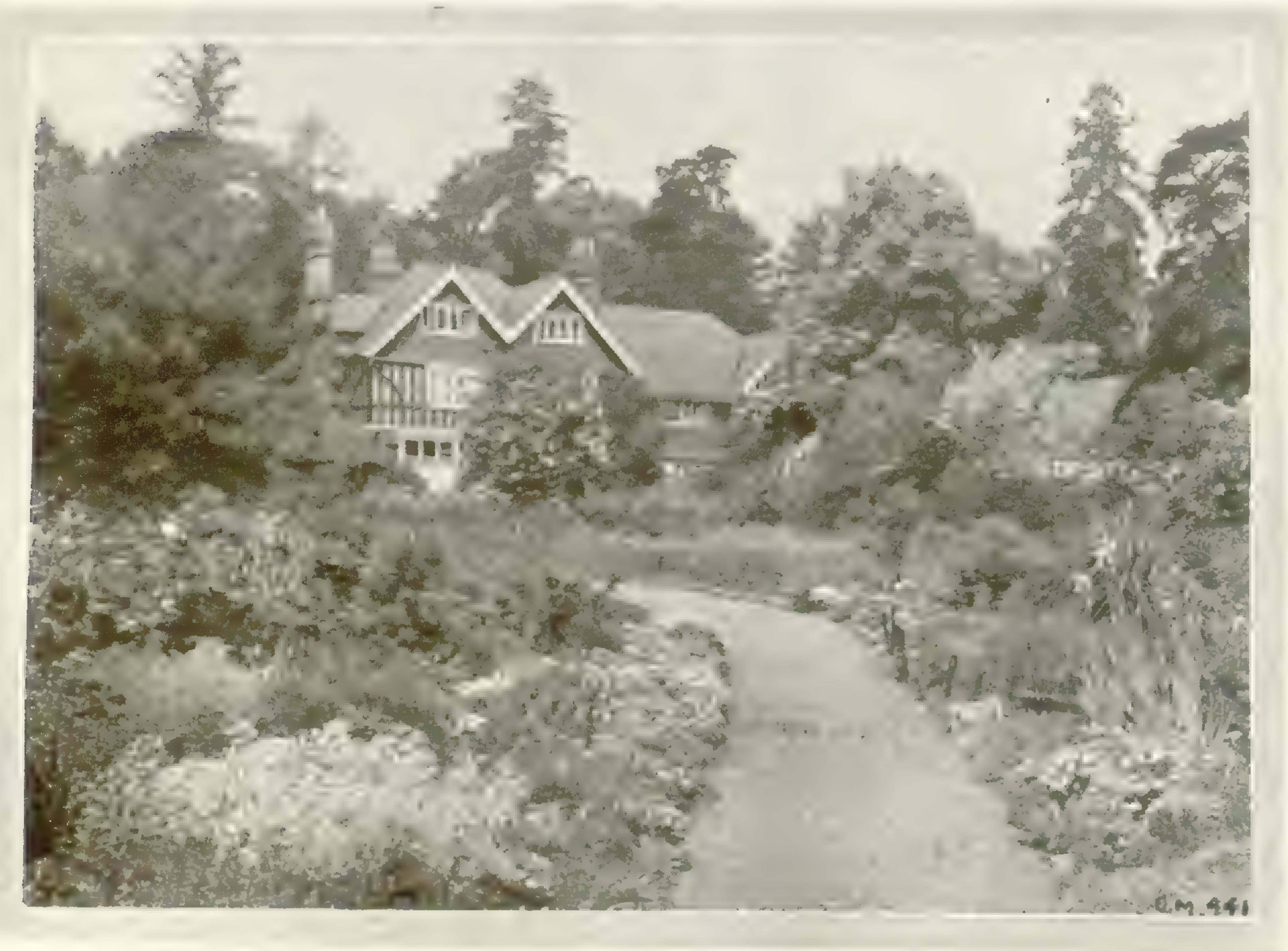
A. sulphurea, by many cited as a form of A. alpina, and although not markedly distinct from that species, save in the colour of its flowers, it is not so easily grown, and the root conditions are different. A. alpina is a limestone plant, varying considerably in stature. A. sulphurea is more uniformly tall, and it does not grow on the limestone formation. Culturally also, A. alpina survives drought that destroys A. sulphurea. It has stouter roots; those of A. sulphurea are easily ruptured, and young plants are formed in quantity if the central crown is cut out. The flowers of A. sulphurea are markedly beautiful—a clear sulphur yellow, with the burnished petal of the buttercup internally, and the silky down of the pasque flower externally. G. B. Mallett.

[Photo: J. E. Tyler.

NARCISSUS SIR WATKIN.
Grown in Fibre and Shell.

A BEAUTIFUL AND INTERESTING GARDEN.

Gardens are of many kinds, and he would be a bold, if not an unwise man who would impose upon himself the task of determining which of the several types is the best. There are large and small gardens, formal and natural gardens, and there are gardens in which effects of the spectacular order are aimed at, and gardens wherein an endeavour is made to provide a home for as large a number as possible of plants remarkable for their beauty and interest. Each has some feature capable of arresting attention, and giving pleasure, provided care has been taken in designing and planting to satisfy the principles of good taste. Moreover, the views of the owners are important factors in determining the relative merits of gardens having different characteristics. One can without much difficulty and without the risk of giving rise to a controversy on the planning of gardens, state which of the many kinds is preferred. If there is no objection to engaging in a controversy one may endeavour to induce other garden-lovers to accept his views and follow in their work on the same lines as himself. I have no intention of expressing an opinion as to which is the best. I should not, of course, hesitate to say which would be the best style to adopt under a certain set of conditions, but that it need hardly be said would be a very different matter to dealing with the question in the abstract.



THE HOLT, THE RESIDENCE OF A. KINGSMILL, ESQ.

While able to enjoy to the full the attractions of the formal garden and the charms of the garden in which an endeavour has been made to imitate Nature, the gardens which give me the greatest pleasure are those containing a judicious selection of plants that have been so arranged as to display their distinctive charms to the best advantage. Hence a recent visit to the gardens of The Holt, Harrow Weald, the residence of A. Kingsmill, Esq., gave me an immense amount of pleasure, for therein are large numbers of hardy plants remarkable for their rarity and beauty, and also for the judgment evinced in their arrangement. The garden in no sense resembles part of a botanical establishment, but in a leisurely examination of rock garden and herbaceous border and of the arborescent features, one meets with subjects well-nigh innumerable that are not frequently met with in private gardens. This is largely explained by the fact that Mr. Kingsmill has a strong affection for hardy subjects suitable for garden adornment, and is thoroughly acquainted, not only with those well known, but with many that have not obtained the attention of the general body of cultivators. Not less interesting is the fact that he is personally acquainted with every one of the occupants in his extensive garden, and can at once locate any particular kind, and give its history, or such part of it as may be necessary at the moment. Some are the gifts of friends, many have been collected by Mr. Kingsmill in the course of his travels in various parts of the world, and there is hardly a fact connected with them that he cannot at once give; but should his mind require refreshing, he can at once refresh it by reference to his admirable card index.

Harrow Weald is, perhaps, one of the most delightful spots within twenty miles or so of the Metropolis, and is by reason of its charms a veritable surprise to those who visit the district for the first time. It has a considerable elevation above the sea-level, and from the higher parts the eye ranges in all directions over country in which rolling meadow and richly-furnished woodland combine to form pictures of the most delightful description. The Holt is situate in one of the most beautiful parts of the Weald, and in passing through the grounds on the way to the mansion one is struck by the rare taste and judgment evinced by Mr. Kingsmill in taking advantage of the natural features of the demesne. Especially noteworthy is the manner in which the carriage-way has been carried through the fine tract of woodland, and the way in which prominence has been given to the more finely developed trees that have a place alongside. Broad gravel walks and grassy glades have also been formed within the wood, and alongside these we find the finest trees brought into prominence, and many highly successful examples of plant naturalisation. An illustration is given of one in which the Welsh poppy (Papaver cambricum) is associated with the lily-of-the-valley and the forget-me-not, and produces in the course of the season a bright display of its golden flowers. Elsewhere are similar breadths of other subjects that flourish among trees and shrubs, and in addition to flowering plants, ferns are freely utilised. Among the last-named is a splendidly developed specimen of the Polystichum munitum, one of the most elegant of hardy ferns that Mr. Kingsmill collected in North America some years since.

As the foregoing reference to the woodland will have suggested, The Holt garden is remarkable for its distinctness of treatment, and as evidence of this it may be mentioned that of the many gardens I have had the pleasure of visiting, not one can be called to mind that has other than a remote resemblance to it. As the home of rare and beautiful hardy plants well-nigh innumerable, it abounds in interest, and the taste which has been shown in the grouping of border and rock plants and trees and shrubs adds immeasurably to its charms. Highly attractive is the mansion, handsome in elevation, and of red brick, in its glorious setting of greenery, in which picturesque Scots firs, tapering spruce, stately beeches, wide-spreading chestnuts and ancient yews are conspicuous. Not less attractive is the foreground, of which some portion is shown in the illustration in which the mansion has a place. In the broad borders that skirt the walk leading to the mansion are great masses of hardy plants that would form a lengthy list were their names to be given. Along this walk are finely developed specimens of Cyanoglossum nervosum, one of the most brilliant of blue flowers and not often seen in gardens, and large masses of the Great Spear Wort (Ranunculus Lingua), a handsome species, bearing a profusion of rich golden flowers on stout stems. To the right in the immediate foreground is a small bog, of which one end can be seen, in which a goodly number of semi-aquatics are growing with quite exceptional vigour.

On the far side of the belt of shrubs that forms, as it were, a background to the perennials occupying the border to the right, is a wide expanse of velvety lawn, which extends from the house to the boundaries of the meadows and the orchard beyond. This fine breadth of turf has a great charm in itself, and affords abundant space for lawn games and also for the display of many a choice tree or shrub of moderate stature. Looking across it from the terrace there is an extremely beautiful view in the direction of London, in which the breezy slopes of Hampstead Heath are conspicuous when the atmospheric conditions are favourable, and materially enhance the prospect. The few specimens that have a place on the lawn are kept well to the left-hand margin, looking from the house, so as not to break up the turf or otherwise interfere with the fine effect produced by its great breadth, and these include several choice golden hollies and Japanese maples with crimson and bronze leafage. In the broad border on the other side of the lawn are fine specimens of these maples, one with green leafage being especially remarkable for its splendid development. All the maples of Japanese origin thrive under the conditions that obtain, and form a pleasing feature. Near the last-named are huge masses of bamboo, which also are evidently at home.

The border that skirts the lawn on its left side looking from the mansion is remarkable for its grouping of choice shrubs and the successful example of the cultivation of alpine plants. The illustration of a section of this will be more useful than a lengthy description, and it will suffice to say that the shrubs in the picture include Choisya ternata and Olearia mucrodonta. The alpines are mostly cerastiums, saxifrages, and helianthemums, the last-named, as will be seen, planted for forming an informal margin. A little higher up towards the house is a broad, irregular rock garden that especially deserves mention for the facility it gives for the cultivation of alpines without incurring the expense incidental to the formation of rock gardens of the usual type. The surface is undulating with rock in various sizes partly embedded in the soil, but probably the highest part does not exceed three feet. Here are masses of snowy saxifrages, purple aubrietias, and golden alyssum, six feet or so in diameter, and hosts of rare subjects spreading over a proportionately large area, the alpine pinks being especially conspicuous. The slopes of the terrace are formed with large flag stones laid irregularly, and growing between them are violas, alpine pinks, and other subjects that thrive under such conditions. The "flagging" in the immediate foreground has been carried for a distance of twenty or thirty feet along the front of the border containing the Japanese maples and bamboos already referred to, and the plants with which it is furnished are making rapid growth. This addition has not been made for the purpose of suggesting an old walk overrun with weeds, but for the purpose of cultivating plants thriving under such conditions, and giving visitors an opportunity of inspecting them closely.

A FLOWERY TERRACE SLOPE.

Daffodils have been planted so liberally in the grass beyond the boundary of the lawn as to produce displays of colour in spring, and rambling roses have been planted so freely as to produce a series of charming effects during the summer. Over rustic supports Aglaia, Euphrosyne, and Thalia fling their long flexile growths with great freedom, and produce a profusion of flowers in the season of roses. Rosa Brunonis grows with great vigour, and may be seen running rampant over holly bush and ancient yew, and bearing cascades of snow-white flowers in June. The pergola forms an attractive feature, for thereon rambling roses, ornamental vines, and other suitable subjects display to the full their charms. This feature is of much interest from the fact that it is formed with gas-piping masked with rustic wood, and by this combination Mr. Kingsmill has provided a structure that has the appearance of having been formed with wood, while possessing the durability of iron. This method of erecting pergolas has much to recommend it, and should have the attention of those who may contemplate adding them to their gardens.

George Gordon.

TASTEFUL GROUPING OF CHOICE SHRUBS AND ALPINE PLANTS.

FRUIT TREES GROWN IN POTS.

Of late years much attention has been turned towards the cultivation of fruit trees of various kinds in pots, particularly of pears, apples, plums, cherries, and figs. There is, of course, nothing new in this present-day fashion, because advocates of such practices have been found among the contributors and readers of the Gardeners' Magazine for very many years past. No doubt the fine exhibits by the Messrs. Rivers, of Sawbridgeworth; Messrs. Bunyard, of Maidstone; and Messrs. J. Veitch and Sons, of Chelsea, at the R.H.S. shows, inspire fruit growers and fruit lovers with the natural feeling that they would value a similar production of their own. Remarkably fine pot-grown trees have been contributed by Mr. Hudson and others, representing private enterprise in this direction, and we have also recollections of equally meritorious successes in gardens which have not been represented at exhibitions, Royal or otherwise. There is, therefore, no novelty found in the pot-grown fig, peach, or nectarine trees, because they have been familiarised with the remote past. Apples and pears, however, were not so frequently met with, nor were plums or cherries common, but all are now recognised as possessing sufficient merit to justify their inclusion in the glass-grown stock, where fruit houses are sufficient to admit of this being done.

In competitions at the principal British exhibitions these pot-grown fruits figure rather strongly, and much to the detriment of those who, imbued with competitive aspirations, are compelled, through stress of circumstance, to depend on the everyday provisions in fruit growing and forcing. It is true plums and cherries may be had from outdoor walls in some gardens quite as good as any pot tree can produce, and perhaps, in some cases, even better, but there must be highly favourable climatic influences which can give the bright and clear-skinned apples and pears which the unprivileged have to review in the summer and autumn contests at many shows. Those fine varieties, Ribston Pippin, Peasgood's Nonsuch, Washington, and Cox's Orange Pippin apples lend themselves perfectly to the limited area of the twelve-inch pot, accommodated in the orchard house. The wax-like texture of the skin, and the greatly enhanced colouring of these fruits, place them far before their fellows grown and gathered under normal outdoor conditions. Similar remarks apply also to pears, which bear no comparison in summer time with even wall-grown fruits outside. The Royal Horticultural Society recognising these advantages, insist that in their autumn contests fruits grown entirely in the open shall alone be eligible, and a very fair and necessary obligation it is in the gathered fruit section. The collections of choice fruit, however, admit the pot-grown apple and pear, plum, and fig.

In the treatment of any of these fruits there is a difference of opinion as to the practice of plunging the pots in the natural soil bed, or raising them above it, so that no means, other than the soil contained in the pot, supports them. The old-time custom favoured the plunging of the pots in order that the roots may, if so disposed, take advantage of the extensive area surrounding them. By such aid it is commonly admitted that size of individual fruits, and extent of crop, may be proportionately greater, notwithstanding that these self-same migratory roots are cut back each recurring autumn. Under these cultural conditions we have found that fine crops of peaches and nectarines can be secured, and that, too, with even greater certainty than when the non-plunging practice obtains. The modern idea demands that by the aid of a special iron-toothed fork the roots are disentangled, the soil removed to such an extent that ample material can be returned to the pot without having recourse to root migration in the border in which the pots may be plunged. By a judicious course of pruning, too, of the superfluous coarser roots there is more room for soil in the pot, and thus a greater food supply is placed at the command of the roots. Subject to this course of treatment each year, there is less need for large pots, and there is a greater uniformity of growth, without the coarseness which accrues from border migration, or larger pots. All the kinds of fruit trees enumerated are amenable to this root treatment when cultivated in pots.

A NATURALISED COLONY OF THE WELSH POPPY.

Given this annual renewal of soil in the autumn, preferably while there is still a complement of healthy foliage, feeding with stimulating liquids, or artificially compounded manures, will carry them through successfully. It is deemed necessary to complete this potting process during the leafy season because the presence of foliage assures root activity in autumn, which makes partial re-establishment certain before they finally settle down to their dormant period. It is well known that most deciduous trees form autumn roots, they may be extensions of the summer stock, or new ones issuing direct from the main roots. Provided with fresh and sweet compost, there must be considerable gain in the progress made under, it may be again repeated, such healthy surroundings.

The great advantages to be derived from pot culture of fruit trees is that the space occupied by them in the growing season may be conveniently set apart for chrysanthemums or other plants in the autumn and early winter. The trees can with safety be stood outside, once their crops have matured and are gathered; but it is found advantageous to cover the pots with some protective materials, making them safe from frost rupture. To prevent the wind from playing havoc the pots can be partially plunged in an open, but convenient site. Figs should not, however, be trusted in the open when the weather becomes threatening, because, though they are hardy, the points of the growths, carrying the embryo fruits, easily suffer, and the first crop may be lost. An exposure to the elements certainly is an advantage until such time as severe frost becomes imminent. The late-grown figs seem, under outdoor exposure, to become hard and bronzed, and when brought inside for starting, the fruit buds appear anxious, as it were, to be progressing. It may be well, therefore, to make some special provision for the wintering of figs in pots, if there are not cool glasshouses available.

It is argued by some that the amount of labour involved by pot culture in the orchard house is scarcely justified when comparisons are made between these and permanently planted trees. It is not my purpose to challenge such arguments; individual conveniences and local circumstances are those which must decide these questions, and there is certainly much to be said in favour of pots when two crops, rather than one, may be secured from the same glass-covered area. Object lessons of this kind have been gained from Gunnersbury no doubt by many readers of the GARDENERS' MAGAZINE, who have paid occasional visits. The maturity of an early crop of peaches, nectarines, plums, or apricots may afford space for an autumn crop of tomatoes, which in private gardens, are often of much service, and in a season like that of 1907, when outdoor crops were so precarious, an indoor reserve for winter parties would be invaluable. There is often an aspect of speculation in the use and purpose of glasshouses eligible for these varying crops of spring, summer, and autumn, and much depends on the individual in making the most of these highly desirable conveniences.

Rood Ashton. W. STRUGNELL.

TREE CARNATIONS.

The border carnations having now passed through their flowering season, those who grow the tree varieties planted out will find this section continue to bloom until autumn. While it is not necessary to specially grow trees for outdoor planting there is no doubt that a proper system of culture amply pays. So far we have not grown plants specially for outside, having relied on older examples, or those which have outgrown their pot space, but which have given us excellent returns for the labour bestowed.

That younger plants of tree carnations given even better returns than older ones has been exemplified this season by a batch of seedlings which I had weeded out as not being good enough to retain for pot culture. They were all good, but did not reach my standard of excellence. The plants have given quantities of flower outside, and now are bristling with flower buds, while the growth they have made tempts me to almost relift or propagate them again.

In growing these tree varieties to bloom from August onwards, if they are planted where temporary lights can be placed over them, far better results will be obtained. Such temporary covering should be put over at night to keep off heavy dews, and also when much rain falls. A cheap and useful covering is "The Eureka" waterproof paper. During the day, and whenever dry, the plants are better exposed or uncovered, so that they may obtain all the light possible. To have clean, unblemished flowers, it is necessary to cover at night, or the opening buds and half-expanded blooms may not become dry before the sun shines on them, and therefore the tips of the petals are liable to become scalded.

Poltimore Gardens. T. H. SLADE.

In the Water and Bog Gardens the various plants will soon be passing their best. Note where any failures have occurred, and where others have been a special success, also whether it is desirable to divide or remove any. Where lakes and ponds do not exist much pleasure may be obtained by growing a number of plants in tubs; in this district the fumes from chemical and other works are too poisonous for any but just the strongest varieties, but this season the double white nymphæa has made specially good growth, and flowered profusely. Nuphar lutea always thrives vigorously here. Astilbe Davidi seems at home on the fringe of lakes, and clumps of it produce a pleasing effect. Senecio macrophylla makes a nice contrast, and is equally effective with its noble foliage and golden-yellow flowers.—E. F. H.

VARIETAL FERN HUNTING.

Now that the innumerable beautiful varietal forms of our native hardy ferns are becoming popular, as is evidenced by their increasing displays at our exhibitions of flowers and ornamental foliage plants, a little consideration of how they are obtained may not be out of place. So great are the differences between many of the finest varieties and the common or specific forms which we find in such profusion in our western counties by the roadside, in the hedgerows and stone dykes, in the woods under the shelter of the trees, and in the deep glens and ravines which have been channelled out by mountain streams, that it is often difficult to believe that they can belong to the same species. A popular but quite erroneous idea for which the scientific botanist, who speaks of "garden forms," is not altogether free from blame, is that by dint of close culture, high feeding, warmth, and so on, the common forms assume these finer types. This, however, is by no manner of means the case. We may by such means get larger, robuster plants, but they will be merely enlarged copies, with the ordinary specific characters, it may be, a little emphasised, but this is all.

Collect their spores, sow them, and distribute their offspring, the chances are enormously great against any difference of type appearing among them. They may be smaller or larger, according to the environment, but given the same conditions, each individual will so closely resemble the others as to be unrecognisable by any accidental and peculiar character. Now and again, however, there are exceptions, we know not why, we only know that here and there such exceptions are found in a wild state, in which more or less marked changes of plan of structure have occurred. It is to these exceptions that we are indebted for all the varieties we possess, and their acquisition has been due to long-continued search among the common forms by a number of persons who have, as a consequence, accumulated a great many diverse forms, some far more beautiful than the common ones, and some of interest mainly as curios, but all interesting in their various ways.

It has been found also by experience that when these "sports" are thoroughbreds, i.e., characterised throughout by new features, and not merely partially so, their spores are capable, as a rule, of reproducing the new type, sometimes yielding exact replicas of the parent, but more often yielding variants, some of less marked character and others of more, and it is by means of these latter that the selective cultivator has profited to enhance the beauty or the singularity of the type originally found. A large number of the wild finds, however, are fully equal to those obtained in this way by selection, and, as all the British ferns, with one insignificant exception, are perennial, and with decent care long outlast their owners, most of the best of these original finds have been preserved alive, and handed on to us at the present day. Since also ferns lend themselves, as a rule, freely to propagation by other means than their spores, viz., by offsets, bulbils, etc., even these original types have been largely multiplied, so that in any large collection the owner can indicate what is to all intents and purposes the identical "sport" found, while probably at the same time pointing out its progeny on varied lines, and yet retaining enough of the ancestral character to be recognised as its offspring. Occasionally, however, a wild find, distinct enough from the common to be worth acquiring, but not of an extreme type, has borne spores which at one bound, as it were, transcended all expectations. Thus a thrice-divided Shield fern (Polystichum angulare decompositum Moly) yielded the strain of plumose Shield ferns known as the Jones and Fox type. A prettily divided Lady fern found near Axminster, and known as the Axminster plumosum, gave after a few years an improved variety, plumosum elegans Parsons, and this subsequently, suddenly yielded a batch of youngsters, nearly all tasselled, a feature quite absent in the parent, and one of these through its spores broke into about a score of tasselled and plain forms of such exquisite beauty and diversity as to far and away excel any of their predecessors or competitors on plumose or extra-feathery lines.

Finally, in this particular connection of unexpected leaps, a fine form of the Hard Shield fern (P. aculeatum pulcherrimum) found in a hedge in Dorset by a labourer, after yielding no progeny but offsets for forty years, produced a few spores, from which has arisen a strain of quite unparalleled types, in which the parental subdivisions of ½in. length, are replaced by long, slender silky ones of over 2in., delicately fringed to boot (P. ac. pulcherrimum Druery), and of the same batch, P. ac. divisilobum Green, doing, in another direction, its best to rival the Jones and Fox plumosums aforesaid of the sister species. In such examples as these we see the richest rewards of those who recognise promising features in wild "sports," and devote their attention to selective culture through the spores.

We are also justified by such cases in looking forward to a time when our British ferns will rank in popular taste, as they do already in that of connoisseurs, as rivalling, and even eclipsing the great bulk of exotic ones. So far, indeed, as regards variety of type, our native ferns undoubtedly eclipse all known exotics. Of these there are a good number which display the peculiarity of bearing tassels at their tips, a few are of the plumose or extra foliose character; but among British ferns we have a number of types which so far are quite peculiar to them, and have no discovered counterpart in the innumerable species found elsewhere in the world. In the Lady fern, for instance, there is the Victoriæ or crossed and tasselled type, and the Frizellæ, in which the pinnæ, or side divisions, are bunched into knots. In the Shield ferns we have much-divided mossy-looking forms, which have, it is true, recently been rivalled by the latest developments of Nephrolepis exaltata, but where shall we find any exotic which can even remotely approach our common Hartstongue in versatility?

In this fern, indeed, we appear to possess the very acme of variability, despite its normal simplicity. A mere tapering, undivided strap-shaped frond has sported into literally hundreds of forms, a descriptive list of which involves about a score of sections, frilled, branching, crested, dwarfed, muricate, narrowed, widened, etc., and combinations of all these on varied lines, such as no other fern in the world has even remotely approached. The result of this sportiveness is that in our British ferns we possess a wealth of decorative foliage plants such as all the rest of the world cannot rival in diversity, and it is therefore a matter of congratulation that this fact—for a fact it is— is now becoming popularly recognised.

Chas. T. Druery, V.M.H., F.L.S.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

SEASONABLE NOTES.—The present is a good time for attending to any defects in the heating apparatus. Where boilers are defective they are best removed and replaced with new ones, which can now be done better than at any other season. Each joint should also be carefully examined, and those showing signs of leakage should be made good. The valves and all air taps should be put in order, and with reference to these, I find it a good plan to go round these about once a month throughout the year, keeping them oiled and in working order. With this attention they are ready at all times for any emergency that may occur. The flues and chimneys should also be examined, swept, and made ready for the winter. Stoke holes ought also to be cleaned down, and a coat of whitewash put on the walls will aid cleanliness and help to lighten the surroundings throughout the winter months. In the selection of new boilers perhaps one might be permitted to depart somewhat from the usual lines in the matter of giving some personal experience that might be of assistance. When I came here some years ago the boilers consisted of saddle and tubular types, some three years ago additions and alterations were made. The old boilers were removed, and replaced with independent sectional boilers, which have proved in every way most satisfactory. In fixing, my employer insisted on having fire-bars only about half the length of the boilers, instead of the full length, as shown in the maker's illustrations. This arrangement has given a slower combustion, and we have thus obtained nearly the full advantage of the possible heating power of the fuel. Considerably less fuel has been used than was the case with the boilers that had been removed. These sectional boilers are easily kept clean, and we have had every advantage in working.

PERMANENT SHADING.—Where permanent shading has been used in conjunction with roof blinds, it should now be cleaned off the glass. Growth ought now to be sufficiently advanced to require every assistance that light can afford, and the blinds will be sufficient to protect the leaves from the rays of the sun. In the warmer divisions especially it is advisable not to bring the blinds into use too early in the morning, and they should be taken off again immediately it may be done with safety in the afternoons. It is advisable to assist the plants to harden their growths as they mature, and unless ripened growth is procured during the next few weeks, it is hopeless to expect satisfactory flowering results from the autumn and winter-flowering kinds. Dendrobiums, the Mexican lælias, and other light-loving plants will only now need sufficient protection by shading to prevent the actual burning of the foliage. Where ample light is given the drying conditions will be correspondingly increased. Care must, therefore, be observed to see that ample water and moisture is afforded, so that the plants do not remain for any prolonged period in a dry state at the roots.

INSECT PESTS with the dry state of the outside atmosphere, will have a tendency to increase, and, therefore, a close watch must be kept; these have been, and are still very troublesome. Constant care is necessary to protect the plants from injury. I find there is nothing better than to spray with some safe insecticide at regular intervals.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

HERBACEOUS CALCEOLARIAS.—These extremely showy plants always attract attention, and when covered with their quaint and beautifully marked blossoms, never fail to win the admiration of all who love flowers. They are essentially cool-house plants, requiring the temperature of an ordinary greenhouse only, and succeeding even better during the winter and early spring, with a minimum of forty to forty-five degrees, than in any higher degree. The herbaceous calceolaria is a perennial, and the seed must be sown during the summer of one season to produce flowering plants by the next. To obtain the large specimens frequently seen at shows, the seed should be sown about the middle of May; but good, well-flowered plants may be had from a sowing made in August, and I have obtained useful little plants in 4½-inch pots, with four or five spikes apiece, from seed sown the first week in September, though I should not advise sowing so late as this as a rule. As the seed is very small, it must be sown on a finely-sifted surface of light rich soil, in a well-drained pan or box. The best place for the seed pan is on a good bed of ashes in a cool pit or frame, in a lightly shaded position, or in a shady corner of the greenhouse, covering it with a square of white-washed glass, and keeping the soil regularly but moderately moist.

BULBS FOR EARLY FLOWERING.—For bulbs to flower early, it is important that they should be potted up early. The first to start with are the Roman hyacinths, and, if they are wanted for early flowering, they should be potted as soon as possible, for the earlier this is done the sooner will they flower. Those that are potted up now can easily be had in flower in November, and even if they are required for later flowering than this, they give better spikes and finer flowers, as their growth must not take place until the bulbs have well rooted into the soil. The Paper White and Double Roman narcissi are excellent for early flowering, and are largely grown for both private and market use. The price being low, they come within the means of most lovers of flowers. The bulbs should be procured and potted as soon as possible if blooms are required at Christmas.

ARUMS.—Those who adopted the planting out system will do well to lift and pot up the plants before they have made much growth either at the root or the crown. Leaving them out until October is very bad policy, as the root masses have then to be greatly reduced to get them into reasonable-sized pots. Plants rested in pots, though now backward in growth, will soon overtake those planted out, as regards earliness of flowers, though in most cases the spathes are not so fine, but more useful for cutting.

FRANCOAS.—I have rarely seen Francoa ramosa in better form than it is at the present time in this neighbourhood. It has thrown up very strong stems, bearing huge branched spikes of pure white flowers, which are very attractive. F. conchifolia is worthy of culture, though not so showy as its relative. The spikes are dwarf, unbranched, and the flowers pink, with a dark spot towards the base. F. appendiculata is often confounded with F. ramosa, but it is quite distinct, the flowers being pale red, and also marked with a darker spot on the petals; the racemes of bloom are compact. All three species are very attractive, and useful greenhouse plants.—T. B. FIELD, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

PROPAGATION of the various summer bedding plants should now be proceeded with, efforts being made to insure an ample supply for next season's arrangements, which should have been well thought out and planned. The more tender soft-wooded plants, such as coleuses, iresine, alternanthera, etc., will root best in gentle heat in a close, shaded frame or house, and the other less tender kinds in a cool frame. Zonal pelargoniums give a better effect, and flower more freely, if struck in autumn than in spring, and they may be easily rooted in pots or boxes in the open, though here we find it advantageous to have them in cool frames where lights can easily be placed over them should weather become unfavourable. When taking cuttings do not disfigure beds more than really necessary; secure well-ripened wood, and take cuttings four or five inches long, and only remove the two lowest leaves. The soil should be sharp and porous, but made quite firm in the pots and boxes; use a blunt dibber, and carefully insert the cuttings, making every one rest on the soil at the bottom of the hole. Silver edged, tricolors, bronze, ivyleaved, and scented-leaved varieties should be put into pots rather than boxes, these being more delicate than zonals. Where strong plants of Centaurea candidissima are required for next season, seed should at once be sown, also Humea elegans; both should be placed in gentle (but not strong) heat.

SPRING-FLOWERING PLANTS for autumn bedding out must be carefully attended to and encouraged as much as possible. Should any still be in the seed beds lose no more time in pricking out or transplanting them; rooted cuttings must be gradually exposed and hardened off. The plan of autumn bedding will have already been decided on.

CLIPPING HEDGES.—Should any of this work be not yet completed finish it as soon as possible to enable the wood to receive full sunlight and become well ripened, so as to withstand whatever severe weather may come during winter.

HYDRANGEA HORTENSIS. — Where these are planted out, immediately the flowers are over old trusses should be removed, and any surplus wood cut out to allow proper ripening of the remainder. Cuttings may also be inserted if required; place these singly in small pots, in sharp sandy soil, and stand them in a close frame, shading them from sunshine until well rooted.

DRY BULBS from last season's beds should now be sorted over and graded. If planted in masses or clumps they should be lifted and replanted every three or four years; this applies more especially to narcissi and Spanish and English irises. Snowdrops, autumn-flowering crocus (colchicums), and sternbergias are best planted as early as possible, and no time should be lost in securing these. Snowdrops do best in a light, warm soil. In the wild garden walks may be bordered with them, and large irregular patches planted. As the bulb catalogues continue to arrive select what is required and send to one of the many good trustworthy firms for them, it being best to buy from such, even at a slightly enhanced price, and thus secure best early bulbs.—E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

YOUNG STRAWBERRY PLANTS.—If not already done, young plants which were layered in small pots last month should be planted out, so that the crowns may be strong and well-developed by the end of the season. Although it is very desirable to have a change of land for strawberries, suitable borders are not always available, and the same plot has to be utilised for several years in succession. In all such cases a great deal may be done to improve the soil by adding fresh loam and manure, with soot, wood ashes, etc., at each time of digging. This I have done for several years, and the crop last season (also this) has been excellent. When planting see that the soil is firm, and the roots in the pots well moistened before turning them out. If the pots have become somewhat crammed with roots slightly disentangle them with a pointed stick; take out the holes sufficiently deep to allow the roots to rest on a few handfuls of fresh soil, and ram this rather firmly. If the land is dry follow on with a good soaking of water through a rose water pot to settle all comfortably round each plant. For Royal Sovereign allow a space of sixteen inches between each plant, and a little less for less robust varieties, if only to be fruited one year and then to be thrown away. Do not neglect permanent beds, especially on light land, and if the crops have been heavy a good soaking of manure water will be of great assistance to the plants if the roots are dry; weakened by heavy crops and dryness at the roots means probably a very light supply of flowers the following season.

BLACK CURRANTS.—These may have become crowded, and should therefore be thinned so that air and light can reach the interior of the bushes. In so doing remove a few of the branches entirely, leaving plenty of young fruitful wood. Like some other things, where other work is pressing these are very apt to be neglected, but a little timely thinning, and, on dry soils, a few soakings with water, will greatly help the next season's promise.

FIGS.—Trees bearing heavy crops need a few good soakings of water and liquid manure at a reasonable strength, and if given enough to thoroughly moisten the soil to a good depth this will greatly assist the fruit and growth. Remove any weak shoots, and preserve those of medium growth with sturdy foliage. The roots of figs delight in a firm, sweet, well-drained border, and the growth needs ample head room for extension.

NETS.—All nets, as they are taken from tree and other fruits, should be tied up when perfectly dry, labelled, and put away. If the sizes are taken, and a label duly inscribed is tied on each net, this saves a great deal of trouble when they are next wanted. See that the fruit room is put into good order for the coming crops, cleanliness and sweetness being very important items in a fruit room.—H. MARKHAM, Wrotham Park Gardens.

A NEW TALL LOBELIA.

As is well known to many, Mr. A. Campbell, the gardener to the Right Hon. Lord Ardilaun, at St. Anne's, Clontarf, Dublin, has been a most successful raiser of new tall lobelias, Japanese anemones, and other flowers. Among the lobelias he has succeeded in producing some really good things, and that named in honour of his employer, Lord Ardilaun, will maintain its place in the favour of many, but a later production, named Morning Glow, is destined to take a high place as well as its predecessor.

I came across a good break of it lately in the wonderful garden of the Messrs. Walpole, at Mount Usher, in co. Wicklow, and later I saw it in Lord Ardilaun's magnificent gardens at St. Anne's. Mr. George Walpole, no mean judge, considers Morning Glow the best of all, and one could see that Mr. Campbell has a high opinion of it himself, although he is modest regarding his own productions. Morning Glory has dark-coloured foliage, covered more or less with a delicate grey tint, almost like thin hoar frost, but not in crystals. Above this rise the fine spikes of rosy scarlet flowers, which are at times five and a-half feet high. This season, however, they are shorter than usual, the weather apparently having been unfavourable for tall growth on this and other plants, as we have all experienced with some things this season.

Lobelia Morning Glow requires the same treatment as the other tall herbaceous lobelias, and when more widely distributed will be most acceptable to lovers of these gorgeous autumnal flowers.

S. ARNOTT.

Summer Pruning.—The passing summer has been one which may rejoice the hearts of those advocates of early summer pinching whereby fruit buds are formed in one season. I do not think sufficient account is taken of the weather as an important factor, when such procedure as advocated by some is followed. The past six weeks have not been conducive to secondary growth in fruit trees, and possibly now August is reached, that danger may be passed. At the same time some trees pinched early in the season show no more promise of fruit buds being formed than those now being pruned. Something wrong somewhere!—T. H. SLADE.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

The fortnightly meeting was held at Vincent Square, Westminster, on Tuesday, August 18. It was certainly small for the season, but doubtless the large shows being held in the provinces accounted for the paucity of exhibits. The fruit trees in pots from Messrs. W. Paul and Son formed quite a feature, as did the collection of botanical orchids from the President.

FLORAL COMMITTEE.

Messrs. H. Cannell and Sons, Swanley, brought up a fine exhibit of dahlias, which included the cactus, giant-flowered, pæony flowered, and giant single sections. The flowers were very good indeed, for the season, and needless to say, were tastefully arranged with grasses and other foliage. In the cactus section the best were Kathleen Bryant, Mrs. S. T. Wright, Whirlwind, Mrs. Seale, Sunshine, and Australian. The giant flowers were presented by some fine sprays of Yellow Colosse, Jeanne Charmet, Phenomene, Le Grand Maniton, F. Grinstead, and Papa Charmet, while the best of the pæonies were F. W. Jansen, Glory of Baarn, Merveille, and Paul Kruger. The same firm also made a nice exhibit of cannas arranged in vases. Messrs. Carter Page and Co., 52, London Wall, E.C., made a fine display of cactus dahlias, a collection of violas staged in shallow pans, and a fine collection of decorative grasses. These included beautiful bunches of Bromus pendulinus, Poa amabilis, Chrysurus cynosuroides, Panicum glaucum, Eleusine rigida, and E. oligostachya, with some fine examples of maize for a background, quite a novel exhibit. The violas comprised a good collection of both bedding and exhibition varieties. The dahlias were arranged in vases and baskets, which produced a fine effect.

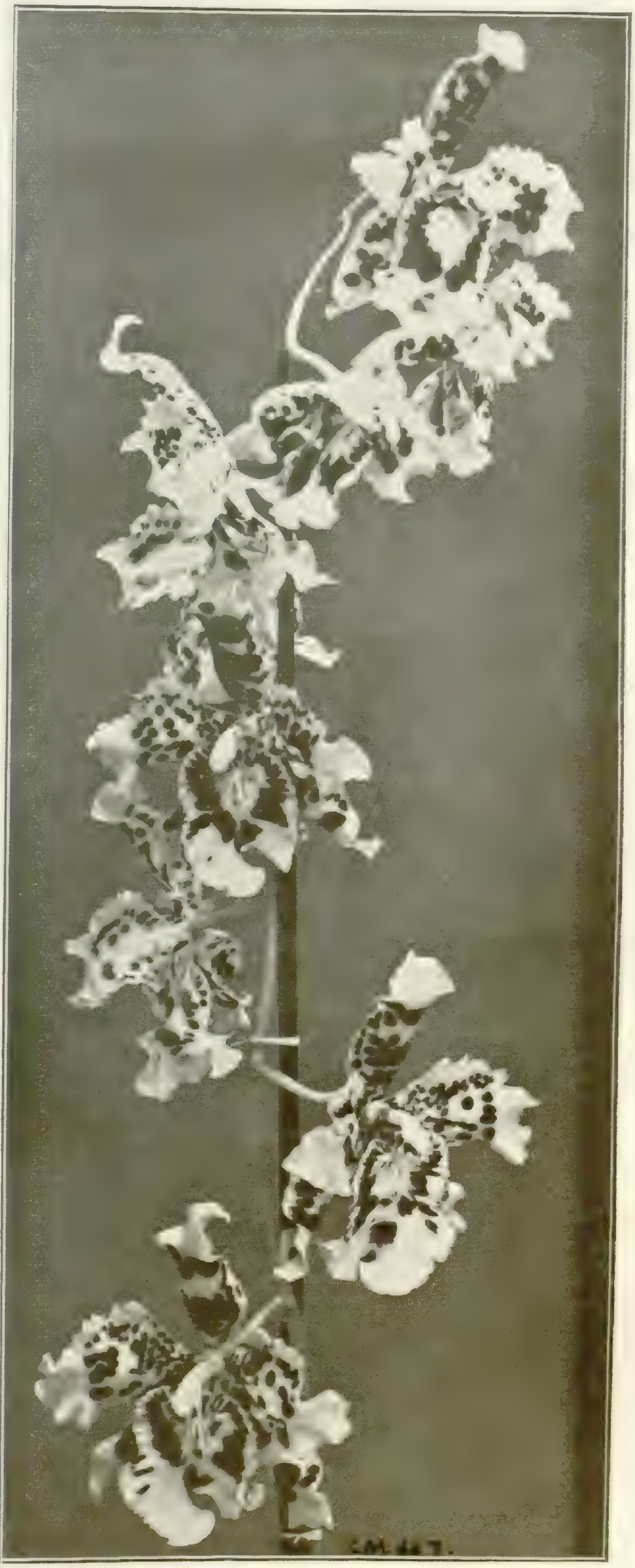
From Messrs. T. S. Ware, Lim., Feltham, came a large table of hardy flowers; also a collection of alpine plants, arranged naturally in boxes. The chief features were the phloxes, Helenium cupreum, Catananche bicolor, Chrysanthemum maximum King Edward VII., Senecio clivorum, and gaillardias in variety. The alpines were very good for the season, campanulas in variety, primulas, aubrietias, and menthas.

Messrs. James Veitch and Sons, Lim., Chelsea, sent a collection of specimen plants. Gigantic plants of Senecio clivorum in grand bloom were to be seen, while S. Wilsonianus and S. Veitchianus were equally attractive. Buddleia variabilis magnifica and B. v. Veitchiana were in splendid condition. Huge panicles of Sambucus canadensis were also much admired. The same firm also staged a representative display of asters, which were well grown and in great variety; also celosias, in three colours, of their dwarf bedding varieties. The plants were about a foot high and of good habit, the colours being yellow, red, and rich salmon.

Messrs. J. Peed and Son, West Norwood, arranged a large group of caladiums, backed with tall kentias, the groundwork being of ferns. The whole was lightly and tastefully arranged. Some of the most conspicuous specimens were La Lorraine, Oriflamme, Golden King, Richard Bastin, Madame Mitjana, Sir Henry Irving, Mary Anderson, Duke of Teck, and Baron Adolphe de Rothschild. The plants were splendidly coloured and well developed.

From Messrs. B. Ladhams, Lim., the Shirley Nurseries, Southampton, came a perpetual-flowering border pink, Princess Christian, a white variety, heavily marked with [illegible], it appears to be very free flowering.

Mr. L. R. Russell, Richmond, arranged a collection of hardy fuchsias, which were in capital condition. A few of the best were Gracilis, Riccartoni, F. coccinea Florian, Madame Corneillson, F. Riccartoni Elysée, R. Drame, a compact semi-double form, and globosa.



ODONTOGLOSSUM WIGANIANUM SUPERBUM.

Exhibited by Sir Trevor Lawrence at the R.H.S. Meeting on the 18th inst., when a F.C.C. was conferred upon it. Flowers large, the sepals and petals rich yellow, spotted with deep crimson, the lip white marked with purple.

A fine collection of phloxes came from Mr. F. Eames, Frome. The flowers were arranged in large masses, and presented a fine appearance. Perhaps the most attractive were Eclaireur, General Von. Heutsz, Selma, Iris, Lord Raleigh, Meteor, Von Hoghberg, and Dr. Charcot. The exhibit was edged with the double gypsophila.

Messrs. Eggett and Son, Thames Ditton, contributed a collection of hardy ferns. These comprised nice plants of Scolopendrium crispum Bowden, S. var. multifidum, Polypodium v. elegantissimum, Polystichum ang. div. scalplum, and a number of small ferns growing in Tufa stone.

A collection of foliage plants came from Messrs. W. Bull and Sons, Chelsea, which comprised some well-coloured crotons, dracænas, aralias in variety, with some nice edging plants; also a small group of Cattleya velutina x Cattleya aurea.

Mr. L. R. Russell, Richmond, also made a large and interesting exhibit of hardy ericas. The plants were arranged in masses, and proved most interesting. The chief forms were Erica vulgaris alba, E. v. cuprea, E. cinerea rubra, E. c. alba major, E. vulgaris flore-plena, E. v. aurea, E. stricta alba, and E. v. Hammondi.

Sir E. Loder (gardener, Mr. W. A. Cook), Leonardslee, Horsham, sent a collection of flowering shrubs and plants that had stood 20 degrees of frost. These included buddleias in variety, hydrangeas, arums, spiræas, Clematis coccinea, Phalesia buxifolia, myrtles, Solanum jasminoides, and Amaryllis belladonna.

From Messrs. Moore, Lim., Rawdon, Leeds, came a grand vase of Lilium nepalense, the colour being very decided, and the flowers well developed.

A full table of gladioli came from Messrs. Kelway and Son, Langport. The spikes were very good, and the colours varied. Some of the most attractive were Marchioness of Granby, Demaris, Lady Warwick, Empress Frederick, Fesca, Miss Zena Dare, Princess Victoria, Viscountess Iveagh, Fireflash, General Buller, and Dovedale.

Messrs. J. Laing and Sons, Forest Hill, arranged a group of caladiums in association with palms and ferns. The plants were well grown and with good colour.

Messrs. H. B. May and Sons, Upper Edmonton, had a large collection of crotons arranged on the floor of the hall. The exhibit was most striking. The colour of the plants and their development merited all praise. The arrangement, too, left nothing to be desired. The plants were chiefly of a decorative size, but arranged in mounds they looked well. Some of the best varieties were Hawkeri, Queen Victoria, Achievement, Princess Matilda, Flambeau, Golden Ring, Warreni, and Reidi. The entire group was relieved with ferns and palms.

FRUIT COMMITTEE.

Messrs. W. Paul and Son, Waltham Cross, brought up a large collection of pears and plums in pots. The whole of the trees were laden with fruit; especially good were Grand Duke, Magnum Bonum, Goliath, Pond's Seedling, and Belle de Septembre in the plums, while the pears, not more than three feet high, were in splendid condition. Brockworth Park, Conference, Duchess d'Angoulême, Louise Bonne de Jersey, and Doyenne Boussoch were in splendid condition; in fact, the whole exhibit bore evidence of the highest culture.

Messrs. S. Spooner and Sons, Hounslow, staged a nice table of fruits, arranged in dishes and baskets. The apples included nice clean specimens of Pott's Seedling, Cardinal, Goodenough's Nonsuch, Lord Suffield, Beauty of Bath, Lady Sudeley, and Stirling Castle. Plums were arranged in shallow boxes, and good examples of The Czar and Early Transparent were noted.

Messrs. H. Low and Co., Bush Hill Park, sent baskets of apples. Early Transparent and Beauty of Bath, both in capital condition.

ORCHID COMMITTEE.

Messrs. H. Low and Co., Bush Hill Park, had a small, but nice display of orchids, in which were noted Oncidium Lanceanum, Cypripedium Watsonianum. A fine specimen of Cypripedium macrochilum giganteum, Cattleya Loddigesi, and Lælio-cattleya Whateleyæ were also in evidence.

From Messrs. Gurney Wilson and Co., Hayward's Heath, came a fine bank of miltonias with a few oncidiums and odontoglossums. The miltonias were in splendid condition, and included some very good forms.

Messrs. Moore, Lim., Rawdon, Leeds, also contributed a group in which were noted Vanda cærulea, a very deep form. Odontoglossums, too, were prominent. A fine plant of Cypripedium Weitzerianum Potter's var., was also in evidence; as was also a good example of Cattleya Germanea, a very fine form.

Another group came from Mr. H. S. Goodson, Fairlawn, West Hill, Putney (gardener, Mr. G. E. Day), which contained some good plants. Odontioda Charlesworthi was magnificent in colour, while other noteworthy forms included Brasso-Cattleya Queen Alexandra, Odontoglossum Harryana, and Cattleya Massangeana, var. Harry Goodson.

Messrs. Stanley and Co., Southgate, were represented by a good collection of cypripediums. The plants were the picture of health, and well flowered. The variety C. A. de Lairesse was especially striking, some of the stems carrying no less than four flowers. A few plants of L. c. elegans var. Turneri were also good.

From Sir Trevor Lawrence came a small collection of choice orchids, which included two well-grown plants of Odontoglossum aspidorhinum, for which a cultural award was given, Catasetum pileatum, while botanical certificates were awarded to four or five of them.

From Messrs. Sander and Son, St. Albans, came a few choice plants, including Odontoglossum Rolfeæ, with extra large flowers, was to be seen. Another fine specimen of Odontoglossum Crispo-Harryanum Bruggense was here noted.

Mr. De B. Crawshay, Sevenoaks, had a small exhibit of odontoglossums, which included some choice hybrids. The most striking were Zenobia, a cross between Halli and Edwardsi; O. Rolfeæ Nerissa, a fine spike; and Wardi. The spikes were good and the foliage excellent.

Messrs. Charlesworth and Co., Bradford, staged some choice plants, such as Sophrocatt.-lælio Marathon, a lovely form; Cypripedium Kubele grandis, Cattleya iris, some grand plants of Odontoglossum Rolfeæ, Pilumna nobilis alba, and O. Lambeauanum.

AWARDS.

First-class Certificates. — Odontoglossum Wiganianum superbum, Sir Trevor Lawrence, Bart.

Awards of Merit.—Trichopilia nobilis alba, Sir Trevor Lawrence, Bart.; Sophro-læliocattleya Medea bicolor, and Cypripedium Rosetti, Lieut.-Colonel Holford; Sophro-cattlælio Marathon, Messrs. Charlesworth and Co.; Odontoglossum Zenobia, Mr. De B. Crawshay; Perpetual Pink Princess Christian, Messrs. B. Ladhams, Lim.; Thalictrum dipterocarpum and apple Feltham Beauty, Messrs. J. Veitch and Sons.

Botanical Certificate.—Catasteum labiatum, C. Claesianum, Listrotachys Kindtiana, Eria longispicata, Polystachya flexuosa, and Epidendrum Lambeauianum, Sir Trevor Lawrence, Bart.

Silver-gilt Flora Medal.—Messrs. H. B. May and Sons.

Silver-gilt Banksian Medal.—Messrs. Kelway and Son, Mr. L. Russell, Messrs. Peed and Sons, and Messrs. Carter Page and Co.

Silver Flora Medal.—Messrs. H. Cannell and Sons, Mr. H. S. Goodson, Messrs. Gurney Wilson and Co., Messrs. Charlesworth and Co., and Sir Trevor Lawrence.

Silver Knightian Medal.—Messrs. William Paul and Son.

Silver Banksian Medal.—Messrs. J. W. Moore, Lim., Messrs. Hugh Low and Co., Mr. De B. Crawshay, Mr. Eames, Messrs. J. Veitch and Sons, Messrs. T. S. Ware, Lim., Messrs. Laing, Sir E. Loder, Bart., Messrs. Spooner and Sons.

Sutton Coldfield and Walsall Gardeners' Associations.

The annual outing of the above associations took place on Monday last to the extensive seed warehouses at Wordsley and seed farms and trial grounds at Kinver, by the kind invitation of Messrs. Webb and Sons, Wordsley, Stourbridge. The party, numbering about 150, included Mr. Joel Cadbury, president of the Amalgamated Associations; Mr. Thompson, Mr. Jeffs, Mr. Grove, etc., and was conveyed by special trams from Dudley to Wordsley, where they were met by Mr. Edward Webb, and the heads of departments, who conducted them over the offices, warehouses, and greenhouses. Adjoining the warehouses is the extensive range of glass, and here all the best types of florists' flowers were to be seen. The size and rich colouring of the gloxinias and begonias excited much interest, and came in for much admiration, as also did the heavy crops of melons, cucumbers, and tomatoes. From Wordsley the visitors passed on to Kinver, where luncheon was provided by the Messrs. Webb, and presided over by Mr. Cadbury. The party then left for an inspection of the trial grounds, where an enjoyable time was spent in looking over the numerous trials of flowers and vegetables. Some idea of the magnitude of these operations may be gathered when it is mentioned that there are hundreds of trials of peas, beans, and other vegetables, 240 rows of sweet peas, and 250 trials of other annuals, but time did not allow of a complete inspection of the seed farms, which extend to 2,000 acres.

At five o'clock tea was served, and, after a hearty vote of thanks, which was proposed by Mr. Cadbury, supported by Mr. Thompson and Mr. Jeff, to Messrs. Webb for their hospitality, the party dispersed to visit the rock houses and Roman encampment at the famous Kinver Edge, a return being made to the Kinver tram terminus, en route for home. It was generally voted that the outing had been one of the most enjoyable ever held by the societies.

Sparkhill Amateur Horticultural Society.

The eighth annual summer show (facetiously designated as the "Shrewsbury" of the Midlands), was held on August 15 in the Sparkhill Recreation Grounds (Birmingham, and proved to be the best and most successful held since 1904. The committee and their energetic hon. secretary, Mr. Wm. W. Staples, are to be congratulated on the splendid results achieved. There was also a series of sports, including equestrian military exercises. The society, in addition to the summer show, has a series of monthly meetings for lectures and horticultural exhibitions, with other social entertainments.

OPEN CLASSES.

For an arrangement of miscellaneous plants to produce the best effect, Mr. George Hancox, West Bromwich, annexed the premier prize with an artistic creation of richly-coloured ornamental foliage and flowering plants; second, Mr. E. Burden, King's Heath, with a creditable display; and third, Mr. S. Rose. The plants in the other various classes were fairly well staged. The cut flowers and dinner table decorations were the most noteworthy features, the latter including fifteen exhibits, with hardly an inferior one; the section was devoted to ladies. A dainty creation was that of the premier prize selected by the judges, and consisted of pale-pink sweet peas, francoa and other appropriate flowers and greenery artistically and lightly disposed as the centrepiece, with elegant spraylets of rosy-red begonias, and white and lavender streptocarpus flowers, etc., supplemented with sprays, the fashionable Selaginella cæsia trailing over the tablecloth. This exhibit was shown by Mrs. Normansell, Edgbaston (gardener, Mr. S. Gibbs); the second honours fell to Mrs. W. Martin for a tasteful arrangement of white and yellow poppies; third, Miss Long with cream and salmon sweet peas, effectively disposed; and fourth, Miss Hirst with pink sweet peas; there were eight awards made. Hand or shower bouquets were very well shown, and Mr. S. Gibbs was the victor with a tasteful exhibit; second, Mr. E. Darby. and third, Mr. A. E. Forty. Sweet peas were extensively staged, and constituted the chief feature in the cut flower section. For a table arrangement of sweet peas, Miss Jessie Hirst, Mr. E. Deakin, and Mr. F. Anderson were the respective winners with elegant combinations. In the class for twelve bunches of peas, Miss M. Guest, Mr. E. Deakin, and Miss J. Hirst were the winners with excellent flowers.

In the class for nine varieties of sweet peas Mr. George Turley led; second, Mr. H. King, gardener to Mr. A. E. Butler, Glindon, Selly Park; and third, Mr. E. Deakin—all with very good exhibits. For the best collection of sweet peas, named sorts, distinct, Mr. C. Perry, gardener to Mrs. Magrath, won with a most creditable lot; second, Mr. E. Perry; and third, Mr. W. Grove.

Excellent, too, were the collections of vegetables in the open classes for eight kinds. Messrs. E. Deakin, E. J. Keeling, E. J. Dalby, and W. F. Anderson were the respective winners. Single dishes were also numerous and well shown.

HONORARY EXHIBITS.

Messrs. W. H. Simpson, Birmingham, were awarded a gold medal for a large and artistic arrangement of sweet peas; Mr. Woolman, of Shirley, gold medal for an extensive and well set-up assortment of chrysanthemums, cactus dahlias, etc.; a silver-gilt medal to Mr. W. T. Mattock, Headington, Oxford, for an arrangement of roses; a silver medal to Messrs. Bostock and Sons, Moseley, for herbaceous and other garden flowers; silver medal to Mr. H. N. Ellison, florist, West Bromwich, for an interesting collection of exotic and hardy ferns; and bronze medal to Mr. A. Dawes for a tasteful arrangement of violas.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE.	SUNSHINE.	TEMPERATURE OF THF AIR.			
1908. August 9 to August 15.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 9 -Sunday	12 30	63	58	76	51
" 10—Monday	5 55	67	61	72	52
" 11—Tuesday ...	12 25	58	52	67	44
" 12—Wednesday .	11 25	58	51	66	42
" 13—Thursday ...	0 5	56	52	64	50
" 14—Friday	8 55	62	56	69	53
" 15—Saturday ...	8 50	58	55	69	48
Means	8 35	60	55	69	49

DATE.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M.			LOWEST TEMPERATURE ON GRASS.
1908. August 9 to August 15.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Aug. 9—Sunday	—	64	64	61	46
" 10—Monday	0·10	65	64	61	46
" 11—Tuesday ...	—	62	64	61	40
" 12—Wednesday.	0·02	61	63	61	35
" 13—Thursday ...	—	62	63	61	43
" 14—Friday	—	62	63	61	46
" 15—Saturday ...	—	62	63	61	39
Means ...	(total) —	63	63	61	42

Begonia Semperflorens.—The great advantage of the double varieties of this begonia is that they appear to stand better than the single ones, and the colours, which range from pure white to deep carmine, include some peculiarly soft and delicate shades. Under good treatment they make bushy plants, and produce a quantity of blooms, keeping up a succession for a considerable time, though, as the plants advance they become somewhat tall and leggy. It is, however, easy to keep up a succession of young stock by propagating from cuttings periodically, and cuttings put in now will make useful plants for flowering during the winter. It is upon the selection of good cuttings that the results will mainly depend. The short-pointed shoots from the base of the plants are the best, and if these cannot be had the growths may be cut back to below the point where the first flowers were produced, and they will soon give good cuttings.—T. B. Field.

ANSWERS TO CORRESPONDENTS.

APRICOTS ROTTING.—F. B., Chelmsford: Unless we have specimens we cannot possibly help you to discover the cause of the fruits rotting. We can only surmise that the fruits were somewhat damaged, and then fell a prey to birds or insects.

STORAGE BOX FOR POTATOES AND BULBS.—N. J. C., Wellingborough: The box herewith illustrated is so extremely useful for storage purposes in the garden that its general use may be strongly recommended, more particularly in gardens of limited dimensions. The box, as shown in Fig. 1, is equally useful for storing such fruits as apples and pears, various kinds of bulbs and potatoes for planting. The box is handy for lifting about, and, as a considerable number can be piled upon each other, large quantities of fruits, bulbs, and potatoes can be stored in a comparatively small space. The most useful size is 27 inches long, 18 inches wide, and 3½ inches deep. The sides and ends should be formed with deal ⅝-inch in thickness, and the bottom with ¾-inch deal two inches wide, and fixed one inch apart. The uprights and the cross pieces forming the handles should be of deal, one inch square, and the former should be screwed to the sides, and screws should be used to fasten the cross pieces. As shown in Fig. 2, the boxes can be stood one upon the other without excluding the light, or interfering with the free circulation of the air, a point of great importance in the case of potatoes for planting.

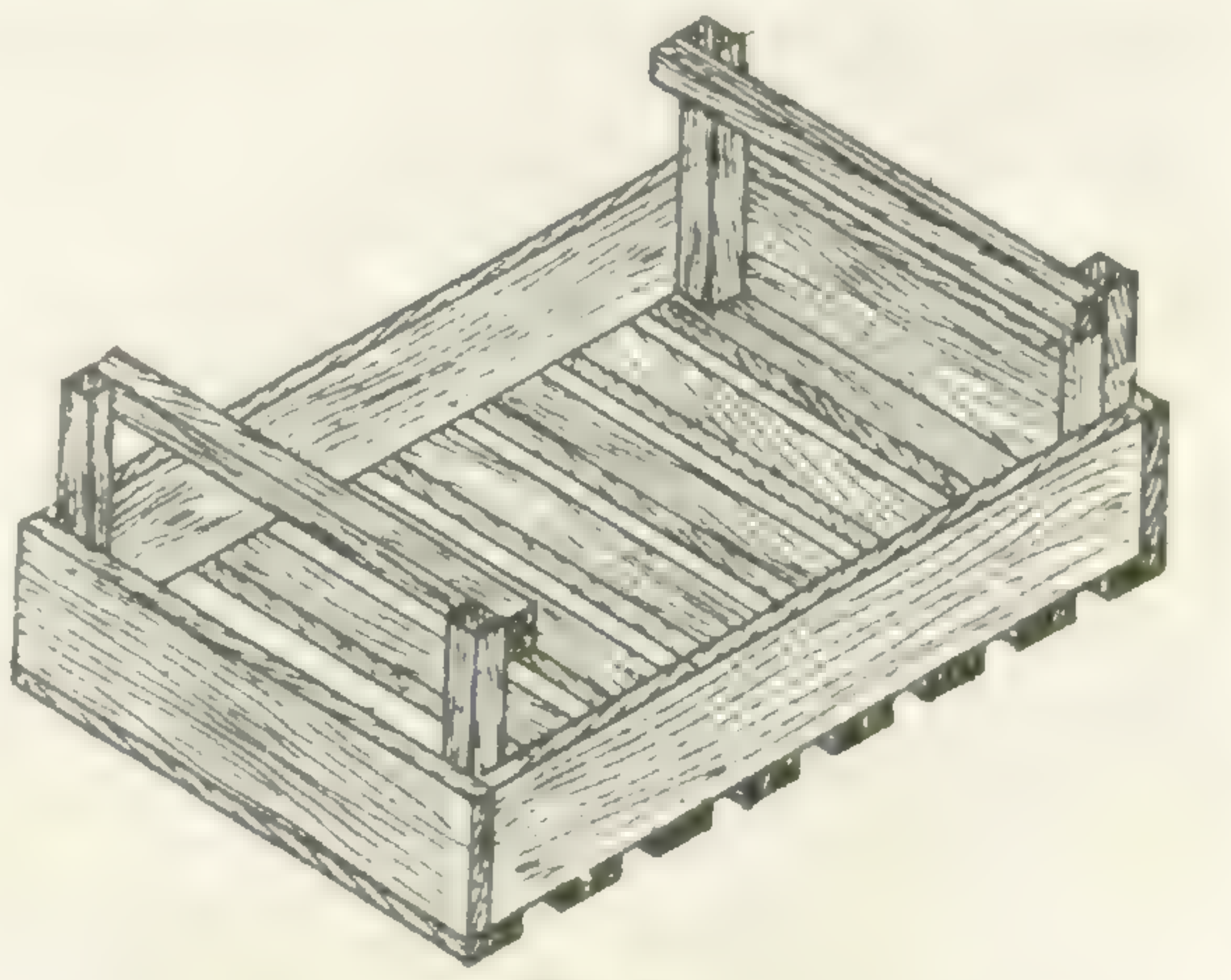


Fig. 1.

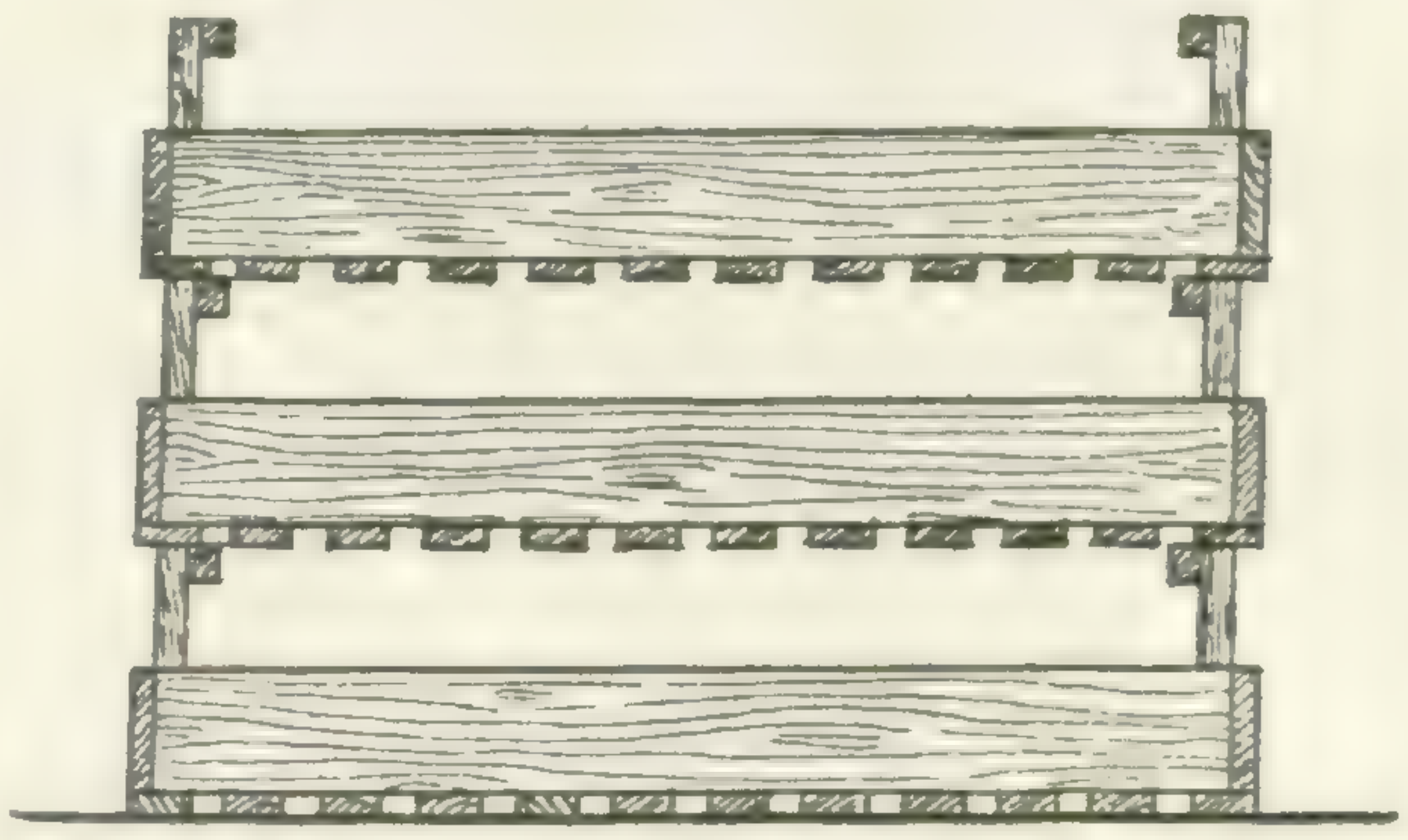


Fig. 2.

STORAGE BOXES OF POTATOES.

REMOVAL OF GARDEN PLANTS.—Rusticus: We are very sorry to have to say that you cannot legally remove anything planted in the garden unless you have the written consent of the landlord to do so, a consent given at the time of planting (which should have been obtained), or now. Pot plants you may remove and also any new variety of a flower that you may have raised yourself, but nothing else. The rockwork you must also leave. Your best plan will be to approach the new owner, and endeavour to obtain his consent to the removal of certain plants. This he may grant freely, or he may permit you to remove them on payment of a certain sum, and it may pay you to pay such a sum. You should, of course, be able to show the new owner that what you propose to remove will not leave the place naked, or cause disfigurement.

TURNIP TOPS.—W. H. D., Warwick: At the end of August or early in September make a liberal sowing of a hardy variety, and eventually thin out the seedlings to about six inches apart. The drills should be one foot apart, and the hoe should be used between the drills whenever opportunity serves. A light dressing of nitrate of soda in February or early March, hoed in, will greatly increase top growth.

GOOSEBERRY LEAVES EATEN.—J. J., Birmingham: The gooseberries are suffering from a severe and late attack of the Gooseberry Sawfly (Nematus ribesi). Dust the bushes with hellebore powder—which is very poisonous—when they are moist with dew or rain, or use soot freely under similar conditions. After the leaves have all fallen, in the autumn, remove two or three inches of the surface soil under and around the trees, and burn it or bury it deeply, putting good garden soil, enriched with old manure in its place. This will encourage new roots, and dispose of the cocoons that lie in the soil for the winter.

WINTER SPINACH.—C. R. C., Dorchester: It is rather late, but not too late to make a sowing of spinach for winter use. Draw drills about one foot apart, selecting a good site, and well enriched soil. The usual date for such a sowing is from August 5 to August 15.

BLACKBERRY CULTURE.—G. P., Melton Mowbray: We strongly recommend you to grow the Parsley-leaved Bramble (Rubus laciniatus), and leave the American varieties alone, as they are not a great success in this country. Substantial supports are necessary for blackberries, and they may be trained to wires fixed to uprights of iron or wood, as may be most convenient, and four or five feet high. But wire trellises, such as are used for cordon pears and gooseberries, are preferable. The trellises should be arranged six or seven feet apart, where several rows are grown, and, as a matter of course, the wires should be stretched quite tight. The plants should be arranged three or four feet apart along the trellises, and have their growths loosely secured to them as they rise in the course of the following season. They may also be successfully grown trained to wood or iron posts, and under that form of culture the blackberries should be planted four feet apart in rows with six feet spaces between them. Each plant should have the support of a post or stout stake, standing five or six feet above the surface. The planting should be done sometime in November, and healthy suckers of medium size should be selected. Plant them to a depth of three or four inches, and, before new growth commences in the spring, cut them down to the ground level to promote the production of strong growths from the base. Not more than three or four canes should be allowed to grow the first year, and the most healthy and vigorous should be selected for furnishing the trellis or post. In subsequent years three or four growths to each plant should be allowed to attain their full development, and all the others be removed as soon as they make their appearance above the surface of the soil. The old canes should be cut out near the base after the fruit has been gathered.

NAMES OF PLANTS.

R. A., Blisworth.—1, Alonsoa Warscewiczi; 2, Liatris spicata.

B. T., Hove.—1, Cosmos bipinnatus; 2, Rosa rugosa; 3, Hoya carnosa.

M. G. A., Cartmel.—1, Veronica Andersoni; 2, Pleroma macrantha; 3, Cobæa scandens variegata.

D. E. W., Roade.—1, Salix viminalis; 2, Cupressus Lawsonianus erecta viridis, 3, Bocconia cordata.

F. C., Hythe. — 1, Buddleia globosa; 2, Veronica teucrium; 3, Arbutus Unedo; 4, Eucalyptus globulus; 5, Acacia lophantha.

N. G. E., Abbot's Langley.—1, Spiræa Douglasi; 2, Andromeda floribunda; 3, Cotoneaster Simonsi; 4, Lonicera sempervirens; 5, Fuchsia triphylla; 6, Gypsophila elegans.

OBITUARY.

MR. HENRY BALDERSON.

With much regret we record the death of Mr. Henry Balderson, which occurred at his residence, Corner Hall, Hemel Hempstead, on the 12th inst., in his seventy-seventh year. Mr. Balderson, who was one of the most genial of men, was best known to the general body of horticulturists by his association with the Fruit Committee of the Royal Horticultural Society, of which he was for many years vice-chairman, a position from which he retired a few years since owing to ill-health. Mr. Balderson was keenly interested in fruits and fruit culture, and notwithstanding the heavy claim that was imposed upon his time by his business, he fully recognised his responsibilities as a citizen. He started the Volunteer movement at Hemel Hempstead in 1869, was a member of the Board of Guardians for thirty years, churchwarden of Boxmoor Church fifty-two years, long an Alderman, and formerly a Mayor of the town.

TRADE NOTES.

Messrs. J. Weeks and Co., who have been established at Chelsea for many years, intend shortly to open an office at 72, Victoria Street, S.W., under new management, as being more accessible for their numerous clients. The excellence of their work, both glasshouses and heating apparatus, is known to most of our readers, and their "Duplex" Upright Tubular Boiler is known all over the world.

Taken in connection with the rapid spread of the American Gooseberry Mildew in Kent, the specimens taken from sprayed and unsprayed bushes that have been sent us by Messrs. H. Cannell and Sons, of Swanley, have much interest. The branches taken from the unsprayed bushes are so badly infected with this highly injurious disease as to have had the development of both wood and leaf seriously checked. The branches on the other hand of the bushes that are described as having been sprayed by a preparation manufactured by the firm are perfectly free from the fungus, and in the healthiest possible condition.

Rose Cuttings may be inserted from now until the end of September, though the earlier they are put in the better. Choose half-ripened wood (not the strong sappy growths), preferably with a heel, though this is not a necessity; they should be from six to nine inches long; remove the lowest leaves and spines, and insert either in a cool frame or in a sheltered border in the open. Shade from the fiercest rays of the sun, and keep nicely moist. The soil should be sharp and porous, and made nicely firm round each cutting. The chief advantage of roses on their own roots is the absence of foreign suckers, but, generally speaking, growth is not as strong as in roses on the briar or manetti stocks.—E. F. HAZELTON.

Notes on Pruning Climbing Roses.—As soon as climbing roses pass out of bloom the plants should be thoroughly overhauled, and loosened from their support, whether wall, pergola, porch, or arch. The old flowering wood may safely be cut out, thereby concentrating the force of the plant into producing vigorous and healthy new wood for another year. When cutting out old wood it is advisable to retain a few buds at the base, as from these adventitious shoots will be produced which, if well exposed to sun and air, will yield quantities of the finest flowers the following season. Roses which are allowed unlimited space for development, or those grown under semi-wild conditions, should only be sparingly pruned. Roses of the Wichuraiana type, and the old Ayrshire roses, succeed well under this treatment, and these rarely require the knife.—THOMAS SMITH, Walmsgate Gardens.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Cut flowers are plentiful, but the demand is by no means brisk.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	5	0	to	9	0
Alstrœmerias	per doz. bun.	2	0		3	0
Arums	per doz.	2	6		4	0
Asparagus	per doz. bun.	1	6		6	0
Asters	per doz. bun.	2	0		3	0
Carnations	per doz. blms.	1	6		2	6
,,	per doz. bun.	7	0		8	0
,, Malmaison	per doz. blms.	6	0		9	0
Cattleyas	per doz.	8	0		10	0
Coreopsis	per doz. bun.	1	6		2	6
Croton leaves	per bun.	1	0		1	6
Cypripediums	per doz. blms.	2	0		2	6
Eucharis	per doz.	4	0		5	0
Forget-me-not	per doz. bun.	2	0		3	0
French fern	per doz. bun.	1	0		3	0
Gaillardias	per doz. bun.	1	6		2	6
Gardenias	per doz.	1	6		3	0
Gladiolus, large-flowered	per doz. spks.	1	6		2	6
Gypsophila	per doz. bun.	2	0		3	0
Lilium auratum	per bun.	2	0		4	0
,, candidum	per bun.	1	0		2	0
,, speciosum	per bun.	1	6		3	0
,, longiflorum	per bun.	2	0		3	0
Lily of the Valley	per doz.	6	0		10	0
Marguerites, white	per doz. bun.	2	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	0		4	0
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	4	0		6	0
Roses	per doz.	1	0		4	0
Smilax	per doz. trails	3	0		5	0
Statice	per doz. bun.	3	0		4	0
Stocks	per doz. bun.	3	0		4	0
Sweet Peas	per doz. bun.	1	6		2	0
Tuberoses	per doz. blms.	0	4		0	6

Fruits.

Supplies are liberal with a good demand.

		s.	d.		s.	d.
Apples, Australian	per case	6	0	to	14	0
,, English	per ½-sieve	2	0		5	0
Apricots	per box	0	9		1	0
Bananas	per bun.	3	0		10	0
Figs	per doz.	1	0		3	6
Grapes, English	per lb.	0	8		3	6
,, Belgian	per lb.	0	8		0	10
,, Channel Islands	per lb.	0	6		1	0
Greengages	per ½-sieve	2	6		6	0
Lemons	per case	6	0		14	0
Melons, Guernsey	each	0	9		2	0
,, English	each	1	0		2	0
,, Valencia	per case	7	0		10	0
Nectarines	per doz.	1	6		10	0
Oranges	per case	9	0		30	0
Peaches	per doz.	2	6		12	0
Pears, English	per ½-sieve	1	6		3	0
,, French Williams	per case	3	0		7	6
Pineapples	each	2	0		4	0
Plums	per ½-sieve	2	0		5	0
Raspberries	per doz. pun.	5	0		7	6

Vegetables.

Tomatoes, marrows, and runner beans continue plentiful, and are low in price.

		s.	d.		s.	d.
Artichokes	per doz.	1	6	to	1	9
Beans, broad	per bush.	2	0		3	6
,, Runner	per bush.	2	0		4	0
Beet	per bush.	1	3		2	0
Cabbage	per tally	1	6		2	0
Carrots	per doz. bun.	1	6		3	0
Cauliflowers	per doz.	1	0		3	0
Cucumbers	per doz.	1	6		2	6
Endive	per doz.	1	0		1	6
Horseradish	per doz. bun.	9	0		12	0
Lettuce, cos	per doz.	0	8		1	0
Mint	per doz. bun.	1	0		1	6
Mushrooms	per doz. lb.	6	0		8	0
Onions, spring	per doz. bun.	1	0		2	0
,, Valencia	per case	7	0		8	6
Parsley	per doz. bun.	1	0		1	6
Peas	per bush.	3	0		4	0
Radishes	per doz. bun.	0	4		0	8
Spinach	per bush.	1	3		1	6
Tomatoes, English	per doz. lb.	2	0		3	0
,, Guernsey	per doz. lb.	2	0		2	6
Turnips	per doz. bun.	1	6		3	6
Vegetable Marrows	per tally	3	0		4	0

LONDON POTATO MARKETS.

The supplies are liberal, but the trade is dull.

		s.	d.		s.	d.
British Queen	per ton	65	0	to	70	0
Epicure	per ton	60	0		70	6
Duke of York	per ton	60	0		70	6
Sharpe's Express	per ton	60	0		70	0
Up-to-Date	per ton	55	0		65	0
Early Puritan	per ton	60	0		70	0

CATALOGUES RECEIVED.

JAMES VEITCH AND SONS, LIM., CHELSEA.—Illustrated catalogue of spring-flowering bulbs, retarded plants, amaryllis, caladiums, etc., a beautiful catalogue.

JOHN A. LAING, SEAL CHART, SEVENOAKS.—A list of bulbs and garden requisites.

H. J. GASSON, RYE, SUSSEX.—A catalogue of garden netting, tennis netting, cricket nets, tents, waterproof material, rick covers, and many other similar goods that a gardener often wishes to know the price of, and where to get them.

FORTHCOMING ENGAGEMENTS.

TUESDAY, August 25.—Odiham Horticultural Society.

WEDNESDAY, August 26.—Chippenham Horticultural Society.

FRIDAY, August 28.—Dunfermline Horticultural Society.

SATURDAY, August 29.—Burrelton Horticultural Society.

TUESDAY, September 1.—Royal Horticultural Society: Committees meet at 12 o'clock; Lecture at 3 p.m.; Scientific Committee at 4 o'clock.

Bicester Horticultural Society.

WEDNESDAY, September 2.—York Florists' Dahlia Show.

Hayward's Heath Gardeners' Association.

THURSDAY, September 3.—Dundee Horticultural Society; three days.

Glasgow Horticultural Society; three days.

National Dahlia Society, at Royal Horticultural Hall.

FRIDAY, September 4.—Cleland Horticultural Society.

TUESDAY, September 8.—Woodstock Horticultural Society.

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Portrait of Mr. H. W. Adnitt, 639; A Light and Tasteful Rose Arbour, 643; Narcissus Barri Conspicuus, 644; Narcissus Sir Watkin, 645; The Holt, the residence of A. Kingsmill, Esq., 646; A Flowery Terrace Slope, 647; Tasteful Grouping of Choice Shrubs and Alpine Plants, 647; A Naturalised Colony of the Welsh Poppy, 648; Odontoglossum Wiganianum superbum, 651

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GARDENER (Head Working), where more are kept; 25 years' practical experience all branches Inside and Out, early and late Forcing, Vines, Cucumbers, Melons, Stove, and Greenhouse Plants, Herbaceous Borders; thoroughly reliable; highly recommended; married, without encumbrance. WOODHOUSE, Eastwood Road, Bramley, Surrey.

GARDENER (Head), age 41; married, no family; life experience in all branches of Gardening; well recommended. WALTER HOLLY, care of Mr. E. Brown, Church Street, Martock, Somerset.

GARDENER (Head Working), where several men are employed; age 31; married; life experience in all branches, including Orchids and Carnations; good references. GARDENER, Mythe House, Tewkesbury.

GARDENER (Head Working), 16 years' all-round experience; last 7 as Head; age 34; married, no family; excellent characters last and previous situations. HARRIS, The Lodge, Wilburton Manor, Ely, Cambridgeshire.

GARDENER (Head Working), age 47; good practical experience in all branches, Inside and Out; many years as Head; can have good references. H. TURNER, Fineshade, Stamford.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

GARDENER (Head Working), where one or two others are kept; 16 years' experience in all branches, Inside and Out; five years present place; excellent references; age 29. J. CLAYTON, Sherwood Lodge, Arnold, Notts.

GARDENER (Head or good Single-handed), thoroughly experienced in all branches; grapes, peaches, melons, tomatoes, stove, greenhouse plants, and kitchen garden. married, no family. W. CANE, Rosedon, Wadhurst, Sussex.

GARDENER seeks SITUATION as HEAD WORKING or good SECOND; single; age 32; well up in all branches; could take Electric Light Plant if required; good references. J. JOHNSON, 41, St. Mary's Square, Kennington Road, S.E.

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GARDENER (Single-handed, or with help), experience Inside and Out, Vines, Stove and Greenhouse Plants, etc.; willing to be useful; married; age 35; 5½ years as single last place; good reference by me. Apply, stating terms. C. H. SMITH, 44, Ravensbourne Road, Catford, S.E. (No circulars.)

GARDENER seeks SITUATION, Plain SINGLE-HANDED or UNDER; married; abstainer; age 35; good reference; disengaged first week September. A. SWAN, North Curry, near Taunton.

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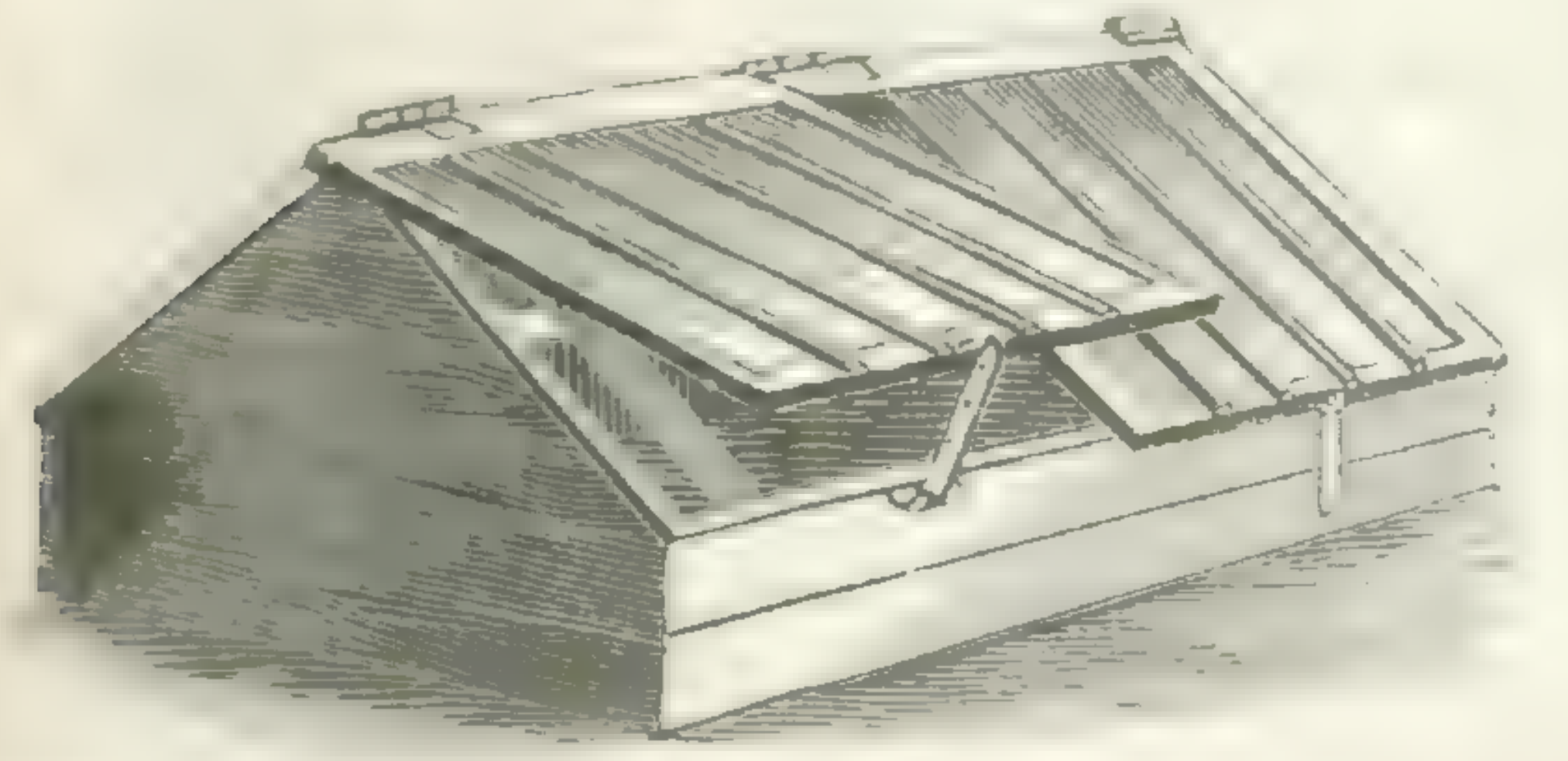

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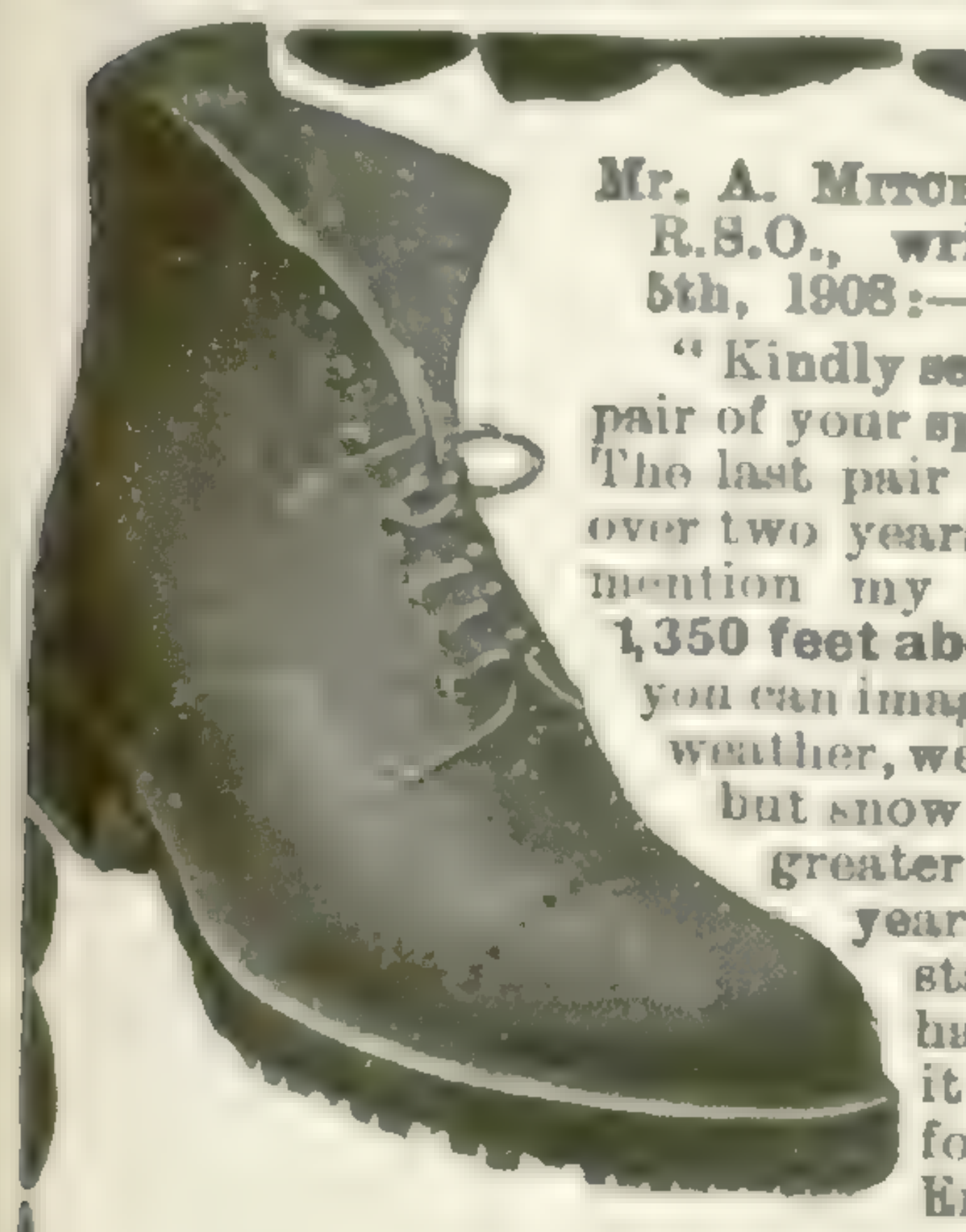

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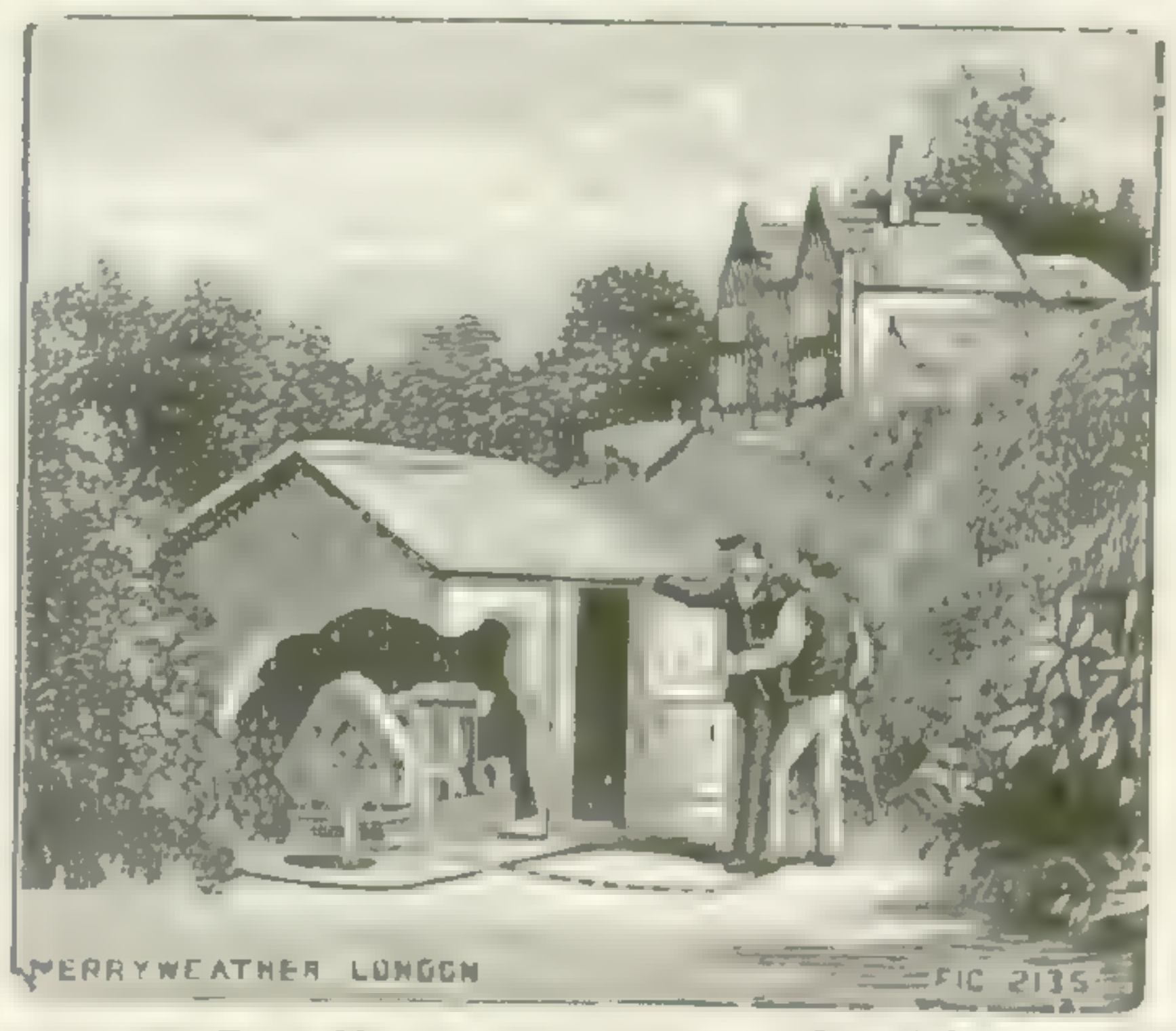

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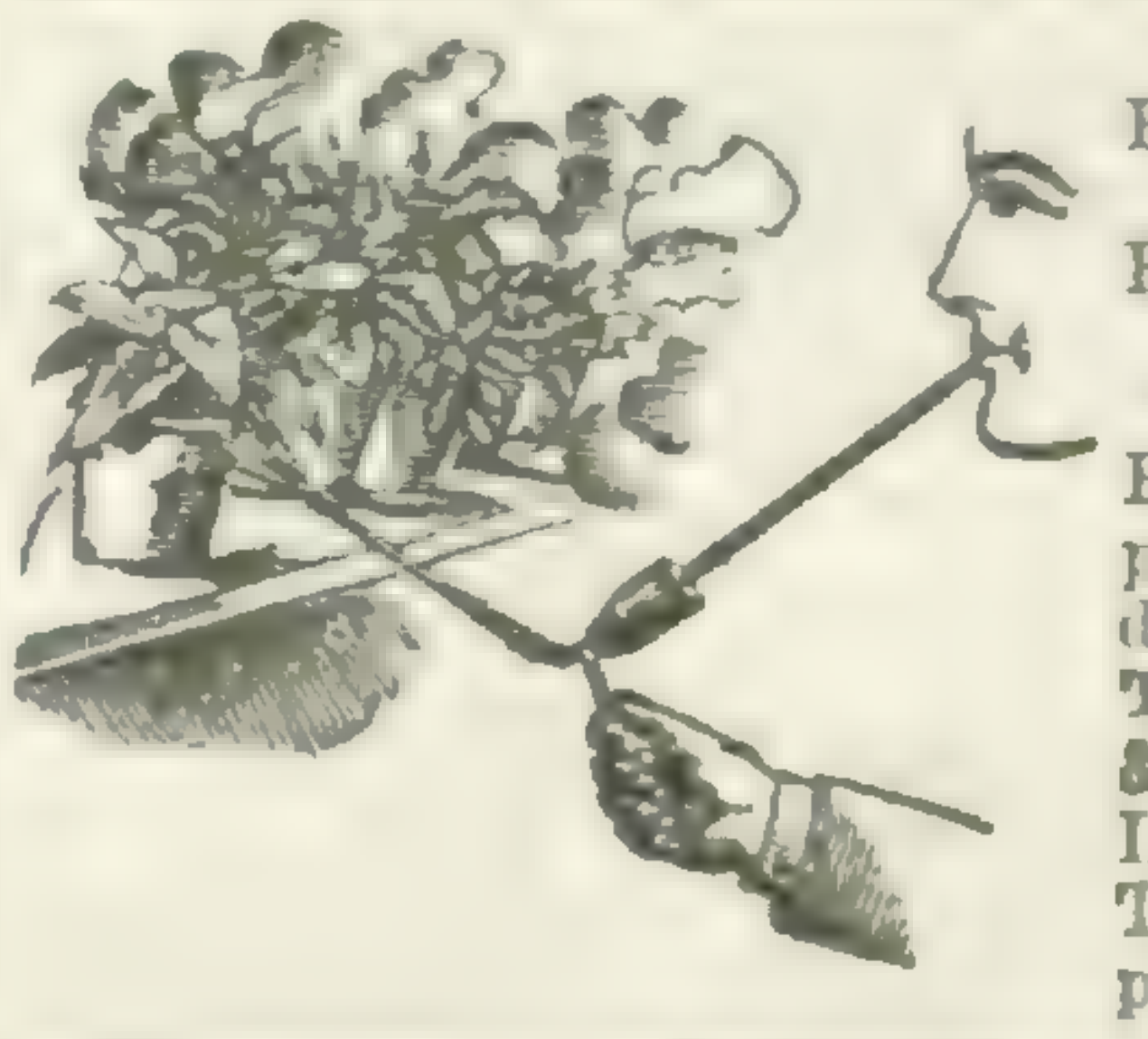

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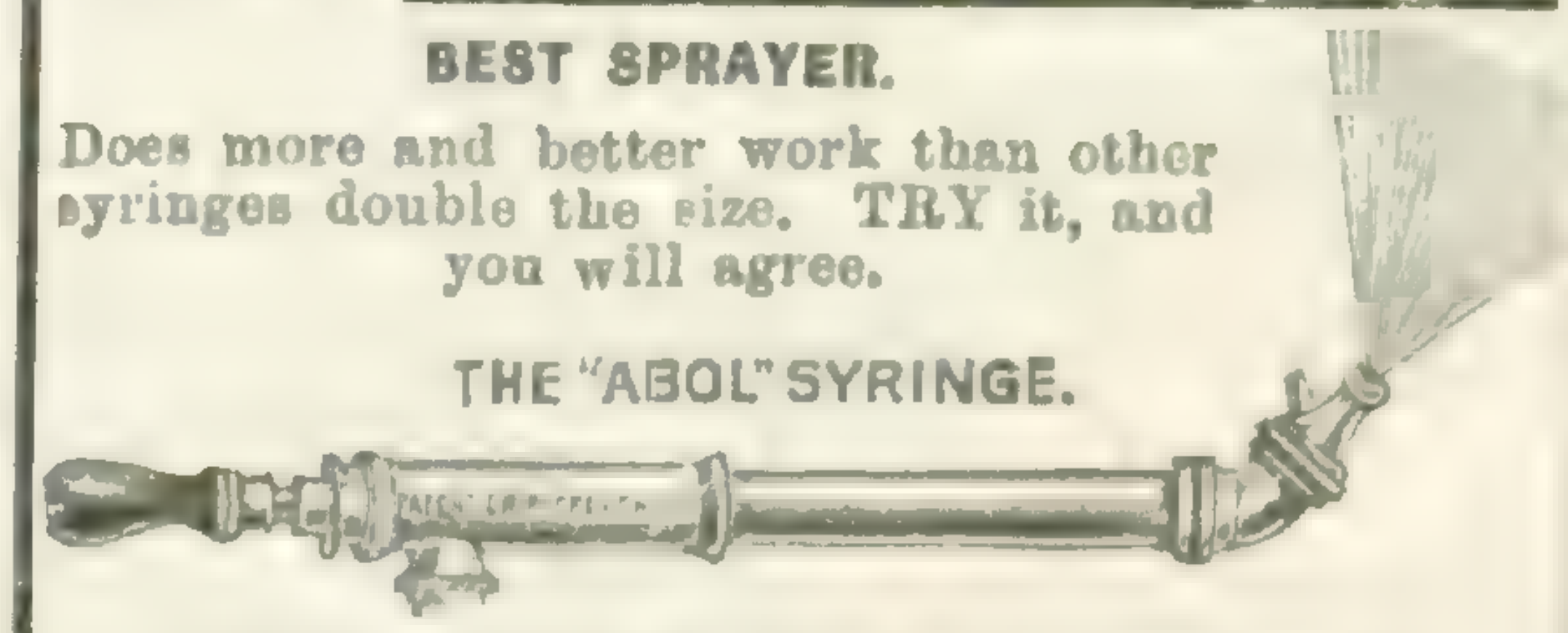

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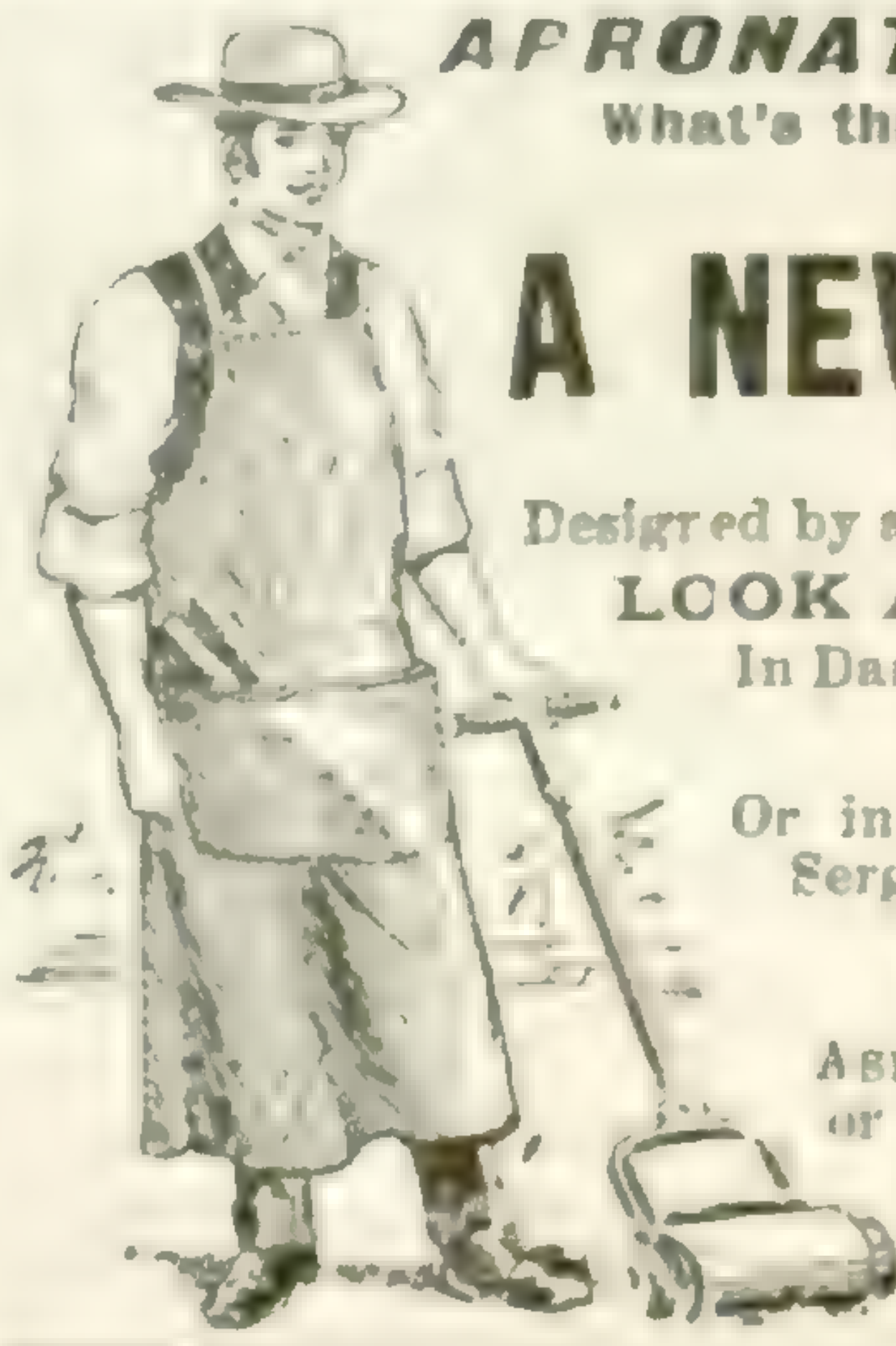

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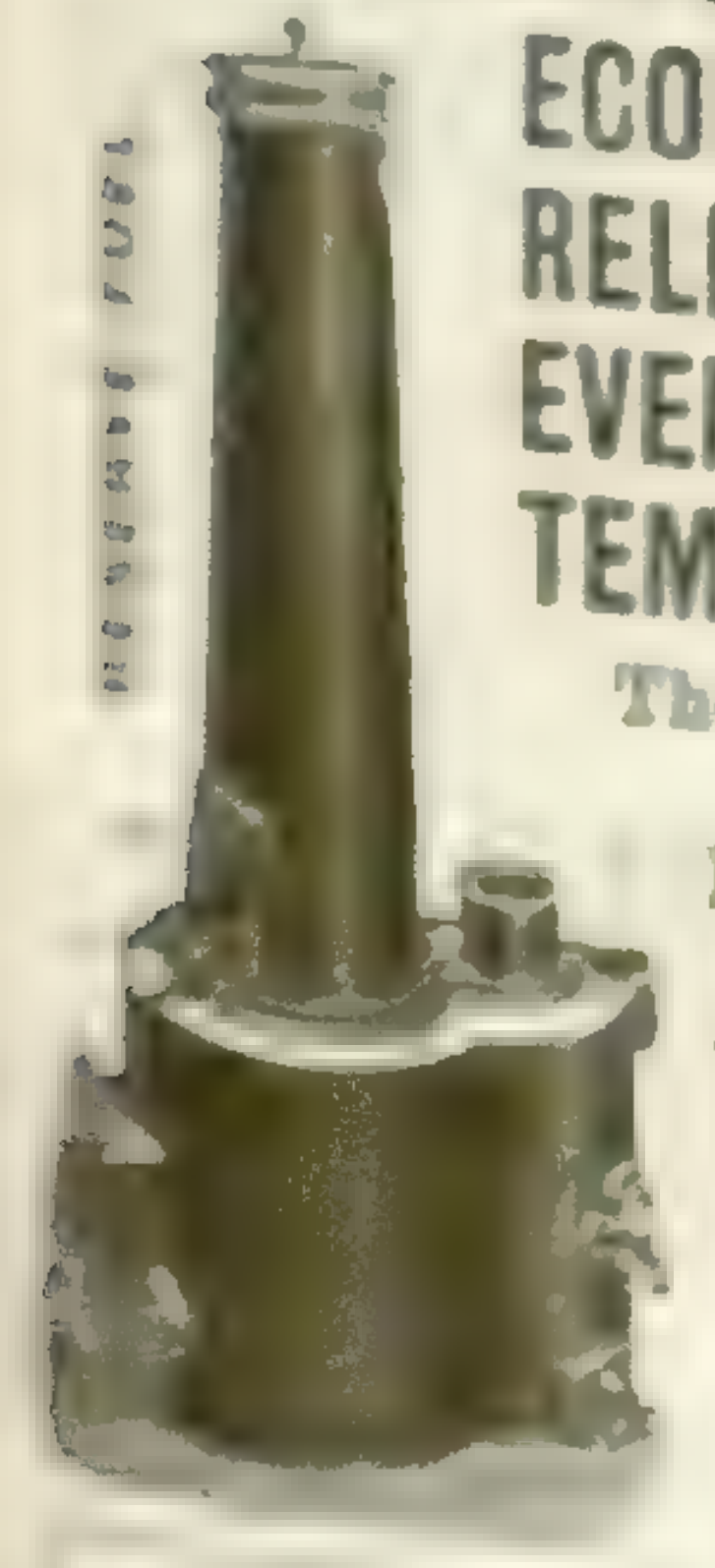

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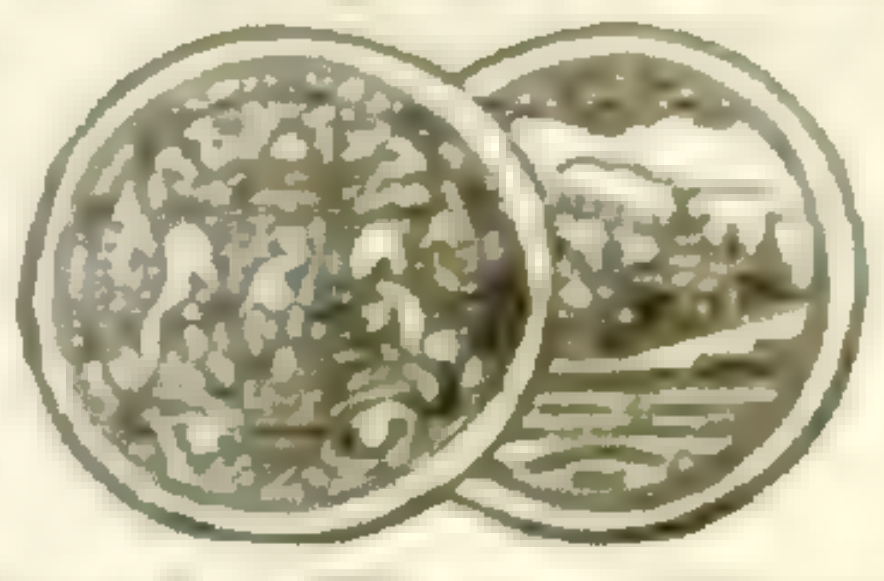

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VOL. LI.—No. 2,861. SATURDAY, AUGUST 29, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Summer Bedders.

Visitors to gardens at this season of the year have an exceptionally good opportunity, not only for enjoying to the full the varied floral displays produced within them, but also for formulating an opinion as to the trend of public taste in its relation to the embellishment of the flower garden during the summer months. We have had many opportunities for visiting gardens in widely separated parts of the country during the past three months, and have taken full advantage of them; and in our visits we have noticed with much satisfaction that there is, on all sides, as strong a love for hardy plants as at any time since the revival of the interest in them. We have noticed also that, speaking in a general way, while there has been no diminution in the interest taken in them, the views with regard to their position in the garden have undergone considerable modification, with, as we believe, advantage to all concerned. Owners of gardens are more fully realising the importance of constant attention and good taste in the management of beds and borders devoted to hardy perennials, and recognise the fact that the association of hardy and tender subjects is a question deserving of the fullest consideration. There are still immense numbers of garden owners who believe hardy flowers are all-sufficient for beautifying the flower garden in summer as at other seasons of the year; but, judging from the observations we have been able to make, the number of those who take extreme views upon this point is gradually diminishing. This is matter for satisfaction, because the greater the breadth of view in garden embellishment the better; but in giving expression to this opinion, we would mention, lest we should be misunderstood, that we feel that, where no effects of the spectacular order are desired, and a personal interest is taken in each individual plant, as in the case of Mr. Kingsmill's garden, of which an illustrated description was given in our last issue, hardy plants are all sufficient. But it must be admitted that where colour effects are desired they can best be obtained by supplementing the hardy plants with tender subjects that can be successfully grown in the open during the warmest season. This fact is now being more generally recognised, as evidenced by the tendency on the part of many owners to give increased attention to the plants popularly known as summer bedders. There is happily no indication of a harking back to the days when the scarlet pelargonium, the yellow calceolaria, and the blue lobelia were in the ascendant, and used almost exclusively in colouring the parterre. The trend is rather in the direction of a freer use of half-hardy plants that are suitable for the production of tasteful effects, and retain their beauty until the season of summer has merged into that of autumn. In the gardens in which we have observed this tendency, there has not been any evidence of a decrease in the interest in hardy plants. They have still spacious borders devoted to them, and they continue to receive the attention essential to their full development, and, as a consequence thereof, the borders are rich in interest and attractions throughout the season. But it is recognised that the hardy plants which produce such a glorious display of colour in the borders, and charm by their diversity of form in leaf and flower, are not the best suited for filling beds near the house where neatness and continuity of flowering are important factors. No longer, as already intimated, do calceolarias, lobelias, and pelargoniums predominate, but they are used as freely as may be considered necessary in working out colour schemes in which yellows, blues, reds, and pinks form a part and no more. With them are associated fibrous and tuberous begonias, which we need hardly say, afford a wide range of colour; ageratums, fuchsias, lantanas, herbaceous lobelias, verbenas, violas, cannas, and various plants remarkable for leaf colouration and elegance of habit. By the judicious utilisation of such materials as these the most tasteful effects may be produced, and the surroundings of the house be made to present a neat yet bright appearance, and especially at the time when the country house is usually filled with guests. We do not hold a brief for summer bedding, nor are we desirous of seeing it greatly extended, because of the work it involves, and the displacement of some part of the hardy plants that would necessarily follow. But we refer to the matter for the purpose of informing our readers as to the tendency of public taste, and pointing out that summer bedders have much to recommend them for the filling of beds contiguous to the house, where continuity of effect is a matter of primary importance. Moreover, they admirably fit into a scheme which includes the free use of crocuses, daffodils, hyacinths, and tulips, in association with such hardy plants as the double arabis, forget-me-nots, polyanthuses, violas, and wallflowers, in beautifying the garden in the spring. The question of flower garden decoration is one that can be considered with advantage at the present time, and we suggest that it be approached with a broad spirit, and that while hardy plants should continue to be grown

MR. GEORGE BUNYARD, V.M.H.,
Chairman of the R.H.S. Fruit Committee.

to the fullest extent, no prejudice should be allowed to prevent summer bedders being utilised in the positions, and in those only, for which they are specially fitted.

Mr. George Bunyard, V.M.H., is so well known to all who take an interest in the practical aspects of horticulture,that in presenting our readers with his portrait there is no occasion we should write at length with reference to the splendid work he has accomplished. Some forty-three years have run their course since Mr. Bunyard commenced business by entering his father's office, having previously laid the foundation of his remarkable knowledge of fruits and fruit culture by assisting in the cultivation, gathering, and storing of the fruit grown for home use and sale. At that time the nurseries had an area of about twelve acres, with a staff of fifteen men, and the trade was of a local character. Now the Maidstone Nurseries have an area of over one hundred acres, a large staff, and a business extending over the whole of the British Isles, and, indeed, considerably beyond their boundaries. From the first Mr. Bunyard devoted close attention to fruit, and soon became well acquainted with varieties, and the details essential to success in the making of trees, and, as the result, he was fully equipped for taking a prominent position in the management of the business when his father's failing health rendered it necessary he should do so. By reason of his business aptitude, and the breaking away from old customs, the demands upon the resources of the establishment increased at a rapid rate soon after Mr. Bunyard assumed the responsibilities of management, and as one of the outcomes the Allington Nurseries were established. By the year 1878 Mr. Bunyard had obtained a high position as a fruit expert, and he was offered a seat on the Fruit Committee of the Royal Horticultural Society, and with this body he has been associated since. For some years past he has occupied the important position of chairman. With the exception of an interval of two or three years Mr. Bunyard has been a member of the R.H.S. Council since 1891, and in 1897 was awarded the Victoria Medal of Honour. In 1890 he was made a member of the Fruiterers' Company, in recognition of the services he rendered in connection with Guildhall Fruit Show, and a few years since he was elected Master of the company, a position, we would add, that had not previously been occupied by a practical pomologist.

Bulbs are now beginning to receive a large share of the attention of the general body of cultivators, and with a view to assisting our readers in making preparations for full displays of bulbous plants, both under glass and in the open, in the spring of 1909, we shall devote our issue of September 12 chiefly to these subjects. The arrangements we have made with contributors specially acquainted with the several classes of spring-flowering bulbs fully justify us in stating that the issue will be equally remarkable for the variety, the interest, and the usefulness of its contents.

The Californian Poison Vine (Rhus toxicodendron) is the subject of an interesting contribution by Sir Ray Lankester to "The Daily Telegraph." After referring to its injurious effects upon persons susceptible to its influence, he observes: "Several cases are on record of the mysterious poisoning produced by this plant in England; but it is strangely unfamiliar to medical practitioners—indeed, practically unknown to them, although an English countess was not long ago a victim for some years to its unsuspected influence. At the University of Harvard, in Cambridge, Massachusetts, they have made quite recently a thorough examination of the poison vine in the laboratory, with the following results: The poison is an oil—a fixed oil, not a volatile one, as we might have imagined from its mysterious action at a distance. The oil exists in all parts of the plant, even in the fine hairs and cuticle of the leaf. It can be extracted by means of ether, and is one of the most virulent irritants known, having a very curious penetrating and persistent action, and producing violent pain and destruction of tissue when placed on the skin in quantity so minute (one-thousandth of a milligram in two drops of olive oil) as to be beyond the terms of everyday language. It seems to be usually brought to the eyes, nose, lips, and skin of the face and body by the fingers which have touched a leaf or fragments of a leaf in powder. The dead leaf in winter still retains the oil, and minute dust-like particles can carry it. The treatment for it is washing with soap, oil, and ether at an early stage of the attack—especial care being taken to free the fingers from any minute traces of the oil adhering to them." Sir Ray Lankester's account of the poisonous effects of Rhus toxicodendron has given rise to some anxiety as to whether it might not in some instances have been planted by mistake for the harmless Ampelopsis Veitchi. It may, therefore, be reassuring to state that the two plants can be readily distinguished by those who have but a slight acquaintance with plants. The rhus does not bear tendrils, while the ampelopsis does. The rhus has trifoliate leaves, and the leaflets have stalks of unequal length, that of the central one being the longest, whereas the leaves of the ampelopsis are entire, with three pointed leaves; occasionally they are trifoliate, but there are always entire leaves on the same plant, and in no case are the stalks of the leaflets of unequal length. Sir Ray Lankester is under a misapprehension in assuming that the medical profession has but little knowledge of the peculiarities of the poison vine.

National Dahlia Society will this year hold its exhibition at the Horticultural Hall on September 3, and the gathering should be of much interest to those who appreciate the value of dahlias for beautifying the garden and supplying an abundance of flowers for indoor decorations late in summer. Dahlias had begun to suffer somewhat on light soils from the drought, but the rains have had a highly beneficial effect upon them, and the blooms are now coming of large size and high quality.

The Jersey Potato Crop has, we learn from the annual report issued by Mr. Philip Barbier, St. Heliers, been on the whole satisfactory. Prior to the end of July when the season closed, 53,100 tons were shipped from the island, and the returns amounted to £356,305, or an average of £6 14s. 2d. per ton. The price obtained for the earlier shipments was remarkably good, the average for the 200 tons dispatched between April 6 and May 2 having been £28 12s. per ton. This produce was obtained from glass-houses and warm slopes. The price for subsequent shipments was well maintained. Upwards of £14 was obtained until the end of the third week in May, and in the last week of that month it did not fall below £11 11s. By the middle of June, when 11,890 tons were exported, the price fell to an average o £6 10s. per ton. Somewhat later the price dropped to £2 9s. 10d. per ton, but quickly recovered to about £3 10s. per t The crop, although satisfactory, was by means excessive in bulk, for during t previous twenty-five years larger quantit were shipped in sixteen years, and the r turns have been greater in twelve year The heaviest crop that has been grown Jersey was lifted in 1907, when 77,800 t were lifted and dispatched to the vario markets, but as the average price was le than £5 per ton the financial results wer not satisfactory to the growers. T largest amount realised was £487,612 1891, and the highest average was rat more than £10 per ton in 1903, in wh year 47,530 tons were dispatched Jersey.

A Commissioner of Fresh Fruits.—A Bill has been introduced int the American Senate which provide the appointment of a fresh fruit comm sioner, whose duty will be to regulat bushel, basket, and box apple measu and ascertain that the contents of packages are of true grade in accorda with the compulsory outside marki With reference to this Bill a corresponden of "The Times" writes: "Might not green fruit commissioner be appointed wi advantage and profit to producers and sumers in England? Market bushel me sures, especially those utilised for app are of such a varying and elastic na that a standard measure should prescribed by law. The apple bu measure cannot be regulated by wei Some varieties of apples are la and light, such as the Early V toria, whilst others are small and he such as Fearn's Pippin. Only a stand measure of capacity can meet the diffic The Bill before the American Senate, w meets with universal approval, compels packer of apples to mark distinctly on package the quality or grade. As most the apples distributed in our markets England are repacked, and often in a that is distinctly to the disadvanta the purchaser, the compulsory marki grade and quality on English apple p ages should be insisted upon in the in of the public. Foreign fruits are often as home-grown, to the injury of the B cultivator and the buyer, and c sorts are often marked and sold as sorts, at enhanced prices. An active fruit commissioner would prove a dis boon, and would make his department of the most interesting branches public service."

Gladioli from Langport. splendidly developed spikes of gladioli Messrs. Kelway and Son have been enough to send us are of much inter a reminder of the great success that been achieved by the firm as raisers cultivators of these stately and attracti coloured flowers. They also sugg remarkable attractions of the la nurseries at the present time. The ties represented by the spikes of sent us are wholly of Messrs. Kelway Sons' raising, and an extremely beau set they are. Among the varieties Prince Henry of York, a distinct ye of high quality, bearing vermilion- flowers; Darkness, rich crimson, lovely purple glow, the flowers and very large: Queen Alexandra, a ha flower of a soft salmon hue, with blotch and white crescent on the segments; Golden Ray, a beautiful yellow flower, with a few crimson ings on the deep golden-yellow low ments; Mrs. F. Field, pure white, pink, and freely marked with brilliant rose, and most attractive; and Mrs. Chatham, a fine variety, the large, pure white flowers being of fine form.

Bulbs for the London County Council Parks.—The bulbs required by the London County Council for planting in their parks and open spaces this autumn will be supplied by Messrs. James Carter and Co., Holborn. The number of bulbs it is estimated will be required are as follows: 20,000 hyacinths, 115,000 tulips, 75,000 crocus, 3,500 lilies, 160,000 snowdrops, scillas, etc. These will be distributed chiefly at Finsbury Park, Victoria Park, Victoria Embankment, Battersea Park, Brockwell Park, Dulwich Park, Ravenscourt Park, Southwark Park, Clissold Park, Kennington Park, Golders Hill, Waterlow Park, etc.

Menthol, which is commonly known by chemists as methylic acid and camphor of peppermint, is described in one of the weeklies as growing in Surrey. The writer, in giving an account of the harvest of fragrant flowers from which essential oils are distilled, writes: "Peppermints and menthol are also grown extensively in Surrey. The plants have only insignificant white and pink flowers, not unlike nettles. They are reaped in much the same way as lavender, and the smell of the distilleries, when their essential oils are being extracted to be used by confectioners and chemists, is almost overpowering." It would be interesting to know what the second of the two plants is to which reference is made, because menthol is not a plant, but a crystalline substance deposited from oil of peppermint when kept a considerable length of time.

The Royal Fern in Lancashire.—At a field meeting of the Liverpool Botanical Society, at Barton, Mr. W. H. Stansfield delivered an address on points of interest in connection with the mossland flora. In the course of his remarks he pointed out that, as a result of draining and cultivation, very little aboriginal moss now remains in Lancashire, and that, as a consequence thereof, the effect on the fauna and flora is becoming very evident. Many plants and animals formerly plentiful on the Lancashire mosses have now become extinct or greatly diminished in number. Osmunda regalis, the well-known Royal Fern, afforded a striking instance. Formerly this handsome fern covered vast areas of moss, and was especially plentiful about St. Helens. Mr. Stansfield remarked that he could remember large quantities being brought from the mosses into Manchester markets. Now, however, partly owing to drainage, and largely as a result of vandalism, this handsome fern is almost lost to the county.

Window Boxes in Winter.—Much has of late years been accomplished in Manchester in encouraging a taste for flowers among the poorer classes by the awarding of prizes to the best-kept window boxes. A correspondent makes the suggestion that the owners of window boxes in that city should be further encouraged by instituting a winter competition.

Brympton Horticultural Society, which was founded early in 1907, has, we are pleased to learn, held a highly successful exhibition. The show was held in Brympton Park, the residence of Sir Spencer Ponsonby-Fane, G.C.B., and there were 831 entries, as compared with 492 entries last year. The weather was not favourable, but we are informed by Mr. W. Hobby, the hon. secretary, that the society has a good balance at the bank.

DESTROYING WASPS' NESTS.

Although one may come across them at any time after the middle of July in an average summer, wasps' nests are not generally much in evidence until the early part of August, and sometimes not before the middle of that month. So soon, however, as the pears, plums, and apples begin to ripen in any quantity wasps are almost certain to make their appearance in considerable numbers, although the plague is often so local in character that one county may be overrun with the pests while the next is almost entirely free from them. Nearly every part of the kingdom has its turn, however, and there are many particularly favourable districts where hardly a summer goes by without great inconvenience and loss being occasioned by myriads of these unwelcome insects. How great may be the damage committed annually by wasps, it would be impossible to determine, but it is very certain that the loss to fruit-growers, fruiterers, and confectioners must total many thousands of pounds per annum, while a not inconsiderable amount of loss is suffered by private individuals. The question of inconvenience and suffering caused by wasp-stings is undoubtedly a small one considering the many millions of these insects that a fine summer must produce, and the consequences are not generally very serious. Fatal cases of wasp-sting do, however, occasionally occur, and many accidents have been caused by horses being stung while passing a wasps' nest by the roadside.

From every point of view, therefore, it is desirable that the number of wasps should be reduced as far as possible, for the small amount of good that they may do in destroying flies is quite disproportionate to the harm that they commit in a variety of directions. The destruction of wasps is a matter in which nearly everyone is interested, and it is therefore somewhat surprising that so little effort is made towards organising a co-operative movement with that object in view. It is true that in some villages the vicar or schoolmaster has instituted a competition among the school children to see who shall bring in the greatest number of dead queen wasps in the spring, and here and there small rewards are offered to encourage this good enterprise; but in most parts of the kingdom no attempt whatever is made to kill the queens, and the most primitive and unsatisfactory methods are adopted for the destruction of the nests. Probably only a very few of the total number of the latter are discovered, those which are found by accident or placed in such conspicuous positions that they cannot be missed being the only ones that anyone attempts to destroy.

Now that a move has at last been made in the matter of rat destruction, and steps are being taken to bring into line such local organisations as already exist for the suppression of such unnecessary creatures as rats and sparrows, it would seem a good opportunity to do something of the same sort in regard to the taking of wasps' nests. Such a campaign ought to be very easily initiated, and one cannot conceive that there would be any opposition on the part of anyone. It might be necessary to offer some inducement in certain cases, but one imagines that the owners of orchards and gardens, as well as local tradesmen who find their wares spoilt and eaten by wasps, would readily support a movement that must be of great advantage to them. Competitions might also be arranged as in the case of rat and sparrow clubs, and a small entrance fee charged to cover any incidental expenses and help to swell the prize-money. But in such a matter as the destruction of wasps' nests, it would be absolutely necessary to have some responsible person to conduct affairs, or otherwise the whole thing might frequently end in dire disaster. In the first place one is dealing with a dangerous and determined enemy which requires careful handling, and in the second the methods adopted are not always free from danger in themselves. Many an accident has happened to a party of foolish boys bent on wasp destroying, and, while it might be all very well for the younger members of the community to search for and mark the nests, the actual work of destroying them ought to be left to those of riper years.

Of all the plans for taking wasps' nests that have been recommended, none can equal the employment of cyanide of potassium for ease of application and absolute efficiency. It is a deadly poison, and as such is only sold to those over age, and must be signed for when purchased. The greatest care must be exercised in using it, and none but a very careful person should be allowed to keep or handle it. The modus operandi is simplicity itself. First of all, the hole must be marked in some way, so that it may easily be found after dark, for wasps go to bed late, and it is no good trying to destroy a nest until all are at home. One person should carry the cyanide and an old teaspoon to administer it with, while another brings a spade and lantern. A sod of turf is cut and brought near the hole, and while the light is placed sufficiently near to enable the operator to push a teaspoonful of the cyanide as far down the hole as it will go, the other man should be waiting ready to clap the sod of turf over the mouth of the hole. A pat or two with the back of the spade will make all secure, and next morning the nest may be dug out, and all the grubs in the comb destroyed. If the cyanide be fresh and the work properly done, not a wasp will survive its deadly effects, and the cost of destroying a score of nests is only a few pence. With such a powerful agent easily procurable, it is mere waste of time and patience to try and take wasps' nests with such unsatisfactory things as tar, boiling water, paraffin, soap-suds, or squibs, not one of which can be relied upon to achieve the desired result at the first time of asking. Finally, let it be urged that in taking wasps' nests early action is of the utmost importance, for the nest that is only two or three hundred strong to-day may contain ten times as many wasps before another week has gone by.

East Sussex.

Veronica filifolia.—There is now in cultivation a very beautiful little speedwell under the name of Veronica filifolia. In foliage it resembles few of the other herbaceous veronicas, this being extremely graceful, and finely divided, as the specific name would suggest. The flowers, also, are charming, with their soft blue colouring, and, as the plant is quite dwarf, it is a splendid thing for the rockery. It is as yet but little seen in British gardens, but is apparently making its way gradually into our gardens. I had V. filiformis some years ago from the famous gardens of M. Philippe de Vilmorin, at Verrieres-le-Buisson, but, through an accident, lost it after a year or two, and have only recently replaced it, much to my own gratification. Only lately I came across it in a few good gardens in Ireland, and I was glad to find that it was appreciated there by good and tasteful lovers of alpine flowers. V. filifolia is quite hardy, and can be cultivated in ordinary soil, although I think it prefers one which is a little moist, though not excessively so.—S. Arnott.

BLACK AND RED CURRANTS.

The various kinds of small fruits form such an important part of the annual crops that one is constrained to ask himself the question if the most is really made of the limited space at his command, or if there are no improved methods to be adopted. There are but very few gardeners with unlimited resources, or who are able to do just as they wish; if there are any such they may consider themselves fortunate. It too frequently happens that the kitchen garden is far too small for the requirements of the establishment, and when a good portion of that already overtaxed small plot has to find accommodation for hardy flower borders, and plants to produce cut flowers, there is not much space left for crops that are really necessary.

Black Currants.

In many places the black currant is in great demand, in others it is the red varieties, or it may be the gooseberry, raspberry, strawberry, loganberry, or the like. Let us take the black currant first, as this fruit is used for a variety of purposes, such as making jelly and preserves, as well as for general cooking. This being so, it is necessary to extend its season of usefulness over as long a period as possible. To do this several varieties should be grown, and they should be planted in different positions, the earliest being given an open sunny place, while the late one should be planted in a shady spot, such as on a north border. Black currants are moisture-loving subjects, and though with attention they may be grown to perfection in dry, gravelly soil, they will grow much more freely with the same treatment in a deep rich loam. To produce the finest samples it is necessary to have young bushes, and were this practice adhered to, we should hear but very little about the black currant bud mite. This is a pest that has not troubled us here, for the simple reason the bushes do not remain sufficiently long in one place.

As every gardener knows, black currants are readily propagated by cuttings, some take off the tips of the shoots about six or eight inches long, and insert these close together in beds in the winter, but we prefer selecting some of the strongest shoots from eighteen inches to two feet in length, and taking these off with a heel of the old wood attached as soon as the young wood has become matured. These cuttings are dibbed in beds that have been previously prepared for that purpose on a north border, where the soil can be kept moist and cool. They are inserted about six inches deep, holes being made with a dibber to admit of them being put in the proper depth. We usually allow a space of a foot between each cutting in the row, and a distance of from fifteen to eighteen inches between the rows. By the following autumn they are nice strong plants, ready for transplanting in their permanent quarters. There is no necessity to put them any great distance apart, four feet each way being ample, and where space is very limited a row of lettuce or some other dwarf crop might be grown between them the first season. It is far better to give the currant bushes a liberal mulching as soon as planted. Some have an idea that if planted any time during the winter equally satisfactory results can be obtained, but if anyone will take the trouble to plant during the first spell of showery weather in October, and lift a plant or two again about the latter part of November, they will find that new roots have been made from two to three inches in length, thus proving the great advantage in early planting.

As previously remarked, black currants are moisture-loving subjects; for this reason they should be liberally supplied during the early summer with sewage or the drainage from the farmyard. Here we allow the bushes to stand from three to four years, then destroy them. Each year a fresh lot is planted, so that there is always a stock of young bushes that can be depended upon to give a crop of fine fruit. There are now several very fine varieties of black currants, such as Early Victoria, Coronation, Boskoop Giant, Carter's Champion, Goliath, Lee's Prolific, etc. Where large quantities of fruit are required it is well to grow several varieties, as the late sorts when planted in a cool, shady place, will give a supply of fruit until the end of August. There is no advantage in having the wood overcrowded in the bushes, and this is not likely to happen if they are only allowed to stand three or four years in one place. It is when the bushes become old that the wood becomes overcrowded, spindly, and unfruitful, the foliage often being a prey to red rust, spider, and the bud mite. Keep them healthy by generous treatment, and they will well repay the cultivator for his trouble. Allow them to become sickly they will soon be a source of trouble and annoyance, being neither of any use or ornament.

Red Currants.

These are used for a variety of purposes, and, though the fruit does not command such a high price in the market, they are even more useful in private establishments than the black varieties, as by careful cultivation the fruit may be had in use until quite late in the season. It is no uncommon occurrence in favourable seasons, and in districts where birds are not too numerous, to see red currants hanging on the trees after the leaves have fallen, as they do not drop off as in the case of the black varieties. Trees that are intended to carry their fruit until late in the season should be planted against a north wall, and have their shoots trained horizontally; by so doing the fruit hangs in a great measure clear of the wood, thus allowing a freer circulation of air amongst it. If the trees are planted four feet apart they will soon cover a wall eight or ten feet high, as two tiers of shoots may be taken up annually. The best varieties for planting against walls are those which produce long, loose bunches, such as Raby Castle and Warner's Grape. La Constance is also a good variety, and hangs well.

The red currant is propagated in the same way as the black, though it is not generally understood that if the cuttings are taken early in the autumn as soon as the wood is ripe, and before the leaves have fallen, that they will take root during the winter, and produce strong, healthy shoots the following year. At the time of taking the cuttings it should be determined what shape the bushes are to assume. The cuttings should be planted in rows with a dibber from a foot to fifteen inches apart in the row, allowing two feet between the rows, where it is intended to train the plants. If intended for bush plants the rows need not be so far apart. There are many varieties of red and white currants, but some of the older kinds have been superseded by those of more recent introduction; they make stronger growth, produce larger fruit, and, as the bunches are longer, the berries hang more loosely, and on that account are not so liable to rot. La Versaillaise, Mammoth, White Versailles, La Hâtive, and Knight's Large Red are all good. The red varieties do not suffer from the currant bud mite, and the only pest that troubles us is the larvæ of the clear wing sphinx; these sometimes eat the pith out of the shoots, causing them to die off.

There can be no doubt but that red currants grow far best in a rich loam, and where an abundance of moisture can be provided at the roots, the fruit is both finer and will hang for a longer time than when the trees suffer from want of moisture at the roots. For general use bushes from five to six years old are preferable to older ones, and if a stock of cuttings are put in each season there will always be a supply of young healthy plants to draw from. H. C. PRINSEP.

Buxted Park Gardens.

RAMBLER ROSES.

Although the growth of these roses has not been so rampant this year as in 1907, the plants have made an average growth, and there is an abundance of young shoots starting from the base of the plants. In this district we have suffered severely from drought, and all outdoor crops have much needed rain. Roses especially wanted rain, and as it has now come there is sufficient time for plants to make up any arrears of growth. The thorough moistening of the ground in its heated condition will speedily produce more growth.

If not already done, the rambler section of roses should have their annual pruning, which will be the cutting out of the shoots that have flowered bodily from the base, so as to make room for, and divert the vigour of the plants into the young growths which are partly grown. To do this efficiently, it is best to loosen all the shoots from the arches or pillars on which the plants are growing. Then carefully lay them out, and afterwards cut out all the growths that are not required for next season. Leave the current season's growth only, unless by so doing the arches or pillars are likely to be somewhat bare, when a few of the older growths may be retained for covering purposes. Keep the shoots secured to their supports as they grow, and this will complete the pruning until next year.

Ramblers have never made a better display with us than this season, while the colours have been intense, especially in the darker shades, notably among them has been Ruby Queen, the colour has been splendid. This variety also has the merit of clean, shining foliage, and is very distinct in character. These two qualities alone should recommend it to planters. All varieties in this section have been good this season, but the one named has been pre-eminently so. T. H. SLADE.

Shasta Daisy.—Can any reader of the GARDENERS' MAGAZINE say anything in favour of this plant? I have tried to grow it during the past two seasons without success, and find it a weedy, poor thing, which withers very quickly in dry weather. The old Chrysanthemum maximum doesn't mind a drought.—J. C.

Godetia, Double Rose.—This double-flowered godetia is one of the best to grow both for display and effect or for cutting purposes. It is a showy plant in a bed, but, like many of the godetias, should not be relied on for a lengthy display. The variety under notice is very effective in a long border and also planted in good-sized clumps in the herbaceous border. While it blooms when there is an abundance of other flowers, yet it provides variety for cutting, the spikes of bloom lasting well in the cut state. Good cultivation and generous soil leave their mark on this annual, and where such can be given the results fully justify the time and attention given them.—T. H. SLADE.

IRIS VERSICOLOR.

As an illustration of the adaptiveness of plants under cultivation one may cite the common Marsh Iris of the United States of America, a plant that possesses all the characters of a waterside plant, but which will grow and thrive in positions that may be described as sun-traps, and in the poorest of soils, so tenacious is it of life. Despite this seeming advantage Iris versicolor has not enjoyed a great measure of popularity. One finds a few clumps in the gardens of the curious and the scientific, and occasionally a happy grouping by waterside, showing some landscape genius had been there, but generally I. versicolor is an unknown plant in English gardens.

In common with most grassy irises of the American beardless group, it is very variable in colour, and the species embraces claret, red, blue, purple, violet, and pale mauve forms, and all vary a little in height and shape of flower. The flower's shape is practically that of Iris reticulata, but the standard petals are half the length of the fall petals; they measure four inches across, and are produced in flexuose sprays just surmounting the leaf cluster, and are effective for a month or five weeks preceding midsummer.

The leaf system is markedly robust, distinctly fan-shaped, and when grown by waterside exceedingly dense and vigorous, the plants being capable of holding up banks (that would otherwise fritter away) by their ramifying root system—an excellent use to which I have many times put them. Their value for broad plantings in semi-wild parts of the water garden and marsh is too great to be overlooked. Although they have not enjoyed a great measure of popularity in the past, there is a rapidly increasing scope for their use in informal gardens and in positions where it is desirable the plants should be able to take care of themselves. I know of several colonies that have thriven apace, and which have spread rapidly by ramifying rhizomes and many hundreds of self-sown seedlings till the patches appeared literally all flowers in the distance. These Iris versicolor can combat all but the strongest grasses, and hold their own with sedges, rushes, and other waterside vegetation if the soil is moist.

Selected or garden colour forms include Kermesiana, whose colour scheme is claret-red. Columnæ, violet-purple; Virginica, pale purple; and pallida, soft lilac. The standards are invariably paler than the fall petals, and these latter are as rich in their particular colourings as any flower I know. All have a white, lined signal patch that serves to heighten the intense colouring of the falls. Those who care for the very easy work of raising I. versicolor from seeds will find endless colour forms among their productions, violets and purples predominating.

To the student of evolution the grassy irises of America are an engrossing study. They are derivatives of apparently one ancient type, and every species is linked up by a series of intermediate forms that render their classification difficult. The lowland and marsh species are among the easiest of plants to grow, but the high and mountain species and species from dry regions call forth all the tenacity of purpose, patience, and the other virtues the man who cultivates alpines, dry region and high level plants must possess—or fail in his efforts to grow them.

G. B. Mallett.

SCHIZANTHUSES.

The various species and varieties of schizanthus are now generally appreciated as subjects for summer bedding, and for this form of garden decoration they are singularly effective, being not only extremely beautiful in foliage, but they embrace a good range of colour and are exceedingly light and graceful. They cover a long season of flowering, and the colours readily harmonise with most other subjects. All the species of schizanthus are annuals, which, to many people, simply means that haphazard growing is good enough, and it is this indifferent culture that so often misses the best things in gardening.

The ground intended for growing these annuals should be of medium richness. I do not advocate direct manuring unless it can be applied the previous autumn, employing thoroughly decayed manure from the farmyard or a spent mushroom bed. Manure of this description by spring becomes incorporated with the soil, and is therefore in a state readily assimilable by the roots.

Seeds can then be sown in the open ground any time after April 1, and the resulting plants thinned out to 12 or 18in. apart. The system I follow is to sow seeds under glass about the middle to the end of April, the seedlings are pricked out into boxes and grown under cool frame treatment, being finally planted out to the open ground at the end of May. Provided the ground has been carefully prepared growth will be vigorous and flowering will follow in due course, the plants remaining in bloom for a period of three months or more. This sowing will be most effective throughout July and August, but where a later display is desired, a date correspondingly later should be chosen for sowing.

Should the weather prove hot and dry after planting, water must be freely applied, and every encouragement given to luxuriant growth. Strong plants come into flower early, and continue growing, but weaklings soon answer to fertilisation, and their further development is stopped by the strain of seed production. The best species of schizanthus is Wisetonensis, which combines beautiful crisped foliage with a splendid range of soft shades of colour. This species yields seeds sparingly, consequently it is somewhat expensive to procure compared with some of the older species. Next in value to Wisetonensis are the hybrid forms, which largely figure in trade exhibits, and are probably the progeny of the last-named and pinnatus. These hybrids ripen seed in abundance, a mixed blessing, as the effort of seed production greatly reduces their period of attractiveness. Retusus and retusus Grahami have both flowers larger than the above, but they are produced more sparingly, the latter is a fine red flower, with a strong yellow lip. Retusus and its forms are not so floriferous as the others, yet when inter-grouped with Wisetonensis and pinnatus, their elegant leaves add to the general effect, and it is often the only greenery discernible among the mass of flowers which these last-named produce. The dwarf hybrid schizanthuses attain a height of 15in. when grown in the open, the others vary in height from 18 to 24in. For pot culture no annual can surpass the schizanthus for usefulness, as by sowing at frequent intervals they may be had in flower through summer and autumn, and an August sowing yields one of the most useful batches for spring flowering, as the subsequent plants come into flower in time for the Easter festivities. The effectiveness of the schizanthus in the garden is well shown in the accompanying illustration.

Thomas Smith.

Walmsgate Gardens, Louth.

A TASTEFUL ARRANGEMENT OF SCHIZANTHUSES AT WALMSGATE.

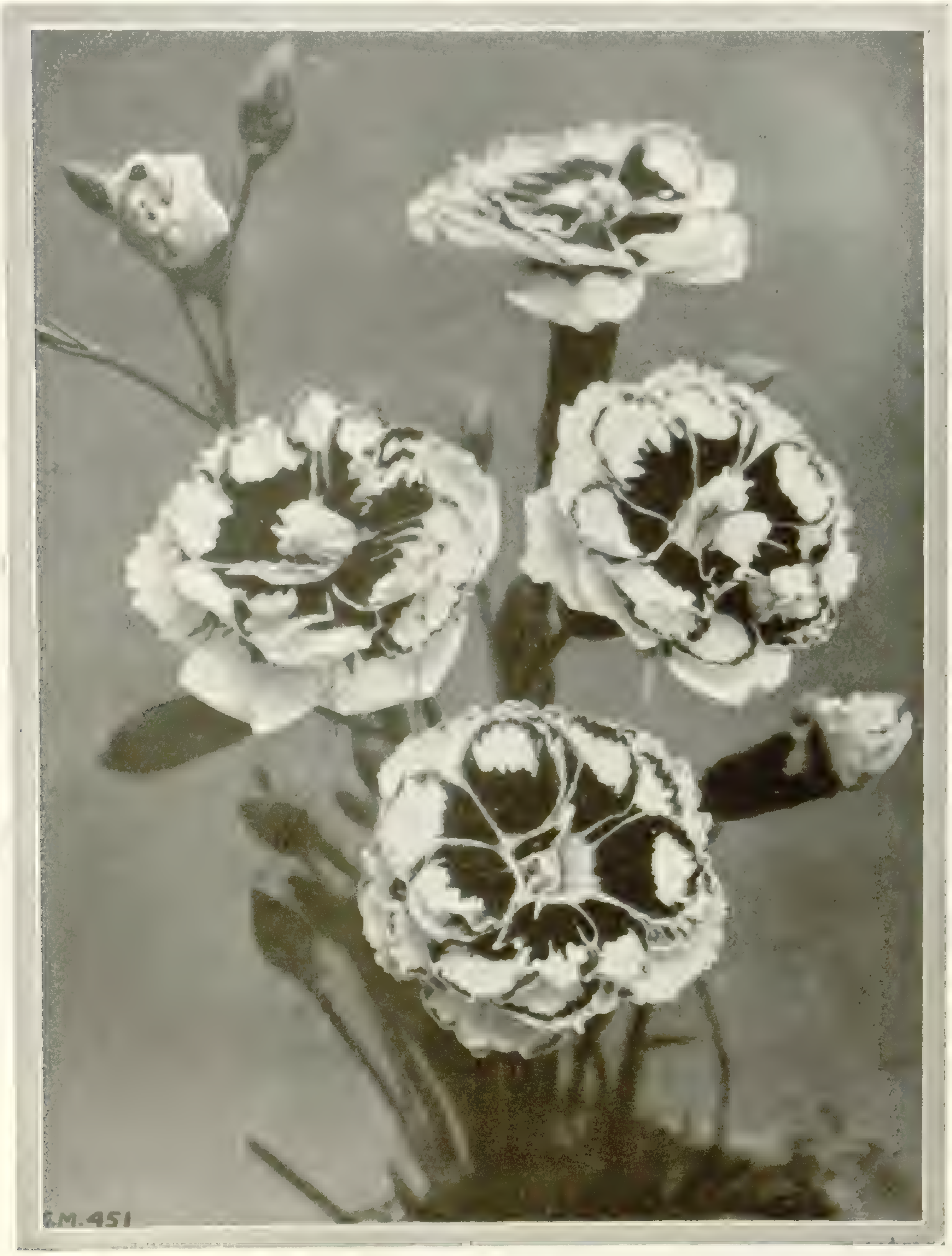
Helenium cupreum. — Helenium cupreum is one of the most conspicuous objects among hardy perennials at the present time. The colour of the flowers is a curious combination of bronzy chocolate and orange, a rare colour among plants, and one which is always popular. The plant attains a height of 2½ft., the growth is very free, and it is one of the best plants for flowering throughout a period of drought. The best results follow from planting in a good deep mass, and as it is easily increased by division, no difficulty need prevent the attainment of this end.—Thomas Smith, Walmsgate Gardens.

NEW PLANTS, ETC.

◆

ODONTOGLOSSUM WIGANIANUM SUPERBUM.

A remarkably handsome variety of the fine hybrid obtained from a cross between O. Wilckeanum and O. Rolfæ, as will have been seen from the characteristic illustration given in our issue of the 22nd inst. The flowers are large and of fine form; the petals and sepals bright yellow, freely marked with dark crimson spots, the lip pale white, marked with bright rose-purple. F.C.C., R.H.S., August 18. Sir Trevor Lawrence, Bart. (orchid grower, Mr. W. H. White), Burford Lodge, Dorking.



PERPETUAL-FLOWERING PINK PRINCESS CHRISTIAN,

Exhibited by Messrs. B. Ladhams, Lim., at R.H.S. Meeting, August 18, when an A.M. was conferred upon it. The flowers are shown rather below natural size, and the petals are laced with purple.

SOPHRO-LÆLIO-CATTLEYA MARATHON.

A distinct hybrid with Sophro-lælia Psyche and Cattleya Empress Frederick William as its parents. The flowers are large, and possess much beauty; the sepals and petals white marked with rose, the lip bright ruby red. A.M., R.H.S., August 18. Messrs. Charlesworth and Co., Heaton, Bradford.

THALICTRUM DIPTEROCARPUM.

A charming hardy border plant found growing in Western China at elevations ranging from 4,000 to 5,000 feet, and introduced to cultivation by Messrs. J. Veitch and Sons. The plants attain a height ranging from 18 to 24 inches, and the soft lilac-coloured flowers, which have pale-yellow stamens, are borne in panicles nine or ten inches in length. A.M., R.H.S., August 18. Messrs. J. Veitch and Sons.

SOPHRO-LÆLIO-CATTLEYA MEDEA VINICOLOR.

A beautiful variety that deserves a much less cumbrous name than has been given it. The hybrid was raised from a cross between Sophro-lælio læta Orpetiana and Cattleya bicolor, and is remarkable for the comparatively large size of its flowers, and this variety differs from it chiefly in having flowers of a rich vinous crimson. A.M., R.H.S., August 18. Lieut.-Colonel Holford (orchid grower, Mr. H. G. Alexander), Westonbirt, Tetbury.

CYPRIPEDIUM ROSETTI.

A beautiful hybrid between C. insigne Sanderæ and C. Maudiæ. The flowers are rather large, the flowers are pale green-yellow, the dorsal sepal veined with bright green, and having a broad white margin to the upper part. A.M., R.H.S., August 18. Lieut.-Colonel G. L. Holford.

TRICHOPILIA NOBILIS ALBA.

A beautiful variety differing from the type in having its flowers wholly pure white. A.M., R.H.S., August 18. Messrs. Charlesworth and Co.

ODONTOGLOSSUM ZENOBIA.

A hybrid remarkable for its distinctness and beauty with O. Halli and O. Edwardi as its parents. The flowers are finely formed, the petals and sepals deep chocolate tipped with white, and the lip brownish red with a few white markings. A.M., R.H.S., August 18. De B. Crawshay, Esq. (gardener, Mr. Stables), Rosefield, Sevenoaks.

APPLE FELTHAM BEAUTY.

A dessert variety possessing quite exceptional merit, and a valuable addition to the eating apples available for the table at this season of the year. The fruits are of medium size, roundish and shapely, the skin green-yellow richly coloured with red, especially on the side next the sun; the flesh yellowish-white, brisk, sweet, and juicy. The parents were Cox's Orange Pippin and Gladstone. A.M., R.H.S., August 18. Messrs. J. Veitch and Sons, Chelsea.

PERPETUAL PINK PRINCESS CHRISTIAN.

A useful addition to the border pinks, being strong in growth and free and continuous in flowering. The flowers are of full average size and good form, the petals slightly serrated at the margins and finely marked with rich purple, as shown in the accompanying illustration. A.M., R.H.S., August 18. Messrs. B. Ladhams, Lim., Shirley, Southampton.

OLEARIA CILIATA.

An elegant species attaining a height of about two feet, and producing a profusion of flowers about an inch in diameter; the ray florets are lilac and the disk yellow. This shrub is a native of Australia, and inhabits deserts and sandy places. Seeds were sent to Kew from Albany, West Australia, by Sergt. Goadby, R.E., in 1899, and plants flowered in the Temperate House in the spring of 1907. It has yet to be proved whether it will thrive in the open in the British Islands. It is difficult to propagate from cuttings, and it has failed to mature seeds at Kew. "Bot. Mag.," t. 8,191.

LIPARIS TABULARIS.

One of the most attractive of the species of Liparis and closely related to the Formosan L. macrantha. It was introduced a few years since from Penang; was flowered in Mr. H. T. Pitt's collection at Stamford Hill in April, 1906, and submitted to public notice at a meeting of the Royal Horticultural Society. The flowers are comparatively large, reddish-purple, and borne on a spike rising to a height of about six inches. "Bot. Mag.," t. 8,195.

PHILADELPHUS PURPUREO-MACULATUS.

A handsome shrub of medium stature described as having been raised from seeds ripened by Philadelphus Lemoinei Fantasie; a hybrid raised by M. Lemoine from a cross between P. mexicanus and another form. This fine form is of medium stature, and bears pure white flowers with purple blotch at the base of each petal; in the figure the blotch is rose-red, and much lighter than the colouring of the flowers of any of the many plants of P. purpureo maculatus that have come under our notice. With reference to the culture of this valuable shrub Mr. W. J. Bean writes: "A mode of cultivation which answers exceedingly well for Philadelphus Lemoinei at Kew may be adopted for this plant also. This is to cut away the shoots that have flowered as soon as the blossoms are over, thus leaving behind nothing but the young growths of the current year. These grow quickly, and make long flowering shoots for the following year, to be cut away in their turn. Propagation is most readily effected by cuttings made of the young shoots whilst they are still in a semi-herbaceous condition. Placed in a brisk bottom-heat they strike root in a few days." "Bot. Mag.," t. 8,193.

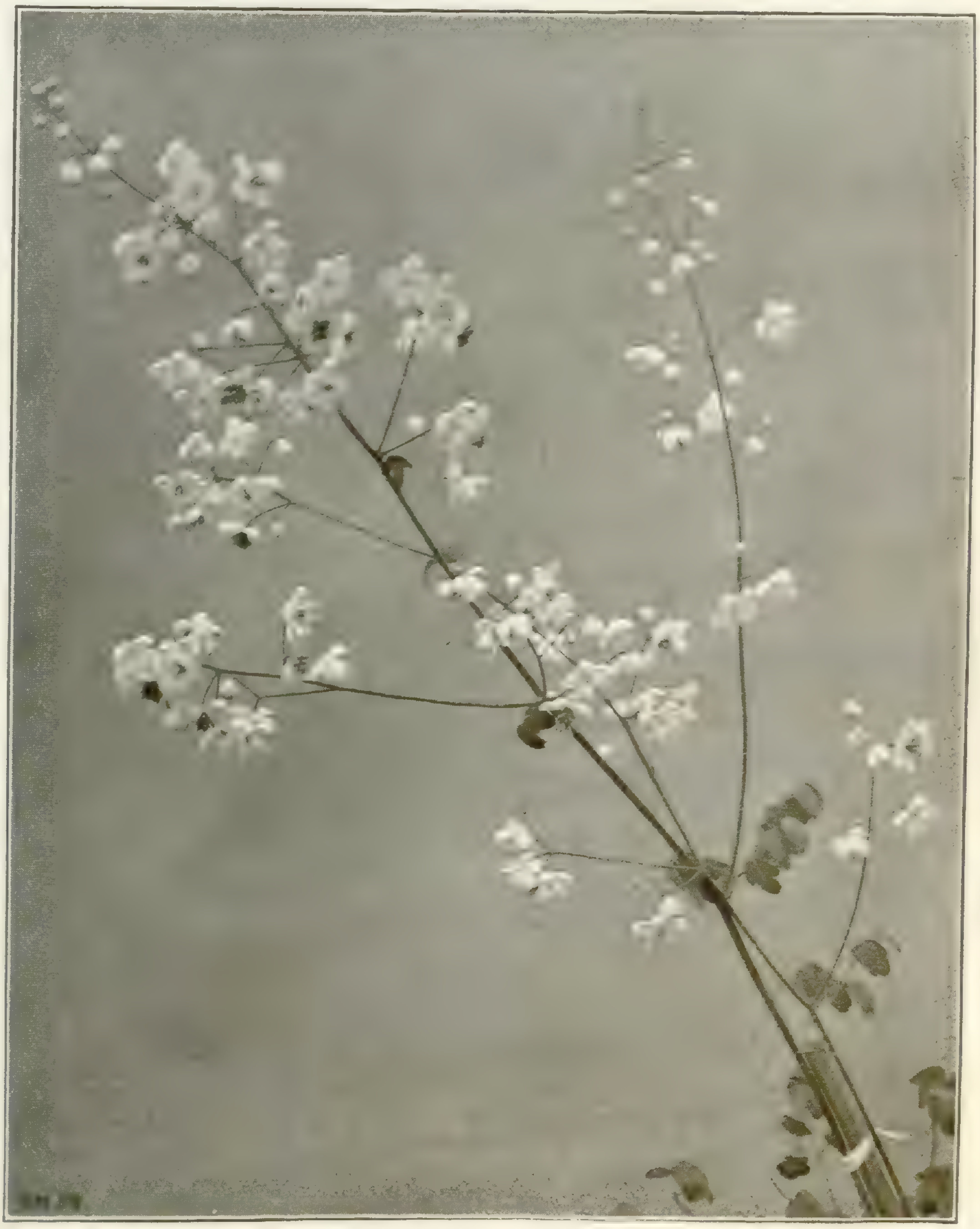
THE LADY FERN AND ITS VARIETIES.

Those who have seen the Lady Fern (Athyrium filix-fœmina) at its best in some of the cool, moist, shady coombes of Devon, or the equally favourable glens of Scotland, will readily admit that it is one of the most delicate and graceful ferns extant. To its delicacy of cutting when developed to the utmost we must ascribe both its botanical and popular names, which are really synonymous; both are, however, misapplied, seeing that, like all other ferns, it propagates itself by spores, which reproduce a succeeding generation by independent fertilisation of an embryo seed. Had, however, the old botanists who christened it foreseen the marvellous varieties which the species has since produced, they would possibly have felt more than justified in so naming it, since no fern in the world, and we speak advisedly, has managed to contrive so many diverse fashions in its foliage as the Lady Fern, and, in this way, asserted its feminine character by its consequent assumption of a truly ladylike capacity.

If we compare some of the most diverse bizarre sports of this species with each other, and with the normal or common form, we shall find, indeed, a fair parallel between them and those extraordinary varieties of feminine costume which have displayed themselves in successive eras, as shown by antique fashion plates. Normally, that is, in what we may term the peasant costume, the Lady Fern adopts a garb of delicate point lace, the tall graceful fronds being cut into small and smaller divisions, each of the smallest being a little miracle of semi-translucent veins, to which the finest lace must yield in delicacy. Lace, however, not sufficing for her ladyship's taste, she has in numerous cases adopted more or less elaborate tassels, some fan-shaped, some bunched, some with long repeated strands on very charming lines, and in a few cases she has gone so far as to put tiny tassels to all the tips of her finest point lace to quite a bewildering extent, far and away eclipsing any human effort at embroidery. In the well-named Victoria Lady Fern she has adopted a criss-cross lattice-work effect, tipped with the best type of slender tasselling on absolutely unique lines. In A. f.-f. Frizelliæ she goes in for the narrow and slender style, and adopts a sort of bead costume, the divisions being bunched up into rows of little round knobs, and, by way of variation on this particular form, crests, or spreading tassels have been added by way of ornate fans. Then we have ambitious dames who, spurning the simplicity of mere lace, have donned delicate plumes, the fronds being cut so finely as to be quite feathery in texture. These form what are termed the plumosums, and by many are esteemed as the most beautiful of all. Ringlets have been assumed on more or less successful lines, A. f.-f. revolvens having the side divisions rolled and twisted into spirals, while the whole frond forms nearly a tube with a spiral end, the minor spirals forming a curly fringe. A. f.-f. fluctuosa is a lady who conceived, but only half perfected, this idea, and has only succeeded in twisting herself into acrobatic contortions. Besides mere fashion in dress, too, there are giant ladies and dwarf ones, the last-named embracing some of the prettiest little ferns existing, the tasselled and crested forms being condensed into miniatures only a few inches high when full-sized. In some instances the lady is absolutely lost to view as a fern proper by hiding her identity under such a dense heap of frills and tassels, that she resembles a ball of fine moss (A. f.-f. uncoglomeratum).

The Lady Fern has, in short, eclipsed all other fern species in versatility of design, and it is noteworthy that every distinct type must be attributed solely to Dame Nature's inventive power, and not to any capacity in that respect of the fern specialist and selective cultivator. We plunge into a ferny glen or woodland nook where the Lady Fern abounds, and among the thousands of fair dames of ordinary type we may suddenly perceive one of quite different appearance, tasselled or plumed, or otherwise costumed, and all we can say of her, as was said of Topsy in "Uncle Tom's Cabin," "I specks she growed." None of her companions present the slightest claim by family resemblance to her parentage, and there she stands alone in her glory until her discoverer transfers her to a place of honour in his collection, and thus, maybe, adds thereto an unique attraction. Some slight idea of the capacity of variation of the Lady Fern may be found when we state that over 300 distinct varieties are described and chronicled, with their finders or raisers, and although even this number is exceeded by the Shield Ferns and the Hartstongues, the fact remains that in the Lady Fern there are several marked types of variations distinct from any which have appeared in any other fern species in the world. Not content, too, with her native sportiveness, when brought under culture her descendants not only inherit her peculiar tastes, but often display and expand them on more and more marked lines, enhancing their beauty immensely. Finally, when we add that the Lady Fern is one of the easiest culture, resenting only drought and rough winds, which spoil its beauty, we think we have said enough to induce our readers to give at least a few good specimens a place in their rockeries and shady conservatories.

Chas. T. Druery, V.M.H., F.L.S.



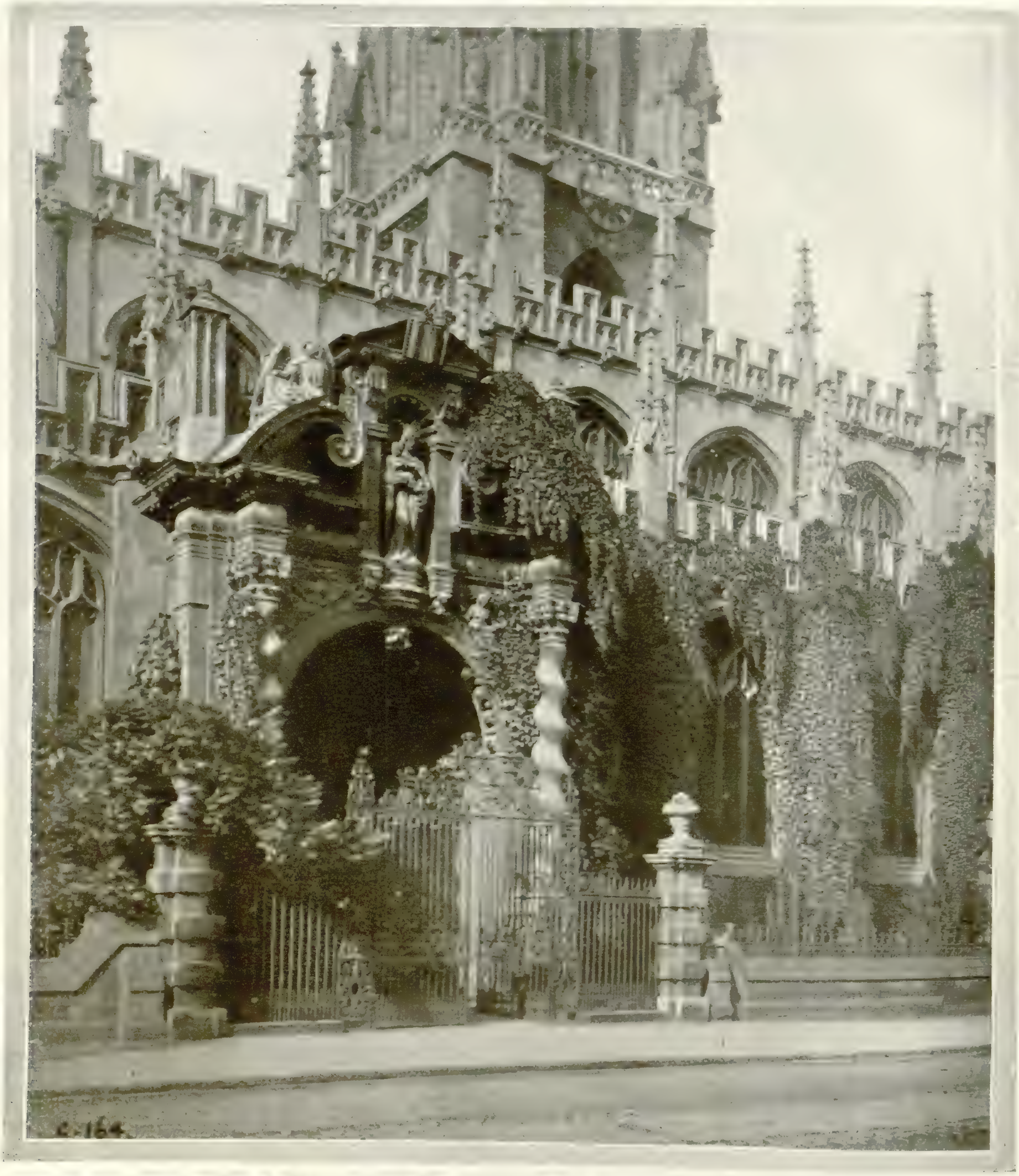
THALICTRUM DIPTEROCARPUM,

A new hardy plant, exhibited by Messrs. J. Veitch and Sons, at R.H.S. meeting on August 18, when an A.M. was conferred upon it. Flowers, lilac colour with yellow stamens.

Viburnum plicatum.—This beautiful shrub was more beautiful than ever this summer. I am sending you a photograph of one growing at the end of my vine border here [shows a fine plant.—Ed.] It was just an avalanche of snow-white flowers from top to bottom, surpassing all its former meritorious efforts. Visitors to my garden would look at nothing else. Just beyond it, in the angle between the greenhouse and the wall, is a young specimen of V. macrocephalum; this also covered itself with glorious trusses of the purest white, and was "highly commended," but, in the matter of attractiveness, it was quite dwarfed and overshadowed by its older and bigger relative.—S. G. Reid, Yalding, Kent.

USE OF CLIMBING PLANTS ON BUILDINGS.

There cannot well be any difference of opinion with regard to the beauty of climbing plants, and their usefulness in the garden; but there is room for a diversity of views on the manner in which they should be used on the walls of public and private buildings. This diversity is greater than might have been expected, and it finds expression in walls bare of greenery, that would be greatly improved by a liberal use of plants of scandent habit; and in the covering up of buildings remarkable for their historic interest or architectural beauty, in such manner as to hide from view their distinctive features.



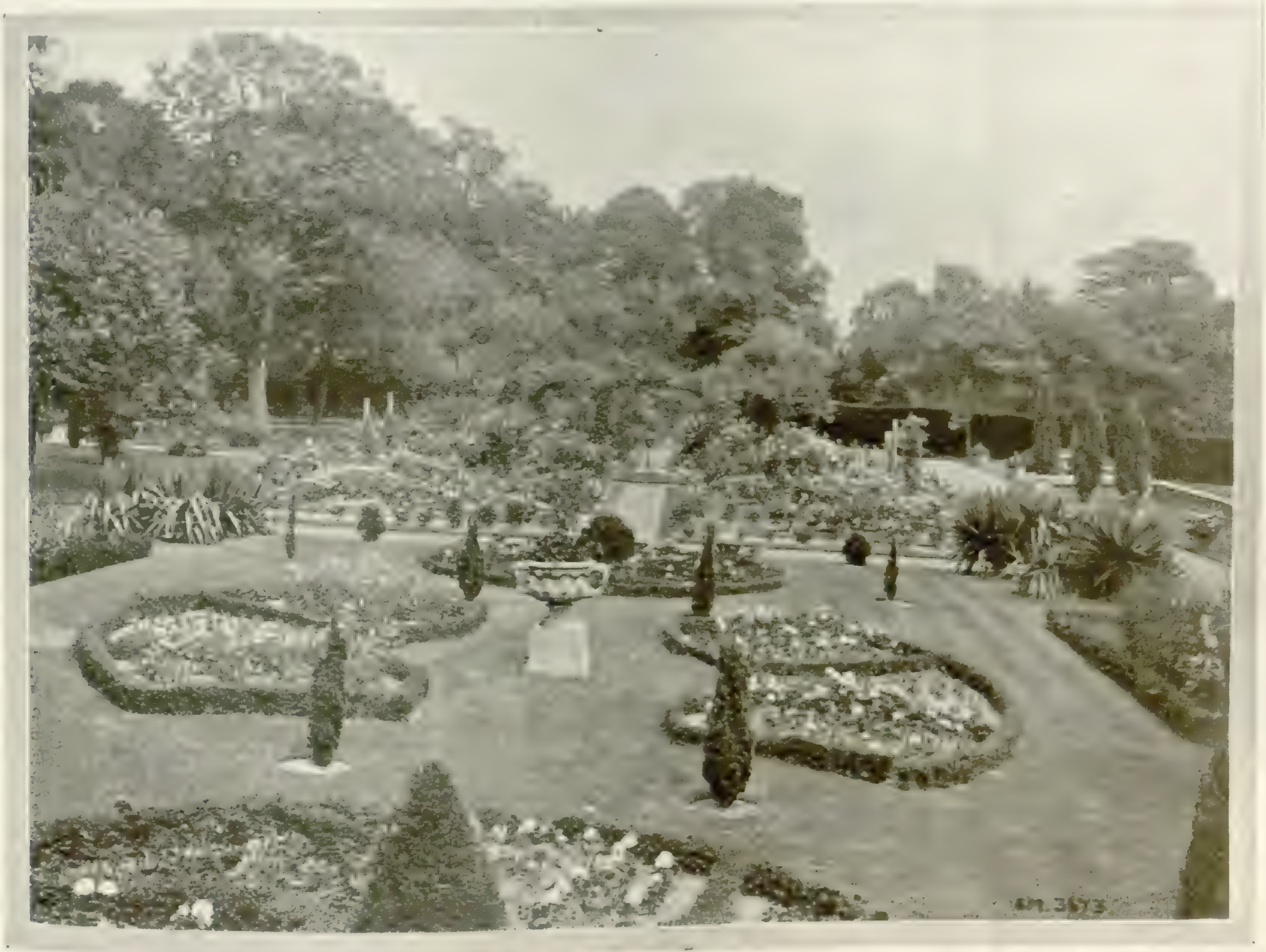
PORCH OF ST. MARY'S CHURCH, OXFORD, DRAPED WITH VIRGINIAN CREEPER.

This difference in opinion as to the manner in which climbing plants should be used on the walls of dwelling houses and public buildings is difficult to understand, and probably a more useful purpose will be served by stating a few of the principal points that should have attention in the planting of climbers against walls than in endeavouring to give an explanation of the diversity of views that are held. It is important to give first consideration to the fact that buildings, whether public or private, are not erected specially for the purpose of displaying the charms of vigorous roses, rampant ampelopsis, or rapidly running ivies. They are designed for other purposes, and the clothing of their walls with climbers has for its object the enhancement of what beauty they may possess, or the softening down of objectionable features. The walls of outhouses are not now being considered, but it may be advisable to mention in passing that those which come into view from the garden or mansion should be wholly covered with plants that grow to a suitable height, and thrive in the aspect they afford.

The planter of climbers must be largely governed by the style of architecture represented by the building whose walls he is desirous of clothing. If it possesses the baldness which found so much favour among builders in the early Victorian days, the whole of the walls might, with advantage, be covered by climbing plants suited to their height and aspect. In these bare, barrack-like structures there is but little of beauty, and well-kept climbers will soften their lines and render them pleasing to the eye. In the case of dwelling-houses of more recent date, of which the designs are more or less tasteful, climbing plants must be used with some discrimination. A judicious selection of climbers will, with careful management, contribute materially to the attractions of such buildings as these, and judicious procedure in this case means using the plants somewhat sparingly. Careful management consists in so regulating the growth that the allotted space is nicely clothed without hiding any portion of the architectural features. A well-designed house is an object of beauty, and climbing plants should be used, not for the purpose of hiding any part of it, but rather to emphause the characteristic features of the design. There is yet another class of buildings awaiting consideration, and it is that which includes those of historic interest or remarkable for beauty of architecture. These are frequently dealt with in much the same manner as one would deal with a commonplace suburban villa, and this is unquestionably a serious mistake. As briefly stated, buildings that possess an element of ugliness should have their walls almost, if not quite, hidden by greenery; and those erected from designs that are good without possessing special merit, should be sufficiently embellished with climbers to bring into prominence whatever of beauty they may possess. Historic buildings, and those distinguished by reason of their handsome elevation, require but little aid from vegetation. In visiting an historic building one does not go to see great sheets of solemn-looking ivy or a big expanse of flaming ampelopsis, but rather is the journey made for becoming more closely acquainted with its associations, and of studying the style of architecture it represents. To the student of architecture it is a serious matter that the object lessons which a fine old building is so well able to afford should be hidden beneath a covering of ivy or Virginian creeper. In like manner fine examples of architecture, whether ancient or modern, should not have their beautiful lines broken or their exquisite workmanship hidden by climbers. It does not necessarily follow that no plants should be allowed to come near the walls of such buildings; in many instances they may be employed to advantage, but they must be used very sparingly, and with great care.

The fine porch of St. Mary's Church, Oxford, is an excellent example of what may be accomplished in beautifying a graceful and highly ornate structure. Here we have a few, comparatively speaking, of the slender growths of the Virginian creeper hanging gracefully over some parts of the masonry, and forming a pleasing contrast to its dark grey tones. There is no interference with the architectural lines of the building, as would be the case were this or other climbers allowed to form dense masses of foliage, as in the case of some other buildings hardly less beautiful that we have in mind.

G. G.



THE CHARMING FLOWER GARDEN AT SHIPLAKE COURT, HENLEY-ON-THAMES.
Embellished with summer bedders and roses.

A BEAUTIFUL FLOWER GARDEN.

Visitors to Shiplake Court, Henley-on-Thames, the residence of R. H. C. Harrison, Esq., are invariably charmed by the beautiful flower garden, which forms so fine a feature of the grounds, and we have much pleasure in presenting our readers with an illustration of it. This so admirably shows the characteristic features of the flower garden as to render a lengthy description wholly unnecessary. In the foreground are flower beds cut in the grass and enclosed by bold box edgings, and interspersed are columnar coniferous trees, with bold masses of Yucca recurva at the corners. Beyond are beds and borders of roses, enclosed with bands of turf and intersected by gravel walks. In the centre is a handsome sun-dial, and around it are roses in great variety, and so robust in growth and profuse in flowering as to testify in no uncertain manner to the skill that is brought to bear upon them by Mr. J. A. Hall in carrying out the details incidental to their cultivation.

CENTAUREAS.

The great improvement effected in these annuals is more inducement to grow them than was formerly the case. The glorious summer weather of the past few weeks has suited them admirably, for they are far more satisfactory when the blooms can open free from moisture, while the plants, individually, are not quite so strong owing to the drought, yet the flowers are all that can be wished for.

Two new, or improved, varieties sent out by the Holborn firm have come far superior to previous introductions. One, named Chameleon, has large sulphur-yellow flowers, with a suffusion of mauve, and a suspicion of other shades approaching a fancy shade in centaureas, a blending of colours which appeal to many flower lovers. The other centaurea is a golden-yellow, which the firm describe as "new yellow," this, in size, is much larger than the ordinary yellow sweet sultan, and therefore of greater value for the supply of cut flowers for use in large vases and bold decorations generally.

Centaureas are not difficult to grow. Slugs are their greatest enemy, and frequently do them much harm when the plants are young. It is therefore advisable to sow in dry weather to get the plants up a few inches, when the danger is over. If showery weather prevails when the blooms are opening some protection to keep off the moisture should be given. The plants resent coddling in any form. Our latest sowing is where we can cover with temporary lights.

T. H. Slade.

Poltimore Park Gardens.

THE VIBURNUMS.

The viburnums are found in Europe, North America, and China, and, although the majority of them produce the small, fertile flowers, that render them ineffective as blossoming shrubs, a few that bear large, sterile flowers are among the most valuable of garden plants. The best known is the Guelder Rose, V. Opulus sterile, which, with its rounded trusses and large, pure white, sterile blossoms, is common in English gardens. In the type the centre of the truss is filled with small, fertile flowers, only a few of the outer blossoms being sterile.

V. tomentosum, generally known as V. plicatum, is without doubt the finest of the family as a flowering shrub. It is a native of Japan, and has been known in this country for more than sixty years. It is quite hardy, and will stand thirty degrees of frost without injury. It is a shrub of neat and graceful habit, and bears on short branches, springing from the previous year's growth, fine trusses of pure white blossoms four inches across, that, in well-flowered specimens, smother the plant in a snowy cloud. The typical seed-bearing type has trusses that are composed of small fertile flowers.

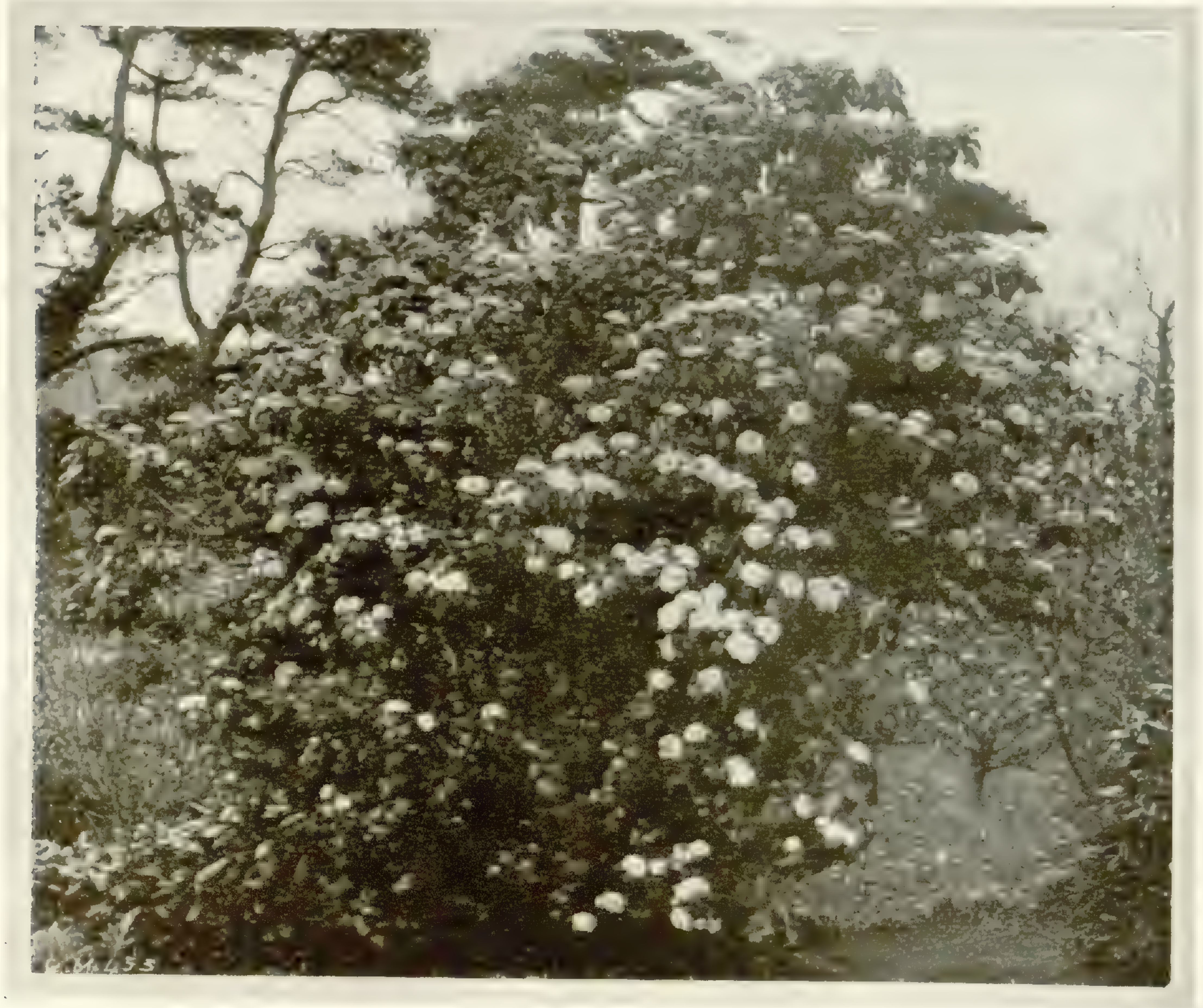
V. macrocephalum is a very showy shrub, bearing the largest trusses of any of the viburnums. The blossoms, all of which are sterile, are pure white, and measure from one inch to one and a-half inches across. The trusses are pyramidal in shape, much resembling those of Hydrangea paniculata. It was introduced from Shanghai in 1844, but is, unfortunately, not very hardy, and is rarely seen in good condition in the open air, except in the warmest gardens. V. macrocephalum is not a wild plant but a garden hybrid. The type is known as V. macrocephalum Keteleeri, and has the centre of the truss filled with small fertile flowers, only the outer ones being large and sterile.

The variety of the Laurustinus, V. Tinus, known as lucidum, is a pretty flowering shrub, which has larger trusses than the type, and blossoms of a greater size and purer white.

V. rugosum, of which an illustration is here given, is a native of the Canary Isles, and is practically unknown in this country, the only two specimens I have met with being the one here shown, which is growing in Mr. T. B. Bolitho's garden at Greenway, on the River Dart, and one in Mr. Howard Fox's garden at Rosehill, Falmouth. The example illustrated is over twenty feet in height and sixteen feet through. Its flattened white flower trusses are five inches across, and are carried in great numbers, and the shrub, when in bloom, has a very decorative effect. It is apparently fairly hardy, as in neither of the gardens in which I know it has it ever suffered from the winter frosts.

S. W. Fitzherbert.

Kingswear.



A FINELY-DEVELOPED SPECIMEN OF VIBURNUM RUGOSUM,
In Mr. T. B. Bolitho's Garden at Greenway. Flowers, white.

Autumn Flowers.—It is always interesting to record any special features which occur in practice, and especially when it applies to colour grouping of plants. A particularly fine autumn effect results from a liberal planting of Lobelia Queen Victoria and a few plants of Aster Hon. Edith Gibbs. The vivid tone of this lobelia is subdued by the feathery growths of the aster, then when the daisy flowers open the intermingling of the high colour with the half-tone of the aster produces an effect which appeals to every taste. On similar lines Gypsophila paniculata or its double form makes an excellent groundwork for a large bed; if Gladiolus Brenchleyensis be planted through it—not too liberally—the result will be a success that will generally bear repetition. —Thomas Smith.

SHAKESPEARE AND ROSES.

Authorities assure us that the famous scene in the Temple Gardens has no historical basis, and the attempt to decide the time of its supposed occurrence by a reference to the death of Edmond Mortimer, which in the play takes place on the same day, is frustrated by the brutal fact that Mortimer was a young man instead of an old one, and died, an officer of state, in Ireland, instead of a prisoner in the Tower. So, observes "The Globe," in default of dates, which it is agreed are soul-less things, we must be content with the knowledge that the "scene" was "in the time of roses," and can, if we choose, identify it with the glow of June or July. The emblematic choice of red rose or white in the Temple Gardens is only one out of over a hundred references to the flower in Shakespeare's plays, but it is the sole instance in which the rose is part of the essential mechanism of the play; elsewhere it is mentioned by way of illustration, metaphor, or apostrophe. But wherever and in what manner it is mentioned, the impression we receive from the allusion is that Shakespeare wrote con amore, certainly as a lover—perhaps as a grower—of roses.

But more noticeable even than his technical knowledge is the intense, almost personal and tender affection that Shakespeare shows for flowers, and notably for roses. There is the apostrophe to Ophelia, where to "dear maid, kind sister," is prefixed "O rose of May"; we have, as comparisons, "my fair rose," that "sweet lovely rose," "sweet rose, fair flower"; in one of the sonnets that breathe the most fervent and abiding and passionate love the lover tells his mistress, "Nothing this wide universe I call, Save thou, my Rose: in it thou art my all."

Far more frequently does Shakespeare mention the rose than any other flower, though in the case of almost all flowers there is a note of tenderness and affection before referred to. Roses were abundant in London in Shakespeare's day. There is no record of his having personally known Gerard, whose "Herball" was published in 1596, but as Gerard was gardener to the great Lord Burghley, whose splendid estates Shakespeare must have been familiar with, and had besides his own garden in Holborn, the acquaintanceship may be not unfairly presumed. At any rate, one may take it that the poet would have subscribed ex animo to the horticulturist's encomium of the rose: "The Rose doth deserve the cheefest and most principall place among all flowers what growe, being not only esteemed for his beautie, vertues, and his fragrant and odoriferous smell, but also because it is the honore and ornament of our English Scepter."

Doubtless, too, there was a like allusion to Gerard's to the Royal Cognisance of the flower in Ophelia's mournful reference to Hamlet as "the expectancy and rose of the fair state," though its literal appropriateness would, of course, be not to Denmark but to England. Occasionally one meets with the idea that in the famous scene in the Temple Gardens the choice of the white and red rose by the respective representatives of York and Lancaster was a sort of happy thought, inspired by the surrounding blossoms bright in their summer beauty. This is very doubtful, the "rose gules" of Lancaster and "rose argent" of York having probably been established heraldic cognisances before the outbreak of the war between the factions. Floriculturists do not identify these two roses with unanimous decision, but the Lancastrian rose is probably the old English cabbage rose, and the York rose, according to one eminent authority, is the double white rose. The variegated red and white rose, which is referred to in the sonnets, is doubtless what is known as the York and Lancaster rose, which, according to tradition, first bloomed when the Lancastrian Tudor married Elizabeth, the "White Rose of York," and joined in peace the warring flowers. The other roses Shakespeare mentions are the musk, the damask, the Provençal roses, the sweet briar, and the canker rose,

"CURIOSITIES AT FLOWER SHOWS."

All will probably agree in theory with your leading article in this week's number under the above heading, but the difficulty, as it appears to me, is to give practical effect to the ideas expressed.

I have hardly known a small show where some variety of asparagus has not been brought in for exhibition as a fern. In these cases a hint from one of the committee has been effectual in getting a fern proper substituted.

Before referring to the remainder of the article, I should like to interpose here a few words on another show point about which you hold strong opinions—the naming of exhibits. It seems to be pretty generally agreed that exhibits should be named, but what is to be the penalty for a wrong name being affixed, and, again, who is to judge whether the name is correct or not? Take the Muscat grapes that were disqualified at last year's fruit show of the Royal Horticultural Society, and suppose that they were exhibited and named in a collection of fruit —what would happen? Take the case of a cottager who buys a packet of seed of something he has heard about, but has not grown before, and who exhibits the "rogues"—what would happen here?

The foregoing, although not in strictness relating to the article in question, should have careful consideration. Returning to the article, we come to the matter of exhibiting vegetables—one variety of each. This again is a very proper provision, but how is it going to be given effect to without causing considerable bitterness. If we take the grape question, for example—suppose a collection of fruit, "six kinds, one variety of each," were asked for, and the exhibitor showed grapes cut from the vines of the disqualified Muscats with Muscats cut from another vine. There would probably be a difficulty here with the same judges.

At a show with which I was connected, the schedule, last year, asked for "six kinds of vegetables." The best exhibit contained ten varieties, and the judge wished to disqualify, but the committee properly ruled that the exhibit was within the words of the schedule, and so the exhibit obtained first prize.

The same society holds an autumn show, and to avoid the difficulty added the words "one variety of each" to the collections asked for. The exhibitors did their best in this direction, but the best exhibit had undoubtedly two varieties of onions, and was disqualified. The exhibitor, a cottager, was naturally sore about this, as the onions were all the produce of the same packet of seed, and he does not buy cheap seed. How would you obviate this undoubted hardship?

If flowers of plants that are not "herbaceous" are allowed to be exhibited as such, it would be as well to drop that title which was used, I presume, to exclude shrubs—by the way, what is a shrub as distinguished from the plants that can be used to cut perennials from?

Some time ago I asked in your columns, "What is a hardy perennial?" I am still awaiting a reply from your readers.

I now ask what is an "annual"? I am strictly in agreement with your definition, but if it were strictly acted upon there would again be hardship. Seedsmen here are largely to blame, including, as they do, in their lists of annuals plants that are naturally of longer duration. If you will turn to the back of the cover of No. 2,839 of the "G.M." you will find an instance of this. Even the "G.M." itself is not without blame in this matter, as reference to the articles "A Garden of Annuals" (Nos. 2,836-7), and "Annuals for the Greenhouse" (No. 2,840) will show. If such authorities can go astray, how can you penalise the poor cottager or allotment holder?

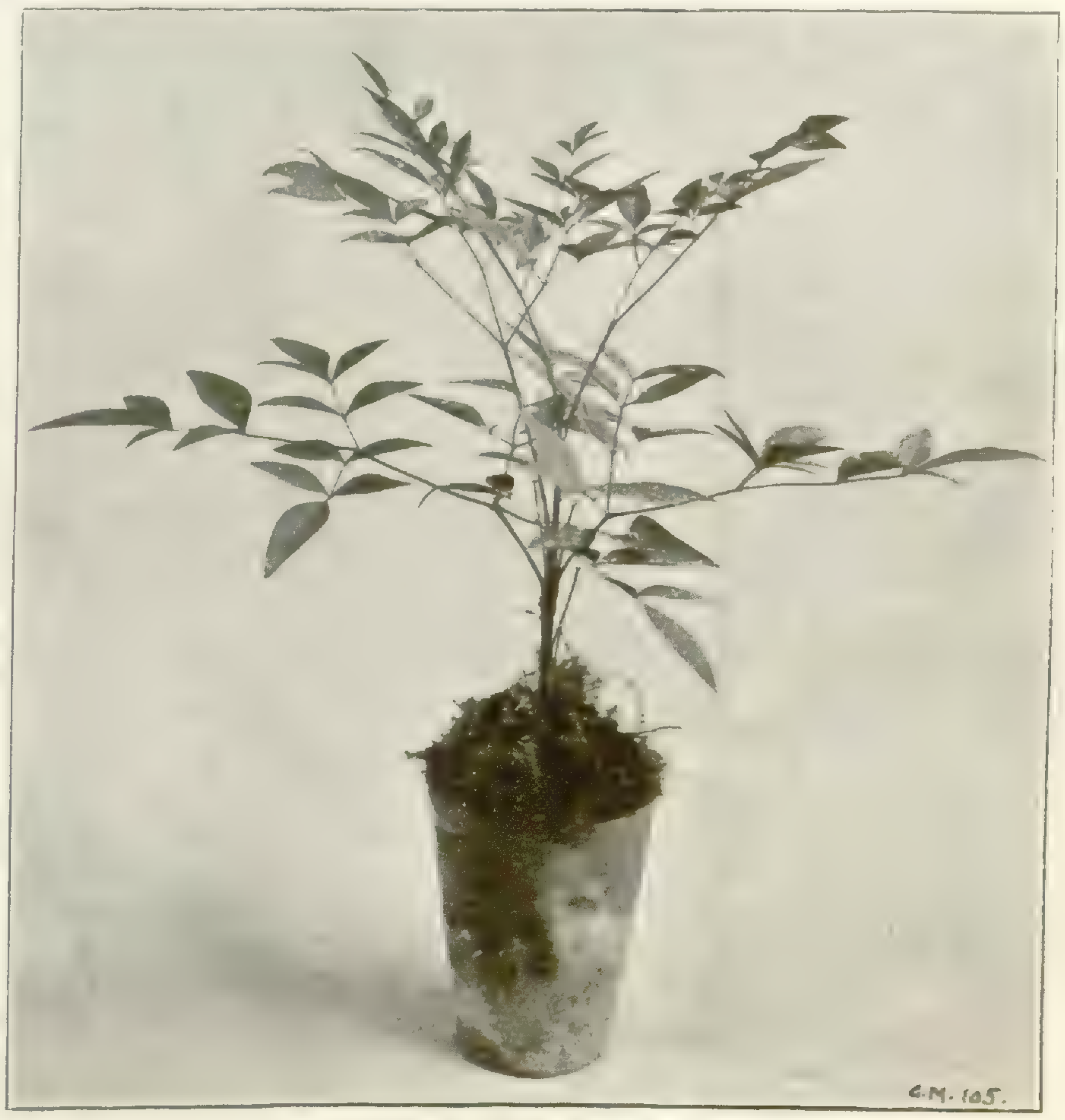
I am afraid I am trespassing too much on your good nature by the length of this letter, but before I finish I should like to ask another show question. What is the value of the word "distinct," as used in schedules? Agreeing that where there is a society for the special cult of any flower the synonyms as classed by them would not be "distinct," what is to be done where there is no such society? Would a nurseryman's catalogue be conclusive? If not, who is to judge?

B. Henderson.

Lansdowne Road, Snaresbrook.

NANDINA DOMESTICA.

Although this plant is of very old introduction, it is by no means common in gardens. This is propably due to the fact that it can only be successfully grown out of doors in a few favoured localities, and also that, except for certain objects, it is not very suitable for indoor culture. It must not, however, be imagined that it is not an ornamental plant, for when seen at its best, either when crowned with handsome, doubly pinnate leaves, with upright panicles of white or pink-tinted flowers, or with red fruits, it is decidedly decorative. Autumn also provides a further period of beauty, for the leaves take on very pretty orange-red shades.



NANDINA DOMESTICA.
As grown for decorative purposes by Messrs. Barr and Sons.

It is found in both China and Japan, and is cultivated largely in many parts. In those countries it is called the sacred bamboo, on account of the reed-like branches, which are clothed with heads of leaves, and largely used for decoration in religious festivals. The branches, terminated with heads of red berries, are also sold for house decoration during winter. It was figured about 1808 in the "Botanical Magazine" (t. 1,109), the plant at that time being in flower in the nursery of Messrs. Lee and Kennedy. Several forms may be obtained, the chief difference between them being in the colour of the flowers and fruit.

W. D.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in Easily Grown Hardy Perennials, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

STOVE PLANTS.

MYRSIPHYLLUM ASPARAGOIDES.—A batch of plants of this useful stove trailing subject may now be raised from seeds sown in shallow pans or boxes. If the seeds have been previously thoroughly steeped in water they will germinate in a few weeks time, and the seedlings be ready for potting off singly, using small thumb pots. They ought to be kept steadily growing throughout the winter, and as soon as they show signs of twining they must be placed in their permanent position, where green twine should be fixed to support the growths. Autumn-raised plants are best kept growing in pots throughout the winter months, although, if desired, they may be planted out as soon as the new year arrives. Under this system of cultivation serviceable trails of smilax can be obtained for decorative purposes early in the new year. Aphis and thrips will sometimes attack the tender growths, but these troublesome pests are readily destroyed by fumigation with a nicotine preparation.

POINSETTIA PULCHERRIMA.—As soon as later batches of these plants require further root room, they should be shifted into the pots in which they are to flower. As they become well established, apply weak liquid manure occasionally, and alternate top-dressings of some chemical fertiliser. As the summer advances, gradually cease syringing, and expose the plants to as much light as possible. This will assist in the ripening up of the wood, and in the preservation of the foliage plants throughout the flowering period.

STEPHANOTIS FLORIBUNDA.—Where grown as roof climbers in the stove, the plants will have almost finished their season's flowering. Those growing in the intermediate stove will continue to bloom for some time if attention is regularly given to watering and feeding. They should, however, be trained and thinned out as they require it, and gradually expose the growth to more light and air as the season advances.

CLERODENDRON BALFOURI. — Specimens of this species that have finished flowering must have the water supply gradually reduced to induce them to pass into a state of rest. At no time must the growths be allowed to suffer for want of water. As soon as the wood is well ripened they may be stored in a temperature of 50 to 55 degrees, when they will require very little further attention. They should, however, be examined occasionally throughout their resting period.

CLERODENDRON FALLAX. — Examples that have been grown for autumn and winter decoration may now be exposed more fully to the sun, and the use of the syringe be gradually withheld. They may be kept in a temperature of about 60 to 65 degrees during their flowering season. — John Donoghue, Bardon Hill Gardens, Leeds.

THE ORCHID HOUSES.

THE COOL HOUSE.—The end of the month of August and onwards is a suitable time to examine the plants in the cool house divisions for repotting purposes. In the case of Odontoglossum crispum, plants that are flowering at different times throughout the year, cannot have any hard and fast rules applied to them with regard to treatment for repotting at this particular season of the year. Those in charge must judge for themselves as to whether or not plants are in the right state of growth for being repotted, and should not be carried away from any successful line of cultivation by outside suggestions. There is also the fact of being acquainted fully with the peculiarities of plants we are dealing with. In a collection like ours I have been able to observe that even the special varieties of odontoglossums commence root action in totally different stages of their growth. In many cases they emit their new roots when the new pseudobulb commences to form at the base of the developing growth. In others there is not a new root to be found until the growth has matured, and sometimes even not until the plants have passed out of flower do we find root action commencing. I have always held that the safest season to attend to the repotting of any orchid is when the new roots make their appearance, irrespective of the season of the year. I consider there is the least possible check given at a season when the plants are thus afforded the best opportunity of becoming quickly re-established. Practically all prominent growers have of late years recommended the months of August and September for general repotting, because the bulk of the plants are in the stage of growth when new roots are found at the base of the recently developed or developing growths. The fact also of the hottest weather having been passed is also beneficial, as the plants are not nearly so liable to become shrivelled from the effects of the warm, dry condition of the outside atmosphere. I prefer, if possible, to delay repotting until a reasonably moist outside atmosphere is obtainable.

It is well, then, to have potting material made ready as soon as possible, so that there may be no delay when the favourable opportunity of commencing occurs. The potting compost we use consists of two parts fibrous peat, the remaining portion consisting of chopped sphagnum moss and broken oak or beech leaves, with sufficient broken crock and sand added to render the compost porous; the surface of the potting compost is covered with a layer of chopped sphagnum moss. The pots should be cleaned, and a crock or two placed over the hole at the bottom, and filled to at least one-third with chopped dried bracken roots. I would point out that it is advisable to dip the leaves used in the compost into boiling water. We place them in bags and dip them into a boiling copper for a few minutes; this destroys all insect life and fungoid growth. The leaves are afterwards laid out thinly to dry before they are used.

MASDEVALLIAS, especially those of the robust-growing type of the M. Harryana section, will be found in an active rooting condition during the next few weeks. It is not advisable to disturb large specimens of this section more frequently than is absolutely necessary, and unless they require more pot room, or the compost is in an advanced stage of decay, removing any dead or decaying matter about the base of the plant, and renewing with fresh potting material is all that will be required. Any repotted plants in the cool division must be well shaded from strong light, and the atmosphere kept in a moist state about the plants.—H. J. Chapman, Oakwood Gardens.

FRUITS UNDER GLASS.

CUCUMBERS.—Those in frames should have plenty of nourishment, and old and useless vines thinned, and old leaves infested with red spider removed. Encourage new growth for another month by top-dressing with good loam and lime rubble. Syringe and shut up early in the day. If hot-water pipes are available they will continue productive until the next batch comes into bearing. For winter supplies the Improved Telegraph still holds its own. The plants for winter crops will at this time be making good headway, and may be given a small shift to encourage growth till the house is ready. Clean this structure well down, especially if it abounds in woodlice, which soon make havoc amongst these in the winter. Syringe all walls and crevices with paraffin and water, whitewash the walls, and paint the woodwork if necessary. The compost should be prepared and turned over a few times before bringing it into the house. The mixture should consist of loam free from wireworm, old spent mushroom bed, and plaster rubble.

STRAWBERRIES.—The potting of these being completed syringe them night and morning to keep down red spider. They should have been stood on a good thick bed of ashes to prevent worms entering the pots. Watering should be done carefully, and care taken to well moisten the whole of the soil when water is applied. At the same time they must not be overwatered. Dryness at the roots checks the growth and encourages red spider, and with an excess of moisture the soil becomes sour, and growth is very slow. The plants should be stood far enough apart so that the pots can be sounded by a hazel stick; this, perhaps, is slow work, but it will give a good return.

PINE APPLES.—Those that are swelling their fruit should have assistance with liquid manure prepared from sheeps' droppings, and this may be syringed between the pots that are plunged when the house is closed in the afternoon; this gives off an aroma which these revel in, and makes the foliage a good colour. Soot-water may also be given in the same way occasionally, but no great quantity should be allowed to lodge in the axils of the leaves; a slight overhead syringing with clear water may be given also at closing time. As the fruits colour they should be removed to a somewhat drier house.

SUCCESSIONAL PINES will now be rooting freely, and will require plenty of clear water. Syringe and shut up early; pot on a few successional plants as they are required. They will require a cooler temperature, and a little bottom heat to induce them to root freely.

TOMATOES.—These for winter should be in their fruiting pots; the two best are Winter Beauty and Lye's Early Prolific. The pots, which should be 10 or 12 inches in diameter, should be well drained and have some good turf placed over the crocks. Use good loam, leaf-mould, and charcoal, and leave a few inches space on the surface to allow for top-dressing later on. They should be stood outside for a short time unless wet weather sets in. Those carrying heavy crops should have the assistance of liquid manure. Cut off all bad leaves and side shoots to assist them to finish off their crop.

MELONS.—These swelling in the houses generally attain a good size at this season of the year. Melons, if given plenty of fire-heat, will be valuable, as most of the bush fruits suitable for dessert are over. Midseason melons may be grown on the stage of a house in deal boxes about two feet square. They do not canker so much as those grown in a bed resting on decayed manure.—A. B. Wadds, Paddockhurst.

THE KITCHEN GARDEN.

LIFTING POTATOES.—It is not a good plan to leave the main crop of potatoes long in the ground after the tubers have attained their full size, for, should a thunderstorm come, it would no doubt start the tubers into second growth, which greatly interferes with their keeping properties. It is not at all necessary to wait for the foliage to die off, for if the skins seem hard and firm they are ready for lifting. Store the tubers in a cool, airy place, and cover them well over to exclude the light, for they would soon become green and unfit for culinary purposes. Pick out the seed potatoes at the time of lifting and leave in an exposed position to harden the skins. All the early varieties should be lifted at once and stored.

EARTHING CELERY.—The early batch should now be earthed up for the last time. Choose fine weather for this operation if possible. If there are any slugs lurking about in the rows dust well between the plants with fine powdered lime before earthing. Place the soil equally round each plant with the hand as the work proceeds, then a clean, kind growth will follow.

MUSHROOMS.—It is now a good time to collect horse manure for forming outdoor beds which are to produce mushrooms during the spring months. Turn the manure frequently so that the rank heat may escape. The beds should have a dry foundation, and be made up ridge shape, about four feet wide and three feet high, made firm, and the spawn put in 1½ inches deep when the heat has declined to 80 degrees, and afterwards cased over, to the depth of two inches, with loam or any good garden soil. Then place a good thickness of clean straw on the beds, and put some wire netting over all to keep the straw from blowing about.

MUSHROOMS INDOORS.—If the mushroom house has been cleaned down and limewashed out the first bed may now be started, so that a few early dishes may be had for the shooting parties in October.

CAULIFLOWERS.—To provide cauliflowers for the table in May make several sowings in September; keep the plants strong by giving them cool treatment. Good results may be obtained by sowing extra early varieties under glass early in the year.

PARSLEY.—Another sowing may still be made, which will prove useful for gathering in the early spring months. Any old beds will be much benefited if cut over, so that young leaves may become hardened before the winter sets in. And they will keep up a supply much longer than if left with the old leaves.

LETTUCE.—It is advisable to sow another batch of All the Year Round cabbage, or Hicks's Hardy cos, and keep a look-out for those that are just showing through the ground, as slugs are very fond of the tender leaves. Dust the plants with a little soot early in the morning.

TURNIPS.—Late sowings are growing well, and they should be encouraged by thinning them out whilst they are quite small. Those required for present use should be watered, or they will become stringy, and indifferent in flavour.

GENERAL WORK.—Attend to clipping box and privet hedges, and make the kitchen garden neat and clean, hoeing and pulling all seed weeds as fast as they appear.—T. W. Birkinshaw, Hatley Park Gardens, Sandy.

Freesia Notes. — Unlike tulips and hyacinths, freesias should not be subjected to a burying process after potting. Stand the pots in a cool place under the shade of a low wall, or what is better, stand them close together in any disused frame, such as was in use earlier for forcing vegetables. Plunge the pots to the rims in coal ashes or cocoanut fibre, and when the young growths are an inch through the soil expose the pots to fuller light. Water in the early stages of growth must be sparingly applied, as the least tendency to saturation of soil at this stage invariably ends in failure. — Thomas Smith, Walmsgate Gardens, Louth, Lincs.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Grand Shrewsbury Floral Fete.

We now give our report of the three sections of the Shrewsbury Flower Show, which we had to leave over from the issue of the 22nd inst.

GENERAL PLANT CLASSES.

Mr. C. Roberts, gardener to Mrs. Swann, Halston Hall, led for the local groups, and Mr. T. Edwards, gardener to Dr. G. Burd, Newport House, came second. Mr. Lambert, Mr. Roberts, and Mr. Cromwell were the prizewinners in the local class for stove and greenhouse plants. Mr. Lambert led for dracænas, Mr. A. Bridge for fuchsias, Mr. F. Hammond, Castle Street, for four begonias; Mrs. Eyke, Belvedere, Shrewsbury, for double pelargoniums, and Mr. H. Cliffe for single pelargoniums, the latter also winning for six specimen singles with beautiful plants, while Mr. Bridge, Green Hyton, Liverpool, scored for six specimen double varieties; Mr. E. Vaughton, Handsworth, had the finest ferns, Mr. Cromwell the best caladiums, and Mr. J. Swain, gardener to Colonel Patchett, Broome Hall, led for coleuses.

Messrs. T. S. Ware, Lim., Feltham, were awarded the first prize for a collection of begonias, arranged on a space 16ft. by 4ft.; theirs was a marvellously fine set of finely-selected and finely-grown plants, the colouring and the arrangement being alike good. Messrs. Blackmore and Langdon, Twerton-on-Avon, second; and Mr. F. Davis, Pershore, third.

FLOWERS.

Messrs. J. Gibson and Sons, Bedale, gained first place for eighteen bunches of hardy flowers, and they had a fine set, but it was put up in an extremely formal manner; Mr. M. Prichard, Christchurch, Hants, second; and Mr. Bamfield, gardener to W. H. Banks, Esq., Kington, third. Mr. J. Smellie, Busby, Glasgow, led for six bunches of summer-flowering chrysanthemums with splendid flowers of Improved Masse, Mrs. W. Sydenham, etc.; Mr. W. Barsley, Leicester, second; and Mr. A. Hoggan, Busby, third. For twelve bunches of cactus dahlias Mr. M. V. Seale, Sevenoaks, led with Harbour Light, Raymond Parks, Daisy Easton, etc.; Mr. W. H. Banks, second; and Mr. E. Deakin, Hay Mills, third.

Reflexed asters, twelve blooms, were best shown by Messrs. H. J. Clarke and Son, Rodley, Leeds, who led in a big competition. There was a splendid competition for two dozen show dahlias, and here Mr. J. Smellie, Busby, led with wonderfully bright, shapely blossoms of popular sorts; Messrs. H. Clarke and Sons second. Mr. T. Jones, Ruabon, led for twelve show or fancy blooms, and Mr. J. Haycocks, Wrexham, was a good second. Messrs. G. Gibson and Co. had the best gaillardias.

In the rose classes Messrs. A. Dickson and Sons, Newtownards, led for eighteen blooms, and Mr. Hugh Dickson, Belfast, came second. Messrs. A. Dickson and Sons also led for two dozen blooms with splendid [illegible], and Mr. H. Dickson was again second. Mr. W. E. Wilson, Cannock, scored for twelve cactus dahlias, splendid flowers arranged on a velvet-covered, heart-shaped stand: Dreadnought, Mrs. E. Mawley, and Thomas Wilson were superbly shown. Mr H. Rutherford, Brechin, second. For eighteen cactus dahlias Mr. W. E. Wilson was [illegible] first, and Mr. J. E. White, Bramley, second. Gladioli were finely shown by Messrs. [illegible] Muir and Son, Prestwich, and Mr. J. Walker, Thame, came second.

Messrs. Bottomley and Burton, Elland, Yorks, secured first place for two dozen cactus dahlias, Mr. W. Tresider, Cardiff, coming second, and Mr. J. Smellie, third; this was a fine class, and all the flowers were of excellent colour and quality. Mr. W. H. Banks led the way for a collection of cut hardy flowers, and he did well with montbretias, helianthuses, etc.; Mr. T. Bouskill, Market Bosworth, second.

The best collection of carnations and picotees was a handsome one set up by Messrs. M. Campbell and Sons, High Blantyre, N.B., who showed Foxhunter, Polly Aitken, Peggy, and May Campbell finely; Mr. C. H. Herbert, Acocks Green, Birmingham, was a good second, the latter also showing Progress, a new freely-flowering perpetual pink. Mr. C. Allcock, Liverpool, led for twelve carnations or picotees, three blooms of each, and Mr. W. H. Parton, Hollywood, Birmingham, was second. First for cut carnations and picotees, another class, was won by Mr. J. Wallace, Bromboro, with a splendid set, rather flatly set up, however; Miss Gladys Bibby, St. Asaph, second. For a group of tree carnations Mr. C. F. Waters, Balcombe, Sussex, gained first place with a splendid set of popular varieties admirably arranged: Mr. A. F. Dutton, Iver, Bucks, second.

For a display of roses Messrs. Gunn and Sons, Olton, were first with a lovely arrangement of tea and hybrid tea varieties, and Mr. George Prince, Oxford, came a very close second. Mr. Lambert scored for cut stove and greenhouse flowers with a gorgeous set of clerodendrons, eucharis, allamandas, etc.

The best collection of hardy perennials was the one from Messrs. Gunn and Sons, Olton, Birmingham, a very bright and worthy display. The collections of cactus and decorative dahlias were splendid and numerous, and the leading prizes were won in order by Messrs. M. Campbell and Sons, High Blantyre, N.B.; Messrs. Keynes, Williams, and Co., Salisbury; and Mr. J. Walker, Thame, Oxford; all these showed fine flowers, and set them up beautifully.

NON-COMPETITIVE.

Messrs. Dobbie and Co., Rothesay, contributed a bold and very effective display of early cactus dahlias, setting these up in pyramids and vases. In front of these were pompon varieties in great variety, and a fine set of the increasingly popular pæony-flowered varieties, these creating a great deal of interest. The front of the group was finished off with boards of cactus and show dahlias, show pansies, and Dobbies' Selected French marigold, and Dobbies' Lemon Queen African marigold.

Mr. Henry Eckford, Wem, Salop, contributed a very extensive and well-arranged bank of sweet peas, the flowers being large and pure in their respective colours, most of the leading varieties were represented, the strikingly distinct Henry Eckford being conspicuous. Others worthy of note were Mina Johnston, and Queen of Spain.

Messrs. Hobbies, Lim., Dereham, had a large semi-circular group of roses, artistically set up in tall stands, hanging baskets, pyramids, etc., and associated with smilax and growing plants of the Wichuraiana varieties. A few more flowers would have improved the display, but we understand that part of the consignment reached Shrewsbury too late for use. Messrs. Sutton and Sons, Reading, had an attractive and imposing exhibit. They had an arched background of asparagus, and varieties of various annuals, such as scabious, asters, etc. The front was filled with the Reading specialities in melons, tomatoes, dwarf and runner beans, potatoes, peas, carrots, cucumbers, etc. Nemesias and Primula obconica were also used in the centre, and at the ends of the group.

Mr. Albert Myers, Sutton Lane Nurseries, Shrewsbury, set up a very bright group of zonal pelargoniums, cut flowers, and growing plants. The disposal of the cut flowers of the best varieties, in arches and pyramids, added materially to the effectiveness of this display.

Messrs. Dicksons, Chester, were represented by a bold bank of roses in bunches, these being chiefly tea and hybrid tea varieties, with these were the finer phloxes, montbretias, gladioli, liliums, and select hardy herbaceous flowers. Messrs. Isaac House and Son, Westbury-on-Trym, set up a splendid lot of phloxes in large bunches, vases of excellent pentstemons, delphiniums, gladioli, etc., but a grand feature of this display was a huge flower of Aristolochia gigas, a strong-growing stove climbing plant.

Messrs. Jones and Sons, Lim., Coton Hill Nursery, Shrewsbury, made a bold and bright display of cactus dahlias, backed up by tall arches decorated with sweet peas, the reverse side of the stage being occupied by sweet peas in bunches. Messrs. Hugh Low and Co., Bush Hill Park, London, N., showed vases of carnations set up on a groundwork of Nephrolepis todeaoides.

Mr. John E. Knight, Tettenhall Nurseries, Wolverhampton, put up a bold and effective group of cactus dahlias, arranged in tall bamboo stands and glass vases. The varieties were of the best, the blooms good, and the arrangement very tasteful. Messrs. Dickson and Robinson, Manchester, showed a fine new tomato named Moneymaker. It is a smooth, medium-sized fruit, borne on large, spreading bunches, averaging 15 to 20 fruits. Dahlias were also shown by this firm. An extensive collection of vegetables was staged by Messrs. Clibran's, Altrincham. In addition to excellent dishes of the popular kinds were several uncommon and at present little-used vegetables, such as silver beet, golden turnips, and kohl rabi.

Messrs. Alex. Dickson and Sons, Newtownards, Ireland, made a very fine display of roses. The so-called garden varieties occupied the background with boxes of the leading exhibition sorts in front, all being excellent in quality. Messrs. Wm. Artindale and Son, Nethergreen, Sheffield, showed herbaceous flowers, carnations, pentstemons, and a few good lilies; also a very extensive collection of violas, dahlias, and early-flowering chrysanthemums.

Mr. Thos. W. Darlington, Wharton, Carnforth, staged sweet peas in a manner that betokens the specialist. Large bunches of best varieties arranged artistically; the whole stand was a feast of beauty. Messrs. G. Stark and Son, Great Ryburgh, showed a few choice sweet peas, including the new variety Silver Wings.

The well-known firm of Webb and Brand, Saffron Walden, showed hollyhocks, both as single blooms and on spikes; Salmon Queen, Walden Primrose, and Black Knight were three good and distinct varieties. Roses were well shown by Messrs. W. and J. Brown, Stamford. The best known hybrid teas and polyanthas were arranged in lightly constructed bouquets, a few tall bamboo stands at intervals breaking the dead level. Several good hardy subjects were staged by Mr. William Angus, Penicuik, N.B.; Chrysanthemum maximum Snowdon is a remarkably large, broad-petalled flower, with a clear centre; Disa grandiflora was well staged, and also some good phloxes. Mr. John Smellie, Pansy Gardens, Busby, N.B., showed early chrysanthemums, a new seedling named Stella being noteworthy. It is a Japanese, with long waved florets of a clear cream, with deeper centre. Another good one, of more compact build, is Caledonia. This is also cream, and of good substance. Zonal pelargoniums were shown in fine style by Mr. Vincent Slade, Staplegrove Nursery, Taunton. Among singles, Ascott, Hopedene, and Mrs. Williams were good, Tresor being a good double salmon.

Messrs. Tom B. Dobbs and Co., Wolverhampton, showed some rustic rose supports of useful design; pillars formed of short pieces of oak so fixed as to form short jutting branches, among which the roses can ramble; rather a good idea. An interesting exhibit of ferns was put up by Mr. H. N. Ellison, Bull Street, West Bromwich. Nephrolepis todeaoides and Whitmanni occupied prominent positions, with smaller things, such as Adiantum hispidatum, Asplenium viviparum, and some good gymnogrammas, etc., in front. Messrs. Cutbush and Son, Highgate, N., brought down from London a fine lot of perpetual-flowering carnations. All the leading varieties were staged in a light and graceful manner. The new dwarf Polyantha rose Mrs. William H. Cutbush was shown, and is certainly very pretty and free flowering. A recess in the big tent was devoted to the roses, gladioli, and clematis staged by Mr. Edwin Murrell, Portland Nurseries, Shrewsbury. Trained specimens of Gruss an Teplitz and Dorothy Perkins surmounted bunches of other good garden roses, Sunrise and Liberty being conspicuous. Messrs. Webb and Sons, Wordsley, Stourbridge, made a most interesting and effective display, which consisted of melons, tomatoes, peas, and other vegetables arranged on tall, elegant stands, and in flat baskets, the whole being interspersed with many choice varieties of sweet peas; a remarkable and instructive exhibit. A large and varied collection of gladioli were staged by Messrs. Kelway and Son, Langport. The varieties exhibited were excellent in colour and form.

Messrs. Bakers, Wolverhampton, made a bold display of excellent hardy flowers, and also cactus dahlias, and the new pæony-flowered dahlias in several good varieties. The exhibit was well staged, and merited the high praise it received. Messrs. Jarman and Co., Chard, Somerset, put up dahlias and roses, also some good onions, but the feature of their stand was the excellent arrangement of their strain of sweet sultans, which were bright in colour and of good size. A bunch of their new sweet pea, Mrs. Townsend, was also shown. Messrs. Robert Sydenham, Lim., Birmingham, showed sweet peas in rustic receptacles, also lilies in fibre. Mr. A. W. Thorpe, Lichfield, had a well-arranged group of early-flowering chrysanthemums, in which the soft colours of the Masse varieties were excellently blended. Tall vases contained Wells' Masse, Hector, Ethel, and other decorative flowers. Gladioli, lilies, Hyacinthus candicans, and montbretias formed a good group staged by Mr. Frank Lilley, Guernsey, the centre feature being an arrangement of auratum and speciosum lilies. Tall pyramids of sweet peas, rising from a groundwork of smaller vases arranged in four terraces to form a bank of colour, enabled Mr. Robert Bolton, of Warton, Carnforth, to arrest the attention of the visitors Several good novelties were shown.

An exhibit which provided a distinct feature among the many floral displays, was the collection of pot-grown fruits staged by King's Acre Nurseries, Lim., Hereford. Healthy, evenly-balanced, and perfectly clean, the well-laden apples, pears, and peaches were good to look upon, and evinced skilful care and culture. Baskets of fruits were also shown, the apple Irish Peach being very well coloured. Phloxes, roses, and other hardy flowers were also staged by the firm. The exhibit of phloxes by Messrs. Gunn and Sons, Olton, Birmingham, can only be described as grand, and totally worthy the firm who show and grow phloxes so extensively and well. A number of remarkably good seedlings were staged by Messrs. Gunn, but these are not at present named. Forbes' phloxes once more helped pentstemons and carnations to add to the laurels of the well-known Hawick Nurseries. Violas and antirrhinums were also staged, and we saw so many things on Mr. Forbes' stall that were good that it is useless to single out any for special mention. Messrs. Pritchard and Sons, Shrewsbury, staged nephrolepis, crotons, and a few flowering exotics; also alpines in pots, which were arranged over a groundwork of virgin cork. We did not particularly admire the idea, but were pleased with the many choice things the exhibit contained.

True to their reputation, Messrs. Rivers and Son, Sawbridgeworth, Herts, caused outbursts of admiration from all who viewed their remarkable fruit trees in pots. Peaches were most in evidence, but plums and black Bigarreau cherries were also well shown.

Liliums were a prominent feature in the exhibit of Messrs. Hewitt and Co., Solihull, Birmingham. Phloxes, carnations, and a variety of perennials made up a good stand. A word of special praise must be accorded Messrs. Wallace and Co., Kilnfield Gardens, Colchester, for their remarkable display of the newer montbretias, for which the firm hold a high reputation. Probably a finer exhibit of these charming subjects has never been seen. Liliums and gladioli were also shown in great variety and excellent condition. As a contrast to the gorgeous colouring of sweet peas and other flowers, a collection of cacti and succulents was quite restful to the eyes. Miss S. S. Thompson, Handsworth, Staffs, had a number of interesting and well-grown specimens. A large semi-circular group of aquatic and bog plants was arranged by Mr. Amos Perry, Hardy Plant Farm, Enfield, N. Nymphæas occupied the surface of an improvised pond, on the margins of which were Scirpus zebrinus, cyperus, Acorus japonicus fol. var., and many other excellent things. At either end of the group were bunches of border perennials. Messrs. Gunn and Sons, Olton, Birmingham, staged garden roses in great arching sprays, together with bunches of such varieties as Frau Karl Druschki, Mdme. Abel Chatenay, Maman Cochet, and other good sorts.

Messrs. G. Bunyard and Co., Lim., Maidstone, staged a large collection of fruit, comprising very fine pears, apples, plums, etc. The fruits were of capital size, and richly coloured. Messrs. Artindale and Son, Sheffield, arranged a group of hardy plants, chiefly of a moisture-loving character. Rough stones were used with a small expanse of water in the centre of the group. Among the many good things represented we noticed the new, brightly-coloured Silene purpusi, a plant which promises to be a very useful thing for the lower parts of the rockery. Mr. G. Prince, Langworth, Oxford, showed roses in his usual good form, the hybrid teas being well represented.

National Carnation and Picotee Society.

NORTHERN SECTION.

The thirty-fourth annual exhibition was held on Saturday at the White City, late Botanical Gardens, Old Trafford, Manchester. A grand lot of flowers was staged in competition, and the exhibition was notable in showing how the trend of opinion is forcing the florists to fall into line with what may be called the prevailing fashion. The white-ground carnations and picotees are being ousted from the leading, and, as many think, their rightful position, in favour of the selfs and yellow-ground sections. The display produced by the various exhibits was very fine, although competitors stated that they would have preferred to exhibit a week earlier, as they would then have had more flowers. The following list of awards was made:

CARNATIONS.

For twelve selfs, not more than two of any one variety, Mr. A. R. Brown, Birmingham, was first with Daffodil, Avalanche, Major Galton, Mrs. H. Skeels, Isinglass, Mrs. Eric Hambro, Chaucer, Alplin, Mrs. Howard Green, W. H. Parton, Ann Hathaway, and Helen; Rev. C. Gottwaltz, Droitwich, second with John Pope, Hadzor, Helen Gottwaltz, Major Galton, Anglia, John Pope, Helen Gottwaltz, Theodore Galton, Mrs. Eric Hambro, John Hughes, Cambria, and Sir Galahad; Mr. J. Edwards, Moston, third with Daffodil, Mrs. James Douglas, W. H. Parton, Benbow, Mrs. Flight, Mrs. Eric Hambro, Leslie Mills, Seedling, Carabus, Sultan, Mrs. Flight, Mrs. E. Hambro; five exhibits. In the class for six selfs, not more than two flowers of any one variety, Mr. C. Allcock, Blundelsands, was first with Daffodil, Agnes Sorrel, Much-the-Miller, H. J. Cutbush, Daffodil, and W. H. Parton; Mr. H. Chadwick, Stoke, second; Mr. G. Lord, Turn, Ramsbottom, third; twelve exhibits.

There was a strong competition in the class for twelve yellow-ground carnations and picotees with not more than two flowers of any one variety, and in the result Mr. A. R. Brown was first with Lord Skeyne, Brodick, Margaret Thurstan, Emperor, Queen Bess, Hornet, Jupiter, Hidalgo, Sir Olaf, Lara, Mrs. Leo Hunter, and Gaiety; Mr. C. F. Thurstan, Wolverhampton, second with Liberte, Elaine, Sam Weller, Lory Steyne, Professor Cooper, Mr. F. Wellesley, Erl King, Elaine, Leading Lady, Liberte, Leading Lady, Hidalgo; Mr. C. F. Budenberg, Marple, third; six exhibitors. For six fancy or yellow-ground carnations and picotees, no more than two flowers of one variety, Mr. C. Allcock was first with Daniel Defoe, Merlin, Lara, Wm. Pemberton, Lara, Argosy, Hesperus; Mr. G. Lord second with George Lord, Cavalier, Lara, Liberte, Daniel Defoe, Roney Buchanan; and Mr. G. D. Ford, Birmingham, third; eleven exhibits. In competition for the prizes for six carnations, white grounds, dissimilar, bizarres, and flakes, Mr. C. F. Budenberg first with Master Fred, George Melville, Robert Houlgrave, Gordon Lewis, Edward Adams, Flamingo; Mr. J. Edwards second with Murillo, Sportsman, Little Dick, George Melville, Gordon Lewis, J. W. Bentley; and Mr. H. Chadwick third; twelve exhibits.

PICOTEES.

For six picotees, dissimilar, white grounds, Mr. A. R. Brown was first with Lady Sybil, Linda, Mrs. Chaundy, W. E. Dickson, Miss E. Cartwright, and Mrs. Hoskins; Mr. J. Edwards second with John Smith, Mrs. Beswick, Favourite, Thos. Williams, Little Phil, and Pride of Leyton; Mr. G. Lord third.

UNDRESSED BLOOMS.

In the class for twelve single blooms, undressed, without cards, Mr. C. F. Budenberg was first with Brodick, Johnny Briggs, Lara, Leading Lady, Aran, Cadmus, Loveliness, George Lord, Richness, Huish, Sir Launcelot, and Strongbow; Mr. A. R. Brown second with Sir Lancelot, Strongbow, Maud Brown, Sir W. Olaf, Highland Lass, Hornet, The Nizam, Liberte, Mrs. Herbert Incledon, Lara, Daffodil, Drogense; J. Edwards third. For six single blooms, undressed, Mr. C. Allcock Mr. G. D. Ford, and Mr. D. Thompson, Marple Bridge, were the winners in the order of their names; six exhibits.

SINGLE BLOOMS.

Premier white-ground carnation was George Melville. The premier white-ground picotee was Mrs. C. H. Herbert, and the premier yellow-ground carnation was Lara.

Best bizarre carnation, white ground, Mr. G. Lord first with Master Fred; Mr. Budenberg second with the same variety; Mr. J. Edwards third; and Mr. A. R. Brown fourth and fifth. Best flake carnation, white ground, Mr. J. Edwards first and second with Gordon Lewis; Mr. A. R. Brown third with Guardsman; Mr. Thurston fourth; and Mr. Brown fifth. Best heavy-edge picotee: Mr. Brown first with Maud Brown; Mr. Kenyon second with Mrs. Holden, and third with Mrs. Openshaw; Mr. Budenberg fourth; and Mr. Thompson fifth. Best light-edge: Mr. Brown first with Lucy; Mr. Edwards second with Thomas Williams; Mr. Thurstan third with Fair Maiden; Rev. Gottwaltz fourth; and Mr. G. Lord fifth with Lucy.

A first-class certificate was granted to Mr. G. D. Ford for Mrs. C. H. Herbert, light purple picotee.

GARDENING ENGAGEMENT.

Mr. J. Newton, who for the past three and a-half years has occupied the position of foreman in the gardens of Garscube, Mary Hill, Glasgow, the residence of Sir A. Campbell, Bart., has been appointed head gardener to D. W. Graham, Esq., Kilston Park, Monmouth.

Beet.—The roots are swelling fast, and should any of them be likely to become coarse lift them, taking precautions not to bruise them in any way. Lay them in behind a north wall, and cover them over with soil, when they will keep in good condition for a long time.—T. W. Birkinshaw.

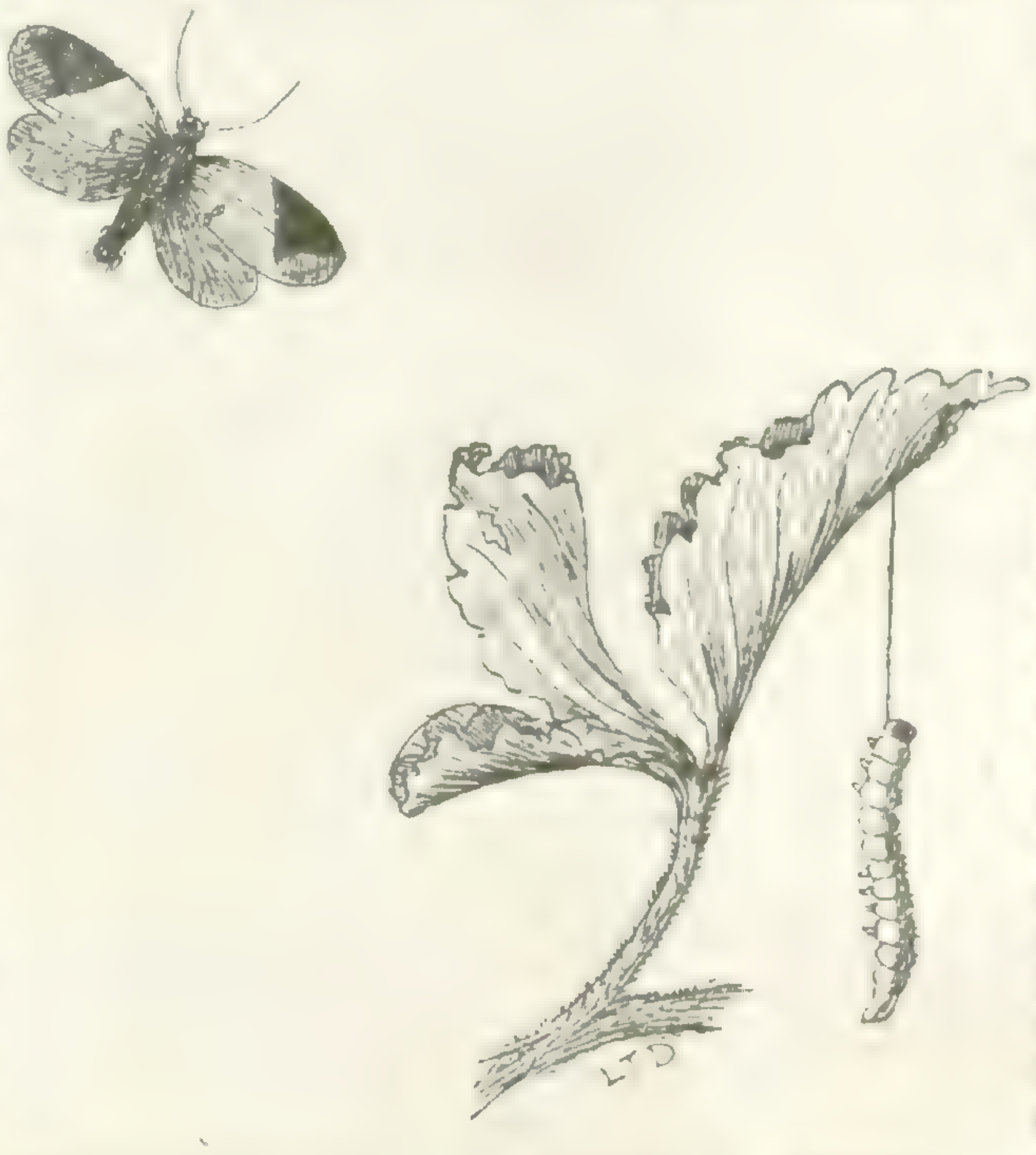
ANSWERS TO CORRESPONDENTS.

ASTERS.—W. B., Bristol: Your question reached us too late to admit of answering it in our issue of the 22nd inst. In view of the development which the annual asters have undergone within recent years, "French Aster" is a vague term, and it would be well were compilers of schedules to use terms which would express exactly the type or types they wish exhibitors to stage. Originally, the term "French" was applied to the flat-petalled varieties to differentiate them from the quilled or German type. According to the schedule you have sent us you could, without any risk of disqualification, stage blooms of the Victoria type, and your opponents would be equally justified in staging blooms of the Comet type. It would be better to use the term flat-petalled in connection with the so-called French asters, and the term "quilled" to the so-called German asters, which have quilled petals, and then exhibitors would have no doubt in their mind with regard to the flowers they should stage.

DESTROYING WASP NESTS. — K. F., Gloucester: The article from the pen of "East Sussex," which we publish in this issue, will give you the information you require. There are strong objections to the use of gunpowder and prepared squibs, for the former is dangerous, and the latter one not sufficiently effectual. The material advised by our correspondent is most destructive to wasps when used in accordance with the advice given, but, as he points out, it is a dangerous poison and requires the greatest care, both in its use and storage. For the information of those who are afraid to handle so poisonous an agent, we would mention that we have destroyed many wasps' nests with spirits of turpentine. In using turpentine for destroying wasps nests, a medium-sized piece of rag is fixed to a pliable stick between two and three feet in length, and then the rag is placed in a cup or basin, containing the spirit, where it remains until saturated. It is then plunged into the passage to the nest, and a piece of turf put firmly over the opening. It is essential to success that the turpentine be of full strength. There is no occasion to dig the nests out.

CHINESE PRIMULA.—F. C. C., Hants: We are sorry we are not able to assist you to the extent you wish, for the materials available for a comprehensive history of the Chinese primula are so widely scattered over the gardening journals published during the past fifty years that the work of obtaining the necessary data, and arranging and summarising them would involve the expenditure of much time. We can, however, assist you by stating that the primula was introduced from China in the year 1820, and is a native of mountainous regions. The plant that first flowered in this country had comparatively small flowers, and a corolla so variously jagged as to lead to a doubt in the mind of Dr. Sims, who edited the "Botanical Magazine" in 1825, when the primula was figured in that publication, whether it really belonged to the genus primula. Judging from the illustration in the "Botanical Magazine," the primula during the earlier years of its cultivation in this country had a strong resemblance to a good type of the star primulas of the present day. There was then some diversity in the height of the plants, and Dr. Sims states that scapes once or twice proliferous, making the flowers verticillate, were not natural, but the result of luxuriance. Thus from plants bearing flowers of much the same size and form as those of an ordinary star type of the present day have been evolved the magnificent strains that cultivators now have at their command. These results have been obtained by intercrossing and selective culture, for as yet it has not been found possible to obtain hybrids between the Chinese primula and other primula species. Primula sinensis was first cultivated with success in this country by Mr. Thomas C. Palmer, of Bromley, Kent.

STRAWBERRY-LEAF BUTTON MOTH. —S. B. E., Bargoed: The trouble is due to the Strawberry-leaf Button Moth (Peronea comariana), which, in the larval stage feeds upon leaves and flowers alike, and draws the leaves together with a silky web. The earliest larvæ appear during May, and when once there has been an attack, the beds should be carefully inspected at that time, as hand-picking is the best remedy, though dusting with soot before the flowers open is useful, inasmuch as it renders the strawberry foliage distasteful to the larvæ. As soon as possible after the runners have been secured, clear away all top-dressings, rough leaves, and useless runners, and burn all promptly; then skim off the surface soil and burn or deeply bury it, returning, in its place, sufficient rich substantial soil made firm.



STRAWBERRY-LEAF BUTTON MOTH AND CATERPILLAR.

SEAKALE FOR FORCING. — M. S. B., Rutland: The want of vigour in the seakale plants is, so far as we can determine from the information contained in your letter, due to your having been too sparing in the use of manure in the preparation of the quarter last winter. Very little can be done now to assist the plants. A liberal watering with liquid manure would be beneficial, and a top-dressing of sulphate of ammonia at the rate of two ounces to the square yard would stimulate. The fertiliser must be carefully distributed between the rows without touching the foliage and be lightly hoed in.

ROMAN HYACINTHS.—W. H. B., Leicester: Roman hyacinths required for indoor decoration may be grown without drainage in a mixture of fibre and shell, in much the same manner as advised by our contributor in describing the culture of daffodils in fibre in our last issue. In our issue for September 12, the writer of the article will deal with other of the bulbs that thrive without drainage, and will, of course, include Roman hyacinths. We need not, therefore, do more in replying to your question than state that these bulbs are amenable to this course of culture, and suggest that you purchase first size bulbs.

SHADY GARDEN. — B. S., Sussex: As your small garden is over-shadowed on all sides by trees in the gardens of your neighbours, it will be extremely difficult for you to grow hardy perennials with any degree of success. Michaelmas daisies, and the helianthuses of moderate stature will grow moderately well under such conditions, and be useful for their greenery in summer. They will bloom fairly well towards the close of the season. If you are unable to have many flowers during the summer and autumn you may have an extremely beautiful display in the spring months by utilising some of the less expensive bulbs. By the judicious use of crocuses, daffodils, and early and May-flowering tulips you can have an attractive display of flowers during March and the two following months. It now being possible to obtain many beautiful daffodils and tulips at a low price, the cost will not be heavy, as both daffodils and tulips will bloom satisfactorily two seasons. We advise you to refer to a bulb list, and select such daffodils as Barri conspicuus, Emperor, Empress, Golden Spur, Grandee, Sir Watkin, Stella, and Poeticus ornatus. From the early-flowering tulips you might select Artus, Chrysolora, Cottage Maid, Duchesse de Parma, Keizerskroon, and Rose Gris de Lin. The May-flowering tulips specially adapted to your requirements comprise Bouton d'Or, Gesneriana major, Isabella, Picotee, Parisian White, Parisian Yellow, and Rosalind.

NAMES OF PLANTS.

G. H., Herts.—1. Polygonum baldschuanicum; 2, Solanum jasminoides.

H. H., Godstone.—We hope to be able to give you the names in our next issue.

R. H., Yorkshire.—1, Buddleia globosa; 2, B. Lindleyana; 3, Spanish Broom.

B., Kent.—We cannot undertake to name florist's flowers. Your begonias are probably unnamed seedlings.

W. F.—We do not recognise either of the Michaelmas daisies you have sent us. They are both inferior to many other varieties in cultivation, and we suggest you weed them out and replant with finer varieties.

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METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. August 16 to August 22.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 16—Sunday	10 25	61	56	71	42
,, 17—Monday......	8 55	53	52	69	41
,, 18—Tuesday ...	—	56	53	62	49
,, 19—Wednesday.	1 35	59	54	65	55
,, 20—Thursday ...	0 5	59	57	65	54
,, 21—Friday	9 10	65	61	70	58
,, 22—Saturday ...	4 0	60	59	67	56
Means	4 53	59	56	67	51

Date. 1908. August 16 to August 22.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Aug. 16—Sunday	—	61	63	61	37
,, 17—Monday......	—	61	63	61	35
,, 18—Tuesday ...	—	62	62	61	43
,, 19—Wednesday.	—	61	62	61	51
,, 20—Thursday ...	0·15	61	62	61	46
,, 21—Friday	0·04	62	62	61	54
,, 22—Saturday ...	0·12	62	62	60	52
Means ...	(total) 0·31	61	62	61	45

MARKETS.

◆

COVENT GARDEN.

Flowers.

Hardy flowers are in abundant supply with a moderate demand.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	5	0	to	9	0
Alstroemerias	per doz. bun.	2	0		3	0
Arums	per doz.	2	6		3	6
Asparagus	per doz. bun.	1	6		6	0
Asters	per doz. bun.	2	0		3	0
Carnations	per doz. blms.	1	6		2	6
,,	per doz. bun.	7	0		8	0
,, Malmaison	per doz. blms.	6	0		9	6
Cattleyas	per doz.	8	0		10	0
Chrysanthemums	per doz. bun.	5	0		7	6
Coreopsis	per doz. bun.	1	6		2	0
Croton leaves	per bun.	1	0		1	0
Cypripediums	per doz. blms.	2	0		2	6
Dahlias	per doz. bun.	6	0		9	0
Eucharis	per doz.	3	0		4	0
French fern	per doz. bun.	1	0		3	0
Gaillardias	per doz. bun.	1	6		2	6
Gardenias	per doz.	1	6		3	0
Gladiolus, large-flowered	per doz. spks.	1	6		2	0
Gypsophila	per doz. bun.	2	0		3	0
Lilium auratum	per bun.	2	0		4	0
,, candidum	per bun.	1	0		2	0
,, speciosum	per bun.	1	6		3	0
,, longiflorum	per bun.	2	0		3	0

Fruits.

Fruits of all kinds are abundant, with a fairly good demand.

		s.	d.		s.	d.
Apples, English	per ½-sieve	1	6		4	0
Apricots	per box	0	9		1	0
Bananas	per bun.	3	0		9	6
Figs	per doz.	1	0		2	0
Grapes, English	per lb.	0	8		3	6
,, Belgian	per lb.	0	8		1	0
,, Channel Islands	per lb.	0	6		1	3
,, Denia	per barrel	5	0		7	0
Greengages	per ½-sieve	3	0		7	0
Lemons	per case	6	0		14	0
Melons, Guernsey	each	0	9		2	0
,, English	each	1	0		2	6
,, Valencia	per case	7	0		10	6
Nectarines	per doz.	1	6		10	0
Oranges	per case	7	0		16	0
Peaches	per doz.	2	6		12	0

Vegetables.

French and runner beans, tomatoes and vegetable marrows are exceptionally plentiful, and continue very low in price.

		s.	d.		s.	d.
Artichokes	per doz.	1	6	to	1	9
Beans, broad	per bush.	2	0		3	0
,, French	per bush.	2	0		3	0
,, Runner	per bush.	1	6		2	6
Peas	per bush.	1	3		2	0
Cabbage	per tally	1	6		2	0
Carrots	per doz. bun.	1	6		3	0
Cauliflowers	per doz.	1	0		2	0
Cucumbers	per doz.	1	6		2	0
Endive	per doz.	1	0		1	6
Horseradish	per doz. bun.	9	0		10	0
Lettuce, cos	per doz.	1	0		1	6
Mint	per doz. bun.	1	[illegible]		2	0
Mushrooms	per doz. lb.	[illegible]	[illegible]		[illegible]	[illegible]

TRADE NOTE.

Quite Content pea, as sent out by Messrs. James Carter and Co., is a maincrop variety; height, 6ft.; foliage and pod, deep green; pod, 7 to 7½in. long, hanging mostly in pairs, and is quite distinct from all other peas. We are requested to make this statement, as we are given to understand that a pea which has not all the claims of Carters' Quite Content, has been distributed this season by others, either by accident or design.

FORTHCOMING ENGAGEMENTS.

TUESDAY, September 1.—Royal Horticultural Society: Committees meet at 12 o'clock; Lecture at 3 p.m.; Scientific Committee at 4 o'clock.

Bicester Horticultural Society.

WEDNESDAY, September 2.—York Florists' Dahlia Show.

Hayward's Heath Gardeners' Association.

THURSDAY, September 3.—Dundee Horticultural Society; three days.

Glasgow Horticultural Society; three days.

National Dahlia Society, at Royal Horticultural Hall.

FRIDAY, September 4.—Cleland Horticultural Society.

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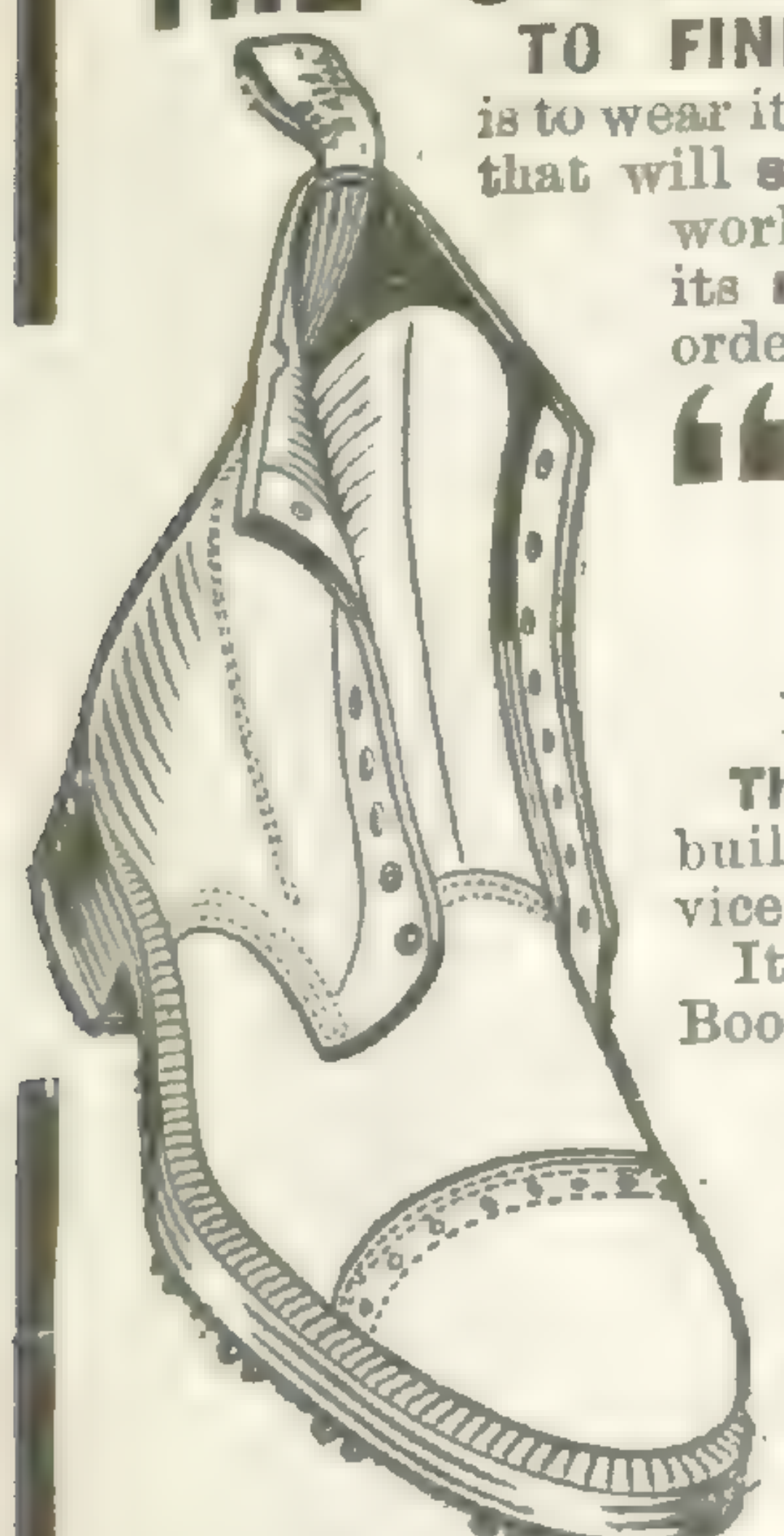

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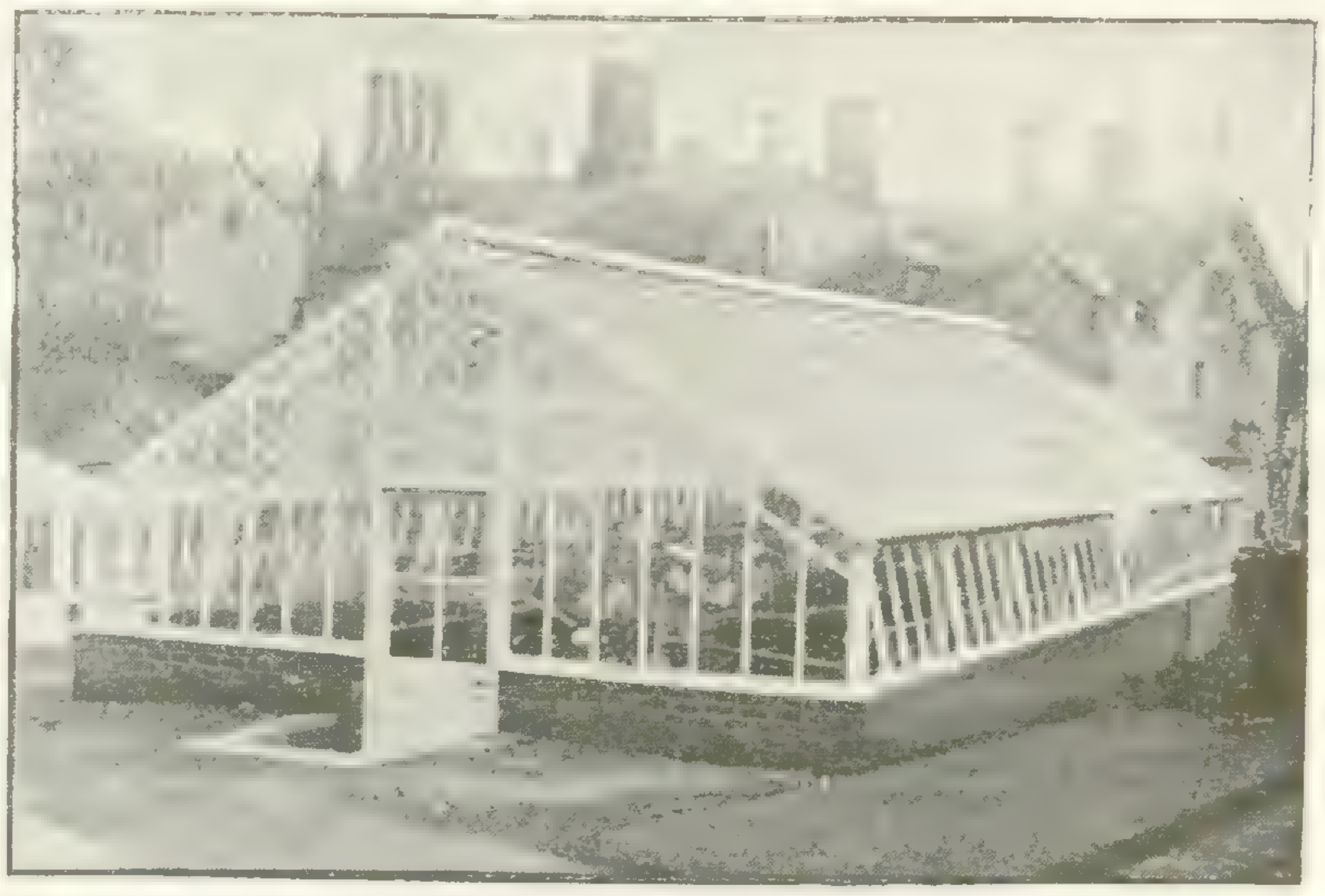

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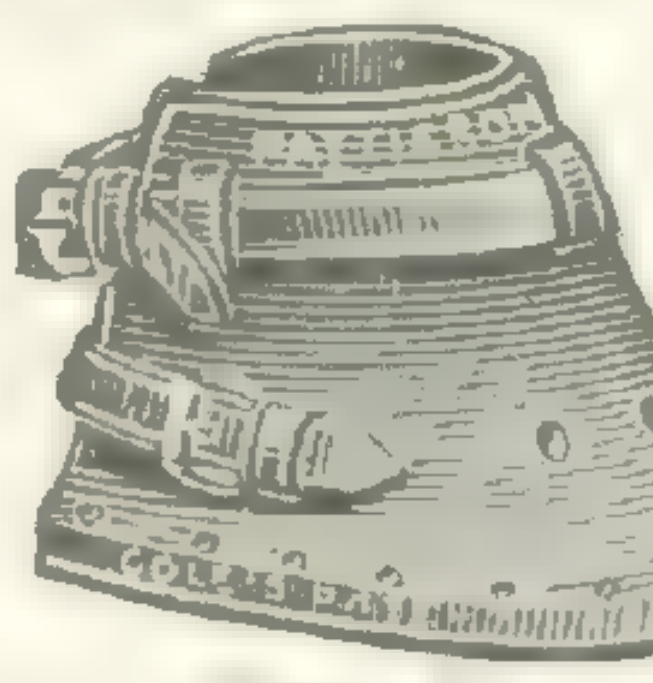

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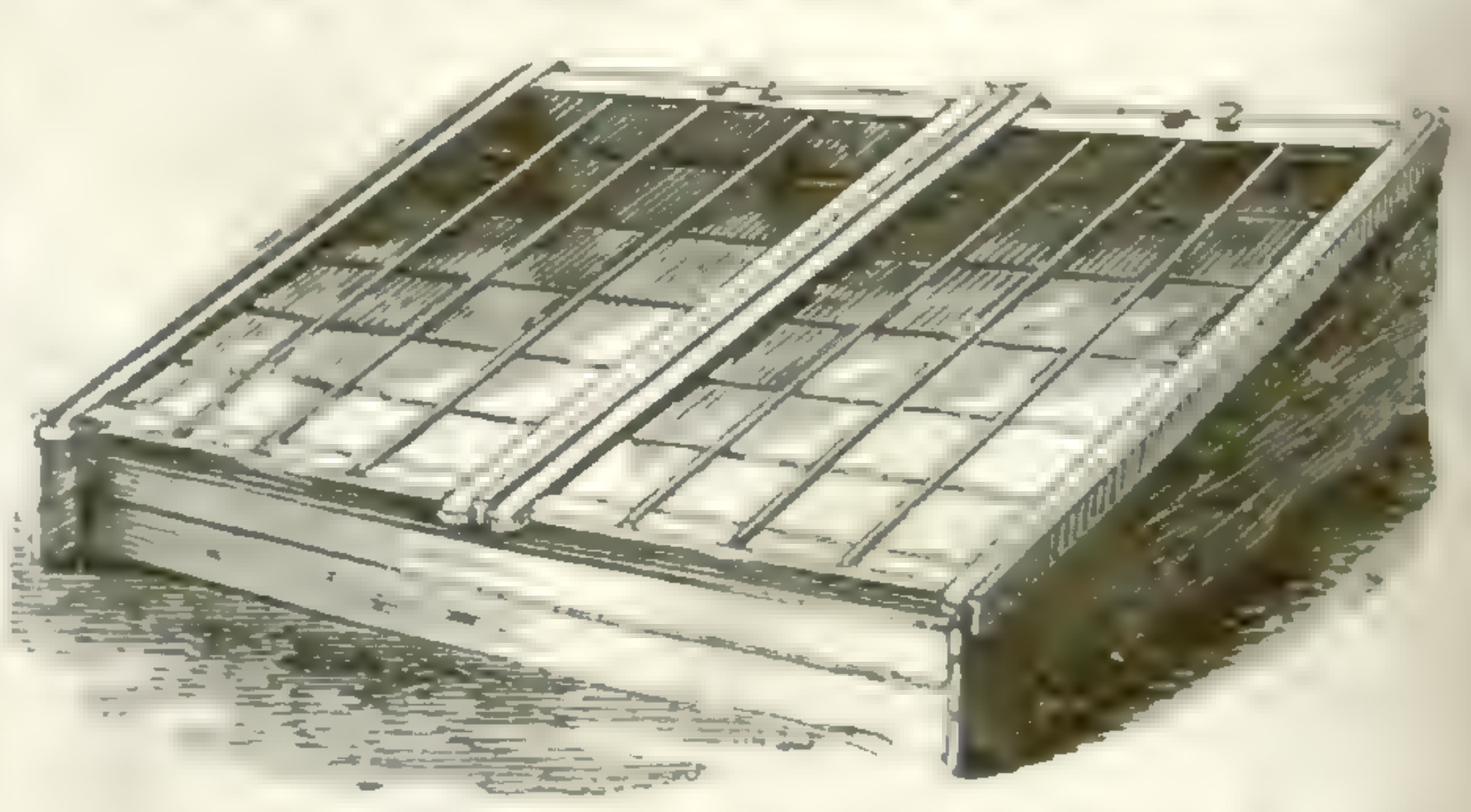

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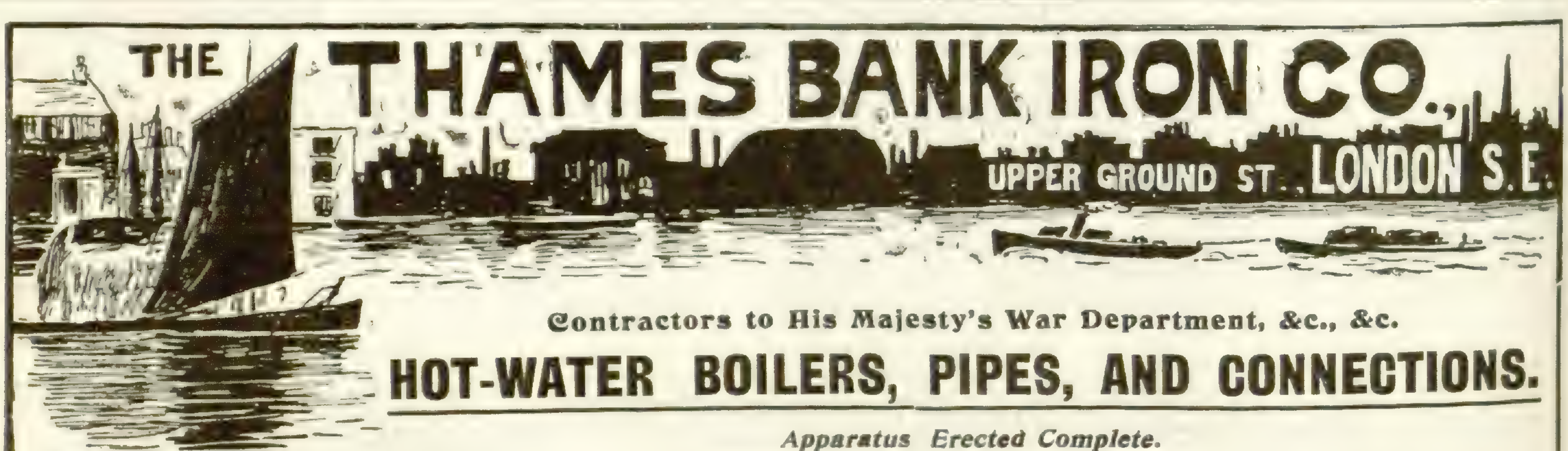

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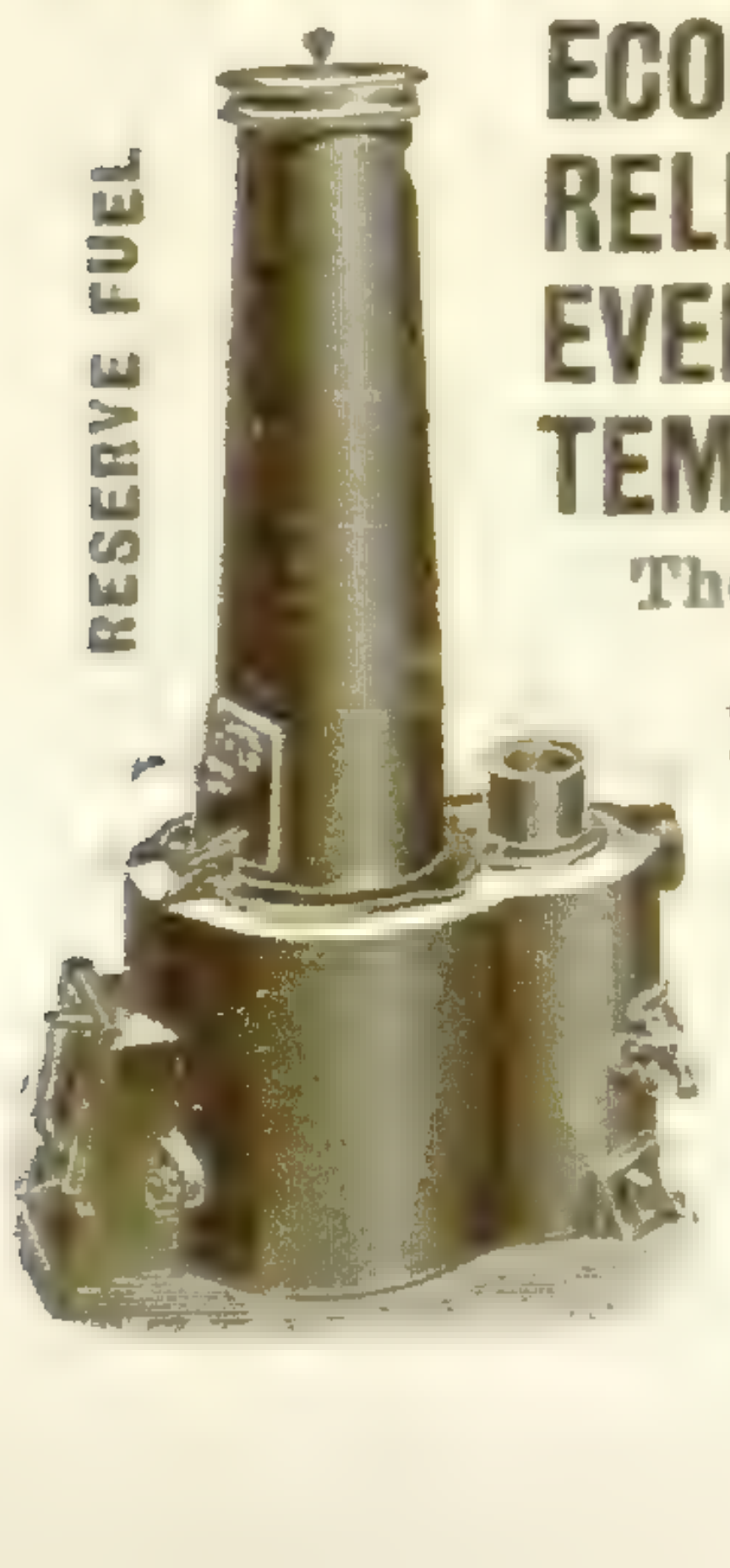

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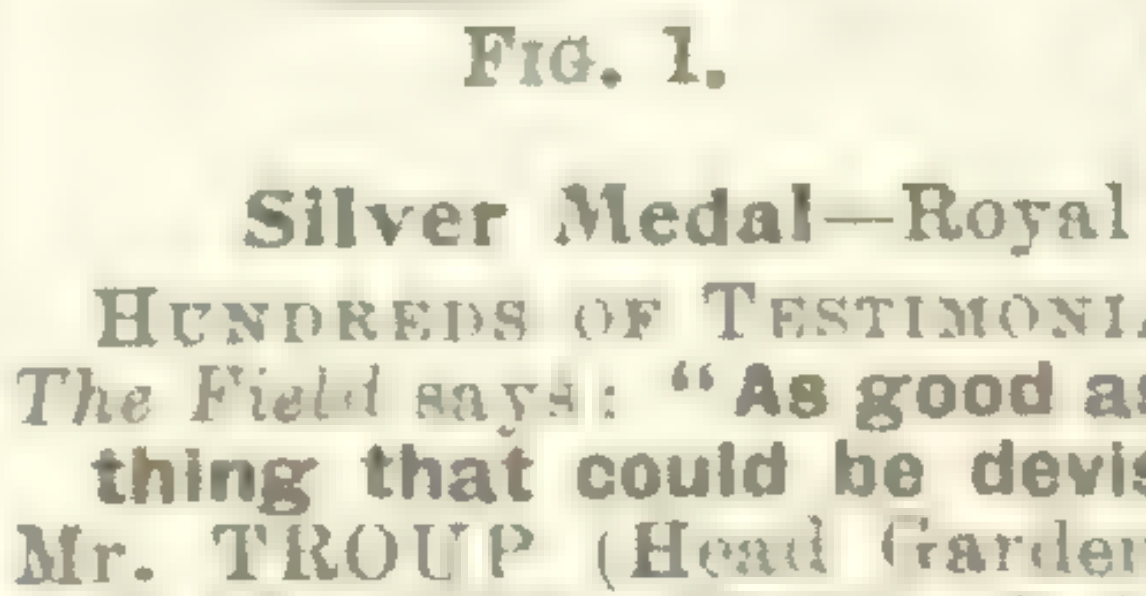

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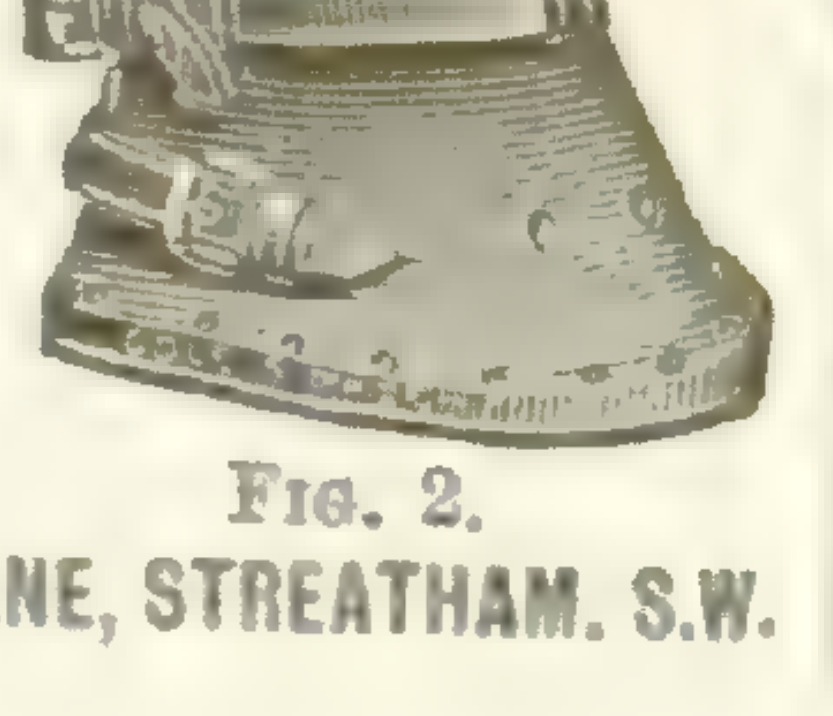

Fig. 2.

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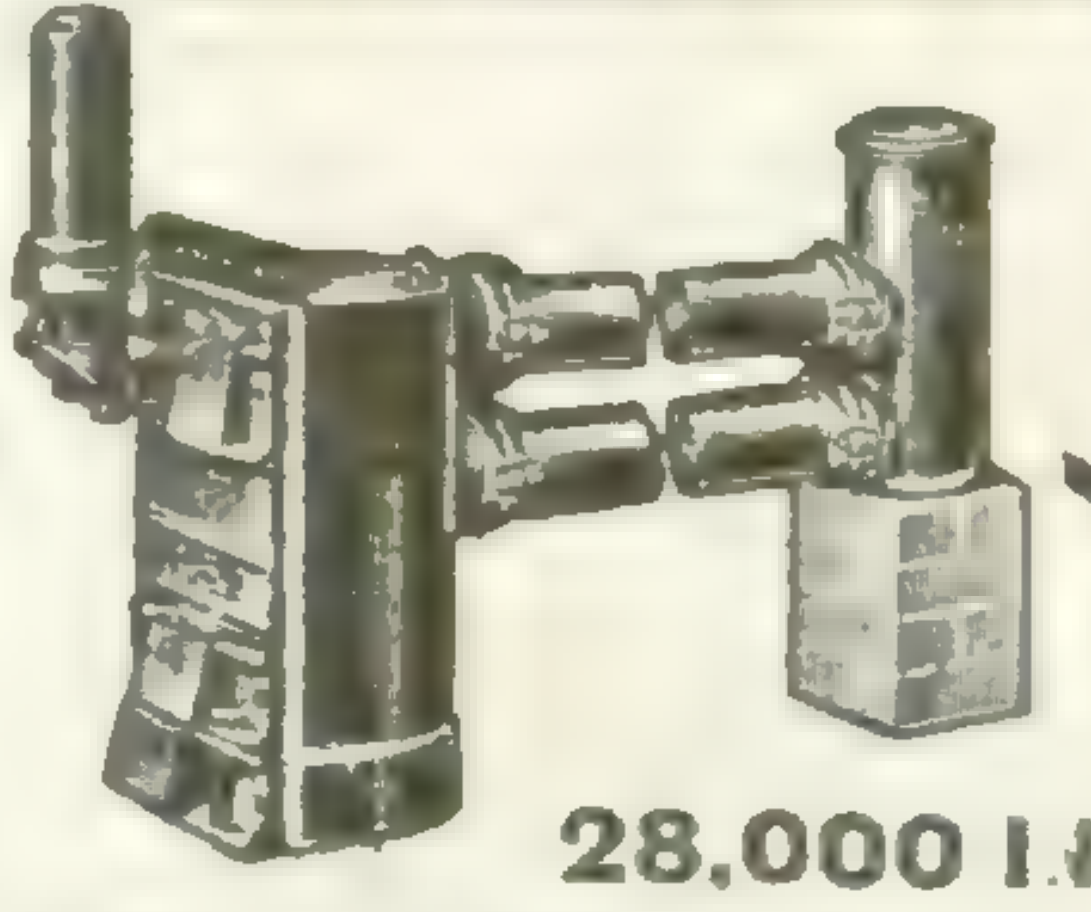

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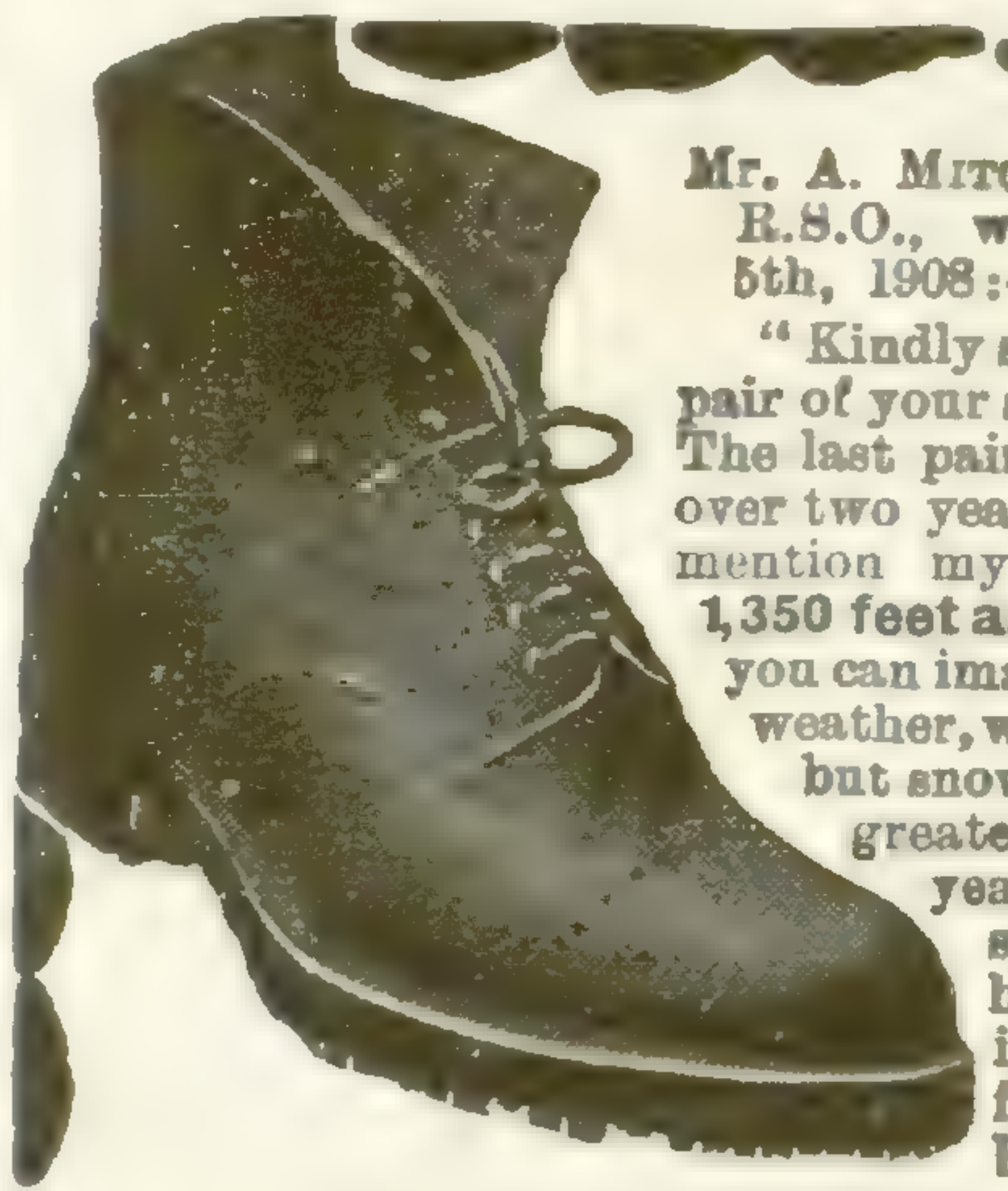

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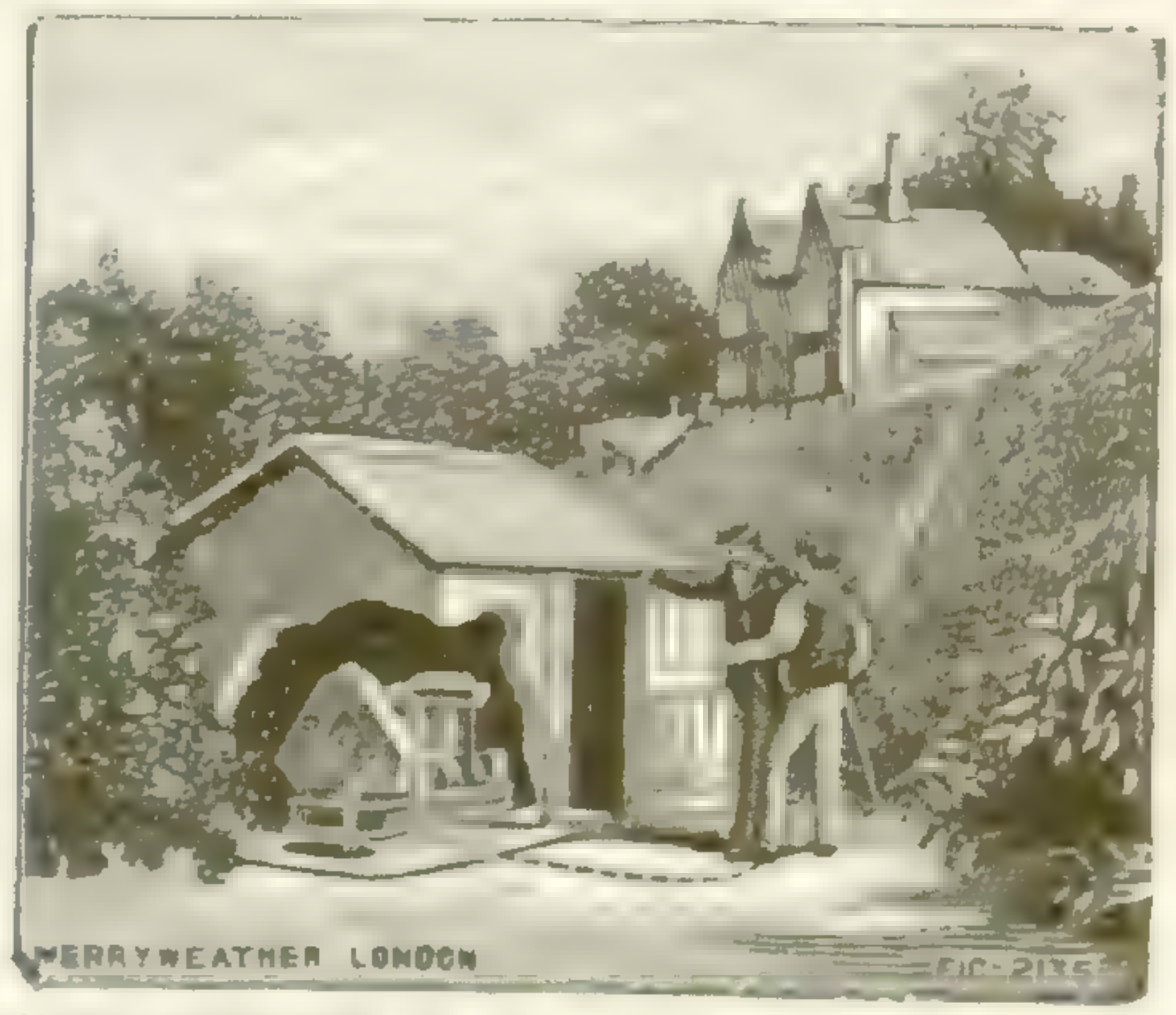

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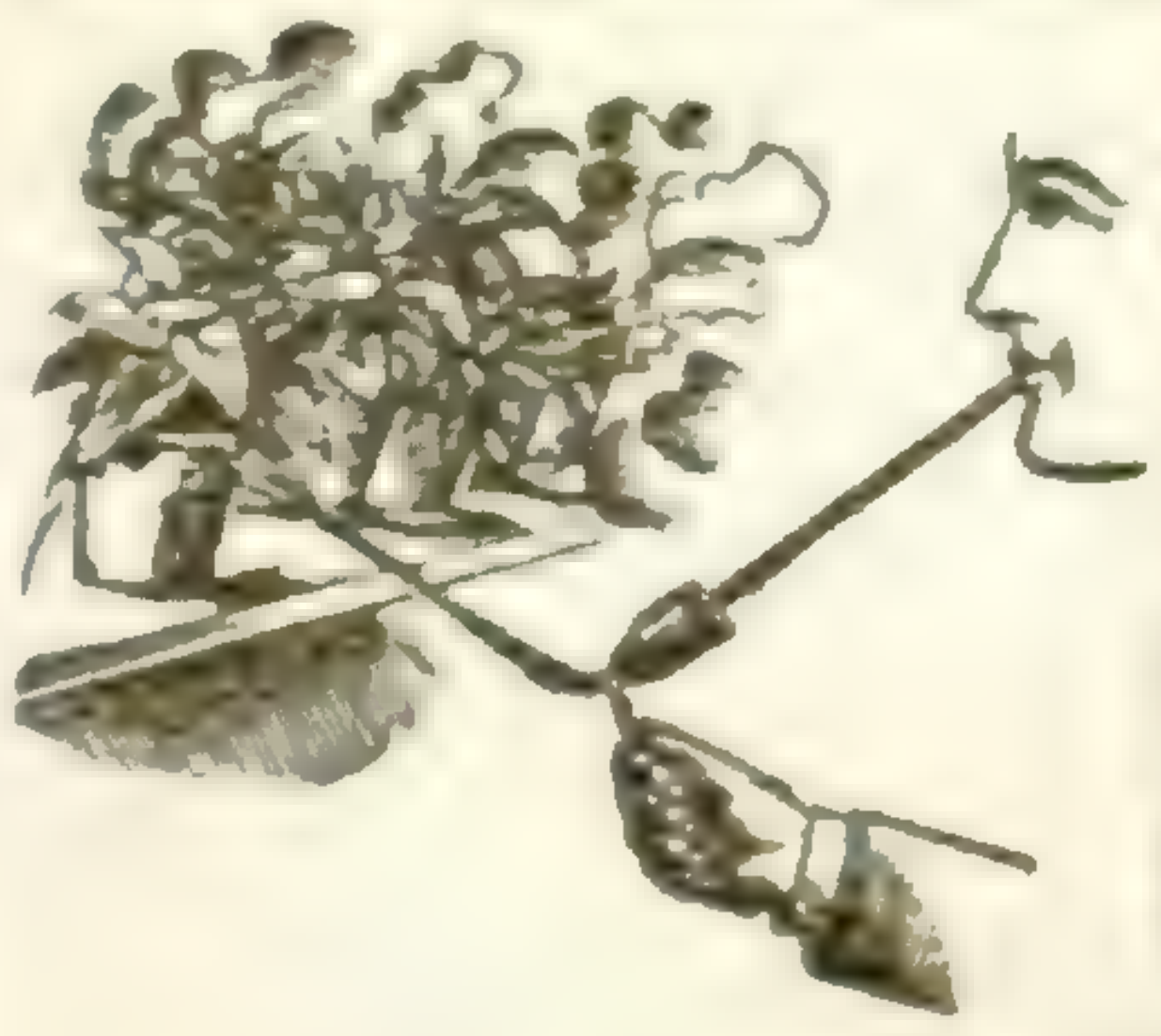

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GARDENER (Head Working), age 40, married: 25 years' all-round practical experience in the management of gentlemen's gardens, including Glass, Grapes, etc.; capable to lay out new or remodel neglected gardens; small family; son (15) could assist if required. GARDENER, 32, Adelaide Road, Chislehurst, W. Kent.

GARDENER (Head Working), where more are kept; 25 years' practical experience all branches Inside and Out, early and late Forcing, Vines, Cucumbers, Melons, Stove, and Greenhouse Plants, Herbaceous Borders; thoroughly reliable; highly recommended; married, without encumbrance. WOODHOUSE, Eastwood Road, Bramley, Surrey.

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GARDENER (Head or good Single-handed), thoroughly experienced in all branches; grapes, peaches, melons, tomatoes, stove, greenhouse plants, and kitchen garden; married, no family. W. CANE, Riseden, Wadhurst, Sussex.

GARDENER (Head Working), where three or more are kept; age 32; married, one child; practical experience in all branches; recommended present employer. T. WHITE, The Woodlands, Hereford.

GARDENER (Head Working, where two or more are kept); 16 years' good practical experience in all branches; thorough knowledge of grapes, melons, cucumbers, stove and greenhouse plants, flower and kitchen garden; age 30; married when suited; good ref.; 2½ years in last place. B. BROOKS, Minerva Cottage, Elm Grove, Worthing.

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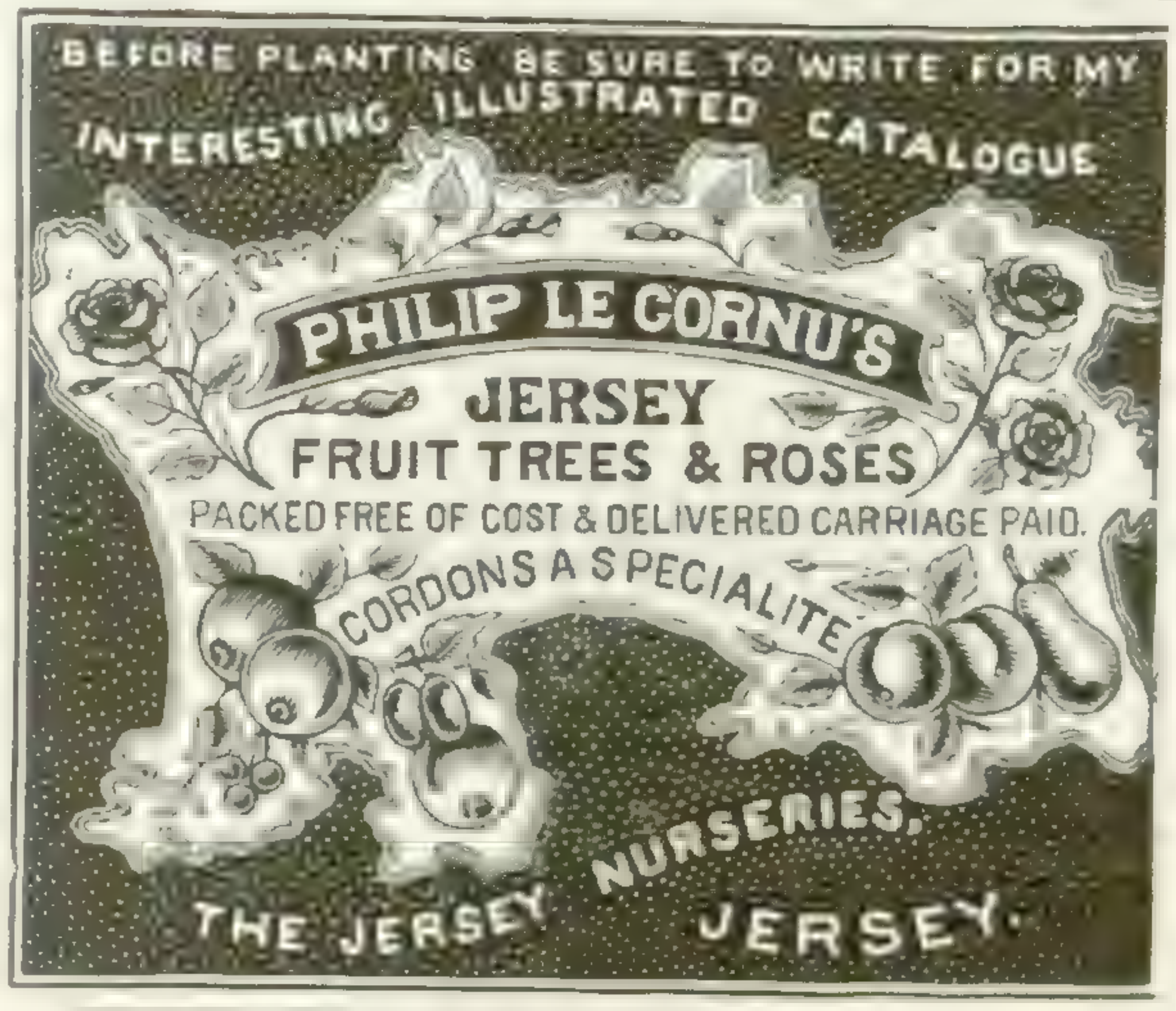
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The Corporation invite TENDERS for the SUPPLY and DELIVERY of 1,030 dozen of BEDDING PLANTS, in accordance with particulars to be obtained at my office. The plants are to be delivered in May, 1909, and the Contractor whose tender is accepted will be permitted to remove from the Parks about the middle of October next, the plants or cuttings he may require free of cost.

Tenders endorsed "Tender for Bedding Plants," must be delivered at the Town Clerk's Office, on or before the 24th September next.

No pledge is given to accept the lowest or any tender.

R. R. LINTHORNE,
Town Clerk.

Municipal Offices, Southampton,
28th August, 1908.

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SOW NOW, to FLOWER NEXT YEAR, Cannells Aquilegia, long-spurred hybrids; Antirrhinum, Canterbury Bells, Hollyhocks, Delphiniums, Digitalis (Foxglove), 6 pkts., 1s., post free. CANNELLS, Loddon, Norwich.

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WILL BE OUR

SPECIAL BULB NUMBER.

THE SUBJECTS WILL INCLUDE:—

Some Good Garden Lilies, Dog's-Tooth Violets, May-Flowering Tulips, Bulbs in Fibre, the Free Use of Daffodils, Spring-Flowering Crocuses, Good Bedding Hyacinths, Some Newer Daffodils, &c., and MANY FINE ILLUSTRATIONS.

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Anemones, single mixed	1	2	10	0
Anemone, The Bride, pure white	1	2	10	0
Crocus, first size, in the finest mixture ...	1	2	10	0
Crocus, second size in the finest mixture	0	8	5	10
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	6	4	6
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture... ...	1	4	12	6
Narcis., Trumpet, in the finest mixture ...	2	6	20	0
Narcis., double, fine mixture	3	0	25	0
Narcis.-Polyanthus, finest mixed	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculus, French, double mixed ...	0	9	7	0
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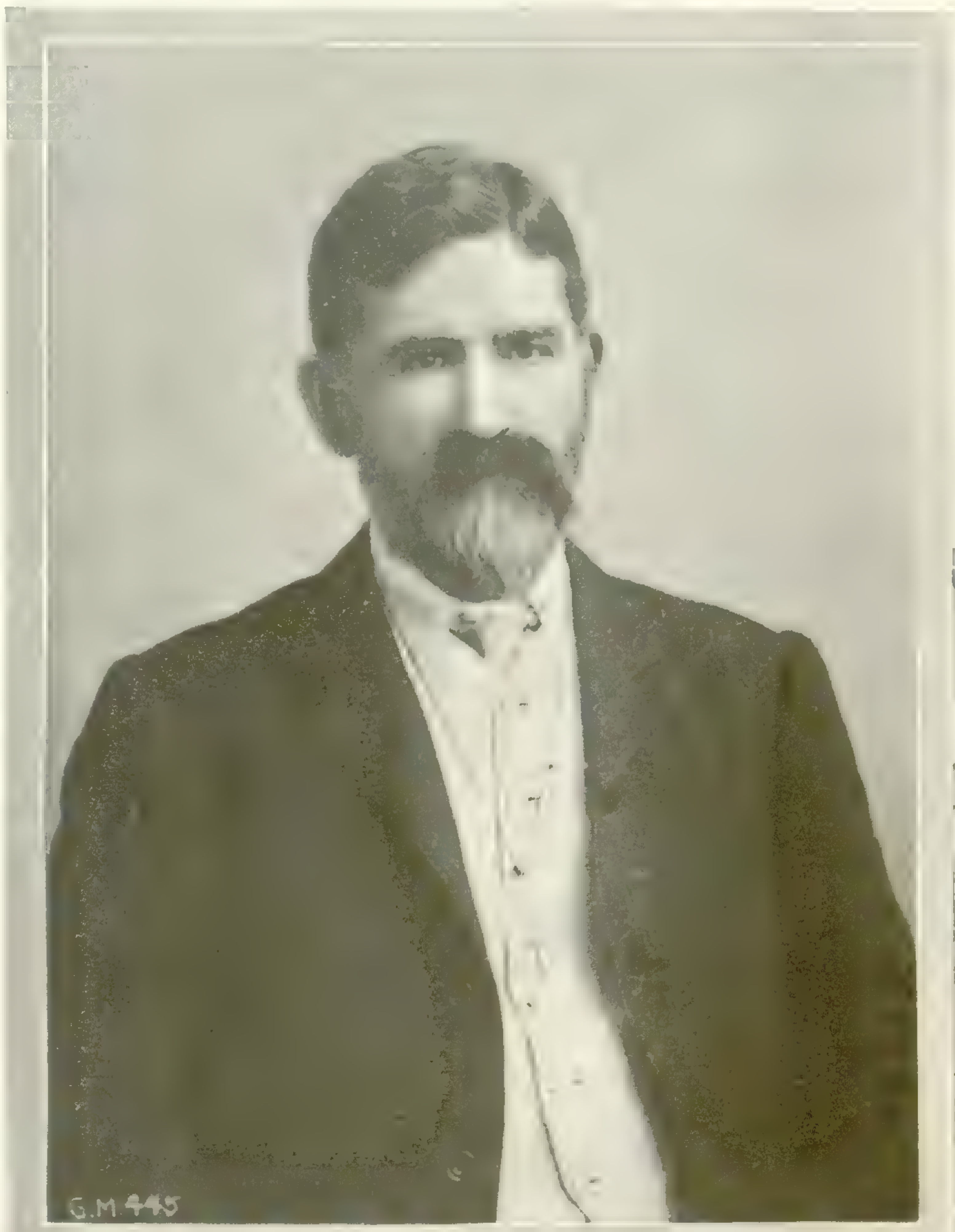
VOL. LI.—No. 2,862. SATURDAY, SEPTEMBER 5, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Water Circulation.

It is a very curious thing to consider that in our ordinary water heating apparatus for hothouses and conservatories, we have really a working model of the water circulation of the great world itself, the sunheat at the tropics raising the water and sending it north and south to cooler regions, whence it returns as ice-cold water creeping along the ocean bottom to be warmed and returned again and again. The surface current of the Gulf Stream represents a portion of this circulation, but it is only the deep sea explorer who can tell us that the water at the bottom of the profound tropical oceans is always, despite the great heat at the surface, at or near the freezing point. This circulation of water as a liquid is, however, only a part of the great system of to and fro distribution which is always going on. In addition to this there is the great aerial transference, to which we owe our rain, hail, and snowfalls. Here again, of course, the sun is the great motive power, constantly lifting millions of tons of water from the surface of the ocean by evaporation into invisibility, conveying it thousands of miles by gentle zephyr, breeze, gale, or hurricane, to far-distant and cooler areas, where, by virtue of the lower temperature, it assumes the visible form of cloud and the tangible form of rain, hail, or snow, as the locality or electrical conditions may determine. In the form of rain it sooner or later finds its way back to mother ocean by way of spring, brook, rivulet, or river, shaping the land as it flows along from one to another; and in the form of snow it does the same, though consuming generally far longer periods of transit. The snow that falls on a heaven-soaring mountain peak, or is perhaps deposited on the great ice cap of the Poles, is probably long ages on its way to the sea after being incorporated as solid ice with that on which it falls as cap or glacier. At the Pole especially, centuries must elapse before the slowly creeping central ice mass gives birth to the mighty bergs, huge fragments of coastal ice cliffs, which, as they float away and slowly melt, contribute their quota to the creeping cold current beneath which will carry the materials of the original snowflake back to the tropic seas in preparation for a new journey. Nature's operations are slow, but sure, and in this particular connection they must be slow indeed. It does not, however, by any means follow that there are no short cuts for the water; even at the Pole evaporation goes on, and the snowflake may escape imprisonment thereby, and sail away as vapour on the wings of the arctic breeze to find its way direct to the ocean as rain or snow again. Great lakes and inland seas must also involve a circulation of their own, contributing to the local rainfall by their own evaporation; but even here the great oceans must be large contributors, and the mighty falls of the Zambesi or Niagara must, for the major part, consist of water thence derived and carried in the upper air to the sources of the great rivers concerned, and their innumerable tributaries. In this connection we usually regard the visible clouds as representing the aerial water supply in transit, but in point of fact they only do so in comparatively small measure, since a perfectly clear sky may be really as richly laden with water as a densely clouded one. It is purely a matter of temperature which determines visibility and deposition, or invisibility and evaporation. The breeze which sweeps across the Atlantic towards our shores, for instance, may do so in unclouded sunshine, but let it strike the cool summits of our western hills, or meet a check by a chilly blast from the north, and at once its watery nature is demonstrated by the formation of dense cloud, and possibly the descent of a deluge. It is, indeed, often interesting to watch the clouds in changeable weather, and note how they appear and disappear. A tiny wisp, like an ethereal feather, appears in a spotless sky, and as we watch it it may spread and become denser, and in a very short time a very appreciable cloud is sailing along on the wings of the breeze, and possibly with many companions, born in a like mysterious fashion from apparently nothing. Or, on the other hand, we may see the fringe of clouds become thin and vanish, and clear sky assume their place in the converse case of warmer conditions prevailing. Dull or clear, the water is always there, making its way from one part of the globe to another, and fulfilling its part in the great circulating system we have described.



MR. DAVID HOUSTON.

Mr. David Houston, whose portrait we have the pleasure of giving in this issue, may not be so well known to the general body of horticulturists as are some of the botanists and horticulturists whose portraits we have presented to our readers, but his name and work are familiar to those who take an active interest in the scientific aspects of horticulture. For a considerable period Mr. Houston occupied a prominent position on the teaching staff of the Birkbeck Institution, and the splendid success he achieved in connection with his classes for agriculture, biology, and botany, contributed in no small degree to bringing the fame which the institution so well deserves. On the establishing of the laboratories and school of gardening and agriculture at Chelmsford, by the Essex County Council, Mr. Houston was appointed to a leading position on the staff, and here he did such excellent work as to greatly enhance his already high reputation, and after a stay of a few years he was appointed to an important position in the Royal College of Science at Dublin. The work achieved by Mr. Houston has undoubtedly been largely due to his having a thorough acquaintance with the practical details as well as of the scientific side of horticulture and agriculture, which has enabled him to take a greater breadth of view in his teaching, and the faculty he has of imparting to his pupils the enthusiasm he takes in whatever matter he may have in hand.

"Gardeners' Magazine" Bulb Number.—As briefly intimated last week, our issue for the 12th inst. will be chiefly devoted to bulbous plants, and the several articles and the numerous illustrations have been arranged with special reference to the requirements of the general body of cultivators during the season of planting. The subjects that will be dealt with include, "Daffodils in the Grass," "Some Newer Daffodils," "May-flowering Tulips," "Dog's Tooth Violets," "Good Bedding Hyacinths," "Spring-flowering Crocuses," "Naturalising Bulbs among Shrubs," and "Bulbs Suitable for Fibre Culture." The number will be freely illustrated, and it will be of special interest, and the large amount of information contained in it will be found of much value to amateurs, and, indeed, to all who are concerned with bulbs and bulb culture.

R.H.S. Journal.—The first part of the thirty-fourth volume of the Royal Horticultural Society's "Journal" has been issued, and although less bulky than some of the parts issued of late years, contains much that is of interest to horticulturists. The principal contents include the lectures on "Brassica Crosses," by Mr. A. W. Sutton, V.M.H. "History of the Cabbage Tribe," by Rev. George Henslow, V.M.H. "Beautiful Flowering Trees and Shrubs," by George Gordon, V.M.H. "The Profession of Landscape Gardening," by Mr. Edward White. "Hardy Cacti and other Succulents," by Mr. E. A. Bowles, F.L.S. "Gardening in the Western Highlands," by Mr. Osgood Mackenzie, and "Photography in Natural Colours," by Mr. T. E. Waltham.

Nature Study.—The Caxton Publishing Company announce a work of considerable importance, to be entitled "The Book of Nature Study," of which Professor J. B. Farmer, F.R.S., is the editor. Nature study is now recognised as possessing great value from an educational point of view, and within recent years it has made good progress in elementary, secondary, and other schools. The chief difficulty connected with conducting classes in nature study lies not so much with the pupils on the subject matter, as with the teachers. While there are many capable and enthusiastic teachers who make the work a real thing to the children, many feel at a loss as to how to set about the work properly, and also as to the objects to be aimed at in the course itself. The aim of the work is to give detailed and systematic guidance to teachers and parents in introducing children to the study and love of nature. The common plants and animals are dealt with by acknowledged experts, who also are experienced in teaching.

Conference on the Spraying of Fruit Trees.—With the hearty concurrence of the National Fruit Growers' Federation, the Royal Horticultural Society is organising a conference on spraying on the second day of their annual exhibition of British-grown fruit, October 13, at their Hall in Vincent Square, Westminster. The following is the programme proposed:—Morning meeting, 11 a.m. to 1 p.m., Colonel Ward, M.P., in the chair, papers by Mr. Geo. Massee, V.M.H., and Mr. H. F. Getting, F.R.H.S. Afternoon meeting, 2.30 p.m. to 4.30 p.m., Colonel Long, M.P., in the chair, papers by Prof. F. V. Theobald, M.A., and Mr. G. Hammond, F.R.H.S. Discussion invited at each meeting, and seats will be reserved for any making application before October 9.

The Hampton Court Vine, which is equally remarkable for its great age and dimensions, is this year bearing an excellent crop of grapes. There are upwards of 250 bunches, ranging from 1lb. to 2½lb. in weight, and they will soon be cut and disposed of in accordance with the King's commands. We have seen heavier crops on this ancient vine, but we cannot call to mind any year in which the fruit has been of higher quality, the bright warm weather having been favourable to the perfect development of the fruit. The vine is said to be between 130 and 140 years old, and in some years it has borne as many as 1,700 bunches, but they were small and not well finished.

Gardeners' Royal Benevolent Institution.—A few days since Messrs. Fisher, Son, and Sibray, with a view to assisting this valuable charity, threw open their nurseries at Handsworth to the public, and made a small charge for admission. Favoured by fine weather there was a gratifying attendance, and Mr. G. J. Ingram, who was present, did not fail to take advantage of the opportunity he had for explaining the objects of the institution to the visitors, and urging the strong claims it has upon all who are interested in gardening.

North Middlesex Dahlia Society will hold its annual exhibition at the Alexandra Palace on the 10th and 11th inst. We mention the dates of the society's show thus prominently for the purpose of expressing our regret that sufficient care should not have been taken to avoid the clashing of the dates of the exhibitions of the North Middlesex Dahlia Society and the Dahlia Union. Dahlia growers for exhibition are not so numerous as to be able to provide two really first-class exhibitions within a comparatively short distance of each other on the same dates. Shows, unless they approach a comparatively high standard, do but little for the advancement of dahlias or other flowers in public favour.

Bulb Culture in Moss Fibre.—As so well-known to our readers Mr. Robert Sydenham has for some years made strenuous efforts to popularise the cultivation of various spring-flowering bulbs in moss fibre, without drainage, and by his advocacy of the method, and the examples he has presented at the public exhibitions he has achieved much success. To still further increase this method of culture which has so much to recommend it, and especially to those who grow their bulbs indoors, Mr. Sydenham generously offers for competition at the R.H.S. meeting, March 9, 1909, prizes for six vases of hyacinths, six vases of tulips, and six vases of narcissi grown in moss fibre, or similar material (not soil), and without drainage. The hyacinths are to be grown in separate vases, not exceeding six inches in diameter, and to be selected from the following varieties: Balfour, General Vetter, Grand Lilas, Grand Maitre, Innocence, Isabella, Jaques, Johan, Koh-i-noor, King of the Blues, La Grandesse, and Roi des Belges. The vases of tulips are not to exceed seven inches in diameter, but there is no restriction as to the number of bulbs in a vase. The varieties must be selected from Duchesse de Parma, Dusart, Fabiola, Joost van Vondel, Keizers Kroon, Mon Tresor, Prince of Austria, Rose Gris de Lin, Thomas Moore, Van der Neer, Vermilion Brilliant, and White Pottebakker. The vases for narcissi are not to exceed seven inches in diameter, but there is no restriction as to the number of bulbs in a vase. The varieties must be selected from Barri Conspicuus, Campernelle, Rugulosus, C. J. Backhouse, Emperor, Frank Miles, Lulworth, Leonie, Mad. de Graaff, Phyllis, Sir Watkin, Victoria, and Waterwitch. The prizes are liberal, and there are five for each set of vases. The varieties named are considered the best for this method of culture.

Japanese Postcards.—We acknowledge with much pleasure a budget of postcards that Messrs. John Stevens and Son, of Coventry, have kindly sent us, as evidence of the circulation of the Gardeners' Magazine in Japan. Messrs. Stevens are large growers of primulas for distribution to cultivators in a small state, and regularly advertise their plants in our pages, and the cards have been received by them in response to their advertisements. It is of much interest to have this further evidence of the large, rapidly increasing circulation of the Gardeners' Magazine in distant lands, and it is not less interesting to know that flower lovers in Japan fully recognise the beauty of the various primulas grown under glass in this country, and appreciate the facilities that Messrs. Stevens afford them in obtaining stocks of high quality.

Flora of the Southport Sand Dunes.—The recent excursion of the Southport Field Club, to the sand dunes around Seaside, for the purpose of studying their flora proved of much interest. The most characteristic and most useful of the plants that have found a home on these dunes is the marram grass, which is planted artificially in many places. Its value consists in its creeping underground stem and long, fine root fibres, which tend to bind the loose sand together. Its manner of growth was well seen in places where a bank had slipped away, or perhaps the sand had been removed by some violent gale and left the underground portion uncovered, showing thread-like roots of great length. On the dunes also occur a few plants of the yellow ragwort, spurges, and hound's-tongue. On the moister flats among the sandhills, and sheltered by them, occur a more varied and attractive flora. Some of these are marshy, and afford characteristic plants, such as the marsh helleborine, a handsome wild orchid now in the fruiting stage; gipsy wort, bog pimpernel, water-mint, marsh pennywort, etc. On these flats also were found the lesser bugloss, sea-rocket, yellow-wort, red centaury, eyebright, stork's bill, prickly saltwort, and Monotropa hypopitys, whose parasitic character is proclaimed by the absence of leaves. The Grass of Parnassus was in great abundance and perfection, its white cup-shaped flowers producing a charming effect.

Checkmating the Turnip Fly.—The Irish Department of Agriculture has recently issued a leaflet on the turnip fly, and in perusing it we cannot repress a feeling of regret that it was not issued at a time when the useful advice it contains would have received more attention than is likely to be now the case. Thorough tillage, liberal manuring, rolling the immediately after the sowing has made, and the selection of seeds of good germinating power are recommended as aids in combating the pest. Dusting the young plants with soot and lime is also advised. There is nothing new in this advice, but it is so good as to well deserve repeating in the interest of cultivators.

GROUPING AUTUMN-FLOWERING SHRUBS.

For beauty and variety spring unquestionably yields the richest array of flowering shrubs. Nevertheless those which adorn the garden in autumn with their flowers form collectively a group which well sustains the interest to those who study and appreciate arborescent vegetation. Whether as isolated specimens, or massed in quantity, they are very beautiful, and there is every reason to suppose that greater appreciation will be extended to flowering shrubs in future than in the past, for the storehouse upon which we draw is exhaustless; form and variety are all that one could well desire, and the selection is so comprehensive as to embrace subjects for every possible style or size of garden.

A singularly pleasing study consists in grouping the various flowering shrubs useful for garden decoration that flower at the same season, by this means the individuality is brought out to the fullest; at other times a carefully planted mass of a single species or variety contains within itself every element of strength and beauty.

One of the finest shrubs which flower during August is Buddleia variabilis Veitchii, a group of dwarf plants, through which some low standards of Colutea arborescens are planted, allowing these to overtop the buddleias, and the ground between the shrubs carpeted with Erica vagans alba, results in a combination of striking beauty, effective for the best part of the month. Another effective grouping consists of tall plants of Colutea Pococki intermixed with Ceanothus Indigo as the intermediate level, and the foreground massed with the bright lemon-flowered Potentilla Friedrichseni, the latter a shrub of great beauty for many months. Ceanothus Indigo and Olearia Haasti group well together, resulting in a half-misty effect which is very pleasing. One seldom finds Indigofera Gerardiana grown in standard form, but if a strong shoot is allowed to run up five or six feet, and topped, and then pruned to form a mop head, cutting the shoots back to a couple of buds in late spring, they form by this system perfectly balanced heads of light shoots, and display the elegant foliage and bright purple flowers to the best advantage. Hypericum Kalmiana forms a good setting for indigofera, and, being slow in growth, requires no pruning. Hypericum patulum and uralum are equally serviceable, but require hard pruning in spring to secure the necessary dwarf habit.

Hydrangea paniculata grandiflora is a well-known autumn-flowering shrub, which succeeds best upon rich soils, and produces the heaviest panicles of flowers when rigidly pruned to a couple of buds in spring. It makes a fine group alone, but is also a charming feature when planted in company with the pale lavender blue Hibiscus Celeste.

Few gardens can dispense with the sweet-scented Spartium junceum, for in those gardens where its value has been practically tested we are sure to meet it in quantity, and whether regarded as a permanent occupant of the ordinary shrubbery, or planted on dry, hungry banks under unkindly conditions, it yearly rewards us with enormous quantities of its glowing yellow flowers, and one of the most enduring charms that memory retains of this fine shrub is to inhale the soft fragrance of the blossoms, as it is borne upon the air in the summer twilight. In the same family as the foregoing is Cytisus nigricans, with soft yellow flowers upon loose-built, erect spikes; it makes a charming group about three feet high, and forms an effective feature when planted with Fuchsia Riccartoni; the latter must be cut hard back each spring.

Some of the privets are excellent for autumn flowering, producing branching spikes of showy white flowers. Ligustrum japonicum has stout, glossy leaves, borne upon slender pendulous branches, and when in flower it forms a conspicuous object in the shrubbery. Ligustrum sinense grandiflora has small foliage, but is exceedingly free in producing flowers. Caryopteris mastacanthus, when grown into a large bush, produces a peculiar misty effect in autumn, with its pale blue flowers; it succeeds best on deep, rich soil, proving almost a failure on light stony ground. It frequently appears under the fanciful name of blue spiræa.

Of the true spiræas which flower in early autumn the varieties of Callosa rubra and Anthony Waterer regale us with crimson flowers; like most members of this family they prefer a cool and moist root run, and their floral display is prolonged when planted in half shade.

Tamarix gallica planted in a good dry mass, and pollarded to the ground each spring, results in a thicket of soft amber-coloured stems clothed with grey-green leafage; the terminal points of the canes produce the soft rose flowers, which are later followed by a white, woolly substance in the seed cases. Tamarixes are splendid seaside shrubs, which grow freely in any well-drained sandy soil.

An aged specimen of Clerodendron trichotomum rarely fails to evoke admiration and praise; the curious flowers, with their rich chocolate bracts, proclaim it a shrub of great decorative value, and a distinct gain to the garden in autumn.

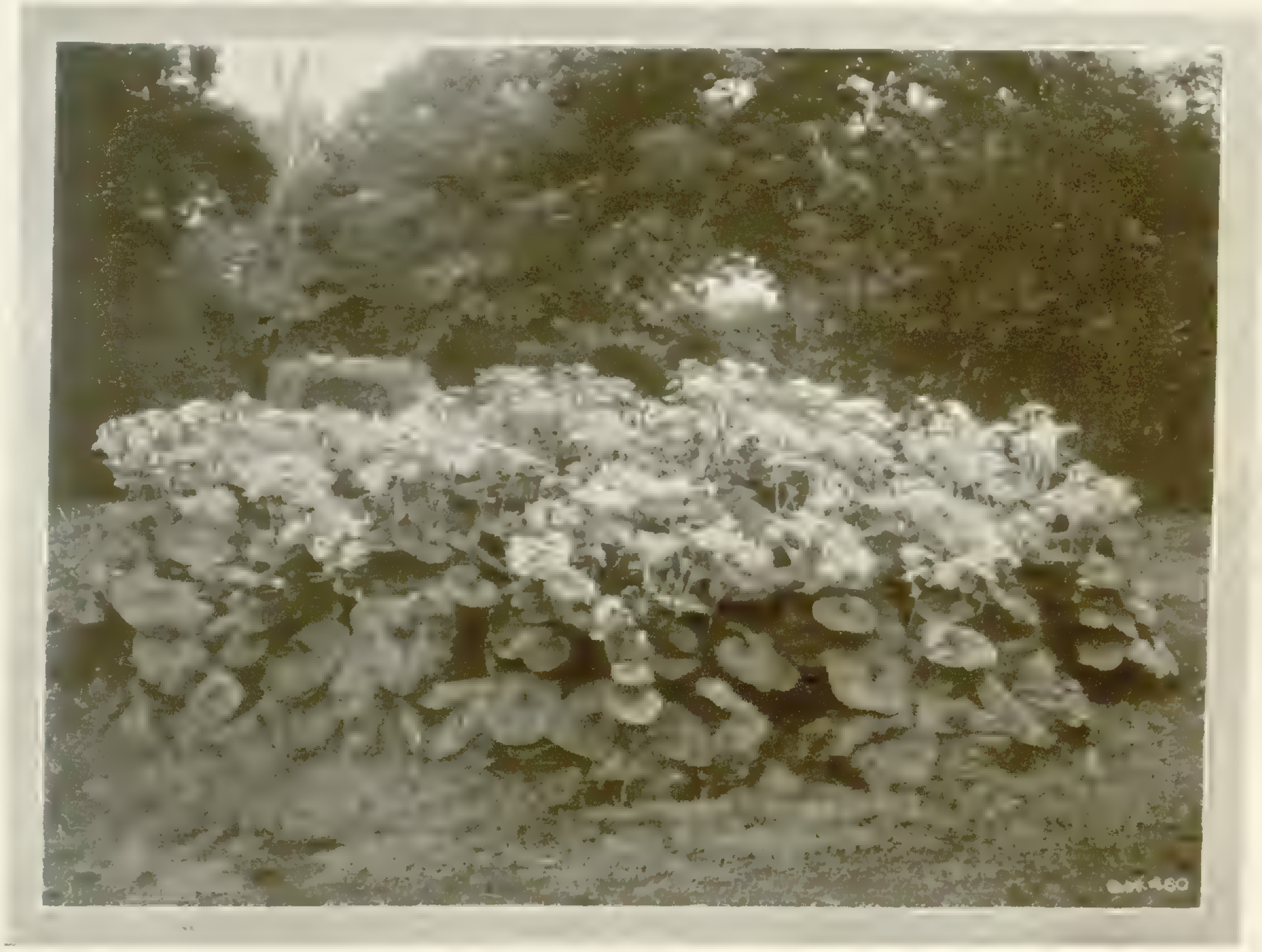
THOMAS SMITH.

Walmsgate Gardens, Louth.

There is no better guide to the kitchen garden than VEGETABLES AND THEIR CULTIVATION, by T. W. Sanders. It is a complete treatise on the general management of the garden, and the successful culture of vegetables, saladings, and herbs for home use. Price 5s. net, by post, in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

SENECIO CLIVORUM.

The Giant Groundsel, of which an illustration is given herewith, may well be described as one of the finest of the many good hardy plants that have been introduced from Western China within recent years. There are, perhaps, some other Chinese plants of recent introduction that possess certain attributes of beauty in a higher degree, but none perhaps that are more effective when grown under suitable conditions than is Senecio clivorum. There is, however, no necessity for instituting comparisons between the various plants that we have of late received from China, with a view to determine their relative merits. For our present purpose it is sufficient to know that this robust groundsel is quite distinct from other hardy plants in cultivation, and that it is of immense value for planting in positions where bold vegetation is appropriate. We have only to glance at the accompanying illustration to see that the plant has large and handsome foliage, that the flowers are freely produced on stout stems and in much branched heads, and that it is specially suitable for the formation of lawn groups of a striking character. The reader will be in a better position to appreciate the effectiveness of this senecio when it is stated that the flowers are rich orange-yellow with dark centre, or to state the colouring more scientifically, the ray florets are rich orange-yellow and the disk florets very dark brown. While highly effective when grown in bold groups, such as the one illustrated, this groundsel is not less attractive when grown singly or in small groups in the wild garden, and on the margin of streams, ponds, or lakes. The growth is most luxuriant when the roots have access to liberal supplies of plant food and an abundance of moisture, and the bold masses of leafage, and large, brightly-coloured flowers are especially attractive when reflected in the water of pool or stream. The plant is not wanting in attractiveness when grown in borders devoted to hardy perennials, but it does not



SENECIO CLIVORUM GROWN AS A LAWN GROUP AT KEW.

A giant groundsel from Western China, quite hardy in this country, and bearing large orange-yellow flowers.

appear to so great an advantage as when grown in the positions suggested. In all cases the stations when being prepared for Senecio clivorum should have a liberal application of partly-rotted manure from the stable or farmyard, and the soil be broken up to a depth of two feet or so, and the manure and soil be well mixed. It should be remembered in planting that when the growth is made under favourable conditions strong plants will soon form specimens three or four feet in diameter, and attain to a height of four or five feet. The season of flowering extends from the end of July to the beginning of September, and the group illustrated occupies a position near the Pagoda in the Arboretum at Kew, where, it may be added, the soil is thin and naturally poor. G. G.

THE ABELIAS.

The abelias form a very pretty class of flowering shrubs, but some of them unless in particularly favoured parts of the country, cannot be regarded as perfectly hardy.

By far the showiest and, at the same time, the most tender, is Abelia floribunda, a native of Mexico, whereas all the others in general cultivation are natives of the eastern portion of the Old World. As widely removed from the others in general appearance as it is in geographical distribution, Abelia floribunda forms a freely-branched, loose-growing shrub, clothed with small neat leaves, while the flowers are tubular, about three inches long, and borne in clusters at the points of the shoots. Their colour is a kind of bright magenta-red, and they are at their best in early summer. When in full bloom this abelia is really delightful, but even in the London district it will not thrive unless given the protection of a warm wall, such as that of a hothouse facing south. Throughout the greater part of the country it must be regarded as a greenhouse rather than an outdoor shrub.

Another tender species is Abelia triflora from the Himalayas, where it sometimes attains the dimensions of a small tree. In this country it forms a freely-branched bush, whose flowers are borne during the summer months. They are small, pink, and borne in compact clusters at the points of the shoots. A casual glance suggests that the specific name of triflora is a decided misnomer, but close inspection of a flower cluster reveals the fact that the flowers are in threes. This abelia needs the protection of a wall in most districts, but I have met with it as an open bush in the South-west of England.

Abelia chinensis is more generally met with as A. rupestris, while it is also known as A. uniflora. In passing, it may be noted that the nomenclature of the abelias is in a very confused state, and authorities are by no means of one accord in the matter. With regard to A. chinensis, it forms a neat-growing, freely-branched bush, flowering profusely when from two to five feet in height. The leaves are small, ovate, and of a bright shining green, while the flowers, borne in loose clusters, are pale pink. Each flower has a large calyx, which becomes red after expansion, and is then very attractive. It is at its best during the latter half of the summer and in early autumn. This is one of the hardiest, as it will flourish as an open bush in the London district. So situated, the slender branches dispose themselves in a partially drooping and exceedingly graceful manner. This species is a native of Japan, and for its introduction we are, I believe, indebted to the late Robert Fortune. W. T.

MATURITY OF VEGETABLE CROPS.

Speaking generally, 1908 will without doubt be remembered as far above the average season from a horticultural standpoint, and in most cases a corresponding amount of satisfaction will be enjoyed by having bountiful crops. The excellent and beautifully matured specimens seen from the large and pretentious exhibition down to the small village show, point to this. On every hand one finds exceptional maturity and good quality, especially amongst the different vegetables, such as potatoes, onions, carrots, etc., which can only be brought about by a bright and sunny season. In some parts of the country the rainfall has been too light, which has necessitated assistance to be given with the hose or watering-pot, but this has not been serious over the greater part of the country.

All crops will now be sufficiently advanced for an opinion to be formed of the amount of success that has been achieved with each one, and a review of them may be profitable now in noting the causes that may have been instrumental in bringing this about. In this district there has been considerably more clubbing of the brassica family than usual. The early cauliflowers did very well, but mid-season plants in many cases collapsed, and a real scarcity of good heads has been the result, more especially in cottage gardens, where they have to occupy the same ground so often, has it been most noticeable.

On land that has been in a fertile state peas have given splendid returns, and where moisture to the roots has been sufficient, they have kept exceptionally free from the much-dreaded mildew. In some cases I fear the high temperature has brought mid-season crops into pod earlier than we anticipated, and thus put them out of line of succession for picking, which to the private gardener is troublesome. Onions have stood the tropical weather very well where the soil has been favourable to their roots pushing down for food and moisture, and some remarkable crops are to be found. But on light, weak soils and with late-sown crops I have seen many failures, the whole of the plants having died off. French and runner beans under good conditions have set their pods with wonderful regularity throughout the last month and this, which, by the reports from the markets in the country has caused a glut and unprofitable prices. The plants will require stimulating with liquid manure regularly to enable them to continue to bear freely where daily supplies are needed.

Potatoes have not, as far as my experience goes, ever lifted better, both in bulk and quality. The old variety, Snowdrop, which is, perhaps, not so notable for its productiveness as for its cooking qualities, is this year giving splendid returns. Equally good reports are given of other varieties. Unfortunately attacks of disease, although slight up to now, are showing themselves pretty generally throughout many parts, and will rapidly spread if the weather changes to much wet. Main crop carrots are very satisfactory, the roots very clean and of first-rate growth. Wireworm has been more prevalent among them than usual. The roots are more matured at this time than is often the case. This will render them particularly liable to crack when wet weather sets in. It may therefore be found necessary to lift them as soon as they have finished their growth to avoid loss. They are practically worthless when they are much split.

Turnips have not been so satisfactory in many gardens where the position has been high and the soil of a light character. The turnip fly has been troublesome, the bulbs became strong and stringy, and unfit for use in a week or two, consequently, frequent sowings in the lowest and coolest position were necessary to obtain usable and tender fleshed roots. The latest sowings for winter appear, so far, to be making satisfactory growth. Summer spinach, with the high temperature, has been rather difficult to obtain with really good fleshy leaves. Frequent sowings in good soil and in semi-shaded cool borders have been necessary.

Celery, in all cases where it has been attended to properly, appears to have grown vigorously during the hot summer, and is now looking robust. Some plants have successfully resisted the attacks of the celery-fly that were made when they were small, which, to some extent, shows that a vigorous plant is much more able to resist pests of this kind than those weakly in growth.

Although we can very materially assist Nature, we are absolutely dependent upon the sunshine and rain in proper proportions to enable us to produce and mature crops in their best form; this year we have little cause for complaint.

C. Flack.

Cholmondeley Castle Gardens.

FLOWER GARDENING AT THE FRANCO-BRITISH EXHIBITION.

In accordance with the opinion expressed in our first notice of the horticultural features of the Franco-British Exhibition at Shepherd's Bush, the several flower gardens in both the English and French sections have proved a decided success, and notwithstanding the heavy rains of late they present a remarkably bright and attractive appearance. They afford now, as they have done throughout the season, a remarkably good proof of the great value of the several classes of plants commonly known as summer bedders for the production of colour effects in positions where continuity of flowering and neatness are essential.

The first of the gardens through which the visitor passes on his entrance to the exhibition from Wood Lane, is that occupying a central position in the section devoted to the fine arts. This garden consists, briefly stated, of large lozenge-shaped breadths of turf, on which are numerous borders and beds of flowering plants and numerous specimen palms and other plants remarkable for elegance of habit. The illustration given herewith conveys an excellent idea of the design and the style of planting, and on close examination, it is not difficult to imagine that the effect must be bright and tasteful. This garden has been planted by Messrs. J. Carter and Co., who may be heartily congratulated on the success they have achieved. On the outside sections of turf are serpentine bands of zonal pelargoniums, mostly scarlets, and chief among them are King Edward VII. and West Brighton Gem. On either side of the pelargoniums are narrow bands of Golden Feather, one of the oldest and still one of the best of the golden-leaved plants for use in working out colour designs in the flower garden. It is certainly one of the most easily raised of all the summer bedders, and because of this it has suffered from being used too lavishly both in public and private gardens. In this case the use of the plant has been judicious, and in consequence it contributes its proper share to the general effect. In the bays outside the border are circular beds in which purple and blue violas, seedling verbenas, petunias, dwarf and herbaceous lobelias, and dwarf begonias are growing freely and blooming profusely. Each bed, it should be stated, contains one colour only, and has a neatly grown standard fuchsia in the [illegible] tre. On the middle portions of the turf are crescent-shaped beds, with circles within the crescent, and in these dwarf fuchsias, petunias, and some other plants have been used with good effect. Round the bed, enclosing the circular mound in the centre, are good blocks of tuberous begonias, and some other subjects, the kochias being especially noteworthy. Plunged in the turf between the beds are fine examples of Cordyline australis and well-developed palms.

Upon Messrs. J. Carter and Co. has devolved the task of planting and keeping the grounds of the Royal Pavilion, and admirably have they performed it. Of much interest are the two miniature trial grounds that have been formed by this firm in the Colonial Gardens, which occupy a site in the more northern parts of the grounds. These are skilfully planted, and in the spacious beds and borders are trial plots of annuals in great variety, and of the various grasses and clovers used in the making-up of preparations for laying down land for meadows and for lawns, bowling greens, and putting greens.

The spacious flower garden in front of the Palace of Fine Arts has been embellished by Messrs. Sutton and Sons, and in beautifying this extensive area they have achieved a high degree of success. The treatment is bold, the colouring, what, to use a popular term, may be described as quiet, and the general effect is in the best possible taste. Two of the more important of the big beds are filled with white marguerites, which have grown vigorously and bloomed splendidly, and these are enclosed with a band of Madame Crousse pelargoniums, one of the best of the pink ivy-leaf varieties, and the broad belt of pink blossom produces a charming contrast to the pure white flowers of the marguerites. Fibrous-rooted and tuberous-rooted begonias are splendidly represented in this garden, both as regards the quality of the varieties or strains, and the development of the plants. Especially noteworthy also are the beds of dwarf antirrhinums, which are now, as early in the season, a mass of bloom. The colours include white, yellow, and crimson. There are several other examples of Messrs. Sutton and Sons' work in this section, and these, as in the case of the flower garden, represent taste of a high order.

In the northern part of the grounds Messrs. Kelway and Son have a big bed devoted to gladioli, and as the flowers produced by the large number of plants are supplemented by some hundreds of cut spikes, visitors are afforded an excellent opportunity for becoming well acquainted with the finest types of these handsome summer flowers.

Much that is of interest may be found in the gardens devoted to the products contributed by French nurserymen and seed houses. These gardens are situate between and beyond the machinery halls, on the western side of the grounds. In these roses predominate, and they also contain a goodly number of trained fruit trees. These trees are of interest as representing the skill shown by French cultivators in the training of such trees, but, as proved by the results, the style of training favoured by growers across the Channel is much less productive of fruit than the tree style generally adopted in this country, and necessarily entails much labour. In the beds and borders devoted to roses the teas and hybrid teas are blooming rather freely, and where planted in masses of one variety they produce a pleasing effect. Especially noteworthy for freedom of flowering are Kaiserin A. Victoria, Madame A. Chatenay, Prince de Bulgarie, La France, [illegible], and several of the polyantha type represented by Maman Lavasseur. Highly effective and of considerable interest are the small stock gardens that have been decorated by Messrs. Vilmorin, Andrieux, and Co., with dwarf, fibrous-rooted begonias. The two begonias used are B. gracilis, which has deep rose-pink flowers, and B. gracilis rubra, of which the flowers are rich ruby-red. These grow to a height of about six inches, bloom with great profusion, and arranged in scrolls about two feet wide are singularly effective.

HARDY SPIDERWORTS OR TRADESCANTIAS.

Among the true "old-fashioned" flowers which have again become so popular are the spiderworts or tradescantias, first cousins of the greenhouse and stove species, but totally distinct in their characters, although the same features in general run through all the species. All have the same air of character which has given them the popular name of spiderworts, the appearance of the foliage presenting the "sprawling" appearance we associate with the spider, but, happily, without that weird look which makes that creature so obnoxious to many.

The hardy spiderworts, best represented in gardens by Tradescantia virginica and its varieties, have this characteristic in a marked degree, and no one looking at them can fail to discern some warrant for the popular name they bear. Yet they are in no sense repulsive, but, on the contrary, are decidedly beautiful, and their general form renders them all the more distinct, and thus all the more valuable for the garden. They are handsome plants, generally reaching a height of a foot and a-half, but sometimes a little more or less, according to the nature of the soil.

FLOWER GARDEN AT THE FRANCO-BRITISH EXHIBITION.
Planted and maintained by Messrs. J. Carter and Co.

Tradescantia virginica.

Of the hardy species, of which some eleven or so are found in the United States, the best for the garden is Tradescantia virginica and its varieties, some of these occupants of British gardens for many long years, and among the hardiest of all our exotic flowers, standing our most severe winters with perfect equanimity, and thriving under an amount of neglect few flowers will bear when under reasonable circumstances.

The typical plant, T. virginica, sometimes called T. virginiana, is a well-known one, with its long, pointed leaves, and its clusters of short-lived flowers, which compensate us for their fugaciousness—which has given the plant the alternative name of "Flower of a Day"—by producing them in long succession from the same cluster. The colour is purplish, but this is by no means the prettiest hue given by the quaint spiderwort.

Varieties of T. virginica.

There is a very beautiful white variety called alba, and this, again, is surpassed by a larger white one, alba grandiflora. In the variety called sometimes azurea and occasionally caerulea, we have one with rich blue flowers; while those of violacea are of a beautiful violet. Nor do these exhaust the range of colouring, as the variety rubra gives us blooms of a fine rich carmine. This, again, has another variety, one with double flowers of more lasting character than the singles, but with hardly the same features which make these spiderworts so attractive in their way. There is also a pleasing lilac variety called lilacina.

Tradescantia pilosa.

Of the other species found in the United States the only one which appears to be in commerce in Great Britain is T. pilosa, which has lilac-blue flowers, and is rather pubescent, or rather pilose. This blooms rather later than T. virginica.

Soil and Cultivation.

One great merit of the tradescantias in the garden lies in their accommodating nature, as one has seen them doing fairly well in soils varying from those which were light, sandy, and poor to those of rather stiff clay, while they thrive well in either sun or shade. The height is greatly affected by the soil and position, and while it averages that already indicated, it sometimes reaches as much as three feet in its native country. In rich soil and under trees it may attain that stature here also. This accommodating nature of the tradescantia renders it peculiarly suitable for many purposes, and, as it is occasionally found in woods at home it can be successfully utilised for planting under trees or in the shade. One can well imagine the beauty of a large colony of the spiderwort established in some woodland glade and holding its own among the dwarfer vegetation through which it might be grown. This old-fashioned flower, which will ever keep green the memory of John Tradescant, is deserving the consideration of all who are about to plant a new garden, or who are desirous of adding to an old one some flower of proved worth and long known in our land.

S. Arnott.

THE TORCH LILIES.

The kniphofias, or torch lilies, which over a long period were known as tritomas, rank amongst the most valuable of autumn-flowering hardy plants. Coming into flower at a somewhat late date, they illuminate the garden at a time when Ichabod is written upon the majority of garden plants, and seem to stand sentinel over their decaying brethren.

To see the kniphofias at their best, large, bold, and irregular groups should be formed, consisting of from three to nine plants, arranged two feet apart. They lend themselves admirably to the formation of effective backgrounds in the herbaceous border, while they may be successfully employed in the shrubberies, semi-wild garden, and also in close proximity to the water garden.

They are natives of South Africa, or, at least, the majority of them, and cannot be described as being perfectly hardy. At the same time, if planted where they will be exposed to the full sunshine, and protected with coal ashes or cocoanut-fibre refuse in winter, they will come through unscathed. A capital plan is to place a mound of tree leaves over them, and cover with an inch or two of fibre refuse. A point to remember in planting upon retentive and heavy loams is to have the sites slightly raised above the surrounding level. These mounds should rest upon a few inches of drainage, such as broken crocks, the drainage being put two and a-half feet below the surface.

It is idle to expect good results from impoverished soil, and being deep rooting and hungry subjects abundance of manure should be incorporated with the staple. They should also receive mulchings of the same material. As regards the best time to plant, I would advise that it be deferred until early in the spring, when they will at once commence to grow and make rapid progress if liberally watered in periods of drought. Once a colony has become established let it alone, and do not shift it in the rearrangement of borders, etc. They are impatient of root disturbance, and provided a dressing of manure is given each winter they will steadily increase in dimensions, and produce a magnificent display.

It may be explained that in dealing with light, porous soil, steps should be taken to give "body" to the soil, and this may be done either by the addition of loam, clay, or cow manure. If clay is used a portion should be placed about two and a-half feet deep, and the remainder allowed to remain on the surface to be pulverised by the action of the atmosphere and frost.

The type plant, Kniphofia aloides, better known under its familiar name, Tritoma uvaria, or Red Hot Poker plant, is a very old inhabitant of our gardens, and is less fastidious as to soil and situation than many of the newer forms, and, further, I have never known it injured by frost or severe weather, and this without any protection. In the northern counties and very bleak districts it is, I believe, the custom to cover the basal part with bracken or other protective material in winter. T. caulescens is also hardy, and evergreen, but the inflorescence is inferior to many others. K. nobilis is a superb species, the spikes towering up to seven or eight feet in height, while a very beautiful dwarf kind is seen in K. Macowani, which produces its orange-scarlet flowers in the latter part of July. K. Leichtlini hails from Abyssinia, and is of medium growth, and, further, seems totally unable to withstand our climate, unless favourably placed and well protected. K. Nelsoni, K. Tucki, and K. rufa extend the list. Amateurs who do not possess these exceedingly useful and brilliant plants should prepare sites during the winter in readiness for their reception in early spring, just prior to renewed activity.

WALTER H. AGGETT.

A FINELY FLOWERED SPECIMEN OF BENTHAMIA FRAGIFERA IN A CORNISH GARDEN.

BENTHAMIA FRAGIFERA.

Although this shrub is frequently met with under the above name, it is really a species of cornus, and is correctly known as Cornus capitata. Other species of cornus have at one time or another been referred to benthamia, but, although they constitute a distinct group of the genus, scientists do not now keep them separate. Lindley was responsible for the name benthamia, and he adopted it for those species of cornus which have the flower heads attended by an involucre of showy, petal-like bracts. These bracts are infinitely more beautiful than the flowers, and are usually white, so that a large bush in full bloom is a very conspicuous object. Unfortunately, most of the sorts are somewhat tender, and are better fitted for gardens in the south-west counties than for those situated in colder places.

The species under notice is a native of N. India and China, and when growing under favourable conditions it forms a large bush twelve to twenty feet in height. During late spring the flowers, accompanied by their white bracts, are borne, and, as may be seen from the accompanying illustration, a specimen in full flower is a very conspicuous object. Unlike the majority of cornuses, this one retains its leaves during winter, whilst its fruits are infinitely more beautiful than those of other sorts. At first sight the fruits suggest those of Arbutus unedo, being scarlet in colour and very similar in shape; in fact, the tree has been called the "Strawberry-bearing Benthamia."

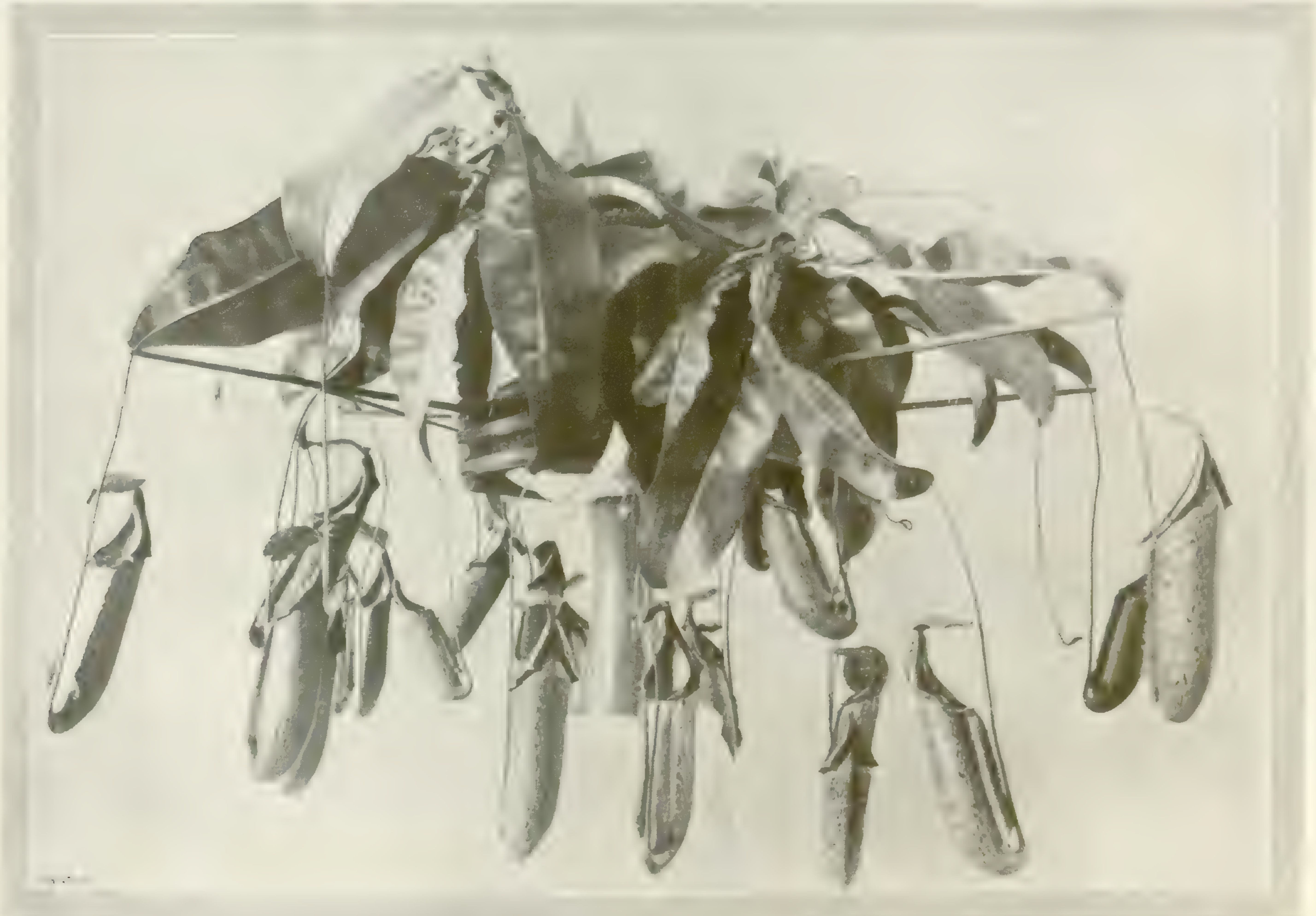
It thrives excellently in Devonshire, Cornwall, and other counties of England in the vicinity of the sea, whilst on the West coast of Scotland and most parts of Ireland it grows well. It cannot, however, be recommended for the midland and northern parts of the country, and even about London it is not a success in the open ground. Other species closely allied to this are: C. florida, from E. N. America; C. Kousa, from Japan; and C. Nuttalli, from W. N. America.

W. D.

Shrubberies.—It is early yet for the removal of many shrubs, but if positions can be decided on for those to be removed the ground may now be prepared with advantage, and while the foliage is on the trees and shrubs the amount of light and shade in each place will be readily seen. Attend to climbing and trailing plants either on trees or rambling over mounds and banks. In many cases the old flowering wood may with advantage be removed. As autumn tints of foliage will now soon be appearing, note the different effects, and where the distinctive colourings are most effective; in many cases a judicious grouping of shrubs with highly-coloured foliage in autumn may be made. In this locality most trees fail to assume their full autumn colouring.—E. F. HAZELTON, Knowsley Gardens.

NEPENTHES.

This family of carnivorous plants is most wonderful and curiously constructed, but very seldom do we find nepenthes growing with anything like real vigour in private establishments. The general impression is that a specially constructed house is required in which to cultivate them successfully, but this is a mistaken idea, as the plants will thrive well in an ordinary stove or East India orchid house, and if suspended from the roof, where the pitchers can be seen hanging down, they will give to the house a very ornamental appearance. As most of the species come from the parts of the Tropics where there is a continually moist atmosphere, it must be understood that the nepenthes should be grown in a high temperature, and have an abundance of atmospheric moisture.



A SPLENDIDLY DEVELOPED SPECIMEN OF NEPENTHES MIXTA SANGUINEA.

Grown by the raisers, Messrs. J. Veitch and Sons. Pitchers very large and richly marked with crimson on a green ground.

Shading should not be of a fixed kind, but under control, so that the plants may receive sufficient light to bring out the beautiful colouring and markings of the pitchers, which would not be developed if too much shade were applied. At no time must the material in which the plants are growing be allowed to become dry, as the roots would soon perish, and when once a pitcher plant's roots are in an unsatisfactory state, it is very rarely the plant regains a healthy appearance again. Baskets have the preference for cultivating the nepenthes in, and the material should consist of good fibrous peat, with the finer particles shaken out, and a proportion of fresh growing sphagnum moss and small lumps of charcoal should be mixed together. The surface of the baskets should be covered with the growing points of the sphagnum. We are indebted to Messrs. James Veitch and Sons for the introduction of many fine species, and the raising of many fine hybrids, and the firm cultivates these wonderful plants with a skill that is greatly admired. The accompanying illustration represents an improved form of Nepenthes mixta, and is known as N. m. sanguinea. T. Cromwell.

Allerton.

PLUMS: SOME VAGARIES OF THE SEASON.

With the passage of years there occur incidents in relation to crops and trees which may be regarded somewhat of contrary disposition, and sometimes past the comprehension of the average gardener. The season now hurrying onward may claim to have given us a series of contrasting incidents, and especially in weather matters, and as the work, and result of work, in horticultural problems depend so much on the weather, the least reflective of minds must expect that issues diverse in degree must follow. In the spring months trees of all kinds gave of their first bounty—blossom—freely, and while Nature was in such pleasant mood the elements essayed unjustifiably to frown and to frolic, even to the extent of giving snowfalls knee deep, and even of greater depth than the proverbial two-feet rule, in some localities. This, too, while plum trees blossomed! Now we have reached the season of plums we are made to wonder why it is we have any to remind us it is summer, for we are taught from our early days that snow and frost are fatal companions of tree flower of any kind, and we inquire of ourselves whether these old-time theories are really reliable.

But while we are wrestling with these peculiarities of the weather, we are reminded that garden walls are built at great cost in order to protect trees which are grown and trained thereto from passing inclemencies of weather, and when good crops respond to the general incident of season, we congratulate ourselves that our forefathers were wise in devising such useful aids, and generous in the outlay which such schemes incur.

Remembering that the open-air tree, be it bush or standard, has to shudder under the cold wind-blast, rain, and snow, while the wall-trained tree has so much less exposure to climatic changes, the natural thought will arise that in such a season as 1908 wall trees should at least afford the greater bounty, because the weather influences have been rather inclining in their favour, but it is not invariably so. Beside wall-grown trees in varied kind and aspect, we have bush and standard specimens, and while so many of the apparently favoured trees have light—some, indeed, very light—crops, the standards are, and have been, on the point of breaking down, some of them, under the load of maturing fruit, and yet these same trees were wreathed with snow and felt to the full the pinch of frost which accompanied it. The puzzling question one must ask themselves is, why is it? Of course, some will answer readily that the snow so protected the vital organs of the individual flower that frost had no chance to injure, but it was remarked by some that the snow had been reduced to icicle on the tree bough. To many beside the writer the matter remains a mystery, and must be left for those of greater wisdom to investigate. It must not be forgotten that all are not alike fruitful, even standard and bush trees in the open. Some of these have crops which are not recognised hardly by the birds. Pond's Seedling, Victoria, Monarch, Wyedale, and Early Rivers, besides Bradley's King and Cluster of Farleigh damsons are the heaviest croppers. The gages, Sultan, Belle de Louvain, Czar, Kirkes', are, in standard and bush forms, shy of fruit, as is the prune damson, although the varieties here named are growing under exactly the same conditions as regard shelter and position.

ABIES PUNGENS GLAUCA.
One of the finest of the silvery-leaved firs, as grown by Messrs. J. Backhouse and Son.

The summer has been, in the matter of drought and temperature, almost tropical, and heat usually is an effective agent in hurrying crops forward, even to premature maturity. It is not so in 1908, at any rate, the experience of growers hereabouts does not coincide with this familiar theory in plum matters. A plum that used to be depended on from aged trees to furnish a dish of ripe fruit the first week in August does not promise a gathering until quite three weeks later this year. Similarly Oullin's Golden Gage, an even more dependable plum, fails this year, not only in season, but crops also, though occupying south and west aspects in well-matured trees. What is there in this season of sunshine to explain the lethargic aspect in plum crops? There must be antagonism between the elements and tree life to justify such peculiarity.

The common law again affecting adverse seasons brings visions and recollections in turn of hordes of insect enemies of one sort or another. The season of 1908 has been remarkable for its immunity; indeed, we cannot easily recall another when so little of pest worries have been imposed in the case of plums. It appears to us a significant breach of old-time theory, for there has been ample ground for the intrusion of the enemy legion, judged by the variable weather moods. Possibly the dripping nature of last summer made its impression on hybernating creatures. Some no doubt will accredit birds with the anomalies in question; it would be pleasant experience if such assurances could be substantiated.

It will have occurred to many how often such finely-developed fruits come from aged trees, and a corresponding undersized fruit from young and vigorous specimens. A natural inference would lead even the untrained mind to expect the contrary to happen. That there are occasions when such cases are cited need no remark, but it is at the same time well worthy of passing notice that trees much past the prime of life give finer individual fruits than do the young and thrifty specimens. We have often heard resolutions of the winter, when the nude state of the old and perhaps decrepid tree comes under review, changed as the summer advances, and there is large and luscious plums to gather altogether more numerous and satisfying than from its younger neighbour, whose object, like that of much of our civil life, is bent on superfluity and extravagance. Thus the vagaries of youth bear poor comparison with a more settled state even in tree life.

W. Strugnell.

Road Ashton Gardens.

PROFITABLE FRUIT GROWING for Cottagers and small Holders of Land. By John Wright, V.M.H. A Gold Medal Essay, written for the Worshipful Company of Fruiterers. Fully illustrated. Price 1s., by post 1s 3d., from W. H and L. Collingridge, 148 and 149, Aldersgate Street, London.

THE YORK NURSERIES.

Established quite early in the eighteenth century, the York Nurseries have, by reason of the business ability and the practical skill and scientific knowledge that have been brought to bear upon their management, occupied from the first a high position among the establishments devoted to commercial horticulture within the United Kingdom. The position occupied was never higher than at the present time, and it is of interest to mention in connection with this fact that the principles which governed the management of the nurseries in their earlier days, and gave such splendid results, are those on which Messrs. J. Backhouse and Son conduct their business at the present time. Hence it is that the establishment continues to rank high among the foremost of the nurseries in Great Britain. To mention this is necessary, lest it might be thought that we do not fully appreciate the importance of the firm having occupied a prominent position in the world of horticulture for about two hundred years; but there is no occasion we should dwell upon this fact, because the nurseries are so well known to those interested in horticulture that but few gardeners who go to York do not make a strenuous effort to visit "Backhouse's."

In making this brief reference to the firm, it is of interest to recall the fact that the business was established within the City walls, and carried on there until some sixty years or so ago, when the great extension of business rendered more room absolutely necessary. The firm then removed its office and nurseries to Holgate about a mile from the railway station, and in the nurseries, which have an area of one hundred and fifteen acres, the visitor finds stocks of both useful and ornamental plants, remarkable alike for their comprehensiveness and the rude health of the several kinds. In addition to the nurseries at Holgate, the firm has established a branch nursery at Cattal, a small town on the railway that connects York with Harrogate, and this is chiefly devoted to fruit trees, for which the soil and site are specially adapted.

It is a good education for any one who is imbued with a keen interest in those forms of plant life specially adapted for the embellishment of conservatory and hothouse, and of indoor apartments, to walk through the fine ranges of glass houses at Holgate. Their furnishing is complete, and of the best, and the several collections afford an excellent opportunity for becoming acquainted with the most useful kinds, and their value for various purposes, when grown to a high state of development, as is the case here. Some of the structures are of proportions quite exceptional in nursery establishments; consequently, many of the specimens are of large size, and scope is afforded for the display of their individual charms to the best advantage. Of special interest is the extensive collection of filmy ferns, of which so many fine kinds have been introduced by the firm, and the cleverly-constructed underground fernery wherein they are so successfully grown has long been regarded as one of the leading attractions of the nurseries. It would be pleasant to mention some of the many objects of interest that arrest attention in walking through the numerous structures, but it must suffice to mention that the collections are so complete as to include all the finest kinds in the several classes.

The rock garden has contributed in no small degree to the fame which the York Nurseries have so long enjoyed, and there can be no question as to it having greatly influenced the extension of the cultivation of alpine plants, and afforded valuable object lessons on the conditions under which the various kinds can be the most successfully cultivated. The rock garden extends over several acres, and is remarkable for boldness of treatment and abaptability for the [illegible] beautiful plants that have found a home on its slopes. Alpine plants of exquisite beauty from the Pyrenees, Switzerland, the Tyrol, and other parts of Europe, the Himalayas, the New Zealand Alps, and the Rocky Mountains, are grouped on the higher parts in a natural and effective manner, and produce a series of delightful effects. On the lower parts bog and water plants in great variety, and dwarf shrubs suited to their rocky surroundings, contribute their full share to the beauty of this charming garden. The great success that has been achieved by the Messrs. Backhouse in the formation and management of the rock garden in their nurseries and in many rock gardens they have formed in private gardens, is, there can be no doubt, largely due to their intimate acquaintance with alpine plants in their own homes. From time to time the principal localities, both at home and abroad, have been visited, and the conditions under which alpine plants are found in the most thriving state closely investigated. Not only have these visits been of value in affording opportunities for becoming well acquainted with rock formations and the conditions under which the various alpines flourish, but they have resulted in the introduction by the firm of many beautiful plants. The illustration herewith gives an excellent idea of one of the "features" in the rock garden, but there are many other features, and some that, by reason of their boldness, appeal strongly to those who can enjoy to the full rugged scenery.

VIEW IN THE ROCK GARDEN AT THE YORK NURSERIES.

Hardy herbaceous plants have throughout formed a strong feature of the York Nurseries, and continue to do so. In the days when [illegible] were so largely grown as [illegible] to occupy nearly the whole of the space available for ornamental plants, they were cultivated extensively by the firm, and the spacious borders devoted to them were a welcome relief to the brilliant displays of colour in private gardens in Yorkshire, as in other parts of England. As with hardy perennials, so also with ornamental trees and shrubs, the choicest of these were grown in considerable numbers when comparatively little attention was given to them by planters, and consequently when the trend of the public taste gave rise to a brisk demand, the firm was in a splendid position for meeting requirements of planters, and, indeed, of augmenting their stock with sufficient rapidity to keep pace with the increasing demand. Of the ornamental trees and shrubs one may write at length, so rich are the collections, both in plants of the usual stock sizes and of finely-developed specimens, the latter being of special interest as showing the characteristics of the several kinds when fully developed. Trees grown for the beauty of their flowers, for the rich colouring or elegance of their leaves, and for their graceful habit or nobility of aspect, afford abundant interest in their respective seasons. Especially noteworthy are the many fine trees and shrubs with golden, silvery, or variegated foliage, for the splendid development of leaf colouration, which is perhaps the best indication one could have of a robust state of health. The golden and glaucous conifers are particularly remarkable for their bright leaf tints, and the illustration of the extremely beautiful Picea pungens glauca indicates very clearly the success with which the choice conifers are grown, for a glance is sufficient for the reader to see that the growth is free, and the silvery colouring fully developed.

This, it should be understood, is not intended as a description of the York Nurseries, but as pleasant "memories" of a short visit made during the present summer.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEEDLING ODONTOGLOSSUMS. — The raising of odontoglossums and allied genera from seed has become so general during the past few years that one is at last able to consider the subject as suitable for a weekly calendar. That which was until quite recently considered a difficult accomplishment now proves, with us at least, to be a comparatively easy task. There are no orchids that germinate so readily as do the odontoglossums. The rain of the past few days will assist greatly in providing the conditions desirable to attend to the pricking off of young seedlings, and for the potting on of larger plants that require more rooting space. It is by no means easy to induce young seedlings (that is those which are just forming their first leaf), to make much growth, if they are pricked out of the seed bed during a hot, dry season, such as that we have experienced this year. If the plants even survive the lengthened season of drought, they will remain in a practically dormant state until more favourable outside conditions are provided. It is best, if possible, to delay transplanting until favourable facilities are offered. Now that the hottest part of the year is past, and with moister conditions outside, the small plants may be pricked off, and as they now become established quickly, they make such rapid progress during the autumn and winter months that a growth of two or three leaves is obtained by the spring of the year.

PRICKING OUT THE SEEDLINGS.—This may either be done singly, or they may be pricked off several together in small pots. Where there are comparatively speaking, only a few to be dealt with, I would prefer to prick them out singly, but this is impossible where they have to be treated in large numbers, as room then becomes a consideration. We use the same potting compost as that mentioned in a previous note for odontoglossums. The pots used are filled to about half their depth with drainage material, the compost being made moderately firm, covering the surface with a thin layer of finely chopped sphagnum moss. After watering the compost sufficiently to moisten it, the pots should stand for a time to allow the excessive moisture to drain away. They will then be ready to receive the seedlings. I find a large pin, or finely pointed hard stick the most suitable to transfer the seedlings from the seed beds to the pots. Care must be taken to see that the surface of the moss does not become unduly dry, and the atmosphere should be maintained in a moist state about the plants until satisfied that the latter are pushing away in the new compost. The size of the seedlings when they are best transplanted is when the first leaf is made and the young root makes its appearance from the base of the plant.

SEEDLINGS in a more advanced stage that require more root space should also be attended to now. The aim of the grower is naturally to induce as much strength as possible in the advancing growth, so that a larger and more robust pseudo-bulb may be the result. It is rarely, indeed, that we obtain a matured pseudo-bulb from the seedling growth under two years. It is quite possible, if we have the first bulb strong enough, to procure flowers from them. So that it is advisable to afford every facility that will procure the most desirable results. We fill our pots about half full of drainage material, using a compost in a coarser state as the plants advance in strength. Liberal atmospheric moisture, and a free circulation of air, is desirable at all seasons of the year. —H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

PELARGONIUMS.—Plants cut back some time ago will now be ready for potting. Much of the old soil should be shaken away previous to cutting back the roots, thus reducing the balls to small proportions, so that they may be put comfortably into pots several sizes smaller than those in which the plants flowered. The pots used should be thoroughly clean and dry, so that when the plants are turned out for repotting the roots will not stick to the sides. The soil most suitable is a fibrous loam broken up into a convenient size for working round the roots, with plenty of sand and a little old mushroom bed manure. Pot firmly, return the plants to the frame, and give but little water for the present.

STREPTOCARPUS. — Seedling plants should now be shifted into the pots in which they are to winter. Very little additional room is needed, as they will not be very active at the roots until the spring. The soil should be fairly rich, using well-decayed cow manure rubbed up fine, and if the loam is fibrous, and not heavy, nothing but the manure and some sand need be mixed with it. On the other hand, if the loam is heavy some good leaf-mould will be a useful addition. A minimum temperature of 55 degrees will keep them growing for the present; later on this should be lowered, and a fall of 10 degrees will do no harm.

HYACINTHS FOR EARLY FLOWERING.—The foundation of a successful flowering of these should be made in autumn, by potting at the proper time, so that a plentiful supply of roots may form before any kind of forcing is started. September is a good time for potting hyacinths, and those required for forcing should be so treated early, following with later batches. A good compost is loam two parts, not sifted, good dry rotten manure one part, which should be passed through a sieve, and a half-part of grit. I use road scrapings in preference to sand, because they are coarser, and tend to keep the soil open. The compost should be thoroughly mixed, and, if very dry, watered to make it in a medium state of moisture, that it may be properly handled. Five-inch pots are used for one bulb, and three bulbs are also put into pots of eight-inch diameter. These latter make showy specimens for the conservatory. In this instance, too, be careful to select each of the three bulbs about even in size, so that there shall not be an odd look in the spikes of bloom.

COLEUS.—Cuttings of these should now be inserted for raising a stock for next season. They root freely at this time in almost any soil, loam or leaf-mould, or a mixture of both, with sand in any case, will do. Cuttings taken with three joints, and the lowest pair of leaves on each cut off, inserted in pots or pans filled with the compost, may be placed in a house or frame which does not require much air, and has a moist atmosphere. Pot off before the roots become entangled into four-inch pots, and when they have recovered the slight check of potting, place them in a sunny position near the glass in a more airy house. As they attain to a height of six inches or so pinch out the points, and when the weather gets colder (in October) shift them to a heated house. The coleus cannot bear cold, though in summer it likes plenty of air day and night from June to September.—T. B. FIELD, Ashwellthorpe, Norwich.

THE FLOWER GARDEN.

WALKS should continue to have close attention, rolling them when their condition renders it desirable. Keep the verges well cut, and if the walks have been allowed to become at all green or weedy no time should be lost in applying a dressing of weed killer. This application should not be left until leaves are falling, for there is then a danger of the leaves becoming contaminated, and injurious results follow in unlooked-for ways. Possibly a heap of the poisoned leaves may be included with those collected for leaf-soil, to the injury of the plants for which it is used.

LAWNS must still be mown as required, as growth will continue for a short time longer. Though not very vigorous, it will produce an untidy appearance if not attended to. Long grass in the wild garden and other parts of grounds should now have its second mowing for the year. If the mowing is done before the leaves fall the walk will be more satisfactory. The work of planting additional bulbs in the grass can be more readily done when the grass has been cut. The appearance will also be much better, for even in the wild garden neglect should not be apparent.

HERBACEOUS BORDERS.—Continue to remove all old flowers and seed pods, give all necessary support to everything that requires it, lest a storm or gale come and speedily disfigure the border. Stakes and supports that have accomplished their purpose for the season should be removed, and if not required again this season, put away in the store for next year. Should the weather be hot and dry, a large number of the autumn-flowering plants will be greatly benefited by a copious supply of water or liquid manure, it being useless to expect fully and perfectly developed lasting flowers if moisture at roots is lacking. As we cannot tell how soon early frosts may come, it is well to be prepared for them. Should they appear likely to occur protection should be given to Anemone japonica and other tender-flowering subjects; this protection on perhaps one or two occasions may prevent disfigurement of borders for several weeks. Large clumps of pinks may now be pulled to pieces and replanted; few will fail to grow. Continue to remove all seed pods from sweet peas.

FLOWER GARDEN.—The propagation of any of the tender summer bedders still in arrears should be completed. Pentstemons, antirrhinums, and calceolarias may be successfully propagated at the end of month. Here also see that nothing lacks moisture; remove dead flowers and foliage, and preserve a bright display as long as possible. A careful selection of the proved best varieties should have been made according to the results obtained this season.

DAHLIAS must still be attended to, as in the absence of frost they will continue bright a few weeks longer. Remove surplus or crowded growths, and tie up all remaining ones.—E. F. HAZELTON, Knowsley Gardens, Prescot.

HARDY FRUITS.

A THOROUGH INSPECTION should be made of all kinds of fruit trees, and a note taken of those requiring renewal. It is practically a waste of valuable space to allow old, worn-out trees to remain; walls are most valuable for the production of good clean fruit. If the trees are healthy, and growing in a sweet, suitable border, the varieties of pears, peaches, etc., should be carefully selected with a view to yield a lengthy supply of fruit, of the very best quality.

OUR PEACHES AND NECTARINES, on a south wall, are very good, heavily cropped, and needed much thinning. The first of the peaches to ripen was Waterloo, and of this we have only one large tree, which fruits very regularly each year, and ripens about July 21. The individual fruits may not be equal to those of the early September varieties, but are, notwithstanding, very valuable. They are of fairly god size, and of excellent quality when gathered a few days before becoming fully ripe and placed in the fruit-room to finish. Hale's Early and Early York follow this, and they are very desirable varieties to grow. Then come Stirling Castle, Early Grosse Mignonne, Goshawk, Royal George, Dymond, Bellegarde, Crimson Galande, Violet Hâtive Marquis of Downshire, Sea Eagle, and Princess of Wales. The last-named should be given a good position as it ripens late, and unless it has that advantage the flavour is not particularly good. Barrington, Walburton Admirable, and Gladstone are all very good varieties. Of the nectarines Lord Napier, Elruge, Pineapple, Dryden, and Humboldt are our main varieties. There are several other good sorts, but we have not room for more.

PEARS.—As several of these will now be approaching maturity, it will be desirable for prolonging their season to gather a few of the most forward at intervals. These should be placed in shallow boxes and stood on the stages under glass. We use shallow peach boxes, with lids. This will hasten maturity and lengthen the supply considerably. When gathering the fruit be careful not to bruise them. William's Bon Chretien is one of our best pears to ripen at this season when gathered at the right stage; but like other early fruits does not remain in good condition for any length of time. When packing these for a long journey they should be a little underripe, rolled carefully in soft tissue paper, and then packed in shallow boxes, with wood or cotton wool. A single layer is enough for travelling. Clapp's Favourite with me bears very moderately, but Madame Treyve, Louise Bonne of Jersey, Beurre d'Amanlis, and Marguerite Marillat bear freely. These are followed by Conference, Pitmaston Duchess, Doyenne du Comice, Durondeau, and others.

THE EARLIEST APPLES will likewise need special care and attention, and in some gardens must be netted to protect the fruits from birds which, in these gardens, are fairly plentiful. Quarrenden, Irish Peach, Beauty of Bath, Kerry Pippin, and Worcester Pearmain are amongst our earliest to ripen. Of these we usually gather at intervals to maintain a supply for as long a period as possible, in fact until Cox's Orange Pippin and other of the finer apples are fit for use.—H. MARKHAM, Wrotham Park Gardens, Barnet.

BEST PLANTS FOR GREENHOUSE.—Nearly 300 pages are devoted to the description, propagation, and culture of the best flowers and plants for the greenhouse in THE AMATEUR'S GREENHOUSE, by T. W. Sanders, price 5s. net, or by post 5s. 6d., from W. H. and L. Collingridge, 148, Aldersgate Street, London

AMONG THE WILD FLOWERS.

Every gardener, whether he pursues his avocation for pleasure or profit, will find it greatly to his advantage to cultivate an acquaintance with the trees, flowers, and grasses that adorn the lanes, fields, and stream banks of the countryside. Much may be learned from Nature's garden that will aid him in his work amongst cultivated plants. Happily, many gardeners are so situated that a ramble among the flowers of the field is possible whenever a half-hour can be spared.

Dwellers in large towns are scarcely so fortunate, but, thanks to the present-day enterprise of our great railway companies, the country is becoming more readily accessible, and even the London gardener may now, at a trifling cost, obtain a peep into some of the green and shady dells, or scramble up the side of some flower-decked hill, and return to town by an evening train. The Great Central Railway, for instance, runs through some of the most delightful country that lies within an hour's journey from London, and the company issues what are known as pedestrian tickets. By means of these one may for a very small sum take train to a specified station and return from another a few miles distant. Nothing could better meet the needs of the student of botany or natural history. A few notes made in the course of one of these pedestrian excursions, which we had on a recent Saturday afternoon, will, we trust, interest the readers of the Gardeners' Magazine, and induce some of them, perhaps, to take a similar trip. Starting from Marylebone, our outward journey was to Chorley Wood, situate on the borders of Buckinghamshire, amid surroundings of exceptional beauty and interest. One of the points of interest in travelling by "G.C.R." is that one soon gets beyond bricks and mortar, and reaches very quickly pure air and picturesque surroundings. By the time Harrow is reached one forgets that London is so near, and it is good to look out upon undulating meadows, plantations of trees, and the many gay gardens that are to be seen from the carriage windows. The railway banks also become interesting, and as we speed onward we catch glimpses of scarlet poppies, broad masses of Ox-eye daisies, and golden headed senecios, with waving grasses adding grace and elegance that might be imitated in some of our herbaceous borders—choosing, of course, grasses most suitable for the purpose. Here and there large colonies of full-blown thistles appear, and in spite of a gardener's inborn hatred of these noxious weeds, we have to admit that here, amid their wild surroundings they are by no means devoid of beauty. Arrived at Chorley Wood, we quit the train, and, leaving the station by the road to the left, turn under the railway arch, and then again to the right, over a stile into a meadow, where we immediately commenced our search for botanical treasures.

On the hedge banks we soon found the nodding harebell and the rosy-pink flowers of the crane's-bill. Onopordon acaulis, with its stemless purple flowers nestling in the centre of the rosette of spiny foliage, grew beside vigorous plantains, some of which, in full bloom, were really beautiful. Passing a small plantation, where, under the taller trees, grew fine bushes of Cytisus scoparius, [illegible], and symphoricarpus, we entered a narrow lane which leads out to the high road, just by the turning to that pretty little village of Chenies. The lane had yielded no rarities, although the commoner wild flowers grew in profusion.

The inhabitants of Chenies are fortunate. They live in a charming village, surrounded by beautiful scenery, and the tenants are under the Duke of Bedford, than whom a better landlord could not be found. The cottages are roomy and well cared for, and each has a large garden, which the tenants are encouraged to cultivate in the best possible manner. Needless to say, not many empty cottages are here to be seen, but when one does fall empty it is thoroughly cleaned and put in order, and the garden is also attended to by the estate workmen, so that a new tenant finds everything spick-and-span, instead of—as is so often the case—the house dilapidated, and the garden overrun with weeds. It is, therefore, no matter for surprise that the flower gardens in front of the cottages were in excellent order. Rose-covered porches and arches were no uncommon sight. Tall lilies, aconites, and galegas flowered profusely, and many fine phloxes, pentstemons, and dahlias were to be seen. At the foot of the village stands an old well, roofed over, the posts which support the roof being ivy-clad. Chenies church, near by, is of historic interest in that it holds the mausoleum of the Russell family, some member of which has from the days of Henry VIII. till now held important positions in the national affairs of the country.

Turning off to the right we soon came to Woodside, and from the high ground opposite obtained a good view of its extensive and well-kept gardens. We had intended walking toward Chesham, but altered our plan, and turned off to the right through lanes and meadows until we reached the river Chess. This route brought us in contact with plenty of good things. Thymus serphyllus grew in masses on a bank, its dense carpet of fragrant leaves being bespangled with rosy flowers. Achillea millefolia was abundant, and, further on, we came upon masses of hypericum. Agrimony is plentiful all round, and we found one plant bearing exceptionally large spikes of sweetly-perfumed flowers. This we believe is Agrimonia odorata, which is generally known as the Italian agrimony. The berried spikes of the cuckoo-pint were plentiful in the ditches, and we were shown a spot which in season is bestrewn with Orchis foliosa. Lotus corniculatus flowered cheerily among the grass, and the tall scabious might be gathered in armfuls. As we proceeded toward the river a different class of vegetation became predominant. The willow herb (Epilobium augustifolium) grew in a bold mass by the boundary wall of an old garden, and a spike of verbascum was also seen. Globularia vulgaris was growing on a little mound, its blue heads showing up against the white daisy-like flowers of Anthemis nobilis, which grew around. The margin of the river was a mass of moisture-loving plants. Althaea officinalis was here, Mimulus luteus spread right on to the breast of the river, the blooms being extremely large and clear. The water forget-me-not, Myosotis palustris, was found still flowering and Cardamine pratensis grew dense on the surface of the water. The tall blades of the water iris, typhas, scirpus, and the bright spikes of Lythrum salicaria mingled in this luxuriant water garden, which Nature had planted.

We trudged along, pausing now and again to watch some bird, to admire some particularly fine view, or to look up at some giant tree that waved its arms high overhead. Following the footpaths, we passed through some private grounds where are growing some handsome young trees, among them being Abies Douglassi, Cedrus atlantica, and other serviceable conifers, interspersed with red-barked willows, and golden elders.

Feeling the need of refreshment, we consulted our pocket guide, and learned of an old-fashioned hotel near by, to which we turned our steps. The guide, we may mention, is an excellent little book published by the Great Central Railway Company, entitled "Strolls in Beechy Bucks." None carrying this little book need either lose themselves, or miss a place where rest and refreshment may be obtained, and the cost of the book is but a penny. Resuming our tramp, we proceeded in the direction of Rickmansworth, and although we soon left the haunts of wild flowers, we found much to interest us in the gardens which we passed. Rickmansworth station was reached at last, and, fairly tired, but well pleased with our ramble, we boarded train for town, thinking that 'tis a pity every Londoner, and every London gardener in particular, does not take advantage of the facilities thus afforded for so enjoyable and instructive a ramble. It should surely be possible for the London branch of the British Gardeners' Association to organise a united ramble of this kind. Is it not worth consideration?

A. J. M.

SWEET PEAS.

Many inquiries have reached me for the new list of Too-much-alike Sweet Peas, and the best varieties in their respective colours, as bracketed and selected by our Floral Committee, and as it is practically impossible for me to answer these in detail, I send you the information so that it may be widely spread through the medium of your pages. At the same time allow me to thank you on behalf of my Committee for your many kindnesses to the National Sweet Pea Society.

Chas. H. Curtis, Hon. Sec.

Too-much-alike Varieties.

The National Sweet Pea Society brackets the following varieties as too-much-alike. "Not more than one of the bracketed varieties shall be shown on the same stand at any exhibition of the National Sweet Pea Society." Priority is given to the first name.

Etta Dyke
White Spencer
Paradise White

Queen Alexandra
Scarlet Gem

Her Majesty
Splendour

Duke of Sutherland
Monarch

Lottie Eckford
Maid of Honour
Ivy Miller

Black Knight
Stanley
Boreatton

Lord Rosebery
Cyril Breadmore

James Grieve
Mrs. Collier
Mrs. Felton
Dora Cowper
Devonshire Cream
Ceres
Yellow Dorothy Eckford

Captain of the Blues
Bolton's Blue

Lady Grizel Hamilton
Countess of Radnor
New Countess
Princess May

Flora Norton
Miss Philbrick

Modesty
Duchess of Sutherland

Sensation
Countess of Aberdeen

John Ingman
Paradise Carmine
Spencer Carmine
George Herbert
E. J. Castle
Rosy Morn
Rosie Sydenham
Mrs. W. King
Phyllis Unwin

Zoe
Mid-Blue

Dora Breadmore
Miss Bostock

Clara Curtis
Primrose Spencer

Evelyn Hemus
Mrs. C. W. Breadmore

Countess Spencer
Paradise
Enchantress
Pride of St. Albans
Olive Bolton
Codsall Rose

Gorgeous
Miss B. Whiley
Mildred Ward

Countess of Lathom
Coral Gem

Marbled Blue
Hester

Mrs. Henry Bell
Sutton's Queen
Kitty Lea
Romani Ronni

Mrs. Hardcastle Sykes
Princess Victoria
Pink Gem
Florence Morse Spencer
Vera Jeffrey
Bobby K.
Lorna Doone

Classification.

The Floral Committee of the National Sweet Pea Society recommends the following varieties as the best in their colours.

White.—Dorothy Eckford, Etta Dyke, and Nora Unwin.

Crimson and Scarlet.—King Edward and Queen Alexandra.

Rose and Carmine.—John Ingman.

Yellow and Buff.—James Grieve and Paradise Ivory.

Blue.—Lord Nelson and A. J. Cook.

Blush.—Mrs. Hardcastle Sykes.

Cerise.—Chrissie Unwin.

Pink.—Countess Spencer and Constance Oliver.

Orange Shades.—Helen Lewis and St. George.

Lavender.—Lady Grizel Hamilton and Frank Dolby.

Violet and Purple.—Rosie Adams.

Magenta.—Menie Christie.

Picotee Edged.—Evelyn Hemus.

Fancy.—Sybil Eckford.

Mauve.—Mrs. Walter Wright and The Marquis.

Maroon and Bronze.—Black Knight and Hannah Dale.

Striped and Flaked (red and rose).—Jessie Cuthbertson and Paradise Red Flake.

Striped and Flaked (purple and blue).—Prince Olaf.

Bicolor.—Jeannie Gordon.

Marbled.—Helen Pierce.

ROYAL BOTANIC GARDENS, REGENT'S PARK, N.W.—GREAT DAHLIA SHOW, Sept. 10th and 11th, 1908. Prizes include Gold Medals and Challenge Cup. E. F. HAWES, Hon. Sec., London Dahlia Union, address as above.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

SEPTEMBER 1.

The display on the above date was most interesting and extensive for the season. The dahlias and collections of fruit made an excellent show in themselves.

FLORAL COMMITTEE.

From Messrs. Jas. Veitch and Sons, Lim., Chelsea, came a large group of specimen shrubs in tubs, some fine examples of Viburnum rhytidophyllum with their clusters of scarlet berries were to be seen, while a giant plant of Buddleia variabilis superba was simply covered with flowers. A fine plant of Artemisia lactiflora was also included, while plants of Aconitum Wilsoni were in full flower. Other specimens were Rubus flagelliformis, and R. bambusarum. The giant Chinese poplar, P. lasiocarpa, was also the centre of much interest, the gigantic leaves being quite a feature. The species is not yet in commerce, but it will prove a very handsome addition to the class. The crab John Downie was literally roped with fruit, while branches of the parsley-leaved blackberry were equally good and attractive.

Foliage plants came from Messrs. W. Bull and Sons, Chelsea. The crotons and dracænas were all well coloured and nicely grown. Bertolonia Mad. E. Pynaert was also much in evidence, as were the aralias, alocasias, and similar plants. A small collection of hybrid cattleyas lent colour to the display.

A fine table of hardy flowers came from Messrs. T. S. Ware, Lim., Feltham. The chief subjects were Lilium tigrinum and its double form; Rudbeckia Newmani, and R. purpurea were also in fine condition. A number of asters were also displayed, the variety Beauty of Colwall standing out clearly as the best. Pentstemons were also a feature, the colours being bright and the flowers large.

Messrs. Jarman and Co., Chard, again placed their giant Sweet Sultans before the public. The dull day, however, did not assist the flowers to open properly, but there is no doubt they are a fine improvement on the old strains. The varieties staged were The Bride, white; Bridesmaid, pale lemon; Bridegroom, a pleasing lavender shade; and Honeymoon, a deep yellow; probably Messrs. Jarman will "invent" other varieties applicable to such auspicious occasions.

From Captain Speer, Esher, came a small collection of dahlias. The single varieties were arranged in tall tubes, while the foreground was occupied with single blooms of the giant decorative section. The varieties used were yellow Le Colosse and Souvenir de Gustav Douzon.

Messrs. R. Wallace and Co., Colchester, occupied an entire table with a collection of hybrid montbretias. The effect produced by the different varieties was delightful. The most conspicuous varieties were Norvic, Messidor, St. Botolph, King Edmund, Germania, and Lord Nelson. The same exhibitors also presented a good display of gladioli, tritomas, and phloxes.

Messrs. Carter Page and Co. occupied the end of the hall with a fine display of dahlias. These were chiefly of the cactus type, though pompons, singles, and pæony-flowered varieties were well represented. Needless to say, the whole exhibit presented a blaze of colour, which was toned down with palms, ferns, grasses, and other appropriate foliage. Early-flowering chrysanthemums came from Messrs. W. Wells and Co., Lim.

A beautiful table of phloxes came from Messrs. Gunn and Sons, Olton, Warwick. These were arranged lightly in baskets with grasses, ferns, and other foliage. All were in fine condition, but perhaps the best were Hall Caine, Paul Martin, Dr. Charcot, Violet, Le Mahdi, and Queen Alexandra, with a few promising seedlings.

Messrs. H. B. May and Sons, Upper Edmonton, had a large exhibit of perpetual-flowering carnations, arranged in blocks of colour. The plants were all in five-inch pots, and were remarkably well developed. All were produced in the open air. The best appeared to be Harlowarden, The Belle, Britannia, Enchantress, Mrs. Brooks, and Elizabeth, a really fine scarlet. A fine exhibit of ferns was utilised to separate the blocks of carnations.

Hardy flowers came in strong force from Mr. Amos Perry, Hardy Plant Farm, Enfield. A feature of the display was the second crop of single pyrethrums and delphiniums, both being good for the season. Various fine liliums, such as Lilium auratum, L. a. platyphyllum, L. a. rubro-vittatum, L. speciosum Aizoika, and L. s. rubrum were much admired. Pentstemons in variety were also much in evidence. The whole exhibit was well displayed without undue crowding.

Messrs. Bakers, Wolverhampton, displayed a fine collection of dahlias, the pæony-flowered varieties being most conspicuous, but, unfortunately, some of the most prominent seedlings were only exhibited under number; this is surely a mistake.

Gladioli came from Messrs. Kelway and Son, Langport. The exhibit occupied an entire table, and attracted much attention. The spikes were well developed, and the colours simply gorgeous. Just a few of the most striking were Golden Measure, White Cloud, Dovedale, Princess Victoria, Lord Roberts, Saltpetre, Miss Wade, and Lady Warwick.

A large exhibit of phloxes, perennial asters, and pentstemons came from Mr. F. Brazier, Hardy Plant Nursery, Caterham, Surrey. The phloxes were all arranged in tall bamboo stands. Conspicuous were the varieties F. Horning, A. Mercie, Le Madhi, Selma, Fort de France, and Lord Kelvin. Plants of Berberis Thunbergi, with its rich coloured foliage, were utilised effectively in the groundwork.

Messrs. Barr and Sons, Covent Garden, staged a nice display of annual and perennial flowers. The former included excellent strains of asters, zinnias, and antirrhinums, while in the hardy section some fine panicles of Agapanthus umbellatus albus were noted. Phloxes in large variety, with liliums were also good, while mention should also be made of Artemisia lactifolia.

Messrs. H. Low and Co., Bush Hill Park, N., displayed fine plants of Chironia ixifera in splendid form; also some excellent plants of Clianthus Dampieri, with Rochea falcata and nice decorative plants of Erica Tubæformis.

Messrs. Wells and Co. came out in a new rôle by staging an entire table of phloxes, perennial asters, and pentstemons. The latter were remarkably well grown.

Annuals in great variety came from Messrs. James Veitch and Sons, Lim. The exhibit included asters in all sections and colours, Phlox Drummondi was especially fine, as were also the zinnias, salpiglossis, dianthus, and African marigolds. These, with a display of ornamental gourds, made a fine exhibit.

A small collection of hardy ferns came from Messrs. Eggett and Son, Portsmouth Road, Thames Ditton. The varieties of scolopendriums were especially pleasing. The whole were well grown, and nicely staged.

Messrs. Watkins and Simpson, Tavistock Street, Covent Garden, sent a fine collection of asters, which included the majority of the varieties in commerce, the variety Unicum being especially worthy of note.

Mr. Charles Turner, Slough, sent pæony dahlias in variety, the best being Paul Kruger, The Geisha, Dr. Van Goorkan, and Bertha von Suttner.

FRUIT AND VEGETABLE COMMITTEE.

The collection of fruits from Messrs. G. Bunyard and Co., Lim., Maidstone, could only be described as magnificent. The pot trees in all sections were carrying heavy crops of fruit, the plums being particularly conspicuous. The finest crops of apples were Cox's Orange Pippin and Baumann's Red Winter Reinette. In pears, Triomphe de Vienne and Marguerite Marrillat were excellent, while the plums were the leading feature. These comprised Belgian Purple, White Magnum Bonum, Monarch, Burbank's Giant Prune, and President. The peaches were Sea Eagle and Duchess of York, both carrying fine crops. The baskets and dishes that formed the front of the exhibit were on a par with the trees, the finest being Gold Medal, Worcester Pearmain, Lady Sudeley, and Ecklinville Seedling in apples, while peaches, nectarines, nuts, crabs, etc., were all worthy of the highest praise.

From the King's Acre Nurseries, Lim., Hereford, came a large exhibit of fruit trees in pots. The trees were in excellent condition, and had carried their fruit wonderfully well. The collection embraced apples, pears, plums, peaches, figs, nectarines, and grapes. The best apples were Emperor Alexander, The Queen, Worcester Pearmain, Cellini, Wealthy, Gascoigne's Scarlet Seedling, and James Grieve. The fruits were large, clean, and of capital colour. The pears were exceptionally good, especially trees of Pitmaston Duchess, Doyenne Boussoch, and Durondeau. The pot-trained vines were Black Hamburgh and Ryton Muscat. Two fan-trained trees of Sea Eagle and T. Rivers' peaches were worthy of note, for they were carrying several dozens of fruit, all of good size and colour. The figs, too, were simply loaded with fruit.

Mr. W. Camm, gardener to Mr. Waldorf Astor, Cliveden, Taplow, staged six bunches of Madresfield Court grapes in splendid condition; the berries were large, and the colour all that could be desired. They were grown, too, in a half a paraffin barrel, a fine example of the grower's art.

A nice collection of fruit came from Mr. G. Reynolds, gardener to Mr. Leopold de Rothschild, Gunnersbury Park, Acton. The chief features were two dozen Queen Pines; all well developed and nicely finished. These, with fine dishes of Gladstone, Sea Eagle, and Princess of Wales peaches, Pine Apple and Victoria nectarines made a nice exhibit, while the dishes of plums were equally good.

Messrs. J. Peed and Son, West Norwood, staged a large collection of apples, with dishes of pears and plums. The apples were large and well coloured, the best being Lady Sudeley, Stirling Castle, James Grieve, and The Queen, though all were wonderfully clean and bright. The plums were quite as good, the dishes of Grand Duke, Pond's Seedling, and Gisbornes being especially fine.

From Messrs. H. Cannell and Sons, Swanley, came another collection of fruit trees in pots, also a large number of dishes. The trees were small but carried plenty of fruit, which was remarkable for its high colour. The best of the baskets were Beauty of Bath, Duchess of Oldenburgh, Lady Sudeley, and Red Quarrenden. The plums were particularly fine, especially Mirabelle, Pond's Seedling, Guthrie's Late Gage, Washington, and Jefferson's Gage. Raspberries and wineberries were also included in the exhibit. A collection of fruiting crabs came from Messrs. J. Cheal and Sons, Crawley, arranged with other foliage and berried shrubs. The most striking of the crabs were Dartmouth, John Downie, Siberian, Transcendant, and Yellow Siberian.

ORCHID COMMITTEE.

Messrs. Sander and Sons, St. Albans, staged a small but choice display of orchids, some of the best being Cattleya Davisi, Lælia elegans, Turneri var., a very fine form; Brassocattleya Madame Charles Maron, Sanders var., a much deeper form than the type. Some well-flowered plants of Vanda cærulea.

of capital colour, with Cypripediums Kubele grandis and Lady Maple.

From Messrs. Moore, Lim., Rawdon, Leeds, came a small collection, in which were noted good forms of Vanda cærulea, Masdevallia macrura, with Cypripediums bellatulum and George Hittel.

Mr. G. Day, gardener to Mr. H. S. Goodson, Fairlawn, Putney, had a nice table of miltonias, with Cattleya Robert Waverin, C. calummata, and C. fulvescens superba, while a fine plant of Cypripedium A. de Lairesse was carrying three blooms on each spike.

Messrs. Stanley and Co., Southgate, sent plants of Cypripedium A. de Lairesse, with grand flowers, also Cattleya minucia in varying shades of colour, with a good example of Cycnoches chlorochilon, var. splendens.

CERTIFICATES AND AWARDS.

First-class Certificates.—Ilex Pernyi, from Messrs. James Veitch and Sons; Brasso-cattleya Madame Charles Maron, Sanders var., from Messrs. Sander and Sons.

Award of Merit.—Gladioli Golden Measure and White Cloud, from Messrs. Kelway and Sons; Cactus dahlia Marathon, from Messrs. J. Stredwick and Son; show dahlia Tom Jones, from Mr. S. Mortimer; Montbretia Norvic and Hereward, from Major Petre; Phloxes General von Lassberg and Violet, from Messrs. Gunn and Sons; Kniphofia R. Wilson Kerr, and Gladiolus primulinus strain, from Messrs. R. Wallace and Co.; Sophro lælio-cattleya, Danae superba, from Lieut.-Col. Holford; Catasetum Russellianum, from Sir Trevor Lawrence; Cattleya Rhoda, from Messrs. Charlesworth and Co.; [illegible]. Elva var. St. Vincent, from Mr. H. F. Goodson.

MEDALS.

Gold.—Messrs. Carter Page and Co., Messrs. G. Bunyard and Co., The King's Acre Nurseries, Lim.

Silver Gilt Flora.—Mr. A. Perry, Messrs. R. Wallace and Co.

Silver Gilt Banksian.—Messrs. Kelway and Sons.

Silver Flora.—Messrs. James Veitch and Sons, Messrs. W. Wells and Co., Messrs. H. B. May and Sons, Messrs. Sander and Sons, Mr. H. S. Goodson, Messrs. Charlesworth and Co.

Silver Knightian. — Messrs. Cannell and Sons.

Silver Banksian.—Messrs. Bakers, Messrs. Gunn and Sons, Messrs. T. S. Ware, Lim., Mr. F. Brazier, Messrs. J. W. Moore, Lim., W. Waldorf Astor, Esq., Messrs. J. Peed and Sons.

Hogg Memorial Medal.—Mr. Leopold de Rothschild.

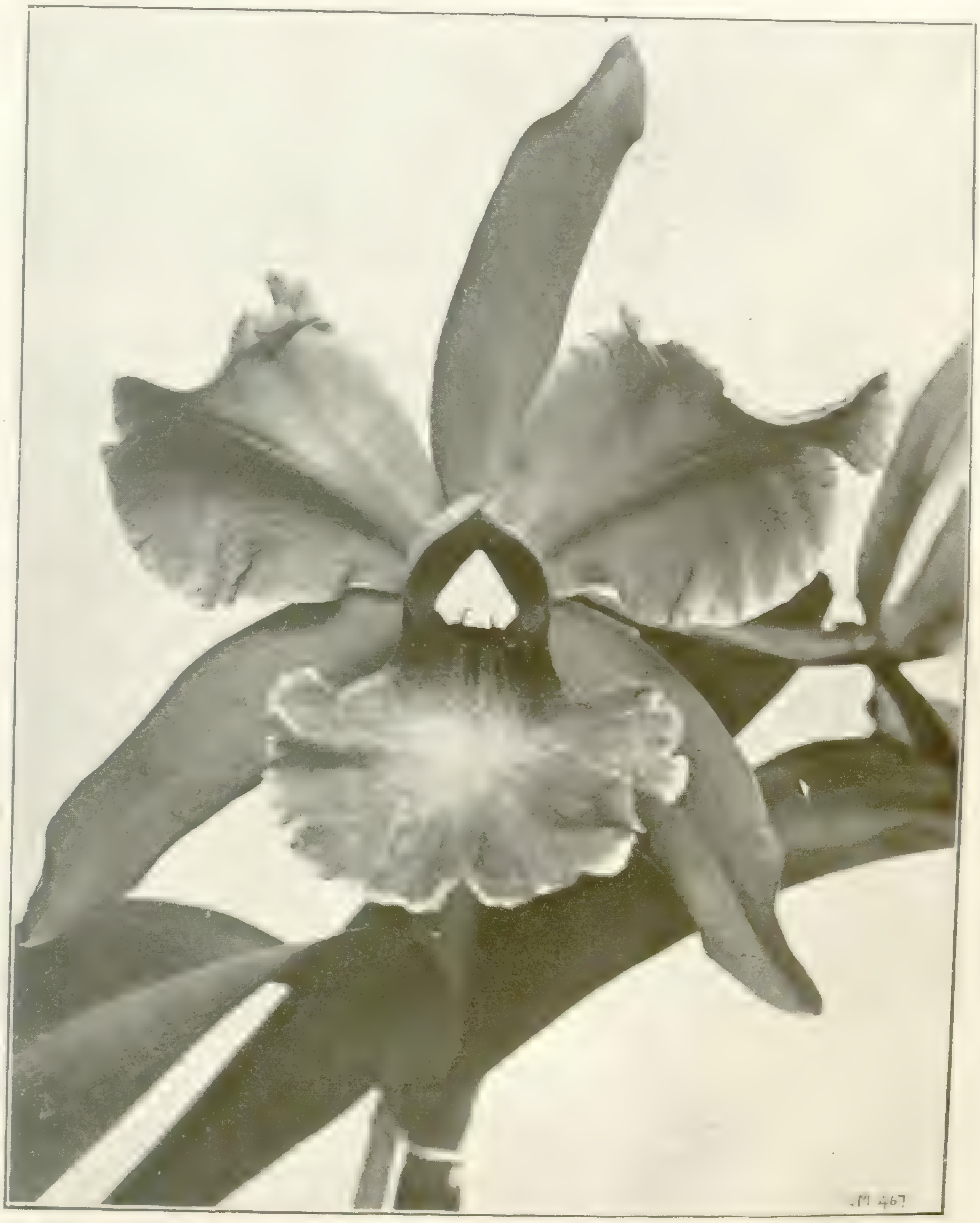
Reading Horticultural Society.

AUGUST 26.

In the Forbury Gardens, on the above date, the fifty-second exhibition was held, and it was, if not superior to any show previously held, quite equal in point of merit to the best. In most classes the competition was keen, the entries being numerous throughout. Fruit formed a specially fine feature; dahlias were remarkable for their excellence; and vegetables were numerous, but apart from the leading collections were not of superior quality. The management was all that could be desired, under the direction of an efficient committee, and Mr. C. J. Howlett, the secretary.

PLANTS.

For a group of plants arranged for effect in a space of 12ft. by 7ft., a challenge bowl was offered as first prize, in addition to a medal and a cash prize. Mr. J. Wyman, gardener to Lady Cooke, East Thorpe, Reading, was first with an arrangement of small plants, much too flatly arranged. Cannas, gloxinias, streptocarpus, and Francoa ramosa, with palms, ferns, etc., made a bright display. Mr. F. Johnson, gardener to G. B. Joel, Esq., Maiden Erleigh, Reading, was a close second with another flat arrangement of suitable plants. Ferns were fairly well shown. For four Mr. S. W. Sherlock, gardener to G. W. Tyser, Esq., Oakfield, Mortimer, Reading, won with well-grown specimens, mainly adiantums. Mr. Dagger, gardener to Mrs. Simons, Maynard, Bath Road, Reading, second. Fuchsias are always a good feature at this show, and in the class for six, distinct, Mr. J. Bright, gardener to J. Friendlander, Esq., Whiteknight's Park, Reading, was an easy first prizewinner. The specimens ranged from 7ft. to 8ft. high, were symmetrically trained in pyramidal form, and were profusely flowered. As a guide to others, the names are appended of the varieties, all of which are desirable: White Knight Gem, Western Beauty, Mrs. Julien Friendlander, Brilliant, White Queen, and Charming. Mr. F. Alexander, gardener to R. T. Darvall, Esq., Warden, Reading, was second with good specimens, although they were a long way behind the first prize set. Double zonale pelargoniums were freely flowered, Mr. F. Johnson winning with well-chosen varieties. Tuberous begonias were numerous and good in quality, and for six Mr. Dagger depended upon double varieties and won the premier award easily, Mr. Johnson coming next.



CATTLEYA RHODA,

A handsome hybrid, exhibited at the R.H.S. Meeting on September 1, when an Award of Merit was conferred upon it. Flowers rather large, the petals and sepals rose-fawn, and the lip brilliant purple.

CUT FLOWERS.

Chief among these were the dahlias, which embraced all the sections. For twenty-four show or fancy, distinct, there was but one entry. This came from Mr. J. Walker, Thame, Oxon, who staged really fine examples in size, form, and colour. The most noteworthy varieties were Golden Gem, J. Saltmarsh, Chieftain, Lord Salisbury, T. W. Girdlestone, B. Cornish, Mrs. Saunders, Mrs. Mortimer, George Rawlings, Kathleen, Mrs. P. Wyndham, and W. Rawlings. For twelve show or fancy, Messrs. J. Cheal and Sons, Crawley, were first with neat examples, the varieties including J. T. West, Black Gem, Miss Ormerod, Mrs. W. Slack, and T. W. Girdlestone. Single-flowered varieties were exceptionally fine in quality, attracting much attention. For twelve bunches, distinct, Messrs. Cheal and Son won easily with charmingly set blooms of Eclipse, Fuji San, Ferita, Snowdrop, Hector, Miss Roberts, Winona, Betty (new), Columbine, Flambeau, Kitty, and Brilliant; Mr. J. Walker was a good second. Three competed for twelve varieties, cactus, three of each, Messrs. Cheal winning again with high-class examples of J. B. Riding, Rob Roy, Mrs. H. Shoesmith, Hélene, Conrad, Ruby Grinstead, Flame, Lustre, Wm. Marshall, Ivanhoe, Mauve Queen, and Harold Pierman. Messrs. Cheal also won for twelve bunches of pompone dahlias with neat, medium-sized blooms, Daisy, Crusoe, Girlie, Cyril, Darkest of All, Dr. Jim, and Adelaide; Mr. J. Walker second. Messrs. J. Jefferies and Sons, Cirencester, had the best roses in eighteen varieties, really nice blooms for so late in the season.

Gladioli were well staged by Mr. F. Eames, Frome, who secured the first place with an unnamed set of high quality flowers; Mr. J. Walker second. The class for twelve vases flowers, distinct, arranged in a space of 10ft. by 2ft. 6in., produced five entrants. Mr. W. Barnes, gardener to A. F. Walter, Esq., Bearwood, Wokingham, was first with huge sheaves of Lilium tigrinum splendens, Bougainvillea Sanderi, Hydrangea paniculata grandiflora, and Montbretia crocosmiæflora; Mr. C. Page, gardener to J. B. Fortescue, Esq., Dropmore, second. Mr. Barnes also won first place for nine bunches of sweet peas with richly-coloured examples of leading varieties.

FRUIT.

Fruit is always a strong feature at this show, and for a collection of six dishes, distinct, Mr. G. Nichols, gardener to the Duke of Wellington, Strathfieldsaye, was first with Muscat of Alexandria and Gros Maroc grapes, Violette Hative peaches, Humboldt nectarines, Hero of Lockinge melon, and excellent Brown Turkey figs; Mr. Thomas Hatton, Badgemore, Henley-on-Thames, second with very fine Barrington peaches and Gros Maroc grapes; Mr. W. Palmer, Andover Nurseries, was third. Seven competed in the class for three bunches Black Hamburgh grapes, Mr. F. Bright winning easily with full clusters of well-ripened large berries; Mr. S. W. Sherlock second. For three bunches, any other black grape, Mr. Nichols won with Madresfield Court, very fine in every respect; Messrs. Hatton and Sherlock second and third respectively with the same variety. There were five sets in the class for three bunches of any white variety, Mr. Nichols winning with Muscat of Alexandria in fine condition. Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, second with just a trifle smaller bunches, yet well finished. Peaches were few in number, yet good in quality. Mr. Dymock, gardener to G. D. Faber, Esq., M.P., Rush Court, Wallingford, won with Sea Eagle in prime condition; Mr. Nichols second with Violette Hative. Mr. Dymock was also successful in the nectarine class with Humboldt in prime order. Mr. Nichols a close second with Dryden.

Plums were numerous and good. For three dishes six competed, and Mr. Nichols was first with Washington, Transparent Gage, and large Black Imperial; Mr. Johnson second.

Dessert apples in three dishes were staged by ten exhibitors, Mr. Ellwood winning with handsomely-coloured fruit of Beauty of Bath, Lady Sudeley, and Reinette Grise; Mr. Page second. No fewer than fifteen staged three dishes of kitchen varieties, Mr. Barnes winning with a fine trio; Mr. Nichol second. The latter also won for both green and scarlet-flesh melons.

VEGETABLES.

These receive much encouragement here, and, as a rule, they are presented in excellent form. Apart, however, from the first two collections in the leading class, the quality throughout the show was but moderate.

For ten distinct kinds, for which the prizes were provided by Messrs. Sutton and Sons, the competition was limited, but the quality was high. Mr. Dymock was awarded first prize for an exceedingly fine lot, in which Ailsa Craig onion, New Red Intermediate carrot, Centenary pea, Superlative potato, Perfection tomato, and Best of All runner beans were conspicuous; Mr. G. Ellwood was a capital second; Mr. J. Hudson, Leicester, third. For six kinds, maiden class, Mr. Nichols was first with a desirable exhibit; Mr. E. Deakin, Hay Hall, Hay Mills, second. Mr. H. Keep, Aldermaston, won the premier award for six dishes in Messrs. Webb and Sons' class with an even display. Single dishes were numerous and good.

First-class certificates were awarded to Messrs. Cheal and Sons for dahlias, Lusitania and Betty, the first-named an exquisite cactus variety, very dark in colour, and the latter quite one of the best of the singles.

Chester.

AUGUST 26.

This show was held in connection with the Cheshire Agricultural Society on the Roodee, and in quality proved an advance on that of last year, especially in the groups and vegetables. The day proved favourable, and the tents throughout the afternoon were crowded with visitors.

For a group of miscellaneous plants Mr. E. Stubbs, gardener to F. B. Summers, Esq., Bache Hall, won with a well-arranged display, in which apricot and scarlet gesneras proved highly effective. Mr. W. H. Shaw, gardener to A. Ashworth, Esq., Horsley Hall, was a good second, and Mr. D. Macphie, gardener to T. G. Williamson, Esq., Arrow Hall, third. For six stove or greenhouse plants Mr. J. Breen, gardener to John Mosford, Esq., Righi, Tattenhall, led, with Mr. W. Reeves, gardener to E. Peter Jones, Esq., Greenbank, second.

In the class for four ferns the position of these two exhibitors was reversed.

In competition for the prizes for four pelargoniums the prizetakers were Mr. J. Breen, Mr. W. Reeves, and Mr. T. Dean, gardener to J. R. Darsie, Esq., Newton House, Chester. For one begonia Mr. W. Dunning, gardener to the Rev. M. W. Kinlock, Eccleston, was first.

In competition for the prizes for cut blooms Thomas Coatup, Esq., Spital, had the best dahlias, Mr. J. Breen the leading asters, Mr. W. H. Shaw, hardy annuals and herbaceous flowers, staging a capital collection; Mr. E. Jones, gardener to G. H. F. Robertson, Esq., Gresford, with a smaller collection, also for twelve vases of sweet peas. In the class for a small collection Mr. John Haycock, Wrexham, was the winner. For twelve roses, Mr. E. Jones was well in advance with medium, fresh blooms. Thomas Jones, Esq., Ruabon, scored for the bowl of roses, and E. Smith, Esq., Upton, for gladioli. For two bunches black grapes Mr. J. Clack, gardener to J. G. Frost, Esq., Boughton Hall, Chester, was first with Madresfield Court, and for two bunches of white grapes the same exhibitor with well-coloured Muscat of Alexandria. Mr. W. Pilgrim, gardener to Sir George Meyrick, Bart., had the finest peaches with Princess of Wales; Mr. N. F. Barnes, gardener to the Duke of Westminster, the finest nectarines, staging well-coloured Pine Apple; Mr. George Atken, Wrexham, good apricots; Mr. W. Dunning, the leading melon. For a collection of nine dishes, Mr. N. F. Barnes won with a grand lot, his melons, apples, and plums being especially noteworthy. The prizes in classes for vegetables were well contested, the entries being numerous and the quality high. In the three classes for collections of six distinct kinds the first-prize winners were Mr. W. S. Sharp, gardener to H. N. Gladstone, Esq., Burton Manor; Mr. W. A. Pierce, Waverton; and Mr. Charles Parker.

Messrs. Dicksons, Chester, contributed a large collection of cut flowers of herbaceous and border plants of high quality.

Cardiff Gardeners' Association.

A large number of the members of the above-named association availed themselves of the kind permission which had been granted by the Marquis of Bute to visit the gardens at Cardiff Castle on August 22. Mr. H. R. Farmer met the party at the North Road Lodge. The old gardens were first visited, where there is still remaining a great portion of the fruit and plant houses which are traditional in the horticultural world, and are still keeping up that tradition under Mr. Farmer's direction. The apple and pear trees are heavily laden with fine fruit. These trees are some of the finest in the country. Attention was next directed to the new gardens which are under reconstruction, under the superintendence of Mr. Farmer. New vineries, peach and plant houses, and pits, have been recently erected, being entirely built of teak. The newly-planted vines and peach trees have done remarkably well, and have produced an abundance of the finest fruit. The plant houses are well furnished with a grand collection of innumerable varieties of well-known plants. The chrysanthemums and winter-flowering carnations, which are at present in the open, are very fine and healthy. Too much praise cannot be bestowed on Mr. Farmer for the splendid condition of the gardens and pleasure grounds. No doubt more will be seen and heard of these new gardens, which take rank with the finest in the United Kingdom.

Before the members dispersed, Mr. S. Medhurst and Mr. D. Cory, vice-presidents of the association, proposed and seconded respectively a hearty vote of thanks to Mr. Farmer, which was carried with acclamation, Mr. Medhurst remarking that all they had seen was excellent. Mr. Farmer, in responding, thanked the speakers for their kind remarks, and hoped that it would be his pleasure to receive the members of the association another year.

R. T. W.

Bristol Gardeners' Association.

The usual monthly meeting was held on Thursday, August 27, at St. John's Parish rooms. Mr. S. Shaddick presided over a good attendance. The lecturer was Mr. Morse, gardener to Sidney Humphries, Esq., who gave a very instructive paper upon "Tuberous Begonias," which are grown so well at Eastfield Lodge.

Dealing with propagation first, Mr. Morse said the stock may be increased both by cuttings and seed. He did not advise the former unless it was necessary to perpetuate a certain variety, as it was the only reliable means of doing so, but propagation by means of cuttings weakened the constitution of the plants. Seedlings were the best for bedding out. The soil in the seed pans should, he said, not be allowed to become dry, as drought would prove fatal to the young seedlings. A gentle bottom heat was better than a strong temperature. Those required for the flower garden should be gradually hardened until they were ready for planting out. If grown in pots for greenhouses the ventilators should be open day and night through the summer months, as the cooler the condition the better. Those grown in beds are greatly benefited by mulching with cocoanut fibre refuse or peat moss manure. Mr. H[illegible] opened the discussion, and he was followed by Messrs. Curtis, House, Wakefield, Garn[illegible], and Shaddick, after which a hearty vote of thanks was accorded to Mr. Morse.

For six bunches sweet peas, Mr. Har[illegible] was first, Mr. T. Clarke second, and Mr. Dainton third. For a basket of sweet peas, juniors only, Mr. Whiting was first, Master Fred Curtis second. An ordinary certificate was granted to Mr. Pratt for a melon.

H. W.

Dutch Bulb Growers' Society, Haarlem.

The following awards have been made at the recent meetings of the Floral Committee of this society:

First-class certificates were conferred on early gladioli Gordon, lilac with white blotch, a seedling variety obtained in 1906, and Innovation, light rose with white blotches, a seedling variety of 1905; Spanish iris, F[illegible] white, shaded with lilac, and Queen Wilhelmina, pure white and deep yellow, remarkably early-flowering. Ixia Lady Helen Vin[illegible] obtained from seed in 1903; the colour is very soft rosy-pink, quite a new colour in ixias. Richardia Gloire de Hillegom: the colour is canary-yellow with a deep purple basal blotch; the foliage is mottled with white. Richardia Mrs. Roosevelt, light sulphur-yellow, a variety of American origin.

Awards of Merit were made to Anomatheca cruenta alba, a pure white variety of this lovely bulbous plant; it flowered for the first time in 1906. Anemone Comtesse de F[illegible], double variety of nice form and bright violet colour. Anemone White Lady, a fine double white variety. Early gladioli Cath[illegible], white with light-coloured blotches; and Lady Howard, white, shaded soft lilac. Spanish iris Lothair, light blue and soft lilac.

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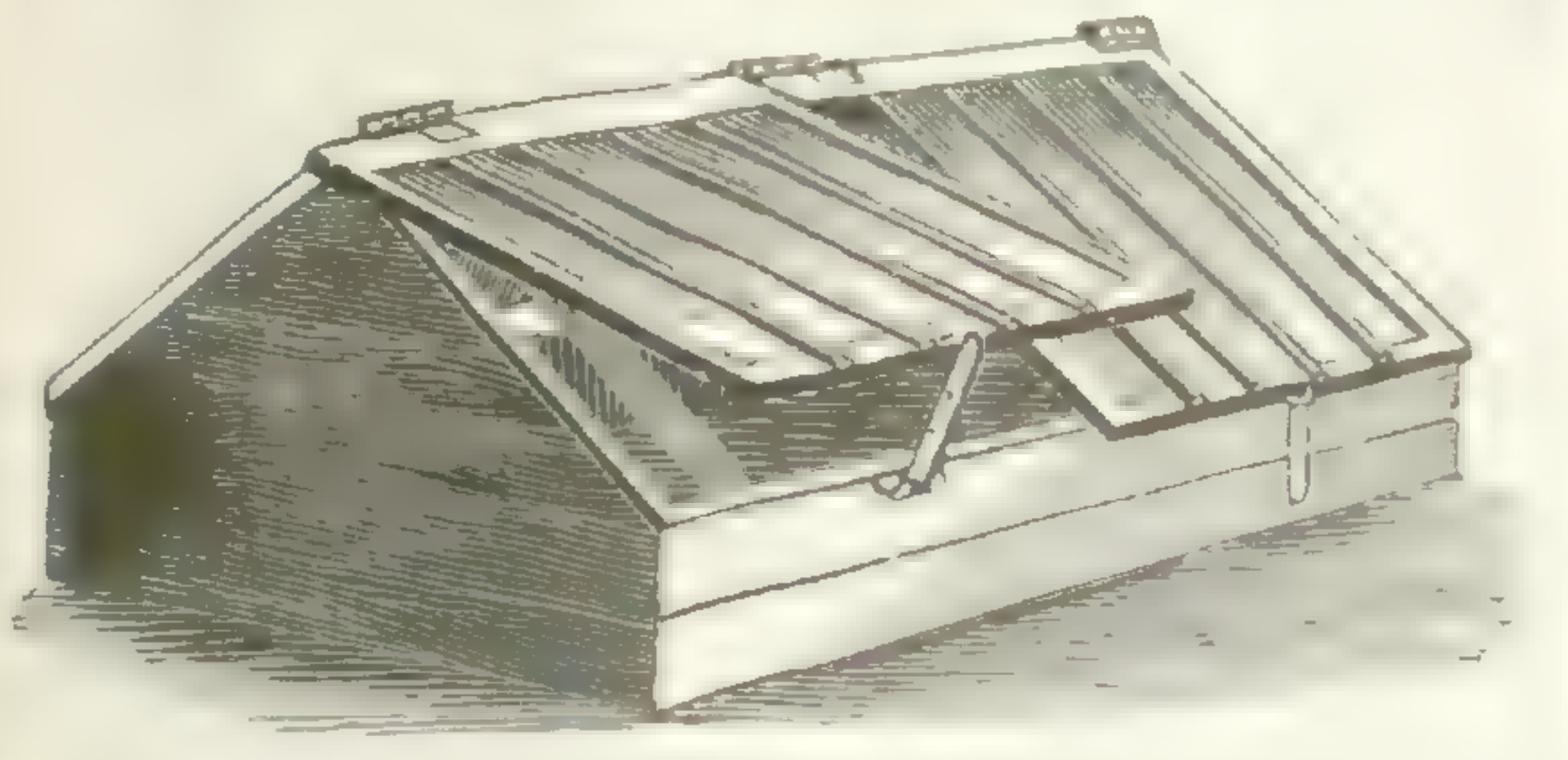

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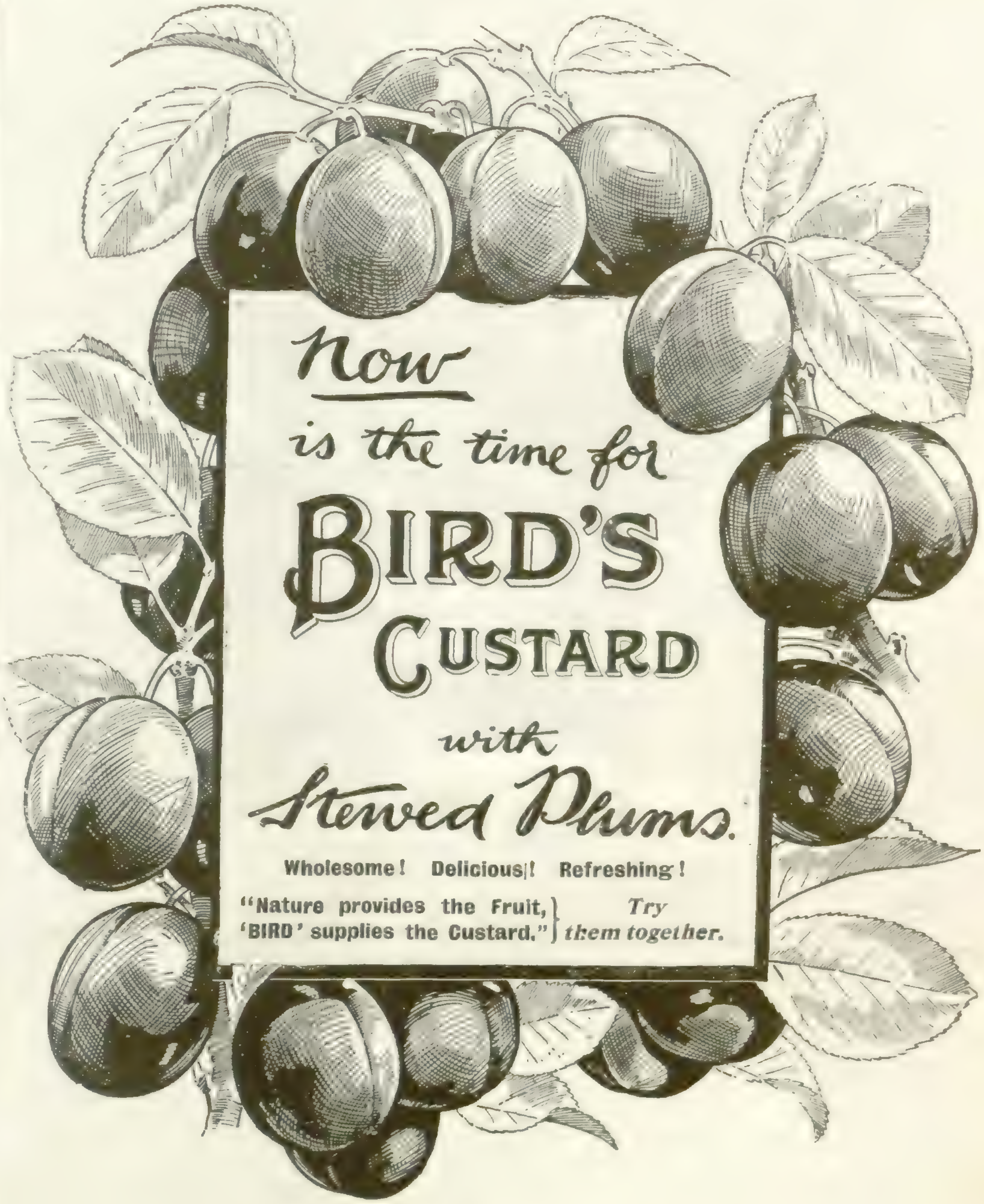
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A Complete Illustrated Guide to the Selection, Planting and General Culture of Bulbs and Tubers in Garden and Greenhouse.

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ANSWERS TO CORRESPONDENTS.

TRICHOPILIA NOBILIS ALBA.—C. and Co., Bradford: The list in which Sir Trevor Lawrence is credited with having received an award of merit for this trichopilia was compiled from the official list issued by the Royal Horticultural Society. You will see that in describing the new plants in our issue of the 29th ult., the names of the exhibitors are correctly given.

NOTICE TO LEAVE.—P. T., Coventry: The notice that you have received is in order, and you must leave at the end of the month. There was no necessity for the notice to be given in writing, and the notice was given you by the head gardener acting as agent for your mistress. As you evidently do not live on the place, you could not legally claim more than a week's notice.

PACKING CARNATION BLOOMS. — R. M., Yorkshire: There is really no difficulty in so packing carnations that they will not appreciably suffer in passing through the post, although so many fail to pack them satisfactorily. As you do not give us any particulars we cannot say definitely why you have failed, but it is probable that you have selected flowers somewhat too advanced in development, and packed them loosely. It may be you have followed the practice still too common of placing the flowers in contact with dry cotton wool, which is not only difficult to remove, but absorbs the moisture. To overcome the difficulty you have had obtain a box of a suitable size to hold the number of flowers you wish to send, and have it long enough to admit of the blooms having from twelve to eighteen inches of stem. The box may be of tin, light wood, or stout cardboard, the first-named being preferable, but tin boxes are unfortunately expensive and heavy. The flowers will travel safely in boxes of thin wood or cardboard, provided the stamps are affixed to a loose label, so placed that they can be obliterated without stamping the box. In addition to the box, have at hand cotton wool and brown and tissue paper. Select flowers that are not quite fully expanded, cut them early in the day, and immediately put the stalks in water. Then lay in the bottom of the box two or three thicknesses of damp brown paper, and over this place tissue or soft thin packing paper. Then lay the flowers carefully in the box, cover them with soft paper, and over the paper place sufficient cotton wool to prevent them moving about when the lid is fixed in its place. Pack them a short time before the post leaves, and when the packages are sent into country districts the preferable course will be to post in the afternoon, and thus ensure their reaching their destination early in the following day. All flowers that are to be despatched by rail or post should be placed in a cool room or shed with their stems in water for at least half an hour before they are packed.

POST CARDS.—A. J.: We are much obliged by your letter, but there does not appear any occasion to refer to the matter further.

DISEASED CUCUMBERS.—A. E. M., Carisbrook: We have submitted the leaves you sent us to a careful examination, and as the result we have no doubt that the plants are suffering from the disease known as Cucumber Leaf Spot, which is caused by Cercospora melonis, and is so prevalent as to inflict heavy losses on growers for market. Three years ago there was considerable discussion concerning some secret remedies for this disease, but we have not heard anything further about them.

TRAINING IN GARDENING. — "K. H. M.": Such situation as that which you desire will be very difficult to obtain; and we can only suggest that you make your requirements known by means of a few advertisements. There are several colleges and schools at which women are trained in gardening, but the fees for a year's course will be found considerable.

BLACK HAMBURGH v. MUSCAT OF ALEXANDRIA GRAPES.—J. C. B. writes: "Would you please give me your opinion regarding a special prize for the best bunch of grapes? Whether you would give it for Black Hamburgh or Muscat of Alexandria, both being equal. The Muscat of Hamburgh was first in its class, and the Black Hamburgh was first in the class for black grapes. So the special prize was awarded to the best bunch in the show." Our correspondent, while stating the case fairly well, fails to say whether a bunch of the Black Hamburgh or the Muscat of Alexandria was selected for the award of the special prize. That, however, does not prevent us readily answering the question. Muscat of Alexandria is unquestionably the finest flavoured of the two grapes, and also the most difficult to grow, and therefore if we had a bunch each of the two grapes before us, and both were grown to the highest degree of perfection, we should unhesitatingly give it the prize. In the same way, if the two bunches represented the same degree of culture in their respective classes, the bunch of Alexandrian Muscat would receive the award. But we should not place a second-rate bunch of Alexandria in a higher position than a first-rate bunch of Black Hamburgh, because the "best bunch" must in such case be that which represents the highest cultural skill. Seldom in judging grapes, as of other things, is the line of demarcation so clearly defined as is here suggested, and when the two grapes here referred to come into competition, it is not easy to determine which is the best. We offer no opinion on the award made in the case cited by our correspondent, but may state, as a general proposition, that well-finished bunches of Black Hamburgh are preferable to indifferent examples of the Muscat of Alexandria.

FAILURE WITH STRAWBERRIES.—With reference to the question raised by a correspondent some time since, as to the cause of failure of his strawberries that were under galvanised wire netting, the Hon. A. H. T. de Montmorency, M.D., The Grange, Carrickmines, writes: "I have been looking over some back numbers of THE GARDENERS' MAGAZINE, and in the issue of June 6 last, I saw the question relating to failure with strawberries. I at once write to throw light on this subject, and, as this is planting time, I would suggest your publishing my note. I consider my experience is a very marked answer to your correspondent. I have grown strawberries on an extensive scale for over thirty years, and I have never had a plantation fail until last season. Thinking I would start a small fresh plot of Royal Sovereign, I sowed, after planting, some seeds of All the Year Round lettuce, and to prevent the birds eating the seeds, I put several pieces of sparrow-proof galvanised netting over a part of the plot. It was left there throughout the winter, with the consequence that I had neither lettuce nor strawberries. Most of the plants presented the appearance of having been burned, being brown and dead. The other part of the plantation was all right. There is not the slightest doubt now in my mind as to the cause of the failure. I was puzzled over it, and suspected the netting, for there was nothing else different from any other bed or the rest of that bed. In my case the netting was lying on the ground, not supported at all. I thought whether it could be electrical, for the rain water is very corrosive on zinc sheeting, and that is one reason why lead has to be used where otherwise zinc might answer, in water gutters, etc. This corrosive action of the zinc and iron might act in producing electric currents.

FRENCH GARDENING.—E. O., Marlow: We are sorry you found your visit to the market garden so disappointing, but we do not see that any good purpose would be served by the publication of your letter. We should not, indeed, feel justified in publishing it until we could verify the statements, and this there is no occasion to do under the circumstances.

SPARROW TRAPS.—W. P. P.: We appreciate your kindness in sending us the circular, but the matter contained therein is best suited for our advertisement columns.

NOTEWORTHY GRAPE VINES.—B. W., York: There are a considerable number of grape vines remarkable for their age and size, but there are six that stand out pre-eminently among their compeers. These are the Cumberland Lodge (Windsor Park) vine, which occupies a house 138 feet long by 2 feet wide, and has a stem nearly four feet in circumference; the Finchley vine, which in 1862, when only six years old, filled a house 90 feet long by 18 feet wide; Kinnell House (Breadalbane) vine, which was planted in 1832, and fills a house 172 feet long and 25 feet wide; Maresa Lodge (Roehampton) vine, which was planted in 1862, and many years ago filled a house 424 feet long; Hampton Court vine, which occupies a house 65 feet long by 30 feet wide; this was planted about the year 1770, and has a main stem 3½ feet in circumference; Sillwood Park (Sunninghill) vine fills a house 129 feet long by 12 feet wide, and the main stem has a circumference of three feet. These are all Black Hamburghs.

NAMES OF PLANTS.

W. M. B., Brighton. — The plant is the double rose-coloured form of the bramble, and its scientific name is Rubus fruticosus fl.-pl. rosea.

S. T., Kent.—1, Tillandsia fenestralis; 2, Æschynanthus longiflorus; 3, Bignonia argreo-violascens; 4, Aristolochia ornithocephala; 5, Asparagus retrofractus arboreus.

F. A., Beaumaris, Anglesey. — The sunflower is Helianthus multiflorus. We are not able to give you the name of the border carnation. There are several carnations with flowers somewhat similar in colour, although not, perhaps, equal to your variety in vigour of growth and profusion of flowering.

AMERICAN GOOSEBERRY MILDEW IN ESSEX.

In the interests of fruit-growers throughout Essex, it is expedient that the greatest possible publicity should be given to the fact that, after extensive ravages in many of the Eastern counties, the American Gooseberry Mildew has at length appeared in this county. A gooseberry mildew order will be issued by the Board of Agriculture, as a natural corollary, and growers should see that every effort is put forward to ensure the efficient working of the order on their part. The mildew, as its name implies, is a native of America, and was unknown in Great Britain till 1900, when it was found in two Irish counties; by 1907 it had spread to no fewer than 21 counties. In respect to the damage done by the disease, Dr. Pethybridge says: "As regards Ireland, it is no extreme view of the case to state that the losses have been in many cases most serious, and unless the disease is checked we are threatened with nothing less, practically, than the total loss of the profitable cultivation of the gooseberry as a bush fruit. What is true of Ireland is true also of Essex. I will gladly give any help to Essex fruit-growers who care to write me on the subject.

C. A. EALAND, B.A., F.L.S.,
Biologist to the Essex Education Committee.
County Laboratories, Chelmsford.

FORTHCOMING ENGAGEMENTS.

TUESDAY, September 8.—Woodstock Horticultural Society.
WEDNESDAY, September 9.—Royal Caledonian Horticultural Society; two days.
THURSDAY, September 10.—London Dahlia Union, at Royal Botanic Gardens, Regent's Park; two days.
North Middlesex Dahlia and Horticultural Society, at Alexandra Palace; two days.
FRIDAY, September 11.—Newart Hill Horticultural Society.
SATURDAY, September 12.—Galashiels Horticultural Society.

OBITUARY.

◆

MR. W. MITCHELL.

We much regret to record the death of Mr. William Mitchell, who for over a quarter of a century occupied the position of head gardener at Chilworth Manor, the residence of J. Willis Fleming, Esq. During the period that Mr. Mitchell had charge of the Chilworth Manor Gardens he effected many improvements, and specially distinguished himself as a cultivator of grapes, and was the winner of many prizes both in London and the provinces for these fruits. Mr. Mitchell rendered valuable aid in the management of the societies in the district that have for their object the advancement of horticulture, and for the past twelve years he was a member of the council of the Southampton Royal Horticultural Society. The services rendered by Mr. Mitchell in the management of the gardens under his charge were highly appreciated by his employers, and he was held in the highest esteem by those who served under him, and by his many friends. A striking proof of this was the large gathering at Chilworth Church on the occasion of the funeral, and among those who paid the last tribute to his memory were Mr. and Mrs. Fleming, Mr. C. S. Fuidge representing the Southampton Society, many gardeners in the district, and practically the whole of those engaged on the estate from the steward downward.

MRS. JOHN WALKER.

We regret to record the death of Mrs. John Walker, which occurred at Thame on the 24th ult. Mrs. Walker, who was in her 84th year, was the senior partner in the firm of John Walker, Thame.

MR. GEORGE BETHELL.

We have to record the death of Mr. George Bethell, which occurred at his residence, The Firs, South Woodford, on the 27th ult., in his 76th year. Mr. Bethell for many years took an active interest in horticultural matters, and was a Fellow of the Royal Horticultural Society for 38 years, and for a long period a subscriber to the Gardeners' Royal Benevolent Institution.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. AUGUST 23 TO AUGUST 29.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 23—Sunday	—	54	54	64	54
„ 24—Monday	8 30	64	62	73	52
„ 25—Tuesday ...	10 50	62	57	69	58
„ 26—Wednesday .	3 10	59	56	68	53
„ 27—Thursday ...	8 40	62	56	66	59
„ 28—Friday	2 30	55	53	64	54
„ 29—Saturday ...	10 5	60	54	65	52
Means	6 15	59	56	67	55

DATE. 1908. AUGUST 23 TO AUGUST 29.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Aug. 23—Sunday	1·04	61	62	60	51
„ 24—Monday	0·02	60	61	60	53
„ 25—Tuesday ...	0·18	61	61	60	54
„ 26—Wednesday .	0 16	60	61	60	49
„ 27—Thursday ...	0·50	61	61	60	58
„ 28—Friday	0·34	59	61	60	49
„ 29—Saturday ...	0·04	58	60	60	48
Means	(total) 2·28	60	61	60	52

MARKETS.

◆

COVENT GARDEN.

Flowers.

Supplies about equal to the demand.

		s.	d.		s.	d.
Adiantum cuneatum ...	per doz. bun.	5	0	to	9	0
Alstroemerias	per doz. bun.	2	0		3	0
Arums	per doz.	2	6		4	0
Asparagus	per doz. bun.	1	6		6	0
Asters	per doz. bun.	2	0		3	0
Carnations	per doz. blms.	1	6		2	6
„	per doz. bun.	7	0		8	0
„ Malmaison	per doz. blms.	6	0		9	0
Cattleyas	per doz.	8	0		10	0
Chrysanthemums	per doz. bun.	3	6		7	6
Coreopsis	per doz. bun.	1	6		2	0
Croton leaves	per bun.	1	0		1	[illegible]
Cypripediums	per doz. blms.	2	0		2	6
Dahlias	per doz. bun.	5	0		7	6
Eucharis	per doz.	4	0		5	0
French fern	per doz. bun.	1	0		3	0
Gardenias	per doz.	1	6		3	0
Gladiolus, large-flowered,	per doz. spks.	1	6		2	6
Gypsophila	per doz. bun.	2	0		3	6
Lilium auratum	per bun.	2	0		4	0
„ candidum ...	per bun.	1	0		2	0
„ speciosum ...	per bun.	1	0		3	0
„ longiflorum	per bun.	2	0		3	0
Lily of the Valley	per doz.	6	0		10	0
Marguerites, white	per doz. bun.	2	0		4	0
„ yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	0		4	0
Odontoglossums	per doz. blms.	2	0		3	0
Pelargoniums	per doz. bun.	4	0		6	0
Roses	per doz.	1	0		4	0
Smilax	per doz. trails	3	0		5	6
Sweet Peas	per doz. bun.	1	6		2	0
Tuberoses	per doz. blms.	0	4		0	[illegible]

Fruits.

There are plentiful supplies; plums have suffered somewhat from the wet weather, but not more than might have been expected.

		s.	d.		s.	d
Apples, cooking	per ½-sieve	2	6		3	6
„ dessert	per ½-sieve	2	0		4	0
Apricots	per box	0	9		1	0
Bananas	per bun.	3	0		10	0
Damsons	per ½-sieve	1	6		2	3
Figs	per doz.	1	0		3	6
Grapes, English	per lb.	1	0		3	6
„ Belgian	per lb.	0	8		0	10
„ Channel Islands	per lb.	0	6		1	0
Greengages	per ½-sieve	2	6		4	6
Lemons	per case	6	0		11	0
Melons, Guernsey	each	0	9		2	0
„ English	each	1	0		2	0
„ Valencia	per case	7	0		10	0
Morella Cherries	per 12 lb.	5	0		6	0
Nectarines	per doz.	1	6		10	0
Oranges	per case	9	0		30	0
Peaches	per doz.	2	6		10	0
Pears, English	per ½-sieve	1	6		3	0
Pineapples	each	2	0		4	0
Plums	per ½-sieve	2	0		2	6
Walnuts, green	per ½-bus.	2	3		2	6

Vegetables.

All kinds are abundant, and the quality is high.

		s.	d.		s.	d
Artichokes, Globe	per doz.	1	6	to	1	9
Beans, Runner	per bush.	1	0		2	0
Beet	per bush.	1	3		1	6
Cabbage	per tally	1	6		2	6
Carrots	per doz. bun.	1	6		3	0
Cauliflowers	per doz.	1	6		2	0
Celery	per roll	1	6		1	9
Cucumbers	per doz.	1	3		2	0
Endive	per doz.	1	6		1	[illegible]
Horseradish	per doz. bun.	8	0		10	0
Leeks	per doz. bun.	1	0		1	6
Lettuce, cos	per doz.	0	8		1	0
Mint	per doz. bun.	1	0		1	6
Mushrooms	per doz. lb.	6	0		10	0
Onions	per doz. bun.	1	6		2	6
„ Valencia	per case	7	0		8	6
Parsley	per doz. bun.	1	0		2	0
Peas	per bush.	3	0		4	0
Radishes	per doz. bun.	0	4		0	8
Salsafy	per doz. bun.	3	0		3	6
Spinach	per bush.	1	3		1	8
Tomatoes, English	per doz. lb.	3	0		3	6
„ Guernsey	per doz. lb.	2	0		[illegible]	[illegible]
Turnips	per doz. bun.	1	6		3	6
Vegetable Marrows	per tally	2	0		3	0

A New Bulb Book.—At a seasonable moment a new work on bulb culture is announced for publication next week by Messrs. W. H. and L. Collingridge, Aldersgate Street, London. "Bulbs and Their Cultivation" is the title, Mr. T. W. Sanders is the author, and the price is 2s. 6d. net (by post 2s. 10d.) The work, which is freely illustrated, is divided into three sections: Outdoor bulbs—planting in beds, borders, rockeries, grass, window boxes, etc., lifting and storing, soils and manures; Indoor bulbs—hothouse, warm house, cool and cold greenhouse bulbs, forcing, frame culture, etc.; Miscellaneous—propagation, pests and diseases, common names, etc. Tabular lists of species and varieties are also given.

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BULBS AND BULB PLANTING.

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SATURDAY, SEPTEMBER 12, 1908.

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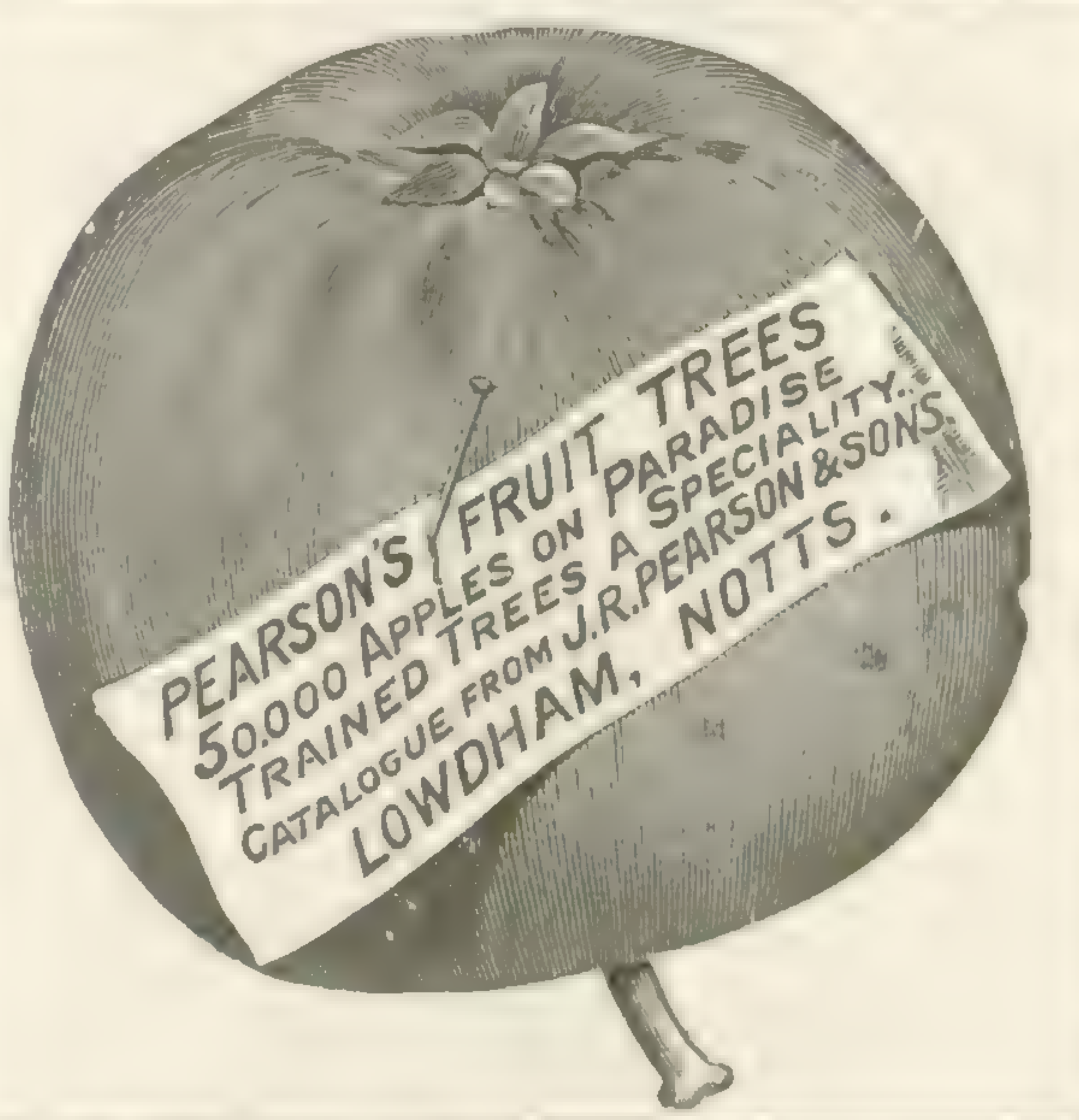
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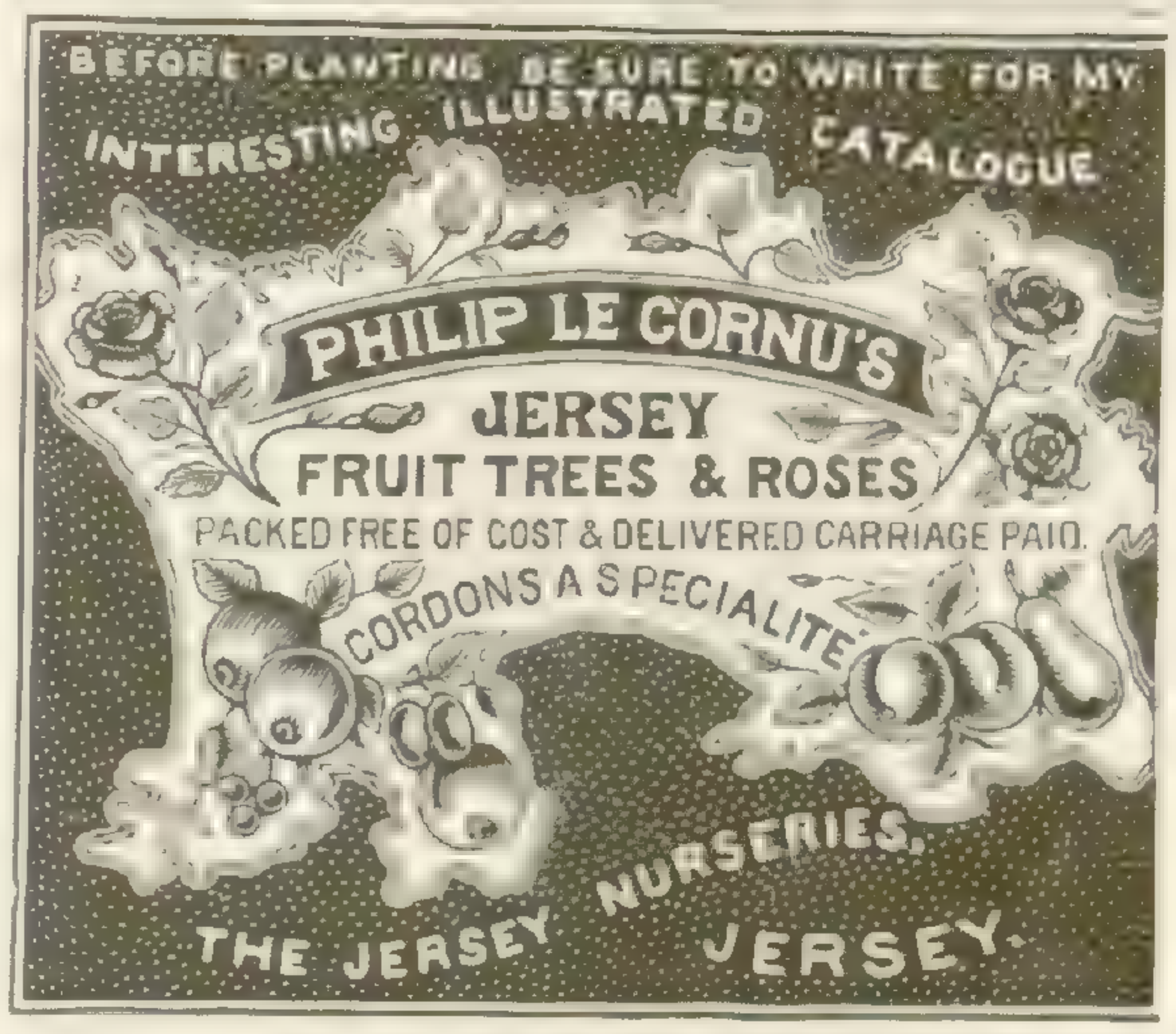
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VOL. LI.—No. 2,863. SATURDAY, SEPTEMBER 12, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Movements of Plants.

Although Mr. Francis Darwin did not, in his presidential address at the opening meeting of the British Association, follow the lines that some writers assured us he would do, he presented some strong arguments in support of his views with regard to plants being highly organised individuals, keenly sensitive to external conditions; and of this sensitiveness being in a large degree due to something equivalent to habit or unconscious memory. He should, he said, endeavour to give a general idea of how the changes going on in the environment act as stimuli and compel plants to execute certain movements; and then proceed to show that what is true of these temporary changes of shape we describe as movements of plants is also true of the permanent alterations known as morphological. It would indeed be hardly necessary to insist that as the study of movement includes the problem of stimulus and reaction, morphological changes must be investigated. These two departments of inquiry should, in fact, be classed together, as this combination has had the important result of making it evident that the dim beginnings of habit or unconscious memory we find in the movements of plants and animals, must have a place in morphology. With regard to the doctrine of the inheritance of acquired characters which is by some considered a lost cause, Charles Darwin, in his book on "The Power of Movement in Plants" (1880), pointed out that "it is impossible not to be struck with the resemblance between the foregoing movements of plants and many of the actions performed unconsciously by the lower animals." In the year previous to the publication of the work mentioned, Sachs called attention to the resemblance between the irritability of plants and animals. With reference to the essential character of stimuli and of the reactions they call forth, Pfeffer has stated that an organism is a machine set going by touching a spring or trigger of some kind; a machine in which energy can be set free by some kind of releasing mechanism. The energy of the cause is, in Mr. Darwin's opinion, out of all proportion to the effect, a small stimulus producing a big reaction. Thus a plant may be made to curve by altering its angle to the vertical, by lateral illumination, by chemical agency, and so forth. The difference between cause and effect should not surprise us. "We might," said Mr. Darwin, "have guessed that big changes would result from small stimuli, since it is clear that the success of an organism in the world must depend, partly at least, on its being highly sensitive to changes in its surroundings." The permanent or morphological changes and the stimuli by which they are produced have engaged the attention of Goebel, Klebs, Vochting, and other botanists for some years past, and the morphological changes have been brought under the rubric of reaction to stimulation, and considered as essentially similar to the class of temporary movements. The first stage in development may be determined by a purely external stimulus. The position of the first cell wall in the developing spore of equisetum is determined by the direction of incident light. Stabl, to whose investigations reference was made, has shown that beech leaves developed in the shade in the middle of the tree are so different in structure from leaves in full sunlight that they might be mistaken for leaves belonging to another species. Klebs has found in the course of his investigation that the flowers of Campanula trachelium can be changed from blue to white and back again to blue by varying the conditions under which the plant is cultivated. Other interesting results of Klebs' investigations might be given, but it must suffice to state, in the words of Mr. Darwin, that "we are so much in the habit of thinking of the stable element in ontogeny that the work of Klebs strikes us as a shock." This investigator assumes that every species has a specific structure, and that this structure has certain pobrought to light by appropriate stimuli. In stating his views on the unconscious memory of plants induced by external conditions, Mr. Darwin referred to the peculiarities tentialities which may be of sleeping plants as illustrative of his arguments, or in other words, plants whose leaves assume a position at night different from that occupied during the day. This change of position is known to be produced by the alternation of day and night. But this statement by no means exhausts the interest of the phenomenon. As was pointed out, if a sleeping plant is placed in a dark room after it has gone to sleep at night, it will be found next day with its leaves in the day position, and will again assume the nocturnal position as evening comes on, although there is no alteration in the light. This Mr. Darwin regards as a habit built up by the alternation of day and night. The plant normally drops its leaves at the stimulus of darkness, and raises them at the stimulus of light, and thus we see the leaves falling and rising in the absence of the usual stimulation. Since this change of position is not due to external conditions it must, it is considered, be the result of the internal conditions which habitually accompany the movement. This is a striking characteristic of habit, namely, a capacity acquired by repetition of reacting to a fraction of the original environment. Pfeffer accounts for the behaviour of sleep-

MR. J. C. TALLACK.

ing plants principally on the more general ground that when any movement occurs in a plant there is a tendency for it to be followed by a reversal, a swing of the physiological pendulum in the other direction. The fact that the return movements occur at the same time-intervals as the stimuli is obviously the most interesting feature of the case. It would be different if the pendulum-like swing always tended to occur naturally in a twelve-hours rhythm; but Pfeffer has shown that a rhythm of six hours can be readily built up, and Mr. Darwin and Miss Pertz produced a half-hourly rhythm by alternate geotropic stimulation.

Mr. J. C. Tallack, whose portrait is given in this issue, is so widely known as one of the foremost gardeners of the present day, and so highly esteemed by those who are acquainted with the man and his work, that not a few of our readers will derive much pleasure from seeing his portrait. A Cornishman by birth, Mr. Tallack commenced his gardening career by serving five years' apprenticeship in the gardens of Porthgwidden, where orchids were largely grown, and the glass department a special feature. No doubt the early training here and the love of gardening established a special liking for the culture of New Holland and other plants too tender to be grown in the open in this country, but which succeed under glass with but little artificial heat. After serving some time in the gardens of Wynyard Park, Durham, and Looton Hoo, Beds, Mr. Tallack obtained the position of foreman at Higham Court, Gloucester, and this he occupied three years. This position was relinquished to enable him to take charge of the gardens of Prideaux Place, Padstow, and during the five years he was there he formed the main flower garden and established most of the glass department. Then, after an interval of two years, which was spent in the landscape department of Messrs. J. Veitch and Sons, Mr. Tallack received the appointment of head gardener at Livermere Park, Suffolk, where herbaceous plants, fruit, and vegetables were special features. Here he remained between eleven and twelve years, and then took charge of the gardens at Shipley Hall. During the ten years, less three months, that Mr. Tallack has been at Shipley Hall the gardens have been thoroughly reconstructed, inside and out, all the houses having been moved or remodelled, and many fresh features added. These latter include an exceptionally fine pergola, and admirably arranged lily ponds in the open and under glass. With a thorough training and varied experience, coupled with a strong affection for the garden and ability of a high order, Mr. Tallack has made himself so good a master of all departments that it would be difficult to indicate any direction in which he may be said to specialise. Once he told us that he had from the first aimed to become an all-round gardener, and in his endeavour he has achieved success of a very high order. Of Mr. Tallack's ability as a writer on horticultural subjects, we need not speak, his contributions to these pages being sufficient evidence, but we may mention that he is not less successful as a lecturer, his most recent educational work having been at, and under the auspices of, the Nottingham University College.

Colour Chart.—The Council of the Royal Horticultural Society have long felt the need of a chart for the international standardisation of colours, but the huge expense of producing it has hitherto deterred them from issuing it. Not long since a most admirable chart, containing more than 1,450 shades of colour between white and black, was published in France, at the instance of the French Chrysanthemum Society, the price in England being £1 1s. net, and by this chart it is now possible to recognise or describe to a friend or purchaser at a distance the precise colour of any possible flower. The cost of this chart, £1 1s., has been somewhat prohibitive to its purchase in the past, but by undertaking to be responsible for the disposal of a large number, the society is now in a position to offer this chart to its Fellows at the reduced cost of 14s. 6d., for which price it can be obtained at the society's offices, Vincent Square, Westminster, or it can be sent free by post for 15s.; but in all cases a cheque or postal order must be sent beforehand.

Sugar in Snowdrop Leaves.—In the course of a paper read at a meeting of the botanical section of the British Association, Mr. John Parkin gave some interesting particulars of the sugar present in the leaves of the snowdrop. His paper was entitled "The Carbohydrates of the Snowdrop Leaf and Their Bearing on the First Sugar of Photosynthesis," and at the outset he stated that his researches had been conducted with a view to extend the knowledge regarding the sugars which occur in the leaf as the direct of photosynthesis. In the course of his researches sucrose was found in considerable quantities in the snowdrop leaf in conjunction with glucose and fructose. Analyses of leaves gathered at various periods and at different hours of the day enabled him to state provisionally that the total quantity of sugar ranged from 20 to 30 per cent. of the dry weight; and that the amount of sugar increased from the apex to the stalk at the same time as the ratio of the sucrose to the glucose and fructose diminished. Leaves deprived of a considerable amount of light still contained a moderate amount of sugar. The percentage fell with some degree of rapidity during the first 48 hours and then remained nearly constant. Plants that were deprived of light for some time and then fully exposed showed a large increase of sucrose, with but little change in the glucose and fructose. In Mr. Parkin's opinion greater importance should be attached to the presence of sucrose in the leaves of the higher plants, and its probable usefulness as the chief form in which the carbohydrates passed through the tissues.

Danger of the Plane Tree.—Lord Walsingham calls attention to an unsuspected source of irritation to the respiratory organs which he attributes to the plane tree. He writes: "The globular seed catkins of the common plane tree, Platanus orientalis, are composed of slender, hard, thread-like rods, diverging from a common centre. The fruit is ripened in October, and remains on the tree during the greater part of the winter, then falling, and splitting into myriads of little fibres, which are broken into shorter lengths by road traffic, whirled along with the dust, filling the air with innumerable minute spiculæ, which enter the eyes, nostrils, mouth, and probably lungs causing irritation, and producing an inflammatory condition of the mucous membrane. I have strong reason to suspect, from more than one case that has come under my own observation, that these spiculæ give rise to many attacks of so-called pneumonia, which have hitherto been consistently attributed to other causes. Such attacks occur for the most part during the earlier months of the year, especially in dry weather, and in London are often supposed to be connected with the accumulation of polluted dust particles on the wood pavement. There is scarcely a health resort in the South of Europe where plane trees are not a common feature in the landscape. In Perpignan, where some of the finest specimens that can be found form a magnificent double avenue, I have seen on a windy day masses of dead leaves and seed fibres swept along the streets, covering the floor of every shop when the door was open even for a few minutes. On the west side of Cannes the same whirling particles are an accompaniment of every high wind: yet persons with delicate lungs flock to such places in winter and spring in complete ignorance of the danger they incur. It is enough to examine, under a microscope, any small sample of dust gathered from a road on which plane trees grow to be convinced of the probable effect that such dust must have upon the delicate breathing organs of a human subject The plane tree is not only beautiful, but, through the habit of shedding its bark, is specially adapted to cultivation in towns where other species with persistent bark become smoke-begrimed, but, having regard to its rapidly-extending culture, it seems desirable to call medical attention to it as an unsuspected source of throat and lung trouble, even at the risk of disparaging its otherwise well-deserved popularity."

Garden Design.—At the recent meeting of the Royal Horticultural Society Mr. Thomas H. Mawson, A.R.I.B.A., gave the first of a series of three lectures on "Garden Design." In this lecture Mr. Mawson defined the broad ethical principles of garden design as gathered from the great historical examples of ancient art. He said it was his practice in studying anything in the shape of visual effects, whether of a constructive or artistic character, to take into consideration the age, the racial instincts, the religion, the pervading customs, and the environment generally of the designers or producers of the work that obtained at the respective periods to which their work was always relative. Mr. Mawson passed under review the gardens of Egypt, Babylon, and other countries of the east, and in referring to some of the broad principles of garden designs, urged the importance of the garden being restful. The remaining lectures will be given at the Horticultural Hall, on September 15 and 29, at three p.m., and will be illustrated by lantern slides.

Destroying Sparrows.—With reference to destroying sparrows where they are so abundant as to be a nuisance, Mr. Oliver Anketell describes as follows the method by which he greatly reduced their numbers. "Permit me to state how I in my American home reduced the nuisance. Sparrows in town and country, where no houses are thatched, find it difficult to get a fitting location for their nests; so acting on this theory I constructed what I may call "a sparrow house," with about 12 small separate compartments, an opening to each from outside, a resting place or perch projecting from each cell; when completed, I placed the house upon a tree or pole (made fast in the ground). The sparrows, thanking me for my consideration, forthwith took possession, little dreaming what was in store for them. At night, when all in the house was still, not a creature stirring, not even a mouse, I drew a bag over the house, making it fast beneath, and in the morning removed house and contents to the nearest pond, and all in that house perished, and repeated this from day to day, until all sparrows from my vicinity vanished. This plan might appear cruel to some over-sensitive people, but it is not so cruel as poisoning."

DOG'S TOOTH VIOLETS.

Among the smaller bulbous plants there are few which have more innate beauty and grace than the erythroniums, or dog's tooth violets, which lend themselves to many purposes in our gardens, and are charming things when naturalised in the grass outside the cultivated ground. They are delightful even in grass in the more kept grounds, they are charming on rockwork, they are very beautiful in the border, and they may even be employed to form pretty edgings to beds or borders, or in still more formal spring bedding. The short life of their flowers and leaves renders them, however, less suited for the latter, and it is in association with other plants employed to carpet them, or in the grass that their real beauty is best understood. Their charm does not altogether depend upon the blooms, for the leaves of the great majority are beautifully marbled, and give in themselves attractions to the plants which would commend them to all who can appreciate such charms.

The dog's tooth violets, which are varieties of the old Erythronium dens canis, the common one, have been cultivated in British gardens from time immemorial, and many are the references to them in the gardening literature of olden days. They are very beautiful indeed, with their brightly-coloured flowers and their marbled and mottled leaves, but the newer American species and varieties have commanded universal admiration, and have speedily made for themselves a place in the best gardens, where such flowers are made welcome. The beauty of these is unquestionable, and as they present few difficulties of cultivation they are likely to grow steadily in the public estimation.

The cultivation of all the dog's tooth violets is remarkably easy, as the forms of E. dens canis will thrive in almost any soil, although not one of stiff clay; while the American forms delight in loam, leaf-soil, and a little sand. They do well enough in cold and wet localities in full sun, but the flowers and leaves last longer if they are planted in shade or semi-shade, conditions they prefer. Three inches is a suitable depth for planting, which should be done in early autumn.

European Erythroniums.

Erythronium dens canis.—Of this old dog's tooth violet, which is a native of Europe, a description seems hardly necessary. There are several varieties, including those known as E. sibiricum and E. japonicum, which are recognised to be only geographical varieties of this old species. The plants vary in colour of flower, some being pure white, others of various shades of purple or almost lilac, and others of a good rose. They are also variable in size, good stocks of large-flowered varieties being sold as E. dens canis grandiflorum. There are also several named varieties, of which La Candeur, Franz Hals, Vondel, and Rouge frappante are as good as any. All are so cheap that only the large-flowered varieties should now be cultivated.

American Erythroniums.

The classification and nomenclature of the American erythroniums are far from being perfect, and it seems a little difficult to unravel the confusion that exists regarding some species. One is safe, however, in following in the main in this respect that distinguished botanist, Mr. J. G. Baker, who has monographed the American species and varieties as a whole.

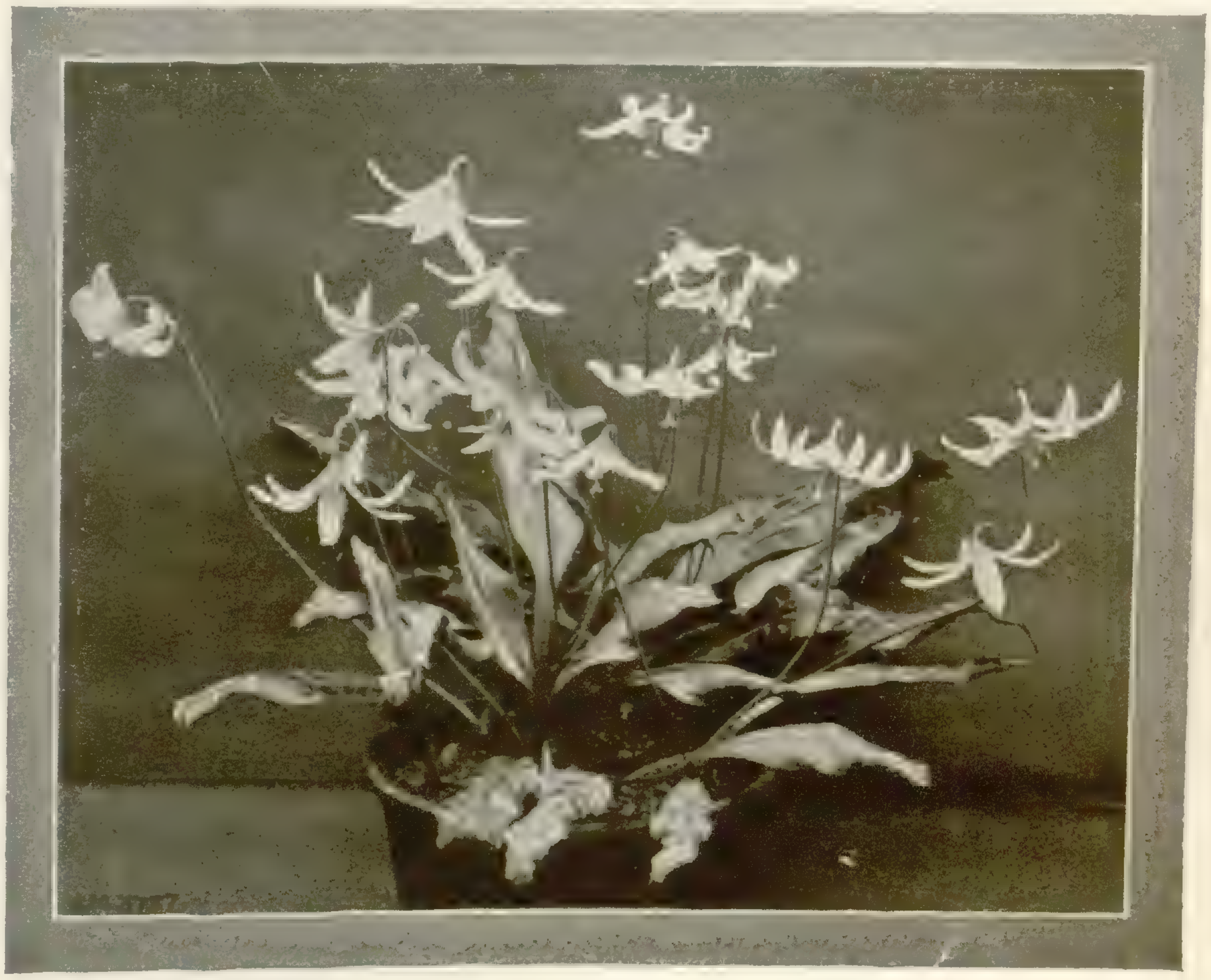
E. americanum is a handsome species, which has good yellow flowers, and prefers shade and a damp situation, but it is not satisfactory as a rule in cultivation, frequently failing to flower for many years after being planted. It is more satisfactory if it has its corms so confined that they cannot descend to any depth. A kind of box made of slate, but with holes for drainage; or planting in a part of the rock garden with stones underneath, has been found helpful in improving the flowering of E. americanum, whose corms seem to seek to go too deeply down, and often produce single leaves with no flowers. The yellow flowers of this species are sometimes tinged with purple, and the leaves are dotted and marbled with white and pale violet. It only produces one flower, and grows about four or six inches high.

E. californicum.—In referring to this one has to depart from Mr. Baker's classification of 1897, as it is not included in his monograph by this name, but appears to be his E. giganteum. It is one of the most ornamental and one of the very finest of the genus, the plant having large and beautifully mottled leaves, and producing scapes of from three to twelve flowers, of a good creamy-white or pale yellow, to a height of nine inches or a foot, or even more.

E. grandiflorum.—This handsome species suffers to some extent from the absence of the mottling on the leaves, but its flowers are so handsome that this may be pardoned, and as they are set off by the foliage being dark green, while they are of a clear yellow, the appearance of the plant is good. It comes from the West Coast of North America, from Idaho and Washington to British Columbia. Its height is generally from nine or ten inches to even as much as two feet. The variety Nuttallianum, of Regel, has smaller flowers on a shorter scape, sometimes classed as a species. It likes damp.

E. purpurascens.—A species which takes a high place among the erythroniums in cultivation is E. purpurascens, and there are among its forms quite a number of the most beautiful dog's tooth violets. I have here departed from the trade nomenclature as the form of E. purpurascens called uniflorum is sometimes sold as E. revolutum, a name not now recognised. This is a variable species, what is recognised as the type having several flowers of a light yellow, tinged with purple, which extends almost over the flower eventually, and pretty marbled or mottled leaves. E. Smithi is understood to be the same as E. purpurascens uniflorum, which has generally one flower on a scape. There are several varieties of this, but the typical one has whitish flowers passing off to purple. Some good pink varieties exist, that called Pink Beauty being among the best.

S. Arnott.



ERYTHRONIUM PURPURASCENS UNIFLORUM.

A beautiful Dog's Tooth Violet with flowers varying from yellow to pink.

DAFFODILS IN GRASS.

No apology is needed for the frequent advocacy of the practice of planting daffodils in grass, and in the wilder parts of the garden where an annual digging is not considered essential, for though the progress made in this method of dealing with some bulbous plants is great, the opportunities offered are much greater still, and there are yet large spaces in the surroundings of many gardens where the grass and other herbage is allowed to grow away at will until say mid-July, and then cut, perhaps twice over, during the remainder of the season. Such spaces are of the best in which to introduce any bulbs that ripen their foliage in time for the first cutting of the herbage.

Daffodils in their various sections cannot be surpassed for the purpose, for in such positions and such a setting they not only grow well, but, if well planted, they look at home and in every way suited to their surroundings. Personally I think they look best in informal groups containing from fifty to a hundred bulbs in each group, and planted in a more or less rounded form over an area of from twelve to twenty-four square yards, or even in larger groups still, but avoiding anything in the way of formal outline or any attempt to plant in lines. For immediate effect perhaps half-a-dozen bulbs should go to each clump, but I like to distribute them almost singly to begin with, for then there is no fear of the bulbs starving each other for many years. Moreover, where there is choice between two sites with different soils I would choose the soil of heaviest nature as, in this, bulb production is not so rapid though the individual growth is stronger and the flowers of most varieties are finer in a moist and rather heavy soil. On the other hand, for rapid increase of stock, I would choose the lighter soil, especially if it is of a sandy nature.

It will be found that a group of one variety is more effective than one containing several varieties, and whatever the quantity of stock may be, an attempt should be made to so group each variety. Certain varieties are better than others for this method of culture, but the choice is still an extensive one, so that a good and varied selection can be made while still confining the choice to varieties which succeed well in grass, and it is advisable to introduce some untried varieties when planting in case a gem may be found among them.

STAR DAFFODIL STELLA IN THE GRASS
In the Arboretum, Royal Gardens, Kew.

Most people love daffodils, and many even among those who have but limited space give up a good portion of their garden ground to them, thereby wasting room that might be utilised for other things, while at the same time they have the means to place their daffodils in positions, such as say in an old orchard among the fruit trees, where they would give the best effect without in any way encroaching on the garden proper, and where the flowers do not become splashed with soil during heavy rains, as they often do when grown on cultivated garden soil. For more than twenty years I have been carrying out this method of growing daffodils, and increasing stock each year, and during this period hundreds of thousands of bulbs have passed through my hands. In no instance has the work given any cause for regret, for though the result with a few varieties has not always been what one could wish, the labour entailed is small, the expense for the bulbs used for the purpose is not great, and the plants are quite inoffensive to such things as they may be brought into contact with. They take care of themselves in every way, being subject to few diseases, and practically immune from "basal rot" when planted in grass. The great essential is that the grass shall not be cut until the daffodil foliage has quite ripened. It is sometimes a little difficult to restrain the would-be mower, but, if the best results are to be obtained, this must be done, and for this reason I do not advocate an extensive use of the polyanthus type, though I have found some of these, notably the fine form named Grand Monarque, do fairly well and give useful spikes when the foliage has been allowed to ripen, and, of course, the various forms of the Poet's narcissus, also rather late in ripening, must be included in a representative collection.

During the past few years I have planted out many thousands of daffodils and other narcissi, which have been bought in for forcing in pots or boxes, in which, after forcing, the bulbs have been ripened off and then planted out. The position selected for planting in this case is in grass among forest trees which have been well thinned, with a view of encouraging a full development of their branches. A site of this kind proves an ideal one for the bulbs and flowers, and though the forced bulbs, as one might naturally expect, do not flower at all well during the first year, they recover themselves in the next year and continue to do well afterwards.

The method of planting is an easy one. A sod is partially lifted to a depth of from four inches to six inches with a narrow spade, the bulb or bulbs thrust in, so that the base rests firm on the soil below, and in an upright direction, and the turf is then allowed to go back into position.

Early planting is desirable and possible also with home-grown bulbs, as they commence rooting when the first rain comes, and get a start of those bought in, as the latter seldom come to hand much before September. The present is a good time to start with bought-in bulbs, but late for those which are home grown, unless the latter were lifted as soon as ripe and stored where they could not commence rooting. Bulbs left in the ground till now will have their roots far advanced, and would receive a big check if disturbed. I may add that planting is best done soon after heavy rain, as the turf can be turned up more readily when moist, and the bulb will be easier pressed into proper position under these conditions. I give below a selection of varieties that have been found most successful, but refrain from including any of the newer high-priced varieties, as these can only be tested in bulk when they become cheaper, and are not yet subjects for wholesale planting.

Among the long-crowned varieties the best are N. bicolor Horsfieldi, N. b. Empress, N. rugilobus, N. Emperor, N. cernuus, N. princeps, and N. telamonius plenus (Van Sion).

In the medium-crowned section we have many excellent varieties, notably Sir Watkin, Frank Miles, Autocrat, Minnie Hume, Barri conspicuus, Figaro, and, among the newer forms, Duchess of Westminster, grand for massing, of fine size and striking appearance, being almost white with a lemon-coloured lip. Then we also have the and forms of Double Phœnix, such as the Sulphur Phœnix, the Orange Phœnix, and the Yellow Phœnix, all of which are good for the purpose, as also are all the varieties of the Poet's narcissus, with the exception of the double form N. poeticus plenus, which is erratic and only does really well in favoured districts. This, if tried, should be planted from seven inches to nine inches deep.

J. C. Tallack.

Shipley Hall Gardens.

SPRING-FLOWERING CROCUSES.

Though these as a rule are harbingers of spring, there are several species that bloom in the autumn, and in the dull winter months, and whether grown in beds, borders, pots, frames, or planted in the grass they are alike attractive, for they bloom at a period of the year when flowers are much valued. I shall take an early opportunity of referring to them. Many of the species are but little known to the majority of gardeners, as they are seldom seen except in botanical collections. For naturalising in the grass they are most useful, as they prolong the season of flowering considerably.

Crocuses in Beds.

When planting these simply to produce a show in spring, and the corms are afterwards taken up before the foliage dies down to make room for summer bedding plants, the corms have not time to mature before they are lifted, the growth of these being then a secondary consideration; but when planted for a permanency the case is different, for unless the foliage is allowed ample room to develop the corms will not increase or grow to a respectable size, the consequence being that in a few years they would so deteriorate, if left to themselves, that they would fail to bloom. Though the crocus blooms during the winter and early spring months, the foliage does not become matured before July, for this reason the corms ought not to be lifted until it has died off. Some recommend planting the corms, deeply, out of the way of other plants, in order to avoid this annual lifting, but unless the soil is of a warm, light, sandy nature those so planted make but poor progress, and not infrequently rot.

When planted in beds simply for a spring effect, and it becomes absolutely necessary to lift them to make room for summer bedding, they should be taken up in showery weather, if possible, and carefully laid in soil in a shady place until the foliage dies off, which it soon will do, but even with all the care possible the corms deteriorate, as they have not attained their full size when lifted.

Crocuses in Borders.

When planted in borders filled with herbaceous plants the different species should be kept separate, and a label placed with each, for unless one is well acquainted with them, being somewhat alike, one is apt to forget their names, which makes them less interesting. There are numerous named varieties of Crocus vernus that are well suited for planting in bold masses, such as the large yellow, white, blue, and striped. Sir Walter Scott, Queen of White, Victoria. Sir John Franklin, Baron von Brunow, Cloth of Gold, etc.

Crocuses in Pots or Boxes.

Crocuses may be had in bloom very early in the season, provided they are planted at the right time, which is as soon as possible after the corms are ripe, that is, from the middle of August to the end of September. Those for indoor cultivation should be of the finest quality, as these give a greater wealth of bloom than the smaller ones. The soil used should be of a light, rich, sandy nature, that the roots may readily penetrate. As the corms will be somewhat exhausted by forcing, they may be planted rather thickly, as they will be of little value after flowering. When potted they should be stood on a bed of ashes, either in a cold frame or in the open; if the former can be provided so much the better, as they can remain there until the flower buds show themselves. The pots should be covered with some light material to the depth of about three inches. Sifted leaf soil, old mushroom bed, cocoanut fibre refuse and the like are useful. Some recommend sifted ashes, but this is a mistake, as it is far too heavy.

Crocuses bloom naturally in a low temperature, therefore but a small amount of artificial heat excites them into bloom. If a too high temperature be applied before the buds are well developed they fail to expand properly, therefore this should be avoided, better by far pot early and bring them on gradually than to try and rush them into flower before they are well rooted. Where very early flowers are desired potting should be done at the beginning of August, bringing them on when well rooted into heated pits close to the light, where air can at all times be freely admitted to produce well-developed flowers.

H. C. Prinsep.

TRUMPET DAFFODIL EMPEROR IN THE GRASS

At Eaton Hall, Chester, the seat of the Duke of Westminster.

MISCELLANEOUS BULBS FOR CULTURE IN FIBRE.

In my recent contribution to the GARDENERS' MAGAZINE (page 644) on the cultivation of daffodils without drainage, such general details as the preparation of the materials, potting the bulbs, watering, and the positions most favourable for flower development, were so fully dealt with as to render further reference to them unnecessary. Therefore, in referring to the bulbs suitable for fibre culture, other than the daffodils, these notes will be limited to an enumeration of the best kinds and to such particulars relating to their culture as apply specially to them. The number of kinds that may be successfully grown in this manner is considerable, as proved by the fine examples that have been exhibited by Mr. Robert Sydenham within recent years; but my opportunities have not been such as to enable me to grow many kinds, and my notes will be more useful if they are limited to those I have grown myself, and I would add with success.

Crocuses.

Spring-flowering crocuses bloom most satisfactorily when grown in prepared fibre, and although the flowers do not retain their freshness for so long a period as one could wish, they are so effective as to justify their being included in a selection. They may be grown in the ordinary vases, but shallower receptacles are preferable, and I use bowls, some of the usual Japanese type, and some of earthenware. It is essential to success that good corms are obtained, and that they be put in the vases quite early in the autumn. There is no occasion to have a long list of varieties, and Golden Yellow, Madame Mina, white, striped with lilac; Mont Blanc, white; Purpureus grandiflorus, deep purple; and Purple Queen, blue purple, will make a good selection. The number of corms required for each vase will depend upon the diameter of the latter, and it will suffice to say that the corms should be arranged about two inches apart. The receptacles should be filled to within about one and a-half inches of the rim, and when the corms are placed in position they should be covered to a depth of about one inch.

WHITE ITALIAN GRAPE HYACINTH (MUSCARI BOTRYOIDES ALBA), GROWN IN FIBRE.

Hyacinths.

These are of much value for culture in fibre without drainage, and it may be reasonably anticipated that they will be more largely grown in this manner than has yet been the case. The varieties mentioned in the note relating to the prizes offered by Mr. Sydenham, for competition at the meeting of the Royal Horticultural Society, March 9, 1909, comprise some of the best in their several colours, and those who intend competing should, of course, select from the list. I have grown with much success Blondin, Grand Lilas, and Regulus, light blues; Charles Dickens, Grand Maitre, and King of the Blues, dark shades of blue; Fabiola, General Pelisser, King of the Belgians, and Robert Steiger, red shades. These I grow in vases five and seven inches in diameter, and in the first the bulbs are grown singly, and in the second three bulbs in each, these, of course, being of one variety. The material should not be pressed very firm, because when this is the case the bulbs will, when they commence to make new roots, be loosened in precisely the same manner as those growing in pots which rest upon firm soil.

Tulips.

The varieties belonging to the early flowering section are preferable for growing in fibre without drainage, and a selection should be made from them. Varieties that have flowered admirably with me include Boule d'Or, Duchesse de Parma, Joost Van Vondel, La Belle Alliance, Proserpine, Queen Victoria, Rose Gris de Lin, Snowflake, Scarlet Pottebakker, Tournesol, White Pottebakker, Vermilion Brilliant, and Yellow Prince. For tulips I use vases ranging from five to seven inches in diameter, and put from four to eight bulbs in each, and arrange them as near as may be at equal distances apart.

Grape Hyacinths, etc.

The Italian grape hyacinth (Muscari botryoides), and the netted iris (Iris reticulata) bloom very well when the bulbs are grown in fibre, and those who have the room should try a few. The iris may be grown in small vases as shown in the accompanying illustration, and in vases five or six inches in diameter, eight or more bulbs being put in each. I have a preference for the latter. The Italian grape hyacinths should be grown several together, in five or six inch vases. I have seen some remarkably fine vases of lily of the valley grown by the method under consideration, and I would suggest that a few vases of this fragrant flower be included. I have not as yet grown lily of the valley in fibre, but I shall do so this season. L. A.

TREE CARNATIONS.

I wish to fully endorse all Mr. Slade said in his recent letter regarding tree carnations for summer flowering out of doors. You were good enough to honour me by printing a letter on the same subject in the early spring and I hope you will be able to find space for this note. We at Messrs. Hugh Low and Co. have for the last two years carried on careful experiments to test the hardiness and summer-blooming qualities of the various varieties belonging to this section out of doors. While we have proved that almost all the varieties are hardy, yet some are much more suitable than others for summer flowering. For instance, the varieties forming the Lawson family come with too short a stem towards the autumn. Others burn in the sun. Yet an excellent collection, including all colours, can be selected.

The great advantage to be gained by growing the perpetual-flowering carnation as summer bedders is that they can be planted out in May, whereas the common border carnation must be planted in the autumn or very early in the spring to obtain any measure of success, thus putting spring bedding stock out of the question. As Mr. Slade says, old plants will give a good show of bloom from August onwards. Yet young plants specially grown for the purpose will entirely supplant border carnations because they commence flowering earlier, and continue to bloom until quite heavy frosts come.

At Bush Hill Park we propagate special batches of cuttings for this purpose; they are wintered in specially-constructed cold frames, and allowed to be frozen. By May they are bushy plants in 5in. pots, with from six to ten flowering growths, ready for bedding out. These commence to flower almost as soon as planted, and continue in bloom until the frosts spoil the flowers late in the autumn. Autumn-rooted cuttings will give good results, but we attribute our great success to early propagation and careful wintering in cold frames. MONTAGUE C. ALLWOOD.

Bush Hill Park.

THE BEST BEDDING HYACINTHS.

There is a wide difference in the decorative value of the various hyacinths as employed for bedding purposes, and while some retain their colouring and are extremely long lived others behave in very indifferent fashion when grown in the garden.

Over a long period I have annually planted upwards of 35,000 bulbs for spring display, and these have included from season to season nearly all the varieties in commerce, both in hyacinths and tulips, and I propose, in as concise a manner as possible, to enumerate a list of the very best all-round hyacinths in each shade of colour.

White Hyacinths.

If we take white varieties first La Grandesse must be given premier position, being perfect in every way. Madame van der Hoop has a wonderfully fine truss as regards breadth, but is rather short, and may well be employed for outside rows and groups near the margin, and associated with a fine crimson variety, such as General Pelissier. A powerful rival to the first-named is L'Innocence. The flowers are pure white, but, as far as my experience goes do not retain their freshness for so long a period. There is the faintest suspicion of blush colouring in Mina, but it is of great merit and must have a place amongst the best; to my mind the drooping flowers of Paix de l'Europe is a recommendation, as it certainly presents a less stiff and formal appearance than those which hold their inflorescence quite rigid. Alba maxima and Lady Derby, although good, are not equal to the foregoing.

Blue Hyacinths.

Turning to the blue varieties King of the Blues, of a dark shade, is extremely long lived when in bloom, and on this account is admirably adapted to associate with wallflowers, and is closely followed by Marie, a grand old dark variety. I must speak in praise of Grand Maitre, and if my choice was restricted to one blue variety, this would be chosen. Pienman appeals to me strongly on account of the somewhat thinly disposed flowers which does much to rid the spike of formality. Czar Peter is well known and altogether striking and distinct, but as compared to many others is short lived. It will be noted that this failing occurs in the majority of delicately tinted flowers. I have seen glowing accounts of Queen of the Blues, and it certainly is possessed of exquisite colouring, but the fact that it sometimes fails to expand, the upper portion of the spike withering away without any apparent reason, reduces its value as a bedder. The greyish blue colouring of Blondin will please most people, and for general utility and excellence it must be placed in the front rank. Magnificent amongst pale blue shades is scarcely worthy of its name, at the same time it is very reliable. Superb must be written against Grand Lilas, and once experimented with it will never be absent from the bedding arrangements. Of delicate azure blue, both spike and individual flowers being of fine proportions.

Red and Crimson Hyacinths.

As regards red and crimson shades General Pelissier is one of the most beautiful. In view of the fact that its flowers are sensitive to the sun's rays it should occupy beds in partial shade, or where the sun is obscured in the warmest part of the day. A fine effect is produced by associating it with Yellow Hammer in richest gold. Linnæus is good in the same shade, but the price is high for our purpose. Robert Steiger cannot be ignored in spite of more recent introductions. Garibaldi throws up a noble spike and yet the flowers are of quite medium size. Grand beds of this variety were seen in Hyde Park two years ago, as also of Macaulay, which is more accurately described as deep rose with a carmine stripe. The flowers are densely arranged on the spike. I was impressed with the beauty and behaviour of Victoria Alexandrina and Solfaterre in crimson and orange-scarlet respectively, in consequence I am employing them on a larger scale this season.

Rose and Pink Hyacinths.

We have some very pleasing varieties in the rose and pink shades, and here Gigantea must take first place. As seen in the company of pure white varieties the effect produced is very fine, being both soft and pleasing. The very delicate rose colouring appeals strongly to the fair sex. Norma is not a new comer, but the waxy pink flowers are very beautiful, and the only failing is that it blooms at too early a date, and cannot be relied upon to appear fresh and beautiful simultaneously with the general display. Princess of Wales cannot fail to please the most fastidious, and I would urge that it be given a trial. Extreme vigour is stamped upon Gertrude, and small wonder that it is largely employed as a bedder, seeing that in addition to this good quality it is of a fine deep pink shade. Deep salmon is seen in Cavaignac, its beauty being enhanced by rose coloured stripes.

THE NETTED IRIS (IRIS RETICULATA) GROWN IN FIBRE.

Purple Hyacinths.

The exceedingly dark or purplish black kinds do not seem to me to be worthy of attention for bedding, and perhaps are seen to best advantage when associated with tulip white Joost van Vondel, or Sutton's Golden Yellow wallflower. The great depth of colouring seen in Mon Tresor tulip will also contrast finely with them; Uncle Tom, Masterpiece, and King of the Blacks are the best.

Yellow Hyacinths.

Yellow plays an important part in the decorative scheme, and Yellow Hammer and King of the Yellows are fine indeed. Ida is spoken highly of by some, but to my mind it has a washed-out appearance, more especially after being fully expanded for a few days. Primrose Perfection, although the same shade, is vastly preferable. Obelisque and Alida Jacoba extend the list, and although there is naturally a diversity of opinion as to the merits of hyacinths and everything else, I hardly think the varieties enumerated are surpassed for beauty, longevity, and general excellence.

I may take this opportunity of saying that the season of beauty of spring-flowering bulbous plants generally is appreciably lengthened by thorough soakings of water from time to time. It often happens that we experience a period of drought, together with drying winds instead of showers in April, and this leaves light ground more particularly almost destitute of moisture, at least as far as the root system extends, hence the necessity of attention in this way.

Walter H. Aggett.

GRAPES AND HOW TO GROW THEM.—An illustrated guide to propagation, culture, and management in vineries, greenhouses, and in the open air. By J. Landell, F.R.H.S. Price 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

MAY-FLOWERING TULIPS.

The tulips that yield of their floral beauty during the month of May comprise four distinct groups, all of which are well deserving the attention of those who appreciate the charms of plants blooming in spring, although differing somewhat in merit for garden decoration. First we have the varieties popularly known as the cottage tulips, and remarkable for the varied forms of their flowers and their attractive colours, and for their usefulness in the production of striking colour effects. Then follow the Darwins, which have flowers differing little either in form or size, and, as a whole, quieter in colouring than the cottagers; the Rembrandts, an attractive race, having flowers that differ chiefly from the Darwins in being striped or flaked, and tulip species which afford a great diversity in the size, form, and colour of their flowers, and in their cultural requirements. These notes will be devoted to the first two sections, which are unquestionably the most generally useful for beautifying the garden in May. It might, indeed, be suggested that the cottage and Darwin varieties be selected for planting in large numbers for the production of broader colour effects; that Rambrandts be planted in a quiet, yet sunny part of the garden, where their exquisitely beautiful markings can be fully enjoyed, and that the species be planted in a border or bed where they can have their requirements complied with, and where also there will be no occasion to disturb them before their growth is fully completed.

A FINE BED OF TULIP INGLESCOMBE PINK.

This is one of the finest of the May-flowering tulips, and has large salmon-pink flowers. The illustration is from a photograph taken in Messrs. R. Wallace and Co.'s Nurseries, Colchester in May last.

The principal object of these notes is to assist readers in making selections from the large number of beautiful varieties now in cultivation; but before discussing the merits of varieties there are one or two points to which reference might be made with advantage. In the first place, it must be pointed out that the May-flowering tulips do not so readily fit into a scheme under which spring and summer displays of flowers are produced as do the early Dutch tulips. As a set off to this they are more beautiful, and they bloom at a time when outdoor flowers can be fully enjoyed. If the preservation of the bulbs is not a matter of importance they can be used, and with good effect, in the spring displays, as the beauty of their flowers will have gone before the tender bedders will have to be planted, and they can at once be lifted and disposed of in such manner as the cultivator may determine. In other cases they can be grown in the beds and borders devoted to hardy perennials, as in these there will be no occasion to disturb the bulbs until they have attained their full maturity, and not even then every year. This is a most important consideration, for unless tulips can perfect their bulbs before they are lifted they fail to bloom satisfactorily the following season.

When grown in conspicuous beds, or in geometric schemes, such as that at Eaton Hall, of which an illustration is given in this issue, each bed should be devoted to one variety. When grown in mixed borders it is a good plan to arrange them in groups containing about twelve bulbs each. If care is taken to so arrange the varieties as to obtain a good balance of colour, they produce a charming effect, and when the number of varieties is considerable afford much that is of interest. It is desirable it should be clearly understood that while tulips will produce fairly good blooms in impoverished soil, a comparatively rich root medium is necessary for their full development. The cultivator who would achieve the highest success should moderately enrich the soil and deeply stir it.

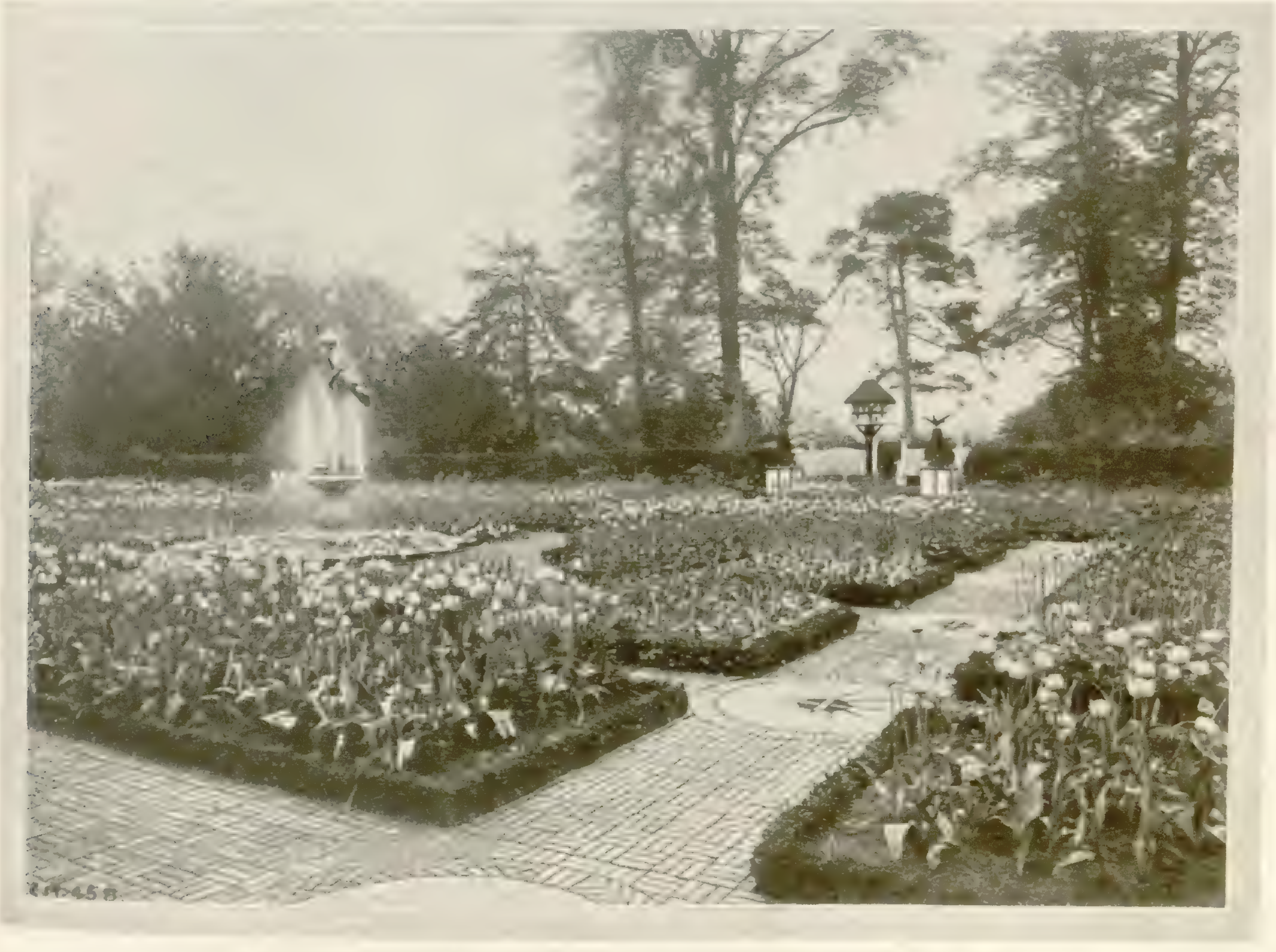
In turning to the notes on cottage tulips made last season there is considerable difficulty in making a really short selection because of the large number of really fine varieties that are in cultivation and obtainable at a price that is certainly not excessive. An endeavour will, however, be made to limit the selection to those varieties which cultivators generally should grow. Varieties with flowers of various shades of yellow are numerous, and the following are highly meritorious and quite distinct. Afterglow, a handsome variety, the flowers large deep yellow, becoming suffused with crimson when fully developed; very effective in bold groups. Gesneriana lutea, a tall-growing variety with flowers of considerable depth and a rich yellow colour. There is a pale coloured form of this known as pallida which should have the attention of those who have the space for a considerable number of varieties. Golden Spire, known also as elegans lutea maxima, is also of tall growth and has flowers remarkable for their length, the colour orange-yellow. Inglescombe Yellow, an effective variety, the flowers large, canary-yellow, and borne on stems about twenty-four inches high, one of the best. Kathleen, a pleasing variety, with pale yellow flowers of fine form. Mrs. Moon, one of the largest of the yellow May flowering, bright in colour and in every way desirable. Primrose Beauty, a charming variety, the flowers large and of the tint of the primrose. Parisian Yellow, a fine tulip for beds and large groups, the flowers of fine form and rich in colour. Retroflexa, an extremely elegant variety, the flowers large with recurving petals, the colour soft yellow.

From the several shades of crimson, red, and scarlet may with advantage be selected Coronation Scarlet, a distinct variety, remarkable for its effectiveness; the flowers of great depth and the colour vermilion. Elegans, soft crimson, the flowers large with reflexed petals, and specially adapted for indoor decorations. Flame, a fine variety with large finely formed flowers of a rich orange-scarlet hue. Gesneriana major, one of the best forms of Gesner's tulip, the large crimson flowers being of fine form and producing a striking effect. Inglescombe Scarlet, a very distinct and handsome variety, the flowers large, brilliant scarlet, and borne on tall stems. La Mer-[illegible], a beautiful red tulip with large flowers having elegantly reflexing petals. [illegible] Emperor is as yet rather expensive, [illegible] possesses so much merit that at least [illegible] group should be grown if there are no [illegible] objections to paying fifteen shillings [illegible] per dozen for the bulbs. The flowers [illegible] of the largest size, brilliant scarlet with [illegible]olden base, and are singularly effective, [illegible]ore especially when the sun is shining upon them.

The shades of rose and pink are less [illegible]rous than the others; but they are [illegible]lant among the Darwins. Briefly [illegible]ed the best are Inglescombe Pink, an [illegible]xceptionally fine variety, which, like the [illegible]ther two Inglescombe varieties, is remark[illegible]le for distinctness of character, fine form [illegible]f the flowers, and for effectiveness of [illegible]lour. The general character of the variety is well shown in the illustration of a large bed in the bulb grounds of Messrs. R. Wallace and Co., Colchester, where annually the May-flowering tulips form a fine feature. The colour is a rich shade of salmon-pink. Isabella, cream colour suffused with rose-pink, an attractive variety of high quality, and Picotee, an exquisitely beautiful flower, margined and suffused with rose on a white ground; of great value for the supply of cut flowers, as well as for the furnishing of beds and borders. When grown in comparatively shaded position the colouring is rather weak, hence the desirability of giving it an open position.

The white varieties should include Elegans alba, white, edged with rose, the flowers of rather large size and with elegantly reflexed petals. Parisian, an excellent variety both for massing and groups, the flowers pure white, of good form, and borne on stems about eighteen inches high.

The following twelve varieties will form a good selection of Darwins for those whose space is limited, and they will form a good foundation for a more extensive selection for large gardens. They are all of high quality, and it will suffice to indicate the colours. Antony Roozen, deep rose, lighter towards the margin of the petals. Clara Butt, salmon-rose; one of the very best. Farncombe Sandars, dark crimson. Henner, crimson. King Harold, vinous crimson. La Tulipe Noire, very deep maroon, the nearest approach to black in the tulips. Madame Krelage, rose pink. Millet, crimson-maroon. Pride of Haarlem, bright red. Suzon, bright pink, shading to blush pink at the margins. Van Poortvleit, deep rose, and Psyche, light pink. G. G.



AN EFFECTIVE ARRANGEMENT OF MAY-FLOWERING TULIPS

In the Geometric Flower Garden, Eaton Hall, Chester.

GOOD GARDEN LILIES.

The lilies one can recommend as good garden plants of easy culture, or, as our worthy Editor puts it, "that ordinary men can grow," are not nearly so numerous as those of another category. The wonder is, with so many diverse conditions of culture presented throughout Britain, all the species of lilium have not found suitable conditions of growth where they could thrive and multiply in the manner of the martagons and L. candidum.

Those lilies a man can plant in his garden, and expect to see year after year, are mainly European, and it is with these it is proposed to deal in the following notes, not en bloc—for each species has peculiar needs which must be fully met, and as exhaustively as the limitations of my notes will allow.

The Madonna Lily.

First and foremost in garden value stands that paragon of lilies—L. candidum, the white lily, the cottager's lily, or the Madonna lily. Blessed with a constitution above the normal, and admired by everyone, this lily has become widely scattered throughout the land. Most village gardens contain a few plants, and where a colony existed in the garden of a generous owner twenty years ago, row after row, and patch after patch, of white lilies meet one's gaze throughout the village. The success of the white lily in the comparative neglect of a village garden often puzzles the professional gardener; he may plant his hundreds, and but few will thrive! His soil is all right, his intentions better still, his skill superlative, whence comes the trouble?—from the bulbs' source. It is a certain fact that many stocks of Lilium candidum on the continent are stricken with disease; numbers of these bulbs are distributed throughout Britain annually, the cultivator gets them through his dealer, fails with them, as a matter of course, and infests his soil with botrytis. Also, as a matter of course, lily culture with almost any species becomes impossible for him for three years at least. One hears much of the frosts affecting the white lily and causing disease, but less of the fact that frosts cannot create disease. They may, and often do, injure the plants in cottage gardens, but disease does not follow in such cases.

A TASTEFULLY ARRANGED GROUP OF THE MADONNA LILY (LILIUM CANDIDUM).

One of the salient features of lily culture is protection or shade on the eastward side of the garden; protection that will temper frosts, or shade that will temper its damage. A cultural and artistic association of old-time yews and the white lily becomes possible here, and, in many instances, has proved the only way of growing the white lily in some gardens. Many happy ways of using groups of L. candidum will suggest themselves, but one particularly happy grouping is worth placing on record. It was that of a broad belt of Portugal laurel as a wind screen, margined by a long border ten feet wide, entirely filled with narcissus (April), May-flowering tulips (May and June), white lilies, and blue delphiniums (July and August), and hollyhocks (August and September). It was my privilege to see this border at various seasons, and the July grouping of delphiniums and white lily was surpassingly beautiful. Another fact in connection with the white lily is that its only period of rest is in August, a few weeks ripening of the bulbs is not harmful, or really necessary, unless they must be moved. They should be replanted, however, before the end of September in order that the autumnal leaf-growth may develop fully.

The Orange Lily, Etc.

The next lily in order of garden value is the Orange Lily (L. croceum), which also is a well-known inhabitant of cottage gardens. Its erectly-held flowers, of deep orange, often in verticils, are not admired by everyone, the colour note appearing harsh. Arranged with Lysimachia aurea the colour softens, and each of the two shades of yellow helps the other. It likes a deep, cool soil, and to be able to rear its head in full sunlight. In Irish gardens, and in Western England generally, it has become somewhat of a weed, and in King Alfred's country many a bushel of bulbs have gone down stream as garden rejects!

L. umbellatum is another cup-flowered lily, modelled on the lines of L. croceum, which proves a capital amateur's plant. It likes a deep, cool soil, and its handsome white bulbs, which always look "fit to eat," develop into huge masses eventually. A big cluster of stems, a yard through, each surmounted by a pyramid of handsome flowers, coloured deep orange-red, is characteristic of well-grown L. umbellatum. Good forms are L. Joerg, with a tongue-shaped medium patch of yellow on each petal; Sappho, tipped with old gold; and Tottenhami, a clear old gold throughout. Erectum is the commoner form of merit.

Dwarfer still, but of the same type of flower, are L. bulbiferum and L. elegans. The former, an European species, the latter an Oriental group of garden forms, of which atrosanguineum proves very attractive and long-lived. Orange Queen, an improved form of elegans, is worthy of extended culture. Its broad, spoon-shaped petals, of good finish, make up a substantial flower, and this, with atrosanguineum, are the only two forms of elegans one can expect to keep indefinitely. They like a rich sandy loam, heavily dressed with leaf-soil, and an annual mulch of decayed manure to help the stem roots develop.

Martagon Lilies.

The European martagons give us many graceful species of easy culture. The common purple martagon is practically ubiquitous; its colour note is not attractive, however, but there are forms, equally easy to grow, that would please the most exacting of tastes, notably album, which delights in the slight shade thrown by spreading fruit trees; dalmaticum, a tall and robust deep mahogany-purple flower, with whitish, woolly buds; and Cataniæ, deep wine purple, often very intensely coloured. All the martagons enjoy sunshine, a deep holding loam, and they need early planting. Bulbs planted later than September are handicapped in their first year of growth, and suffer the tax of flower production without adequate root formation. Other martagons of easy culture are L. monadelphum, a lovely soft yellow bell-flowered lily, surpassed, however, in garden value by its form colchicum. This form is very adaptive, and where the shade of a slight growing tree can be provided it will attain giant proportions, yielding twenty or more flowers on six-foot spikes. Its flowers vary in tint from straw yellow to palest orange, and are dotted low down in the tube. It inhabits mountain defiles in the Caucasus, and enjoys pure loam untouched by manure of any description.

The Greek or scarlet martagons (L. chalcedonicum) are exceedingly popular, and fairly long-lived once established; they have the characteristic turn-cap flowers, thick petalled, and very lasting, they enjoy open sunshine, and the pure loam recommended for monadelphum. A year's wait is, however, entailed before the plants flower freely, but subsequent years show increased vigour, until tall, well-leaved stems, five feet high, with two or three verticils of flowers surmounting them, annually develop for generations. I have before me as I write a colony of L. chalcedonicum, veritably a thicket of stout stems, quite thirty years old: their shapely flowers always attract, and cut stems last three weeks in water if frequently shortened and refreshed. Vars. Heldreichi and maculatum, although distinct, do show the vigour of the type, and I have not yet seen really established clumps of either form. Carniolicum, with light scarlet flowers, and the scarlet pompone, L. pomponium, both from Eastern Europe, are other attractive martagons, the latter being very noteworthy as a good thriving species of high merit. It may be effectively described as a short-stemmed, multileaved, lax chalcedonicum, that dislikes disturbance exceedingly. Pyrenaicum, often called a yellow martagon, is not a general favourite. Its flowers are greenish-yellow, suggestive in this respect of the common Pyrenean fritillary, and in another of being so heavily scented that one prefers to be "up wind" on a hot day. It is a common inhabitant of Irish gardens, and its pungent odour is noticeable even in the bulbs. The best yellow martagon is the Japanese L. Hansoni, a sturdy grower, with leafage aggregated into verticils, and heavy clusters of light orange-burnished flowers in mid July. It grows readily, but needs shelter from easterly winds, and from strong sunshine, the former crippling the too precocious growths, the latter bleaching the flowers to a dull grey.

Other Lilies.

The American martagons give us some magnificent garden plants that are all too little used in modern gardening. They need a moist soil—every one of them, and if this can be provided one may recommend all the Panther Lilies (L. pardalinum), L. parvum, and L. Roezli for association with border plants, and such fairy lilies as canadense and Grayi for the marsh and bog, with L. superbum as the nearest approach to an aquatic the lilies can afford.

A few lilies thrive well in ordinary positions, and under crude conditions of culture, provided the soil is free, light, and moderately rich. One cannot recommend them for new town gardens, with builders' rubble and excavata as rooting material, but in old-time gardens, mellowed by time and tillage, one can grow L. Marham, a martagon of cloudy amber tint: Browni, a magnificent trumpet lily with ruddy-brown exterior: L. excelsum (testaceum), nankeen yellow: Turn-cap, flowers of chalcedonicum form, and of surpassing beauty: Henryi, the newest of the speciosum section, but infinitely better developed under glass than in the open; all the Continental forms of speciosum, which precede the Japanese forms by three weeks in their season of flowering, hence are more recommendable for outdoor culture: and all the forms of tigrinum, of which Fortunei is one of the best, will grow and thrive almost anywhere, provided the soil holds good. Every lily with masses of roots issuing from the base of the stem can be helped materially by mulching with fresh soil or old manure in the summer season. The lilies whose roots issue from the base of the bulb can only be helped at the start by planting them in late summer, and in deep, well-tilled soil, that would grow a cabbage well.

Lilies I cannot grow, and never could grow, other than as annuals, or, at best, biennials, are the forms of auratum, Batemannæ, concolor, many forms of elegans, Humboldti Washingtonianum, and its forms, Leichtlini, japonicum (Kræmeri), Walkeri, rubellum, and sundry American species not noted in the text. In the matter of the cultivation of these I am still a willing learner, but of isolated, short-lived successes, I believe there are several such, not of instances that enable me to describe them as "good garden lilies that ordinary men can grow."

George B. Mallett.

SOME NEWER NARCISSI.

The object of these notes is to call attention to some of the very best of recently introduced daffodils, beginning with the scarcer ones, the prices of which will be prohibitive to the generality of buyers, and ending with some which, although moderate in price, are yet very beautiful and worthy of a place in any garden. To take the trumpet section first:—

White Trumpets.

Ailsa.—A peerless flower, pure white, with the growth and carriage of Empress. Offered at £15.

Florence Pearson.—A giant among the whites, figured in the Gardeners' Magazine July 18, 1908. If it were a shade whiter I should place this variety at the head of the list, but, unfortunately, the trumpet is not white until the flower has been cut for a few days, in fact it is just about the same as one of its parents, Mme de Graaff, but for size and form of bloom, and for tremendous vigour of growth there is nothing to beat it. £6 6s.

NARCISSUS SNOWDROP.

Mrs. R. Sydenham.—A seedling from Mme. de Graaff. A beautifully refined flower, with long white trumpet, beautifully recurved at the mouth. £9 9s.

Pearl of Kent.—A real white trumpet daffodil, opening white on the bed. Segments very broad and overlapping, trumpet long and elegantly recurved at the edge. The plant is of extreme vigour, making foliage as large as Emperor, and a bulb measuring up to eight and a-half inches round. Personally I consider this the finest of the white daffodils. Offered at £15 15s.

Peter Barr.—A very fine variety, pure white, of large size and good proportions. The segments are prettily twisted, like the screw of a steamer, which gives the flower a distinct appearance. Plant of robust habit, with broad and ample foliage. Originally offered at £50 per bulb, now to be had for £12 12s.

White Knight.—A very fine white daffodil, perianth snow white, firm, and of good substance. Trumpet pure white, long, and shapely; a finely finished flower. £20.

There are other lovely whites, notably some raised by Mr. Ernest Crossfield, such as Countess of Stamford, and others, but they are not yet to be purchased, no not with gold from Ophir!

Whites at a moderate price I would recommend are Mrs. Betteridge, 12s. 6d. each. Alice Knights, 10s. each. Mme de Graaff, about 8s. per dozen. This latter will still be a standard variety when many of the more expensive ones have been dropped out of cultivation. It has a fine constitution, increases with great rapidity and almost every little offset bears a bloom.

Yellow Trumpets.

One of the very finest of these is C. H. Curtis, a very large flower, perianth segments deep primrose, broad and smooth; trumpet golden yellow, well open at mouth; a flower of model form. £15 15s.

King Alfred.—Quite the finest of the deep yellow daffodils, exquisite in form and colour, and of great lasting quality. Where soil and situation suit it King Alfred grows very vigorously, but, unfortunately, he is particular in this respect, and where his lodgings do not suit him he refuses to pay for them, for instead of giving fine blooms and good increase, he produces but poor little flowers, and the bulbs get smaller and smaller year by year. Now offered at about 21s. each.

Hengist.—A gigantic flower on the lines of Emperor, but nearly twice the size. A perfectly smooth, well-balanced flower, without a trace of coarseness. £8. 8s.

Lord Roberts.—A much improved Emperor, larger in size and having smoother perianth. A great exhibition flower and useful for the hybridist. 21s. each.

Rising Sun.—A remarkably fine, bright yellow daffodil. The bloom is of the Tenby type, but is of large size. It is of perfect shape and brilliant colouring, blooms early and lasts remarkably well, added to which it is a strong, healthy grower. This will no doubt make its mark in the near future. £10.

Alert is a nice firm, well-formed flower. Raised from Obvallaris it retains the shape of the parent, but is larger, has a longer stalk, and much broader and more vigorous foliage, the colour, too, is distinct, the perianth being lighter than the trumpet. Very early and lasts a long time. 7s. 6d. each.

Mervyn is another of the Tenby type, a fine, bold, handsome flower of uniform soft yellow, raised from Emperor and Obvallaris. It opens a few days before Emperor and is of equally good growth and constitution. Offered at 5s. each.

Leedsi Section.

I will take the Giant Leedsis next; indeed, according to the new classification, they are made into a sub-section of the trumpet daffodils, being classed as "Short trumpets." Perhaps the finest of these as yet in commerce is—

Lord Kitchener, a real giant, having a perianth quite four inches across, and a cup about one and a-half inch. I am only speaking from memory, but do not think these measurements are far wrong. The segments are of great width and very flat and firm, the cup is wide and deep, pale yellow. Long stalk and very vigorous habit. £15 15s.

Hon. Mrs. J. L. Fremcklin is quite as perfect in shape, though perhaps a trifle smaller. The segments are as stiff as cardboard, and the flower has wonderful lasting quality. Perianth pure white, the cup, which is very long, is a pale clear yellow. Splendid habit and constitution, rather late. £10 10s.

Lowdham Beauty is another of this class of giant Leedsis, the result of a cross between Minnie Hume and Mme. de Graaff. It has more rounded segments than the two preceding varieties, is quite distinct, and a truly magnificent flower. The cup passes to ivory white with age. The plant is remarkably free, and has very long, broad foliage. £8 8s. each.

Marguerite Durand.—A flower which does not possess quite the size of the two just described, but is very distinct, being the only Leedsi I know of which has a distinctly primrose tint in the perianth. This colouring does not appear when the bloom first opens, but comes after a day or two, and develops much more on the plant than if cut young and kept in water. 20s. each.

Priscilla.—I think this is the first of this class which has given us a distinct tint of apricot in the cup. The flower is of largest size, carried on a stalk twenty inches long. The segments are broad and stout, slightly pointed at the tips. Cup large and long, beautifully frilled at the brim, the apricot tint lasts until the flower is dead. It has a delicious scent. The plant is remarkably strong in growth. £5 5s.

White Queen is now so well known that it hardly needs description, it was the forerunner of this class, and is now to be seen in nearly every winning stand at the spring shows. 30s. each.

Waterwitch.—Of the newer Leedsis (apart from the giants) nothing is more beautiful than this variety. Some people do not admire it because of its drooping habit, but that is one of its chief charms to my eye. The whole flower is a lovely glistening white. The plant is a very good doer and is remarkably free flowering. It has now reached the very reasonable price of 5s. per doz.

White Lady is another good Leedsi, having a large flat upstanding flower. Perianth white, cup shallow, and pale lemon yellow, very long stalk and abundant foliage. Increases at a great rate and flowers profusely. Late 15s. doz.

Johnstoni.

I have now to refer to that most dainty and fascinating section known as Johnstoni, artificial productions resembling the wild hybrid, known as Johnstoni Queen of Spain. These are all the outcome of crossing our garden narcissi with the beautiful litle fuchsia-like Triandrus albus, a wild Spanish species. One of the first to be exhibited was Snowdrop, see illustration herewith, and one of the best is unquestionably Bennett Poë. It is a thousand pities that this class of daffodil has a very tender constitution, and with most growers they soon die out. Miss Willmott is quite the most successful grower of them that I am acquainted with. One of my friends tells me that they like leaf-mould and partial shade. J. Duncan Pearson.

Lowdham.

(To be continued.)

GOLD OF THE GARDEN.

As summer advances and merges into autumn our gardens take on a golden splendour due to this being the predominant hue of its blossoms. There are, of course, other colours freely presented, the red of roses, for example, the cool lavender-blue of Michaelmas daisies that begin long before their name season; the white, pink, mauve, and carmine of phloxes, yet the majority of blooms are gold ones among the herbaceous plants. It seems possible, as an ancient writer poetically suggests, that "the sunshine has stored itself up in buds that are, perforce, obliged to repeat again its aureous magnificence."

Reckon the sunflower as a garden feature of August and September, and see if it does not deserve to be more honoured. Because sunflower seed is cheap, and the perennials increase as rapidly as weeds, the flower has become regarded as fit for villa and cottage pleasure grounds only: the truth is that a well-planted bed of annual sunflowers will make one of the grandest ornaments possible upon a noble velvet lawn, while collections of the best evergreen shrubs are shown off to perfection by groups among them of the perennial helianthuses. The grace of Helianthus Maximilianus is especially valuable; in this variety we have the clear pale yellow shade that is, in an artist's eye, an improvement upon orange-yellow, because offering greeny shadow tints among the petals, and the shape, all twisted, cut into narrow segments, curling marvellously, suggests the much-vaunted elegance of the single cactus dahlia.

For depth of colour nothing can surpass the effect of Helianthus multiflorus plenus, a better double than the variety Soleil d'Or, but blooming later in most localities. The semi-double Helianthus Miss Mellish ought to attain a height of seven feet when well cultivated, massed it should resemble a thicket of stem, leaf, and flower. Helianthus hirsutus is an orange sunflower. In addition to these we see the annual kinds, varying in height from a few inches to ten feet, willing to make the landscape as golden as though untold riches were spread out fresh from the mint.

Like, yet not sunflowers, are the heliopsises, four to five feet high, hardy anywhere, prolific in blossom; the four-feet H. scabra Pitcheriana is so deep an orange as to be almost vermilion, and is a true August bloomer; best of all, probably, is H. compacta floribunda, which is content to be a yard high, begins in June, and continues until frost, and gives hundreds of large deep yellow blooms.

Heleniums seem to be anxious to claim red as one of their colours, for H. autumnale cupreum has caught and imprisoned actual crimson with its shining gold, and the ground of H. autumnale Kelwayi is marked handsomely with red; H. a. Hoopesi, one of the shortest, is orange; H. a. striatum is streaked with brownish-crimson; still there are many pure yellow Helen flowers, such as Bolanderi, grandicephalum, Bigelovi, autumnale, and superbum.

The gaillardia resembles the deep gold, orange, and flaming reds of the setting rather than the midday sun; indeed, a mass of gaillardias of ordinary type, planted close to a background of gorse and broom, looks brown seen from a slight distance; exquisite clear yellow varieties are plentiful, however, of which Goldfish, Khartoum, Edouard de La Rue, Topaz, Vivian Grey, and the quainty quilled Somerset may be extra recommended.

Coreopsis grandiflora is superior to any gaillardia in the opinion of many flower connoisseurs, for its thin-stemmed elegance and upright habit of growth, as well as its fringed shape, and brightest of almost transparent yellows. The giant, five-feet high Coreopsis trichosperma is a stranger to many gardens that it might grandly embellish, while, though the blossoms of C. lanceolata are smaller and paler than those of grandiflora, its lemon tint is of rare loveliness.

Now, too, are the golden rods in full beauty, but only where they are given rich, damp soil will they show what prodigies of blossom they can be, or how easily they can surpass their advertised heights: Solidago gigantea and Solidago procera variegata, planted in sunny bogland, beside water, will reach seven or eight feet, and Solidago altissima will tower a foot more above them. How few are the gardens in which space is given to a collection of solidagos, yet there are a dozen or more of great merit; the dwarfs of the family, below three-quarters of a yard, S. vigaurea, and S. v. compacta, are among the best perennials for clothing banks.

Rudbeckias are a glory of the four last months of autumn; tree lupins and œnotheras keep them company; so do the robust telekias that thrive in almost any soil, with the bright yellow Achilleas eupatorium and augustifolia. Before these giants there may grow innumerable yellow flowers of worth, including the All-heal, St. John's wort, or hypericum, and the humble, but magnificently-hued calendulas, those flowers that were formerly designated "golds." M. H.

Campanula isophylla alba.—Where plants of a trailing or drooping habit are required there is nothing to equal this. Few things are so easily managed, and few, indeed, are so well adapted to such a variety of circumstances. Suspended in the windows of the cottage, as a pot plant, it is excellent, and the same may be said of it for the rockery, for window boxes, and for any and every position where trailing plants may be employed with advantage. Singularly enough, it thrives amazingly in either sunny or shady positions, though in the latter the blossoms are rather longer lived. I have lately seen some splendid masses of this plant in cottagers' windows, forming perfect sheets of bloom, and, to my knowledge, the same plants have been in full flower for the past six weeks. Is it not rather surprising that plants capable of making such a display should only be seen here and there? This campanula has no equal among trailing subjects, and deserves extensive cultivation.—T. B. Field.

MONTBRETIAS.

In the wave of enthusiasm that has swept over the garden-loving public of recent years in connection with hardy plants many have been the triumphs of the hybridist, and both numerous and great the improvements achieved. In no class of plants, however, has there been more remarkable advances made than in montbretias.

When we contemplate the "then" of Montbretia crocosmæflora and Pottsi, with their frequently half-opened flowers and often indifferent colouring, and contrast it with the "now" of the glorious introductions for which we are principally indebted to M. Lemoine, and, more especially to our own compatriot, Mr. George Davison, we are inclined to speculate as to where lies the limit of this progress, especially when we consider to what point a mere decade has brought us.

There is just at present with me a peculiar sense of appreciation of the unique beauty and great utility of the successes so far achieved. Generally speaking, the herbaceous borders are losing much of their early summer glory. The delphiniums are gone, the earlier phloxes have passed their best (in the south at least), irises, paeonies, poppies and eremuri are no more; perennial asters are yet in the bud state, and the montbretias come in with their yellow, orange, and crimson glow to fill the gap.

Messidor is one of the earliest, and has tall branching spikes of beautiful pale yellow flowers, changing almost to white towards the centre, and is now shedding its pristine glory, but is still beautiful. I know of no plant that furnishes more elegant sprays of flowers for table decoration than this.

Germania is the nearest approach to an antithesis in colour to Messidor yet obtained in montbretias; the flowers are rich orange, almost crimson, and widely expanded. The plant is tall, and will remain a favourite whatever fine forms the future may have in store for us.

Then we have George Davison, and closely following it is Ernest Davison, which were among the first of Mr. Davison's successes. The colouring of the first-named is perfectly lovely, and may be described as yellow with a suggestion of orange suffusion. The flowers of the second are large and flat, often attaining three inches in diameter, and the colour is deep orange with a tinge of carmine on the inner petals, and shading of crimson on the outer.

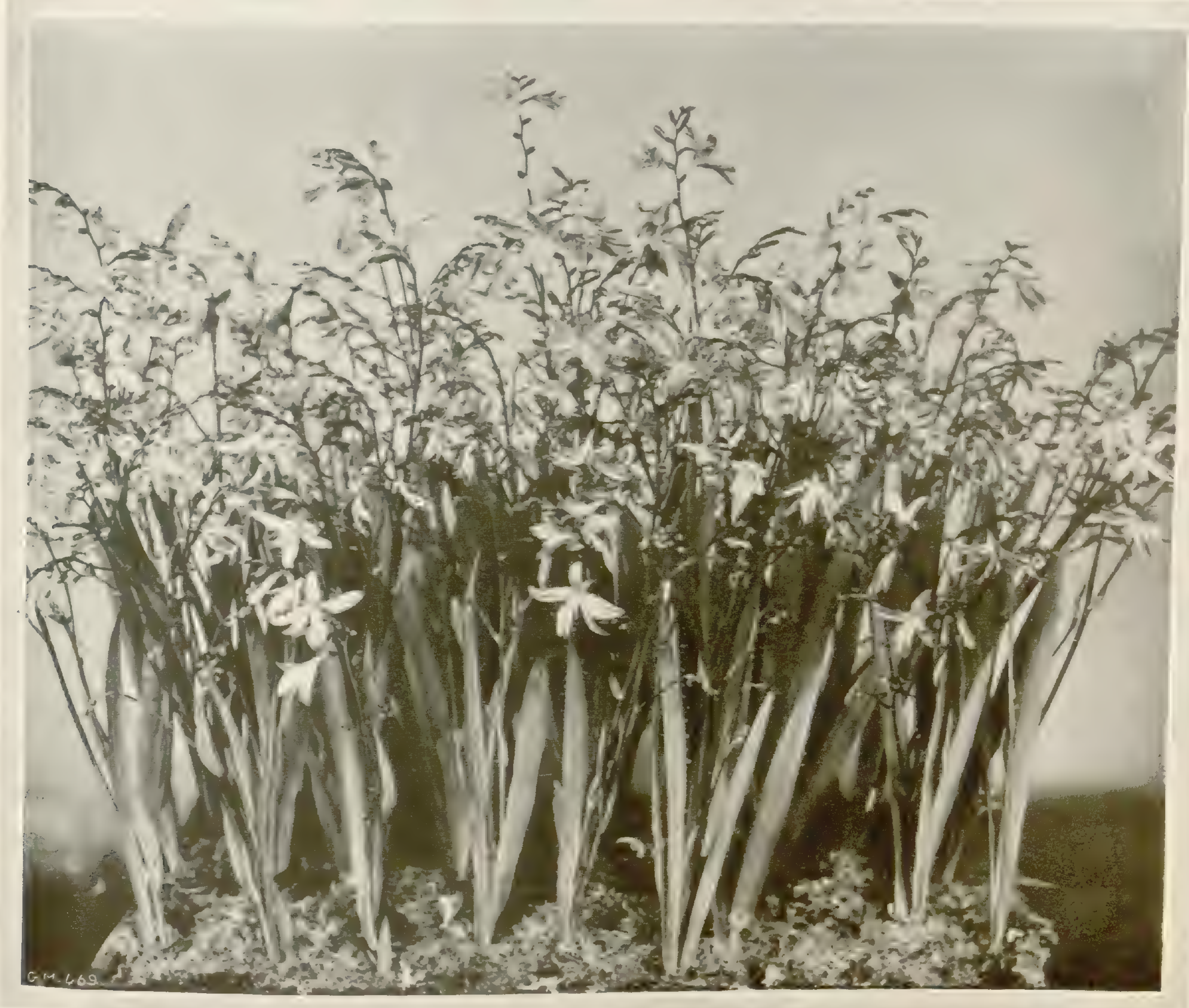
Lord Nelson blooms about the same time as George Davison, and is unique as regards colour. It is the nearest approach to crimson in montbretias we have; indeed, the exterior is crimson, but the petals internally have a beautiful orange glow that is intensified by the pronounced yellow centre. This variety often attains a height of three and a-half feet and over, and the flower stems are very dark purple.

Lady Hamilton, the companion of Lord Nelson in height, is distinctly different in colour, and, I am convinced, has "come to stay." Indeed, there is little of admiration and praise that can be given to the other varieties that cannot be given to this. The flower stems are studded with an abundance of yellow flowers.

There is now no occasion to speak in detail of Westwick, Lutetia, Etoile de Feu, Hereward, and King Edmund; all are good and serviceable varieties, and will hold their places for many years to come. But it may with advantage be mentioned that Prometheus is, in the matter of size and richness of colouring, unsurpassed. I have seen flowers that measured four and a-half inches in diameter, perfect in form and richness of colour.

One other variety, and that known as yet only to those who devote attention to the most recent of novelties, must be mentioned. This is known as Norvic. It is one of Mr. Davison's introductions, and is exceedingly dwarf, the height being about eighteen inches; very late flowering, the stems freely branched, and, what is unique, nearly all the flowers expand at once. These latter are very large, deep yellow, suffused externally with crimson towards the outer edges of the petals.

D. G.



NEW MONTBRETIA NORVIC.

Exhibited by Mr. G. Davison, at R.H.S. Meeting on the 1st inst., when it received an A.M. The plant is dwarf and free-blooming, and the flowers are rich orange and yellow.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

CYPRIPEDIUMS.—There can be no question as to the popularity of the autumn and winter flowering section of cypripediums. It was long before they became popular or numerous that I first began to draw attention to their claim to more extensive cultivation in the Orchid and other columns of the Gardeners' Magazine. I still hold the opinion that they might be termed everybody's orchids. I feel that the suggestions made in the past as to their merits are now becoming more than ever realised, and nothing can illustrate the fact more plainly than the extensive exhibitions that are made of the cypripediums in London and Manchester during the whole of the autumn and winter months. The orchids are so tractable under cultivation, that the humble amateur may grow them equally as successfully as the most expert orchid grower. They are also distinctly suitable subjects for town culture and under other unfavourable atmospheric conditions, which in winter are so detrimental to plant life in general, and there can be no doubt their suitability for fog and smoke-laden districts has led to their remarkable popularity. The durability of the flowers and their usefulness for indoor decorations being appreciated in more favoured districts, and they are also now extensively grown for the cut flower trade.

In private gardens they are worthy of every consideration, as they commence flowering with such species as C. Fairieanum and C. Charlesworthi early in September. These are followed in October by C. Spicerianum, and some of the hybrids of C. Fairieanum and C. Spicerianum, while some of the early-flowering varieties of the variable C. insigne open towards the end of the month. Through the months of November and December the greater number of the species and hybrids are in bloom, and where grown in quantities they make a fine display, lasting in perfection for many weeks. Many of the plants will be now showing their flower scapes, and they must have every encouragement that will assist them to develop and expand their flowers. It is a very good plan to fix a stick strong enough to secure the flower scapes as soon as they have advanced a few inches in height.

The plants should only now be sufficiently shaded to avoid actual scorching of the foliage. A great deal depends on the treatment now as to the quality and the development of their best coloured tints when the flowers have expanded. Care must also be taken to see that with more light the plants do not remain for any length of time in a dry condition at the roots. I am frequently asked what manure we use for orchids. I find that a good supply of rain water is all that is required, and no artificial feeding of any kind is used for our plants. I do not suppose that a weak liquid made from cow manure would do any harm in cases where the plants have become root bound, but as I am convinced there is no necessity for its use where plants are properly attended to, I have no grounds for advocating the use of manures of any kind.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

ALOCASIAS.—Plants that have completed their season's growth should be gradually brought to a period of rest by a reduction of water and temperature. With the exception of A. Sanderi, which winters best if kept steadily growing, most of the varieties are best when kept thoroughly dry throughout the winter months, and in a structure in which a temperature of about 60 deg. is maintained. As soon as the foliage has died away, but little further attention will be required, with the exception of pot room, until the tubers are again ready for starting into growth.

ANTHURIUMS.—The varieties grown for the beauty of their spathes are now finishing flowering for the season, and the plants should be placed in a position where they will be exposed to the sun. They should be kept somewhat drier at the roots, and they may be safely wintered in a house having a temperature of 55 deg. They ought to be examined occasionally with a view to watering those becoming dry.

COLEUS.—A further supply of these ought to be raised from cuttings, as young plants stand the winter better than the older specimens. They also form useful stock for early spring decoration, and also prove serviceable for producing an early supply of spring cuttings.

EUCHARIS.—Plants of E. amazonica that are grown for blooming in autumn and winter will now be producing their flower spikes, and an occasional watering with clear soot water will be found beneficial. Careful observation must be kept upon the young flower spikes, or beetles, crickets, or such like pests will cause much damage. The foliage may be sponged with insecticide as time permits.

BEGONIA GLOIRE DE LORRAINE.—Should it be desired to have the earliest plants in bloom at the latter end of October or early in November, the pinching-out of the flower buds must be discontinued. Carefully loop all the long shoots to the centre stake, and apply regularly at intervals of about ten days some approved stimulant, for the roots are most active at this stage. As they begin to develop their flowers, reduce the temperature to about 55 deg., and keep the atmosphere of the house somewhat drier.

GENERAL REMARKS.—As the cold weather comes upon us the temperature of the stove should be gradually lowered in order to afford its occupants a short season of rest. All shading may now be removed, with few exceptions, as the sun greatly assists most stove plants in ripening their wood. Careful attention must also be given to the eradication of insect pests, by fumigating with a nicotine preparation or sponging with insecticide.—John Donoghue, Bardon Hill Gardens, Leeds.

FRUITS UNDER GLASS.

FIGS.—Those fruiting in a late house or cool orchard house should have plenty of clear water. If damp weather prevails the pipes should be warmed at night and a little air admitted by the top and bottom ventilators. Mice are very troublesome with ripe figs, and should be trapped, or they soon spoil considerable numbers of fruits. Figs at this time of the year are generally large, and should be looked to every day, and be carefully handled when gathered. As soon as the trees in the midseason house have finished fruiting, apply the syringe twice a day, and if the border is dry give a good soaking of water. Liquid manure may be given if the crop has been heavy and the wood is weak, but not otherwise. If the shoots are too thick, thin a few out, and leave the house open night and day. Pot trees that failed to give crop when being forced, generally give a few good fruits in the autumn. If the trees are strong and the fruit required they may be allowed to ripen. If not, they are best removed. Give all trees that are plunged outside plenty of liquid manure, providing the water can pass away from the pots. If they are in a windy or exposed position they should be secured with stakes.

EARLY VINES.—These in pots intended for forcing should have all laterals cut off, as this will assist them to plump up the back buds. The same with early vines in the house; these should be cut over for the same purpose. Keep the syringe in use, especially inside. If the borders are at all sour on the top from frequent waterings, a little fresh lime should be dusted over the surface, and be watered in.

MIDSEASON VINERIES just cleared of fruit should be well syringed down with clear water or some safe insecticide. To clear the house of any bunches that are still on the vines cut them and suspend them in the fruit room with the end of the laterals in bottles of water. They will keep in good condition several weeks, but it is necessary to look over the bunches occasionally for bad berries.

PEACHES AND NECTARINES.—Continue to give attention to late fruiting varieties every day. Walburton Late Admirable and Sea Eagle are good late peaches, but not to be compared in flavour with those that are gathered outside, being stringy and wanting in flavour.

LATE VINES.—These should have every encouragement to finish their crop, both in colour and size. If the laterals have been allowed to grow, and are becoming crowded, take a few out, not too many at once to give a check to them, or to start them cracking, which sometimes happens with Lady Downes. Tie the leaves back on the Gros Colmar to give all light and sun possible on the bunches, as these often fail to colour, and are generally planted in the darkest corner of the house. When properly finished, this is one of the best keeping and flavoured grapes grown. Maintain a rather dry atmosphere when the weather is dull by having a good heat in the pipes at night with ventilation at the top and bottom, running some good wasp netting along to keep out vermin. — A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

CABBAGE.—Plants raised from seeds that were sown during the third week of July and the first week in August should now be ready for planting in their permanent quarters. The site which they are to be grown on should have been prepared some time ago by digging the ground deep and putting in a liberal supply of manure. Lift the plants carefully from the seed beds and plant them with a dibber, making sure that each plant rests on the bottom and is made firm. Some growers prefer to dip the roots in a puddle made of lime and soot, which is a most excellent thing to do where clubbing is prevalent. Those which have been pricked out should be lifted and planted with the trowel, so that each may have a good ball of soil about them. Cabbages should have every attention, for they have to pass through the trying time of winter, and they are important early in the spring. Ellam's Early and Early Heartwell are both suitable for the first supply.

PARSLEY.—Where there are spare frames it is a good practice to prick out parsley into them, for this useful herb is always in demand through the winter. Small plants from the July sowing are the best.

WINTER LETTUCES.—Still continue to plant out good batches of these for a winter supply. Plant them in good soil, so that they may have an abundance of roots when they are removed to cold frames for the winter. It is not too late to sow some more seed, but quick-hearting varieties must be chosen, such as Tom Thumb or Commodore Nutt. If these two are lifted and planted on the fruit borders in the glasshouses before severe weather comes, they will give nice little hearts at Christmas.

MINT.—Cuttings of this herb may still be put in, either in boxes or pans; and clean, healthy growths should be selected. They will quickly form roots if dibbled into light open soil, and placed in the shade for a week or two.

TOMATOES. — Plants that are growing against walls and are now ripening their fruits should have nets placed over them, for the birds will soon destroy them if they are not protected. Where there are plenty of spare lights some might be put over the most backward plants, which will assist them to ripen their fruit.

WINTER VEGETABLES.—Keep the hoe constantly at work amongst these crops, both for the purpose of destroying the weeds and maintaining the surface soil in a loose state. This will encourage good growth, and the produce will be more abundant and of better quality.—T. W. Birkinshaw, Hatley Park Gardens, Sandy, Beds.

PRELIMINARY ANNOUNCEMENT.

THE BIRMINGHAM GREAT CHRYSANTHEMUM, FRUIT, and FLORAL EXHIBITION,
Will be held in
BINGLEY HALL, November 10th, 11th, and 12th.
Schedules and all particulars may be obtained from the Secretary,
ALFRED NOAKES,
148, Bristol Street, Birmingham.

NATIONAL CHRYSANTHEMUM SOCIETY.
EARLY AUTUMN EXHIBITION.
October 7th and 8th, 1908.
[illegible] of prizes and all particulars as to members may be obtained post free on application to [illegible] Secretary, RICHARD A. WITTY, St. James's Villa, Swains Lane, Highgate, London, N.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Ninepence per line, the minimum charge being Five Shillings. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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National Dahlia Society.

SEPTEMBER 3.

The annual exhibition of this society was held at the Royal Horticultural Hall, Vincent Square, and, although it could not be classed as an average show, it was very much better than was expected after the violent gales of the previous week. The cactus section evidenced considerable advance, while the other sections keep at a good level. The competition in the amateurs' classes was very keen.

NURSERYMEN'S CLASSES.

The first of the classes in this section was for forty-eight blooms, distinct, and there were but three competitors. Mr. J. Walker, [illegible], won first prize with good blooms of T. W. Girdlestone (self), H. Clarke, Blush Gem, Colonist, Mrs. W. Slack, R. Dean, J. T. West, Eclipse, A. M. Burnie, Golden [illegible], Victor, Mrs. Every, S. Mortimer, Mrs. J. Greaves, G. Rawlings, Golden Gem, Lord Salisbury, Shirley Hibberd, Ethel Britton, Purple Prince, Daniel Cornish, John Walker, Dr. Keynes, Majestic, Wm. Keith, Marjorie, W. Rawlings, Gracchus, H. Turner, Dante, Rothesay, Duke of Fife, Duchess of York, Mabel Stanton, J. Nicholson, John Bennett, Arthur Ocock, Florence Tranter, Chieftain, T. Pendered, R. T. Rawlings, Dandy, T. J. Saltmarsh, Rev. J. Gooday, H. Keith, J. C. Vaughan, Arthur Rawlings, and Harbinger; the second prize was awarded to Mr. W. Treseder, Cardiff; Mr. Mortimer, Farnham, third. In the smaller class for twenty-four blooms, distinct, Mr. Charles Turner, Slough, was placed first with medium-sized, though well-coloured flowers. Mr. M. V. Seale, Sevenoaks, was placed second, having excellent examples of well-known varieties.

In the class for eighteen fancies, distinct, there were only two exhibitors, Mr. John Walker leading with excellent blooms of T. W. Girdlestone, W. Sheldon, Emin Pasha, Mrs. Mortimer, Goldsmith, S. Mortimer, Rev. J. B. M. Camm, Dandy, Chorister, Miss [illegible], Comedian, Lottie Eckford, Plu-[illegible], Mrs. Saunders, Prince Henry, Duchess of Albany, Edmund Boston, and Matthew Campbell. Mr. W. Treseder was a good second.

For twelve blooms, distinct, Mr. S. Mortimer won first prize with some fine flowers. Messrs. Keynes, Williams, and Co. were second, and Mr. C. Turner third.

For a dozen blooms, show and fancy inter-[illegible]; Messrs. J. Cheal and Sons, Crawley, [illegible] with a very strong stand, the varieties being T. W. Girdlestone, Gracchus, George Gordon, Emin Pasha, Dr. Keynes, [illegible], Florence Tranter, R. T. Rawlings, The Reverend, Maud Fellowes, Mrs. Saunders, and Dorothy. Messrs. W. Pemberton and Son, Bloxwich, Walsall, followed with [illegible], but not such well-finished flowers.

The keenest contest was in the class for [illegible] bunches of cactus flowers, six blooms [illegible]. Here Messrs. J. Stredwick and Son, St. Leonards, obtained first place, and won the challenge cup outright, having obtained premier honours in this class in the two previous years. The blooms were finely developed, and the varieties represented were Dorando, Wm. Marshall, Dr. G. G. Gray, Diadem, Snowstorm, Rev. A. Bridge, C. E. Wilkins, J. B. Riding, Satisfaction, Rev. A. Hall, Indomitable, Harold Peerman, Ivernia, Saxonia, Herald, Mrs. A. Dyer, Rev. T. W. Jamieson, and Evening Star. Messrs. J. Burrell and Co., Cambridge, were placed second with rather younger flowers. The best bunches were those of Crescent, Mercia, Artemis, Una, Fairy, Echo, and Brigadier. Messrs. J. Cheal and Sons, Crawley, were third with fine examples. For twelve bunches of six blooms each, Mr. S. Mortimer won the first prize with excellent blooms, and Mr. M. V. Seale was second.

The class for forty-eight blooms of cactus dahlias, distinct, must have taxed the exhibiters severely after the storm. Messrs. Burrell and Co. won well with a handsome collection, in which were noted Nelson, W. Marshall, J. B. Riding, Seraph, Una, C. E. Wilkins, Crescent, Fairy, Leda, Mrs. Baxter, Sunshine, Eveline, Laurania, Rev. A. Hall, Burletta, and Alicia. Messrs. Keynes, Williams, and Co. were winners of the second prize with fine specimens, and Messrs. Jas. Stredwick and Son were third.

There were four competitors in the class for twenty-four distinct blooms. Mr. M. V. Seale led off well with blooms of high quality of Clincher, F. McQuade, Countess of Kenmare, Imperial, Saturn, Ruby Grinstead, Edith Reynolds, Nelson, Ivernia, Rev. A. Bridge, and J. B. Riding. Mr. W. Treseder was a good second, and Messrs. W. Pemberton and Son were third.

The vase class for twelve varieties of six blooms each, with grasses, berries, and other appropriate foliage, did not present such an imposing display as usual. Mr. M. V. Seale secured the first prize with beautifully-arranged vases, but we have seen this competitor in better form. Messrs. J. Cheal and Son followed with good vases, and Mr. C. Turner was third.

Pompon varieties were well represented, and in the large class for twenty-four varieties ten blooms of each, Mr. C. Turner occupied the premier position. His flowers were all perfect, and not too large. The varieties were Corsair, Rodney, Blush Gem, Phyllis, Nerissa, Marietta, Portia, Edith Bryant, Cyril, Queen of Whites, Jessica, Clarence, Romulus, Adelaide, Tommy Keith, Donald, Bacchus, Zerlinda, Enid, Hesperus, Sybil, Adela, Lufra, and Thora. Messrs. J. Cheal and Sons were second with neat blooms; Mr. M. V. Seale was third. In the smaller class for twelve bunches Messrs. Burrell and Co., Cambridge, were first, and Mr. J. Walker second.

For twenty-four bunches of single varieties Messrs. Cheal and Sons were first with a beautiful selection, comprising well-timed blooms of Naomi Tighe, Mrs. Moreland, Leslie Seale, Miss Roberts, Vesuvius, Eclipse, Fuji San, Royal Sovereign, Victory, Darkness, Betty, Columbine, Elmira, Glencoe, Brilliant, Tommy, Kitty, Bertha, Snowdrop, Flambeau, Princess of Wales, Serita, Peggy, and Holena. Mr. M. V. Seale secured the second prize with good bunches.

In the class for twelve bunches, Mr. J. Walker was the only competitor.

AMATEURS' CLASSES.

The premier class was for twenty-four blooms, show and fancy varieties, and carried the five-guinea challenge cup. In this there was seven competitors, and Mr. Thos. Jones, Ruabon, won well, his blooms being deep and well finished. The varieties were Mrs. Ormond, John Hickling, Mrs. D. Saunders, Standard, Marjorie, Arthur Rawlings, Maud Fellowes, The Reverend, Goldfinch, Mrs. W. Treseder, Colonist, Chieftain, R. T. Rawlings, Mrs. Bartlett, George Rawlings, J. Walker, W. Garratt, Mrs. Langtry, Perfection, Victor, Mrs. McKenzie, Diadem, and Mrs. Gladstone. Mr. Sidney Cooper, The Hamlets, Chippenham, followed with a good stand. Mr. Thos. Hobbs, The Cedars, Downend, Bristol, third. The class for twelve show varieties contained eight competitors, and Mr. Thos. Haskins, Kingswood, near Bristol, won with large, well-coloured blooms.

For six blooms, distinct, Mr. E. Tanner, Staple Hill, Bristol, was the first prize winner.

For twelve fancy varieties, distinct, there were three entries, and Mr. A. P. Ironsides, 43, Park Lane, Chippenham, staged a beautiful collection for first prize. Messrs. Sidney Cooper and Thos. Haskins secured the other prizes in the order named.

The smaller class for six blooms appeared more popular, Mr. J. Cousins winning first from six competitors. Mr. Thos. Hobbs was second, and Mr. J. Haycocks, Gyfellin, near Wrexham, third.

The classes for cactus varieties were well filled, and the quality, generally speaking, was good. The silver challenge cup for six varieties of three blooms each evoked a capital competition, and Mr. W. E. Peters, Baldslow, Hastings, won the cup. Mr. J. Shoebridge, St. Margarets, East Grinstead, was a capital second, and the Rev. A. Bridge, The Rectory, Worth, Crawley, was third. For six varieties of three blooms each, Mr. W. Lockyer, gardener to the Rev. G. Twentyman, Greenhill Park, New Barnet, won first prize with excellent blooms; Mr. H. Jackson, Woburn Sands, was second; and Mr. E. Mawley, V.M.H., Rosebank, Berkhamstead, third.

The gold badge, presented by Messrs. Dobbie and Co., for twenty-four distinct blooms, was keenly contested, and Mr. J. Bryant, Salisbury, secured the award with some good flowers. Mr. A. H. Farmer, Walthamstow, was a really fine second.

For twelve blooms, distinct, there were twelve entries, and Mr. H. Brown, Luton, the Rev. A. Bridge, and Mr. H. Jackson were the prize-takers in the order of their names. For six blooms, Mr. H. L. Brousson, Thorndean, New Eltham, was placed first with a splendid board. Mr. M. W. Dance, School House, Andover, was second, and Mr. G. Davidson, Elm Lodge, Thornton Heath, third. There were four entries for twelve bunches of pompons, Mr. H. Brown leading off with neat little flowers. Mr. W. E. Pagram, Weybridge, came second, and Mr. Sidney Cooper third.

The Rev. A. Bridge led in the class for six single varieties of ten flowers each, making a very attractive stand. The Rev. S. S. Pearce, Woodstock, was a good second, and Mr. A. Brown was third.

In competition for the prizes for six varieties of six blooms each, arranged for effect with suitable hardy foliage, berries, or grasses, there were but two entries. The first prize was awarded to Mr. A. Brown, who used far too much foliage; and Mr. E. Mawley second, the latter having the most artistically arranged vases.

OPEN CLASSES.

For six varieties of pompon cactus of six blooms each there were five entries. Messrs. J. Burrell and Co. winning first prize with some pretty little specimens. They were Minima, Nairn, Tom Tit, Argus, and Lena. Mr. M. V. Seale was second; Messrs. Cheal and Sons third. In the class for six blooms of any one cactus variety, Messrs. Keynes, Williams, and Co. were placed first with fine blooms of Ruby Grinstead; Messrs. Burrell and Co. second with Midas; and Mr. W. Treseder third with Harbour Lights. A similar class for show and fancy varieties resulted in Messrs. Keynes, Williams, and Co. again securing first prize with Miss Ormond, Mr. S. Mortimer was second with Marjorie; and Mr W. Treseder third with Warrior.

DECORATIVE CLASSES.

The decorative classes did not appear to have been judged from a decorative point of view, and the result was not satisfactory. For the basket Mr. R. Edwards, Beechy Lees, Sevenoaks, won first prize with a nicely-arranged basket, lightly displayed. Mr. Thos. Jones followed with a mixture of colours, while Mr. J. Haycocks was third.

There were eight entries for the vase of twelve blooms. Here Mr. T. Jones was placed first, and Mr. E. Mawley, V.M.H., second; while Mr. G. Stevenson was third.

In the trade classes, as in the amateurs' section, the judging was generally regarded as unsatisfactory. The first prize for a shower bouquet was awarded to Mr. J. Walker, and Mr. M. V. Seale was placed second.

In the class for a basket, Mr. W. Treseder was placed first, and Mr. M. V. Seale second; and for a vase of pompon varieties Messrs W. C. Pagram, J. Emberson, and M. V. Seale were the prize-takers.

NON-COMPETITIVE COLLECTIONS.

Mr. J. T. West, Tower Hill, Brentwood, made a good representative display of cactus and pompon varieties, all arranged in sprays and backed with suitable foliage and grasses.

From Mr. J. E. Knight, Wolverhampton, came a nice display of cactus varieties, arranged in bamboo stands, while the front was occupied with the usual orthodox boxes.

Messrs. Dobbie and Co., Rothesay, staged a large collection, embracing all sections, and was arranged tastefully with ferns and other suitable foliage. Messrs. Hobbies, Lim., Dereham, were represented by an attractive display, consisting chiefly of pæony-flowered varieties.

From Messrs. H. Cannell and Sons, Swanley, came a fine bank of cactus, giant-flowered and singles. The same firm had also a good collection of cut cannas. Mr. J. Emberson, Grove Road Nursery, Walthamstow, contributed a collection of the cactus and pompon varieties. A large collection of finely-developed blooms of cactus and pæony-flowered varieties came from Messrs. T. S. Ware, Lim., Feltham, who also staged good varieties of singles and pompons.

MEDALS.

Gold Medal.—Messrs. Dobbie and Co.

Silver-Gilt Medal.—Mr. J. T. West.

Silver Medal.—Mr. J. Emberson, Messrs. Hobbies, Lim., Mr. J. E. Knight, Messrs. H. Cannell and Sons, Messrs. T. S. Ware, Lim.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE.

Present: E. A. Bowles, Esq., M.A., F.L.S. (in the chair); Messrs. C. T. Druery, E. M. Holmes, W. Cuthbertson, G. Gordon, W. Fawcett, H. T. Güssow, J. Douglas, G. S. Saunders, and F. J. Chittenden (secretary).

ALIENS IN GARDEN SOIL.—Mr. John Fraser, F.L.S., showed a specimen of the alien weed, Amoranthus retroflexus, a North American plant which had appeared in a garden at Kew, though no seeds or plants had been received from there and planted in the garden. He thought that the plant had possibly arisen from a seed introduced with merchandise either from North America or from the Continent, where also the plant has become a weed. He had noticed other instances of plants which had probably been introduced in a similar way, and had become weeds in gardens, viz., Datura stramonium, Euphorbia esula, and Sisyrinchium angustifolium, while Papaver somniferum, Œnothera biennis grandiflora, and Oxalis corniculata rubra, originally cultivated, had quite frequently become garden casuals, and certain British wild plants, e.g., Chenopodium rubrum, Epilobium roseum, E. hirsutum, Lychnis alba, and Silene cucubalus often behaved in a similar fashion.

RUBUS LACINIATUS.—Mr. Fraser also showed a specimen of a seedling form of Rubus laciniatus which he had collected on West End Common, Esher, where the seed had been deposited in all probability by a bird. The origin of this form appeared doubtful, but it seemed to differ only in the laciniated leaves (the sepals and petals also being cut) from Rubus villicaulis var. Selmeri.

ROSE CANKER.—Mr. H. T. Güssow showed specimens of a disease of roses which was very prevalent in Ireland, and which started in the form of reddish spots on the shoots, which soon died, the dead tissue contracting and cracking. A callus formed around the edges of the wound, and this was frequently damaged by frost, etc., until a large cankerous growth was produced. He attributed the beginning of the injury to the fungus Coniothyrium Fuckeli, Sacc., the conidial form of a Leptosphæria.

DOUBLE GENISTA TINCTORIA.—Mr. Bowles showed specimens of double flowers of Genista tinctoria from Canon Ellacombe's garden, and others having numbers of bracts below the inflorescence. This had apparently arisen from the presence of a small dipteros larva belonging to the Cecidiomyidæ, which Mr. Saunders reported as that of Aspondylia genistæ. This species is known to attack and form galls on the ends of the shoots of Genista germanica in exactly the same manner as in the shoots exhibited. Another species, A. ulicis, forms galls resembling flower buds on U. europæus. There appears to be no record of G. tinctoria being galled by a fly, but some of the galls in the present specimens contained no less than fifteen or twenty grubs feeding upon the leaves forming the gall, particularly at their base.

ABNORMAL ORCHID. — From Messrs. Hugh Low came an orchid, Rodriguezia crispa, showing an abnormal condition in the spike, the bracts were much longer than the flowers, and very closely grouped at the end of the inflorescence.

MUTATIONS IN SHIRLEY POPPIES.—Mr. Chittenden showed, on behalf of a correspondent, a number of dried flowers of the Shirley poppy, all of which had bracts just under the flower or where the flowers should be, some two, others three, four, five, or six bracts without flowers; while others produce bracts with semi-double or quite double flowers. Neither Mr. Wilks nor any member of the committee had seen bracteate flowers in this plant. It would be interesting to know what was the origin of the seed, and whether the phenomenon came true from seed.

FERN GROWING IN BOTTLE.—Mr. Druery exhibited in a pickle jar, hermetically sealed, with a glass and rubber stopper, wired on to prevent removal, a mass of vegetation consisting of a Hart's-tongue, two Lastreas, and a dense tangle of confervoid growth, the whole of which had arisen from a small piece of the base of a Hart's-tongue frond, bearing a minute bud, which had been placed in the jar fully four years ago, and the spores and animal eggs, etc., which had gained entrance with it at the time when it was sealed and secured. About an inch of clean-washed coarse silver sand was first introduced, and upon the damp surface the base and bud in question were simply dropped. The jar is about 8in. high and 3in. square, and from the commencement the growth has been healthy, the fronds of the Hart's-tongue fern reaching the stopper, while the confervoid growth is dense in the centre, and has spread half way up the sides. The two seedling Lastreas have remained small, but have produced new fronds this season, while several healthy green fronds of the Hart's-tongue spring from the centre from amid the debris of the old ones of the three previous years' growths. The question raised by this exhibit is, whence has the material for all this growth been derived? The originally enclosed air could only have contained a three-thousandth part of carbonic acid gas, i.e., a minute atom of carbon, altogether out of proportion to the debris of dead fronds, and the volume of cellular growth of the living ones which have been generated in the jar since its closure four years ago. If it be assumed that the glass is porous, and thus permits air circulation, and consequent fresh supplies of carbonic acid gas by the laws of gas diffusion, how is it that aqueous vapour has not also been transferred, and the quantity of water reduced during so long a period to nothing? Carbonic acid, too, is not the only food required, and the amount of assimilable salts contained in well-washed quartz sand, freed from all vegetable admixture by such washing, save perhaps confervæ or other spores, can hardly be regarded as adequate for such results, and for persistent growth, such as is shown. A small worm has also been noticed inside the jar. While expressing interest in the experiment, the members of the committee greatly doubted whether the bottle was really hermetically sealed.

Royal Caledonian Horticultural Society.

SEPTEMBER 9 and 10.

On September 9 the weather was not kindly disposed towards the executive of the Scottish Society, as rain fell more or less throughout the opening day of the great autumn show, held in the Waverley Market, Edinburgh. The big market was well filled with exhibits, and a high standard of excellence marked almost every section of the show. Special interest centred round the grape and other fruit classes, the vegetables and the cut flowers, but plants and groups were not of special merit, save those in the trade displays. Altogether this was one of the best shows the society has held.

GRAPES.

The championship grape class was again a great attraction, and there was a keen competition for the splendid silver trophy presented by Mr. W. H. Massie. First prize was won by Mr. A. Kirke, gardener to J. Thomson Paton, Esq., Norwood, Alloa, with a total of 57 points out of a possible 70. He had beautiful, shapely, and, on the whole, finely coloured bunches of Madresfield Court, Muscat of Alexandria, Gros Maroc, and Directeur Tisserand, two bunches of each. The berries of Madresfield Court were of wonderful size. We may mention that the judges did not err on the side of high pointing. Mr. J. H. Goodacre, Elvaston Castle, Derby, was second with 55 points out of a possible 74 points, and he had heavy bunches of Muscat of Alexandria and Muscat Hamburgh; Mr. J. Beisant, gardener to Lady Armitstead, Castle Huntley, third, his set containing a huge bunch of Seacliffe Black, a round-berried variety.

Mr. W. G. Pirie, gardener to C. W. Cowan, Esq., Dalhousie Castle, Bonnyrigg, won first place for four bunches of grapes with Alicante, Cooper's Black, Muscat of Alexandria, and Black Hamburgh, in good condition, gaining 27 out of a possible 35 points; Mr. J. Highgate, gardener to the Marquis of Tweeddale, K.T., Yester, second, with 26½ out of a possible 35 points; Mr. W. Galloway, Gosford, third, with 25 out of a possible 30 points. Mr. Galloway led for a pair of bunches of Muscat of Alexandria, with large-berried, well-finished clusters; Mr. H. E. Hughes, second, and Mr. J. Beisant third.

Mr. Millar, Cartside, Millikin Road, Paisley, scored for Black Hamburgh, followed by Mr. J. Macdonald, gardener to Mrs. Bremner, Streatham House, Morningside. Mr. Hughes had the best single bunch of Muscat of Alexandria; Mr. T. Ireland second. Mr. Millar was first for one bunch of Black Hamburgh, and Mr. F. Macrae, gardener to J. A. Clyde, Esq., K.C., Briglands, Kinross, second.

Mr. J. McNeil, gardener to Major Thorburn, Peebles, led for Alicante, and Mr. J. Highgate was second in a keen competition. Mr. Ireland had the best bunch of Gros Colmar, Mr. Hughes scored for Lady Downes, and Mr. J. H. Goodacre led for Madresfield Court. For one bunch of a white grape, Mr. M. Matheson, gardener to the Dowager Lady Kinross, Glasclure, North Berwick, scored with a very fine bunch of Buckland Sweetwater. A bunch of Appley Towers won first prize for Mr. J. McNiell, in the class for "the finest bloom."

CHOICE FRUIT.

In the class for a decorated table of dessert fruit, not more than sixteen dishes, arranged on a space 10ft. by 4ft. 6in., the Edinburgh Corporation provided substantial prizes. There were but two competitors, and Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, was the chief prizewinner with Thos. Rivers and Bellegarde peaches, spendid Marguerite Maillat and Souv. du Congres pears, Pineapple and Early Rivers nectarines, Ribston Pippin and Cox's Orange Pippin apples, Brown Turkey figs, two seedling melons, Kirke's plum, Black Hamburgh, Muscat of Alexandria, Madresfield Court, and Muscat Hamburgh grapes. The decorations consisted of Francoa ramosa.

montbretias and schizanthuses. Mr. D. Kidd, gardener to Lord Elphinstone, Carberry Towers, came second with good fruit, and a charming decoration of Sunrise roses and Gloriosa superba blooms.

Mr. J. Goodacre was the only exhibitor of a collection of twelve dishes of dessert fruit, and he was awarded the first prize; he had Muscat of Alexandria and Madresfield Court grapes, splendid Peasgood's Nonsuch and Emperor Alexander apples, Triomphe de Vienne and Dr. Jules Guyot pears, Bellegarde and Thos. Rivers peaches, Pineapple and Elruge nectarines, Countess melon, and Negro Largo figs. Mr. Goodacre led in the class for a collection of orchard house fruit, and here he had enormous Marguerite Marillat pears; Mr. G. Mackinlay second.

Plums were wonderfully well shown. Mr. Searle led for a dozen fruits with Oullin's Golden Gage; Mr. Mackinlay led for yellow plums with large Magnum Bonum; Mr. H. MacFadyen, gardener to F. Brüitmayer, Esq., [illegible]kfield Park, Sussex, scored for red plums with Pond's Seedling, and he was first for purple plums; Mr. Searle led for a collection of dessert plums with Kirke's, Jefferson, Early Transparent Gage, and Washington; Mr. J. H. Goodacre second, and Mr. W. Galloway, gardener to the Earl of Wemyss, Gosford, third. For culinary plums Mr. Searle led with Pond's Seedling, President, Goliath, and Victoria, with Mr. Mackinlay second, and Mr. Goodacre third. Mr. Thos. [illegible], gardener to Lady Chermside, Newstead Abbey, led for peaches with brilliant examples of Dymond, and Mr. B. Ness, gardener to the Earl of Stair, Oxenfoord Castle, Dalkeith, had the best apricots—Moor Park.

APPLES AND PEARS.

These were a fine feature. Mr. R. M. Whiting, Credenhill, Hereford, had the finest collection of twelve varieties of apples, showing heavy specimens all through; Mr. Caddick second, and Mr. MacFadyen third. A very good class was the one for a collection of twelve varieties of apples grown in Scotland, and here Mr. J. Duff, gardener to Colonel Gordon, Threave House, Castle Douglas, scored with good specimens of Peasgood's Nonsuch, The Queen, Hawthornden, Lord Grosvenor, Emperor Alexander, King of the Pippins, Gascoigne's Scarlet, Lord Suffield, Duchess of Oldenburgh, Lady Sudeley, King of Tompkin's County, and Ecklinville. Mr. M. Stewart, gardener to J. Neilson, Esq., [illegible], Castle Douglas, second, and Mr. D. Murray, gardener to the Marquis of Ailsa, Culzean Castle, Ayr, third.

Mr. Whiting was first and Mr. Lee second in the open class for six varieties, while Mr. [illegible] was first, Mr. J. Gibson second, and Mr. D. Murray third for orchard house trees, four dishes; the first prize set were excellent examples of Emperor Alexander, Gascoigne's Scarlet, Peasgood's Nonsuch, and James Grieve—all grandly coloured. Mr. Goodacre scored for a dish of dessert apples with Cox's Orange Pippin.

In the single dish classes the premier awards fell as follows:—Mr. R. M. Whiting, Credenhill, Hereford, for Allington Pippin; Mr. G. Mackinlay, Wrest Park Gardens, Bedford, for Blenheim Pippin; Mr. J. Lee, [illegible], Cheshire, for Chas. Ross (fine); Mr. J. Gibson, Welbeck Abbey, for Cox's Orange Pippin; Mr. Whiting for Coronation; Mr. G. Mackinlay for Gascoigne's Scarlet; Mr. Whiting for Irish Peach, beautifully coloured; Mr. A. Searle, gardener to the Marquis of Northampton, Castle Ashby, Northampton, for James Grieve, in very fine condition; Mr. E. W. Caddick, Caradoc, Ross, Hereford, for Lady Sudeley; Mr. Caddick, for Ribston Pippin; Mr. Caddick, for Worcester Pearmain.

Mr. J. Lee led for Alfriston, Mr. A. Brydon, Tweedbank, Innerleithen, for Bailie Nielson, a roundish, green apple; Mr. Lee, for Beauty of Kent, for Bismarck, and for Bramley's Seedling; Mr. R. Grindrod, gardener to Captain Clive, M.P., Whitfield, Hereford, for Cellini; Mr. Caddick for Cox's Pomona, very good; Mr. Whiting, for Duchess of Oldenburgh; Mr. Lee, for Ecklinville; Mr. Caddick, for Emperor Alexander; Mr. Mackinlay, for Golden Noble; Mr. Lee, for Golden Spire and Grenadier; Mr. W. Clanachan, gardener to J. S. Crawford, Esq., Thorpe Satchville Hall, Melton Mowbray, for Keswick Codlin; Mr. Caddick, for Lane's Prince Albert, Lord Derby, and Lord Grosvenor; Mr. Lee, for Lord Suffield; Mr. Caddick for Mère de Ménage; Mr. J. Gibson, for Newton Wonder; Mr. Lee, for Peasgood's Nonsuch, fine examples; Mr. Caddick, for Pott's Seedling, Stirling Castle, The Queen, and Warner's King; Mr. Jas. Duff, for Dumelow's Seedling.

In the pear classes Mr. R. M. Whiting scored for a collection of twelve varieties, with Marie Louise, Beurre Superfin, Marguerite Marillat, Beurre Baltet Père, Triomphe de Vienne, Beurre d'Amanlis, Pitmaston Duchess, Dr. Jules Guyot, Chas. Ernest, Beurre Bachelier, Beurre Alexandre Lucas, and Doyenne du Comice; Mr. Jas. Gibson, Welbeck Abbey, second; and Mr. H. MacFadyen third.

Mr. W. Galloway and Mr. R. Greenlaw gained equal firsts for six dishes of pears; Mr. Mackinlay led for Beurre Diel; Mr. A. Hogg, for Beurre d'Amanlis; Mr. Mackinlay, for Beurre Superfin; Mr. Macfadyen, for Conference; Mr. J. Macdonald, for Doyenne du Comice; Mr. P. McAndrew, for Durondeau; Mr. Mackinlay, for Jargonelle and Marie Louise; Mr. Greenlaw, for Pitmaston Duchess; Mr. Mackinlay for Souv. du Congres; Mr. Searle, for Williams Bon Chretien; and Mr. Ross, for Catillac. Mr. J. Gibson led for four dishes of pears, with Souv. du Congres, Doyenne du Comice, Durondeau, and Marguerite Marillat; Mr. W. Nicoll, second.

PLANTS AND GROUPS.

The plant classes do not seem to be taken seriously at Edinburgh, as there is never a very keen competition, and little trouble is taken in the disposal of the exhibits. Mr. A. McMillan, gardener to the Earl of Home, Douglas Castle, Lanark, had the best six foliage plants, winning with large examples of Anthurium crystallinum, Phyllotænium Lindeni, Dieffenbachia magnifica, Alocasia metallica, Maranta zebrina, and M. Portiana; Mr. A. Knight, Brayton Gardens, second. In another class for foliage plants Mr. McMillan and Mr. Knight were again first and second, and Mr. Bell, gardener to the Earl of Home, K.T., Bothwell Castle, was third.

The best four stove and greenhouse plants were from Mr. D. Mackay, Viewbank, Lasswade, Mr. E. Hughes, gardener to Sir Duncan Hay, Bart., King's Meadows, Peebles, second, and Mr. McKenna, gardener to Sir Robt. Usher, Bart., Norton, Ratho, third. The best single plant was a fair sized statice from Mr. W. Hogarth, gardener to Robt. Thorburn, Esq., Springwood, Peebles, Mr. McKenna coming second. Mr. W. Sharp, Freeland, Forgandenny, had the best four orchids—Vanda suavis, Cattleya gigas Sanderiana, Lælio-cattleya Bletchleyensis, and Cattleya Loddigesi; Mr. D. Mackay second. Mr. W. Pirie, gardener to C. F. Cowan, Esq., Dalhousie Castle, Bonnyrigg, had the best specimen orchid, a Cypripedium insigne Sanderæ, with nine beautiful blooms. Mr. Sharp scored for three cypripediums with C. Curtisi, C. œnanthum superbum, and C. Harrisianum, all large plants; Mr. A. Findlay, gardener to A. Dryburgh, Esq., Gogar Park, second.

In the fern classes there were some splendid adiantums, and Mr. L. Moodie, gardener to Miss Carse, Musselburgh; Mr. A. Findlay, Gogar Park; Mr. A. McMillan, Douglas Castle; and Mr. W. M. Bruce, gardener to Mrs. P. Neill Fraser, Rockville, Murrayfield, were the leading prizewinners. For hardy ferns Mr. Turnbull, gardener to A. Cowan, Esq., Valleyfield, Penicuik, was successful, and for selaginellas Mr. W. M. Bruce led the way.

For a large group, Mr. J. Davis, gardener to Colonel Stewart Richardson, Ballathie, Stanley, won first prize, using well-grown crotons and abutilons round a massed central cone of crotons and liliums; Mr. A. Knight, Brayton, Cumberland, second.

CUT FLOWERS.

This was one of the finest sections of the show. In the rose classes Messrs. W. and R. Ferguson, Dunfermline, had the best twelve bunches of garden roses, their Richmond, Mdme. Abel Chatenay, and Gruss an Teplitz being very good. Messrs. Dicksons, Edinburgh, scored for a dozen vases of roses. Messrs. Jas. Cocker and Sons, Aberdeen, led for thirty-six blooms, and they staged well, though some of the blooms showed the effects of recent bad weather; Messrs. D. and W. Croll, Dundee, second. The latter firm led for eighteen blooms, Messrs. Adams and Craigmile, Rubislaw, Aberdeen, following closely. The Aberdeen firm reversed the order of things in the class for eighteen tea roses, though both showed well. The Messrs. Croll had the best twelve pink roses—Mrs. J. Laing, and Messrs. Dicksons and Co. had the best dozen white roses—Frau Karl Druschki.

The Hugh Dickson Memorial Cup for twenty-four roses was won by Mr. A. Hulton, gardener to G. Keith, Esq., Montrose, with a handsome set of finely-coloured flowers, a trifle over-dressed; Mr. W. Parlane, gardener to Mrs. Dennistoun, Rosslyn Row, second, and Mr. J. Russell, Newton Mearns, third.

For a group of cut roses Messrs. J. Cocker and Sons, Aberdeen, were to the fore with a lovely arrangement of beautiful blooms, but they had a dark corner for their exhibit; Messrs. W. and R. Ferguson, Dunfermline, second.

For two dozen gladioli spikes Messrs. George Mair and Son, Prestwick, gained first prize, with massive spikes of shapely and large blooms; Messrs. A. E. Campbell and Son, Gourock, came a good second. Mr. John Smellie, Busby, secured the chief award for two dozen cactus dahlias, six blooms of each, but none of the varieties were named until some good while after judging was finished; the blooms were fine; Messrs. M. Campbell and Son, High Blantyre, second; Mr. J. Paul, Drumbeg, Kilbearn, scored for six vases of cactus dahlias, and he had handsome flowers; Mr. Sutherland, Victoria Nursery, Lenzie, second; and Mr. G. Bowness, Busby, third. The wiring and binding of the stems in this class were painful to see.

Hardy herbaceous flowers were well shown, Mr. C. Pattison, Linwood, Paisley, leading for twelve bunches; Mr. Adam Brydon, Innerleithen, second; and Dr. McWatt, Morelands, Duns, third. Mr. T. M. Whitehead, Selkirk, had the finest set of twelve bunches of carnations, and he showed fine selfs and fancies.

Mr. J. D. Kerr, gardener to the Hon. Mrs. Baillie Hamilton, Duns, was a good and easy first for nine bunches of sweet peas, with lovely flowers of John Ingman, Prince of Asturias, Helen Lewis, Etta Dyke, Mrs. Hardcastle Sykes, Primrose Spencer, Evelyn Hemus, Miss M. A. Linzee, and Frank Dolby; Mr. Thos. Hender, Coltoquhar Gardens, Crieff, second; and Mr. J. Kennedy, gardener to W. Russell, Esq., Abernethy, third. For six bunches, Mr. J. D. Kerr was again first, followed by Mr. Thos. Smart, gardener to Colonel C. T. Menzies, Kames, Greenlaw; and Mr. Kirkwood, Coltoquhar, Crieff.

Early chrysanthemums were beautifully shown by Mr. G. Bowness, Riverside, Busby, who won first prize for eighteen bunches, his set containing splendid bunches of Elstob Yellow, Holmes' White, Well's Scarlet, Goacher's Crimson, Polly, Parisiana, and Improved Masse; Mr. J. Smellie, Busby, second; and Mr. J. Sutherland, Linzee, third.

FLORAL DESIGNS.

Messrs. Perkins and Sons, Coventry, annexed the premier award for a floral design with a star and crescent done in white chrysanthemums and tuberoses, with cattleyas standing out therefrom; Messrs. Gunn and Sons, Olton, second, with a large floral harp composed of white chrysanthemums, odontoglossums, Vanda cœrulea, and Cattleya Loddigesi; this was a graceful design, whereas the first prize one was rather heavy. Messrs. Perkins and Sons led for a coloured hand bouquet with gorgeous oncidiums and cattleyas. Mr. A. Knight, gardener to Sir Wilfred Lawson, Bart., Brayton, Cumberland, led for an epergne, with a rather poor effort in oncidiums and yellow cannas; Messrs. M. Campbell and Son, High Blantyre, second, with Francoa ramosa and montbretias. For a cactus dahlia bouquet Messrs. Perkins and Sons were again to the front, and they also led for a white hand bouquet, using odontoglossums, roses, lily of the valley, and phalænopsis blooms; Mr. A. Holmes, gardener to A. Campbell, Esq., Helenburgh, second; the latter was first in another class for a white bouquet.

For a table decoration Mr. A. Knight, Brayton, was first prizewinner with pink oncidium sprays; Messrs. M. Campbell and Co., High Blantyre, second with pink sweet peas, carnations, and francoa sprays; and Mr. W. P. Bell third.

VEGETABLES.

Very keen was the competition and the interest in the class for a collection of eighteen dishes of vegetables, not less than twelve kinds. There were four competitors, and Mr. Jas. Gibson, gardener to the Duke of Portland, Welbeck Abbey, Notts, won the chief award with some of the finest produce he has ever staged. His set consisted of Early Giant and Autumn Mammoth cauliflowers, 7 points each; Solid White and Superb Pink celery, 6½ and 6¼; Ailsa Craig and Globe Onions, 6½ and 6½; Prizetaker leeks, 6½; New Red Intermediate carrots, 5; Gladstone and Centenary peas, 5 and 5; Tender and True parsnips, 4; Matchless cucumbers, 4; Princess of Wales and Perfection tomatoes, 6 and 6; Sutton's Black beet, 4½; Supreme and Superlative potatoes, 6½ and 6½; and Best of All runner beans, 5; a total of 104 points. Mr. R. Stuart, gardener to Lord Lauderdale, Thirlestone Castle, Lauder, came second, with 81 points, and he also had fine leeks and cauliflowers; Mr. W. Harper, gardener to J. Ramsey Richardson, Esq., Tulliebelton House, Perth, third.

In another class Mr. W. Galloway led, and Mr. J. Highgate was second; this was for twelve dishes also. Mr. J. Gray, Middlewood, Uddington, had the best six dishes; and Mr. R. Watson, Crossford, Carluke, was second.

Potatoes were very fine, as usual, and Mr. Gibson won for twelve varieties, with Mr. J. Brown, gardener to Major Balfour, Collesie, second. Mr. Gibson was first for onions, and Mr. Fleming, Galashiels, second for leeks; Mr. Gibson also led for beet and for parsnips.

NON-COMPETITIVE.

Messrs. Storrie and Storrie, Glencarse, Perthshire, put up a splendid group of plums, apples, and pears in pots, all finely fruited, and below the trees they had begonias and narrow-leaved crotons. Mr. Henry Eckford, Wem, Salop, was forward with a big display of sweet peas, showing good bunches of popular, as well as newer, varieties; he had Constance Oliver and The King in good form, and Queen of Spain was very pretty. A very handsome and charmingly arranged exhibit of Lilium auratum, L. speciosum, Hydrangea paniculata grandiflora, and early chrysanthemums of the Masse type, was set up by Messrs. Thos. Methven and Sons, Edinburgh; crotons, palms, etc., lent grace to the beauty of the flowers.

Mr. John Forbes, Hawick, contributed a wonderfully bright and interesting exhibit of his famous pentstemons and phloxes, together with an assortment of herbaceous flowers, dahlias, and carnations. Pentstemon Crimson Gem, a real beauty, was the great attraction in this display. Messrs. Dobbie and Co., Rothesay, had a mixed display of choice pansies and violas, a fine selection of cactus, show and pæony-flowered dahlias, early chrysanthemums, and marigolds; they also set up some good leeks and a small collection of early potatoes. Messrs. Cunningham, Fraser, and Co., Comely Bank, Edinburgh, set up a table of herbaceous plants.

Messrs. Sutton and Sons, Reading, were large exhibitors; their circular group of fine seedling tuberous begonias, gloxinias, nicotianas, and streptocarpuses was a great feature of the show, and practically every plant was a seedling of the present year. Behind this group they had a long group of asters, showing all the types and a wonderful range of colouring. A few choice vegetables, including a wonderful dish of Sutton's Centenary pea, completed a splendid display. Messrs. W. Cutbush and Son, Highgate, had a large and pretty display of hardy flowers grouped in fine masses round a pool of lovely water lilies. Meconopsis Wallichi, pentstemons, and kniphofias and montbretias, were especially good.

Messrs. J. Mason and Co., Jamestown, sent pansies and violas. Sundries were contributed by Mr. J. Don, Glasgow, and Messrs. Alex. Cross and Co., Glasgow. Mr. J. Wilson, Hereford, showed a grand lot of fine bulbs of Cranston's Excelsior onion. Messrs. W. Wells and Co., Merstham, Surrey, contributed early chrysanthemums and pentstemons, while early chrysanthemums were also largely shown by Mr. D. McOmish, Crieff.

From the Horticultural College, Swanley, came some very fine culinary and dessert apples. Mr. J. Downie, Shandwick Place, Edinburgh, put up a group of bright crotons, with a large central mass of liliums. Messrs. Macrimmon and Fulton, Leicester, contributed sweet peas in variety. Mr. Robert Bolton, Warton, Carnforth, had a delightful exhibit of splendidly-grown sweet peas, setting up, among other things, splendid sheaves of Mrs. Henry Bell, Clara Curtis, Mrs. Chas. Foster, and Mrs. Hardcastle Sykes. Messrs. Gunn and Sons, Olton, Birmingham, had a grand lot of phloxes, and they showed the dwarf white Tapis Blanc finely. Mr. Thos. W. Darlington, Warton, Carnforth, had sweet peas in plenty.

Messrs. Austen and Macaslan, Mitchell Street, Glasgow, put up a large and interesting collection of well-grown vegetables. Messrs. Clibrans, Altrincham, showed vegetables largely and well, and arranged them in a most admirable manner; the tomatoes, onions, and beet were unusually good. Mr. D. W. Thomson, George Street, Edinburgh, contributed large apples, and a few gladioli spikes. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, staged a few orchids, Cattleya Loddigesi and Stanhopea oculata being conspicuous in their group. Mr. D. McLeod, Chorlton-cum-Hardy, contributed a few cypripediums and cattleyas.

Messrs. R. B. Laird and Sons, Lim., Pinkhill Nurseries, Edinburgh, were responsible for a very artistic exhibit of flowering shrubs, greenhouse plants, crotons, dracænas, etc., arranged around and on a rockery design. Messrs. Thos. S. Ware, Lim., Feltham, Middlesex, put up a very attractive group of fine single and double tuberous begonias, showing such splendid varieties as Mrs. A. Tweedie, Rhoda Pope, The Queen, May Pope, Samuel Pope, Miss Strower, and Marchioness of Bute.

MEDALS AND AWARDS.

Gold.—To Mr. James Gibson, gardener to the Duke of Portland, Welbeck Abbey, Notts, for his first prize collection of vegetables.

Silver-Gilt.—Messrs. Sutton and Sons, Reading; Messrs. Dobbie and Co., Rothesay; Messrs. Clibrans, Altrincham; Messrs. T. Methven and Sons, Edinburgh; Mr. J. Forbes, Hawick; Messrs. R. B. Laird and Sons, Pinkhill, Edinburgh; Messrs. Thos. S. Ware, Lim., Feltham, Middlesex.

Silver. — Messrs. W. Cutbush and Son, Highgate; Mr. Robt. Bolton, Warton, Carnforth; Messrs. Cunningham, Fraser, and Co., Edinburgh; Messrs. Austen and Macaslan, Glasgow.

Bronze.—Messrs. Gunn and Sons, Olton; Messrs. A. Lister and Son, Rothesay; Messrs. M. Campbell and Son, High Blantyre; Mr. J. Downie, Edinburgh.

First-class Certificate. — Rambling rose, Christian Curle, from Messrs. Jas. Cocker and Son, Aberdeen; Michaelmas daisy (double), Beauty of Colwall, from Messrs. T. S. Ware, Lim., Feltham.

Award of Merit.—Sweet pea Rose Spencer, from Mr. A. Malcolm, Duns; early chrysanthemum Rob Roy, from Mr. W. Robinson, Pilrig; croton-leaved coleus, from Messrs. Storrie and Storrie, Dundee; chrysanthemum D. W. Thomson, from Mr. [illegible] Thomson, Dean Nursery, Edinburgh; chrysanthemum Abercorn Beauty, from Mr. Alex. Brown, Abercorn Nursery; Acalypha Clibrani (yellow-white variegated sport from A. macrophylla), from Messrs. Clibrans, Altrincham; dahlia Sentinel, from Messrs. Dobbie and Co., Rothesay.

NEW BOOKS.

POT CULTIVATION OF ROSES.

By William Paul, F.L.S. (Simpkin, Marshall,
Hamilton, Kent, and Co., London, E.C.)
Price, 1s.

The appearance of the ninth edition of this popular handbook of the cultivation of roses in pots is sufficient evidence that the general body of cultivators are well acquainted with its distinctive features, and highly appreciate the immense amount of information it contains. We need not, therefore, refer to it with the fulness of detail that would be necessary were the work a new one, or, indeed, say much beyond directing attention to the publication of a new edition. It is now many years since the late Mr. William Paul recognised the need cultivators of pot plants had for information on the more important details, and placed at their command a book that was at once thoroughly practical, clear, and concise in its treatment of the various details, and so inexpensive as to be within the reach of all concerned with pot roses. Mr. Paul achieved so high a degree of success in planning the original edition that there has been no occasion to change the arrangement of the contents in the preparation of the subsequent editions, and the ninth issue may well be described as a model of what such handbooks should be. If there has been no change in the general plan, there has been much alteration in the contents, as the author has been careful in the preparation of the several editions to keep the work thoroughly up to date, and to keep his readers fully informed as to the most popular of the various types of plants and the most recent methods of procedure. In this edition the cultivation of the Wichuraiana and other of the rambling roses in pots receives special prominence, and the reader is able to obtain the fullest information on the points essential to success in the cultivation of these popular roses for the decoration of the conservatory, and the embellishment of the home on festive occasions. As in the case of previous editions, the whole of the chapters have been revised, and to the several lists of varieties the names of such of the new roses as are superior to those of earlier introduction have been added. The revision has indeed been so thorough that the book have the freshness one only looks for in a quite new book, and we may heartily congratulate Mr. Arthur Paul on the success he has achieved.

WITH GOD IN THE GARDEN.

By Leonard E. Dowsett. (H. R. Alle[illegible]
Lim., 7, Racquet Court, [illegible]
E.C.) Price 2s. 6d. net.

A highly interesting book, consisting [illegible] addresses that have been delivered to c[illegible]dren on Sunday mornings as part of [illegible] regular church worship. The whole of [illegible] lessons which the author has sou[illegible] teach have been drawn from the ga[illegible] The addresses are admirable in their o[illegible] and style, and the book is one that [illegible] placed in the hands of the young with [illegible]tage. It should certainly receive [illegible]tion of those engaged in teaching [illegible] in Sunday schools.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

NITROGENOUS MANURES.—T. Smith, [illegible]: You have been wrongly informed. Quick-acting manures, such as nitrate of soda and sulphate of ammonia ought not to be applied in the autumn for the purpose of enriching land that is to be cropped in the spring. As your soil is light much of the fertilising properties of these quick-acting manures will be washed away before the crops will be in a condition to derive benefit from them. A short time before planting or sowing will be quite early enough to apply these quick-acting manures, and in some cases it is an advantage to apply them in the form of top-dressings when the crops have made some little progress.

BEDDING PELARGONIUMS.—W. W. F., Lancashire: You might greatly improve the appearance of your large beds of zonal pelargoniums next year, as compared with this year's effect, by keeping over the winter a sufficient number of plants to fill them. The plants will be somewhat taller, and they will bloom more freely, especially if the weather should be rather wet. If you can spare the room, we suggest that you put them singly in five-inch pots when they are removed from the beds, and that when potted they be placed in a light and airy structure. The shoots should not be shortened now because of the risk of the cut portion decaying and the decay spreading through the tissues. The leaves as they show signs of decay should be removed, and very little water be given until there are signs of new growth at the beginning of the year. They will then require additional attention, and the first step will be to shorten the shoots to within two or three inches of the base. In due course, new growths will be produced, and when these are about an inch in length repot, using six-inch pots, and a substantial compost. When they have recovered from the check received in repotting, water more liberally, and from that stage until they are turned out of doors preparatory to their being planted out, give them a position in pit or frame where they can enjoy uninterrupted light, and be safe from frost. It is a good plan when large beds have to be filled with zonal pelargoniums to grow a few standards with stems ranging from 20 to 30 inches high, and plant them with the dwarfs, as they relieve the flatness in a marked manner. The flowers of the standards should be of the same colour as those of the dwarfs, or of a tone that the two will harmonise.

POT CULTURE OF FIGS.—F. B., Wilts: The span-roof house, twenty feet long by twelve feet wide, which you are desirous of using for figs instead of ornamental plants, is large enough to enable you to have sufficient pot trees to give you a good supply of figs in the course of the summer. The culture of figs in pots is an interesting method, and one from which large returns of highly-flavoured fruit may be obtained. With a suitable selection of varieties growing in the same structure, you will find it possible to have a continuous supply of fruit from the middle of June until October is well advanced. Unlike most other fruits commonly grown in this country, some of the varieties of figs will produce two crops during the season, and occasionally a third crop; and as some ripen their first crop earlier than others, you will readily understand how continuous supplies can be obtained over a long period. If you decide to act on this suggestion, we shall be pleased to give you a selection of varieties, and, indeed, any other information of which you may be in need.

PACKING APPLES AND PEARS.—W. T., Herts: These fruits are, owing to the hardness of their texture, less liable to be injured in transit than other kinds; but we would impress upon you the importance of care in packing, so that the fruits may reach your employer's table in the best possible condition. Both apples and pears are frequently damaged in transit, and one of the chief causes of injury is the failure to pack with sufficient firmness to prevent the fruit moving about in the course of the journey. Shallow boxes are best for both classes of fruit. We advise you to provide for choice dessert apples and pears boxes of thin deal, about eighteen inches wide, twenty-four inches long, and six or seven inches deep. These will have a sufficient depth for one layer of large fruits and two layers of those of medium and small size. A greater depth than six inches is not desirable, nor is it necessary for the purpose of economy in carriage, it being an easy matter to cord several boxes together. Care should be taken to dispatch pears before they are quite ripe, for when kept in the fruit room until they are nearly ready for the table there is a probability of their being past their best when received, and, moreover, a risk of their being so soft as to be damaged in transit. First cover the bottom of the box with a layer of rather fine wood wool, about an inch in thickness, and also line the sides with the same material. Wrap the fruits in soft paper, and so place them that they will, as far as practicable, fill the whole of the spaces. Pears of pyriform shape should be arranged alternately, with stalk and eye in different directions to more fully utilise the space. A little of the wood wool should be thrust into the vacant spaces, and where necessary, sufficient must be thrust down the side of the box to prevent the fruits moving in the slightest degree. Over the fruits should be put a sufficiently thick layer of wood wool to render some amount of pressure necessary when the lid is fastened down. The procedure in packing apples will not materially differ from that advised for pears. A rather stouter and cheaper kind of paper may be used; ordinary kitchen paper is in every way suitable, and the apples should all be placed with their stalks downwards.

TULIPS IN SMALL GARDENS. — Subscriber: In gardens in which tulips can be given positions where they can enjoy full exposure to light and air, and have the advantage of moderately rich soil, such, for instance, as that in which hardy perennials can be successfully cultivated, the bulbs will multiply and attain the degree of maturity essential to the production of finely-developed flowers. The advice to which you refer was given to a correspondent who has a small garden in a suburban district which is surrounded by large trees growing in his neighbours' gardens. In his case the borders are impoverished by the roots of the trees, and the plants growing in them are also deprived of much of the sunlight.

CHERRIES.—W. M. K., Hants: Bedford Prolific, Beurre de Hedelfinger, Black Tartarian, Early Rivers, Frogmore Early, Bigarreau, Governor Wood, and May Duke are all of great excellence and form a good selection for a garden of moderate dimensions, such as the one you have under your charge.

UNHEALTHY CATTLEYAS. — M. B., Yorkshire: If the small plant you send is representative of the condition of the whole of your stock of cattleyas, measures of a somewhat drastic character will be necessary. The pots were not, in the first place, efficiently drained, and the peat used was not of a quality suitable for orchids. We advise their being repotted forthwith, for, although this is not the best time of the year for repotting cattleyas generally, it will be better to do so than allow the roots to remain through the winter in the same material in which they now are. Provide pots of the same size, or one smaller, than those now occupied, let them be perfectly clean, and in their preparation fill them to one-half or two-thirds their depth with crocks, which also must be quite clean. Turn the plants out of the pots, carefully remove the material from about the roots, then well wash the latter and cut away those that are dead or are showing signs of decay. Repot in the usual way, use fibrous peat, from which much of the finer part has been shaken, and as the peat is being packed about the roots, work in nodules of charcoal and small crocks. Very little moisture will be necessary until new roots are being produced, and subsequently water must be sparingly applied.

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NEW PLANTS, ETC.

◆

LÆLIO-CATTLEYA ELVA VAR. ST. VINCENT.

A very distinct hybrid between L.-c. Ingrami and C. gigas. The sepals and petals are deep rosy mauve, and the large lip deep purple with large yellow blotches. A.M., R.H.S., September 1. Mr. H. S. Goodson, Putney.

CATTLEYA RHODA.

A fine hybrid obtained from a cross between C. Iris and C. Hardyana. The sepals and petals creamy buff suffused salmon, the lip a bright purple with lighter edges. A.M., R.H.S., September 1. Messrs. Charlesworth and Co., Bradford.

SOPHRO-LÆLIO-CATTLEYA DANÆ SUPERBA.

A pleasing form, the flowers large, the sepals and petals creamy-white edged purple rose, the lip golden-yellow margined with purple. A.M., R.H.S., September 1. Lieut.-Colonel Holford, Westonbirt.

BRASSO-CATTLEYA MADAME CHARLES MARON, SANDERS' VARIETY.

A remarkably fine hybrid between Brassavola Digbyana and Cattleya Warscewiczi, and far superior to the original form. The flowers deep purple rose, with a pale-yellow blotch at the base of the lip. F.C.C., R.H.S., September 1. Messrs. Sander and Sons, St. Albans.

TRITONIA R. WILSON KER.

A handsome variety, having a large spike, and flowers of bright shining crimson. A.M., R.H.S., September 1. Messrs. Wallace and Co., Colchester.

GLADIOLUS PRIMULINUS HYBRIDS.

A series of hybrids obtained from a cross between G. primulinus and G. Gandavensis. The flowers have the characteristics of the first-named species, and are exquisitely coloured orange, lemon, and pink. A.M., R.H.S., September 1. Messrs. R. Wallace and Co.

MONTBRETIAS.

Norvic.—A fine dwarf variety. The spikes are nicely arranged, the flowers are large, and the colour yellow, heavily flushed on the outside of the segments with red and crimson. A.M., R.H.S., September 1. Mr. G. Davison, Westwick Hall, Norwich.

Hereward.—A very handsome variety. The flowers are large and borne boldly on the spike; the colour rich orange. A.M., R.H.S., September 1. Mr. G. Davison.

GLADIOLI.

Golden Measure.—A fine yellow variety, self coloured, with the large and finely-formed flowers evenly disposed on the spike. A.M., R.H.S., September 1. Messrs. Kelway and Son, Langport.

White Cloud.—A beautiful variety with large flowers of fine form, and well set on the spike. The colour creamy-white. A.M., R.H.S., September 1. Messrs. Kelway and Son.

CATALOGUES RECEIVED.

WM. CUTBUSH AND SON, HIGHGATE, N.—A useful and freely illustrated catalogue of bulbous plants, and a further and very interesting catalogue of Malmaison, Perpetual, and Border carnations, pinks, etc.

LITTLE AND BALLANTYNE, CARLISLE.—This catalogue is chiefly devoted to bulbs, but it contains good lists of fruits, roses, and flowering shrubs.

M. HERB, NAPLES, ITALY.—A general catalogue of bulbs, including many rare kinds, and seeds for autumn sowing.

Sweet Peas.—An Irish correspondent writes as follows: Your little manual—"Sweet Peas and Their Cultivation"* is admirable. Any person who reads, marks, learns, and inwardly digests it, and then afterwards fails to make his garden like Paradise restored is a duffer."

* "Sweet Peas and Their Cultivation." By C. H. Curtis, F.R.H.S. Price 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 9d., from "The Gardeners' Magazine" Office.

MARKETS.

◆

COVENT GARDEN.

Flowers.

Supplies of outdoor flowers are declining, and there is a slight improvement in values.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	5	0	to	9	0
Alstrœmerias	per doz. bun.	2	0		3	6
Arums	per doz.	2	6		4	6
Asparagus	per doz. bun.	1	[illegible]		[illegible]	[illegible]
Asters	per doz. bun.	2	[illegible]		3	[illegible]
Carnations	per doz. blms.	1	6		3	0
,,	per doz. bun.	7	0		[illegible]	[illegible]
,, Malmaison	per doz. blms.	7	0		9	0
Cattleyas	per doz.	8	0		10	6
Chrysanthemums	per doz. bun.	5	0		7	6
Coreopsis	per doz. bun.	1	6		2	6
Croton leaves	per bun.	1	0		1	6
Cypripediums	per doz. blms.	2	0		3	0
Dahlias	per doz. bun.	5	0		7	6
Eucharis	per doz.	4	0		5	0
French fern	per doz. bun.	1	0		3	0
Gardenias	per doz.	1	6		3	0
Gladiolus, large-flowered,	per doz. spks.	2	0		3	0
Gypsophila	per doz. bun.	2	0		3	0
Lilium auratum	per bun.	2	0		4	0
,, candidum	per bun.	1	0		2	6
,, speciosum	per bun.	1	6		3	0
,, longiflorum	per bun.	2	0		3	6
Lily of the Valley	per doz.	6	0		10	0
Marguerites, white	per doz. bun.	2	0		4	6
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	0		4	0
Odontoglossums	per doz. blms.	2	6		3	6
Pelargoniums	per doz. bun.	4	0		6	0
Roses	per doz.	1	0		5	0
Smilax	per doz. trails	3	0		5	0
Sweet Peas	per doz. bun.	2	0		2	6
Tuberoses	per doz. blms.	0	6		0	8

Fruits.

Hardy fruits of all kinds now in season are abundant.

		s.	d.	s.	d.
Apples, cooking	per ½-sieve	2	6	3	6
,, dessert	per ½-sieve	2	0	4	6
Apricots	per box	0	9	1	0
Bananas	per bun.	3	0	10	0
Damsons	per ½-sieve	1	6	2	0
Figs	per doz.	2	0	4	6
Grapes, English	per lb.	1	0	3	6
,, Belgian	per lb.	0	8	0	10
,, Channel Islands	per lb.	0	6	1	0
Gage Plums	per ½-sieve	2	6	3	6
Lemons	per case	6	0	14	0
Melons, Guernsey	each	0	9	2	0
,, English	each	1	0	2	0
,, Valencia	per case	7	0	10	0
Morella Cherries	per 12 lb.	5	0	6	0
Nectarines	per doz.	2	6	10	0
Nuts, Cob	per lb.	0	7	0	[illegible]
Oranges	per case	9	0	30	0
Peaches	per doz.	2	6	7	6
Pears, Hessle	per ½-sieve	3	6	4	6
Pineapples	each	2	0	4	0
Plums	per ½-sieve	2	0	2	6
Raspberries, Scotch	5lb. basket	2	0	2	6
Walnuts, green	per ½-bus.	2	3	2	6

Vegetables.

Supplies are fully equal to the demand, and the quality generally is good.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	1	9
Beans, Runner	per bush.	1	0		2	0
Beet	per bush.	1	3		1	6
Cabbage	per tally	1	6		2	6
Carrots	per doz. bun.	1	6		2	0
Cauliflowers	per doz.	1	0		2	0
Celery	per roll	1	6		1	9
Cucumbers	per doz.	1	3		2	0
Endive	per doz.	1	0		1	6
Horseradish	per doz. bun.	8	0		9	0
Leeks	per doz. bun.	1	0		1	6
Lettuce, cos	per doz.	0	8		1	0
Maize	per doz. [illegible]	1	0		1	6
Mint	per doz. bun.	1	0		1	6
Mushrooms	per [illegible] lb.	6	0		12	0
Onions	per doz. bun.	1	6		2	6
,, Pickling	per ½ bush.	1	6		2	0
,, Valencia	per case	7	0		8	6
Parsley	per doz. bun.	1	0		2	0
Peas	per bush.	3	6		4	0
Radishes	per doz. bun	0	4		0	[illegible]
Salsafy	per doz. bun.	3	0		3	6
[illegible]		1	3		1	[illegible]
Spinach	per bush.	1	3		1	8
Tomatoes, English	per doz. lb.	2	6		3	0
,, Guernsey	per doz. lb.	2	0		2	6
Turnips	per doz. bun.	1	6		3	6
Vegetable Marrows	per tally	2	0		3	6
Watercress	per doz. bun.	0	4		0	6

LONDON POTATO MARKETS.

Since the improvement in the weather supplies have been somewhat increased, but there has been no material change in the demand.

		s.	d.		s.	d.
British Queen	per ton	60	0	to	65	0
Epicure	per ton	60	0		70	0
Duke of York	per ton	60	0		70	0
Sharpe's Express	per ton	60	0		70	0
Up-to-Date	per ton	55	0		65	0
Early Puritan	per ton	60	0		70	0
Evergoods	per ton	50	0		60	0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. AUGUST 30 TO SEPTEMBER 5.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Aug. 30 Sunday	8 0	58	55	66	49
,, 31 – Monday	2 10	57	53	60	47
Sept. 1—Tuesday	3 20	56	51	60	49
,, 2 – Wednesday	8 25	57	51	62	48
,, 3—Thursday	0 50	53	48	57	42
,, 4—Friday	—	53	52	53	52
,, 5 – Saturday	7 20	51	49	60	39
Means	4 20	55	51	60	47

DATE. 1908. AUGUST 30 TO SEPTEMBER 5.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Aug. 30—Sunday	—	58	60	60	44
,, 31—Monday	0·42	58	60	60	[illegible]
Sept. 1—Tuesday	0·08	57	59	59	45
,, 2—Wednesday	0·25	56	59	59	44
,, 3—Thursday	0·44	55	58	59	37
,, 4—Friday	0·04	56	58	58	51
,, 5—Saturday	—	54	57	58	36
Means	(total) 1·23	56	59	59	43

FORTHCOMING ENGAGEMENTS.

TUESDAY, September 15.—Royal Horticultural Society. Meeting of Floral, Fruit, and Orchid Committees at noon, and Scientific Committee 4 p.m.; General Meeting at 3 p.m., lecture by Mr. T. H. Mawson, on Garden Design.

THURSDAY, September 17.—National Rose Society's Autumn exhibition at the Horticultural Hall.

A New Book on Bulbs. — If you want to know anything about bulbs and how to grow them, which to plant, and where to plant them, we would direct your attention to the new book, "Bulbs and Their Cultivation," by T. W. Sanders, F.L.S., issued this week. In its pages will be found all that it is necessary to know in the culture of indoor and outdoor bulbs, corms, tubers, and the miscellaneous plants broadly classed as bulbs and tubers. The selections at the end should be of much value at the present time as an aid to the unknowing what to choose for their beds and borders, windows and greenhouses. The book, which is freely illustrated with plates and other illustrations, is published by W. H. and L. Collingridge, at 148, Aldersgate Street, London, E.C., and can be had direct and post free for 2s. 10d. The price at booksellers is 2s. 6d.

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Work for the Week

ILLUSTRATIONS.
Portrait of Mr. J. C. Tallack, 689; Erythronium purpurascens uniflorum, 691; Star Daffodil Stella in the Grass, 692; Trumpet Daffodil Emperor in the Grass, 693; White Italian Grape Hyacinth (Muscari botryoides alba) grown in fibre, 694; The Netted Iris (Iris reticulata), grown in fibre, 695; A Fine Bed of Tulip Inglescombe Pink, 696; An effective arrangement of May-flowering Tulips, 697; A tastefully arranged group of the Madonna Lily (Lilium candidum), 698; Narcissus Snowdrop, 699; New Montbretia Norvic.

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Horticultural Builders. **NORWICH.**

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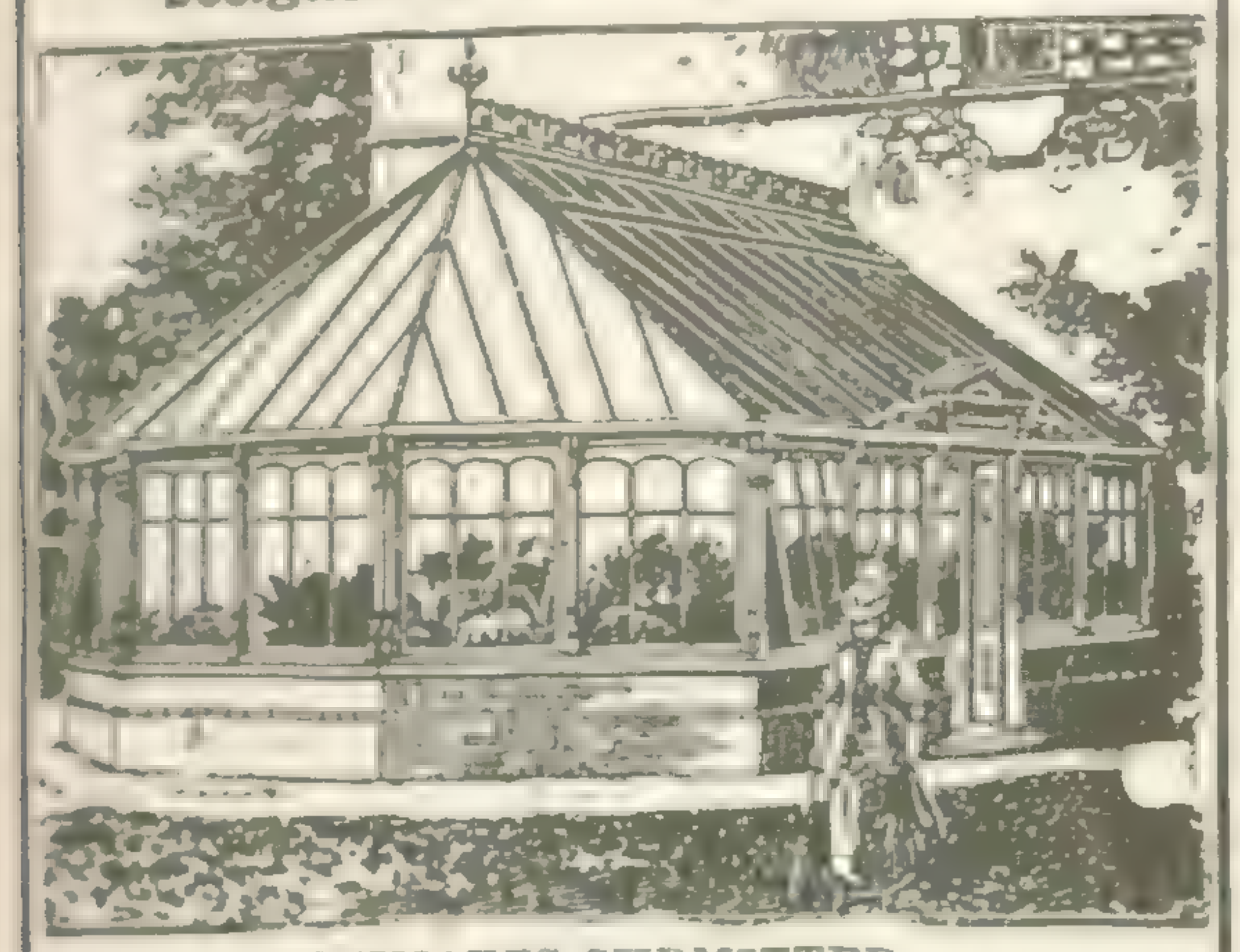
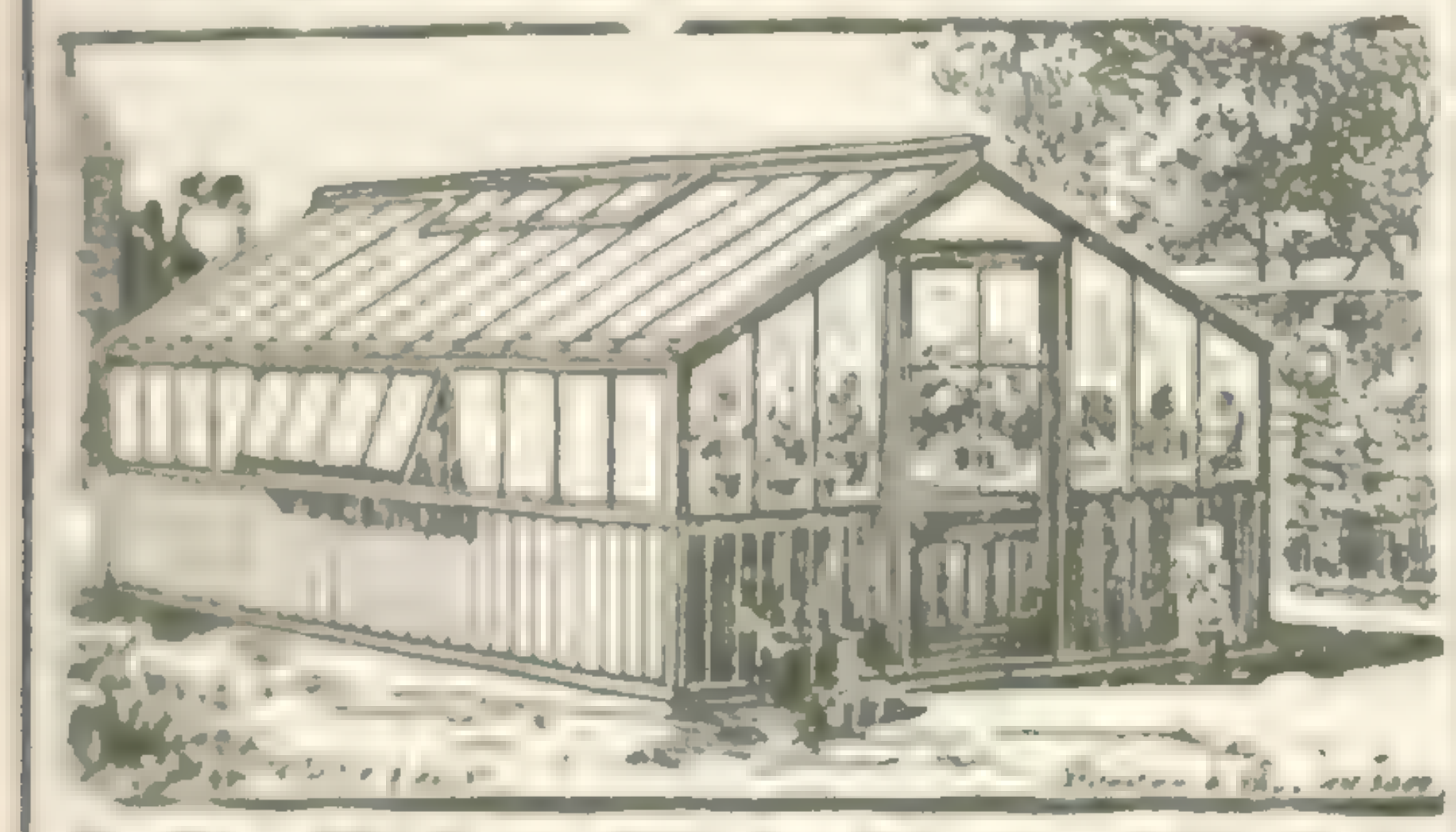


ESTIMATES SUBMITTED.

No. 49A.—**SPAN-ROOF GREENHOUSE.**



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Boilers of all Makes and sizes.

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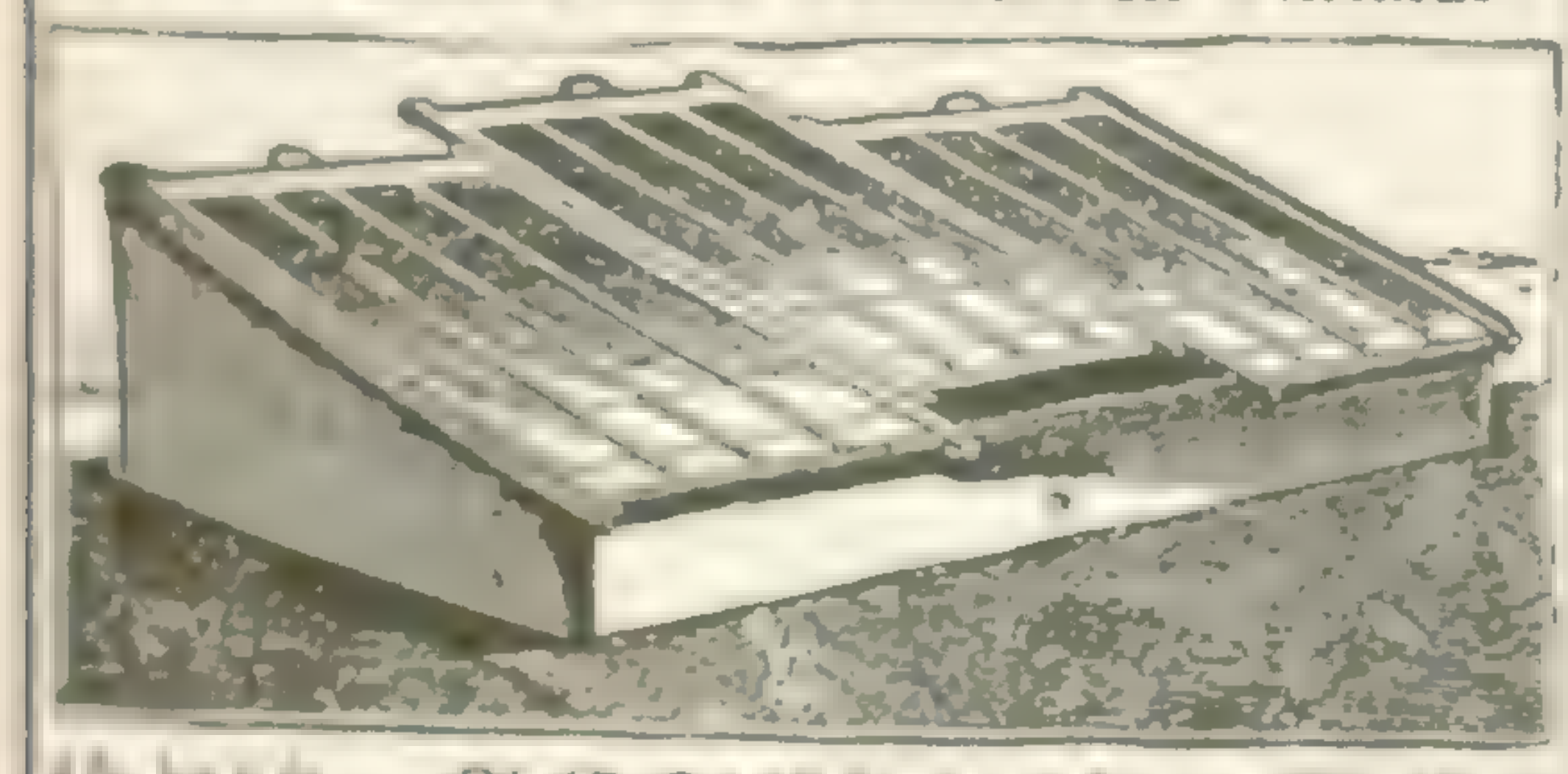

4ft. by 6ft.	£1 15 0	12 ft. by 6 ft. ...	£3 15 0
8ft. by 6ft.	2 15 0	16 ft. by 6 ft.	4 15 0

GARDEN FRAMES in great variety.

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CARRIAGE PAID on orders of 40/- value to most Goods Stations in England and Wales.

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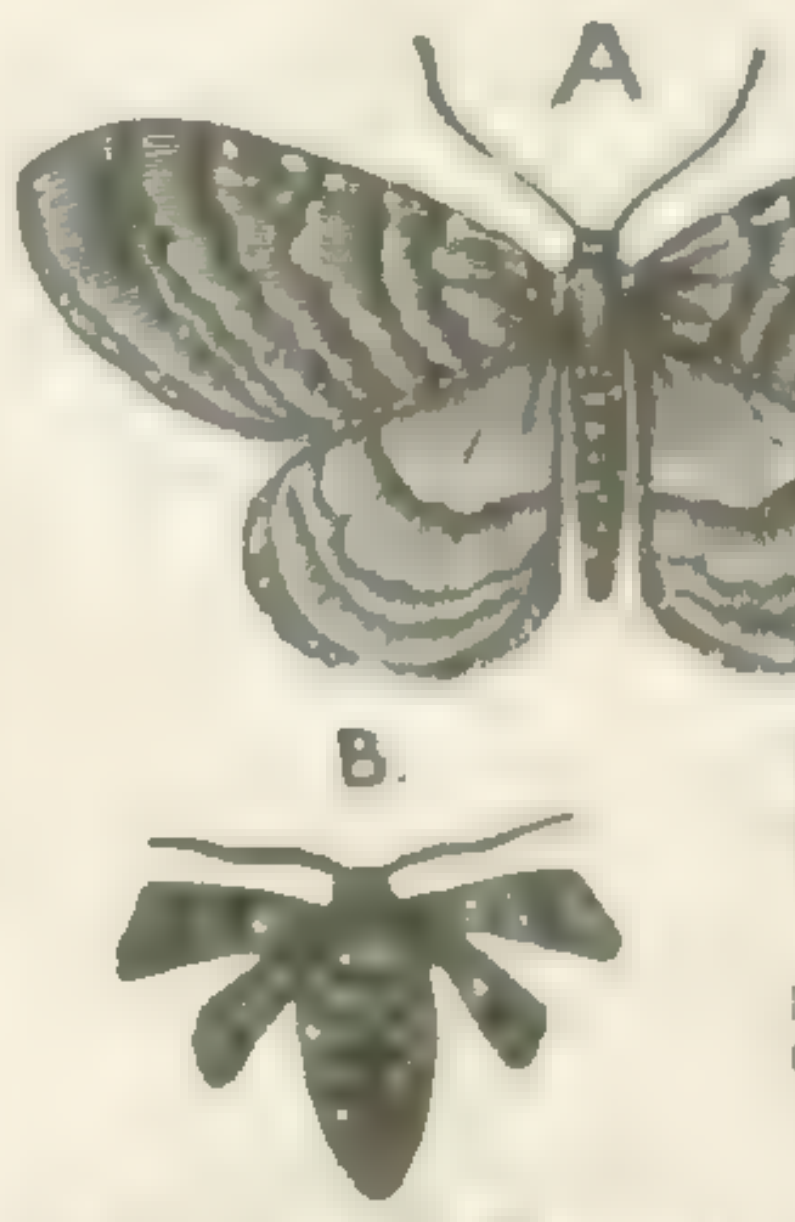
For capturing the Caterpillar Moths.



A, Male; B, Female.

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Contracts are undertaken for the erection and heating of

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The most recent improvements in Ventilation, Heating and internal fittings are introduced.

Plans and estimates will be sent free on receipt of particulars. Write for Illustrated Catalogue, post free.

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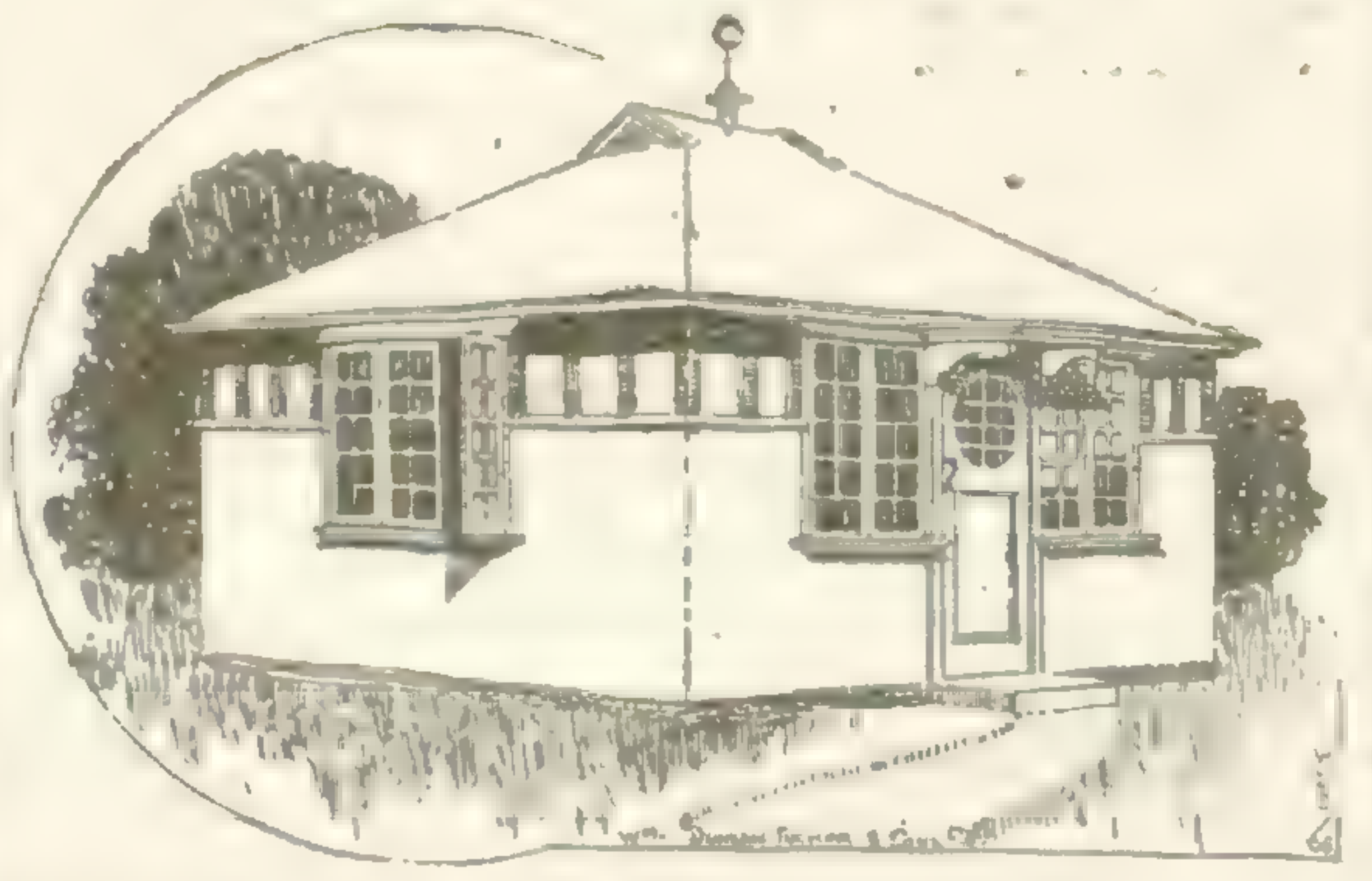

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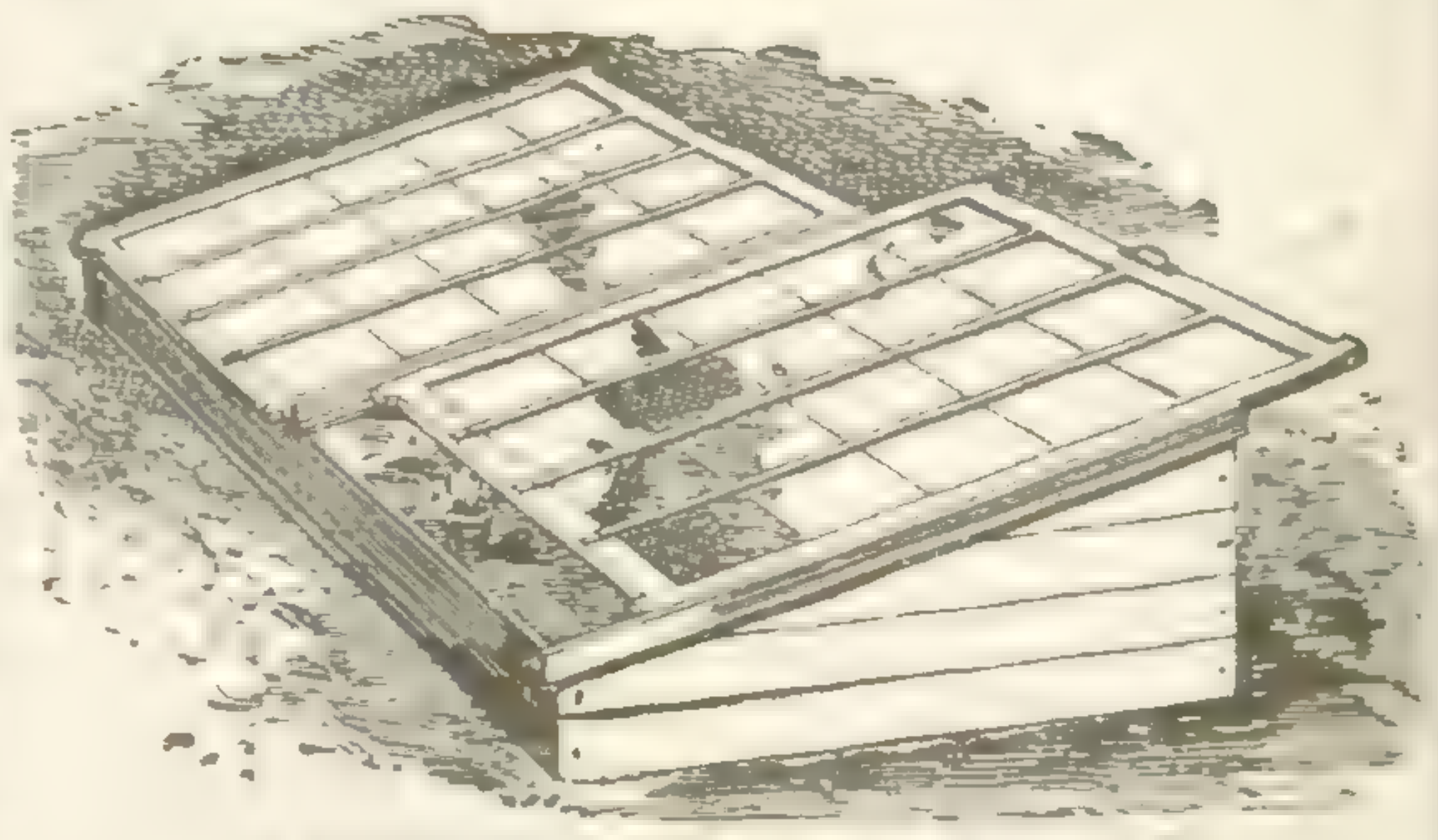

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(See page facing 724.)

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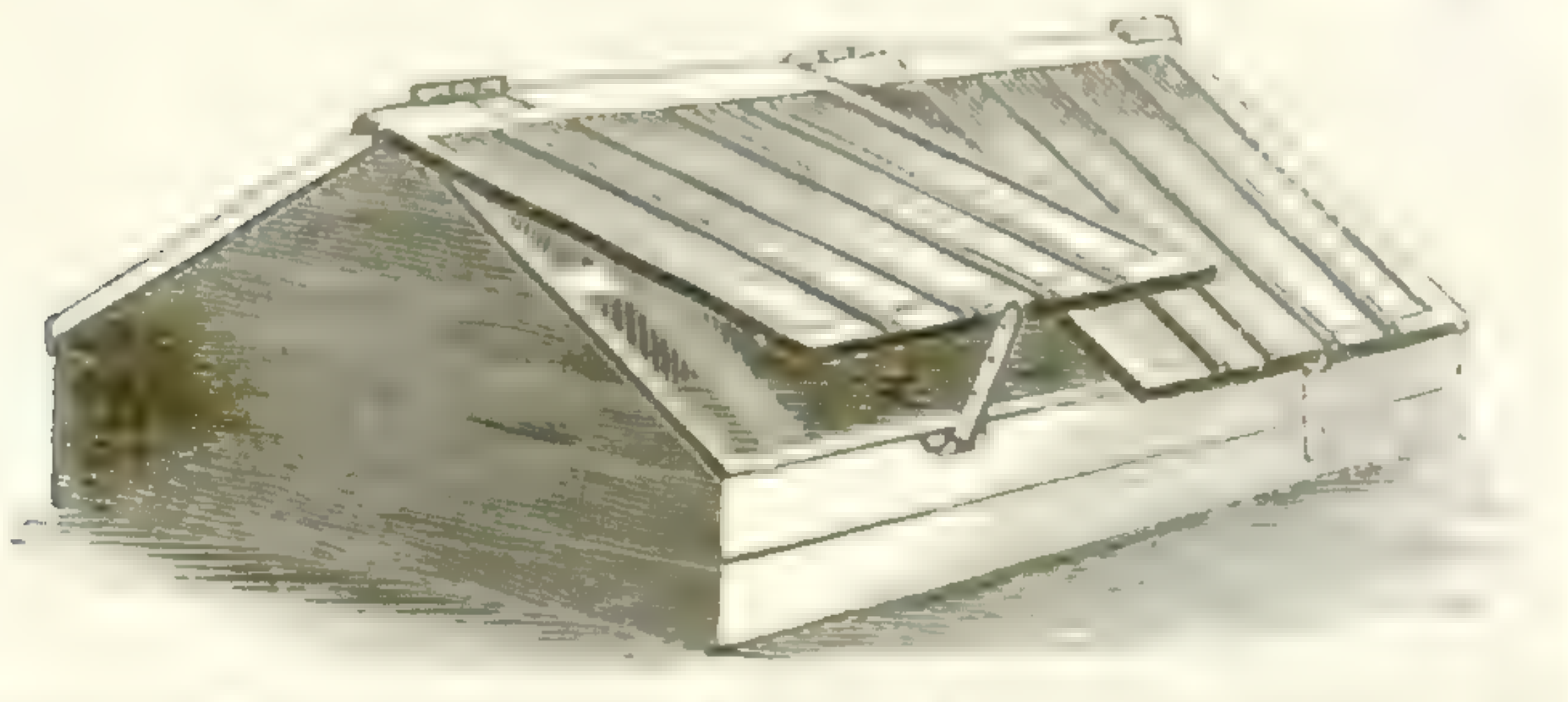

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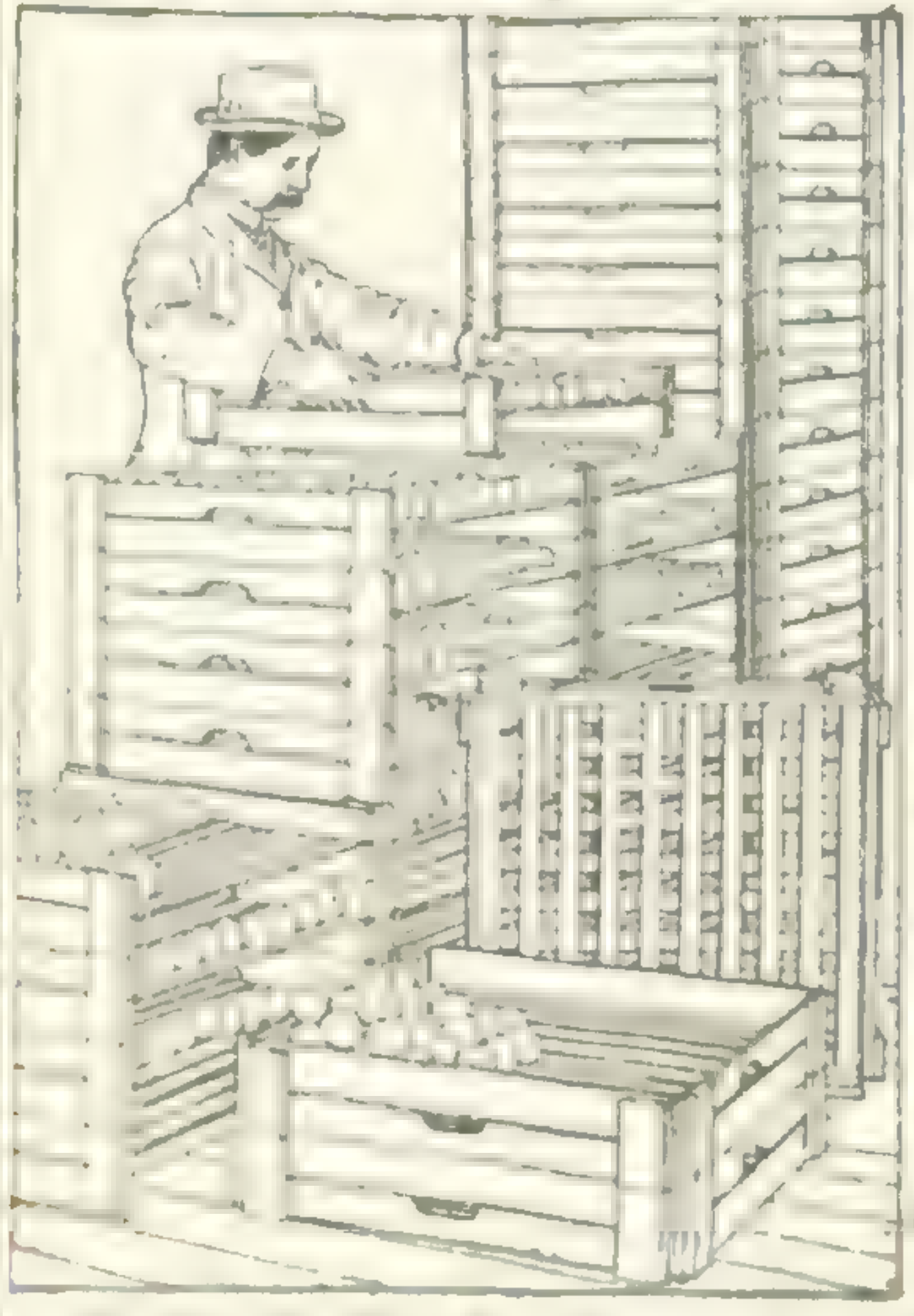

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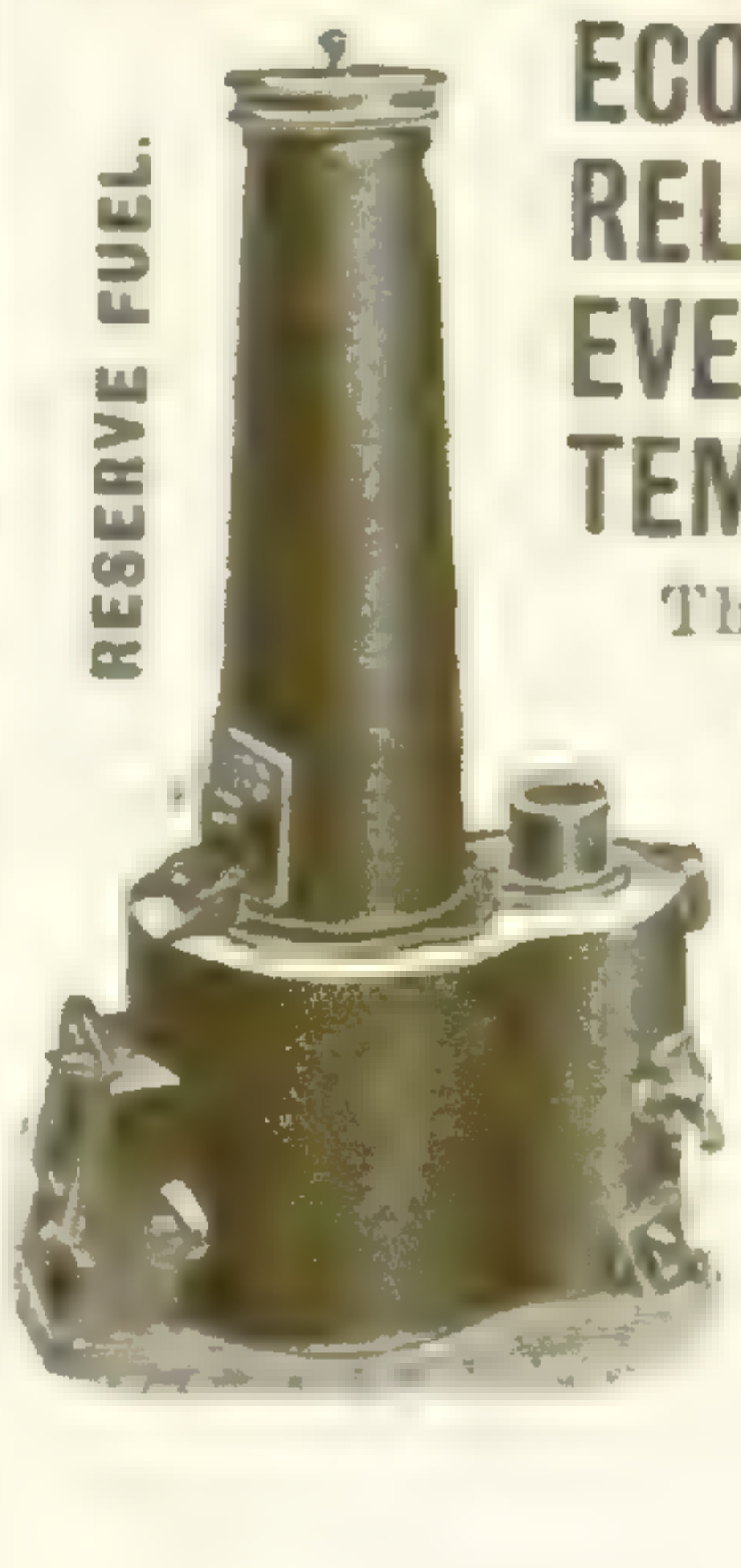
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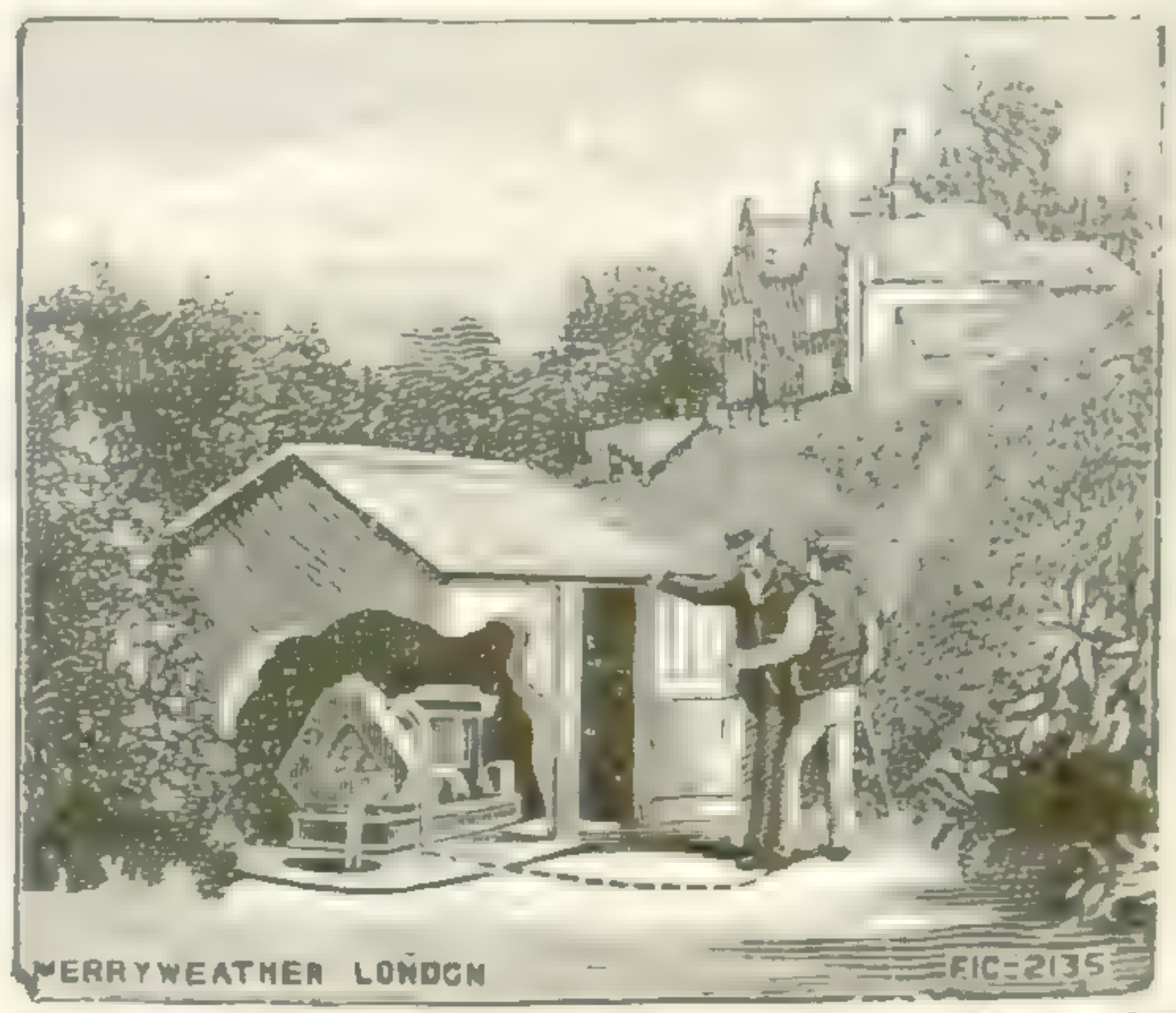

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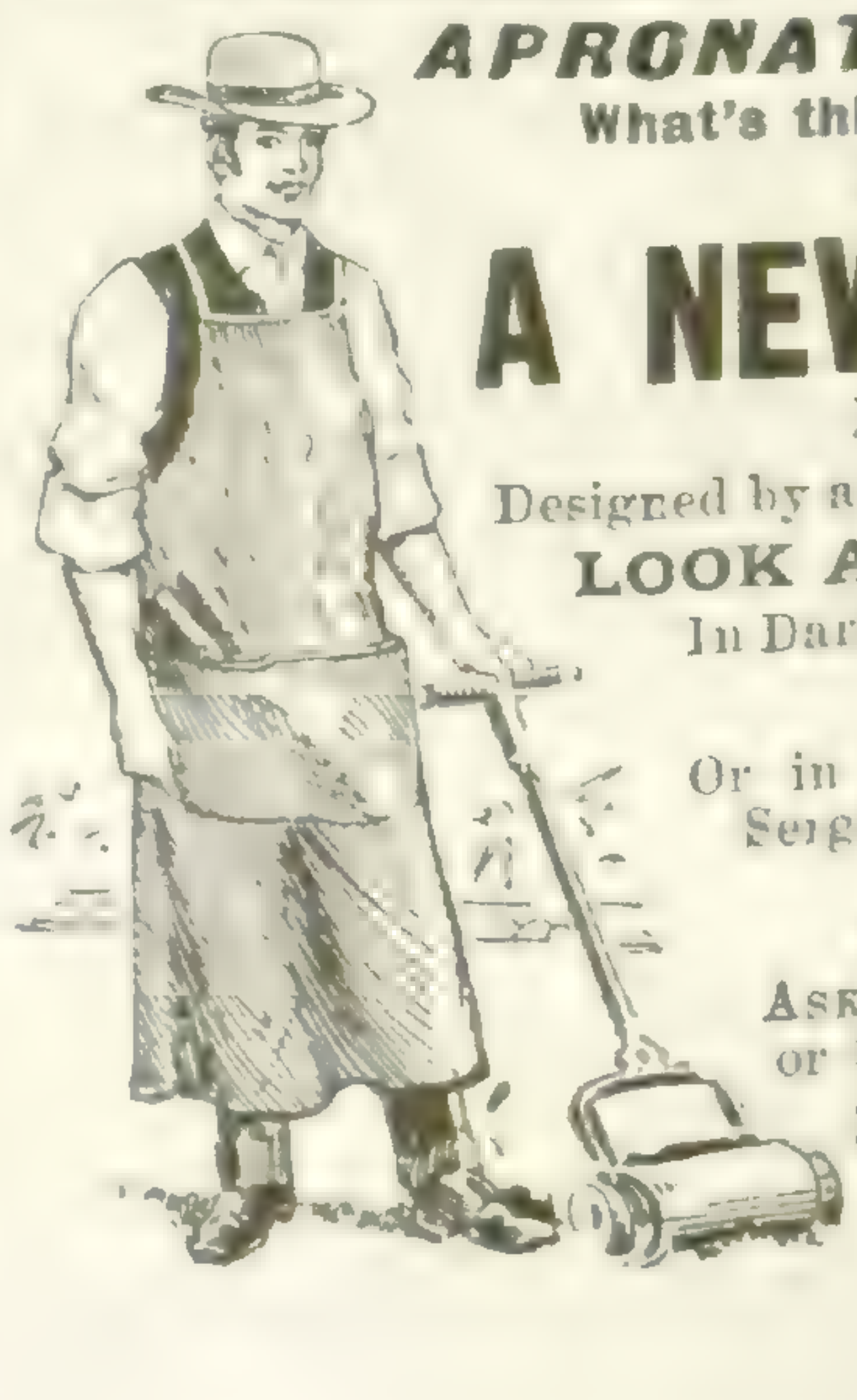

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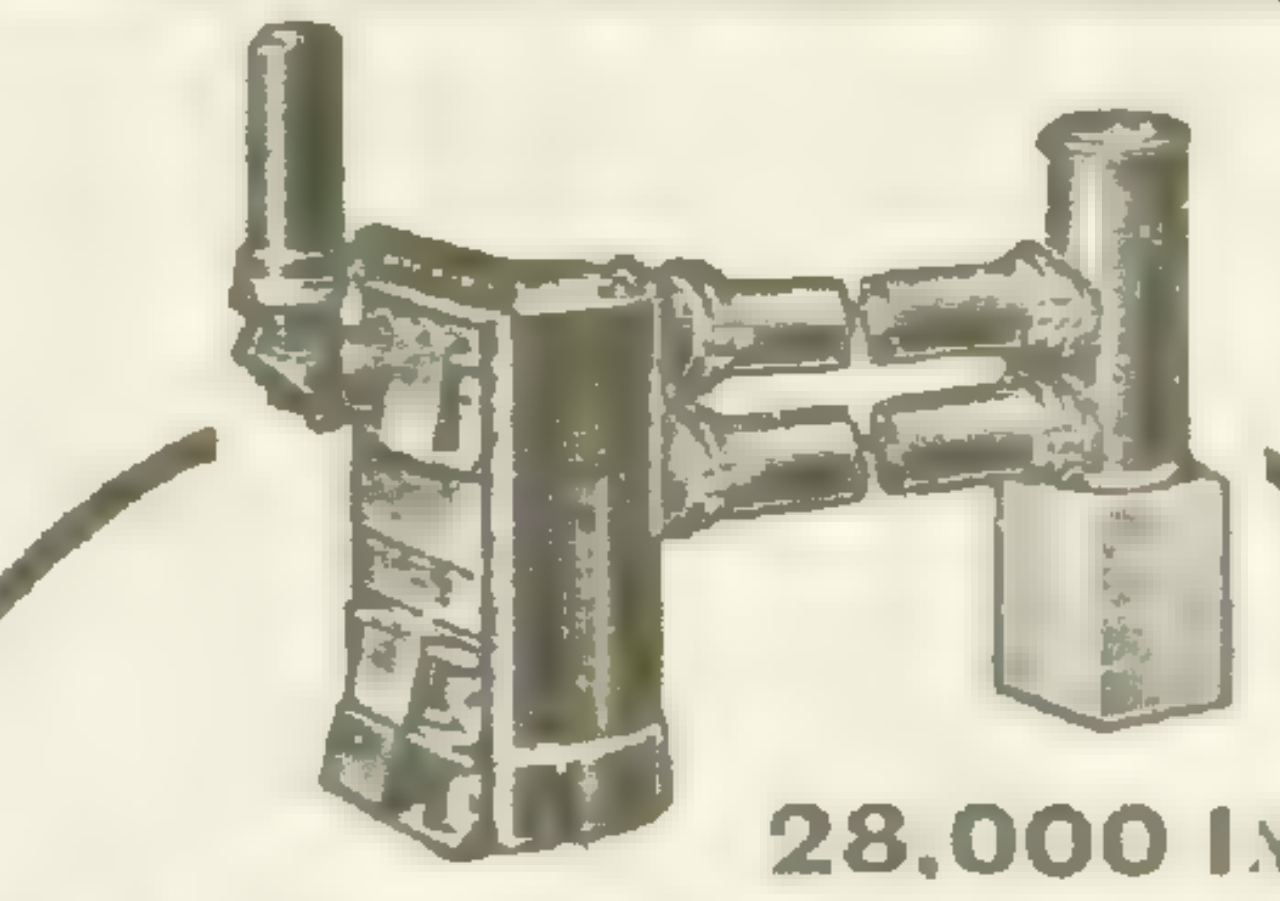

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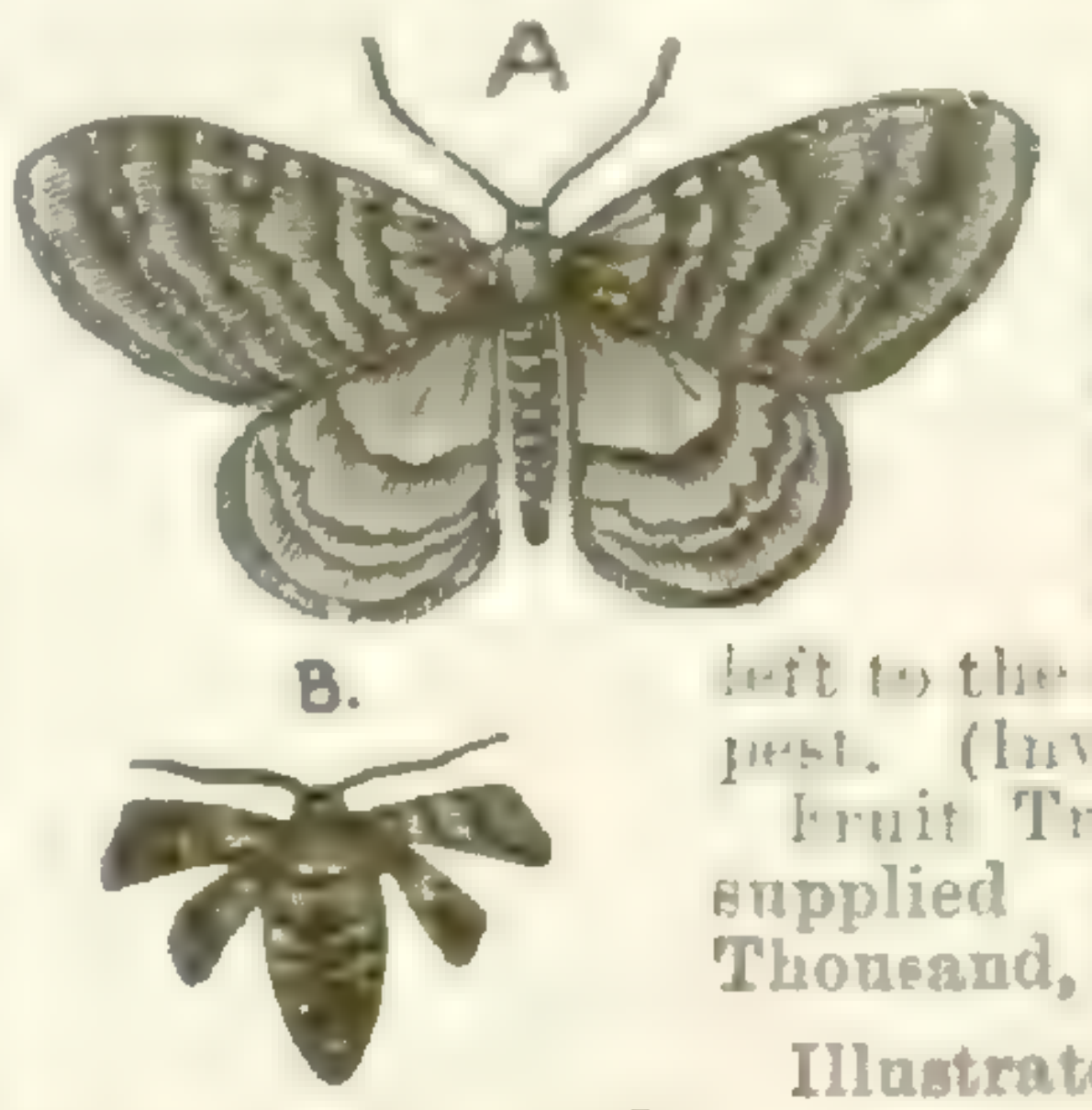

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GARDENER (Head Working or Single-handed); age 39; married, two children; good all-round experience Inside and Out; cows and poultry if required; good references. G. A., 49, Norman Road, Ilford.

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JOURNEYMAN (Second), (Inside), age 20, 5 years' experience; well recommended; private place; Bothy preferred. H. WILLIAMS, The Gardens, Lower Eaton, near Hereford.

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REV. CAPEL YOUNG wishes to recommend A. SARNEY as IMPROVER, Inside and Out; 12 months' experience; Bothy. A. SARNEY, Coxlease Cottages, Stonor, Henley-on-Thames.

RICHARD SMITH and CO., LTD., beg to announce that they are constantly receiving applications from Gardeners seeking Situations, and that they will be able to supply any Lady or Gentleman with particulars, etc. St. John's Nurseries, Worcester.

ESTATE ENGINEER seeks SITUATION, take charge Electric and Acetylene Plant, Carpentering, Painting, Glazing. DORLING, Lo[illegible] Road, Brandon, Suffolk.

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SITUATION WANTED by steady, reliable and competent Man; experienced all branches Inside and Out, including herbaceous and A[illegible] plants, roses, shrubs, etc., also laying out and al[illegible]tions; highest references to date. LANDSCAPE, [illegible] Kings' Road, Orpington, Kent.

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YOUNG MAN requires SITUATION [illegible] JOURNEYMAN or IMPROVER, age [illegible]; [illegible] years' experience at Buxted Park; Inside; Bothy preferred. J. BROOKER, Coffee Hall, Five Ash Down, Buxted, Sussex.

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YOUNG MAN, age 19, seeks SITUATION [illegible] good garden, Inside and Out; [illegible] years' experience; good character; life abstainer. [illegible] Chiltown Farm, Chertsey.

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For SEPTEMBER 26, 1908.

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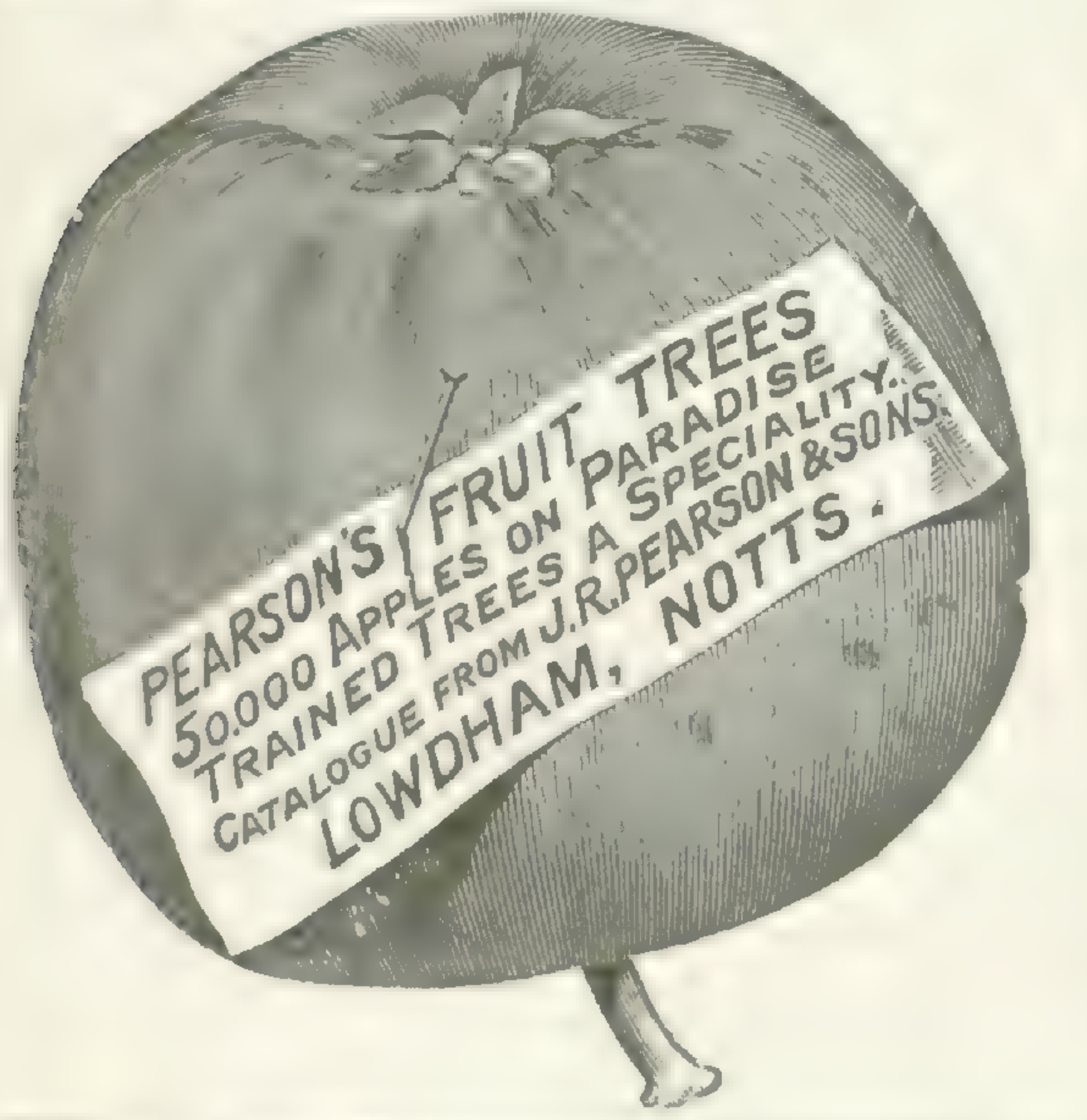
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Tulips, double, in the finest mixture... ...	2	2	20	0
Anemones, single mixed	1	2	10	0
Anemone, The Bride, pure white	1	2	10	0
Crocus, first size, in the finest mixture ...	1	2	10	0
Crocus, second size, in the finest mixture	0	8	5	10
Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	6	4	6
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture... ...	1	4	12	6
Narcis., Trumpet, in the finest mixture ...	2	6	20	0
Narcis., double, fine mixture	3	0	25	0
Narcis.-Polyanthus, finest mixed	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
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VOL. LI.—No. 2,864

SATURDAY, SEPTEMBER 19, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Rural Education.

Educational questions received a full share of attention at the recent meeting of the British Association at Dublin, and special prominence was given to the all-important subject of the education of children attending the elementary schools in country districts. While all the matters brought forward were well deserving of the most careful consideration, and, therefore, had our sympathy, we were especially interested in the papers and discussions on the system of education best suited to the needs of rural districts. This question has long been regarded by us as having an important bearing upon the prosperity of rural industries, and during the past thirty years or so we have consistently advocated a system of education that would place children in the possession of a knowledge of the common objects of the country, and thereby interest them in their surroundings and more fully equip them for the duties they have to perform in after life. We have also strongly urged again and again that such education must, to be thorough, be of a more or less practical character. While acknowledging the usefulness of textbooks we have pointed out that to interest children in plants or insects we must place specimens in their hands, describe their destructive characteristics, and encourage them to ask questions about their peculiarities of structure and functions with a view to quicken an interest in the subject and develop their powers of observation. Holding these views we have been much interested in the fact that both readers and speakers without exception advocated a system of rural education in close accordance with the lines laid down in these pages. In the course of a paper by Sir Philip Magnus, that well-known authority on educational matters pointed out that, while an immense improvement had been made within recent years, the true aim and purpose of elementary education did not appear to have been fully realised, and its relation to the pupil's life-work seemed to have been greatly neglected. The methods of teaching had, in his opinion, been, and in many respects still were, deficient owing to so much importance having been attached to the value of book-learning and oral instruction unaccompanied by experimental work on the part of the pupils. He also stated that he regarded the scheme of education as incomplete owing to the want of correlation between the subjects taught, and to the neglect and the failure to appreciate the necessity of adaptation to the requirements of actual life. The larger part of the school lessons had, he felt, failed to stimulate observation, to encourage initiative, and to create those habits of self-reliance which were as essential to success in the garden and field as in the workshop or office. The discussion on rural education was an important contribution to the problem of the best means of educating those likely to be engaged in rural life to fit them for their duties, but much had to be accomplished before a satisfactory and complete solution could be effected. Professor Miall, who was president of the education section, expressed the opinion that in the near future the practical application of biology would receive far more consideration than it received to-day. The raising of crops, the management of gardens, and the prevention of insect pests were obviously of great importance, and a good supply of naturalists competent to advise upon such matters would be regarded as essential to the national welfare. In like manner natural history, which was often treated as mere recreation, would be considered one of the great and permanent interests of mankind. Professor Miall also insisted upon the necessity of the teaching of natural history being thorough, and of it being conducted with a practical object in view. In his opinion such labour-saving appliances as pictures and lantern slides, ready-made preparations, printed descriptions, and museum lectures were far too freely used. These things diverted the minds of the children from active inquiry, and lessons were of but little value unless the teachers encouraged the children to think for themselves and cultivate their powers of observation. Mr. George Fletcher was of the opinion that reform was necessary, but he contended that it was less a question of the introduction of a new subject into the curriculum than the infusion of a new spirit into the system. So long had they continued to run in the academic groove that primary education seemed to have become a thing somewhat remote from the lives of those receiving it, and especially was this the case in rural schools. The commonest things in everyday environment could be made to serve an educational end, and if every school could be made to fully utilise its surroundings in teaching there would be hope for the solution of the problem. As proof of the readiness with which children adapt themselves to practical teaching, Mr. C. H. Bothamley, the director of education in Somerset, stated that it did not usually take more than four or five days to settle down to work at botany or practical science without the use of books. What is essential in the teaching of either plant or insect life is not setting pupils tasks in botanical or biological terminology, in accordance with the practice which has so long obtained, but the studying with them, as it were, the form and functions of the plant or insect, and using live specimens. We have urged this on many occasions in these pages, and we are much gratified by the knowledge that there is now a strong trend of opinion in the same direction.

DR. DOUGLAS L. FREELAND.

Dr. Douglas L. Freeland, whose portrait adorns our front page this week, is one of the keenest members of the younger group of amateur rosarians, and if, in course of time, his opportunities for growing and showing should increase, he will prove a very difficult competitor to defeat. Dr. Freeland lives at Delamere, Snodland, Kent, where what spare time he can snatch from professional duties is devoted to the flowers he loves so well. Roses and sweet peas are prime favourites at Delamere, but the roses take first place, and right well are they grown. Dr. Freeland is not wanting in pluck, for he competed for the Sherwood cup at the recent Holland House Show, and though the cup was not awarded, his display, put up at no small cost and trouble, was evidence of his love of the flower, and his sportsmanlike qualities. Dr. Freeland is also keenly interested in horticultural teaching in his locality, and anyone who visits the Snodland district for the purpose of instructing the residents in matters horticultural is always the recipient of abundant hospitality at Delamere.

Roses and Rose Planting.—Our issue of September 26 will be devoted chiefly to roses. It will contain a full report of the Autumn Rose Show of September 17, and a number of special articles dealing with the New Roses, Arches of Roses, Single Roses, Roses for Rock Gardens and Rooteries, and Planting Roses, etc. The issue will be freely illustrated, and promises to be of unusual interest to rosarians of every class. As the demand is certain to be a very large one readers who desire extra copies should place their orders with the publisher without delay. The price will be 2d. as usual.

Annual Dinner of the U.H.B.P.—The annual dinner of the United Horticultural Benefit and Provident Society will be held on Thursday, October 15, at the Waldorf Hotel, Kingsway, W.C., at 6.30 p.m. Dr. Robert Boxall, of Ingleside, Abinger Common, Dorking, will preside. An excellent programme of music has been arranged, under the direction of Mr. Thomas Winter, and, as the function is to take place during the evening of the first day of the Royal Horticultural Society's Fruit Show, a large attendance is anticipated. Tickets, 5s. each, may be obtained from Mr. William Collins, 4, Martindale Road, Balham, S.W.

Fruits of Foreign Growth were sent to British markets last month in smaller quantities than for some time past, and had it not been for considerable increases in the imports of apples and pears the decrease in the total would have been very large. In the imports of apples there was an increase of 39,945 cwt., the total having been 88,603 cwt., of the value of £47,726. Bananas dropped from 705,478 bunches, of the value of £198,383, in August, 1907, to 624,897 bunches, of the value of £174,946 last month. In the imports of cherries there was a decrease in quantity of 16,615 cwt., and in value of £17,278, the aggregate having been 760 cwt., of the value of £689. The decrease in the imports of currants also was very large, the total having been 3,711 cwt., of the value of £3,707, against 10,988 cwt., of the value of £11,359, in August, 1907. The imports of gooseberries were, on the other hand, rather larger, the total having been 937 cwt., of the value of £468. There were increases in the imports of the several kinds of nuts, and decreases in the imports of oranges and lemons. Pears were imported in large quantities, the total having been 210,295 cwt., of the value of £217,323. Very large also were the imports of plums, these aggregating 244,657 cwt., of the value of £246,676. Strawberry imports dropped from 937 cwt., of the value of £1,000, in August, 1907, to 92 cwt., of the value of £71, last month. The value of unenumerated fruit was £179,256, or a decrease of £1,985. The total value of the fruit imports for the last month was £922,449, or a decrease of £1,985.

Colour Chart for Florists.—Mr. C. Harman-Payne writes: With reference to the short note on p. 690 of the Gardeners' Magazine, may I point out that the proper name of the work referred to is the Répertoiré des Couleurs." It is essential to bear this in mind, as there is another French colour chart, entitled "Code des Couleurs," which is intended to be referred to as the "C.C." by those who use it. The arrangement and numbering of the colours are quite different in the two works; hence the necessity for using the proper title.

Colour Changes in Tropæoleums.—Colonel H. E. Rawson recently stated at the British Association, he had produced startling changes in the colours of tropæoleums by protecting the plants from the direct rays of the sun. The means he used are not clearly defined, but we gather he changed scarlet and orange varieties to a mauve variety, with the exception of one carmine, blue-marked one. He further states that the mauve variety has proved a veritable mutation, and seed from it, after the second year, comes true, though sown in different climates and aspects. We saw some of the flowers and plants at York Gala last June, and were not specially attracted by them. We know how wide is the colour variation of tropæolums, and how the floral colours vary in different aspects and under different conditions, and we are, therefore, not prepared to accept at once the statement that adaptation to external influences will result in fixity in one or two years.

Franco-British Exhibition Awards.—On Tuesday the International Jury commenced the important task of making awards to the multitudinous contributions to this exhibition. The members of the Jury, to the number of about four hundred, assembled in the Congress Hall at 11 a.m., where they were received by the Exhibition authorities. A few short speeches were made by British and French members of committee, and at the close the Jury adjourned to the Garden Club for the purpose of completing the organisation of the several sections, and this having been accomplished, commenced their duties. Among the British horticulturists who are members of the sections of the Jury entrusted with making the awards in the classes devoted to botany, horticulture, and forestry, are: Mr. W. Barr, Mr. George Bunyard, V.M.H., Mr. H. J. Elwes, V.M.H., Mr. George Gordon, V.M.H., Mr. H. B. May, Lt.-Colonel Prain, and Mr. H. Somers Rivers.

Horticultural Societies and Public Parks.—The edition of the "Gardening Year Book" for 1909 is about to go to press, and we shall be greatly obliged by secretaries of horticultural societies sending in particulars in regard to their societies, with dates of exhibitions, etc. We shall also be pleased to receive from superintendents of public parks and gardens their full name and address, with particulars of the title and extent of the open spaces under their charge. We shall be obliged if these particulars are in each case sent at the earliest possible moment to the Editor of the "Gardening Year Book," 148 and 149, Aldersgate Street, E.C.

Classification of Daffodils.—At the request of the Daffodil Committee, made on April 28, 1908, the Council of the Royal Horticultural Society recently appointed a committee to consider the way of avoiding the confusion, and consequent disputes, likely to arise from recent multitudinous crossing, recrossing and intercrossing of the old Divisions Magni- Medio- and Parvi-coronati. The committee, consisting of the Rev. W. Wilks, Rev. J. Jacob, and Messrs. J. Bennett-Poë, J. W. Barr, E. A. Bowles, and C. H. Curtis, have delivered their report, instituting an entirely new system of classification, which the council have (with slight modifications) adopted and confirmed, and ordered to be used at all the society's shows. The report contains a list of every daffodil known to the committee, together with the name of the raiser, so far as it could be discovered, each flower known being allotted to its appropriate class. The report has been printed in handy book form, and can be obtained from the society's office, Vincent Square, at a cost of 1s.

Princes Street Gardens, Edinburgh, always one of the features of the Scottish capital, are just now very interesting by reason of the extensive display of liliums they contain. The tall spikes and flowers rise well above the summer-flowering occupants of the beds, and they are now yielding beauty, grace, and fragrance in no small measure. Mr. McHattie has almost converted the place into a lily garden, for there are thousands of Lilium speciosum, representing a considerable range of varieties from deep red to white, Lilium longiflorum and L. auratum. Early chrysanthemums also add their attractions to those of the lilies.

The Horticultural Trades Association of Great Britain and Ireland has just completed its annual congress, the meeting taking place this year in London. The gathering was a record one as regards numbers, over 100 leading members of the nursery and seed trades attending from all parts of the United Kingdom. The three days allotted were devoted to excursions round London, and the evenings to business meetings and the discussion of topics of trade interest. Among the nurseries visited were those of Messrs. Hugh Low and Co., Enfield; Paul and Son, Cheshunt; W. Paul and Son, Waltham Cross; Thos. Rochford and Sons, Lim., Turnford; and Jas. Veitch and Sons, Lim., Coombe Wood. The generous hospitality shown by the proprietors to the visitors added much to the pleasure of the outing, which was marred only by the miserable weather experienced during the last day.

National Chrysanthemum Society.—The regular autumn and winter work of this long-established society commenced on Monday, when the Floral Committee met at Essex Hall in the afternoon and the General Committee at Carr's Restaurant in the evening. The society's exhibitions will be held at the Crystal Palace on October 7 and 8; November 4, 5, and 6; and December 2 and 3. The Floral Committee meets on September 28, October 26, and November 16, at 3 p.m., at Essex Hall, Strand, and on October 7, November 4, and December 2, at the Crystal Palace at 12 o'clock. The Executive Committee meetings are arranged for October 26, November 16, December 7, and January 11 (1909), at Carr's Restaurant, Strand. All correspondence concerning subscriptions, membership, etc., should be sent to Mr. Richard A. Witty, St. James Villa, Swain's Lane, Highgate, N.

TULIP SPECIES.

As is the case with other flowers, so with tulips, species is the term used to describe those varieties that are found growing wild in various parts of the world, and cultivated in the same condition in our gardens.

Everyone knows the prominent place that cultivated tulips occupy in the history of flowers, because of the mad tulip mania of the Dutch in the years 1634—1637, but few are aware of the vastly interesting questions which arise, and still wait for a solution, out of the strange, sudden appearance of new forms in well-known hunting grounds of botanists, or how in the fourth quarter of last century, and even up to the present year of grace, that unknown land of Central Asia has given us some of the most gorgeous flowers in the world, e.g., Tulipas Greigi, Eichleri, Tubergeniana, Fosteriana, Ingens, Micheliana, Kaufmanniana coccinea, and the small, but equally bright linifolia and Wilsoniana.

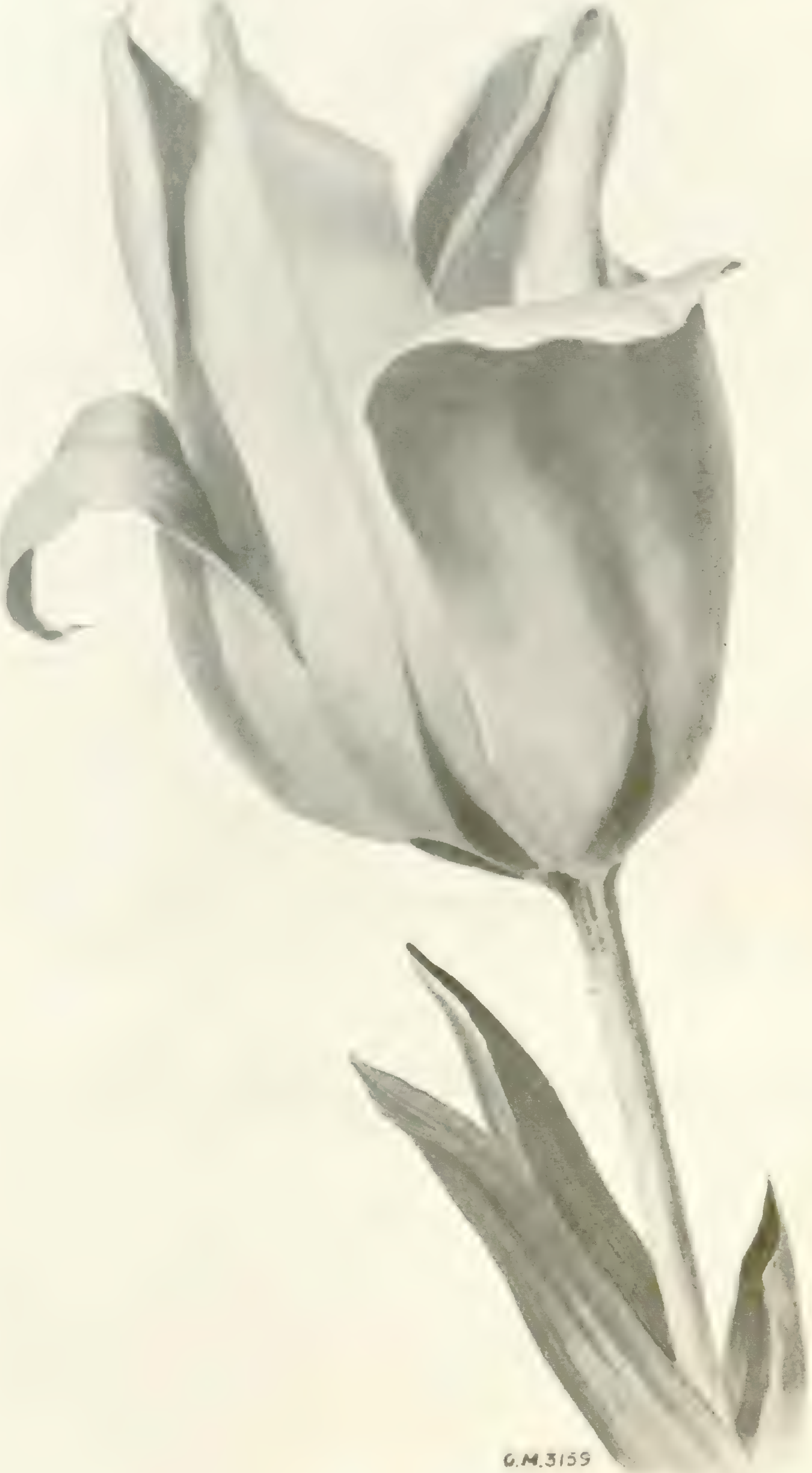
The honour of introducing the major part of these new species belongs to Mr. C. G. van Tubergen, jun., of Haarlem, and a visit to the large oblong enclosure at the back of his offices when they are in flower is a sight indeed. Picture a solid mass of real vermilion-red, some three yards by eight or ten, and you have his stock of Fosteriana as I saw it this last spring; then add to that other patches smaller, but equally as bright, and you get an idea of what that bit of ground is like when these tulips are in bloom.

These easterners, together with a few other varieties, such as Clusi and sylvestris, constitute one of the two divisions into which, for convenience, I may divide the species.

The others which form the second have been appropriately called næo tulips, from the fact that they have been found in more or less cultivated ground in quite recent times, and yet are quite distinct from the older inhabitants of our gardens. Such are Billietiana, Didieri, Marjoletti, Mauriana, and undulatifolia. These, with the exception of the last, are fairly well known, and thrive and increase with ordinary treatment just like ordinary garden forms. Mauriana is a handsome scarlet with a golden centre. It received an award at the Temple Show in 1901, and time has confirmed the opinion of the judges, for it is one of the most useful and lasting of all tulips. Billietiana, which was only found as recently as 1880, is a yellow, flushed and edged with varying degrees and depths of red. Mr. Hartland has selected some charming varieties of this type, Cloth of Gold and Sunset being two of the best.

The small and slender crimson Didieri, with its dark basal blotch, edged with pale primrose, and its white variety, "alba," are a delightful change from the larger and more showy varieties. While another of much the same habit is Marjoletti, with its long stems and primrose-yellow flowers, each petal of which has a rosy-red patch on its exterior. These three—the two Didieris and Marjoletti—are excellent for cutting. So, too, is the reputed, but rather doubtful, native species Sylvestris. It is one of the few sweet-scented kinds, and its yellow flowers are borne on stalks which, not being too stiff, lend themselves to graceful arrangement in vases. The Strangulata group belong to this division certainly as far as being good doers in the border. The pick of the bunch is undoubtedly S. primulina, a particularly lovely pale yellow self, and as it is much dwarfer than all the Gesneriana and other "cottage" yellows, is just the thing for a front place in the herbaceous border.

When we come to the other division we get simply magnificent flowers, but, alas! they have not the same constitution nor the power of increasing by offsets that characterises most of the other division, and also most cottage tulips. They seed freely enough, and from what I saw at Mr. van Tubergen's I should say that in Turkestan, Bokhara, and in their native haunts generally, this is the way that they propagate themselves. I used to consider T. Greigi, with its broad, brown-spotted foliage and handsome orange-scarlet flowers, as the tulip of the world, as far as magnificent colouring went, and so it was once upon a time—but that was before we had T. Tubergeniana and T. Fosteriana. When these were sent home from Bokhara, from four to seven years ago, King Greigi was deposed, and in his place they reigned as joint monarchs. They are both immense flowers, with reflexing petals, eight to ten inches across, and of a gorgeous vermilion, with a black base in Tubergeniana, and a yellow one in Fosteriana. Both do fairly well in ordinary borders if lifted every year. What I find about them, and all this type, is that their foliage so soon feels our variable climate, and becomes affected with what the Dutch call "fire." If only



TULIPA TUBERGENIANA.
A handsome species from Bokhara; the flowers large and finely formed, the colour vermilion with a black base.

we could devise some means of avoiding this, it would be a great impetus to their extended cultivation. Præstans is fine red, and often bears two to four flowers on a stem. Ingens is another good thing. It is much more of a crimson than Fosteriana, and has a decided white flame on the outside of its petals, which is very noticeable in its unexpanded state.

I must not forget the early "Water Lily" Tulip, T. Kaufmanniana. It does very well in ordinary borders, and may be left undisturbed for two or three years. When the clump is taken up careful search must be made at some distance below the old bulbs for "droppers." This mode of giving offsets is very characteristic. It is a dwarf grower, and has long primrose-coloured flowers, often with red flames on the exterior. In the sun they open very wide and become almost flat, and it is then that they have very much the look of a mass of white water lilies. A variety of this tulip, Kaufmanniana coccinea, is a brilliant scarlet self, and, as I believe it is just as good in constitution as the type, should be a very great acquisition when the somewhat prohibitive price of 60s. per twelve becomes lower. Among these species we have some splendid dwarfs, which are suitable for nice sunny and well-sheltered positions on a rockery or in the very front of a border.

The old Clusi, with its solid white petals marked externally with cherry-red, and having in the middle of the flower a rich ruby-violet base, is one kind that might well be given a trial. Linifolia and Batalini, the former a sealing wax red with a black base, and the latter a lovely pale primrose self, are two that do well. Both are real dwarfs, only growing five or six inches high, with narrow, deeply channelled, undulating leaves, that lie close upon the ground. Pulchella should not be omitted. It is fairly at home with us, and its small crocus-shaped carmine-rose flowers are bright and attractive. The last that I will mention is T. persica. This makes an excellent edging for beds, and is a gem for the rock garden. It has usually two or more flowers on each stem. They are a brilliant yellow inside, with an outside of golden-bronze. Once planted they take care of themselves for a long time. There are, of course, many other forms, which space forbids me to mention, but they do not surpass, even if they rival, the ones that I have mentioned, all of which together would form a collection of which anyone might be proud.

Whitchurch. JOSEPH JACOB.

Rose Paul Transon.—This beautiful rambler proves itself one of the best for arches and other purposes to which the ramblers may be put. Its shining foliage makes it as distinct as Dorothy Perkins in that respect. The blooms are wonderfully sweet, most freely produced, and, in colour, are a beautiful shade of pink. The individual blooms have more substance than is usually found among the rambler section, while the growth is of the strongest.—T. H. SLADE.

Cucumbers.—The house having been made in readiness, as advised last month, there should be no delay in planting out cucumbers intended for furnishing winter supplies, to ensure their being well established before the dull days. The ridges should be formed well up to the lights, as this will keep the soil sweet, and the plants will reach the trellis sooner. If very bright weather prevails after they are planted, they will perhaps require a very slight shade till they become established. Maintain a temperature of 70 deg. at night and 75 deg. during the day. Close the house early in the afternoon on bright days, and well syringe the walls.—A. B. W.

FLOWERS AT LOCAL FLOWER SHOWS.

Village flower shows have done much to raise the standard of gardening amongst cottagers, working amateurs, and allotment holders, and, though too much must not be expected from the people who exhibit in the cottagers' section at these gatherings, there are many curiosities to be observed in addition to those referred to in the article which recently appeared in the GARDENERS' MAGAZINE on this topic, and various directions in which departure from old methods might reasonably be asked for. We are inclined to overlook the shortcomings of the cottager, and smile at them simply because the exhibitor is but a cottager; but should not an attempt be made to educate him up to better things by encouraging him to display the things he invariably grows so well in a more pleasing and natural manner?

I have no word but one of praise for the enthusiasm of the exhibiting cottager, and the way in which he grows his vegetables and flowers reflects great credit on him, and so far as vegetables are concerned he generally displays them on the show board in a way that leaves little room for criticism, when we consider that things have generally to be done in a hurry on flower show days. It is, however, with the flowers that our friend mostly stumbles, and the way these are exhibited at many village shows is perfectly ludicrous. People who know better see these "curiosities" of the cottager, and smile at his crude ideas, but they rarely help him by pointing out his errors and encouraging him to alter his ways. As for the exhibitor, he is a slave to custom; he always has shown his flowers in a certain way, just as his father did before him, and as he wins prizes, he assumes that it is all right, and that no departure from the old order of things is necessary. A very essential part of the stock in trade of the cottager who exhibits flowers is a show board, but it would be doing the show a good turn if he were deprived of it, because he would then be reduced to the necessity of adopting some fresh and more original method of exhibiting his flowers. I will allow that the show board is essential for the cottager to exhibit his cactus dahlias on, but when one sees, as I did the other day, half a dozen stocks stuck into the holes on a board intended for twenty-four chrysanthemums and towering up with an expanse of ugly bare timber beneath them, one may be forgiven for wishing that show boards could be abolished for ever. When the cottager does not possess an orthodox board, and is unable to borrow one, he secures the nearest possible substitute in the shape of something with a flat surface that he can bore holes through. I had a demonstration of this recently in the case of a man who was exhibiting zinnias, but he had no board, so he fell back on a starch box, and stuck the stems of the flowers through holes made in the lid. To make the thing a bit more ludicrous the name of the starch maker was printed in big letters on the top of the box underneath the flowers.

It is curious what a prevailing idea there is amongst cottagers to add some form of artificial adornment to flowers, but yet the fact remains, and at a show I visited this summer one ambitious exhibitor set up half a dozen very nice roses, but every bloom was encircled with a neat white paper collar. Fancy the queen of flowers being staged with a paper collar round the neck! If such a thing happened at one of the exhibitions of the National Rose Society how people would laugh, but because it was a cottager who did this there was no comment. On the other hand, the judges gave the first prize to the collared roses, and were in a measure right, as they were the best blooms, but they said nothing about the paper adornments, and the exhibitor went home, perhaps thinking that his brilliant idea of putting his flowers in paper collars had helped him to win premier honours. No one told him different, and doubtless he will do the same next year, but these are the directions in which the officials of local horticultural societies should endeavour to educate the exhibitors up to better things.

Sweet peas are now exhibited at every village show, and I am pleased to say that I have never seen them staged on a board, but always in glasses or jars, and probably the reason for this is that the sweet pea as an exhibition flower, is a modern acquisition, and no one has ever thought of staging it except in the way for which it is best adapted. A better understanding, however, is wanted as to what shall be shown with sweet peas in the way of foliage. Some exhibitors use nothing, and cram their flowers down into the receptacles without any suspicion of taste in arrangement, while others employ the orthodox gypsophila, or the light foliage of the sweet pea plant, than which there is nothing better; but there are other methods as well, and at a show quite recently I saw a collection of sweet peas set up with maidenhair fern. Needless to say, the combination was neither pleasing nor in character. At the same show another exhibitor used carrot tops, which were preferable to the fern; but why, in the name of all that is reasonable, should anyone hunt about for greenery to accompany sweet peas when the light tendrils and young shoots of the plant itself are so suitable?

Stocks are often a bone of contention at village shows. The schedule asks for six stems or spikes, and some exhibitors remove the side branches from the stems and show the central spike, while others cut the plant off above the ground and show the stem with its side branches intact, though both parties are in doubt as to whether they are doing right. I overheard a very heated argument a short time ago on this point, and an advocate of showing merely the central spike was very much upset that he did not get a prize, but he quickly disappeared when someone removed a stem from one of his jars, and revealed the fact that he had carefully removed the branchlets, and ingeniously wired them on to the central spike. After seeing this ruse, opinions generally veered round to the direction of showing the whole plant with its side branches intact, but the point is an interesting one, and I should like to hear other opinions on it.

In conclusion, let me urge a protest against the way collections of annuals and perennials and bouquets and baskets of flowers are staged at village shows. Be it basket or vase the idea seems to be to cram as many flowers into the receptacle as possible, with little thought about the arrangement of colour, and no consideration for beautiful flowers that are crushed out of recognition in order to cram them in. Surely the time has come when a different state of things should exist even at village shows, but year after year one has the same old complaint to make, and improvement seems a long time in coming. It should be remembered also that, just as the sale of an article is governed by the way in which it is displayed, so also are judges influenced by the manner in which a floral exhibit is set up. This is just as it should be, but if some means were provided by which judges could express their disapproval of the unnatural and even absurd way in which flowers are often exhibited, this would lead to improvement. Cottage exhibitors have got into a habit which has become like second nature to them, and they do not get out of it because it is the business of no one to point to a better way and act as guide.

G. H. H.

SOME NEWER NARCISSI.

(Concluded from page 699.)

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Incomparabilis Section.

We will now turn to that very large and important section, the Incomparabilis. One of the very finest of these which has been lately sent out is—

Bernardino.—It is a large flower with a large, well-expanded cup, prettily frilled at the edge with orange and apricot shading, segments creamy white. It has a long stalk and is a strong grower. £4 4s. each.

Brilliancy.—Best described as a much enlarged Barri conspicuus; may it become as popular as that fine old favourite. The size and brilliant colouring of this flower make it very attractive. £10 10s.

Gipsy Queen.—Is a very fine variety, it has only been exhibited once or twice, but attracted a great deal of attention on those occasions. It is a fine, well set up flower, with creamy white segments, broad and well formed. Cup large and expanded, yellow with broad edging of orange. £5 5s. each.

Heroine.—Best described as a glorified "Albatross." A very large flower, with pure white perianth and large cup, yellow with broad edge of orange scarlet. A fine plant, of good constitution and free-flowering habit. £8 8s. each.

Homespun.—This is an absolutely perfect flower of large size and beautiful clear uniform yellow, a firm, lasting flower. Our Cornish friends grow this to perfection; with me it has proved a fairly good doer, but is given to producing too many little offsets. £2 2s. each.

Scarletta is one of the very best of the red-cupped incomparabilis. It is not a large flower, but the cup is very brilliantly tinted with bright orange. It has come with good colour every year I have grown it, and the flower is a rare one to last. The segments are deep cream on opening, passing to white with age. 15s. each.

Gloria Mundi.—We must not overlook our old friend, for with all the new red cups there is nothing to beat it when well grown. The late Rev. Eugène Bourne and Mr. Young, a near neighbour of his, have from time to time exhibited glorious blooms of this fine variety at Birmingham.

Steadfast is a very fine incomparabilis, the segments are white, very firm and overlapping, retaining their shape until the flower is quite dead. The cup is almost cylindrical, bright rich yellow. Opens very late, and helps to prolong the season. 7s. 6d. each.

Will Scarlet, of which an illustration is given, possesses the largest and richest red cup of any variety I know of, and makes a very telling effect in a bunch; unfortunately the perianth is somewhat rough and irregular, nevertheless it is worth growing for its colour only. 20s. each.

Cossack.—This among the small cups (Parvi coronati) is one of the newest and brightest, with broad overlapping segments of a creamy white. Well formed crown of deep red. Very brilliant in effect. £5 5s.

Furnace is a quite remarkable flower, the segments are well expanded, colour light yellow, crown nearly flat and of brightest orange scarlet. It is rather an unusual combination of colouring and very effective. I have not the price at hand to quote, but know it to be a stiff one.

Englehearti.

Of the Englehearti section those having flat disc-like crowns, Incognita and Egret, are good, but I have found all of this section difficult to grow on my strong soil; they would no doubt succeed better on a lighter and drier soil.

Burbidgei.

The Burbidgeis are as a class rather small and not very showy, but there are some gems among them all the same. Cresset, Firebrand, Hyacinth, Scarlet Eye, are some of the very best.

Double Narcissi.

Doubles have not received quite so much attention from the hybridists as the single varieties, but we have in Argent, Plenipo, and Dubloon, three which are a distinct advance upon the older ones, such as the three Phœnix. The feature of these newer ones is the great improvement in stalk, which enables them to stand upright in any ordinary weather, and even to withstand gales of wind; they are all moderate in price.

NARCISSUS WILL SCARLET.

Poets.

The poeticus family has been immensely enriched of late years, and we now have improved flowers of all degrees of earliness and lateness. Some of the best to be had at a moderate price are Cassandra, Epic, Homer, Horace, Juliet, Virgil.

Buying Daffodils.

I fear, Mr. Editor, that this list rather resembles a trade catalogue, but I thought your readers would like descriptions given to the newest varieties, for they are no doubt still strangers to many daffodil lovers. I have added the prices because experience has taught me the wisdom of it, for if a person sees a fine flower, or reads a taking description of one, and places an order for say half a dozen, and then finds they are £10 10s. each, the said person is apt to look foolish when the bill comes in! I think many amateurs make a mistake in not trying some of the newer varieties. Buying new narcissi is not like buying some expensive bulbs which are flowered once and then thrown away; but providing the novelty has a decent constitution it will soon increase, and the garden gradually gets filled with choice things, instead of becoming filled up with weedy varieties which are hardly worth the room they occupy. Of course there are many of the older kinds which will never be driven out, or at least will hold their own for many a year to come; still, a few new things added from time to time gives a greatly added interest to one's garden. It is quite an excitement to visit one's beds in the spring and look out for the first open blooms of one's latest purchases.

I would advise amateurs to grow the more expensive daffodils in nursery beds in the kitchen garden, rather than attempt to grow them in a mixed flower border, where they are closely surrounded with strong growing plants, or exposed to the attacks of slugs which are harboured by the said plants; while, if the label should chance to get lost or displaced, what more annoying thing can happen than to stick a fork into the group and disturb it when the roots are in full activity; perhaps even spearing one of the treasures as well!

J. Duncan Pearson.

Lowdham, Notts.

Pigmy Narcissi.—Remember when planting such dainty bulbs as Narcissi minimus, corbularia, and triandrus that their flowers, though extremely beautiful, are also very delicate. Of foliage they have really none to protect their gay spring blossoms from inclement weather and consequent soil splashing. Give them a carpet of some close-growing plant, through which they will push their blossoms, and their flowering season will be prolonged, and their beauty remain unsullied. Arenaria balearica, or Thymus serphyllum in several varieties is just the carpet they want.—Thomas Smith, Walmsgate Gardens.

Pears in Pots.—These are carrying a good crop at the time of writing. The trees of Williams Bon Chretien are ripening good fruit. Owing to the dry weather birds are making a raid on pears inside, and netting has to be resorted to. The trees should have plenty of clean water, and be well supported with stakes. Other varieties carrying good crops are Durondeau, Doyenne du Comice, one of the best of croppers in pots, but requires to be well thinned. Beurre Superfin makes a good pot variety, and will soon be ripening. Marie Benoist is a good late pear, but too large for dessert. Beurre Giffard is another good early pear for pot culture. The same may be said of Beurre de Jonghe. Trees plunged outside should be well supplied with water and syringed when the weather is dry.—A. B. Wadds.

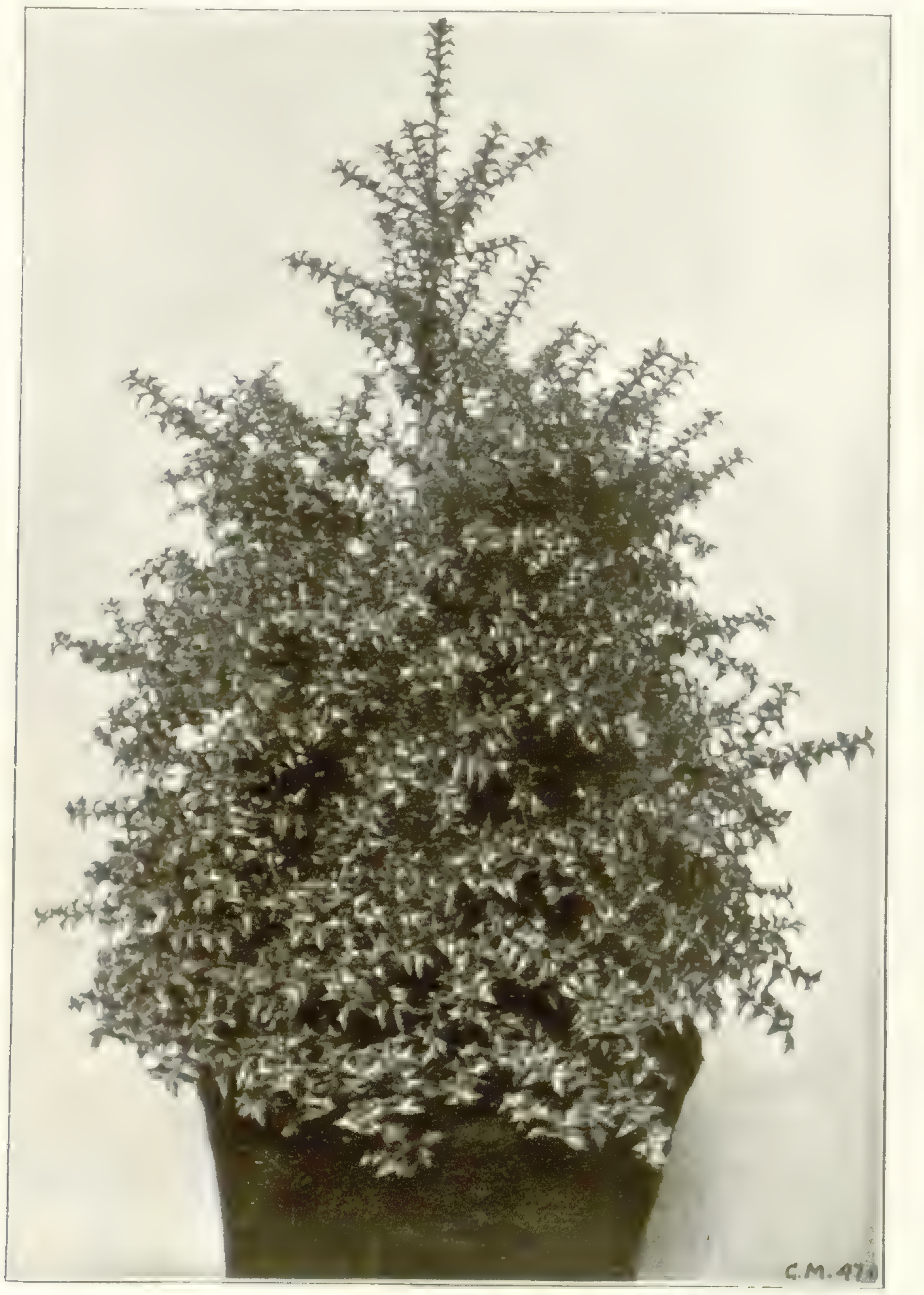
NEW PLANTS, ETC.

ILEX PERNYI.

A remarkably distinct species of dwarf growth introduced from Western China. The leaves are very small, spiny, and of a deep shining green colour. It has the promise of proving valuable for the front of shrubberies, rockeries, and similar places. F.C.C., R.H.S., September 1. Messrs. Jas. Veitch and Sons, Chelsea.

PTERIS AQUILINA NICHOLSONI.

A very elegant form of the bracken fern, and evidently very free growing. It was exhibited as a basket fern, the long trailing fronds being most effective. The fronds were about three feet in length, and finely divided. A.M., R.H.S., September 1. Messrs. H. B. May and Sons, Edmonton.



ILEX PERNYI.
A dwarf-growing holly from Western China with small dark green leaves. Exhibited by Messrs. J. Veitch and Sons, at R.H.S. Meeting on September 1, when it received a F.C.C.

PHLOXES.

General Von. Lassberg. — A pure white variety, of medium height and high quality; the spikes are large and the individual flowers are equally conspicuous. A.M., R.H.S., September 1. Messrs. Gunn and Sons, Olton, Birmingham.

Violet.—A very fine variety, the flowers large, the colour rich violet. The spikes are large and well arranged. A.M., R.H.S., September 1. Messrs. Gunn and Sons.

ROSE MRS. LITTLETON DEWHURST.

An extremely beautiful rambling rose, obtained as a sport from Lady Gay. The flowers are white with a slight suffusing of pink, and, as in the case of the parent, are borne in great profusion. A.M., R.H.S., September 1. Messrs. J. R. Pearson and Sons, Lowdham, Notts.

CATASETUM RUSSELLIANUM.

A pretty species, the flowers pale-green with deep green veins. A.M., R.H.S., September 1. Sir Trevor Lawrence, Bart., Burford Lodge.

DAHLIAS.

Marathon.—A large cactus variety with long florets, the colour being the centre of the flower, pale-yellow, shading off to rosy carmine, should make a good exhibition bloom. A.M., R.H.S., September 1. Messrs. Jas. Stredwick and Son, St. Leonards.

Tom Jones.—An excellent show variety of fine form and build, rich creamy white, heavily edged and flushed rosy lilac. A.M., R.H.S., September 1. N.D.S., F.C.C., September 3. Mr. S. Mortimer, Farnham.

Jasper.—A fine show variety, blooms of full size, and a rich rose-purple colour. N.D.S., F.C.C., September 3. Mr. S. Mortimer.

Minima.—A delightful little pompon cactus of a rich claret colour. N.D.S., F.C.C., September 3. Messrs. Burrell and Co., Cambridge.

Una.—A new break in the cactus varieties, and extremely beautiful. The blooms are large, and the petals are forked at the tips, giving the flower a full and unique appearance. The colour bright pink. N.D.S., F.C.C., September 3. Messrs. Burrell and Co.

Mrs. W. W. Merry.—A single variety, the flowers scarlet, shading to orange at the edges of the petals; very good form. N.D.S., F.C.C., September 3. Rev. S. Pearce.

Adela.—A pure white pompon variety, good in form and petal. N.D.S., F.C.C., September 3. Mr. Chas. Turner, Slough.

Rev. T. W. Jamieson. — A fine cactus variety, the blooms large, and of good form; yellow, deeply edged with lilac rose. N.D.S., F.C.C., September 3. Messrs. Jas. Stredwick and Son.

Betty. — A beautiful single variety, the blooms of medium size, the colour deep lilac rose, with a broad belt of crimson round the disc. N.D.S., F.C.C., September 3. Messrs. J. Cheal and Sons, Crawley.

Mrs. Alfred Dyer. — A pleasing cactus variety, the centre pale lemon, shading to rosy pink. N.D.S., F.C.C., September 3. Messrs. Jas. Stredwick and Son.

Debutante. — A large exhibition cactus variety. Pale pink, tipped with white. The petals are long, and twisted. N.D.S., F.C.C., September 3. Messrs. Jas. Stredwick and Son.

GLADIOLUS PRIMULINUS.

It is yet early to fully estimate the effect this lovely species of gladiolus from the Zambesi will have upon the future of the race of gladioli in general.

The distinct character and the lovely yellow colouring of G. primulinus marks it for especial notice in the near future. A great point in its favour is the light arrangement of the blossoms upon the tall spikes, giving it a grace and a balanced elegance that one does not meet with in the massive-flowered hybrid gladioli that are now so widely known.

The fact that this species has hitherto done well both here in England and in the Channel Islands, may reassure intending growers as to its suitability for general culture in the garden. What is of more importance, however, is the fact that it is proving most amenable in the hands of the hybridist, and those who thought that the range of colouring displayed in hybrid gladioli had almost reached its limit will be agreeably surprised to hear of the possibilities of varieties raised from primulinus.

Some of the loveliest shades of colour it is possible to imagine have been produced upon seedling varieties, and they are colourings which in delicacy and charm will prove well-nigh unsurpassable. These primulinus forms defy description. The soft, yet rich rosy-salmons, orange, old gold, terra-cottas, soft apricot, and a wealth of other shades, mark a great advance in the gladioli family.

Much yet remains to be done, but the results already obtained are sufficient to establish the merits of the new types, and to indicate that they will become popular favourites in the near future. The general character of the seedlings in natural grace, well-formed spikes and blossoms, and their exquisite colourings, marks them as ideal decorative garden subjects.

P. S. H.

ERANTHIS HYEMALIS.

Conjure up in your mind a plant that luxuriates under the heavy canopy of beech foliage, maintaining its existence, successfully fighting the hungry surface roots of this tree, and bathing the ground in a blaze of living gold during February, and whose luxuriant dark-green leaves clothe the ground with a dense carpet of foliage long after the flowers have gone. For less than a sovereign you can buy a thousand winter aconites, and, if planted now, they will unfold the bright buttercup-yellow flowers in prodigal profusion, and increase from year to year in a surprising manner. Eranthis hyemalis grows freely in any moderate soil; the leaves are often the only reward in rich soils, and it succeeds to perfection upon our thin chalk soil.

Thomas Smith.

Walmsgate Gardens.

EARLY TULIPS IN THE GARDEN.

No other plant flowering early in the spring can equal the tulip for brilliance and variety of colouring, either in the flower garden or as forced under glass. It has, moreover, the merits of being hardy, easy to grow, and cheap, as bulbs go, consequently it is an almost universal favourite with those who have to provide displays in the garden or in the house during the late winter and spring months. The annual importation of early tulip bulbs to this country must be immense, for although bought in bulbs can be depended on to bloom satisfactorily almost anywhere, and in any kind of soil, the soil of most gardens in the United Kingdom is not favourable to the good growth and increase of the bulbs, and we are, to a large extent, dependent on the growers in Holland and elsewhere for the great majority of our bulbs.

There are limited areas in our own country, such as the sandy soils of parts of the eastern counties, in which very good bulbs can be grown, and I have myself grown bulbs in a certain district in Suffolk equally as good as the imported bulbs, and with a considerable annual increase of stock. This is sufficient to prove that they might be grown commercially, given the right treatment and soil, but these favoured districts are not sufficiently well known to commercially-inclined growers. Here, in a part of Derbyshire where the soil is naturally heavy, and the early season too cold to permit of good ripening, the tendency is towards deterioration, and home-grown stocks of most bulbs have to be frequently added to by purchasing from more favoured districts or countries, consequently it is far better to leave the matter of bulb production in other hands, and only to save the best of the home-grown bulbs for future planting.

Planting in Beds and Borders.

Certainly the growth is finer and the flowers better from well-prepared ground, and to provide this a goodly quantity of well-rotted manure should be dug in, say, early in October, and with this, if the soil is heavy, should be incorporated a plentiful dressing of sand or road grit, and a sprinkling of freshly-slaked lime. The bulbs of early-flowering tulips should be planted at the end of October or early in November, at a depth of about four inches, and the same distance apart. Each bulb should be so planted as to rest firmly on its base, and if the surface can have a mulching of cocoanut fibre or leaf-mould and sand when the growth appears above the soil, this will be of great assistance to the development. Cocoanut fibre is perhaps better than any other material for this purpose, as it prevents the flowers from becoming splashed with soil.

Tulips may be planted in a number of ways to suit various tastes. They look magnificent when massed in their colours, or with two or three well-blended colours together. In the latter case it is necessary to take care to select varieties that not only associate well as to colour, but that are also suited to each other in the matter of height and time of flowering. A good bulb catalogue will give the necessary particulars in these matters, and should be studied by the novice to prevent errors. The Duc van Thol varieties should be planted by themselves, as they are earlier than the others. Besides massing, there are other pleasing ways of growing tulips, one of which is to use them as "dot" plants over a foundation of snowdrops, crocuses, scillas, or chionodoxas, all of which flower in advance of the tulips, but produce good foliage to make them a good setting. Another way is to plant the bulbs in turf near the fringes of the lawn or any other such suitable spot, but this method is not suited for bulb production, and no practical result beyond the embellishment of the sward should be expected from bulbs so planted.

Lifting the Bulbs.

Early-flowering tulips may be lifted in time to clear the ground for the general

AN ATTRACTIVE EARLY-FLOWERING TULIP, ROSE GRIS-DE-LIN.

Flowers of large size, the colour rich rose with white margin.

run of summer bedding plants. One need not wait till the growth has died down before lifting, though it is better to wait until the stems are tough enough to allow them to be tied in a loose knot—an old-fashioned way of testing the near approach of ripeness; but they may be lifted even earlier if care is taken not to damage the tops, and to pack the bulbs carefully into boxes with just a little soil round them, and stand them in an open place, as under these conditions they will complete the swelling and ripening of the bulb almost as well as if left later in the ground. When the bulbs are dried off they should be stored in a dry, airy shed, and before planting they should have much of the outer scale removed, as these scales are then useless, and often contain fungoid germs that may spread to the growth during the ensuing year.

Effective Varieties.

The number of good varieties is so great that any short list must be incomplete, and the better way to choose is to study a good catalogue for heights, colours, and descriptions, but I may say that in growing Keizers Kroon, red and yellow; Couleur Cardinal, crimson scarlet; Rose Gris-de-Lin, rose and white; White, Yellow, and Scarlet Pottebakker; Wouverman, purple; Yellow Prince, yellow with red streak as the flower ages; Vermilion Brilliant, rich scarlet, Thomas Moore, apricot; La Reine, white and rose; Chrysolora, yellow; Violet Queen, purplish carmine; Ophir d'Or, golden yellow; Dusart, vermilion; Princess Ida, white and yellow; Stanley, rich rose; Crimson King; Princess Marianne, white and rose; and Artus, scarlet, no one will be disappointed, though there are other newer varieties, some of which may be found improvements on the above well-tried varieties.

J. C. TALLACK.

Shipley Hall Gardens.

THE STORY OF THE DAHLIA.

Ask nine gardeners out of ten how the dahlia was introduced into England first, and they will answer that we are indebted for this to the Swedish botanist, Dr. Andrew Dahl, who gave the flower its name. As a matter of fact, however, the dahlia is said to have been discovered by Baron Humboldt, in 1789, whereas Dr. Dahl did not obtain it from Lady Holland until 1804. Baron Humboldt brought it to England the same year as that in which he found it, but the plant was neglected and died out of British cultivation, more shame to us, though it flourished meanwhile in the Royal Gardens of Madrid, a carefully guarded speciality that the Spaniards refused to share with other lands.

FIRST PRIZE BASKET OF DAHLIAS
Exhibited by Mr. W. Treseder, Cardiff, at the National Dahlia Society's Show, and described in the report which appeared in our issue of the 5th inst.

Next a Frenchman, Count Lelieur, contrived, we do not learn how, to obtain one of those roots from Madrid, and then his florist countrymen entered so enthusiastically into dahlia culture that, when a general peace was proclaimed in 1814, there were found to be many beautiful varieties in existence that English horticulturists were able to see and covet. Presumably, therefore, Lady Holland and Professor Dahl, who had been in possession of the dahlia since 1804, had not done as well with it as had French floriculturists.

What was the dahlia's original name. That seems to be an unanswered question. Certainly Dr. Dahl does not quite d to have it as a perpetual memorial countries. When Baron Humboldt covered the plant in Mexico, it was gr ing in sandy meadows several hundre above sea-level. Some amusing proph combined with historical facts, are to be found in an old volume, republished in 1864, and entitled "The Kitchen and Flower Garden," by Eugene Sebasti Delamer. This author states: "D variabilis is a floral upstart, the whole course of whose rise to fame and fortune is within the memory of many persons now living. The original single-flowered plant, from Mexico, first claimed the attention of horticulturists as an edible root, whose repulsive, nauseous, peppery taste insp equal disgust to man and beast. The single dahlias were thought fine things, and various gay colours were obtained from seedlings. Then came the phenomena double dahlias, which were taken favour by enterprising florists, and proved, and improved, till they be what we see them now. The dahlia essentially a made flower; its cultivators proposed to themselves a certain model, as to form and furnishing of petals, which they determined to perfect, and by skill in hybridising, by outlay in sowing enormous numbers of seeds, and, above all, by patient perseverance, they have perfected it. One great point, however, they have not attained—the production either of a blue, or of an agreeably-scented flower. No attempt will be made here to name any of the choice varieties of dahlias, which, at the moment of this present writing, may chance to be the favourites of the day. The existence of this little book may be durable than most of theirs, and it wou be of little service to print a list that wou soon become obsolete by the intrusion fresh candidates for the public applau . . . Perhaps, though not probably, blue perfumed dahlia will start from the earth; in which case, those which now figure in the parterre will have to hide their diminished heads, for a time at least Many old-esteemed varieties have completely disappeared, while the mercan horticulturists, both of Great Britain the Continent, annually inundate market with a copious flood of novelties, many of which are inferior to their predecessors."

Having relieved his mind by abusing this plant, the writer goes on to detail the troublesomeness of its culture. "Both the leaves, stem, and root are killed by frost; the latter, consequently, must be kept in a place of safety during winter. The stem is fragile, and apt to be blown down or snapped short by high winds; it is, therefore, best supported by a stake inserted into the ground at the time of planting the root or cutting. The young shoots, in their early growth, are apt to be eaten off by slugs and snails, which must be driven off or destroyed by circles of lime and ashes, or by waterings with lime-water. The blossoms are apt to be bitten and spoiled hungry earwigs, to obviate whose onslaug traps of hollow bean-stalks, to be inspect once or twice a day, are hung at enticing intervals amidst the foliage, or circular earthen pans, to be filled with water, placed at the foot of each plant in the early stage of its growth, so as to keep the enemy at bay by a miniature kind of encircling ditch. Choice blooms for exhibition are shaded and protected in various ways."

After describing the methods of planting tubers and rooted cuttings, similar to the culture pursued to-day, the author deals with another branch of the subject.

"In the climate of England, dahlias are unable to complete the entire circle of their vegetation. In October they are in full force, and the slightest frost destroys them then. In order to prolong the duration of their blooming they are sometimes planted in large pots, which are plunged in the border during summer, but are lifted and removed to a greenhouse or conservatory as autumn advances. The forward buds are thus enabled to expand in safety. But plants so treated display only a short-lived beauty; to flower well, dahlias must have the open air. The tubers ought to be left in the ground some time after the autumnal frosts have destroyed the foliage; they still find nourishment there, complete their ripening, and are consequently less difficult to keep. About the middle of November is the usual time for taking them up, an operation which ought to be carefully performed, avoiding wounding the roots, and choosing, if possible, a bright, calm day. They may be left a few hours to dry in the open air, to be thence removed to any place secure from frost, where neither the excess of dryness or moisture is to be feared." In conclusion, Mr. Delamer remarks: "The dahlia derives its principal value from its filling the void left by the disappearance of summer flowers, as well as from displaying its finest blooms at the season when our aristocracy return from town to their country seats. It is a gay, flaunting, showy plant, which has the great merit of usefulness in its way; but it is far from possessing all that can be wished for in a flower, and no doubt many of its early worshippers will now confess that they prostrated themselves too blindly before their idol." But everyone has, and ought to have, his taste. We have no right to blame, though we may not sympathise with, the amateur who prefers a dahlia to a rose.

A smaller species, D. cosmæflora, which has not yet started off into varieties, is of dwarfer habit, and produces flowers with a purple disk and lilac rays.

Lastly, we may remember that the emblem of the dahlia is pomp, surely one most unfitting to the classic elegance of the single cactus, or the tiny rosette beauty of the pompone?

M. H.

A Spring Picture.—There is a pretty spring picture which occurs when Dog's Tooth violets and fritillarias spring in hundreds from grassy banks or lawns. The native species and their progeny—e.g., Erythronium Dens-canis, and Fritillaria meleagris, are partial to limestone soil, but none of the others seem to succeed where there is an excess of this substance. Plant the bulbs six to nine inches deep, according to soil, the maximum depth obtains on light, warm soils.—Thomas Smith, Walmsgate Gardens.

Climbers should be given good attention. Where the growths have become too dense and crowded, remove all surplus shoots, regulate and secure the remaining. Where it is desired to protect the fruits or berries of Pyracantha Lelandi from birds it may be necessary to hang light fish netting over them. Where Tropæolum speciosum thrives this should now be in its glory; a cool, partially shaded position is best for it. The old wood may be removed from many climbers, though nothing in the way of a general uning should be attempted, and in the case ampelopsis in variety and a few other umn-tinted ones, as far as possible, a careless profusion should be allowed until after the foliage has fallen. In suitable positions the beautiful vitis in variety give easing effect, especially when the leaves ve assumed their autumn tints.—E. F. Hazelton, Knowsley Gardens.

WORK FOR THE WEEK.

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CONSERVATORY AND GREENHOUSE.

LIFTING PLANTS.—Where such plants as bouvardias, solanums, marguerite carnations, and the like, have been planted out for the summer months, there should now be no further delay in lifting them that they may become established in their pots before winter. The difficulties of guarding against a serious check at a time when the plants are in full vigour prevent this system from being generally adopted. If the positions and soil are suitable, they make satisfactory progress with little trouble to the grower compared with those kept in pots. In re-establishing the plants, it is necessary to keep them for a time in a cool and somewhat close atmosphere, so that there shall be no great drain on their resources in the way of evaporation until the roots have resumed activity. In husbanding these resources, shade plays an important part, and should be utilised more or less until the plants are able to bear full exposure without flagging. The syringe, too, may be used, except in the case of the carnations, as a means of applying moisture to the foliage and the atmosphere. Great care should be taken in lifting the plants, so that they may carry as much of the soil and as many roots as can be conveniently transferred to the pots, and in potting care must be taken not to disturb the ball by ramming or jolting.

HARD-WOODED PLANTS.—Azaleas and such other hard-wooded plants standing outdoors should now be taken under cover. Examine the azaleas for thrips, and give them a vigorous syringing with a good insecticide, laying them on their sides, and turning them so as to reach every part with the insecticide while still outdoors. Heaths, which are subject to mildew, should have a light dusting with sulphur, and should not be crowded in the house. Camellias may safely be left out for a week or two longer, unless they are wanted to flower early, for they are less liable to injury from frost or wet than are many other hard-wooded plants.

IXIAS.—We obtain a great variety of colours in these, and they are easily grown. They should be potted early in the autumn. Use a compost consisting of sandy loam and leaf-mould. If protected from frost it is better not to use any extra covering on the surface of the pots. They may be taken in and placed on a shelf or in any light position, and will come into bloom in time to succeed some of the earlier flowering bulbs.

FIRST PRIZE BOUQUET OF DAHLIAS

Exhibited by Mr. J. Walker, Thame, at the National Dahlia Society's Show.

LACHENALIAS.—These are very pretty for spring flowering, and come into bloom quite early without forcing. After they have done flowering they may be gradually dried off, and later on repotted, selecting the largest bulbs, and about six in each pot make a nice show. The varieties are not numerous, and all are pretty; but Nelsoni is the finest for pots, having long spikes of rich yellow flowers.

LEUCOJUM VERNUM, OR SPRING SNOWFLAKE.—The bulbs, if potted in the autumn and kept in a cool frame or pit during the winter, will soon start away when placed in a sunny position in the greenhouse in the spring, and are never out of place.

DAFFODILS.—The ordinary varieties are most showy for the greenhouse, and all the newer and choicer varieties may be grown, but such as Emperor, Bicolor, Horsfieldi, Princeps, Obvallaris, Telamonius plenus make a good show. Potted now, and kept in a cool pit until they are well rooted, they may then be taken into warmth as required. —T. B. FIELD, Ashwellthorpe, Norwich.

THE ORCHID HOUSES.

CALANTHES.—The deciduous calanthes are unusually forward in growth with us this season, and, although there is no sign as yet of the foliage fading, the flower scapes are rapidly advancing. To produce satisfactory conditions and the development of the proper colour of calanthes, I consider they must be thoroughly matured and ripened before the flowers commence to expand. I do not wish to convey for one moment that it is necessary the plants should lose their foliage before flowering, but it is to the proper ripening of the pseudobulbs to which I allude. Care should now be taken to afford all the light available during the next few weeks, and it is often at this stage when the pots have become filled with roots that one is considering the necessity of feeding. We do not "feed" any kind or class of orchids here. We have a plentiful store of rain water, and even with a very dry season like the present, we have never run short. I consider that where this is so one has at hand all that is required for the successful culture of orchids. I do not wish to condemn those who feed calanthes and other orchids with liquid cow manure, etc. If such methods are found successful under the particular circumstances, then by all means continue them.

PHAIUS.—The species and hybrids are now in full growth, having become well established after the repotting of a few weeks ago, consequently they should now have every encouragement. The temperature at night should be kept at about 60 degrees for the next few weeks. I do not advise a higher temperature at this season, as this would result in too early flowering to give good results. If the plants are not required until April and May, the cooler they can be kept at this season of the year the better. I consider 55 degrees at night ample under such circumstances. As the season advances, and with cooler conditions prevailing outside, it is advisable to keep the atmospheric moisture within bounds, especially at night. Damping should be done sufficiently early in the day to permit the excess of moisture to disperse before the evening temperature is reached.

SPATHOGLOTTIS.—The few species and hybrids of this genus are most interesting and desirable. There seems to me to be a great possibility of the production of bigeneric hybrids from the intercrossing of these with some of the allied genera, such as bletia and phaius. The spathoglottis will at the present season be rooting freely from the newly developing growths, and any repotting necessary should be attended to without delay. The pots used should be clean and well-drained. The potting compost we find suitable is a mixture of equal parts fibrous peat, turfy loam, and chopped sphagnum, with sufficient sand or broken crocks added to render the compost porous. The plants that are repotted should be kept shaded from strong light for a time, and the atmosphere should be constantly moist about the plants. Where the plants are grown in a stove or hot-house, constant observation is necessary to prevent attacks from thrips and red spider. Spraying and sponging is the best means of keeping these pests in check.—H. J. CHAPMAN, Oakwood Gardens.

THE FLOWER GARDEN.

SUMMER BEDDING.—As the beds lose their effectiveness, they should be cleared and prepared for autumn planting. All hard-wooded dot or other plants that are used from year to year must be lifted very carefully to avoid unnecessary damage. If they were retained in pots and only plunged there will be no danger, but with those bedded out great care will be necessary. Old, soft-wooded plants, of which there may be any scarcity of stock, should also be carefully lifted, and either potted or boxed up. In most cases the tops may be reduced in size. Zonal geraniums, if not cut back, may have a large number of their old leaves removed. This will relieve the plant somewhat, and also help to prevent decay later on. If kept moderately close and partially shaded a short time after potting they will soon make new roots. A number of old plants that may now be lifted are very useful for vases and the centre of beds the succeeding year, being rather more floriferous than young plants. Liliums, gladioli, Galtonia (hyacinthus) candicans, and any other bulbs may also be lifted and sorted. Lilium bulbs should not be allowed to remain exposed to become dry and shrivelled, but placed in boxes in a cool frame. Gladioli corms and Galtonia bulbs, if not well ripened, should be placed in damp soil in sunny positions, where they can gradually mature and be dried off. Bulbs that have become divided and have formed a number of small ones, are not worth troubling about, as good strong flowering bulbs can now be procured so cheaply. After clearing beds cut the verges, and if soil is naturally cold and wet, a dressing of old mortar rubbish, wood ashes, or road grit will be very helpful, especially if wallflowers, silene, aubrietias, saponarias, myosotis, or arabis are to be the next occupants.

ANTIRRHINUMS, PENTSTEMONS, AND CALCEOLARIAS should now be propagated from cuttings. An unheated frame is the best suited for the cuttings, but sufficient protection must be given to keep severe frost out. Place from four to six inches of good soil in the frames, and give a good sprinkling of sand on the top. The soil should be made smooth and firm, make the cuttings about four inches long, remove the lower leaves, and then dib them in four or six inches apart. Keep them nicely damp, but not saturated. Shade in bright weather, and keep the frame quite close, except on calm, mild mornings, when the lights may be removed for about three-quarters of an hour. Calceolarias take rather longer to root than some other plants, and must not be given much air until it can be seen that they are rooting.

BORDER CARNATIONS.—As the layers of these become rooted, they should be lifted and either potted up or planted direct into quarters for flowering next season. In localities where climate and soil are suitable it is best to plant them direct, as by early planting they become well established and pass through the winter unharmed. If due attention is given them in spring they make a strong growth and give satisfactory results. In other places it may be more desirable to pot them up singly, using three or three and a-half-inch pots, and winter them in cold frames. The Nidd Hall variety of the old clove has done well with us here this year, though, unfortunately, it is not as strongly scented as the old form, which will not succeed with us; neither will the Limber variety, although in appearance, colour, and scent it seems very much like Nidd Hall. Before planting deeply dig, but do not heavily manure the ground. A good dressing of sharp material on heavy soil and well-decayed leaf-soil on light soils will be most helpful. Wood ashes or burnt refuse may with advantage be applied to both. Lift the rooted layers with very great care to avoid damaging the roots. Plant firmly in the ground, and, should weather be dry, keep the soil in a moist condition. A dusting of soot and lime, or fine wood ashes, at intervals will tend to ward off slugs and sparrows. —E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

PEACH TREES.—Although too early to commence planting, it is none too soon to commence preparations where planting is anticipated on a large scale. At one time it was considered almost useless to plant peach and nectarine trees on the open walls with the hope of being rewarded with success; but if given good position and planted in well-prepared borders, and the trees carefully attended to during their growing season, the trees will in most districts produce excellent crops. The best varieties only should be planted, and they should be selected to suit different districts. Late varieties can be satisfactorily grown in the south, but in the colder parts probably the early and mid-season kinds only should be planted, and the borders which must be thoroughly drained and the soil raised several inches above the surrounding land, should have a decided slope.

BORDERS FOR PEACHES AND NECTARINES.—If it is intended to plant peaches and nectarines on a south aspect, as soon as convenient the borders should be prepared, so that when the time comes for planting the trees the soil may have become settled. Although peaches delight in a sweet, moderately rich soil, the roots require a firm grip —a border to each—and to support fruitful trees for many years should be two feet deep, and should rest on six inches of drainage. If the land is of a stubborn character small drain pipes ought to be laid crossways at intervals along the border, and a larger drain along the front to carry off the water. After the drainage has been made perfect, cover the rough material with turf, grassy side downwards, and then fill up with a mixture of loam, wood ashes, old brick mortar, a few crushed bones, and well-decomposed manure, the latter rather sparingly. If this mixture is turned over about twice, and then when filling up the borders rammed rather firm, more or less according to the nature and condition of the soil, the trees ought to produce good fruit. The width of the borders for a few years need only be four to five feet, but as the trees increase in size, a few feet wider should be afforded them.

REGULATION OF WOOD.—Keep all sub-laterals removed from the trees of those bearing fruit, and as fast as each tree has been cleared of its crop a little thinning out may be done. Shoots which have borne fruit, and are not wanted for another year should be cut out and replaced by the young wood preserved for next year's crop. Peach trees require careful attention, both at the top and at the roots, the aim being to furnish each tree with medium, well-ripened wood, not too thickly trained. Earwigs have been rather troublesome of late, and a great many have been caught and destroyed. Short pieces of bean stalks were placed behind the branches and examined three times weekly, and when taken from the trees they were blown through over a pail containing paraffin and water. I have also heard, though I have not yet practised it, that smearing along the bottom of the walls with grease will prevent them from doing much harm. A strip of smeared paper placed round the stem will prevent earwigs going up the tree by way of the trunk.—H. MARKHAM, Wrotham Park, Barnet.

BULB DONT'S FOR BEGINNERS.

Don't conclude that big bulbs must necessarily mean big spikes of blossom; small, firm, well-ripened bulbs are where the hyacinth hides its treasure.

Don't leave bulbs in unopened packages indefinitely, spread them out in single layers in a cool cellar, but

Don't delay planting longer than you can avoid, and

Don't follow this advice with liliums; these will remain in the grower's package with perfect safety for several weeks, should the ground not be ready for them. Liliums deteriorate if kept in dry rooms unpotted, and they are equally susceptible of moisture, showing premature growth in cellars or outhouses that are over damp; therefore, avoid extremes, but plant at the earliest opportunity.

Don't plant when the ground is sticky.

Don't plant shallow; twice the depth of a bulb from root to apex is a safe guide.

Don't use either dirty pots or wet soil.

Don't—and this has often been paid for—

Don't think for one moment that low-priced bulbs are always cheap.

THOMAS SMITH.

Walmsgate Gardens.

NATIONAL CHRYSANTHEMUM SOCIETY.
EARLY AUTUMN EXHIBITION.
October 7th and 8th, 1908.
Schedule of prizes and all particulars as to mem-[illegible] may be obtained post free on application to [illegible] Secretary, RICHARD A. WITTY, St. James's, Swains Lane, Highgate, London, N.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Six-[illegible] per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

SEPTEMBER 15.

The exhibition held on the above date was a good one, and distinctly characteristic of early autumn. Dahlias were in great plenty and beauty, and, though there did not seem to be any very marked enthusiasm over them, their absence would have resulted in a meagre display. Orchids were moderately-well represented, and there was a bright show of hardy autumn flowers.

FLORAL COMMITTEE.

Mr. Amos Perry, Enfield, showed a splendid group of hardy flowers that was one of the features of the show. Liliums were splendid, and the delphiniums were a revelation for so late a date. The Kniphofias nobilis, McOwani, Corallina, and excelsa were magnificent, and Michaelmas daisies, pyrethrums, and poppies added their quota of effect. Messrs. Wm. Cutbush and Son, Highgate, had a good batch of the new brilliant Coleus Cordelia, a very handsome lot of the popular winter-flowering carnations, in large vases, and a selection of especially fine pentstemons. The Guildford Hardy Plant Company, Guildford, submitted a small collection of hardy flowers.

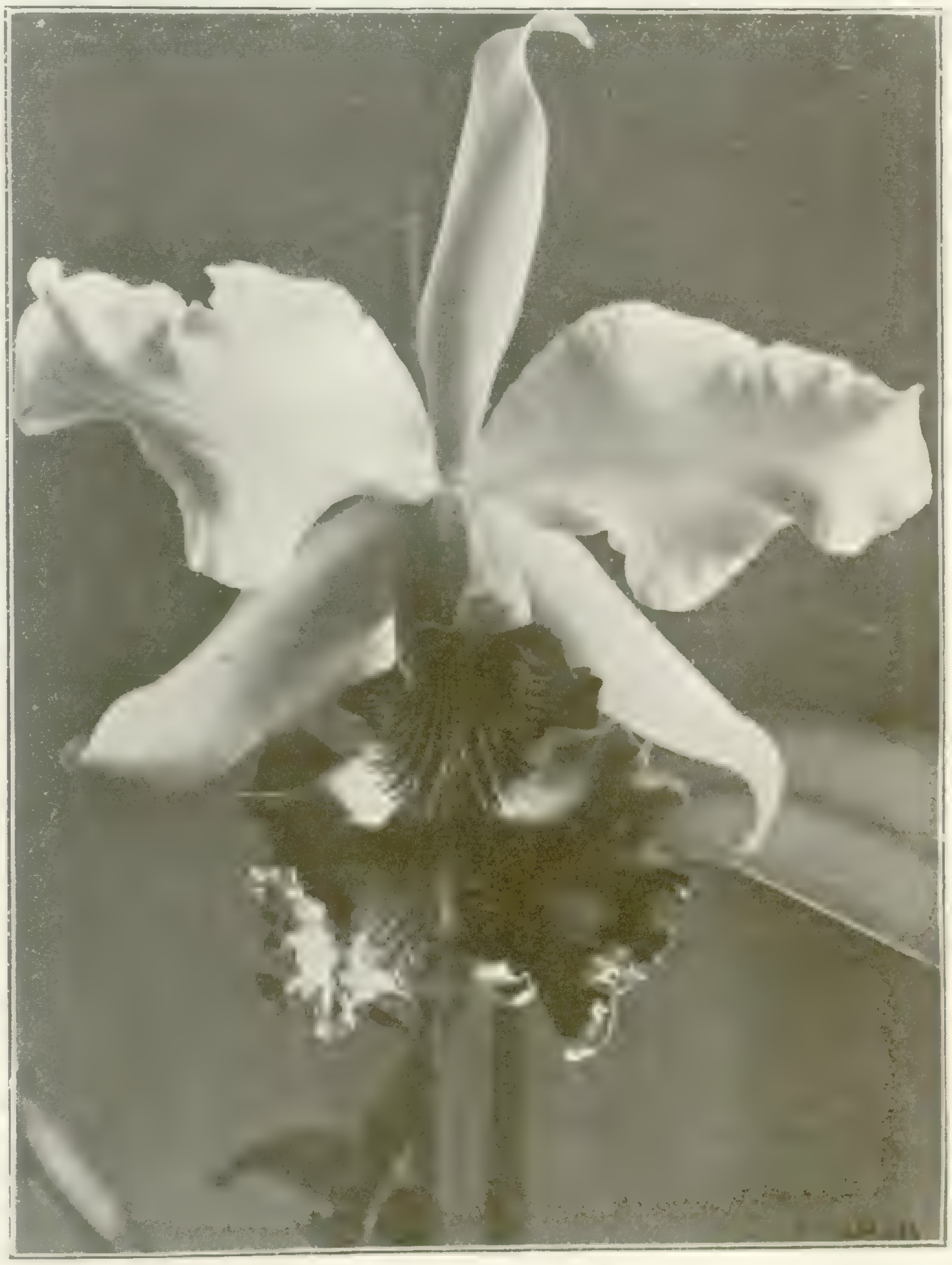
Messrs. Jas. Veitch and Sons, Chelsea, were extensive exhibitors of ornamental trees and shrubs, in sprays, and among a very interesting collection we were especially attracted by the berried sprays of Viburnum rhytidophyllum, pernettyas, hardy heaths in variety, Cornus alba Spathi, Acer palmatum sanguinea, Sambucus canadensis, Clerodendron trichotomum, Ceanothus Gloire de Versailles, and Spiræa Anthony Waterer. On the opposite table the Chelsea firm had a group of grandly-flowered nerines, carrying a host of spikes of vivid blooms, and a group of Golden Fleece abutilon, and the interesting Æschynanthus Lobbianus.

The fine new variegated Hedera dentata variegata was well shown by Messrs. Pennell and Sons, Lincoln: this is a very fine [illegible] plant. Early-flowering chrysanthemums were extensively exhibited by Messrs. Wells and Co., Merstham, Surrey, and with these useful flowers were staged phloxes and Michaelmas daisies. Zonal pelargoniums, notably the free-flowering [illegible] that are useful for autumn flowering, were shown well by Messrs. H. B. May and Sons, Edmonton, who also had bouvardias, the fine heliotrope Mdme. de Bussy, and plumbagos.

Messrs. Barr and Sons, Covent Garden, had a very bright display of hardy flowers, notably kniphofias, liliums, phloxes, and Michaelmas daisies, autumn crocuses, colchicums, etc. Clematises, as shown by Mr. L. R. Russell, Richmond, were very pretty. Messrs. G. and A. Clarke, Dover, had, in their group of hardy flowers, a bold lot of kniphofias, Gilia coronopifolia, gaillardias, and gladioli. A grand display of gladioli, [illegible] spikes all finely developed, and the flowers of fine size and substance, was staged [illegible] Messrs. J Burrell and Co., Howe Nur-[illegible] Cambridge. This very fine exhibit [illegible] a great attraction.

Mr. A. L. Gwillim, Eltham, contributed [illegible] and single begonia blooms of fine quality. Messrs. Thos. S. Ware, Feltham, [illegible] bright bank of hardy flowers, staging the new double Michaelmas daisy Beauty of Colwall largely, with heleniums, pentstemons, phloxes, etc. The Misses Hopkins, Shepperton, sent a few alpines. Messrs. Robt. Veitch and Son, Exeter, showed the scarlet-leaved Euonymus yeddœnsis, Nerine Bowdeni, the sweet-scented Dahlia coronata, Colletia horrida, Cleome spinosa, and Clematis grata.

A very bold and brilliant group of dahlias was admirably set up by Mr. J. T. West, Tower Hill, Brentwood, who had a background of choice cactus dahlias, faced with pompones and flanked with pæony-flowered varieties; Nelly Riding, Sunbeam, and Royal Scarlet are three fine new cactus varieties Mr. West has raised, and the latter is the most brilliant scarlet variety we have seen.



CATTLEYA MARONI AUREA.

A.M., R.H.S., September 15; shown by Sir Trevor Lawrence, Bart., Dorking. Flowers, yellow, rose, and purple. The illustration represents the flower two-thirds of natural size.

Messrs. Eggett and Son, Thames Ditton, brought up a few hardy ferns, chiefly lady ferns and polypodies. Messrs. Paul and Son, Cheshunt, set up a group of very interesting shrubs that included Spiræa Aitchisoni, Rhus typhina laciniata, Euonymus latifolia, purple-leaved peach, Magnolia trifoliata, and the curious Rosa sericea pteracantha. Messrs. Carter Page and Co., London Wall, were responsible for a very big exhibit of cactus dahlias, set up in large baskets of a variety; Australian, Miss F. C. Stoop, Mr. Carter Page, Flame, Primrose, Francis Graham, White Lady, and Wm. Marshall were especially fine.

A wonderfully fine exhibit of dahlias was made right across the top end of the hall by Messrs. Dobbie and Co., Rothesay and Marks Tey. It was a very bright and effective, as well as elegant exhibit. At the back the tall stands of self-coloured cactus varieties stood well above the lower vases, and smaller stands. The front consisted of boards of show and cactus dahlias, while at one end pæony-flowered varieties were grouped, and at the other pompone varieties were very much in evidence. A few cactus dahlias that attracted special attention were Britannia, Dreadnought, Iris, Wm. Marshall, Lucifer, Faunus, Mabel Needs, Conrad, White Swan, J. B. Riding, Ruby Grinstead, and Hilda Shoebridge. Mr. Frank Brazier, Caterham, had a large variety of Michaelmas daisies, and early-flowering chrysanthemums and phloxes. Messrs. H. Cannell and Sons, Swanley, showed the brilliant begonia Washington, double scarlet, as well as the pink Rosebud, the white Queen of Spain, and the yellow Mr. J. Burden. Messrs. J. Stredwick and Son, St. Leonards, contributed a number of fine new cactus dahlias, and Mr. S. Mortimer, Farnham, was also an exhibitor of new cactus and show dahlias.

Messrs. J. Cheal and Son's contribution of dahlias included excellent bunches of Fugi San, Miss Morland, Alice Castle, Winona, Elmira, Serita, Glencoe, Flora, and Sunrise single varieties, in addition to excellent representations of cactus varieties. Winter-flowering carnations were well shown by Messrs. Hugh Low and Co., Enfield, who had Britannia and Mrs. Burnett in excellent condition.

ORCHID COMMITTEE.

Messrs. Stanley and Co., Southgate, sent up a plant of Cattleya Harrisoniæ alba Stanley's var. (F.C.C.), that carried a pair of beautiful white blooms with a faint lemon mark on the lip. Cattleya Angela, a cross between C. intermedia nivalis and C. labiata Cooksoniæ, came from Mr. H. J. Chapman, gardener to N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne. Mr. Black, gardener to R. G. Thwaites, Esq., Chessington, Christchurch Road, Streatham, put up a small group of well-grown hybrid orchids, chiefly of Cattleya granulosa parentage; C. Pittiana J. M. Black was very good, and C. Adula in several forms was also fine. Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Dorking, showed Cattleya Maroni aurea (A.M.), a handsome form; and the quaint Cirrhopetalum pipillosum. Mr. H. G. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Tetbury, Gloucester, showed Sophro-lælio-cattleya Medea superba, a deep dark purplish maroon, a neat flower with purple lip; Cypripedium Rosetti magnifica, and Lælio-cattleya Elva superba, very rich and bright purple. Messrs. Sander and Sons, St. Albans, showed Brasso-lælia Helen var. amabile, with spidery sepals and petals of yellow and pink colouring, and a big lavender lip, fringed with a pale-yellow throat.

Messrs. Charlesworth and Co., Heaton, Bradford, had a very interesting group of choice orchids. Old favourites included Vanda Sanderiana, V. cœrulea, and Houlletia Brocklehurstiana, while more modern subjects were represented by Brasso-cattleya Thorntoni, B.-c. Digbyana-gigas, Cattleya Aliciæ, C. Enid, C. Rhoda, Sophro-cattleya Marathon, and several forms of a pretty new and unnamed hybrid from C. Mrs. Pitt and C. Hardyana. C. Lord Rothschild delicata was also conspicuously good.

Mr. Day, gardener to H. S. Goodson, Esq., Fairlawn, West Hill, Putney, showed a group of cypripediums and lælio-cattleyas arranged with a few odontoglossums and oncidiums, and the plants were prettily set amid maidenhair ferns. Messrs. J. Cypher and Sons, Cheltenham, had a fine Cattleya Pittiana among various cypripediums, Miltonia Bleuana, Cattleya Ashtoni, Zygopetalum rostratum, and Dendrobium phalænopsis. Messrs. Stanley and Co., Southgate, had a group of Cattleya Loddigesi, C. Gaskelliana, Cypripedium A. de Lairesse, and other things.

Messrs. Sander and Sons, St. Albans, had a fine Vanda cœrulea, Cattleya Gaskelliana alba, Brasso-cattleya Chas. Maron, the rare and interesting Cœlogyne Micholitzi, Odontoglossum grande, etc. Messrs. Moore, Lim., Rawdon, Leeds, showed the quaint Cycnoches chlorochilon, richly coloured Vanda cœrulea, Cattleya Mrs. Pitt, C. fulvescens, and a very dark Odontoglossum Harryanum.

Cattleya Pittiana figured largely in the group of orchids exhibited by Messrs. Hugh Low and Co., Enfield; with these were Vanda Kimballiana, Cattleya Loddigesi, Stanhopea oculata, etc. Messrs. Wm. Bull and Sons, King's Road, Chelsea, had a large number of varieties of the cross between Cattleya velutina and Cattleya aurea, set amid a variety of stove foliage plants.

FRUIT AND VEGETABLE COMMITTEE.

A collection of vegetables, contributed by Messrs. Jas. Veitch and Sons, Chelsea, attracted a good deal of attention; it comprised leeks, beet, cabbages in variety, carrots, Veitch's Maincrop onion, Hackwood Park Success bean, fine Early Rose celery, Hackwood Park tomatoes, etc. Mr. Joseph Goatley, gardener to Lady Northcliffe, Sutton Place Gardens, Guildford, showed two dozen excellent specimens of Hero of Lockinge, The Peer, and Sutton's A1 melons.

Tomatoes in great variety, from the small cherry and pear-shaped varieties up to the big American Ponderosa, were exhibited by Messrs. Carter Page and Co., London Wall; Superlative, Golden Jubilee, Sunrise, and Dobbies' Champion were very attractive smooth varieties. Mr. G. W. Miller, Clarkson Nurseries, Wisbech, sent up a handsome soft red apple that appeared to be a cross between Emperor Alexander and Gascoigne's Seedling; it was named Red Victoria. (A.M.).

CERTIFICATES AND AWARDS.

First-class Certificate. — Cattleya Harrisoniæ alba Stanley's var., from Messrs. Stanley and Co., Southgate; Populus albus lasiocarpa, from Messrs. Jas. Veitch and Sons, Chelsea.

Award of Merit. — Apple Red Victoria, from Mr. G. W. Miller, Clarkson Nurseries, Wisbech; Cattleya Maroni aurea, from Mr. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking; single dahlia Betty, from Messrs. J. Cheal and Sons, Crawley; cactus dahlias Brigadier and Monarch, from Messrs. Burrell and Co., Cambridge; cactus dahlias Snowdon, Teutonic, and Satisfaction, from Messrs. J. Stredwick and Son, St. Leonards; cactus dahlias Flora and Nellie Riding, from Mr. J. T. West, Brentwood; pompon dahlia Adela, from Mr. Chas. Turner, Slough.

MEDALS.

Silver-gilt Flora.—Messrs. Burrell and Co., Cambridge; Messrs. Dobbie and Co., Rothesay.

Silver-gilt Banksian.—Messrs. Carter Page and Co., London Wall; Messrs. Jas. Veitch and Sons, Chelsea.

Silver Flora.—Mr. Amos Perry, Enfield; Messrs. W. Cutbush and Son, Highgate, N.; Mr. J. T. West, Brentwood; Messrs. H. B. May and Sons, Edmonton; Messrs. Paul and Son, Cheshunt; Mr. G. Day, gardener to H. S. Goodson, Esq., West Hill, Putney.

Silver Banksian. — Messrs. J. Cheal and Sons, Crawley; Mr. A. L. Gwillim, Eltham; Messrs. W. Wells and Co., Merstham, Surrey; Messrs. H. Cannell and Sons, Swanley; Messrs. Hugh Low and Co., Bush Hill Park, Enfield (2), carnations and orchids; Messrs. Carter Page and Co., London Wall, for tomatoes; Messrs. J. Cypher and Sons, Cheltenham; Messrs. Sander and Sons, St. Albans; Messrs. Moore, Lim., Rawdon, Leeds; Messrs. Stanley and Co., Southgate.

Bronze Flora.—Mr. J. Brazier, Caterham; Messrs. G. and A. Clarke, Dover; Mr. L. R. Russell, Richmond; Messrs. T. S. Ware, Lim., Feltham; Messrs. Barr and Sons, Covent Garden.

Silver-gilt Knightian.—Messrs. Jas. Veitch and Sons, Chelsea, vegetables.

Silver Knightian.—Mr. Goatley, gardener to Lady Northcliffe, Sutton Place, Guildford.

WISLEY TRIALS.

The trials that are being conducted at the Royal Horticultural Society's Gardens at Wisley this year include one of cactus dahlias, arranged with a view to bring into prominence the varieties best suited for garden decoration. The trial is extensive, and is of interest for the evidence it affords of the necessity of so improving the habit of the varieties comprised in the section that the flowers will stand clear of the foliage. At the recent visit of a joint committee, composed of members of the R.H.S. Floral Committee and the National Dahlia Society, the following varieties received three marks each.

Emily Habgood.—A rather robust growing decorative variety; the blooms are pure white, large, of good form, and borne on stiff, erect stalks well above the foliage.

Brightness.—An excellent cactus variety, the flowers of medium size, and freely produced on erect stalks, the colour brilliant rose-crimson. The plant is dwarf and erect, with wiry growths.

Avoca.—Brilliant crimson, the blooms produced on long stalks, and slightly drooping. The growth is comparatively thin, and the plants, by reason of their freedom of flowering, are very effective.

Miss Willmott.—The flowers large, rich yellow suffused fawn. The growth tall, but thin, and the flowers are freely produced.

Stalwart.—The flowers brilliant crimson, and stand clear of the foliage, although the stalks are rather short; medium height.

These are all useful additions to the dahlias of value for the production of colour effects in the garden.

Phlox Comtesse de Jarnack.—An attractive variety with variegated leaves, also received three marks. The growth is vigorous, and the leaves are broadly margined with cream-yellow, this colour in many cases extending over the whole of the leaf. It is a distinct advance upon the phloxes with variegated leaves, and appears to have great possibilities for garden decoration.

Zea quadricolor.—A distinct and attractive maize of much value in the garden. It is robust in growth, attaining at Wisley a height of six or seven feet, and the leaves are of large size, stout, and marked with broad stripes of white, pink, and rose on a green ground. This also received three marks.

SCIENTIFIC COMMITTEE.

Present: Mr. Chas. T. Druery, F.L.S., V.M.H. (in the chair), with Messrs. Jas. Douglas, J. W. Odell, W. Fawcett, J. Fraser, H. T. Güssow, George Gordon, and J. T. Bennett-Poë.

MILDEW ON OAK LEAVES.—Mr. Güssow reported that the fungus on certain oak leaves sent for inspection is probably a form of a nucimula; it is in its conidial stage Erysiphe commune.

GALL ON WILD ROSE. — Mr. Douglas showed specimens of the rose gall, Cecidomyia rosarum.

STREPTOCARPUS. — Mr. J. W. Odell showed streptocarpus having (a) in a light-flowered variety a regular peloric corolla with six segments, the whole flower being campanulate; and (b) in a dark-flowered variety the peduncle branched and the bracts foliaceous instead of very small, as is normal.

ABNORMAL FLOWERING OF LABURNUM.—Mr. George Gordon mentioned that at the present time a laburnum was flowering freely in his garden at Kew. The tree had occupied its present position some fifteen or sixteen years, and owing to it occupying too much space the whole of the branches were cut back to within three or four inches of the main stem after it had flowered last spring. The tree produced new shoots from the stumps of the branches, and of these about two-thirds produced terminal racemes of flowers, these being of a much larger size than the racemes previously produced in the usual way.

VICTORIA PLUM. — Mr. C. T. Druery showed a Victoria plum upon which was a group of insect eggs on a stalk, which had at first sight an appearance of a fungus, but it was determined to be something like the stalk and eggs of the lace-wing fly, than which they were, however, somewhat smaller.

TOMATO WITH ENLARGED CALYX.—Mr. F. Fellows Wilson, of Alveston, Chobham, Surrey, sent a tomato with an extraordinarily large calyx, the segments measuring about 3in. in length. It is not uncommon for the calyx to extend to this extent, particularly if the tomato plants are allowed to bear but few fruits on one branch.

DISEASED APPLES.—Mr. J. G. Howlett, of 36, Bracondale, Norwich, submitted some Green Beaufin apples which were diseased. Mr. Güssow undertook to investigate the matter.

YEW BLIGHT.—A few diseased sprigs of yew were submitted from Mrs. F. Lyell, of Ruckmans, Oakwood Hill, Surrey; the matter was left with Mr. Güssow to report.

DAFFODIL POISONING. — Dr. C. B. Plowright sent the following interesting note: "Cases in which the handling of daffodil flowers by the gatherers has caused poisoning is one often heard of, but how many are really due to the flowers themselves and how many to incipient eczema or other skin disease on the part of the gatherer is not so clear. Cases in which the bulbs themselves are partaken of as food are not nearly so frequent. The following note may, therefore, be of interest. A gentleman in King's Lynn purchased in the month of December, 1907, a number of bulbs. These were, for security, placed in a paper bag upon a shelf in the kitchen. By some mischance the daffodil bulbs became mixed with the household stock of onions, and eventually were sliced up together with them and used in the preparation of soup, which was partaken of by the whole family. Shortly after the meal all the members were sick, they vomited freely, and suffered more or less from nausea, but they had neither abdominal pain nor diarrhœa. Recovery took place in from six to eight hours. The actual number of daffodil bulbs used could not be ascertained. The remainder of the soup was used on the following day with the same result. This led to the investigation of the onion-stock. That the illness was not due to ptomaine poisoning is shown by the complete recovery in eight hours, and by the absence of pain and diarrhoea."

ALIEN PLANTS, ETC.—Mr. J. Fraser, F.L.S., showed a specimen of Erysimum Altissimum L., a plant previously recorded as occurring spontaneously in Britain in the "Journal of Bot.," vol. x., under the name of Erysimum pannonicum, and in the "Flora of Surrey" (1863) as being found as an introduced plant at Battersea Fields. Mr. Fraser had himself found it at East Ham in 1900, at Greycoat Place, Westminster, 1907, and on Putney Common, and on the new Kingsway and Aldwych sites this year. The specimen he showed had its petals reduced to the claw, as if resorting to self-fertilisation. In addition to this plant he had found upon the Kingsway and Aldwych sites the following British plants: Epilobium angustifolium, E. hirsutum, Senecio viscosus, Pyrus malus, Brassica rapa, Carduus arvensis, C. lanceolatus, Sonchus arvensis, Pteris aquilina, and Centaurea cyanus; and the following aliens: Erysimum altissimum, Salvia verticillata, Erigeron canadensis, Fragaria chiloensis, Eschscholtzia californica, Cucurbita Pepo, Helianthus annuus, [illegible], and Papaver somniferum.

London Dahlia Union.

This society held a successful exhibition in the Royal Botanic Society's Gardens, Regent's Park, on September 10 and 11. The competition was fairly good throughout, and the flowers were better than the recent stormy weather had led people to expect.

OPEN CLASSES.

The best three vases of cactus dahlias, the blooms arranged with foliage and grasses, were from Mr. Chas. Turner, Slough, who had bold, tasteful arrangements of Wm. Marshall, Ruby Grinstead, and Mrs. McMillan; Messrs. J. Cheal and Sons second, and Mr. M. V. Seale third. Premier award for six bunches of pompon cactus dahlias was won by Messrs. J. Burrell and Co., Cambridge, with neat flowers of Minima, Lena, Olivine, Butterfly, Argus, and Tom Tit. Messrs. J. Cheal and Sons, Crawley, came second; and Mr. M. V. Seale, Sevenoaks, was third.

Mr. S. Mortimer, Rowledge, Farnham, was placed first for two dozen show dahlias, and he won with a handsome lot of blooms that seemed to have defied the weather. His best flowers were Queen of the Belgians, Wm. Powell, Pleasaunce, Mrs. Saunders, W. H. Williams, Mrs. Langtry, and J. B. Service. Mr. Chas. Turner, Slough, took second place, Mr. John Walker, Thame, was third, and Messrs. Keynes, Williams, and Co., Salisbury, fourth. Mr. J. R. Tranter scored for a dozen show blooms, and he had a very even set of fair-sized flowers, Wm. Powell, W. Rawlings, and Queen of the Belgians being very good; Messrs. J. Cheal and Sons second, and Mr. M. V. Seale third.

There were four competitors in the class for a dozen varieties of cactus dahlias, six blooms of each, and here Messrs. J. Stredwick and Son, Silverhill Park, St. Leonards, were once more first, showing beautiful blooms of H. Peerman, Rev. T. H. Jamieson, Sunstorm, Evening Star, Rev. A. Hall, Mrs. Alfred Dyer, Durando, C. E. Wilkins, Satisfaction, Diadem, J. B. Riding, and Mrs. Grinstead; Messrs. J. Burrell and Co., Cambridge, occupied second place; and Messrs. J. Cheal and Sons, and Mr. M. V. Seale were third and fourth respectively.

For two dozen cactus dahlias, single flowers, arranged on boards, Messrs. J. Burrell and Co. secured the chief award with a fine set, in which Girton, Monarch, Mercia, Leslie, Rival, and Wm. Marshall were finely presented; Messrs. J. Stredwick and Sons came second; Messrs. Keynes, Williams, and Co., third; and Mr. J. Walker fourth. Mr. M. V. Seale scored a first for a dozen cactus dahlias, on boards, and he won fairly easily. Mr. S. Mortimer came second, and Messrs. J. Cheal and Sons third.

Four competitors each staged three vases of cactus dahlias, nine flowers in each, suitable foliage allowed, and here Mr. J. Walker, Thame, Oxon, was a very creditable first with fine blooms, well arranged; Mr. M. V. Seale was second, and Messrs. Keynes, Williams, and Co., third. Messrs. Keynes, Williams, and Co. led for six blooms of any one cactus dahlia, with Glory of Wilts, a pleasing new yellow variety; Mr. S. Mortimer second with Wm. Marshall, and Mr. J. Walker third with Mercury.

Messrs. J. Burrell and Co., Cambridge, won the premier award for a dozen pompon dahlias, ten flowers of each, with very clean examples of Girlie, Kitty Barrett, Darkest of All, [illegible], Montague Wootten, Violet, Nerissa, Ganymede, Bacchus, Emily Hopper, Tommy Keith, and Midget; the Dean Memorial Medal was awarded for this exhibit; Mr. M. V. Seale came second, and Mr. Chas. Turner was third.

The best set of twelve single dahlias, six blooms of each, came from Messrs. J. Cheal and Sons, Crawley, who showed very clean, bright blooms of Eclipse, Brilliant, Fugi San, Leslie Seale, Victoria, Miss Morland, Darkness, Flora, Winona, Kitty, Snowdrop, and Princess of Wales; the Rev. Spencer Pearce, Combe Vicarage, Woodstock, secured the second place; and the Rev. A. Bridge, Worth Rectory, Crawley, came third. First prize for one vase of paeony-flowered dahlias was won by Mr. Chas. Turner, Slough.

Mr. S. Mortimer led for six blooms of a show or fancy dahlia not in commerce, winning with Tom Jones, pink-tipped cream; Messrs. Keynes, Williams, and Co., second, with Cruso, a pretty lavender variety. Mr. M. V. Seale gained first prize for a set of six bunches of decorative dahlias, three blooms in each, and his selection of varieties was Delicatissima, J. C. Newbery, Mrs. Seale, Gladiator, Amos Perry, and Britannia.

First prize for a table decoration in dahlias was won by Mr. M. V. Seale, who used the neat pompon cactus variety Mary. Miss E. B. Sell, Kempton Villa, Luton, second with pompon and single varieties, and Messrs. J. Cheal and Sons third with pompon cactus flowers.

AMATEURS' CLASSES.

The Hobbies' Challenge Cup and first prize for nine varieties of cactus dahlias were won by Mr. W. E. Peters, The Hospice, Baldslow, St. Leonards, who lost the cup to Mr. Stephens last year. Mr. Peters showed splendid flowers of Victorian, Rev. A. Bridge, C. E. Wilkins, Lustre, Ruby Grinstead, H. Peerman, Wm. Marshall, Mrs. W. H. Raby, and Iverleam. Mr. W. Lockyer, gardener to the Rev. G. Twentyman, Greenhill Park, New Barnet, came second; Rev. A. Bridge, Crawley, third, and Mr. E. C. Barton, Brand Street, Greenwich, fourth. For a vase of a pink or white cactus dahlia Mr. E. Mawley, V.M.H., Rosebank, Berkhamsted, won Mr. Sydenham's vase, as first prize, with Mrs. W. H. Raby; Mr. W. H. Brown, Havelock Road, Luton, second, and Mr. E. C. Barton third.

Mr. H. Jackson, The Leys, Woburn Sands, Bedfordshire, was to the fore in the class for six cactus dahlias, three blooms of each, showing Wm. Marshall, Caradoc, Recam, Rainbow, Ruby Grinstead, and Flag of Truce; Mr. E. Mawley second, and Mr. S. H. Cooper, The Hamlet, Chippenham, third. Seven competitors entered in the class for twelve cactus dahlia blooms, in four varieties, on boards, and here the Rev. A. Bridge led with Victorian, J. B. Riding, T. A. Havemeyer, and Rev. A. Bridge; Mr. W. E. Peters second, and Mr. H. Brown third.

For a dozen cactus dahlias, distinct, Mr. W. E. Peters was once more successful with a very clean set of popular varieties; Mr. W. Lockyer came second, and Mr. H. Brown was third. There were eight competitors. Mr. J. Hicks, Bersham Manor Road, Thornton Heath, was first for six cactus dahlias, and Mr. E. Mawley second.

The Rev. S. S. Pearce, Woodstock, led for six bunches of single dahlias with charming flowers of Mikado, Kitty, Columbine, Darkness, Rosebank Cardinal, and Leslie Seale; the remaining awards fell to Mr. E. Mawley and the Rev. A. Bridge. Mr. A. Brown was first, and Mr. E. Mawley second for a bunch of single dahlias. Mr. Mawley had the best vase of cactus dahlias—Dr. G. G. Gray and Mr. E. C. Barton gained second place.

Mr. S. H. Cooper, Mr. H. Jackson, and Mr. A. P. Ironsides, Park Lane, Chippenham, were placed in the order of mention for a dozen show dahlias, and Mr. G. Davidson, Elm Lodge, Thornton Heath, was first, and Mr. E. C. Barton second for six show dahlias. In the classes for pompon dahlias Mr. H. Brown led for six varieties with Nellie Broomhead, Jessica, Distinction, Darkest of All, Queen of Whites, and Phoebe, and he was awarded a Dean Memorial Medal; Mr. A. Brown, Frederick Street, Luton, second; and Mr. S. H. Cooper third.

NON-COMPETITIVE.

A very large exhibit of cactus and paeony-flowered dahlias was set up by Messrs. Hobbies, Lim., Dereham, who had the varieties set up in tall stands and pyramids, and associated them with foliage and palms. Messrs. J. Burrell and Co., Cambridge, brought up a splendid lot of gladioli and some autumn roses. Messrs. Dobbie and Co., Rothesay, showed cactus, pompon, single, and paeony-flowered dahlias in variety.

Messrs. S. Spooner and Sons, Hounslow, contributed a large collection of dessert and cooking apples, all very clean and bright, and also a few plums and a dish of the strawberry-raspberry. Mr. J. T. West, Tower Hill, Brentwood, showed a large and very interesting collection of cactus, pompon, and paeony-flowered dahlias, the pompon varieties being exceptionally good. Messrs. G. Van Waveren and Kruyff, Sassenheim, Holland, had a large exhibit of paeony-flowered dahlias in vases, King Leopold, Queen Wilhelmina, Dr. Von. Gorkom, and Sneeuwitze being conspicuously good. This firm also showed these dahlias in pots.

National Chrysanthemum Society.

The first meeting of the Floral Committee for the season was held at Essex Hall, Strand, on Monday, September 14. After passing the minutes, the committee proceeded to elect its chairman for the season 1908-9, and Mr. D. B. Crane was once again re-elected to the post.

Messrs. D. B. Crane, E. F. Hawes, D. Ingamells, and C. H. Curtis, with Mr. J. B. Riding as reserve, were elected to act as judges of the non-competitive displays at the October, November, and December exhibitions.

Mr. Witty, Highgate Cemetery, N., sent a collection of early-flowering chrysanthemums to show the usefulness of the section for London gardens. Mr. W. J. Godfrey, Exmouth, sent up a new incurved Japanese variety of considerable beauty and size, provisionally named Golden Glow; it was soft canary-yellow, and the committee wished to see it again grown in free style.

The Executive Committee met during the evening, and Mr. Thomas Bevan presided. A letter was read from the Royal Agricultural and Horticultural Society of Guernsey applying for affiliation, which was granted. It was announced, in reply to an inquiry, that there would be no chrysanthemum show held by the authorities of the Franco-British Exhibition.

The interim financial statement was presented, showing receipts and payments to date. A report on the question of holding the N.C.S. shows at the Horticultural Hall, Vincent Square, was submitted, and it was resolved the subject could not be entertained at present. It was also announced that the Market Show would not be held this year. Subject to the convenience of the president, the annual dinner will be held at the Holborn Restaurant on November 26. The committee agreed that miscellaneous exhibits at the October, November, and December shows should be judged by the gentlemen selected by the Floral Committee, as above. The judges for the October show, six in number, were then elected, consisting of Messrs. Howe, Wells, Cull, Such, Emberson, and Ewer, with reserves.

The election of new members brought the meeting to a close.

Woodstock.

SEPTEMBER 8.

The Agricultural and Horticultural Association held its annual competitions in Blenheim Park on the above date. There was a large attendance, although rain fell three hours during the afternoon. The sections were horses, roots, corn, butter, eggs, and honey; jumping and driving; a large poultry and pigeon show, dogs, and other live stock. About eighty classes were devoted to horticulture, this section being largely aided by non-competitive exhibits, the most extensive collection being a group of plants arranged for effect, covering about 150 feet superficial, by Mr. F. Hunter, Blenheim Palace Gardens, who had successfully harmonised palms, ferns, lilies in variety, clustering spikes of gladioli, hydrangeas, perennial asters, bright crotons, yuccas, tuberous begonias, and a large number of scarlet nerines. At the back of the palms was a table of fruit, comprising some fifty dishes of grapes, peaches, plums, melons, apples, pears, and figs, the specimens of Peasgood's Nonsuch apples turning the scale at from eighteen ounces—the noblest examples yet seen at an Oxon show; a silver medal was awarded. Other extras included some high-class floral devices from Messrs. Field and Jacob, The Market, Oxford, and also from Messrs. R. Tucker and Sons, Magdalen Street, Oxford; and from Mr. John Johnson, Garsington Nurseries, Oxon, some eighty or ninety bunches of herbaceous perennials. The last three exhibits were awarded certificates of merit. One fine arrangement of roses was evidently overlooked, viz., the display by Mr. W. T. Mattock, Barton End Nursery, Headington, who had a back line of six bamboo stands, each furnished with two dozen specimen blooms, and about forty bouquets of garden, decorative, and tea roses in variety, very effectively posed. A small collection of garden flowers by Messrs. P. J. Perry, Bampton, were recognised by a certificate of merit.

In the competition Mr. W. T. Mattock scored a premier with a group of plants; his arrangement was largely lilies, francoas, and gloxinias set amid bright crotons, palms, and ferns; the second award went to Mr. D. Curtis, Iffley Road, Oxford, for an arrangement scarcely so full of colour. The only other class for plants was for three specimens in flower, the awards going to fuchsias, geraniums, and a plumbago.

Cut flowers were somewhat extensively shown, fairly liberal prizes being offered for displays of roses, cactus dahlias, and dinner-table decorations. For roses, Mr. John Mattock was placed first for a very attractive show of some forty varieties, all named; each of his back line stands held forty flowers and were faced by four dozen beautifully posed bouquets, the edging being clusters of buds resting on depending foliage of the white Wichuraiana rose; Messrs. Francis Taylor and Sons, Kingham Nurseries, Oxon, were second, their central stand being a massing of Frau Karl Druschki, five other stands, and fourteen bouquets—the varieties were not named. The displays of cactus dahlias were a very attractive section, the first prize going to Mr. J. Walker, Thame, Oxford, who had a back line of five stands, each with thirty blooms, and twenty-six baskets and vases filled with high-class flowers, also four dozen varieties on boards, named, and as a whole the posing was most effective; Messrs. Taylor were second. Mr. Walker was also first for a dozen cactus, and a dozen single dahlias, in triplets; also for double zinnias.

The only collection of perennials on 36 feet came from Mr. J. Cooper, Hardy Plant Nursery, Chipping Norton. Mr. Mark Benden, Stanton Harcourt, Oxon, led in the two classes for asters and annuals. Mr. J. Mattock had the premier collection of gladioli, and Mr. W. T. Mattock was the only exhibitor of a bride's bouquet.

Fruit was well shown; the collection from Mr. J. M. Bush, gardener to F. J. Myers, Esq., Charlton Lodge, Banbury, was awarded first prize and silver-gilt medal, setting up a back line of neat crotons and palms, faced by well-finished clusters of Muscat of Alexandria, Gros Maroc, Black Hamburgh, and Madresfield Court grapes; Ringleader and Hero of Lockinge melons, Pineapple nectarines, Morello cherries, Kerry Pippin and Lady Sudeley apples, Williams Bon Chretien pears, and Jefferson plums. Mr. R. Wadham, gardener to Mrs. Bradshaw, Steeple Aston, was second. For grapes, Mr. Bush led with Muscat of Alexandria; Rev. Dr. Wilson second with an immense cluster of Alicante, and one of Black Hamburgh. The dessert apples winning awards were generally Lady Sudeley, Beauty of Bath, and Worcester Pearmain.

Vegetables made an excellent though not an extensive show, Mr. R. Wadham securing the first prizes for Messrs. Suttons' and Webbs' special collections, and he further staged a collection of potatoes, in which the dozen varieties were clean, shapely, and bright—a certificate of merit being awarded. The cottagers (although a wide area is given) do not make a large display, there being but four classes allotted to them for vegetables.

United Horticultural Benefit and Provident Society.

The monthly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, S.W., on Monday evening last, Mr. Charles H. Curtis in the chair. Four new members were elected, making a total of 52 this year to date. The amount of sick pay since the last meeting was £39 13s. Mr. A. Hemsley resigned his seat on the committee, through pressure of business and inability to attend the meetings, and his resignation was accepted with regret, and a vote of thanks was accorded him for valuable services for several years past. The annual dinner will be held this year at the Waldorf Hotel, Aldwych, W.C., on Thursday, October 15, at 6.30 p.m. Dr. Boxall, of Dorking, has kindly consented to preside on this occasion.

East Anglian Horticultural Club.

This club, with its membership of over 300 active professional and amateur gardeners, still continues to increase its membership, thanks to the exertions of the energetic secretary, Mr. W. L. Wallis, 11, Royal Arcade, Norwich. The September meeting held on the 9th inst., at the Boar's Head Hotel, Norwich, was largely attended, and, although the members were somewhat disappointed in not having a paper from Mr. G. Davison, of montbretia fame, upon "Hybridisation," as promised, owing to unforeseen circumstances, enthusiasm did not flag. A discussion was started upon "Cucumber Growing," and brought out a fairly good debate, Messrs. J. Powley, C. H. Fox, H. Goude, and R. Watson taking the leading points. The exhibition tables were well filled with choice subjects, apples and plums in the fruit section being very fine. For colour the fruits of Worcestershire Pearmain, staged by Mr. G. Moore, gardener at Hethersett Hall, Norwich, were quite a picture. Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, exhibited some spikes of Erythrina Crista-galli, grown in the open, these being grand in colour, and the foliage exceptionally healthy.

Turf that has become much worn or damaged during the season should now be repaired or relaid; it will soon become established. Should a spell of dry weather follow well water the newly-laid turf. All large plantains that, owing to pressure of work, may have been allowed to grow, should be removed.—E. F. HAZELTON.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited send early notification of forthcoming exhibiti and meetings, and are requested to advise us cerning changes of dates.

Specimens of plants, flowers, and fruits for or opinion should be sent to the Editor GARDENERS' MAGAZINE, "Eadsleigh," Priory Kew, Surrey, and as early in the week as All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs gardens, plants, flowers, trees, fruits, etc. reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relati to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark t paragraph.

MALFORMED PEAS.—J. F., Bir ham: The malformation is due to an att of mildew followed by an attack of thri the points of growth. This malforma frequently occurs when a bad attack of th is followed by moist conditions.

ROOT PRUNING OF FRUIT TREES.—Amateur, Colchester: Root pruning is necessary when fruit trees are making strong a growth as to render them ductive. When the trees make a mod growth, flower freely, and produce good in favourable seasons they do not requir their roots to be shortened or disturbed i any way. In your case the apple and pea trees are decidedly too luxuriant, and, as there is no other means by which excessively luxuriant trees can be brought into a fruitful state as by root-pruning, we advise you to shorten the roots this autumn, the third and fourth weeks of October being as good period as any in which to perform the operation. You will not find any great difficulty associated with root-pruning. First draw circle at a distance of three feet from the stem, and outside this dig a trench to depth of two feet. Then work the soil fre about the roots for twelve inches or so wi a fork, and with as little injury to th as possible. When this has been done all round the ball to the depth of the trench, tie the roots into bundles, and well work the spade under the ball and sever any tap roots there may be. In refilling the trench, work the soil under the ball, untie the roots, spread them out regularly as the filling proceeds, and tread the soil firmly. As the result, you will find that the trees will be much less vigorous next year, and bear freely in the year following, provided the weather is favourable.

RULES FOR JUDGING.—A. T., Suffolk: Yes: there is a very useful booklet entitled "Rules for Judging, with Suggestions to Schedule Makers and Exhibitors." This is sent post free for 1s. 6d. on application to the Secretary, Royal Horticultural Society, Vincent Square, Westminster, S.W.

GRAPES.—F. R., Devon: We are glad to find that, as a result of following the advice we gave some time ago, the grapes and vines have so materially improved. If the border is dry it must be watered, and advantage should be taken of a bright, fine day to apply the necessary moisture. Be careful to avoid over-watering just now; sufficient water to just moisten the soil will be enough. An excess of moisture would cause the berries to crack, and produce undue growth. Ventilate freely according to the weather, and keep the pipes comfortably warm during the night and early morning, as this will keep the atmosphere dry and permit plenty of ventilation. After the crop has been gathered and the leaves have fallen, you should proceed to clean the house thoroughly, as well as prune and clean the vines. Having this work finished, remove the top soil from the border, and in its place put sound turfy loam with a little bonemeal added. As the vines have responded so well to the treatment we do not advise an entire overhauling of the border, as previous failures appear to have been due to cultural errors rather than to faulty borders.

DESTROYING WASP NESTS.—Mr. W. [illegible], of Brympton House Gardens, Yeovil, writes us as follows concerning the destruction of wasps' nests: "Your correspondent, 'East Sussex,' recently recommended the destruction of wasps' nests by night because the wasps return late to their nests, and all should be in before steps are taken to kill them. I have proved, however, that it does not matter in the least what time of the day one proceeds to destroy wasps and nests, providing cyanide of potassium is used, and a piece about the size of a hazel nut, or a teaspoonful of powder, is sufficient, if placed well in the nest mouth. Every wasp inside will be killed, and every one that is outside and returns home will drop dead as soon as it enters. If anyone is afraid of being stung, he should use a veil when putting the cyanide into position. Two years ago I destroyed thirty nests within a quarter of a mile of our garden; these were all located by daylight, and dug out the following morning. The cost was about a penny per nest."

DUTIES OF TREASURER AND SECRETARY.—S. S. G., Sussex: The duties of treasurer and secretary vary very much in different societies. In some societies the secretary does all the work, getting in the subscriptions, receiving all moneys, and paying the same into the society's account at the bank. The treasurer in such a case signs the cheques for the payment of accounts conjointly with the secretary, and keeps his own brief accounts of income and expenditure. In some societies all financial matters are in the hands of the treasurer, who attends to subscriptions, appoints persons to take money at the gates on show days, receives moneys paid in to the secretary for entrance fees, etc., and pays all bills. There must always be some amount of overlapping of the duties of treasurer and secretary in a go-ahead society; but if the two officers possess the confidence of the committee, and work amicably together for the benefit of the society, there should never be any difficulty other than can be overcome during a moment's conversation. When one officer distrusts another, or when one is so horribly afraid of doing too much that he ends in doing too little, then difficulties are certain to arise, and the society suffers. On the whole, we favour leaving the work entirely with the secretary, who should furnish the treasurer and committee with a financial statement at each meeting; the treasurer would sign the cheques, and do his best to secure new members, and he should be a man of substance, able and willing to render financial assistance when such is necessary.

MARKET GARDENING.—Veg.: The question you have submitted to us is extremely difficult, and cannot be answered in a definite manner, as in the case of a question relating to cultural matters or to the health of plants. We know nothing as to your tastes, your capacity for work, your business ability, or the capital at your command, factors which should have consideration before your capital is invested in market gardening. The cultivation of fruits, vegetables, and flowers will give a very good return to those who have a thorough acquaintance with the practical work, and also possess the business ability to dispose of the produce to the best advantage. With this knowledge you would be able to purchase land that would be suitable for the production of crops of high quality and in a district where they could be despatched to market without any special difficulty. Without this knowledge you would probably lose a considerable proportion of your capital through the land not being suitable for the crops, or being inconveniently placed for the disposal of the produce. Supposing you could purchase land of the right kind in the right place, the engaging of a manager to carry out the practical work and market the produce, has a strong element of speculation associated with it. He may or he may not be well fitted for the position, and should he be all that could be desired, there is a risk of his being hindered in his endeavour to make the business profitable by your not understanding why this or that expenditure may be necessary. Naturally you would not want to expend a larger amount than would be absolutely necessary, and without considerable knowledge would not be able to determine whether the expenditure would be advisable or not. If you knew an expert cultivator for market from personal acquaintance extending over several years, the case would be different, as you would then be able to place full confidence in him, and allow him the latitude essential to success. Several cases in which an arrangement similar to the one you suggest have come under our notice, and of these some have been successes, some moderately so, and some complete failures, and the latter have not been wholly due to the managers. Moreover, it should be understood that market gardening imposes a rather heavy strain upon both physical and mental faculties. It might probably be well were you to spend a year or so with some large fruit grower for market, and obtain an insight into the practice of growing and marketing fruit, as fruit growing appears to us more suitable for anyone whose health renders an outdoor occupation necessary. You would not be able to become proficient in so short a period, but you would be able to determine whether you would like such occupation. We would certainly strongly advise you not to invest your capital in either market gardening or fruit growing until you have obtained at least an elementary knowledge of the subject.

LIFTING DAFFODILS.—H. C. H., Belfast: Daffodils continue to flower well for many years if undisturbed, but in most cases the flowers produced from these undisturbed groups lack the size and substance of those produced from annually lifted and early planted bulbs. From the point of view of effect alone, where large areas are planted, the undisturbed bulbs are a great success.

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from the Pioneer Importers of recent years, who consequently hold the LARGEST STOCK of FINEST SELECTED QUALITY, in 3 GRADES:—FINE, MEDIUM, and COARSE.

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Mr. Fletcher, Ashlands Gardens.
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TELEGRAMS—"FUNGHETO, LONDON." TELEPHONE—10 TOTTENHAM.

but even under such conditions it is a good plan to lift, sort, and replant the best bulbs every few years. Some varieties do much better than others when left undisturbed, but all choice varieties should be lifted annually and planted in early autumn in new soil, to secure the best results.

LONG ROSE GROWTHS.—F. E., Heston: Secure the long growths to stout stakes, and also make the bush secure from which they spring, or the wind and rain storms of autumn may wrench the growth from its point of connection with the main stem. If very tall and unsightly, cut off a foot or two of the top of the growth, as this will do no harm, because, should new growths push from the apex, these will be a long way beyond the pruning point, even if the shoot is to be pegged down.

NAMES OF PLANTS.

H. R., Scratby.—Maxillaria luteo-alba.

A. C., South Devon.—Benthamia fragifera.

W. F., Berkhamsted.—1, Rosa rubrifolia; 2, Zauschneria californica.

W. H. N.—Not recognised; probably a seedling oak of some kind.

M. D. L., Bray.—1, Exacum affine; 2, Rondeletia speciosa; 3, Ixora macrothyrsa.

N. S. H., Huntingdon.—1, Gaultheria Shallon; 2, Polygonum cuspidatum; 3, Bambusa Metake.

B. C., Henbury.—1, Buddleia variabilis; 2, Fuchsia Riccartoni; 3. F. gracilis; 4, Galtonia candicans.

S. J. B., Horsham.—1, Asclepias currassavica; 2, Clematis flammula; 3, Galtonia candicans; 4, Pentstemon Newbury Gem.

C. M. C., Doncaster.—1, Abies concolor; 2, Juniperus chinensis; 3, Sedum arachnoideum; 4, Lilium speciosum rubrum; 5, Selaginella cœsia.

C. M., Rochester.—1, Hibiscus syriacus; 2, Olearia Haasti; 3, Cyrtomium falcatum; 4, Anthericum liliago; 5, probably a piece of Colutea arborea.

D. L., Beaumaris. — Specimens badly smashed up; so far as we can make them out they are—1, Helianthus rigidus; 2, H. multiflorus; 3, H. decapetalus. The carnation we do not recognise.

GARDENING ENGAGEMENTS.

Miss Kitson, the daughter of the Rev. J. B. Kitson, Lanreath Rectory, Cornwall, has been appointed Vice-Principal of the Country and Colonial Training School at Arlesey, near Hitchin.

Mr. W. B. Little has been appointed as horticultural instructor on the staff of the Armstrong College, Newcastle-upon-Tyne, and in that capacity has charge of the horticultural education in the counties of Cumberland and Westmoreland. Mr. W. B. Little was previously at the Royal Gardens, Kew.

ONE PENNY WEEKLY, by post 1½d.

FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—
ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (Sept. 19) contains the following:
THE POTATO CROPS.
FRUIT TREE RENOVATION.
THE PEAR CROP.
CHEESE-MAKING
PREVENTION OF MILK-FEVER.
CARE OF HORSES' FEET.
BEEF FOR CHRISTMAS.
SELECTION OF STORES.
A WET HARVEST.
YELLOW SUCKLING CLOVER.
CLEANING STUBBLES.
COST OF TILLAGE.
MICHAELMAS GEESE.
DO SMALL HENS LAY BEST?
HOW TO SHOW DEAD POULTRY.
BEE-KEEPING.
THE HOUSEHOLD.
HELPFUL HINTS.

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WORK IN FLORISTS' WORKSHOPS.

The Secretary of State for the Home Department, in pursuance of the powers conferred upon him by section 49 of the Factory and Workshop Act, 1901, directs that the special exception in the said section relating to the hours of employment of women shall be extended to certain non-textile factories and shops. These include shops in which "the making of bouquets or wreaths or similar articles from natural flowers or leaves is carried on; or in which flowers or leaves are otherwise adapted for sale. With reference to employment inside and out on the same day, the Secretary of State grants in pursuance of section 46 of the above Act to florists' workshops, a special exception that women and young persons may, on a day on which they are employed in the workshop before and after the diner hour, be employed in the business of the workshop, outside the workshop, before or after the period of employment appointed for such persons for that day by the notice affixed in the workshop in pursuance of section 32 of the above Act, for a further period not exceeding two hours which shall not begin before 6 a.m. or end later than 10 p.m. This special exception shall be subject to the following conditions: (1) To every person employed in pursuance of the special exception an additional interval at least equal to the further period as aforesaid, shall be allowed during the period of employment, on the same or following day. (2) No person shall be employed continuously, whether inside or outside the workshop, for more than five hours without an interval of at least half an hour. (3.) On each occasion of employment in pursuance of the special exception, the full particulars relating thereto must be entered forthwith in the general register. The Secretary of State has also granted a special exception authorising the occupier of a florist's workshop to allow all or any of the annual whole holidays or half-holidays on different days to any of the women and young persons employed therein, or to any sets of the women or young persons, not on the same days. Further permission is given for women and young persons employed in florists' workshops to have the times allowed for meals at different hours of the day, and for these persons to remain during their meals in the room in which the work is being done. It is stipulated that those who avail themselves of this permission must affix a notice showing the names of those employed and the times allowed to each of them for their meals.

Lilium Harrisi.—One frequently hears of want of success attending the culture of this lily when needed for early flowering. Much of this, I feel confident, arises from the fact that it is left out of the ground too long before potting. The evil effect of lily bulbs being kept out of the ground and in a dry atmosphere for a lengthened period is now generally recognised, but the fact that in Bermuda Lilium Harrisi ripens much earlier than the different lilies in Holland, Japan, or in this country, is frequently overlooked, with the result that the bulbs have spent some time perhaps on warehouse shelves, or some such place, before they are obtained from the seedsmen. Consequently, they are more or less withered, with a corresponding loss of vitality, and the results then are not so satisfactory as they might be. Nearly all bulbs from Bermuda reach here by the end of August; it will be at once apparent, that, where needed for early flowering, nothing is gained by any delay in purchasing the bulbs after the present time; while, if this is not done, a considerable amount of vigour is needlessly lost. If bulbs are potted as soon as received, they may be allowed to become gradually established in a cold frame, which is much better than taking them into heat at once.—T. B. Field, Ashwellthorpe Gardens.

MARKETS.

COVENT GARDEN.

Flowers.

Choice flowers are now more in request, and prices are firm.

		s.	d.		s.	d.
Adiantum cuneatum	per doz. bun.	5	0	to	9	[illegible]
Alstrœmerias	per doz. bun.	2	0		3	[illegible]
Arums	per doz.	2	0		4	[illegible]
Asparagus	per doz. bun.	1	6		6	[illegible]
Asters	per doz. bun.	2	0		3	[illegible]
Bouvardia	per doz. bun.	5	0		6	[illegible]
Carnations	per doz. blms.	1	6		3	[illegible]
,,	per doz. bun.	7	0		[illegible]	[illegible]
,, Malmaison	per doz. blms.	6	0		[illegible]	[illegible]
Cattleyas	per doz.	8	0		10	[illegible]
Chrysanthemums	per doz. bun.	5	0		10	[illegible]
Coreopsis	per doz. bun.	1	6		[illegible]	[illegible]
Croton leaves	per bun.	1	0		1	[illegible]
Cypripediums	per doz. blms.	2	0		3	[illegible]
Dahlias	per doz. bun.	3	0		5	[illegible]
Eucharis	per doz.	2	6		5	[illegible]
French fern	per doz. bun.	1	0		3	[illegible]
Gardenias	per doz.	1	6		3	[illegible]
Gladiolus, large-flowered,	per doz. spks.	2	0		3	[illegible]
Gypsophila	per doz. bun.	2	0		3	[illegible]
Lilium auratum	per bun.	2	0		[illegible]	[illegible]
,, candidum	per bun.	1	0		2	[illegible]
,, speciosum	per bun.	1	[illegible]		[illegible]	[illegible]
,, longiflorum	per bun.	2	0		3	6
Lily of the Valley	per doz.	6	0		10	[illegible]
Marguerites, white	per doz. bun.	2	0		4	6
,, yellow	per doz. bun.	2	0		3	[illegible]
Mignonette	per doz. bun.	2	0		4	[illegible]
Odontoglossums	per doz. blms.	2	6		3	6
Pelargoniums	per doz. bun.	4	0		6	[illegible]
Roses	per doz.	1	0		5	[illegible]
Smilax	per doz. trails	3	0		5	[illegible]
Sweet Peas	per doz. bun.	2	0		2	6
Tuberoses	per doz. blms.	0	4		0	8

Fruits.

There are plentiful supplies of all seasonable fruits, and a good demand.

		s.	d.	s.	d.
Apples, cooking	per ½-sieve	2	6	3	6
,, dessert	per ½-sieve	2	0	4	6
Apricots	per box	0	9	1	[illegible]
Bananas	per bun.	3	0	10	[illegible]
Damsons	per ½-sieve	1	6	2	[illegible]
Figs	per doz.	2	0	4	6
Grapes, English	per lb.	1	0	3	6
,, Belgian	per lb.	0	8	0	10
,, Channel Islands	per lb.	0	6	[illegible]	[illegible]
Gage Plums	per ½-sieve	2	[illegible]	[illegible]	[illegible]
Lemons	per case	6	0	1[illegible]	[illegible]
Melons, Guernsey	each	0	[illegible]	[illegible]	[illegible]
,, English	each	1	0	2	[illegible]
,, Valencia	per case	6	0	10	[illegible]
Morello Cherries	per 12lb.	5	0	6	0
Nectarines	per doz.	2	6	12	0
Nuts, Cob	per lb.	0	7	0	8
Oranges	per case	9	0	30	0
Peaches	per doz.	2	6	12	0
Pears	per ½-sieve	3	6	4	6
Pineapples	each	2	0	3	6
Plums	per ½-sieve	1	6	2	6
Raspberries, Scotch	5lb. basket	2	0	2	6
Walnuts, green	per ½-bus.	2	3	2	6

Vegetables.

Very fine produce in ample supplies, and the demand is steady.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	1	9
Beans, Runner	per bush.	1	0		2	0
Beet	per bush.	1	3		1	6
Cabbage	per tally	1	[illegible]		[illegible]	[illegible]
Carrots	per doz. bun.	1	[illegible]		[illegible]	[illegible]
Cauliflowers	per doz.	1	0		[illegible]	[illegible]
Celery	per roll	0	10		[illegible]	[illegible]
Cucumbers	per doz.	1	0		[illegible]	[illegible]
Endive	per doz.	1	[illegible]		[illegible]	[illegible]
Horseradish	per doz. bun.	[illegible]	0		[illegible]	[illegible]
Leeks	per doz. bun.	1	0		[illegible]	[illegible]
Lettuce, cos	per doz.	[illegible]	[illegible]		[illegible]	[illegible]
Maize	per doz. cobs	1	[illegible]		[illegible]	[illegible]
Mint	per doz. bun.	1	0		[illegible]	[illegible]
Mushrooms	per doz. lb.	5	0		[illegible]	[illegible]
Onions	per doz. bun.	1	6		[illegible]	[illegible]
,, Pickling	per ½-bush.	1	[illegible]		[illegible]	[illegible]
,, Valencia	per case	7	0		[illegible]	[illegible]
Parsley	per doz. bun.	[illegible]	[illegible]		[illegible]	[illegible]
Peas	per bush.	[illegible]	[illegible]		[illegible]	[illegible]
Radishes	per doz. bun.	0	[illegible]		[illegible]	[illegible]
Salsafy	per doz. bun.	3	6		[illegible]	[illegible]
Small Salading		1	3		[illegible]	[illegible]
Spinach	per bush.	1	8		[illegible]	[illegible]
Tomatoes, English	per doz. lb.	2	[illegible]		[illegible]	[illegible]
,, Guernsey	per doz. lb.	2	[illegible]		[illegible]	[illegible]
Turnips	per doz. bun.	1	6		3	[illegible]
Vegetable Marrows	per tally	2	0		[illegible]	[illegible]
Watercress	per doz. bun.	0	4		[illegible]	[illegible]

LONDON POTATO MARKETS.

Business is very quiet, and supplies are ample.

		s.	d.		s.
British Queen	per ton	60	0	to	65
Epicure	per ton	60	0		70
Duke of York	per ton	60	0		70
Sharpe's Express	per ton	60	0		70
Up-to-Date	per ton	55	0		65
Early Puritan	per ton	60	0		70
Evergoods	per ton	50	0		60

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY. SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. SEPTEMBER 6 TO SEPTEMBER 12.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Sept. 6—Sunday	6 10	57	54	64	49
,, 7—Monday	11 10	59	55	68	47
,, 8—Tuesday ...	5 25	61	57	69	40
,, 9—Wednesday.	8 50	57	51	63	53
,, 10—Thursday ...	11 0	52	47	59	44
,, 11—Friday	6 10	50	48	59	44
,, 12—Saturday ...	8 30	50	47	58	41
Means	8 10	55	51	63	45

DATE. 1908. SEPTEMBER 6 TO SEPTEMBER 12.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Sept. 6—Sunday	—	55	57	58	45
,, 7—Monday	—	56	57	58	43
,, 8—Tuesday ...	0·01	56	58	58	39
,, 9—Wednesday.	—	57	58	58	48
,, 10—Thursday ..	—	56	58	58	40
,, 11—Friday	0·11	55	57	57	40
,, 12—Saturday ...	—	55	57	57	34
Means ...	(total) 0.12	56	57	58	41

FORTHCOMING ENGAGEMENTS.

September 20.—Wootton Horticultural Society.

DNESDAY September 23.—Royal Society of Arts.

DNESDAY, September 28.—National Chrysanthemum Society's Floral Committee meeting at Essex Hall, at 3 p.m.

DAY, September 29.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. on "Garden Design," by Mr. T. H. Mawson; Scientific Committee at 4 o'clock.

ESDAY, September 30.—Royal Society of Arts

DNESDAY, October 7.—Royal Society of Arts. Hayward's Heath Gardeners' Society. National Chrysanthemum Society, Crystal Palace days; Floral Committee at 12 o'clock.

Y, October 9.—Carluke Horticultural Society.

DAY, October 15.—Royal Horticultural Society's Fruit Show; two days. n Horticultural Society meeting.

, October 16.—Royal Horticultural Society; ference on "Spraying." Morning session, 11 to 1 p.m., chair to be taken by Colonel Varde, M.P., and lectures given by Mr. G. V.M.H., and Mr. H. F. Getting; afternoon session, 2.30 p.m. to 4.30 p.m., chair to be taken by Colonel Long, M.P., and lectures given by Professor F. V. Theobald, M.A., and Mr. G. nd

DAY, October 21.—Royal Society of Arts

DAY, October 27.—Royal Horticultural Society. Committees meet at 12 o'clock; lecture on "Garden Design," by Mr. T. H. Mawson; Scientific Committee at 4 o'clock

Chrysanthemum Society; two days.

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Carriage Paid.

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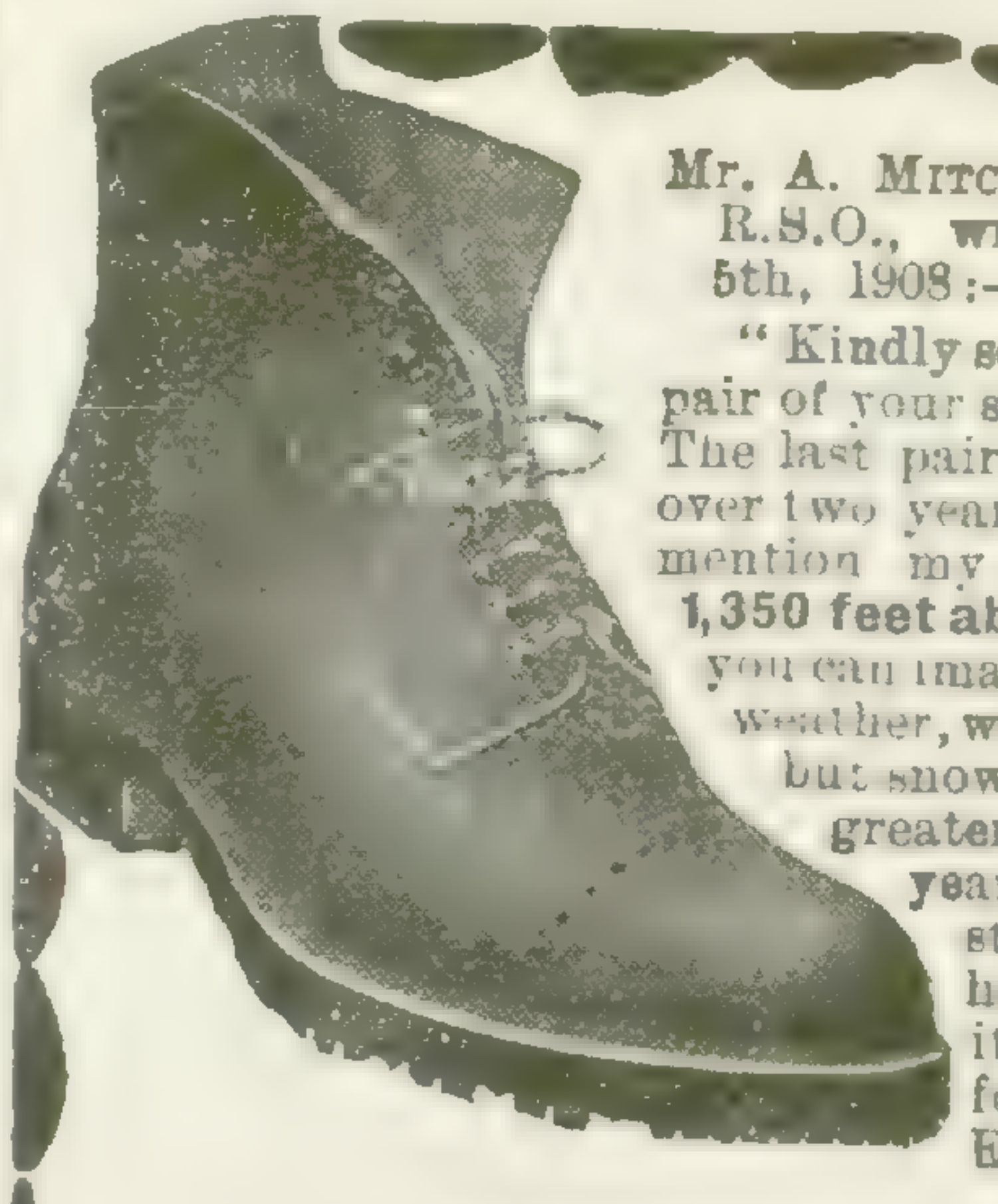

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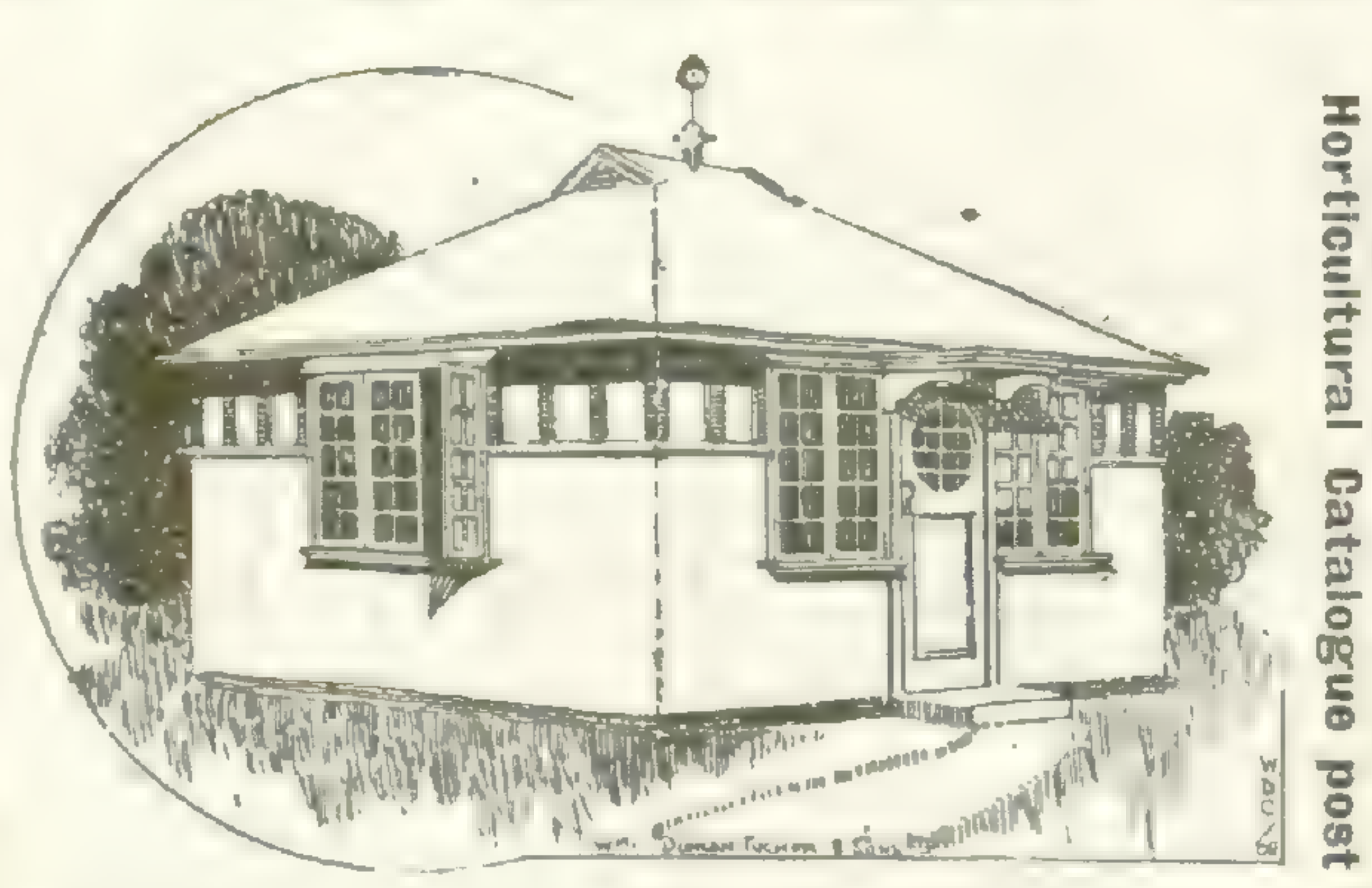

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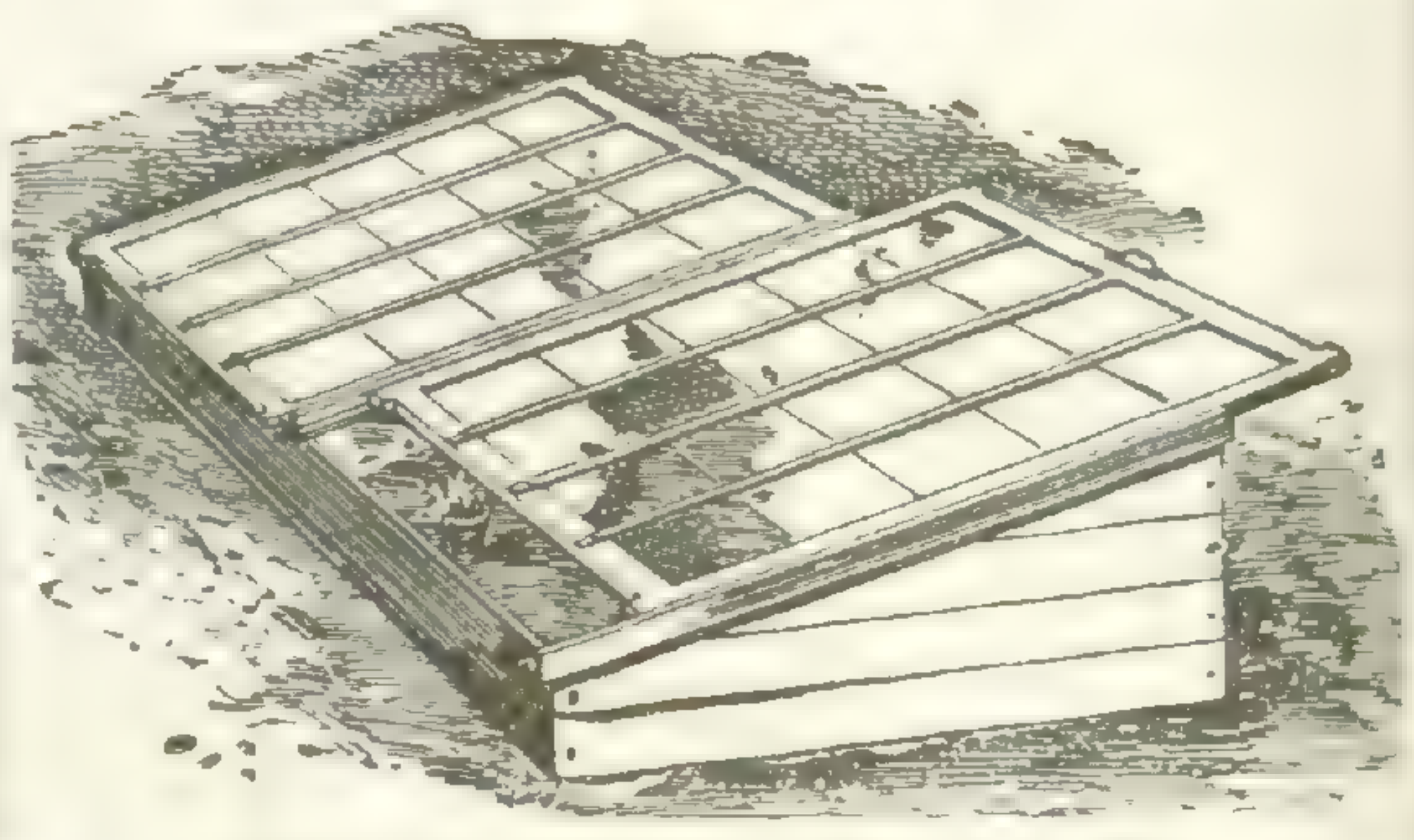

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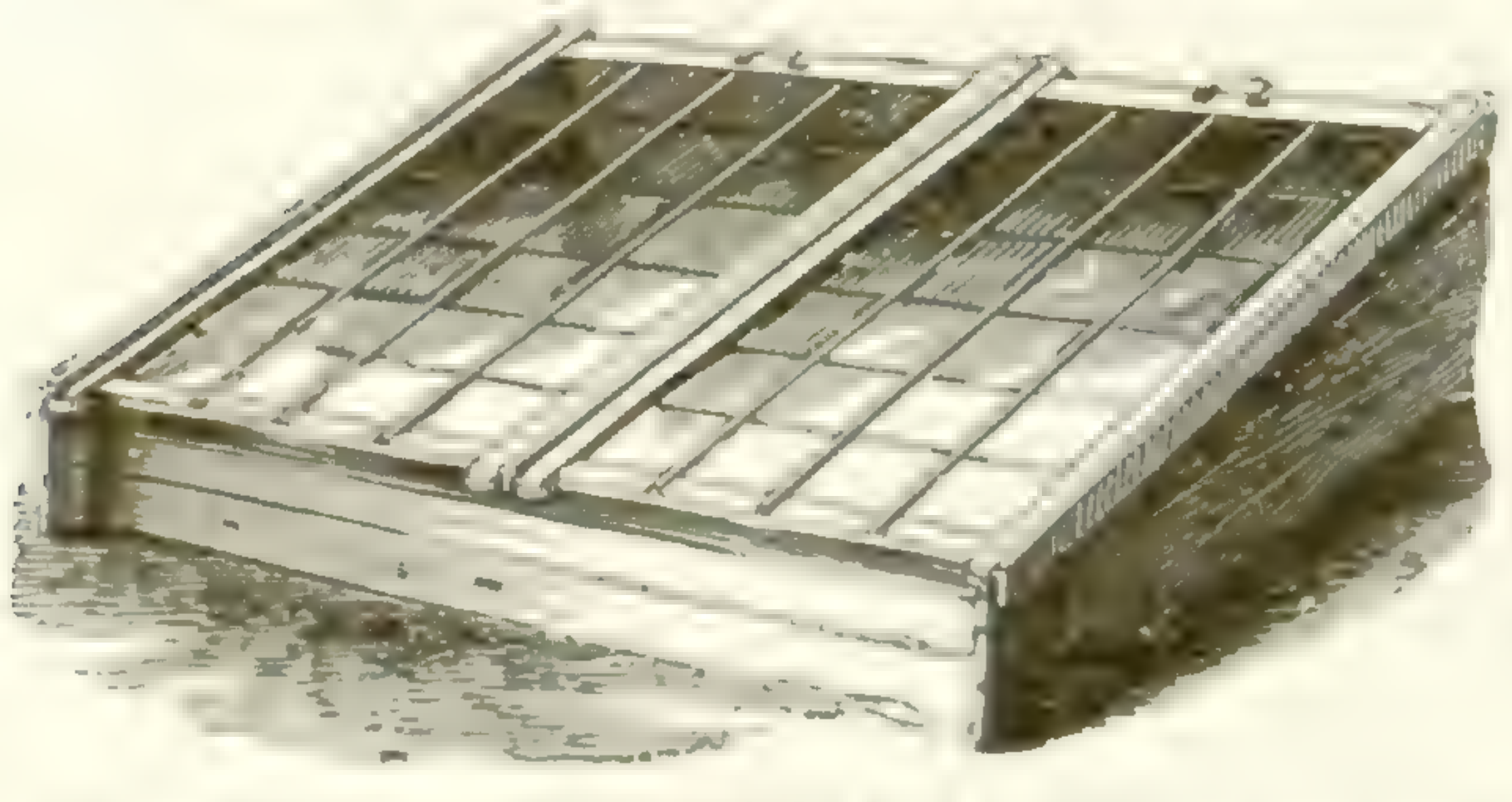

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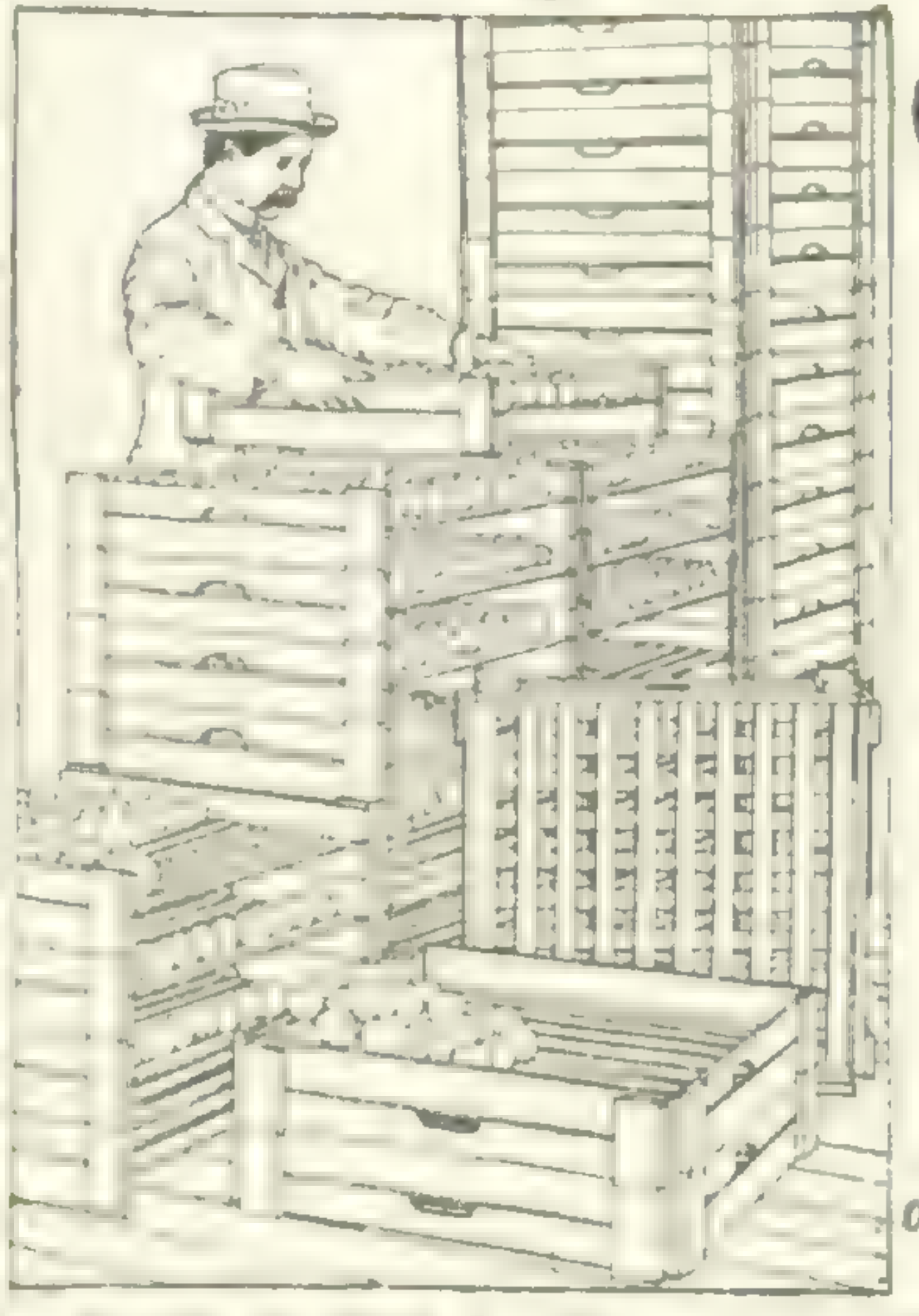

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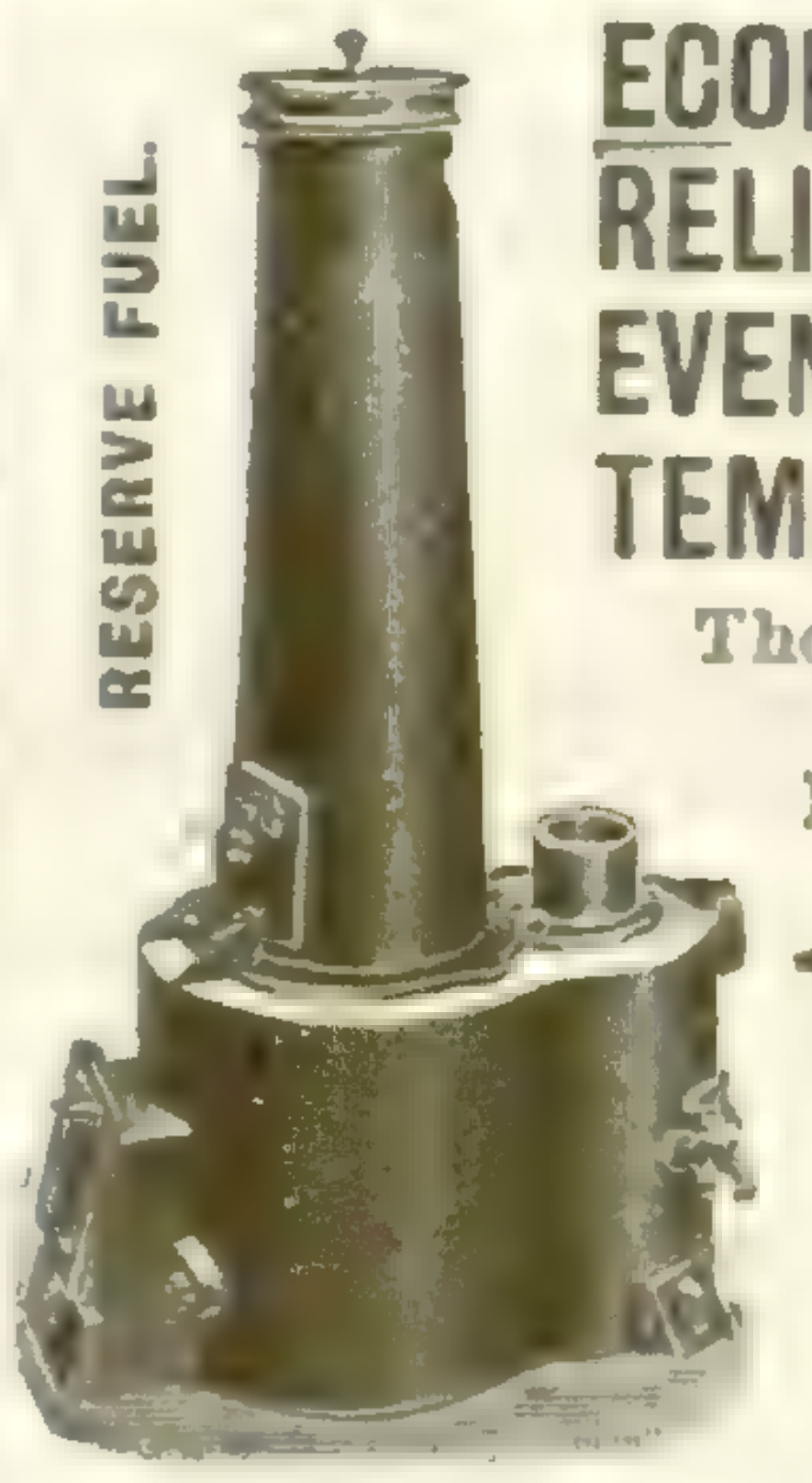
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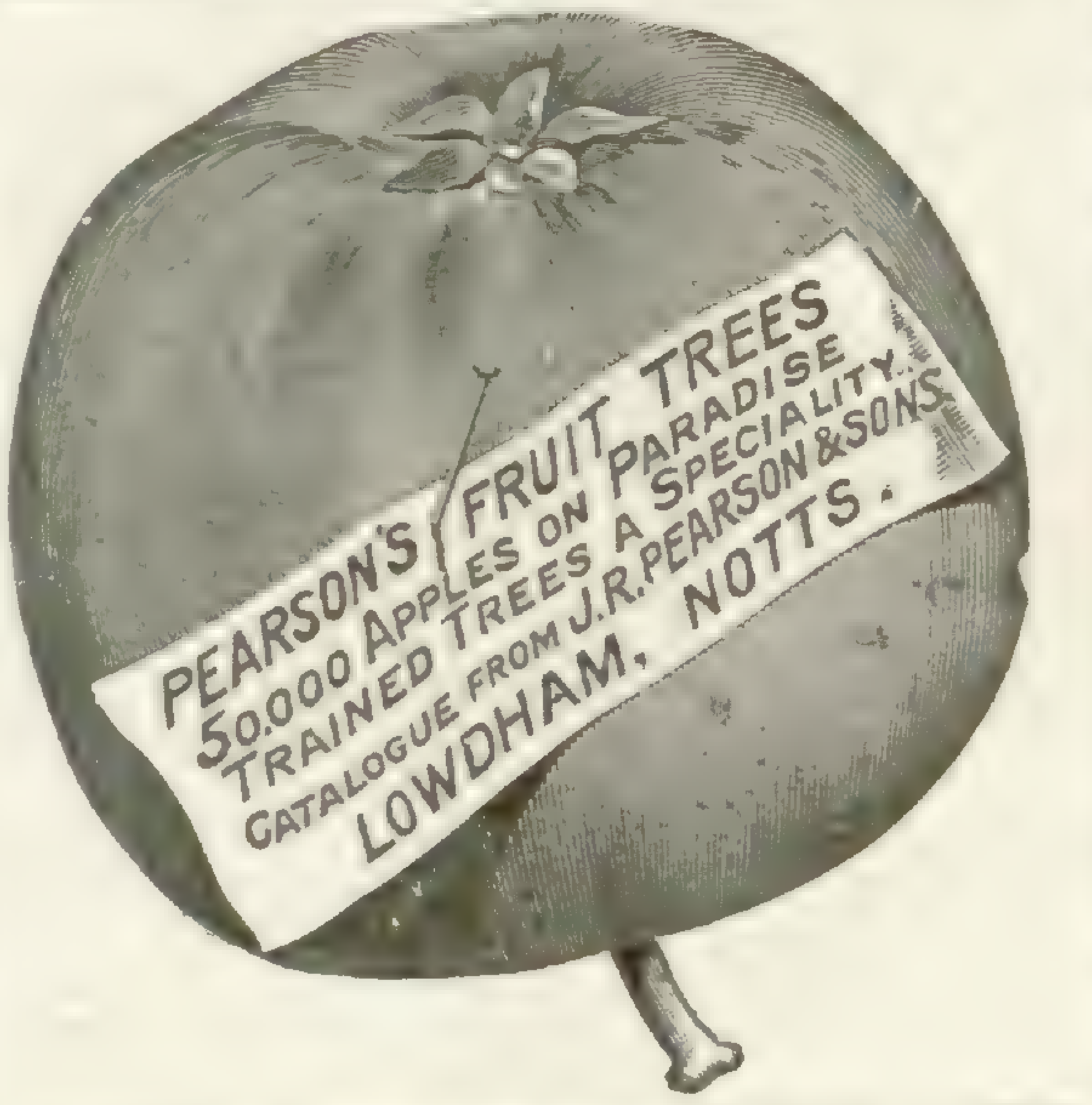
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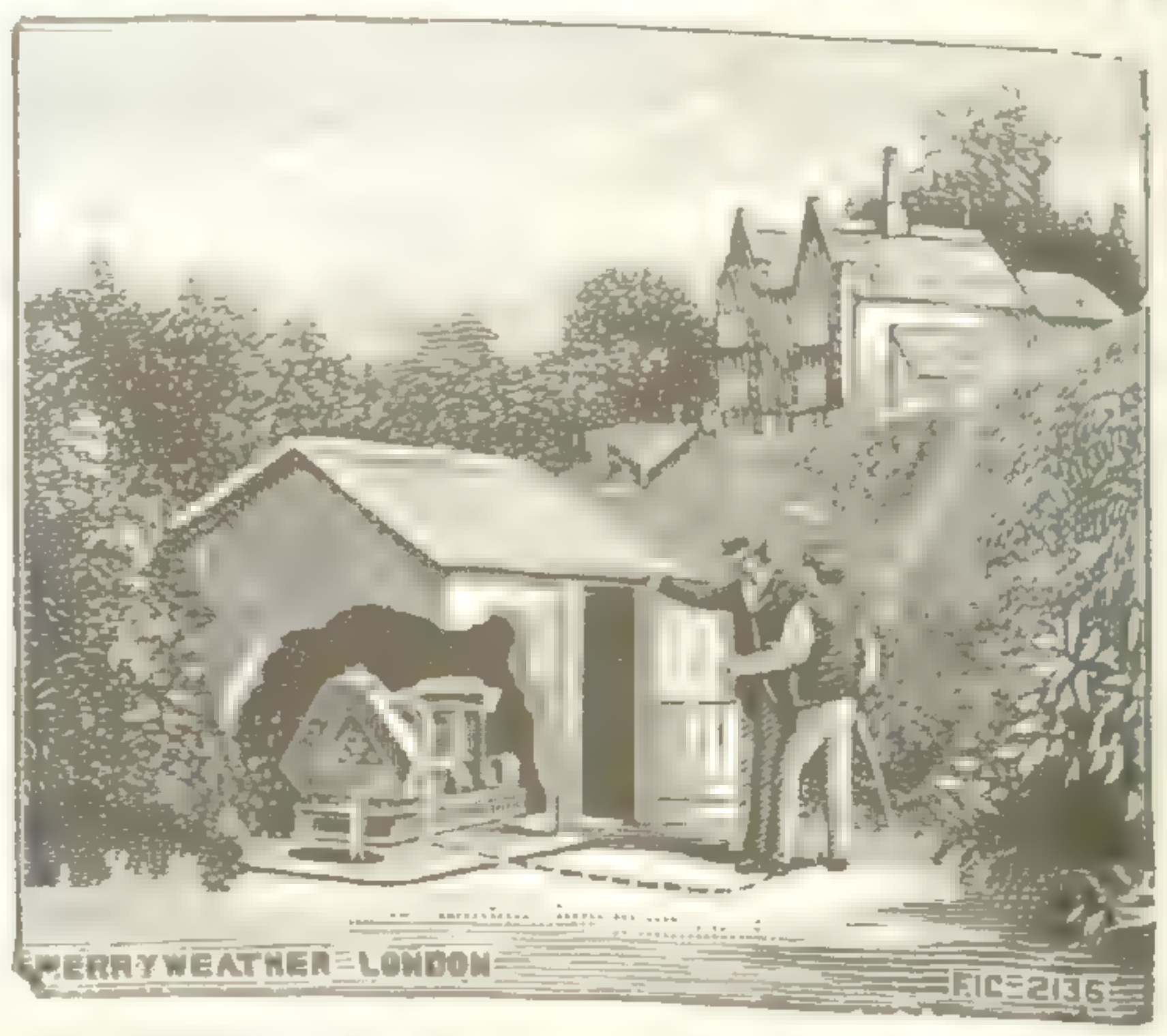

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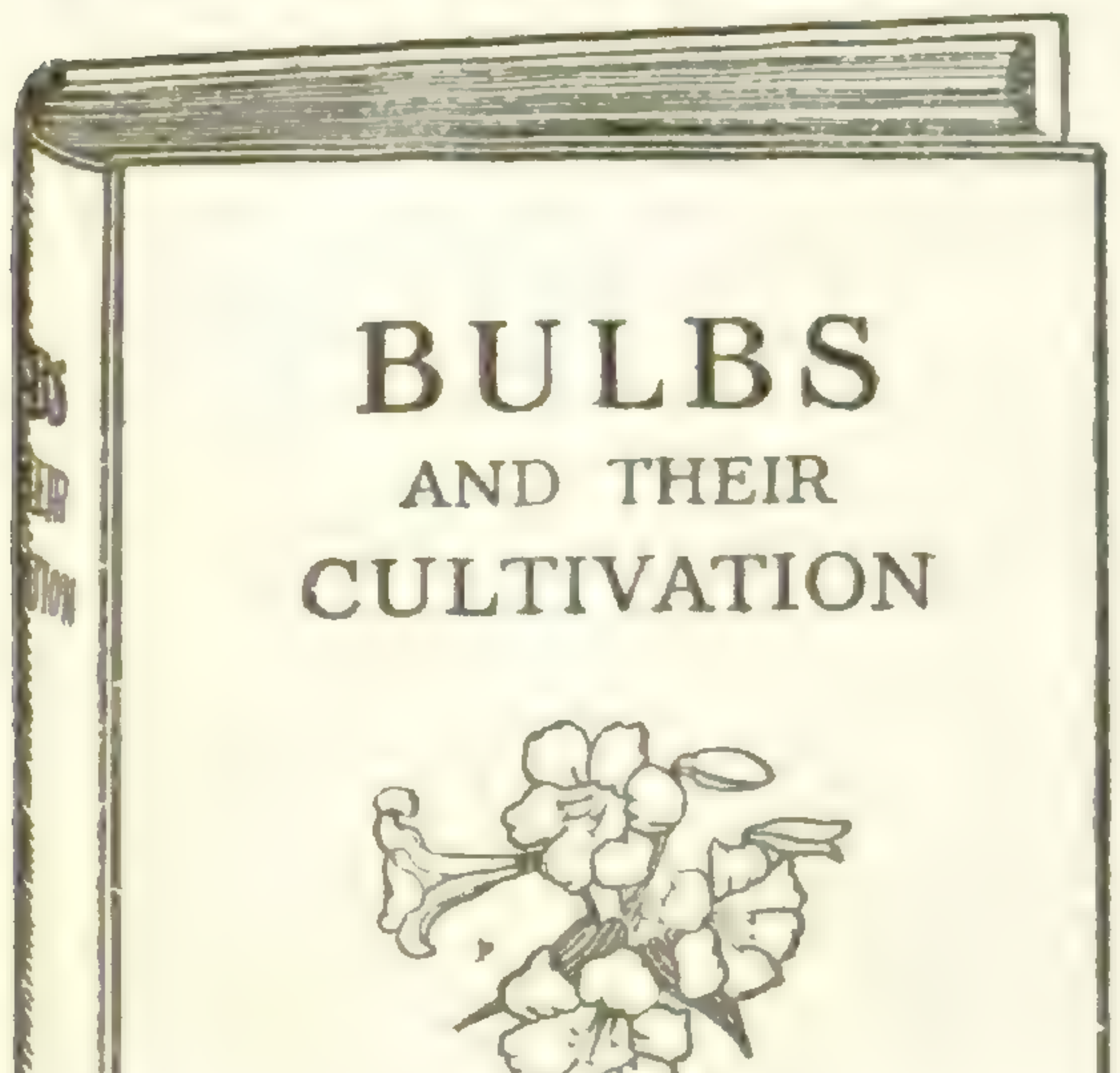

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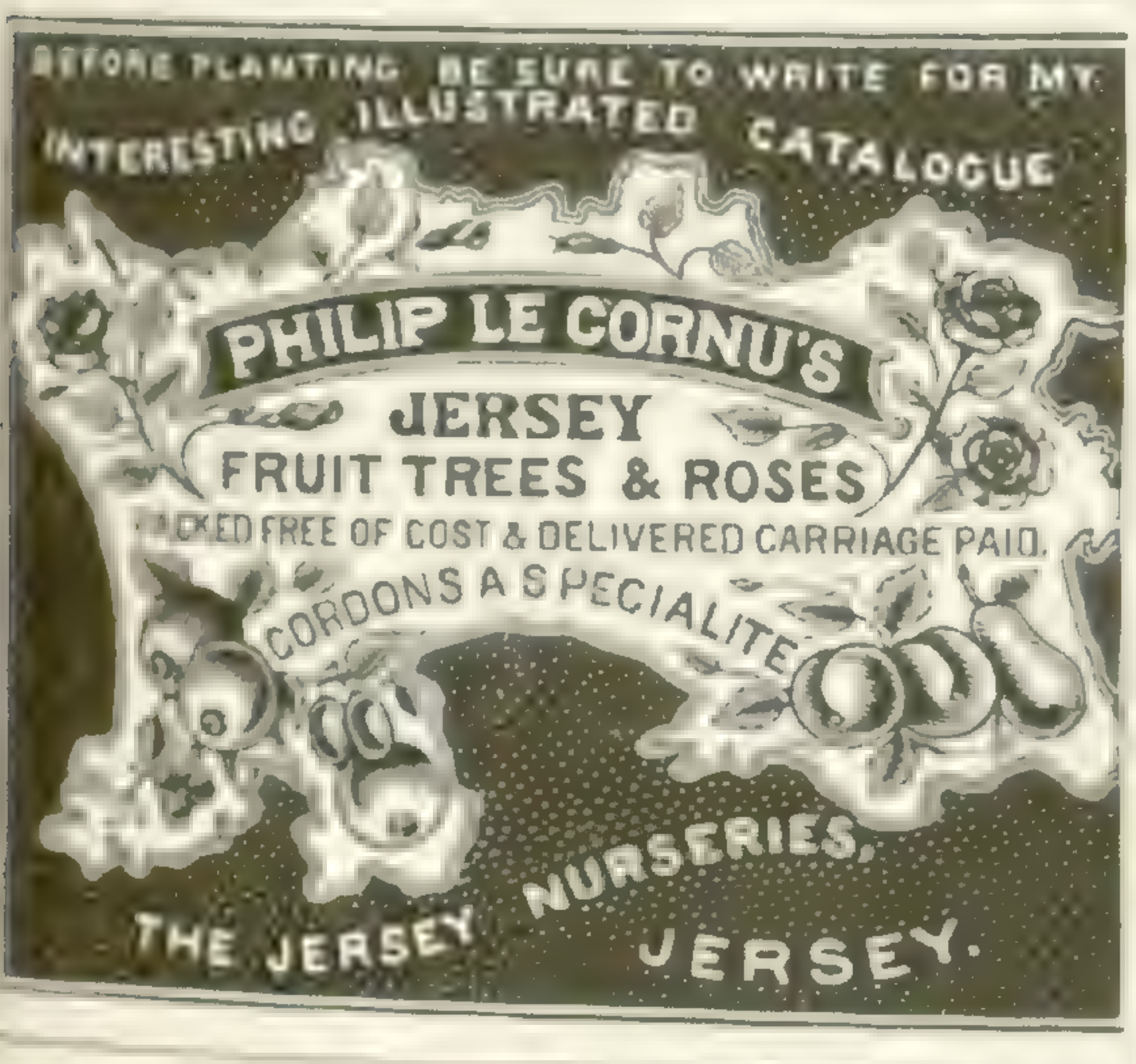

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NOTES OF THE WEEK.

Flower Shows.

To those who take up a hobby of any kind there is nothing more discouraging in the long run than an absence of appreciative visitors who understand the merits of what is put before them, listen with comprehension to the history of the acquisitions, and from whose remarks a stimulus may often be derived to fresh efforts in the same or in new directions. This is particularly the case in natural hobbies such as are constituted by the many branches of culture of flowers, foliage plants, fruits, and vegetables, in all of which the amateur by dint of perseverance and concentration can vie with, and sometimes even excel, the professional nurseryman whose attention is naturally distributed over a wider field. It is here that the flower show proper affords the desired opportunity of comparison of results, and of meeting face to face with friendly competitors; and it is here that abundant opportunities exist for that exchange of experiences by which men learn what to avoid and what to adopt in the interests of their specialities. At the fortnightly meetings of the Royal Horticultural Society we see this principle embodied in its most practical form. To that [illegible] gravitate all the best and most advanced types which have been arrived at by selective culture on expert lines, or by importation from all parts of the world; and it is there that we find committees of experienced experts in all branches before whom these acquisitions are brought for judgment. Human nature is fallible, and the amateur and not rarely even the professional, is but too apt to mistake his "geese" for swans, but the anserine character is little likely to pass muster with a body of men who [illegible], by long years of experience, to discriminate between them. In the greater shows of the Temple and Holland Park we see, indeed, not merely the results of the cultivators skill and labour, but also that of the selective power of the judges aforesaid, which has undoubtedly contributed in a very large measure to the general high standard of the exhibits of all kinds. We appreciate this fact the more if we remember that a first-class exhibition of any speciality, orchids, roses, hippeastrums, begonias, etc., etc., involves a long period of previous preparation, during which the future exhibitor is always influenced in his choice by the knowledge that the eventual reward will not depend upon popular taste, which might be satisfied with a mere blaze of colour, but upon the sharp eyes of connoisseurs as quick to appreciate inferiority as superiority, and also that in all probability there will be keen competition on similar lines, and that the prize will go to the best. In these greater shows, both in London and the provinces, as in the fortnightly meetings at Westminster, it is gratifying to see how greatly the amateur figures as a successful competitor, as a result of that concentration to which we have alluded. Our floral wealth nowadays is so immense that the possibilities open to the selective cultivator and hybridiser are practically infinite. Nature is always busy devising new types, which, however, too often betray themselves at first in a degree only appreciable by skilled eyes, and hence often undoubtedly perish for lack of appreciation and encouragement; if, however, these be noted and followed up by judicious selection of their offspring, it is within the power of the smallest amateur to add something new and valuable to the wealth aforesaid. Every distinct "sport" is a direct gift from Nature, and often involves a suggestion of which the cultivator would otherwise never have dreamed. To follow these up and develop them successfully constitutes one of the greatest triumphs, and is yet within the reach of every true flower lover. All this, however, is of little use unless the cultivator familiarises himself with the work past and present of his fellows in his own particular line. Many of the "geese" that are put forward for awards by the R.H.S. Committees are obviously due to a want of knowledge of this kind, and such ignorance is best combated by study of the horticultural press whose province it is to dispel it, but far more by study of the exhibits at flower shows worthy of the name. We say worthy of the name because in our experience a number of local so-called flower shows are only so by courtesy, a tent or two being filled with second or third-rate plants, to which the judges must be hard put to it to award the first prizes, while the bulk of the attraction consists of a band, and sports of various kinds, other than floral ones. Such shows, in our opinion, contribute but little to the cult, and we should be pleased to see in these cases a strenuous effort to improve matters.

MR. E. J. HOLLAND, J.P.

Mr. Edward J. Holland, J.P., whose portrait it gives us very great pleasure to present this week, has arrived at that golden age when the enthusiasm of youth is undiminished, and the vigour of full manhood has brought with it an experience that tempers and directs the enthusiasm. One cannot be in Mr. Holland's company for five minutes without discovering that he has wide horticultural sympathies and an unbounded love for roses. At Silverdale, Sutton, Surrey, he grows about 2,800 roses that come under the "exhibition" class, besides garden and climbing roses in abundance, and about 200 pot roses. Mr. Holland is a business man, and moreover, he takes his full share of public work, being a member of the Surrey County Council and chairman of the Sutton District Council, and yet he finds, or makes, time to grow roses so well that in the present season his record of wins is as follows: First for 24 and 12 blooms at Richmond; first for 24, 12, and 8 trebles at Reigate; first for 24, 12, and 8 trebles at Sutton; first for 12, first for 6 new roses, and second for 12 trebles at the N.R.S. Show. At Croydon, Purley, and Eltham he was also successful, and he has had four silver medals for "best" blooms this year. Mr. Holland has quite a collection of "best bloom" medals, and no fewer than seven of them have been awarded for Mildred Grant. Mr. Holland is a member of the General Committee and also of the General Purposes Committee of the National Rose Society, and he ever seeks to advance the interests of the flower he so greatly loves.

Devon Daffodil Show.—Captain Parlby, of Crownhill, Devon, has sent us the schedule of the Devon Daffodil and Spring Flower Society's exhibition, to be held in the Plymouth Guildhall on April 20 and 21 next. No fewer than seventy-two classes are arranged, and liberal prizes are offered all through. We are especially glad to find that the new classification of daffodils, as arranged by the Royal Horticultural Society, is set out on one page of the schedule, and to see the special note that "the Royal Horticultural Society's classification of daffodils has been adopted as the standard, and varieties must be shown in the divisions to which they are there assigned. In case of any variety not being classified, the judges will be directed to allow the exhibitor to show it in that which it most nearly resembles, and in all cases to give him the benefit of any doubt."

Footpath Preservation. — Now that the prevalence of motors on the high roads is leading pedestrians to favour the country foopaths and bye-ways more than ever, it is interesting to learn that the preservation of such paths and rights-of-way is becoming a matter of great concern. The Commons and Footpaths Preservation Society is doing splendid work in this direction, but it ought to be more widely known that the duty of preserving such footpaths lies with the District Councils. It is the duty of the latter bodies to proceed in a case of obstruction reported to them by a Parish Council, and both Parish and District Councils may repair these public footpaths so as to prevent their disuse and the consequent lapse of rights.

Horticulture around Sheffield.—Most of our readers are aware that the cutlers and other steel workers in the neighbourhood of Sheffield include many very keen horticulturists. Some idea of the hold that gardening has upon the Sheffielders may be gathered from the fact that the "Sheffield Daily Telegraph," of September 14, contained reports of flower, fruit, and vegetable shows held by the Nether Hallam, Darnall, Norton, Bolehill,, Chapel-en-le-Frith, Buxton, North Wingfield, Stretton, Heanor Liberals', Monk Bretton, Elsecar, Darton, Stocksbridge, Turnditch, Shirland, Summercotes, Newfield Green, Crookes Allotment, and Oughtibridge Societies—nineteen horticultural exhibitions in one week!

Jubilee Bulb Show at Haarlem, 1910.—The Dutch Bulb Growers' Society is organising an important flower show in commemoration of its jubilee in 1910. Our readers are well aware that this society has organised large shows of bulbous plants every five years, and that the last exhibition of this kind was held at Haarlem in March, 1905, and fully reported and freely illustrated in our columns. All the visitors, and especially the foreign members of the jury were, however, unanimous in declaring that a show of flowering bulbs in the open ground would be even more desirable, hence the society has decided that the next quinquennial and jubilee show should be held in the natural flowering season of the bulbs, i.e., from the first days of April until the middle of May, 1910. The Haarlem City Council, recognising the high economical importance of bulb culture, has offered the most picturesque part of the City Park for the show site, and consequently it will be possible to prepare a floral exhibition of a quite distinct and new character, situated in landscape scenery of rare beauty. The flowering season of hyacinths and tulips always attracts large crowds of visitors, not only horticulturists, but also tourists. The Dutch Bulb Growers' Society may well celebrate its jubilee in a striking manner, considering its prosperity and importance. Founded in 1860 with about 150 Fellows, the society has now 2,800 members, divided into 37 local sections in the provinces of North Holland, South Holland, and Zeeland. The society publishes a journal, appearing twice weekly, and forming a yearly volume of 1,000 to 1,200 pages. The weekly mutual bulb market, the committee of arbiters, the floral committee for judging novelties, etc., have all been established by the Bulb Growers' Society.

The Public Parks and Gardens of the United Kingdom form a very interesting feature of our national horticultural life, and as the editor of the "Gardening Year Book" for 1909 is anxious to record the correct title and area of these parks and open spaces, he will be very greatly obliged if the superintendents will send him these particulars, as well as their own name and address. Secretaries of horticultural and gardening societies are also requested to furnish him with particulars of their societies, with dates of exhibitions, etc. The information should be sent as early as possible to the Editor, "Gardening Year Book," 148 and 149, Aldersgate Street, E.C.

Effect of Chloroform on Mimosas.—Dr. A. H. T. Montmorency, of Carrickmines, writes that, though most people are familiar with the sensitiveness of Mimosa pudica, the Sensitive Plant, few, perhaps, are aware that, when treated with chloroform or ether, this plant is like an animal, rendered insensible, and takes no notice of being touched.

M. Philippe de Vilmorin has been, we are pleased to learn, accorded the honour of Chevalier of the Legion of Honour.

Bulb Culture at Portmadoc.—Mrs. Lloyd George recently inaugurated an experiment that is to be conducted at Portmadoc in the culture of bulbs. The Town Improvements Committee has taken a small plot of ground for this purpose, and hopes to show that flower and bulb culture may be a profitable industry in the district.

The Bulb Trade of Holland.—Owing to the absence of the necessary data, it is impossible, says the "Journal" of the Board of Agriculture, to furnish an adequate idea of the importance of the fruit and vegetable industry in Holland, but Mr. Henry Turing, H.M. Consul at Rotterdam, states, as an example, that the value of the garden produce exported in 1905 was estimated at about £1,500,000, of which the bulb trade accounted for £600,000, the principal buyers being England, Germany, and the United States. Strawberries, cabbages, cucumbers, and apples are largely sent to Germany, while potatoes, onions, cucumbers, pears, cherries, gooseberries, and black, red, and white currants come to England.

Vegetable Imports were, on the whole, rather below the average last month, the most material decrease being in the quantities of onions received. The imports of potatoes amounted to 152,075 cwt., of the value of £30,228, these figures representing a decrease in quantity of 2,737 cwt., and in value of £2,967. Of the quantity mentioned, France sent 119,779 cwt., and "other countries" 31,279 cwt. Of onions the imports were 593,973 bushels, of the value of £65,820, or a decrease in quantity of 135,539 bushels, and in value of £21,623. Tomatoes, on the other hand, show an increase in quantity of 22,157 cwt., and in value of £9,870, the total having been 124,757 cwt., of the value of £120,625. The total value of unenumerated vegetables was £23,837, or an increase of £9,607.

Exhibit of English - grown Grapes.—It will be known to most of our readers that the Royal Horticultural Society have, at their Wisley Garden, the most complete collection of vines to be found in this or any other country, and they propose to exhibit at the fortnightly exhibition of flowers and fruits, to be held on September 29 at the Royal Horticultural Hall, Vincent Square, Westminster, about thirty varieties of dessert grapes grown upon these vines, thus affording a unique, and a perhaps hitherto unparalleled opportunity for the comparison of so large and representative a collection of fruits. Such an exhibit is intended to be chiefly educational, and especially to draw attention to some of the smaller-berried varieties which so vastly surpass in flavour their large and more showy brethren. The society has always paid special care to vine growing, which formed a prominent feature of their former gardens at Chiswick. In the early part of last century the society propagated wine-grapes for gratuitous distribution in the then young Colonies, and at the present time at the Wisley Garden, experiments are proceeding with an open-air vineyard to test the feasibility of such grape cultivation in suitable districts in England, and the best varieties for the purpose. Officers of the society will be in attendance with the exhibit on September 29 to give information to and to answer the enquiries of visitors.

A Notable Roof Garden.—The roof garden on the Lincoln Hotel, Seattle, the celebrated little city of the far-western state of Washington, renowned chiefly as the jumping-off ground for Yukon goldseekers, occupies, according to "The Sphere," a space of 12,000 sq. ft., and in addition to well laid out grass lawns, flower beds with beautiful blooms, shrubs, trees, and climbing vines, there is a charming teahouse and a pergola. The whole of the work in this aerial garden is done by Mrs. Blackwell and her two daughters. In addition to fruit trees there are a number of ash and birch trees, the latter reaching 12ft. in height. There are eight maple trees, six hollies, four hawthorns, a few evergreens, two laburnums, and one small apple tree which bears enormously large fruit. Then there are large shrubs like the lilac and quantities of roses, there being 300 or more bushes. There are 1,000 pansy plants in a bed 100ft. long, other plants including dahlias, a number of rhododendrons, 200 carnations, 1,500 Dutch bulbs, and numberless annuals that grow and bloom in profusion. The garden is, it is stated, regarded as one of the sights of the town.

DWARF POLYANTHA ROSES.

If you take a truss of Dorothy Perkins, Crimson Rambler, Baby Dorothy, or Mme. Norbert Levavasseur, and ask some growers what rose it is, the reply may be "A polyantha." This is correct. But what a difference when prefixed by the word dwarf or climbing!

These notes refer to the dwarf-growing forms, although it is admitted that many of the climbing or creeping forms will do well when pegged down. Those treated upon now are all dwarf or bushy growers, seldom exceeding eighteen to twenty-four inches in height, unless allowed to "run away." We have many forms of roses now, but for a lasting show of blossom, or as bedding roses, none can beat the dwarf polyanthas. From early June until the end of September they are one mass of bloom; full as they can possibly be for a fortnight or so; a slight rest, and then again a full crop of flowers that even rivals the begonias and zonal pelargoniums. They are also the simplest of roses to grow. Planted in fairly good soil the bed is a fixture, and only needs a little judicious pruning and feeding. Pruning consists chiefly in thinning out the centre and removing growths that have already flowered. In fact, this is almost all the wood there is to cut away; the rest is successive trusses of blossom.

The dwarf polyanthas are especially valuable in bedding form, because they carry their trusses bold and upright; you see the best flowers at first sight, and do not have to stoop to see their beauty, as is the case in many other dwarf growers, such as Viscountess Folkestone, Maman Cochet, as those you must lift up to see their centres. And yet these are grand roses for clusters and beds. The accompanying illustration represents a pot-grown plant of Madame Norbert Levavasseur, that was introduced in 1903. Unfortunately, there has been considerable confusion amongst some of these dwarf-growing forms. The one figured has been called Baby Rambler, also the Dwarf Crimson Rambler. Mme. Norbert Levavasseur would appear to be its correct name; the others only following when the rose and its characteristics became better known. While on this point, it may be as well to mention that Maman Levavasseur is a dwarf form of Dorothy Perkins, and this is often called the Baby Dorothy in the same connection that the one illustrated is called Baby Rambler. As a matter of fact, they are not Ramblers in the true sense of the word, and do not exhibit any of the Wichuraiana character in this respect. Phyllis is synonymous with Baby Dorothy and Maman Levavasseur, and was sent out in the same year, which was four years after Mme. N. Levavasseur or Baby Rambler.

So many flowers, as well as roses, produce sports at the same time in widely different parts of the country that one cannot entertain the idea of independent firms knowingly introducing the same under other names. We find the same thing occurs in sweet peas, chrysanthemums, and other flowers. I mention this because I do not for a moment believe any reputable firm would risk its credit by duplicating names.

Referring once more to the illustration, I do not think we could find more suitable plants for pot culture than the subjects of these notes; they flower as freely in pots as in the open, provided one takes even less care than is needed for other sections.

Among the polyanthas we have an immense range of colour: white, pink, yellow, red, cream, and almost purple; in short, any shades you can find among other sections. This class is increasing very rapidly and at the time of writing the twelve best may probably be found among those named below.

Madame N. Levavasseur (1903),should not be described as a dwarf Crimson Rrambler because it has a distinct shade of purple never found in that variety. We sometimes see the colour in Philadelphia Rambler, and very pronounced in Ne Plus Ultra. Otherwise, dwarf Crimson Rambler is a good description as regards colour, but the truss itself is more conical.

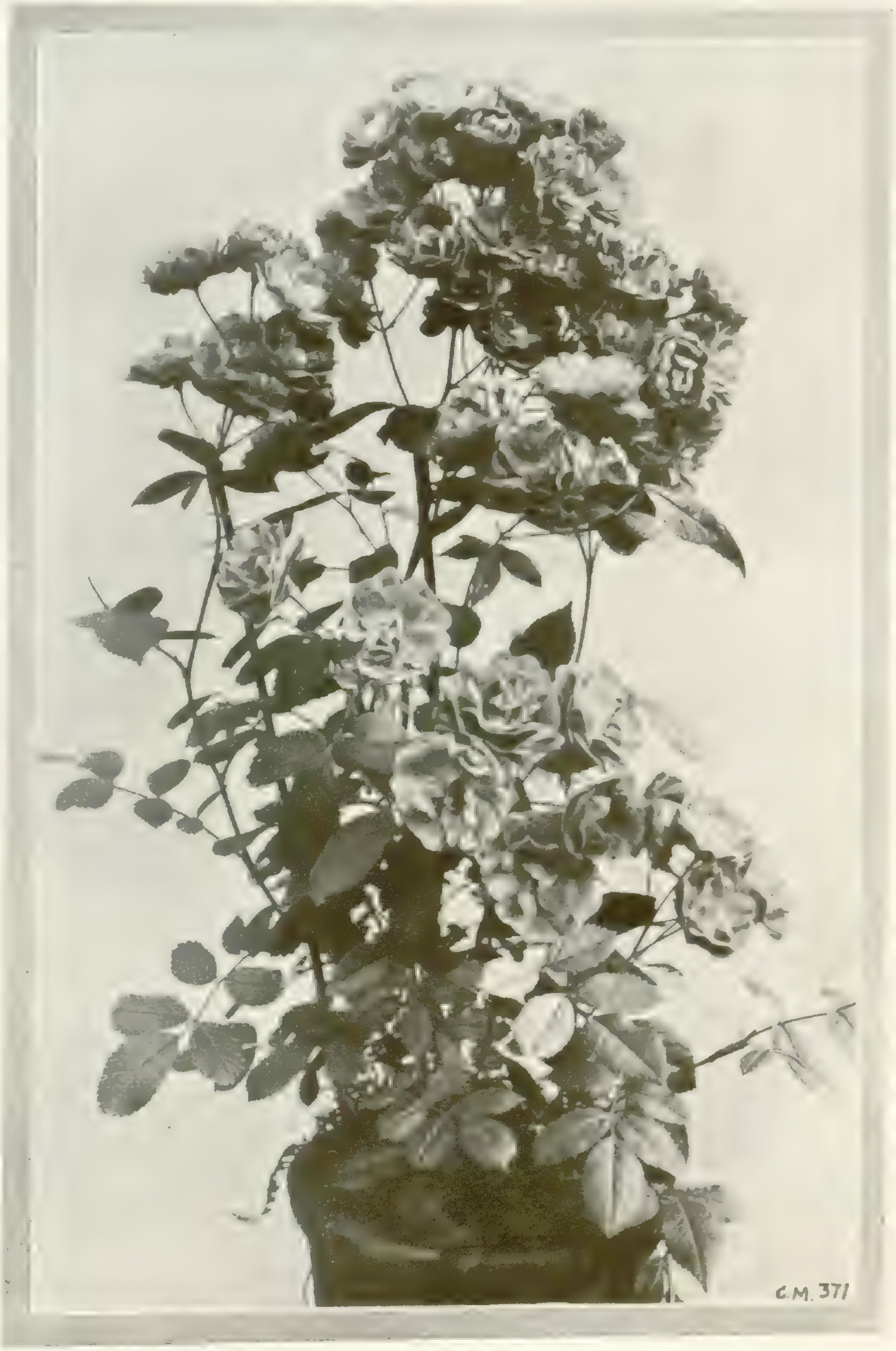
Maman Levavasseur (1907), is much lighter in colour than the centre of Dorothy Perkins, a rose it is reputed to have sported from. Here, again, the form of the trusses is distinct, although much of this may be from their upright instead of drooping habit.

Katherina Zeimet is sometimes called the White Baby Rambler. Why, I do not know, seeing it was introduced by M. P. Lambert, in 1901, two years before we named any of this section as "Babies." It is a beautiful little rose, almost snow-white, very free, and in its perfume resembles the hyacinths.

Schneewittchen was introduced by P. Lambert the same year (1901), and affords another white, yet quite distinct. This is semi-double, with very prominent golden stamens, which give the body of the flower an ivory, more than snowy-white, appearance. A good bloomer, and while roses are blooming this one is never flowerless.

Cécile Brunner is a blush-pink, lighter at the edges, with a distinct golden centre. There is a semi-climbing form of this now that is a great acquisition in that section, and so good as to call for a word here, although out of our subject.

White Pet is happily named. It is almost pure white when open, with a tinge of rose on the edges in its younger stages. I have counted three dozen blooms on a truss. A more perfectly rosette-shaped bloom it would be difficult to find.



DWARF POLYANTHA ROSE, MME NORBET LEVAVASSEUR.
Rich rose crimson, with a purple tinge as the flowers age.

Perle d'Or, a clear nankeen yellow with orange centre, does not keep so compact a habit as most, but is indispensable because of its unique colour and freedom.

Gloire des Polyantha produces very large trusses, somewhat heavy in appearance on account of its colour, a deep rose with lighter base, but it is exceptionally free.

Léonie Lamesch is called a nasturtium-red and yellow by the raiser, and it varies so much between these shades and deep orange that I cannot add to the description. A very peculiar colour this, flowers freely produced, set amongst quite distinct foliage, and the individual flowers lasting longer than any other in this class.

Floçon de Neige is another very aptly

named rose, for it resembles snowflakes when shattered. Pure white, particularly showy on the plant, free-flowering, but not a variety you can cut before it fully justifies its name.

Perle des Rouges gives the most reliable bright crimson, and I think it is better than Red Pet.

Mrs. W. J. Cutbush is a pale and yet clear pink, only semi-double, but a beautiful little rose borne in very large clusters. One of the best late in the season.

Uckfield. A. PIPER.

SINGLE ROSES.

During the last decade or so many purely single roses have come to the front. The growing taste for artistic decoration, rather than for the exhibitor's few blooms of exceptional merit, doubtless accounts for this. Personally I am a great admirer of roses in any form, from the perfectly symmetrical Horace Vernet or Catherine Mermet to the semi-doubles and singles; but few are more beautiful than those I wish more particularly to dwell upon in the present notes.

NEW SINGLE ROSE PARADISE.

A pink and white single Wichuraiana variety, recently well shown by Messrs. William Paul and Son, Waltham Cross.

We can have singles of any class of growth, from one to twenty feet or more in length; also blooms from three-quarters of an inch to five and a-half inches across; while every rose colour is represented. Not only are single roses exceedingly showy, but we get an immense number of varied coloured hips or seeds from them which are quite a feature in themselves.

The oldest known roses were, of course, singles, and it is not known how long the copper and yellow Austrian briars had existed before Gerard noted them. These two are still among the very best, and are, probably, with the help of our own British briars, the forerunners of many now so largely grown. Another great point with the singles is the length of their flowering season, for, although naturally rather evanescent in regard to each flower, blooms are produced so freely and continuously that a truss lasts a long time. Several sorts, too, such as the rugosas, will continue in flower from May until November.

Before going further let us look for a while at the grand show that can be had in the autumn from the rose hips alone; and it is only the single-flowered varieties that produce these. True we have hips upon such as General Jacqueminot, Mme. Abel Chatenay, Mme. Ravary, and a few more; but these are not very decorative. In Rosa pomifera we have bright red hips almost as large as a medlar; R. rugosa alba and R. r. rubra afford a large number of orange and purple-scarlet hips respectively, while R. rugosa atropurpurea has almost maroon-coloured fruits. Leuchtstern and Stella carry bunches of berries that are the same size and as showy as the thorns of our hedgerows. R. moschata alba has numerous bunches of small black berries. Rosa rugosa calocarpa is simply full of deep scarlet hips. Many of these rugosas are much used for covert planting, game birds being very fond of the berries. Even our own hedgerow briars are showy, but are quite surpassed by the grand trusses of sprays found upon the Penzance sweet briars. A stand of rose berries, ranging from black to white or pale lemon, deep orange and purple, with intense scarlet, makes a pretty feature for the table during autumn.

Maharajah is one of our largest singles. This is often five inches across, borne in trusses, the centre one opening first. It is a very strong grower, needs little pruning, has deep green foliage, and is one of the deepest velvety-crimson roses grown. Not the least attraction about single roses is their showy anthers, and here we have immense deep golden ones. Altogether, this is a grand variety for pillars or as a solitary bush on the lawn. It is good very early and again late in the season. Rosa sinica is a large pure white, with peculiar shiny foliage; R. sinica Anemone is beautiful silvery pink, shaded with rose. Both of these are rather tender, but unsurpassed where they will thrive. In Una we have another extra-sized flower, very hardy, and one that grows much like the Penzance briars. Few roses are more showy when growing upon a tall standard, its cascades of pale buff, changing to almost white, being very striking. It may be accepted that all of the single roses have showy anthers, so that I need not mention them individually.

Rosa macrantha, flesh, large, and very showy; and R. moschata alba, white, slightly tinged with pink on the edges, very early, are good. Morgenrot, rich crimson, with clear white eye, is very free flowering. Lady Curzon is classed as a Damask rose, but favours the briars very much; it is very large and pale pink. R. alpina is another very early rose, purple-crimson, and has hips—orange-red—that droop differently from any others. Bardou Job is one of the most dazzling brilliant roses; sometimes a pure scarlet, sometimes dark crimson shaded with blackish maroon, always opens well, and occasionally comes semi-double.

From Ireland we have a number of good singles, all named after the country of their origin, and, better still, in a short and sensible way. A few of the best are Irish Elegance, orange-bronze in the bud, which is long and pointed, opening into various shades of apricot, very perpetual, and a gold medal rose. Irish Beauty is pure white, large, and in clusters, very free in growth and flower. Irish Engineer is a most dazzling scarlet, very large; a sturdy and robust grower, with large deep-green foliage. Irish Brightness is not so good as Morgenrot already mentioned. Irish Pride is flesh, suffused with old rose and gold, and looks very much like a picotee. Irish Glory is silvery pink, back of petals crimson. Irish Modesty is coral pink, and Irish Harmony saffron-yellow, variable, and getting paler with age.

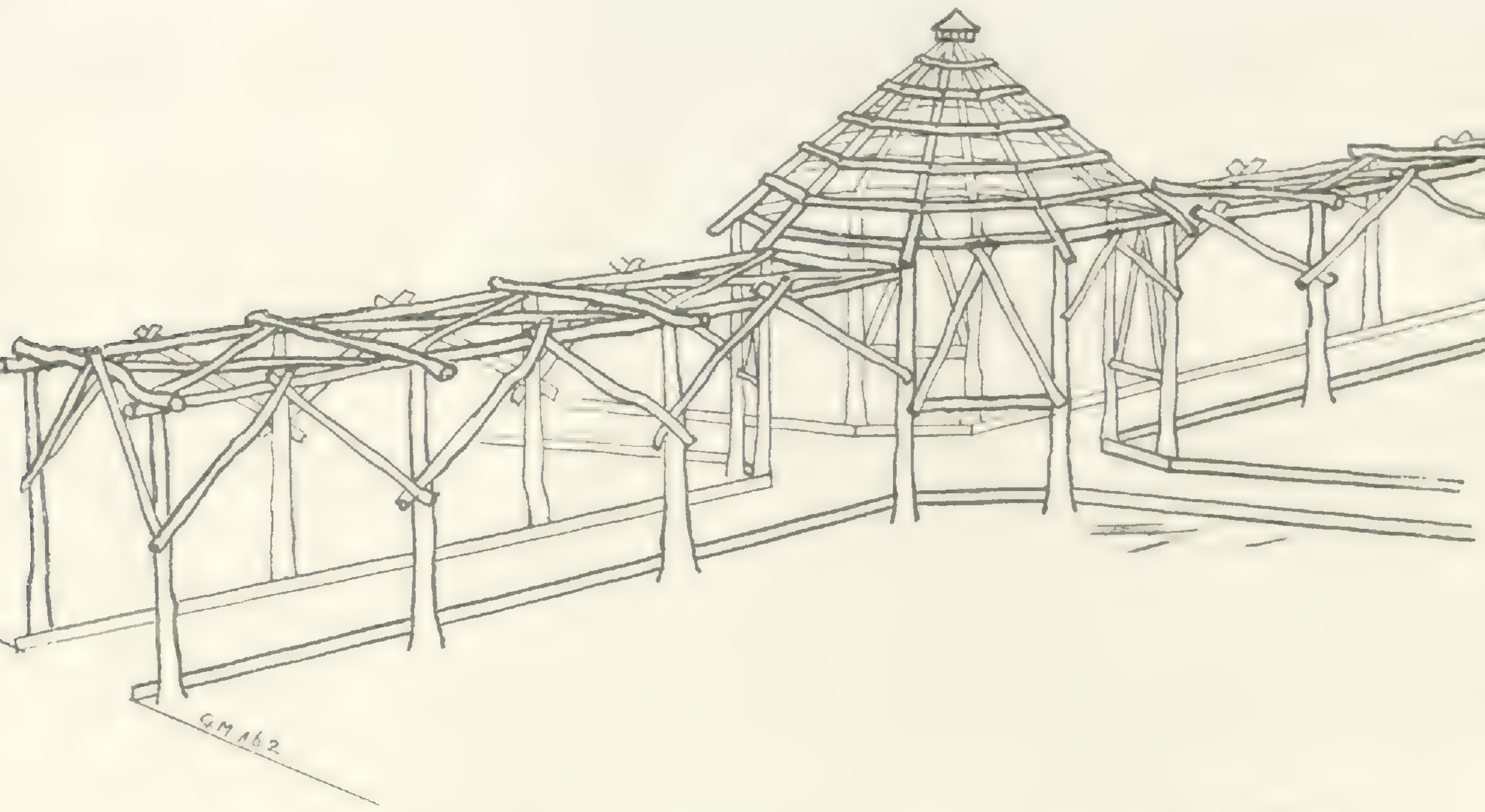
R. polyantha simplex flowers much the same as our common white-blossomed blackberry, but is very early and a mass of flowers for a long time. Mrs. O. G. Orpen, a newer variety, makes a good bush or pillar rose; this is bright rosy-pink, large, and flowers in trusses of from six to twenty blooms. R. himalaica is so erratic in flowering that I cannot recommend it. When one does get its snowy-white blossoms, with their yellow anthers, it is good. It has grown over 40ft. long in Kew Gardens, and would be a grand sight if one could procure blossoms the whole length of its shoots; but it is rather tender.

The Penzance sweet briars give quite a distinct group among roses, almost all are single, and all are covered with hips in the summer and autumn. All of them have the fragrance of the sweet briar foliage, and Lady Penzance more so than the original. I also like this one best of the lot. It is a beautiful soft tint of copper, with bright yellow at the base. Anne of Geierstein and Lucy Bertram (the last almost a perpetual bloomer) are the best deep crimsons. Amy Robsart, deep rose; Edith Bellenden, pale pink; Flora McIvor, pale rose; Catherine Seyton, rosy-pink; Julie Mannering, pearly pink; and Green Mantle, rich pink with a white centre, are among the best. The last three are perpetual flowering. These briars are wonderfully strong in growth, need little pruning, and form an impenetrable hedge quicker than any other rose.

Dawn is a very hardy rose, and so seldom semi-double that I must include it; rosy-pink, shot with silvery-rose; very large, borne in huge clusters, and it will grow in any position. Carmine Pillar is one of our very earliest to bloom; bright rosy-carmine, large and very free. Gottfried Keller is also slightly semi-double; deep apricot, golden yellow centre, darker on the outside of petals; very free flowering and perpetual; quite one of the best.

We cannot leave these single roses without noting a few of the Wichuraianas, a class that has come so much into evidence of late. Two of the very best are the oldest. The type has pure white flowers, borne in large trusses, and is in bloom throughout the season, and one of the prettiest features in our garden. Especially is this the case where growing upon tall standards, the drooping form is so graceful, and the foliage so clean and shiny. Rubra is not quite so free in any respect, but is red, tinted with orange-red, and white at the base of petals. Jersey Beauty, a clear pale lemon-yellow, is very large and showy; quite one of the best. Evangeline is a large single white, tipped with rosy-pink, very sweet-scented, perfectly distinct, very vigorous and grand upon arches or tall standards. Hiawatha is now so well known that I only include it to make my list more complete. There has been almost as much call for this rose as was the case for Crimson Rambler in 1893-4, and no praise is too high for it. For a single roses of its colour it has no faults; deep crimson, shading to almost white in the centre; immense trusses, lasting longer than most, and it is almost evergreen.

D. R.



SKETCH OF THE PERGOLA AT THE COTTAGE, BRENTWOOD.
Showing design and method of construction.

A SIMPLE PERGOLA.

When I entered into possession of my garden I had to deal with a rectangular piece of vacant ground about 30 yards in length by 20 yards in width. A good hedge of Myrobella plum bounds it on the north side, and grass paths form the other boundaries. The grass walks, although in bad condition, were too valuable to be disturbed, and I divided the ground into four equal parts by gravel paths. At the junction of the paths, as shown in the outline sketch, eight substantial larch poles were placed, one at each of the corners of the intersecting paths, and a light openwork roof of smaller poles erected, capped by a simple finial.

The pergola poles are of oak and birch, but I would recommend the former if easily procured. Stripped of their bark and dressed with carbolinium oak posts are long lasting. Smaller rods form the interlacing roof of the pergola and the sides. My gardener placed the uprights in position, and a rough sketch and a little personal supervision, sufficed to direct a very capable handyman who undertook the erection of the superstructure. There is nothing original in the pergola, and the rose bower is an adaptation of a garden ornament of which I think I saw an engraving in a Japanese book many years ago. The height of the poles in the pergola is 7ft. 6in., and they are set 6ft. 6in. apart; the poles of the bower are about a foot higher, and the cap of the openwork roof is 12ft. 6in. from the ground.

The upright poles in the bower are about 3in., the pergola poles rather less than 3in., and the cross rods from 1¾in. to 2in. in diameter.

It has been necessary to make several changes in the planting, for, though I was guided by the advice of a horticultural expert, the result was—well, not altogether a success. The bower is now well covered with roses, Carmine Pillar, Trier, Bennett's Seedling, Leuchtstern, Dorothy Perkins, Madame Berard, Aglaia, and Philadelphia Rambler; Aglaia this year has made too much wood and not enough blossom to be satisfactory. Hiawatha, Blush Rambler, Queen Alexandra, Lady Gay, Mrs. F. W. Flight, Clematis montana, Dutch honeysuckle, wistaria—these are in every way pleasing, but I have substituted rambling roses for clematis, vines, and blackberries.

If I were to make another pergola this autumn I should plant only rambling roses. What a glorious sight a pergola of Dorothy Perkins would be! One only needs sufficient pluck to refuse to listen to the voices of other charmers, charm they never so wisely!

And now as to the cost of this pergola and rose bower. The wood cost me about £6, and to my friend the handyman I paid £4 7s. 6d. To this must be added the value of my gardener's work, which may be fairly stated at £2. Thus the total is less than £13.

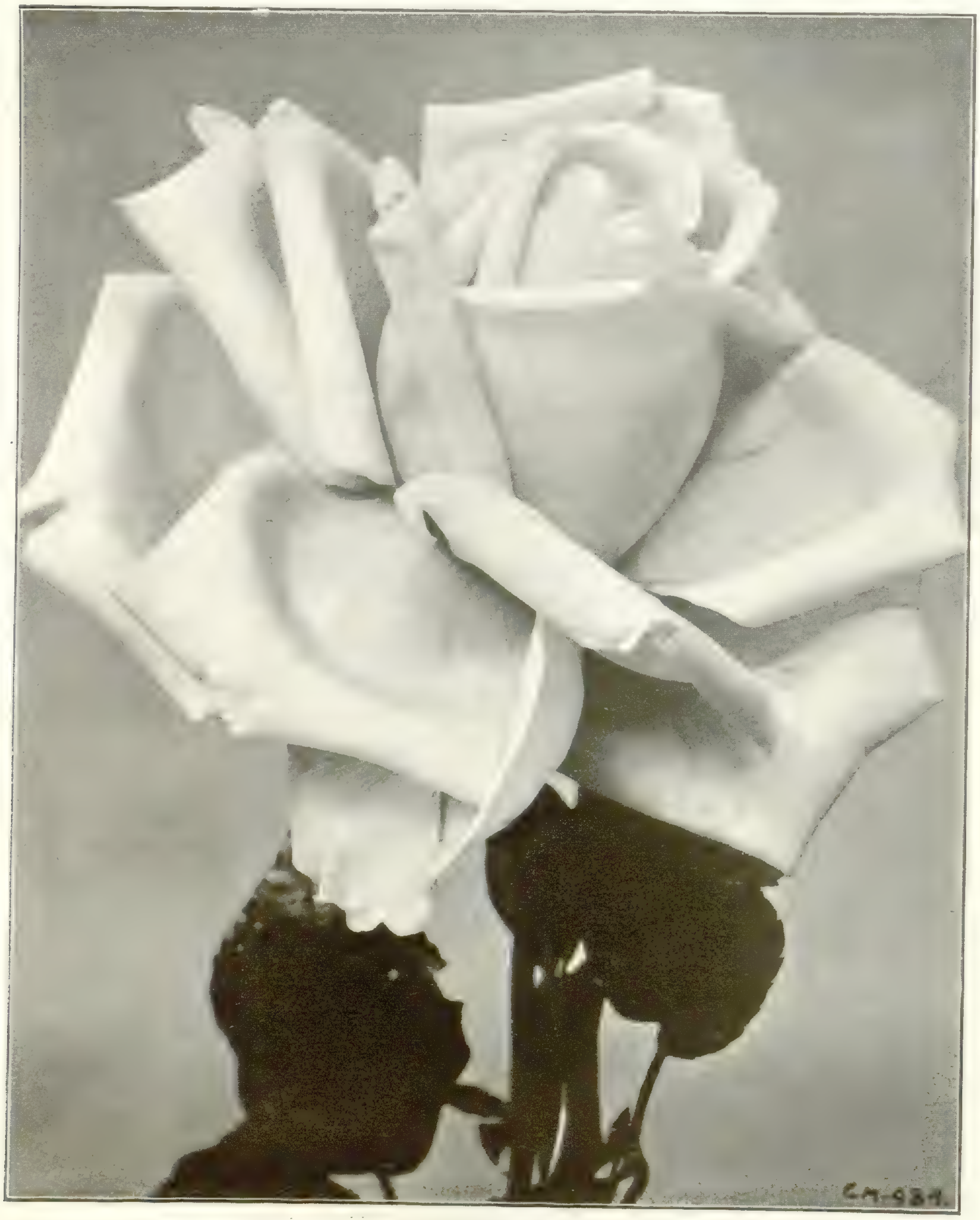
J. C.

Brentwood.

Flower Imports in August were about two-thirds the value of the flowers imported in the corresponding month of the two previous years. The total value was £1,081, and in August, 1907 and 1906 the value was £1,539 and £1,646 respectively. For the eight months of the current year ended August last, the value of imported flowers was £182,168.

NEW ROSES.

It is not the intention of the writer to enter at length into a discussion of the new roses and their respective merits at present, because this subject will be dealt with fully by that most competent judge and grower, the Rev. J. H. Pemberton, in succeeding issues. It may be well, however, to remind readers of a few of the more striking varieties that have appeared this season, many of which have been figured in these columns. Messrs. A. Dickson and Sons, Newtownards, co. Down, Ireland, have been especially successful this season, and growers will not soon forget their grand stand at the Holland House Show. They have received the National Rose Society's gold medal for the bright cream-coloured Nita Weldon; for the beautiful yellow tea-scented Alexander Hill Gray, figured herewith; G. C. Waud, a crimson H.T.; and Dr. O'Donell Brown, a rosy magenta variety. They have gained cards of commendation for several new varieties, and Awards of Merit from the Royal Horticultural Society for Florence Edith Coulthwaite (H.T.), George C. Waud (H.T.), Mrs. David Jardine (H.T.), and Molly Sharman Crawford—surely a good record judged only by the awards gained.



NEW TEA-SCENTED ROSE ALEXANDER HILL GRAY.
Exhibited by Messrs. Alex. Dickson and Sons, Newtownards, at the N.R.S. Show of September 17, and awarded a Gold Medal. Colour, clear soft yellow.

Mr. Hugh Dickson, Belfast, was awarded a gold medal at Manchester for Simplicity, a fine single white variety, and Dr. Campbell Hall gained a similar award for the cream and pink Mrs. J. Campbell Hall, a charming tea rose. Messrs. McGredy and Son, Portadown, Ireland, are helping to maintain the Irish standard. At Regent's Park they gained a card of commendation for the rose-red Earl of Gosford, and at the autumn show last week they gained a gold medal each for His Majesty and Lady Alice Stanley, the former red and crimson and the latter pink and silvery-pink, both handsome broad-petalled roses. Messrs. Paul and Son, Cheshunt, are taking up garden roses seriously and endeavouring to secure new and distinct classes of roses. Their Shower of Gold is very pretty, and their new Iceberg, a white, dwarf Wichuraiana rose, should prove very useful. Messrs. B. R. Cant and Sons, Colchester, have scored with the White Dorothy Perkins, a lovely white counterpart of the popular pink variety, which gained for them a gold medal at Manchester.

Messrs. William Paul and Son, Waltham Cross, have scored a signal success with Refulgence, a gorgeous hybrid sweet briar, with very large single flowers of a vivid scarlet or crimson-scarlet hue. As a garden rose this promises to be a great favourite. This, as well as Elaine, have gained the A.M. of the Royal Horticultural Society. The latter, so well shown at the Temple Show, is a pale cream yellow H.T., flushed and tipped with pink. Christian Curle, a pale cream-pink sport from Dorothy Perkins, was well shown recently at Edinburgh by Messrs. James Cocker and Son, of Aberdeen, and it gained a card of commendation at the Royal Horticultural Hall last week.

These make up a dozen and a-half of new varieties, but there are many more, all proving that enthusiasm for roses shows no decline.

K.

ARCHES OF ROSES.

The introduction of new and improved varieties annually adds considerable interest to the cultivation of the free-flowering types of roses, and encourages the increase of planting on all available sites.

No better site can be imagined for these climbing, free-flowering sorts than over arches, as the latter can be arranged in so many parts of the garden without interfering with the general surroundings. I need hardly say that there should be some aim in arranging arches in a garden. They should be over or alongside paths, whether of grass or gravel. The charming Dorothy Perkins is quite one of the best of roses for arches. This variety possesses freedom of growth, a semi-drooping habit, good foliage, great freedom in flowering, the blossoms lasting a long time, and, what is of great importance, it is later than the bulk of climbing varieties in opening its blossoms, thus prolonging the display until the end of August.

The other illustration represents that old favourite Crimson Rambler, which has done more than any other variety to encourage the increase of what are now known as free-flowering garden roses. Even now, with almost a plethora of sorts, there is not one to compete with this old favourite in freedom and brilliancy of colour. I note with regret that plants established for some time are prone to attacks of mildew, which not only disfigure them, but prevent the blossoms developing, and thus these plants are a failure for the season. I know of several instances this year where mildew has so disfigured the plants that they are to be replaced with other varieties this autumn. Any defects in culture that can be remedied should be kept in mind; I think this weakness in the plant is due to loss of chlorophyll consequent on a reduction of proper food at the roots. It is useless to attempt to check mildew when it has attacked the flower stems and buds. The endeavour should be to supply plenty of rich food in the autumn, solid or liquid, and syringe the plants quite early with one of the many mildew antidotes.

Arch Construction.

When constructing the arches a variety of materials can be employed; larch poles, which are probably the most convenient, have a distinctly rustic appearance in the garden until the plants have thoroughly covered them. The bark should be left on the poles, with the exception of that portion which enters the ground, and this should be creosoted to preserve the wood. Next to larch, peeled oak is the most desirable wood to employ, especially for the cross pieces, as this, when well selected, has a fine appearance, while its lasting qualities are undoubted.

Where wood is not easily obtained iron can be employed, or even galvanised wire will suffice. Some object to the latter on the score of injury to the tender bark of the roses, but this is much more fancied than real, because a coat of paint will obviate all fear of injury. Iron arches should be painted. In what form the arches are to be constructed depends upon the position, and the taste of the owner. Some prefer them flat on the top, others prefer that the centre of the arch should be pointed; indeed, there is no limit to constructive design. In the long run it matters little, because any architectural feature of the arch will be hidden as the plants grow and

[Photo: H. N. King.

FINE ARCHES OF CRIMSON RAMBLER ROSE AT HILLINGDON COURT, UXBRIDGE, THE RESIDENCE OF LORD HILLINGDON.

it. Some build what I term a single en, that is, they employ one upright on ach side of the path. I prefer two up- ghts at a distance of 2ft. apart, employng cross pieces between. In this way a much bolder effect is obtained, because two r more plants can be employed on each e of the arch, thus producing a double effect and making a distinct feature in the garden.

The preparation of the site is very im- tant, because on this so much of suc- depends for the next twenty years. d hardly say deep trenching of the is important, not only in providing a rooting medium, but also in obtainmoisture during the summer. If the light, sandy, or chalky, remove a tion of it, and add a heavier material, for example; this, with some of the portion, provides an ideal rose soil. in quantity is essential. If that from the farmyard is unobtainable add bone-meal and basic slag.

Planting and Pruning.

Early planting is very important, and the end of October is a good time, as the plants put in the warm soil make roots freely, becoming well established by the following March.

Pruning is important; too many persons like to obtain a crop of flowers the first year, and do not think of the future. They simply take the point out of the shoots, which in some sorts will be 8ft. in length. The result of such treatment is that the plants break freely from 2ft. or so upwards, but lower down the stems remain bare, and in the future it is difficult to induce shoots to spring from the base sufficiently freely to fully furnish the arch. It is better to wait a season for flowers, and prune the plants down to within 12in. or 18in. of the base, thus securing more vigour in the growth the first year and providing for a full crop of flowers the following season, and well-furnished plants.

Summer treatment is simple: the provision of abundance of moisture at the roots during dry weather, and copious syringing overhead in the evening after a hot day. The usual remedies for the destruction of greenfly, rose maggots, and the prevention of mildew, should be early attended to.

When the arches are upon grass it is a mistake to allow the grass to grow close up to the base of the roses; leave at least one foot clear all round, watering and feeding the plants is so much easier then. Some object to the bare soil, but this may be covered with some low-growing plant or rockery stone.

What is termed winter pruning is too often carried out at the wrong time; March is too often selected. The proper time is August, or, at the latest, in September; in fact, immediately the flowering season for each variety is past is the best time to prune, cutting away all surplus shoots, admitting light and air to those remaining, and thus ripening them up. Roses well matured in early autumn pass through the winter better than those with soft sappy stems.

Varieties.

As to variety, there is abundant material to choose from. I will give a short list of really desirable varieties; too often hybrid teas are recommended, but these, in my opinion, are distinctly unsuited for the purpose, as they fail to grow sufficiently well to cover the space required. Freedom of growth, coupled with abundance of flowers, should be the aim. Only one variety should be employed for each arch: Crimson Rambler, crimson; Dorothy Perkins, shell-pink; Lady Gay, rosy-pink; Félicité Perpétue, white; Claire Jacquier, yellow, flushed orange; Mrs. F. W. Flight, rich rose-pink; Rubin, deep rich crimson; Tausendschon, pink; Brunonis, white, single; Psyche, white, suffused salmon-rose; Abel Carriere, white, flushed pink, early; Waltham Rambler, delicate pink, single; and Paul Transon, rose, tea-scented.

E. MOLYNEUX, V.M.H.

Swanmore Park.

Potatoes in 1908.—The potato crop in Great Britain for the current year has an area of 256,101 acres, or an increase of 13,185 acres as compared with last year.

ROSES FOR THE ROCK GARDEN AND ROOTERY.

The advent of the numerous forms of rambling roses has been the means of adding many pleasing features to the garden, and by their judicious use it is possible to clothe unsightly objects with a mantle of foliage and flowers.

The ways in which these roses may be used are many, for they are equally at home against walls or on pergolas, rambling over the sides and roof of a summerhouse, or clothing unsightly banks. They are also admissible in the vicinity of the rock garden, and may be effectively placed in elevated positions where the branches can hang negligently and naturally over rough stones or boulders. At Kew an attractive feature is formed by planting these rambling roses in a sunk garden. The position was at one period excavated to obtain gravel for the garden paths, and some twelve or thirteen years ago the sides were irregularly terraced, the terraces being faced with large tree butts. When completed the garden represented numerous bays and terraces of irregular width, and each terrace or bay was planted with a single variety of rose. In this way large masses of distinct colours were obtained, as well as a large collection of sorts.

The plants are encouraged to grow in as natural a manner as possible, and in some places great garlands of flowers may be seen hanging loosely over the old tree roots, whilst in other cases the branches have ascended evergreen trees in the vicinity, and the flowers are set off by dark foliage. In the flowering season such a garden is most attractive, the effect being greatly in advance of a garden made on level ground.

THE BEAUTIFUL ROSE PSYCHE CLAMBERING OVER OLD ROOT STUMPS AT KEW.

The set of varieties known collectively as Wichuraiana roses may be used on banks in a way that would hardly do for the multiflora set. As the majority are prostrate growers they are useful for pegging down, and being evergreen they form an excellent covering for banks. During the flowering season they are very pretty grown in this manner, as the flowers rarely rise more than four or five inches above the soil. To keep a bank neat it is necessary to attend to the plants once a year, as soon as the flowers are over, and remove all the old shoots, leaving only those of the present season. If this cutting out is neglected it is impossible to keep the plants within bounds, and a uniform bank of flowers is out of the question.

The multiflora varieties are also assisted by being cut over annually as soon as the flowers fade. As much as possible of the old wood should be removed so that there is plenty of room for strong, young shoots to grow and ripen. Some varieties after thinning, require a little staking, but this must be done judiciously. If left unstaked they are frequently weighed down with flowers so that their true beauty is not seen. In such a case stakes should be inserted to reach about halfway up the branches. If put in correctly these stakes will support the branches without giving any appearance of stiffness.

Wichuariana roses of the Dorothy Perkins type are improved when grown in masses by having rough oak branches from eight to fifteen feet in height placed among them. Their branches will form a tangle over the support, and an undulated group will be the result. By growing them in this manner the full value of the flowers is obtained, whilst if grown in a dense mass many of them are hidden.

When preparing a site for these roses care should be taken to provide rich soil at the outset, for, to obtain the best results, it is absolutely necessary that there should be plenty of rich food material. It is also a good plan to give a mulch of rotten manure each spring, while one or two applications of liquid manure during the growing period is attended with good results.

Possibly the two worst enemies these roses have are greenfly and mildew. The former may be held in check by spraying now and then with a mixture of soft soap and tobacco extract, while a good way to prevent mildew is to spray the plants two or three times during early spring with Bordeaux mixture. This usually has the result of keeping the plants fairly clean until after the flowers are over, when the same remedy may be applied should a recurrence of the disease take place.

Good roses to plant on banks or in semi-wild rose gardens, are as follows: Wichuraiana roses — Alberic Barbier, Elisa Roubichon, Auguste Barbier, Paul Transon, Dorothy Perkins, Lady Gay, Pink Roamer, and Hiawatha. The last-named has been in commerce but a few years, but it bids fair to rival in merit many of the older varieties. The flowers are of a rich shade of red, and though single last in good condition for a considerable period.

Of other rambling roses the following are first rate sorts: Helene, white flushed with pink; the well-known Crimson Rambler; Philadelphia Rambler, deep red; Una, cream; Electra, cream; Psyche, light pink, an illustration of a large mass growing in the Kew Rose Garden accompanies these notes; Tea Rambler, pink; Flora, blush; Rosa multiflora, single white, and R. moschata, a strong-growing species with white flowers. The single pink variety Kathleen is an extremely pretty and free variety, and its flowers last in good condition for several weeks.

Another set of roses suitable for banks are the R. spinosissima or Scotch roses. They sucker abundantly, and form dense masses which bloom freely. Single and double forms may be obtained with white, yellow, red, or purplish flowers, and many of them produce good crops of round, black fruits after the flowers are over. The variety altaica is a strong grower with single white flowers two inches across. It looks well when part of the branches are pegged down and the remainder left erect. The Japanese Rosa rugosa is excellent for exposed situations, and for places where the soil is poor, for it usually grows and flowers well, whilst the rich red fruits in autumn are very attractive. In addition to the type there are many varieties and hybrids with single and double red and white flowers. They are specially useful for planting in cold places when other roses prove tender. W. Dallimore.

Kew.

PLANTING ROSES.

The approach of autumn is a reminder that the season of rose planting is near at hand. It is not always possible to prepare the ground for planting roses very long beforehand, unless one is forming new beds or a new garden, when early preparation is a comparatively easy matter, and the planter can take advantage of dry weather for turning the ground.

ROSES AT THE AUTUMN ROSE SHOW.
Messrs. Paul and Son's First Prize group of Roses at the N.R.S. Exhibition on September 17.

The kind of soil we have to deal with is not always what we would like to grow roses in; usually the natural soil of the garden has to be studied and made the best of. There are few soils in which roses will not grow with a greater or lesser degree of success, and, although any kind of land will not grow exhibition blooms, most land can be considerably improved by the admixture of suitable materials. The ideal soil for roses is a sandy or moderately heavy loam; I draw the line at clay, and yet the tenacity with which some people cling to the idea that clay is essential for growing roses is worthy of the clay itself. There is a "Clay" which is very beneficial to roses, but it is sold in bags in the form of a fine powder!

I do not say that in some soils the addition of clay is not beneficial; indeed, I believe it would be if thoroughly incorporated with soil of a very sandy or porous character, and one that requires some holding substance to consolidate it. But after some considerable acquaintance with various soils for growing roses, the one I prefer is a moderate loam.

The ground intended for planting should be trenched two feet deep, if possible, but if naturally well drained, eighteen inches might suffice. In the trenching process, should the bottom soil be inferior to the top, then leave it in the bottom of the trench, or, better still, if possible, remove it and put fresh soil in its place. As the trenching proceeds, so also should the manure be worked in, as it can be more thoroughly mixed with the soil before planting than after. While the ground is being turned is also the time to add any heavier soil if the land requires it.

The question of a suitable manure has also to be considered. There is probably no better manure for roses than pig manure; it certainly makes a lasting impression. In naturally warm and light soils, cow manure would be beneficial as being cool in nature and lasting, while in heavy land good horse-droppings and stable manure should be used. In dealing with light land the manure should be kept near the surface, as it is not then so easily washed away from the roots. Artificial or compounded manures are best left alone until the plants are in active growth; they play an important part in the development of good blooms, but have not the mechanical action on the soil which organic manures have. Bone-meal is used by some, but this I prefer to use when the plants commence to grow.

Planting should only be done when the ground is sufficiently dry to prevent any clogging of the land when treading; it is better to defer planting than do it when the land is sticky. Planting any kind of tree or bush should never be done slovenly or carelessly, as the labour is well spent where the work is well done. Planting is something more than digging a hole, stuffing in the roots, and covering them with soil. Have the holes made large enough, and then spread the roots carefully out before covering with soil. It is not unusual to meet the man who knows how to plant, or fancies he does, but whose idea of planting is sticking the plant in, filling up the hole with soil, just a tread, and hey, presto! the work is complete from his point of view. Assuming the hole is ready, the plant should be carefully held in position, roots spread out, and some of the finest soil put over the roots; then carefully tread down firmly, add more soil, and make firm until the hole is filled up.

In the planting of dwarf roses, ramblers, and those budded near the ground, the union should be covered to the depth of an inch; with standards, plant the same depth as they were in the nursery. All standard and rambler roses should be securely fastened after planting.

When the roses have been planted, the surface of the soil should be lightly forked over, making good any inequalities of the surface; this stirring of the soil will aerate the land, and allow heavy rains to pass through into the subsoil, and prevent the land becoming water-logged. In cold districts where severe frosts may be expected, cover the surface of the beds with good bracken, or some similar light material in early winter; this will keep out most of the frost, and will not keep the land too wet. The practice of covering the ground with a thick coating of heavy manure is not always to be commended. It may be of some benefit on the surface of light land. The plants, being dormant cannot assimilate manure. It will be more beneficial to give such dressings lightly forked into the soil after the spring pruning, when growth is commencing.

Poltimore Gardens. T. H. Slade.

Fruit Culture in Great Britain.—According to the preliminary statement relating to the acreage of the various crops in Great Britain that has been issued by the Board of Agriculture, the area now under orchards amounts to 250,288 acres. This is an increase of 112 acres as compared with 1907. The area under small fruits is 84,873 acres against 82,175 acres last year.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SEASONABLE NOTES.—The deciduous dendrobiums will in many cases have completed their growth, and every care will be necessary to prevent the early matured kinds from commencing secondary growth. There are some, such as D. Wardianum, that naturally break into new growth, often before the previous one has reached maturity. This species starts into secondary growth in its native habitat and often advances some distance before the plants actually enter upon their resting season; but, with the return of favourable conditions, these growths re-start with renewed activity, and little or no ill effects are apparent. I do not consider it desirable for the bulk of this section to commence secondary growths thus late in the season, for it will generally be found that such growths are of a stunted nature, and they rarely reach full size even under the most favourable conditions. It is no easy matter, I know, to prevent secondary growths, especially where orchids have to be treated with other plants. The recently matured growths are naturally soft, because of the necessary shading used, and these I find are the most difficult to prevent from growing at the base. Keep the plants as dry as possible, but do not allow the pseudo-bulbs to become shrivelled. It is not desirable to remove such plants to a lower temperature, but it is advisable to afford them every advantage to be obtained from the available light at the present time, and as soon as the growth has become sufficiently ripened, the plants may be removed to cooler and drier conditions, where they may have suitable treatment.

PERMANENT SHADING.—Where permanent shading has been used beneath the roof blinds during the hottest month of the year, such shading should now be removed. The light during the few weeks that remain before the winter season sets in should be taken advantage of for the benefit of the plants in all divisions. There will be very little shading required now in the warm divisions, excepting during the hottest parts of the day. In the cool division also, excepting where repotting has been recently done, the blinds should only be brought into use when there is danger of the foliage becoming scorched. We hear a great deal of complaints about the durability of odontoglossum flowers. We am quite satisfied that the want of texture and substance in the flowers is caused chiefly by improperly-matured pseudo-bulbs. It should be distinctly borne in mind that we are now producing larger pseudo-bulbs by the use of semi-decayed leaves, etc.; and the moisture-retaining compost allows the plants to stand a great deal more light without injury than was the case when a smaller bulk of potting compost was used. The more light we can give the plants, reasonably, the more satisfactory are the results we find among the flowers. The plants that are likely to be in flower during the winter are those that should have chief attention, for, unless they become ripened, there is very little possibility of their maturing when the outside conditions are the least favourable for the purpose.—H. J. CHAPMAN, Oakwood Gardens.

STOVE PLANTS.

EUPHORBIA JACQUINIÆFLORA.—Plants of this serviceable winter-flowering subject ought now to be exposed to as much light as possible, and each growth looped up to the central stake. Careful attention must be given to watering during the autumn and winter. An occasional watering of clear soot water and light top-dressing of some approved chemical fertiliser will be found most beneficial. As previously recommended in this calendar, the plants are best grown as near the glass as possible, this ensuring dark, healthy green foliage, and somewhat counteracting the straggling habit of the plants. Specimen plants that have been formed by bending down the points of the growth during summer must now be given a little freedom, so that the extremities may be induced to throw out their flowering sprays in a graceful form, which is so desirable with the specimen plants. Brown scale appears to infest all euphorbias, hence it is advisable to have the plants thoroughly cleansed previous to flowering. Should the first batch of flower spikes be cut for decorative purposes a second crop of blooms will be provided for the New Year if the plants are subjected to warm conditions.

CREEPERS.—As the wood of climbing plants becomes thoroughly ripened, it is advisable to shorten back the growths, and where possible, remove them to a cooler and drier position. This will give the occupants of the stove more light, which at this season is most essential. Climbers that are permanently planted in borders may be thoroughly examined with a view to renovating the borders as time permits. The borders may be kept somewhat drier as the season advances.

CROTONS AND DRACÆNAS.—Specimens which become unsightly through losing their foliage at the base, and were notched and mossed up some time ago, are now ready for the removal of their tops. The smaller tops, if well rooted, are best cut off, potted up, and placed in the cucumber house, where they soon recover. Larger specimens are separated by the stem being partially cut through at intervals of a few days. Shade from the hot sunshine will be found necessary until the plants have started to grow again.—JOHN DONOGHUE, Bardon Hill Gardens.

FRUITS UNDER GLASS.

POTTING FRUIT TREES.—Peaches and nectarines should now be taken in hand; the material for potting should be the best loam that can be obtained, and if it is too stiff, some spent mushroom bed material may be added, with bone-meal and mortar or plaster rubble. The latter must not be coarse, as the amount of room given will not allow a very rough compost. Everything should be got in readiness for this work, pots thoroughly cleaned and crocked, with a good layer of turf over the crocks. If the potting has to be done outside, a dull, quiet day is preferable, so that the roots do not become dry, or the sun make the foliage flag. If any of the trees potted last season are still healthy, it is not necessary to pot them now, but the drainage must be clean, and if there are any doubts about it, they should be turned out, fresh drainage put in, and the tree placed back in the same pot, and in the same position as before. As a rule, the trees are best potted every season. If left too long the roots become matted together, and in reducing them to the required size more damage is done than when potting is of annual occurrence. Before potting, if any trees are dry when turned out, place them in a tub of water, as no amount of top watering will soak them after they are potted, and the buds will drop.

REDUCE THE BALL OF SOIL by the use of a knife and pointed stick, starting at the top and working downwards. Enough material should be removed to permit the operator to place the ball back in the same sized pot. Pot firmly, adding the compost in small quantities as the work proceeds, so that no cavities are left. Any that are deficient in roots and sickly may be reduced considerably, and, if necessary, washed out and repotted; these should be labelled, so that they are not forced the next season. After potting stand the plants in the shade for a few days, keeping them well syringed. If watered well as soon as potted they will not require more water for some time. Cherries, as a rule, do not require so much root room, and the compost for these should contain plenty of rubble and charcoal.

EARLY PEACHES AND NECTARINES.—Those planted out should, if required, be lifted or root pruned if growing strongly. The border should not be more than 2ft. 6in. deep, concreted at the bottom, and with drain-pipes to take away surplus water. Start well away from the tree and cut all strong roots with a knife, but before proceeding with this operation, have some good loam, with plenty of lime and mortar rubble ready. When placing the roots back keep them well up to the surface, and make the soil firm, well ramming it underneath the tree with a stout stick. If hot weather prevails a slight shading may be given and frequent syringings.

LATE PEACH HOUSES.—As soon as the fruits are gathered, cut out all useless and overcrowded wood, and let the growths hang loosely to ripen. If necessary the borders may have a good soaking of liquid manure, and the trees be syringed twice a day. Preparations should be made for planting any young trees, and the soil for these should be rather poor, as they generally grow fast for a few years, and they can always be mulched.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

FRENCH BEANS.—A good batch of these should now be sown, choosing 6in. pots for this sowing. Place them in a cool vinery or peach house until they are two or three inches high, then they can be accommodated on a shelf well up to the glass, so that they may have all the light possible. Osborne's Prolific and Canadian Wonder are fine old sorts.

STORING ROOTS.- Roots must now have attention. Beetroot will not stand much frost, so that it is the best plan to lift this crop, twist the leaves off, put the roots in a pit outside, cover them up with straw, and soil the pit over. They will keep in this way much better than when placed in a dry shed, for the roots soon become shrivelled if kept too dry. Carrots may be stored in a similar manner.

ONIONS. The spring-sown crop, and especially those sown in boxes and planted out, are quite ready for harvesting. If the weather is showery it is a good plan to place them in cool fruit houses or cold frames until they are dry, then they can be roped any time during wet weather. They keep much better this way than placed on stages, as more air can play about the bulbs.

ENDIVE.—This very useful salad plant should now have daily attention. Place inverted flower-pots over some of the best plants. For the next three months shooting parties will be numerous, and good salads are sure to be in request. Lift the plants that are for a later supply, and plant them in cold frames, when they will come in most useful during the early months of the year.

CUCUMBERS.—When cucumbers have to be provided during the winter months, a few seeds should now be sown of Telegraph or Lockie's Perfection, in a hotbed or propagating pit. Plants that are coming into bearing should be top-dressed with some rich material and have all surplus growths cut out. The fruits should be cut as soon as they are of a suitable size, so that the plants will not be over-exhausted. Cucumbers still growing in frames may be prolonged a little, if the frames are kept lined with fermenting material to maintain the necessary heat. Attend to thinning out the fruits, only retaining those that are likely to swell up. Give them plenty of weak liquid manure, and add rich top-dressings as required.—T. W. BIRKINSHAW, Hatley Park Gardens.

MATURITY OF PEACH WOOD

Those of us who have had much to do with the outdoor culture of the peach are aware of its uncertain character with regard to cropping. This can doubtless be rightly attributed to various causes, amongst which there is probably a no more common one than that of the wood not being properly matured. For this defect again various reasons might be given.

In the first place the effects of the weather from this point of view may be referred to, for much depends upon its condition during the growing season whether the wood is, or is not, satisfactorily matured. If the weather is sunny, warm, and otherwise favourable, the wood, other conditions being suitable, will be strong, well-ripened, and thickly studded with plump flower buds by the end of the season of growth. As the result one of the principal steps towards securing a satisfactory crop of fruit will have been gained. On the other hand, a continuation of dull, wet weather acts most detrimentally upon the growth, by promoting strong, sappy shoots, that fail to ripen well enough to produce blossoms sufficiently perfect to permit of fertilisation, and the consequence is, no matter what the state of the weather may be during the flowering season, they fail to produce fruit. There are, it is to be feared, many manifest examples of the effect of last year's wet and dull weather to be witnessed at the present time to prove the truth of this.

Another and not uncommon reason for the wood failing to properly mature, is the unsatisfactory state of the roots of the trees. This may be due to the border being composed of too rich ingredients, too deep, and cold, or wet through being imperfectly drained. When one or more of these conditions obtain soft and sappy wood is the result. The remedy for this is to renovate, or remake the border upon improved lines, and especially advisable is it to do this in low, damp situations, as in cases of this kind the evils are aggravated by the damp, sluggish state of the atmosphere.

Then, again, the position in which the trees are placed with regard to aspect and elevation has a marked effect upon their [illegible]. A position upon a wall facing south is the best, though peach trees will mature their wood well, other things being favourable, upon walls with a south-east or south-west aspect, that is, in the warmer parts of the British Isles. With regard to elevation, it may be said the wood does not, except in very favourable seasons, become thoroughly ripened and fruitful in low-lying places. Under such conditions it is liable to remain comparatively green, and retain its leaves late, and, moreover, be subject to attacks of mildew.

But whatever other conditions may be, to a considerable degree the proper ripening of wood is influenced by cultural management, for by skilful treatment trees even grown amid unfavourable surroundings, may be made to yield good results, while others, placed under the most favourable natural circumstances, will be unsatisfactory unless their cultural requirements are carefully attended to. In the first place, the roots must have a suitable rooting medium to grow in, and even then they may require, in order to develop satisfactory branch growth, to be skilfully manipulated, in the way of being lifted, or [illegible]. The branch growth likewise requires correct treatment, some of the most important points attending it being those of timely disbudding of the young shoots, and allowing those left to carry fruit ample space to permit them to be well matured by the sun and air, but it should be observed that even if proper attention is paid to these details of culture, they will be of little avail unless the trees are kept free from injurious insects and mildew, thus giving the leaves every means of fully carrying out their functions. For, after all that has been said, the wood cannot become thoroughly ripened without its leaves properly develop and mature.

Something might be said relative to this subject about the varieties of peaches, but I will conclude my remarks by observing that Bellegarde ripens its wood, and consequently more regularly carries good crops of fruit outdoors here, than does any other that we grow. T. COOMBER.

The Hendre Gardens.

TORCH LILIES.

A question which often arises in garden circles, is the one regarding the adornment of the herbaceous borders, etc., in late summer. One may note in many gardens the wealth of blossom during May, June, and July, but ofttimes August reveals a lack of material for providing plenty of colour during that month and September. The remedy for this state of affairs is only found in a closer study of the later-flowering subjects, and amongst these one might well devote a little time to a consideration of the claims of the Torch lilies or tritomas, or kniphofias. I know of nothing which gives the same glorious display of brilliancy in the gardens as do these Torch lilies. **Brilliant in colouring, picturesque in formation, and lavish in their** beauty, the kniphofias should be represented in every garden where hardy plants are a feature.

We cannot reproduce the picture of the Torch lilies as they exist in Africa's marshy lands, where great stretches of them create those "firelit sweeps of glowing grandeur," which are more readily imagined by the reader than described with the pen. Nature's pictures are replete with beauty, and she paints her colours with a lavish hand, and, though one cannot quite compete with such daring colour schemes, yet we can certainly utilise more fully the decorative Torch lilies.

For the wild garden and for woodland clearings the kniphofias are of immense value. Place yourself alongside some of the finest varieties when they are in full beauty, and picture to yourself the glorious effect of a massed array aglow amid the beauty of the wild garden. A marvellous wealth of colouring, alike valuable for effective beauty as for a long-distance display, for whether you view these subjects at close quarters or from a distance, you have to admit sterling value. For cut flower purposes our subjects are becoming more fully appreciated, and if one can devote a corner where a selection could be grown for cutting, it would prove a boon to the decorator.

It would be a difficult matter to decide which varieties are of most value for garden adornment, but a few notes regarding the various species and varieties of note may be of service.

Amid the wealth of colourings, there comes the call for a white variety, based upon the effect of the Natal species, Kniphofia modesta, which has white blossoms, but which is not sufficiently hardy or even of high enough quality to justify planting it upon an extensive scale. Seedlings from K. modesta vary in character, so as to suggest improvement upon the lines of selecting and recrossing of the finest forms. That much may be accomplished in this direction we have no doubt, and patient, steady work will result in improved varieties. The white colouring would be splendidly received if one could get with it grand, well-balanced spikes, of the character of such forms as R. C. Affourtit or John Benary.

There are several light-growing species and varieties which combine a natural elegance with a range of rich colourings, and the gardener could often utilise some of these dainty forms in positions where the more robust and stronger habited species would appear out of place. Among these miniature types one notes such useful ones as K. Nelsoni, a delightful flaming species from Orange River Colony. K. breviflora, the dainty yellow species somewhat akin to the preceding, is less rarely seen, and can be recommended as a useful little subject. K. pauciflora is another light-habited species, giving a wealth of dainty spikes of yellow blossoms. Those pretty hybrids, Goldelse, with its wealth of gold-clad flower spikes, and Torchlight, a rich-hued flaming form, rank high among the miniatures, and their floriferous character and their light, grassy foliage combine to make them exceedingly useful varieties.

The stronger-growing tritomas are legion, and space demands that I should confine my notes to a brief chat concerning some of the newer and noteworthy forms. R. C. Affourtit, a fine variety, derived from K. corallina, should certainly be secured. Its sturdy, well-filled spikes, its natural freedom, and glorious colouring appeal with no uncertain voice to the garden decorator. R. Wilson Ker is a fine variety, its glowing display of coral-red colouring making it of great value for massing. A soft clear yellow variety of great merit is Lemon Queen, which produces a wealth of showy spikes of blossom. The pale straw-yellow of K. pyramidalis is wonderfully pleasing, and its vigorous growth renders it a fitting subject for roomy borders. In Redcap we have the form and basal colouring of Lemon Queen, but the firelit apex of the flower spikes gives it quite a distinctive glow of colour. Chloris is grand, its massive spikes clad with rich apricot blossoms, and a striking, robust habit, give it precedence over many other forms. In Ideal we have a sterling variety with the richest of scarlet colouring, and stately, well-filled spikes. Indeed, one may regard Ideal and John Benary, a glowing fiery crimson gem, as two of the most effective of the richer-hued forms. Leda demands a passing notice, its waxy blossoms shading from orange to coral-scarlet are very distinct and pleasing. Egypt, a lovely shade of deep amber, a strong, vigorous novelty, is worthy of a good position. Meteor is a grand clear yellow with stately growth, and Beacon is a bright form with coral-scarlet colouring.

Other notably fine kniphofias are Seraph, a pleasing yellow with coral tips; Tricolor, with its rounded pokers of gold, red, and pale yellow; Cloto, carmine-scarlet, and the immense bronzy-yellow Star of Baden-Baden.

Though space forbids an excursion among the species, I must note in closing the pleasing habit and colouring of a cross between K. Nelsoni and K. citrina. The result has been a sturdy, erect variety, with well-filled spikes of glowing red flowers. The unique shade of colour, and the dwarf, sturdy habit should make it especially valuable for the border.

With the aid of the foregoing and many other distinct gems it should be possible to give some touches of glowing colouring to the gardens in late summer.

P. S. HAYWARD.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

National Rose Society.

The autumn exhibition of this flourishing society held on September 15 at the Royal Horticultural Hall, Westminster, in beautiful weather, was a great success. There was an excellent competition in the majority of classes, and the flowers were numerous and good enough to convince the most sceptical of the great value of roses in mid-September.

NURSERYMEN—GENERAL SECTION.

The premier class for cut flowers was the one for thirty-six blooms, distinct; there were six entries, Messrs. Jas. Cocker and Son, Aberdeen, winning the chief award with large, clean, fresh blooms of Chas. J. Grahame, Betty, K. A. Victoria, Caroline Testout, Frau Karl Druschki, Mrs. Laing, Countess of Caledon, Mrs. E. Mawley, La France, etc.; Mr. Hugh Dickson, Belfast, second, and Messrs. A. Dickson and Sons, Newtownards, third.

There was a grand competition in the class for thirty-six roses, distinct, not fewer than three trusses of each. There were five good exhibits, and the one set up by Messrs. Frank Cant and Co., Braiswick Nursery, Colchester, was awarded the first prize. This firm had lovely bunches of Mrs. E. Mawley, Dean Hole, W. A. Richardson, Dr. Felix Guyon, Marie Van Houtte, Frau Karl Druschki, Mrs. Sharman Crawford, Mdme. Constant Soupert, La Tosca, Mrs. J. Laing, Wm. Shean, and Souv. de Pierre Notting. Messrs. B. R. Cant and Sons, Colchester, came second with a very effective display that was little behind the premier one; Marie Van Houtte, Dr. Grill, Hugh Dickson, and Florence Pemberton and White Maman Cochet were well shown in this exhibit. Mr. John Mattock, Headington, Oxford, came third.

Messrs. Jefferies and Sons, Cirencester, led for eighteen teas and noisettes, with fairly good blooms, among which Georges Schwartz, Maman Cochet, Mrs. E. Mawley, and Souv. d'un Ami were the best. Mr. George Prince, Oxford, second, and Messrs. D. and W. Croll, Dundee, third. There was a good competition in the class for twelve vases of roses, distinct varieties, seven blooms in each, and here the chief prize winner was Mr. Hugh Dickson, Belfast, who had very fine examples of Mdme. W. Comtesse de Turenne, Caroline Testout, Chas. J. Grahame, Messrs. J. Laing, Captain Hayward, Mrs. S. Clark, Frau Karl Druschki, Gladys Harkness, Ulrich Brunner, and Hugh Dickson; Messrs. Jas. Cocker and Sons, Aberdeen, came a good second, and Messrs. W. and R. Ferguson, Brucefield, Dunfermline, third. Messrs. J. Jefferies and Sons, led for a vase of any one rose, with Frau Karl Druschki; Messrs. W. and R. Ferguson, Dunfermline, second, and Messrs. D. and W. Croll third.

First prize for two dozen bunches of decorative roses was well won by Mr. J. Mattock, Headington, Oxford, with charming bunches of Beryl, Mons. Paul Lede, Peace, Mdme. Abel Chatenay, Isabelle Sprunt, Mdme. Ravary, Sulphurea, etc.; Messrs. Frank Cant and Co., Colchester, second; and Messrs. J. Jefferies and Sons, third. Mr. J. Crossling, Penarth Nurseries, S. Wales, had the best dozen vases of decorative roses, and he set up Papa Gontier, Eugenie Lamesch, Mdme. Ravary, Gustave Regis, and Mdme. Abel Chatenay, finely; Messrs. W. and R. Ferguson, second, and Mr. G. Prince, Oxford, third.

Mr. John Mattock, Headington, Oxford, led for a dozen stands of roses, a distinct variety in each; the stands were of bamboo tubes of varying height, and the best roses were La Tosca, Gustave Regis, Bardou Job, and Mdme. Abel Chatenay; Messrs. J. Jefferies and Sons, Cirencester, came second.

First prize for a dozen bunches of polyantha roses was accorded to Messrs. B. Cant and Sons, Colchester, whose Leonie Lamesch, Eugenie Lamesch, Perle d'Or, and Etoile d'Or were very good; Messrs. Paul and Son, Cheshunt, second, and Messrs. W. and J. Brown third.

NURSERYMEN'S GROUPS OF ROSES.

In the class for a representative group of roses, including pot plants and cut flowers, artistically arranged, Messrs. Paul and Son, Cheshunt, won the premier award with a very pretty and interesting exhibit that included examples of the new dwarf perpetual Wichuraiana, named Iceberg, pure white; the Marechal Niel-scented variety Paula, Eugenie Lamesch, Gottfried Keller, and fine baskets of Frau Karl Druschki, Caroline Testout, S. M. Rodocanachi, Kaiserin A. Victoria, Trier, Mrs. J. Laing, La France, etc. A few palms and an edging of ferns gave an elegant finish to the display. Messrs. Hobbies, Dereham, came second with a good exhibit, in which, however, the small half-standard polyantha roses were scarcely at their best.

For a representative group of cut roses, arranged on a space 18ft. by 6ft., Mr. George Prince, Longworth, was a good first with a very effective and bold arrangement, in which flowers of Frau Karl Druschki, La France, Marie Van Houtte, Mdme. Abel Chatenay, and Mdme. Pierre Cochet were set up in large numbers and fine style. Smaller vases of tea roses were set under the larger stands, and made up a beautiful exhibit. Second prize was won by Messrs. W. and J. Brown, Peterborough, and third by Messrs. Hobbies, Lim., Dereham, the latter firm using arches, baskets, and stands of blooms, but a recent heavy storm had damaged many of their blooms. Messrs. A. Dickson and Sons, Newtownards, were awarded an extra prize.

First prize for a group of cut roses, arranged on a table space of 60 square feet, was well won by Mr. F. M. Bradley, Church Street, Peterborough, with a very handsome and well-arranged exhibit, in which long, clean growths of Wichuraiana roses were freely used in the background. There were tall stands filled with fine flowers of Frau Karl Druschki, Caroline Testout, Captain Hayward, etc., and below these were smaller vases of a great variety of T. and H.T. roses. Messrs. R. Harkness and Co., Hitchin, came second with fine flowers of Mdme. Abel Chatenay, Gustave Regis, Frau Karl Druschki, etc.

OPEN CLASSES.

Mr. J. Mattock scored for a bowl of China roses with a charming red design; Messrs. F. Cant and Co., second, and Messrs. W. and J. Brown third. The class for rose hips was an interesting one, but the hips were not yet fully coloured; Messrs. Paul and Son won first place for nine distinct kinds, and their best sprays were of Rosa lucida, R. pomifera, R. rugosa, R. rubrifolia, and R. alba. Messrs. B. R. Cant and Sons second.

AMATEURS.

There were eight competitors in the class for eighteen blooms, distinct, Messrs. R. and T. Park, Bedale, winning first place with flowers that would have stood well at a July show; their best were Pres. Carnot, Gladys Harkness, White Maman Cochet, Frau Karl Druschki, Ulrich Brunner, Veyrat Hermanos, Mrs. J. Laing, and Mildred Grant; Rev. J. H. Pemberton, Havering, Romford, second with clean flowers, and Mr. Conway Jones, Hucclecote, Gloucester, third. Mr. Lindsell was not even placed in the prize list.

The best dozen blooms, distinct, were from Mr. W. O. Times, Hitchin, whose best flowers were Frau Karl Druschki, Lady Ashtown, Bessie Brown, Countess Gosford, and Countess of Derby; Mr. G. Speight, Market Harborough, was a good second: and Mr. M. Whittle, Belgrave Avenue, Leicester, was third. Seven entries.

The best stand of nine blooms was set up by Mr. W. Upton, Claremont Street, Belgrave, Leicester, who showed Maman Cochet, White Maman Cochet, Mrs. J. Laing, J. B. Clarke, Frau Lilla Rautenstrauch, Mdme. W. Comtesse de Turenne, Frau Karl Druschki, Mdme. Hoste, and S. M. Rodocanachi; Mr. E. B. Lehmann, Ifield Lodge, Crawley, was second; and Mr. C. F. H. Leslie, Epcombe, Hertingfordbury, third.

Mr. Walter Bentley, 21, Lombard Street, E.C., led for six roses, distinct, followed in order by Mr. S. J. Hogg, Leaside, Hertingfordbury, and Mr. E. S. Robinson, Glencoe, Emerson Park, Hornchurch. The Rev. J. H. Pemberton won first place for a dozen varieties of roses in vases, not fewer than three trusses of each, with handsome bunches of Frau Karl Druschki, Fellenberg, White Maman Cochet, Caroline Testout, Florence Pemberton, and Trier, etc.; Mr. H. R. Darlington, Potter's Bar, second.

The finest stand of twelve teas or noisettes came from Mr. Conway Jones, Hucclecote, Gloucester, who had full, clean examples of Maman Cochet, Lady Roberts, Mrs. Edward Mawley, White Maman Cochet, Mdme. Constant Soupert, Mdme. Antoine Marie, Marechal Niel, Souv. d'Elise Vardon, Mdme. Vermorel, Auguste Comte, Anna Olivier, and The Bride; Messrs. R. and T. Park, Bedale, second; and Mr. O. G. Orpen third; eight entries. For nine tea roses, distinct, Mr. C. F. H. Leslie led the way with Ernest Metz, Innocente Pirola, Marie Van Houtte, Souv. de Pierre Notting, etc.; Mr. F. Slaughter, Steyning, second; and Mr. M. Whittle, Leicester, third. Mr. W. O. Times, Hitchin, had the best six tea roses, his Marie Van Houtte and White Maman Cochet being very good; Mr. S. J. Hogg second, and Mr. W. Upton third; seven entries.

ROSES IN VASES.

From six competitors the Rev. J. H. Pemberton, Havering, won the leading award for six vases of roses, distinct, five flowers of each, with Frau Karl Druschki, Earl of Warwick, Hugh Dickson, Caroline Testout, Bessie Brown, and Florence Pemberton; Mr. E. M. Eversfield, Denne Park, Horsham, second; and Mr. W. Leggett, Roseville, Maldon Road, Colchester, third.

Mr. O. G. Orpen, West Bergholt, Colchester, led for four vases of tea roses, five blooms in each, with pretty blooms of Souv. de Pierre Notting, Maman Cochet, Mrs. Edward Mawley, and White Maman Cochet; Mr. Conway Jones second, and Messrs. R. and T. Park, Bedale, third.

LADIES' CLASSES.

Mrs. O. G. Orpen was once more successful in the class for a table decoration, open only to ladies, and here she won with a charming arrangement of Irish Elegance flowers and buds, with a few lygodium sprays on the table cloth; second prize fell to Mrs. Munt, Stagenhoe Park Gardens, Welwyn; and third and fourth places fell respectively to Miss A. F. Harwood, St. Peter Street, Colchester, and Mrs. H. L. Sell, Kempton Villa, Luton. There were ten competitors.

First prize for a bowl of exhibition roses was won by Mrs. J. Walter Smith, Sparrows, Herne Hill, Bushey, with fine flowers; Mrs. G. A. Hammond, Burgess Hill, second; and Mrs. H. E. Molyneux, Brantwood, Purley, Surrey, third. For a bowl of decorative roses the first place was secured by Mrs. J. Walter Smith with Mdme. Abel Chatenay; Miss Jessie Langton and Mrs. C. C. Williamson, Canterbury, equal second.

DECORATIVE ROSES.

The best basket of cut roses was a very pretty one of pale yellow flowers, and sprays of Rosa rubrifolia, arranged by Mrs. O. G. Orpen; Miss Jessie Langton, Raymead, Hendon, was second; and Miss Scott, Harley House, Regent's Park, third. Rev. J. H. Pemberton scored for a dozen decorative roses, in bunches, his best being Gruss an Teplitz, Mdme. Berard, Gustave Regis, and Laurette Messimy.

For six varieties of garden roses Mr. E. Mawley, V.M.H., Rosebank, Berkhamsted, was well to the front with handsome blooms of Mdme. Ravary, Liberty, Perle d'Or, W. A. Richardson, Mdme. Abel Chatenay, and Gruss an Teplitz; Mr. H. R. Darlington, Park House, Potter's Bar, second; and Mr. C. S. Gordon Clark, Fetcham Lodge, Leatherhead, third. The Rev. J. H. Pemberton scored for seven stands of decorative roses, and he was followed by Mr. Conway Jones.

MEDAL BLOOMS.

In the nurserymen's section the silver medal blooms were: H.T., Chas. J. Grahame, shown by Messrs. Jas. Cocker and Son; H.P., Mrs. J. Laing, from Messrs. A. Dickson and Sons; and T., Gladys Harkness, from Mr. Hugh Dickson.

In the amateurs' section the silver medal flowers were: H.P., Mrs. J. Laing, from Mr. E. B. Lindsell; H.T., Mdme. W. Comtesse de Turenne, from Mr. Speight; and T., White Maman Cochet, from Mr. O. G. Orpen.

NEW GOLD MEDAL ROSES.

No fewer than four gold medals were awarded to new roses:

Alexander Hill Gray.—A finely-formed, soft yellow tea-scented rose of great beauty. Messrs. A. Dickson and Sons, Newtownards.

Dr. O'Donell Brown. — A large, broad-petalled H.P. rose of deep rosy magenta colour. Messrs. A. Dickson and Sons, Newtownards.

Lady Alice Stanley.—A lovely rich rose-pink H.T. rose, with silvery rose-pink colouring on the inner face of the petals. Messrs. McGredy and Son, Portadown.

ROSES AT THE AUTUMN ROSE SHOW.

In the foreground is Messrs. Frank Cant and Co.'s first prize exhibit of 36 bunches of roses. Next, to the right, is Mr. J. Mattock's third prize group, while at the end of this fine bank is Messrs. B. Cant and Sons' second prize exhibit. All the exhibits shown were in the same class.

His Majesty.—A handsome deep rose-red H.T. rose, broad-petalled, and full, tinged with cherry red. Messrs. McGredy and Son, Portadown.

A card of commendation was granted to Messrs. Paul and Son, Cheshunt, for Iceberg, a pure white dwarf Wichuraiana, mildew-resisting rose, and a similar award was made to Messrs. J. Cocker and Son, Aberdeen, for a [illegible] pink sport from Dorothy Perkins, named Christian Curle.

Messrs. Garaway and Son, Bristol, showed a new, bronzy-buff tea rose.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, Sept. 15.

Present: Dr. M. C. Cooke, M.A., V.M.H. (in the chair); Messrs. W. Fawcett, J. Fraser, W. Hales, H. T. Güssow, A. Worsley, A. W. Sutton, L. Crawshay, and F. J. Chittenden, secretary.

MUSHROOMS FROM SPORES. — Dr. M. C. Cooke, V.M.H., read a communication concerning a mushroom, Agaricus elvenis, which had occurred in two gardens after pieces of this species had been thrown out, and which had evidently grown from the spores so distributed. They had, after their first appearance, grown in the same spot year after year.

DISEASED PLANTS.—Mr. H. T. Güssow reported that he had examined the apples referred to him at the last meeting, and had found nothing upon them except punctures made by some insect. He had also examined the yew shoots, and was of opinion that they had been injured either by something having been poured over them or by fumes.

USTILAGO HYPODYTES.—Dr. C. B. Plowright sent a specimen of Ammophila arundinacea "affected by the so-called Ustilago hypodytes. The affected plant has been growing in my garden for the last fifteen years, annually producing the fungus. The spores are produced inside the leaf sheaths, so that the sheaths look as though they were filled with snuff packed in between the stem and the leaf. This year, however, the stems are contorted, and the growth very much distorted. The plant came originally from Wells-next-the-Sea, Norfolk."

ASTER TRIPOLIUM.—Mr. Fraser, F.L.S., drew attention to the strongly entomophilous character of the Sea Aster (Aster tripolium), and especially to the great variation in the number of ray florets found in the flower; many plants had the outer florets with broad rays, in some the rays were narrow, though numerous, in others the ray florets were very few, while quite frequently no ray florets were present at all. He found, however, that the various forms were all alike regularly visited by insects, especially the hive bee, the humble bee, and various flies (Syrphideæ). The pollen was spiny in all, and there were numerous papillæ (from which an odour was exuded ?) upon the corolla and other parts of the flower.

SISYMBRIUM SOPHIA.—Mr. Fraser also showed specimens of Sisymbrium Sophia, in which, unlike the usual condition of things, the petals were less than half the length of the sepals.

CARROTS SPLITTING.—Several specimens of carrots splitting lengthwise were exhibited, and Mr. Sutton said that this almost invariably happened when the roots were left in the soil for a considerable time after they had reached maturity. Another cause of the splitting was the rapid absorption of water after a period of drought.

British Gardeners' Association.

At the last meeting of this association, Mr. E. F. Hawes in the chair, six new members were elected, bringing the total up to 1,333. The question of honorary members was deferred for further consideration. A sub-committee was appointed to consider and report whether it would be possible to establish a garden on co-operative principles so as to give employment to any members out of work, and to serve as a centre from which employers could obtain professionally trained gardeners. The secretary will be pleased to receive any ideas or suggestions on this matter.

Cardiff Gardeners' Association.

On Wednesday, September 9, the members of this society visited the Fair Oak Nurseries, Bassaleg, for the purpose of looking over the fruit quarters, and it was a great surprise to everyone to find what a quantity of fine fruits the trees were carrying considering the disastrous gales of the previous week. Mr. Basham said that considerably over a ton of apples were blown down, and yet a huge crop remained on the trees maturing finely as regards size, quality, and colour. Ribston Pippin and Peasgood's Nonsuch deserve special mention, for very rarely are such fine samples to be seen.

Owing to the cold spring the pear crop is scarcely so heavy as usual, but, nevertheless, there was an abundant crop all round. Other kinds of fruit were of an equally high standard. A large number of various fruit trees in pots were carrying extra fine samples, and these were in the orchard house quite recently erected.

After the tour the members were entertained to tea, and before leaving Mr. Treseder, on behalf of the party, thanked Mr. and Mrs. Basham for their kind hospitality, to which Mr. Basham briefly responded. In the absence of the chairman and hon. secretary, who were from home holiday making, the arrangements were carried out by Messrs. Mountney and Julian.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

VANDAS NOT FLOWERING. — L. G., Wimborne: Failure to flower is probably due to overshading, but of this we cannot be certain. We shall be better able to help you if you send us a brief outline of the conditions under which the vandas have been grown, referring especially to the temperature, aspect of house, shading, and watering.

APPLE TREES FOR SMALL GARDEN.—R. R., Blackpool: Thanks for the note. In the case of a small garden such as yours appears to be it will be much more interesting and profitable if you plant cordon apple trees rather than two or three bush or pyramid trees. Whether the trees are to be trained to walls, fences, or trellises, the ground should for a width of four or five feet be thoroughly broken up to a depth of two feet. If the soil is much exhausted, a light dressing of well-rotted stable or farmyard manure may be incorporated with the soil when broken up. Otherwise the application of manure should be deferred until the trees are producing their first crop. They usually make sufficient growth during the first year or two without the aid of fertilisers, and one of the cardinal points in the management of cordons is to avoid an excessively vigorous growth. There will be no objection to the use of a mulch of partially rotted manure during the first summer, should the weather be dry, for the purpose of conserving the moisture; in fact, a mulch will be found highly beneficial. The distance at which to plant cordons is a point of special importance, and in many cases the trees are allowed too much space, and, in consequence, the growth is too vigorous to be fruitful. Single cordons—i.e., trees with single stems—should be planted twenty inches, and double cordons — i.e., trees with two stems— should be thirty-six inches apart. The trees may be trained erect, provided the wall is not less than fifteen feet in height, or oblique at an angle of from forty to fifty degrees. When first planted, any side shoots that have been allowed to extend should be shortened to within one or two buds of the base, and the leading shoot should be left its full length and secured. The leader should not, in fact, be shortened until necessary, but be trained in until the stem has attained the desired length. Stop all side shoots at the end of June or the beginning of July, according to whether the district is early or late. A second growth will result, and these shoots should, early in September, be cut back to the first bud from their base. The stopping in June or July will result in the production of flower buds at the base of the shoots, as well as growth from the upper buds, and it is therefore important to stop at the right time.

SELECTION OF HARDY CLIMBING PLANTS.—B. P., Swindon: The range of hardy climbing plants is a wide one, but, all things considered, the following will be a good selection for your particular case:—Ampelopsis hederacea (Virginian creeper), A. tricuspidata, Hedera helix canariensis (Irish ivy), H. h. chrysocarpa, H. h. Madeirensis variegata, H. h. rhomboidea ovata, Vitis Coignetiæ, V. heterophylla, all plants of vigorous growth, cultivated for their foliage. Bignonia radicans and Wistaria sinensis, two robust-growing plants remarkable for the beauty of their flowers. Clematis flammula. C. montana, C. Blue Gem, C. Henryi, C. Jackmanni superba, C. Mrs. J. Bateman, Jasminum nudiflorum, J. officinale grandiflorum majus, Lonicera brachypoda aurea reticulata, L. Periclymenum, Late Dutch, L. sempervirens, Passiflora Constance Elliott, all of which are of moderate growth. Climbing roses, comprising Gloire de Dijon, Crimson Rambler, Dundee Rambler, L'Ideal, Reine Marie Henriette are also valuable for arches, trellises, and walls of moderate height.

NEGRO LARGO FIG OUT-OF-DOORS.—W. S., Surrey: The cause of non-fruiting is not to be found in the cultural conditions or even in the position of the tree, and the climate of your district. It is to be found in the variety itself, for Negro Largo is emphatically not suitable for outdoor culture. Cut down and root out the old tree, remove the old soil, and make up a narrow border of sound loam, mixed with old mortar or plaster rubble, and in this plant a good tree of Brown Turkey, White Marseilles, or Brunswick figs, the first for preference, though White Marseilles is also excellent, while Brunswick fruits better as an old or large tree than as a young one. Plant firmly. Two and a-half feet of soil will be ample depth, and if the roots are confined within four feet of the wall by means of brickwork or slate slabs so much the better, because a free root run for young figs produces gross and unfruitful growth. Of course, an alternative to this course would be the building of a glass house over the old fig.

GARDENING YEAR BOOK FOR 1909.—R. R., Blackpool: Just at the moment it is not possible for us to say precisely when the new edition will be published, but all the work is being pushed on as speedily as possible in the hope that the book may be published early in December.

HEDGES.—C. R., Loughton: Trench the ground at once so that it may settle down by planting time, which should be as nearly at the end of October as possible. For the production of successful hedges there is nothing of more importance than thorough ground preparation, and yet this is a matter all too frequently overlooked. Three-year-old, or, preferably, four-year-old plants of Quick should be secured and planted about eight inches apart, and they should be cut back to about six inches of the ground level. This severe beheading pays, as it induces very strong growths to start away from the base next season and consequently the hedge is well furnished from the base upwards. Save under exceptional circumstances we prefer a single row of plants rather than a double one because, if properly cared for, the single row will afford all the security and shelter necessary, and will be much more easily kept free from weeds than a double row. Keep the hedge bottom clean for at least two or three years after planting, and if it is a garden hedge it should always be kept clean, and be regularly forked over. Hornbeam makes a good hedge, and need not be planted so closely as thorns.

NETTLES.—L. L. S., Essex: Fork out all the nettles you possibly can, and burn them root and branch; then give the ground a dressing of fresh gas-lime. A few weeks later the ground should be trenched ready for use next spring. Hoeing and forking out, and never permitting a nettle to seed will soon rid the garden of a vile weed. The garden frames should face south. Brick pits will be the most serviceable, though you should have at least one wooden one for placing over a hotbed of stable litter and old leaves next spring, in which to raise seedlings.

NAMES OF PLANTS.

West Surrey.—Gaultheria Shallon.

J. S., Taunton.—1. Begonia Haageana; 2, Bryophyllum calycinum; 3, probably Polypodium chnoodes.

J. S., Ascot.—1, Veronica cupressoides; 2, Clethra alnifolia; 3, a garden variety of Michaelmas Daisy.

W. D., Leatherhead.—The flower was too faded for us to identify it with certainty, but we believe it to be Stanhopea Wardi.

NEW PLANTS, ETC.

CATTLEYA HARRISONIÆ ALBA STANLEY'S VARIETY.

A beautiful variety that is a great improvement upon the original albino form, both in shape and substance. The blooms are shapely and substantial, pure white, save for a faint tinge of lemon-yellow in the throat of the lip. F.C.C., R.H.S., Sept. 15. Messrs. Stanley and Co., Southgate.

CATTLEYA MARONI AUREA.

A distinct orchid with moderately large flowers. The sepals and petals are bright yellow, and the broad apex of the lip is finely coloured with purple, crimson, and gold. A.M., R.H.S., Sept. 15. Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Dorking.

POPULUS ALBUS LASIOCARPA.

A very fine poplar with great heart-shaped leaves fully a foot long, and almost as wide. This is a quick growing Chinese variety that promises to be very useful. No doubt if cut down annually after the manner of Rhus typhina and Paulownia imperialis at Kew, it would make a splendid foliage bed for large parks and gardens. F.C.C., R.H.S., Sept. 15. Messrs. Jas. Veitch and Sons, Chelsea.

APPLE RED VICTORIA.

A handsome, brilliantly coloured early apple, somewhat resembling both Emperor Alexander and Gascoigne's Scarlet. It is earlier than the latter, a free cropper, and should prove a splendid market variety. A.M., R.H.S., Sept. 15. Mr. G. W. Miller, Clarkson Nursery, Wisbech.

DAHLIAS.

Flora.—A very pretty, fair sized cactus variety, yellow, with white tips; good form. A.M., R.H.S., Sept. 15. Mr. J. T. West, Brentwood.

Nellie Riding.—A handsome and beautiful cactus variety of excellent form; deep rich crimson, with white tips. A.M., R.H.S., Sept. 15. Mr. J. T. West, Brentwood.

Adela. — A clear cream-white pompon variety, of excellent form. F.C.C., L.D.U., Sept. 10; A.M., R.H.S., Sept. 15. Mr. Chas. Turner, Slough.

Crusoe.—A very pretty show dahlia of a soft lavender tint, with the florets tipped with a deeper shade. F.C.C., L.D.U., Sept. 10. Messrs. Keynes, Williams, and Co., Salisbury.

Una.—A wonderful cactus dahlia of pink colour, with a yellowish glow in the centre. The outer florets incurve a little, and are narrow, slightly twisted and divided into three and sometimes four parts for half their length. F.C.C., L.D.U., Sept. 10. Messrs. J. Burrell and Co., Cambridge.

Lufra.—A good pompon variety of a dark red colour; a self. F.C.C., L.D.U., Sept. 10. Mr. Chas. Turner, Slough.

Snowdon.—A large white cactus dahlia, that, as shown, had a rather large centre. F.C.C., L.D.U., Sept. 10; A.M., R.H.S., Sept. 15. Messrs. J. Stredwick and Son. St. Leonards.

Indomitable.—A large cactus variety with narrow, twisted florets; colour, rose-red, the points paler. F.C.C., L.D.U., Sept. 10. Messrs. J. Stredwick and Son.

Fairy Queen.—A full-sized cactus dahlia, the central florets a trifle flat; colour, creamy white. F.C.C., L.D.U., Sept. 1 Mr. H. Shoesmith, Woking.

Echo.—A shapely cactus variety, with very narrow florets; colour, purplish rose. F.C.C., L.D.U., Sept. 10. Messrs. J. Burrell and Co.

Brigadier.—A very fine cactus dahlia, with clawed florets; the colour, a very deep shade of crimson scarlet. F.C.C., L.D.U., Sept. 10; A.M., R.H.S., Sept. 15. Messrs. J. Burrell and Co.

Evening Star.—A charming cactus dahlia with long, narrow florets; centre yellow, outer florets bright buff pink. F.C.C., L.D.U., Sept. 10. Messrs. J. Stredwick and Son.

Mrs. Alfred Dyer.—A very pretty and refined cactus dahlia, soft yellow, shading to white at the tips of the narrow florets. F.C.C., L.D.U., Sept. 10. Messrs. J. Stredwick and Son.

Rev. T. W. Jamieson.—A bold cactus variety, with substantial florets that are slightly twisted; soft yellow centre, rose-pink tips. F.C.C., L.D.U., Sept. 10. Messrs. J. Stredwick and Son.

Glory of Wilts.—A very beautiful, refined cactus dahlia of a clear bright golden yellow colour throughout; one of the very best additions. Messrs. Keynes, Williams, and Co., Salisbury.

[illegible].—A neat new single variety; very [illegible] maroon crimson. F.C.C., L.D.U., Sept. 10. Messrs. J. Cheal and Sons.

Flora.—A beautiful single variety; old gold colour, with a ring of rich crimson round the yellow eye. F.C.C., L.D.U., Sept. 10. Messrs. J. Cheal and Son.

Betty.—A shapely and neat single variety of bright rosy-mauve colour, with a crimson zone round the eye. A.M., R.H.S., Sept. 15. Messrs. J. Cheal and Son, Crawley.

Monarch.—A handsome deep reddish salmon-coloured cactus variety, with bright yellow centre. A.M., R.H.S., Sept. 15. Messrs. Burrell and Co., Cambridge.

Satisfaction.—A rosy cactus variety shaded with pink, and with a whitish centre. A.M., R.H.S., Sept. 15. Messrs. J. Stredwick and Son, St. Leonards.

FORTHCOMING ENGAGEMENTS.

MONDAY, September 28.—National Chrysanthemum Society's Floral Committee meeting at Essex Hall, at 3 p.m.

TUESDAY, September 29.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. on "Garden Design," by Mr. T. H. Mawson; Scientific Committee at 4 o'clock.

WEDNESDAY, September 30.—Royal Society of Arts.

WEDNESDAY, October 7.—Royal Society of Arts. National Chrysanthemum Society, Crystal Palace, two days; Floral Committee at 12 o'clock.

NOTES OF OBSERVATION.

◆

Rose Frau Karl Druschki.—Possessing, as I do, an Englishman's respect for "The Times," it is with some diffidence that I venture to question the accuracy of its statement that the flowers of this rose are too large for the plants. It may be correct if giant blooms for exhibition are grown, but for a simple amateur this rose is certainly most desirable. We have had flowers of moderate size at intervals during the past three or four months, and have seldom cut blooms which have been too large for the dinner table. This rose certainly produces flowers of excellent form when grown as an ordinary garden plant.—C. J.

Destroying Wasps' Nests.—Every one will agree with "East Sussex" that a great amount of loss and inconvenience is caused by wasps, and that all possible means should be taken to destroy the pests. I am pleased to see "East Sussex" recommending cyanide of potassium as the best thing to use, but I should like to point out that it is not necessary to wait till after dark to apply it, and most people would find it more convenient to work in the day time. I pour a little of the cyanide into an earthenware pot and saturate a little cotton wool in it, sufficient to plug up the entrance hole, and with a pointed stick push it in, and all the wasps that are out, as they come back and try to enter, inhale the fumes of the cyanide and fall down dead; it is interesting to stand by and watch them. The nest should be dug out next day and broken up, as the grubs would not be killed, and may hatch out, but not a live wasp will be seen. I have destroyed hundreds of nests in this way, and have recommended the method all I can.—H. T. Bradley, Dyffryn Gardens, Neath.

Autumn Crocuses.—Crocuses can be had to brighten the garden in autumn quite as effectively as the cheap Dutch varieties which are so popular in spring. Autumn crocuses are mostly species that begin to flower in September, and continue right into December. The best varieties include: Longiflorus, medius, pulchellus, speciosus, Aitchisoni, and zonatus. All these are cheap to obtain, therefore, plant them in good deep masses in borders, or try them naturalised in grass, and in a very short time you will have an autumn effect in your garden of which you may be justly proud. Lastly, do not confuse crocuses with colchicums, as is frequently done; the former for garden decoration are distinctly the best.—Thomas Smith, Walmsgate Gardens.

Summer Pruning of Fruit Trees.—I thoroughly endorse what Mr. T. H. Slade says in his practical notes on summer pruning (p. 650). As a rule we require a dry season to check rampant growths, for the greater the number of strong growths the smaller the number of fruit buds, unless the trees were root-pruned the previous autumn or winter. I have noticed for many years that summer pinching has very little effect upon the formation of fruit buds. If any interested person will take the trouble to examine his fruit trees in May, he will notice the formation of fruit buds taking place. There will be the young shoots commencing to run out, and the embryo fruit buds forming; it is the previous summer and autumn treatment that rules the quantity of fruit buds formed the following year. Those persons that possess fruit trees producing strong fruitless shoots should moderately root-prune in September, or not later than the middle of October, and they will probably be well pleased with the little extra trouble this incurs and the production of extra fruit buds.—Geo. Picker, Hesslewood Gardens, Hull.

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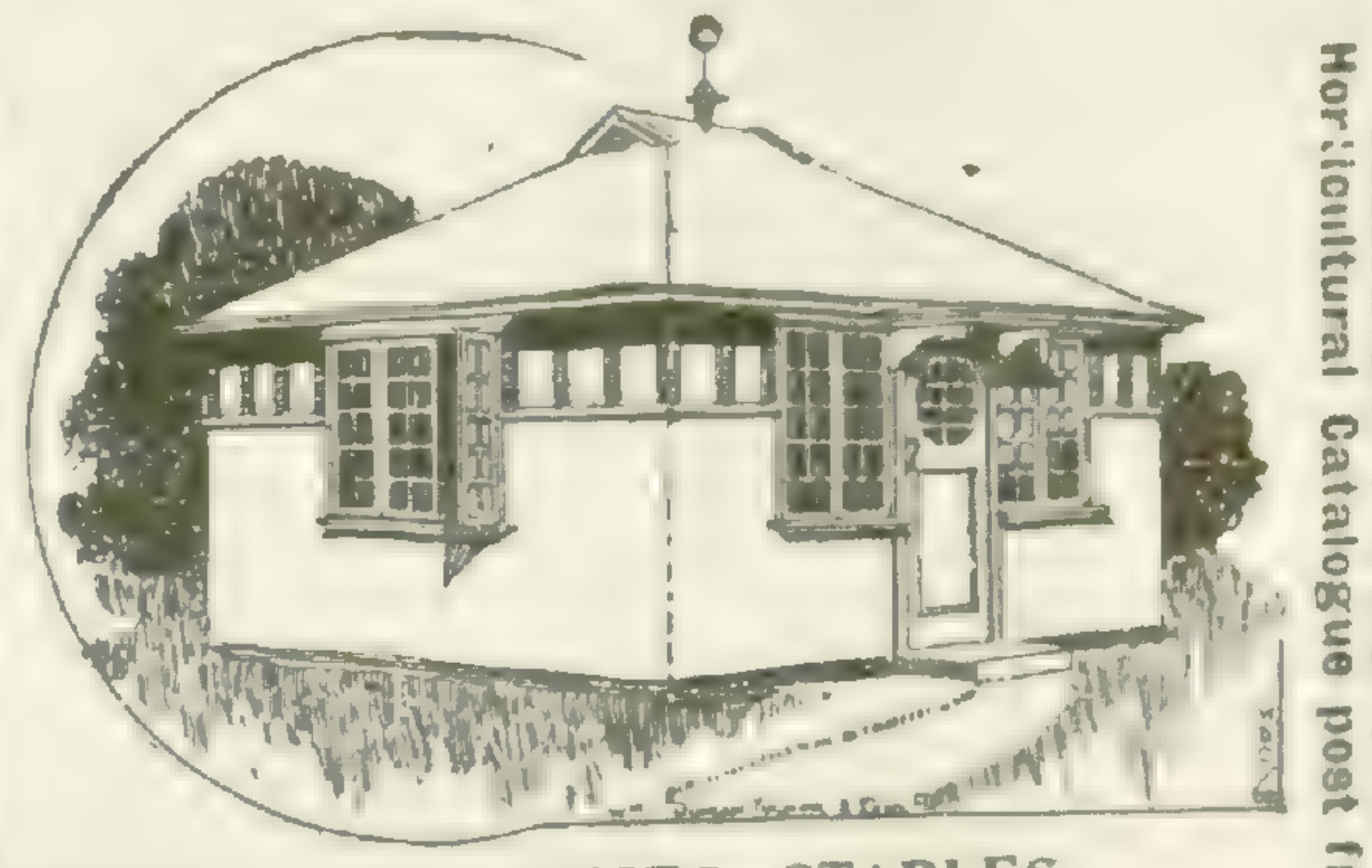

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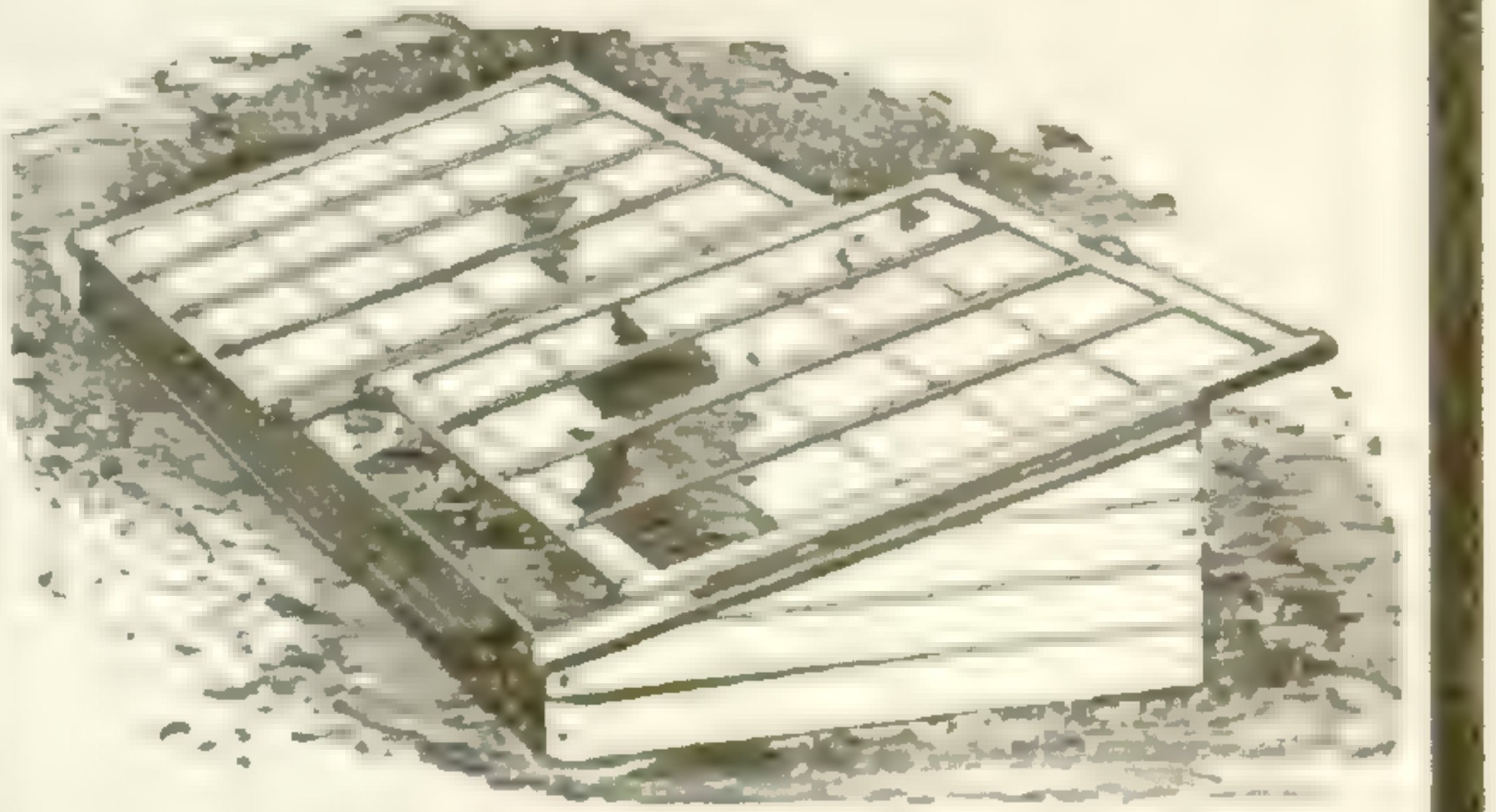

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OBITUARY.

MR. GEORGE NICHOLSON, F.L.S., V.M.H.

It is with feelings of the deepest and most sincere regret we have to record the death, on Sunday last, of one who has for long held a foremost place in the world of horticulture, and a very large place in the affections of all who had the privilege of a close acquaintance with him—Mr. George Nicholson. Although Mr. Nicholson had been in failing health for some time and had suffered several severe illnesses, it was the hope of his many friends that he would yet recover and once more move again among the plants and flowers he knew so well, and the friends who so highly appreciated his great worth. But it was not to be, and on Sunday last, at Larkfield Road, Richmond, he passed into the Great Beyond, to the deep sorrow of relatives and friends.

THE LATE MR. GEORGE NICHOLSON, F.L.S., V.M.H.

The son of a nurseryman, and born at Ripon in 1847, Mr. Nicholson received his early training at his father's hands, and subsequently worked in the nurseries of Messrs. Fisher and Holmes, of Sheffield; Messrs. Hugh Low and Co., then of Clapton; and at La Muette, Paris. In 1873 he entered the Civil Service, and became Clerk to the Curator of the Royal Gardens, Kew, and so well did he take advantage of the great opportunities Kew offered, that in 1886 he was appointed Curator. As an organiser, as a cultivator, and as a botanist, Mr. Nicholson was unusually well fitted for this position, as was shown by the splendid manner in which, under Sir Wm. Thiselton Dyer, he improved the appearance and increased the usefulness of the Royal Gardens. Widely read, a man of excellent judgment, a ready and entertaining writer, and gifted with a wonderfully pleasant manner, it is small wonder that his closest friends and the Kewites of his time have ever held him in a high respect that was litle short of worship. He also possessed a keen sense of humour and a fund of anecdote that made him an extremely pleasant companion.

Mr. Nicholson made hardy trees and shrubs a close study, and he was recognised as the first authority in this country upon a subject he made so peculiarly his own. But his knowledge of plants went far beyond trees and shrubs; indeed, we do not know anyone who knew plants, exotic or native, so well as he. This extensive knowledge was devoted to the service of horticulture in the "Dictionary of Gardening," edited by him, and published in 1891, and which still remains the finest work of its kind. As an acknowledgment of his services to botanical and horticultural science, Mr. Nicholson was made an Associate of the Linnean Society in 1886. In 1894 he was awarded the Veitchian Medal, and he was one of the original recipients of the Victoria Medal of Honour in Horticulture.

In the interests of the Royal Gardens Mr. Nicholson went to America in 1893, where he inspected the important horticultural establishments of the United States, and acted as a judge in the horticultural section of the great Chicago exhibition. In 1901, owing to failing health, he retired from the position of Curator at Kew, but he continued in close touch with the Gardens, as has been shown by the keen interest he took in, among other things, the working out of the native flora and fauna of the Royal Gardens, as recorded in the "Kew Bulletin." Relief from the pressure of administrative duties brought a return of health, and in 1902 Mr. Nicholson went to America as a delegate from the Royal Horticultural Society to the "Conference on Plant Breeding."

With his usual modesty, Mr. Nicholson declined the honour of a public dinner upon the occasion of his retirement from Kew, but a complimentary dinner was given in his honour at the Cannon Street Hotel on October 30, 1901, presided over by Dr. Masters, and attended by all the leaders of horticultural activities. Anything in the form of a public testimonial Mr. Nicholson strongly opposed, but a fine silver salver was presented to him by his friends and colleagues "who, while admiring his qualifications as a man of science and a gardener, have a warm appreciation of his worth as a friend." And it is as a friend, in the broadest and fullest sense of the word, that Mr. Nicholson will be long and best remembered by many. His keen interest in the young men at Kew, his many years of work on behalf of the Gardeners' Orphan Fund, and his presidency of the Kew Guild, all point to those finer qualities of mind and heart with which our friend was so liberally endowed. Mr. Nicholson rendered great service to the Royal Horticultural Society in many ways, and was, right up to the time of his death, a member of its Floral and Scientific Committees. Until recent years Mr. Nicholson was a keen and clever Alpine climber, and used to spend his annual vacation in Switzerland.

Mr. Nicholson has passed from us, but his work at Kew remains as a splendid monument to his ability, while his worth as a friend and gentleman will be remembered for long, long years to come. We sorrow with those who mourn in the home at Richmond, and extend to them our deepest sympathy.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. September 13 to September 19.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Sept. 13 - Sunday	4 40	48	46	60	36
,, 14—Monday	7 40	56	51	64	47
,, 15—Tuesday ...	—	57	54	60	45
,, 16—Wednesday .	4 35	54	51	62	44
,, 17—Thursday ...	10 0	62	57	69	54
,, 18—Friday	2 50	62	57	70	40
,, 19—Saturday ...	7 35	57	56	73	51
Means	5 20	57	53	65	45

Date. 1908. September 13 to September 19.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Sept. 13—Sunday	—	54	57	57	32
,, 14—Monday	—	55	57	57	42
,, 15—Tuesday ...	0·09	55	57	57	39
,, 16—Wednesday.	—	54	56	57	39
,, 17—Thursday ...	—	56	56	57	52
,, 18—Friday	—	56	57	57	36
,, 19—Saturday ...	—	57	57	57	47
Means ...	(total) 0.09	55	57	57	41

The War on Rats.—Lord Strathcona, the veteran High Commissioner for Canada, is the latest convert to join in the crusade against rats. His island home of Colonsay in the Hebrides, inhabited by some ninety families, has just been the scene of a campaign against these vermin, in which the islanders under skilled supervision laid down bait made specially with the contents of hundreds of tubes of Danysz virus jelly, a preparation which is very deadly to rats but quite harmless to other animals. Every farm and homestead was systematically treated, the owners cheerfully lending their co-operation. It is confidently anticipated that as a result this remote "fair island in the sea" will now be freed from the plague of rats, which have added considerably to the many troubles and difficulties with which the crofters of late years have had to contend.

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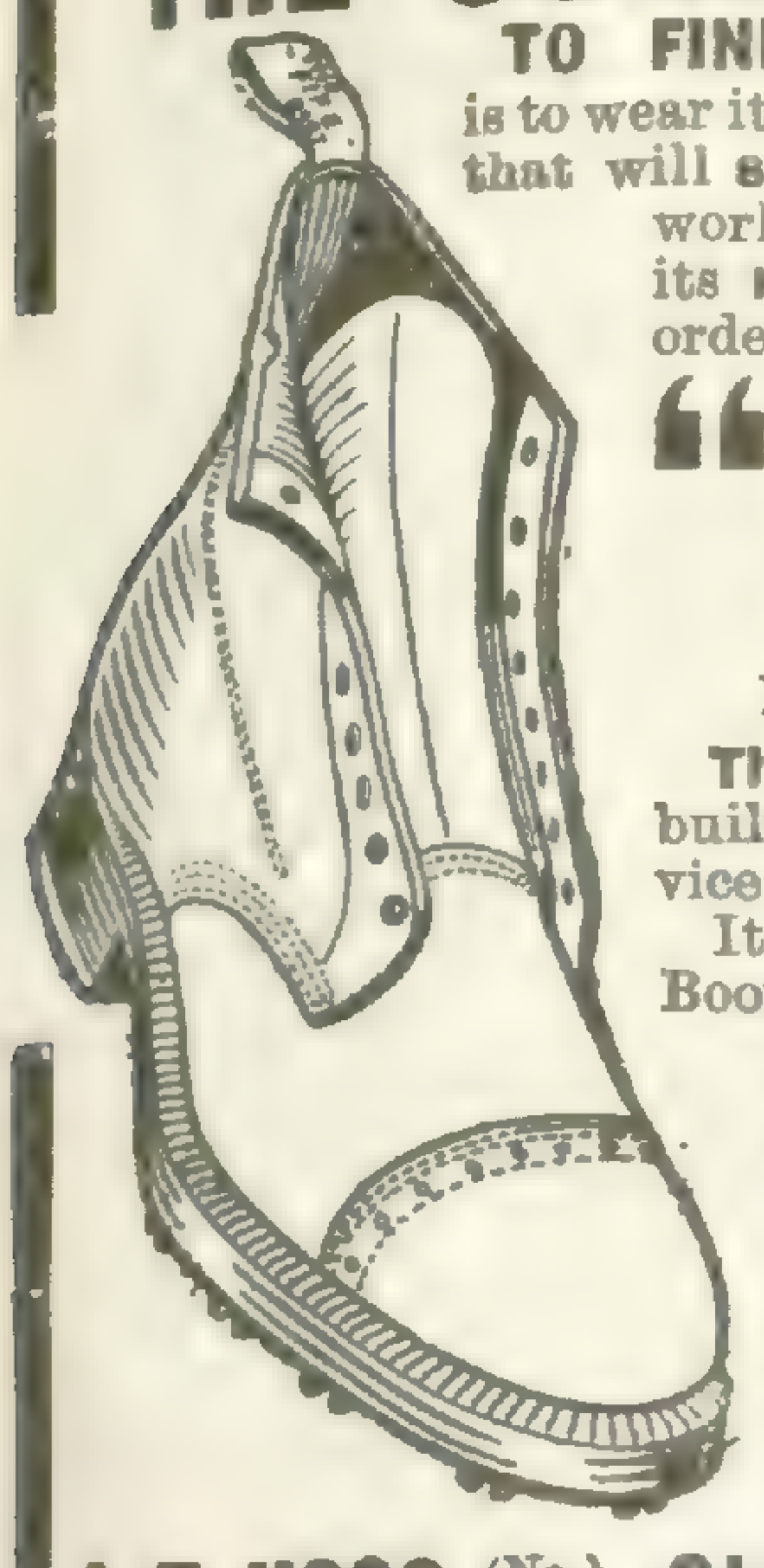

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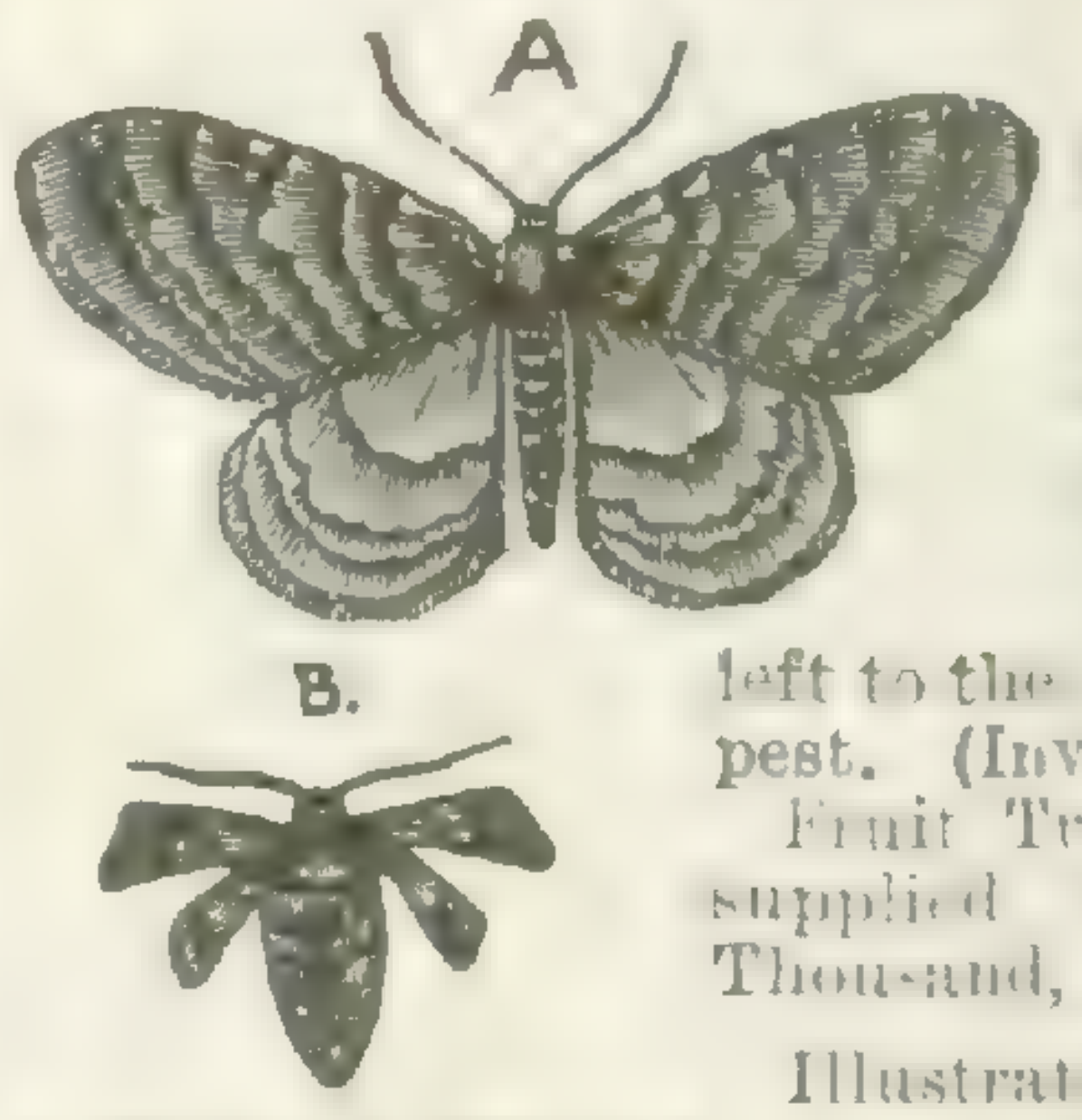

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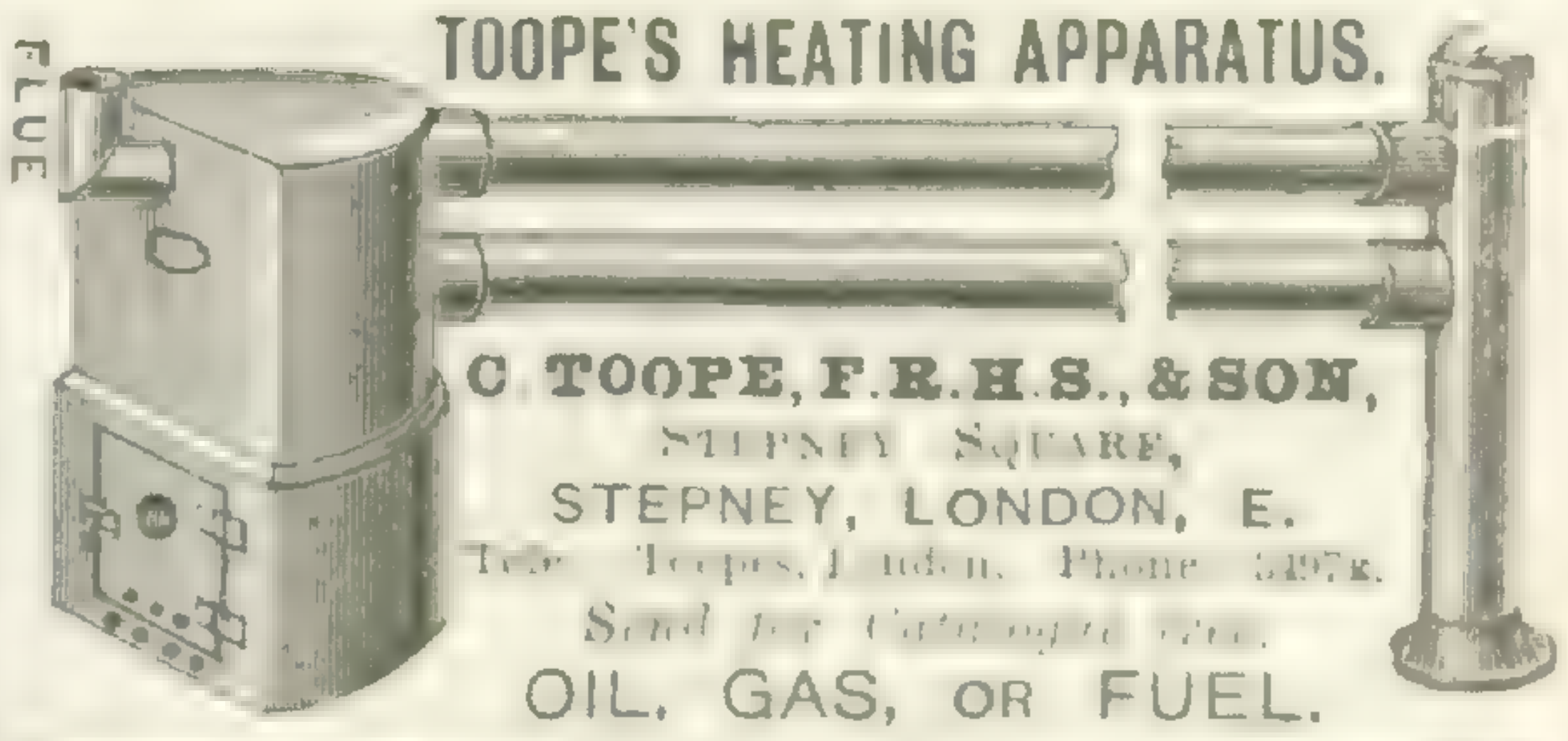

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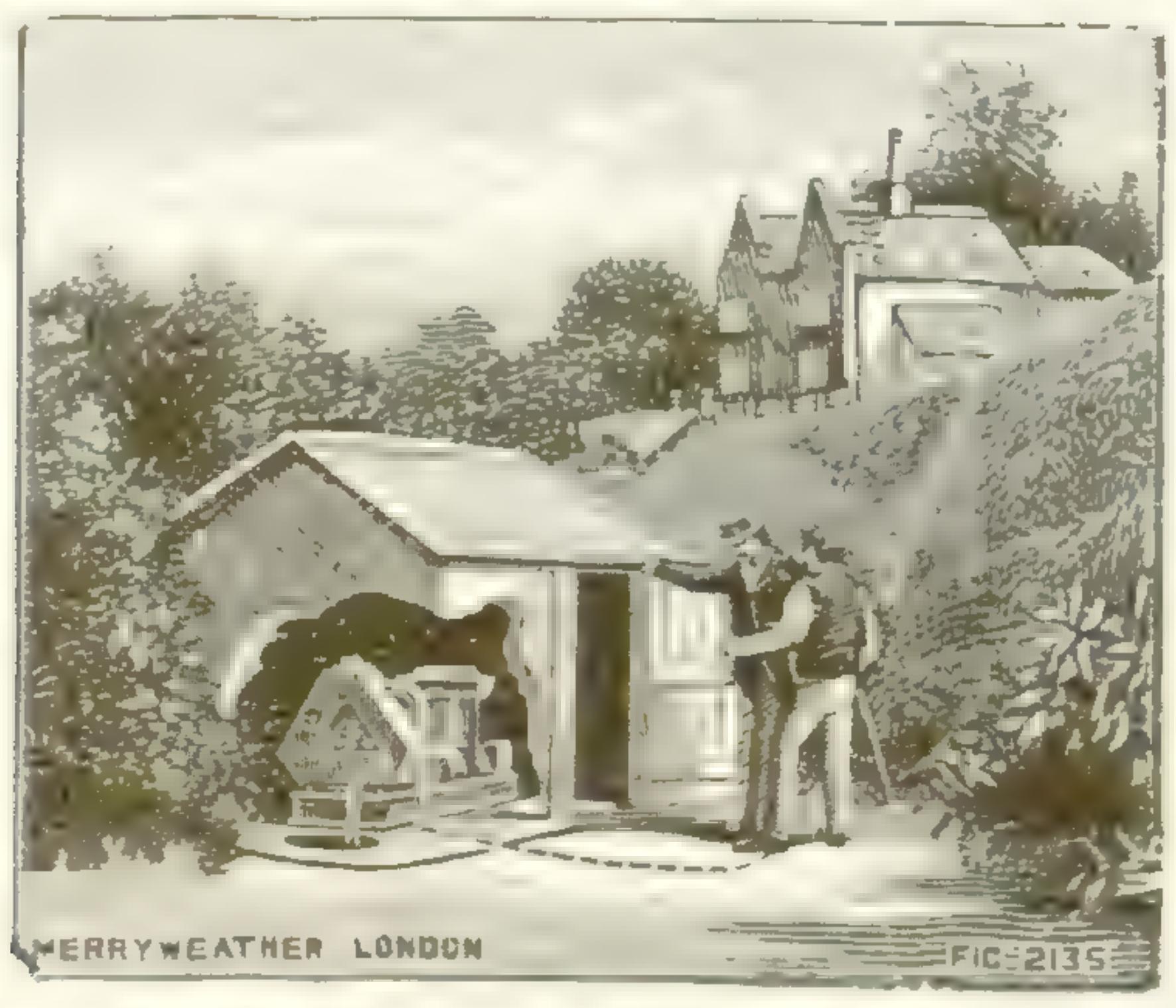

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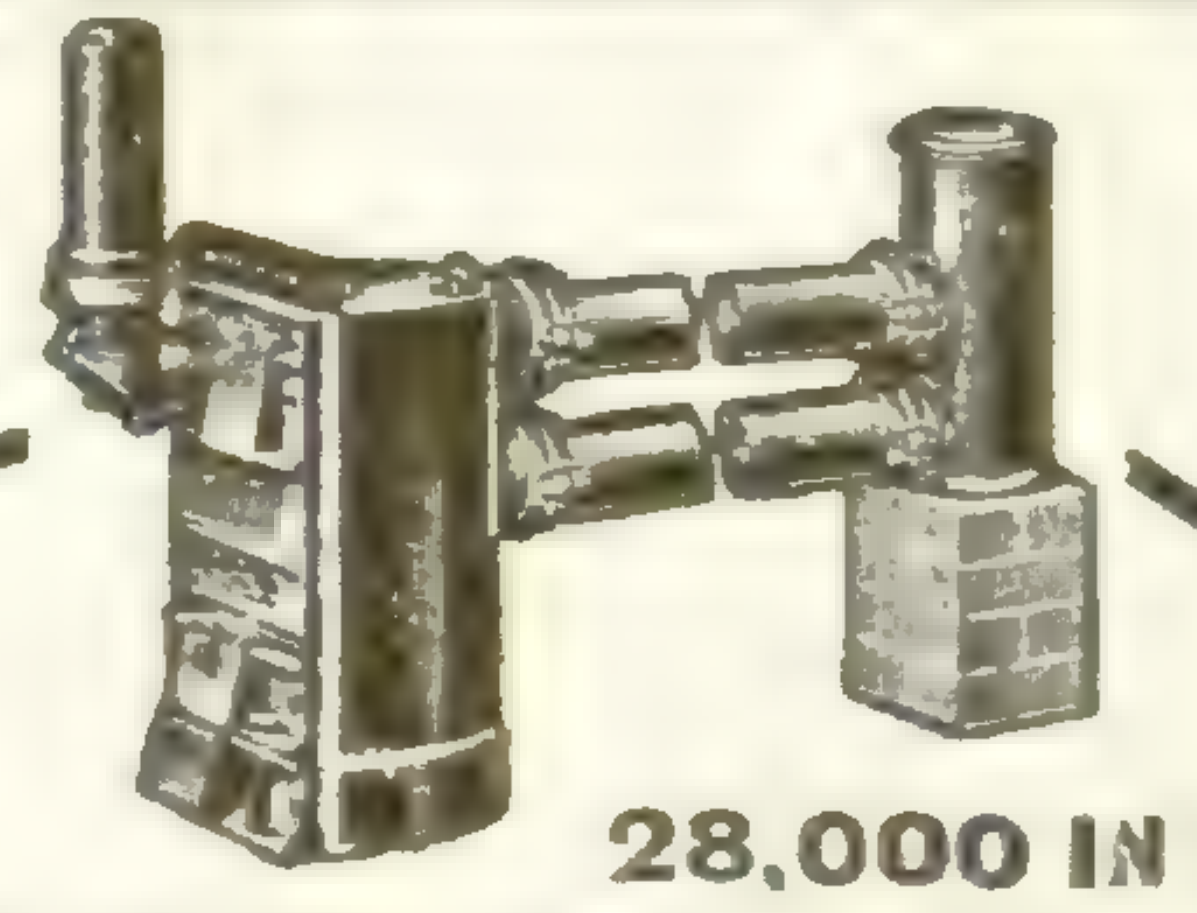

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Scilla sibirica, rich blue	1	6	14	6
Iris, Spanish, mixed	0	6	4	6
Iris, English, mixed	2	0	16	8
Narcis., single, in the finest mixture... ...	1	4	12	6
Narcis., Trumpet, in the finest mixture ...	2	6	20	0
Narcis., double, fine mixture	3	0	25	0
Narcis.-Polyanthus, finest mixed	3	6	30	0
Snowdrops, Elwesi, the Giant Snowdrop	1	6	13	6
Ranunculas, French, double mixed ...	0	9	7	0
Dens canis, mixed (Dog's-Tooth Violets)	2	0	—	

250 Bulbs of same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

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10,000 RHODN. PONTICUMS, 1½ to 2ft. very bushy. Hollies, "Hodgen's" fine trained Pyramids, with good leaders, lift with splendid roots and balls of soil, 4 to 5 feet, 5 to 6 feet, and 6 to 7 feet, not finer in the trade. 10,000 Aucuba Japonica, splendid bushy plants, 1½ to 2 feet and 2 to 3 feet.

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A List of Gardeners on the Register will be supplied to employers only upon application to the Publishers if a stamped envelope is forwarded, addressed 148 and 149, Aldersgate Street, London, E.C.

Situations Wanted.

ADVERTISER seeks ENGAGEMENT as HEAD WORKING GARDENER, with Lady or Gentleman requiring the services of a thorough practical Man, in all branches (Inside and Out); highest references, extending over 19 years; 6 years as head; married; age 33. W. GUNSTON, Bridge Road, Itchen, Southampton.

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GARDENER (Head Working or Single-handed); age 39; married, two children; good all-round experience Inside and Out; cows and poultry if required; good references. G. A., 49, Norman Road, Ilford.

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GARDENER (Head), where two or more are kept; thorough knowledge of gardening generally, both Inside and Out; life experience; good references; abstainer; age 31, married, no family. L. A. KETTEL, 33, Adelaide Road, Chislehurst, Kent.

GARDENER (Head Working, where two or three are kept), good general experience with Vines, Peaches, Flowers, Vegetables; married, age 26 years, one child; 6½ years present place; good references; at liberty when suited; Salop or Midland counties preferred. J. MADDOCKS, Adderley, Market Drayton, Salop.

MR. KENWARD, The Nurseries, Lewes, would be pleased to recommend a man he has now in his nurseries, to any lady or gentleman requiring a thoroughly capable, all-round GARDENER, HEAD-WORKING, where several kept; age 41; married, been head 14 years; especially good at Malmaison and all Carnations.

GARDENER (Head or Good Single-handed), good experience (Inside and Out); good references; married, no family. W. CANE, Riseden, Wadhurst, Sussex.

GARDENER (Single-handed or with help), life experience; good references; age 25; unmarried; disengaged when suited. G. SMEE, The Gardens, Weald House, near Brentwood, Essex.

MR. MORRIS RICHARDSON can thoroughly recommend his HEAD GARDENER, age 45, who has been in his service over 30 years, and is leaving for no fault; thoroughly experienced and absolutely trustworthy. Pleased to answer any questions. Address C. GIBBS, Cranesden, Mayfield, Sussex.

GARDENER (Single-handed or otherwise), single; age 33; life experience in all branches, Inside and Out; good references; disengaged when suited. H. BENSTEAD, Heacham, Norfolk.

GARDENER (Single-handed or with help), good all-round, Cows, Poultry, etc.; married; 34; wife useful, one child; 7 years' excellent references; 3½ years present place; disengaged when suited. MARKHAM, 1, Summerdown, Old Town, Eastbourne.

GARDENER (Single-handed), experienced in Kitchen, Flower, Fruit Gardens, Greenhouses; married; middle age; 6 years last situation; excellent character. W. CALLOW, 12, Banbury Street, Watford, Herts. No family.

GARDENER (Single-handed or otherwise); willing to be useful; 5 years' good reference from last place; life abstainer; age 26; married when suited. A. S., Tranmere, Sunbury-on-Thames.

GARDENER (Single-handed, or with help), experience, Inside and Out, Vines, Stove and Greenhouse Plants, etc.; willing to be useful; married; age 35; 5½ years as single last place; good reference by me. Apply, stating terms. C. H. SMITH, 44, Ravensbourne Road, Catford, S.E. (No circulars.)

GARDENER (39), Seeks SITUATION (Single-handed or with help); good character; life experience; married; no family. HARYETT, 46, Coombe Road, Upper Sydenham, Kent.

GARDENER requires SITUATION (Single-handed or with help), experienced in all branches; good personal character; age 38; married. L. TWIGGE, 10, Bridge Street, Sunbury Common, Middlesex.

GARDENER seeks SITUATION (Single-handed, or Second), 4½ years in present situation. No objection to cow or look after cob; good reference; age 26; married when suited. F. GARDINER, Dyson's Wood Gardens, Kidmore, near Reading.

GENTLEMAN thoroughly recommends his GARDENER, single-handed or with help; good all-round Man; has been with him nine years; age 42; married; abstainer; can manage engine and electric plant if required; disengaged when suited. G. BECKLEY, Cranford House, Moulsford, Berks.

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JOURNEYMAN (Inside), age 21, 7 years' experience; private place; Roman Catholic. J. F. W. HARDY, c/o Just, Cleadon, Sunderland.

GARDENER (Under), age 19, seeks SITUATION; five years' experience Inside and Out; three years' good character. A. WORSFOLD, Benenden, Cranbrook, Kent.

UNDER GARDENER seeks SITUATION, age 19; good knowledge of all Carnations, Malmaisons, Cucumbers, and Chrysanthemums; life experience in kitchen garden; abstainer; good character. S. N., Summerleigh, Stubbington, Fareham, Hants.

WANTED, by a YOUNG MAN, age 1 SITUATION as UNDER-GARDENER, look after a pony and trap; four years' good cha ter. Address B. PYE, Burbage Vicarage borough, Wilts.

YOUNG MAN, age 19, requires SITUAT as UNDER GARDENER; three years' e ence Inside and Out; can be well recommended. A. BOSWELL, The Gardens, Lancing Manor, W ing, Sussex.

GARDENER.—SITUATION WANTED good all-round man; 12 years' experienc chrysanthemum, tomatoes, cucumbers, etc.; mar age 29. J. MOONEY, Oaks Cottage, Balco Sussex.

GARDENER seeks SITUATION as KITCHEN GARDENER; good knowle Rose Trees and Carnations, all Hardy Annuals, et also good knowledge of Poultry; good charact THOMAS RUSSELL, 25, Stockwell Road, Sunny East Grinstead, Sussex.

GARDENER, SITUATION required Gentleman's Garden, age 21; 3½ years in place. Sussex or Surrey; highest references; di gaged. L. F. BAGG, Freshfield, Sesynes Hill, ward's Heath.

IMPROVER, age 17.—W. MEADS stro recommends C. COLLIN as above; 2 years sent place. C. COLLIN, Goldicote Cottages, S ford-on-Avon.

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For OCTOBER 10, 1908.

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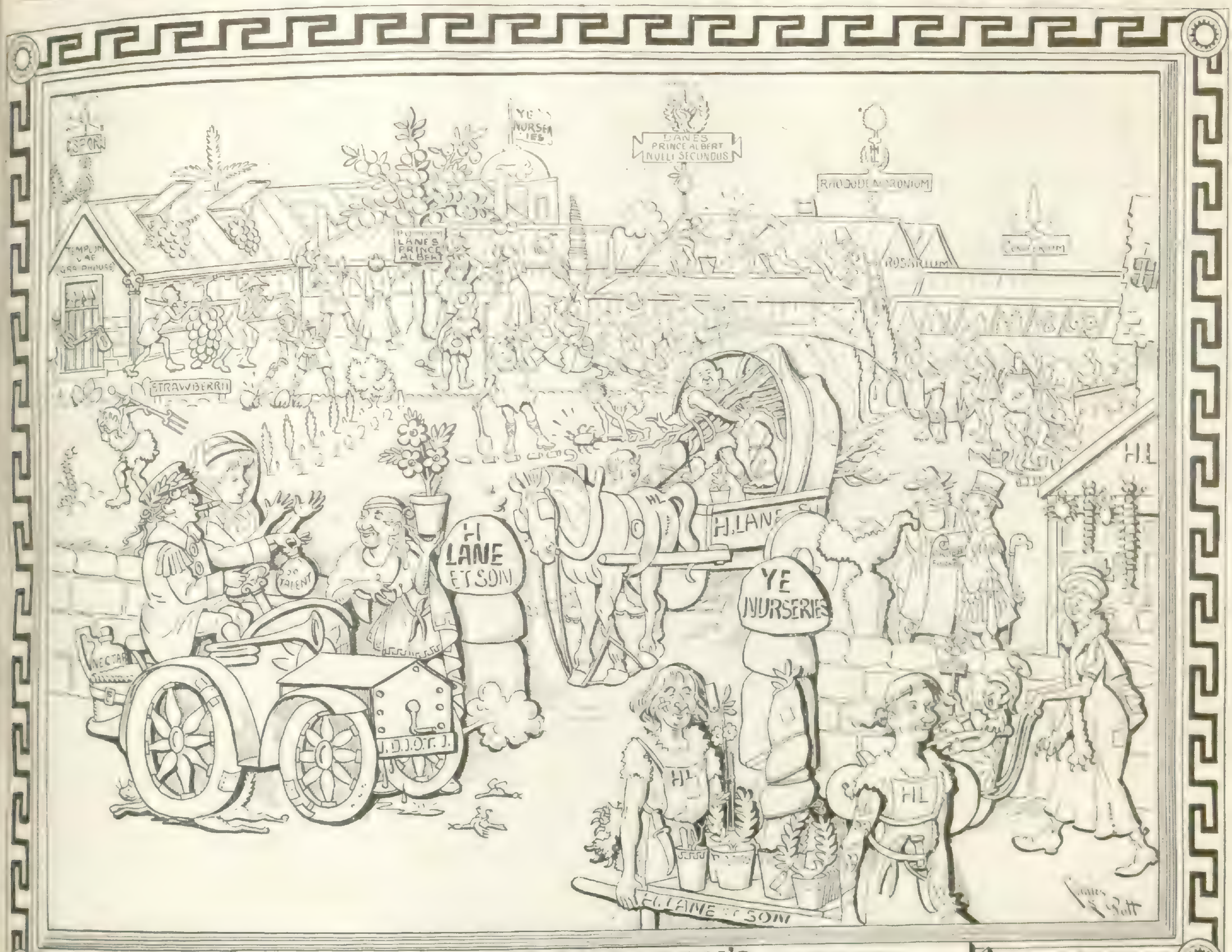
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DURING YE OCCUPATION OF GREAT BERKHAMSTED BY YE ROMANS B.C 43

Situations Wanted—*continued*.

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YOUNG MAN seeks SITUATION in Kitchen [illegible] and Pleasure Grounds; age 30; total [illegible] references; disengaged. D. T., S. [illegible] Road, Watford.

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YOUNG MAN, kitchen garden and pleasure ground; age 19; good references. Apply A. HOPE, 213, Friern Road, East Dulwich, London, S.E.

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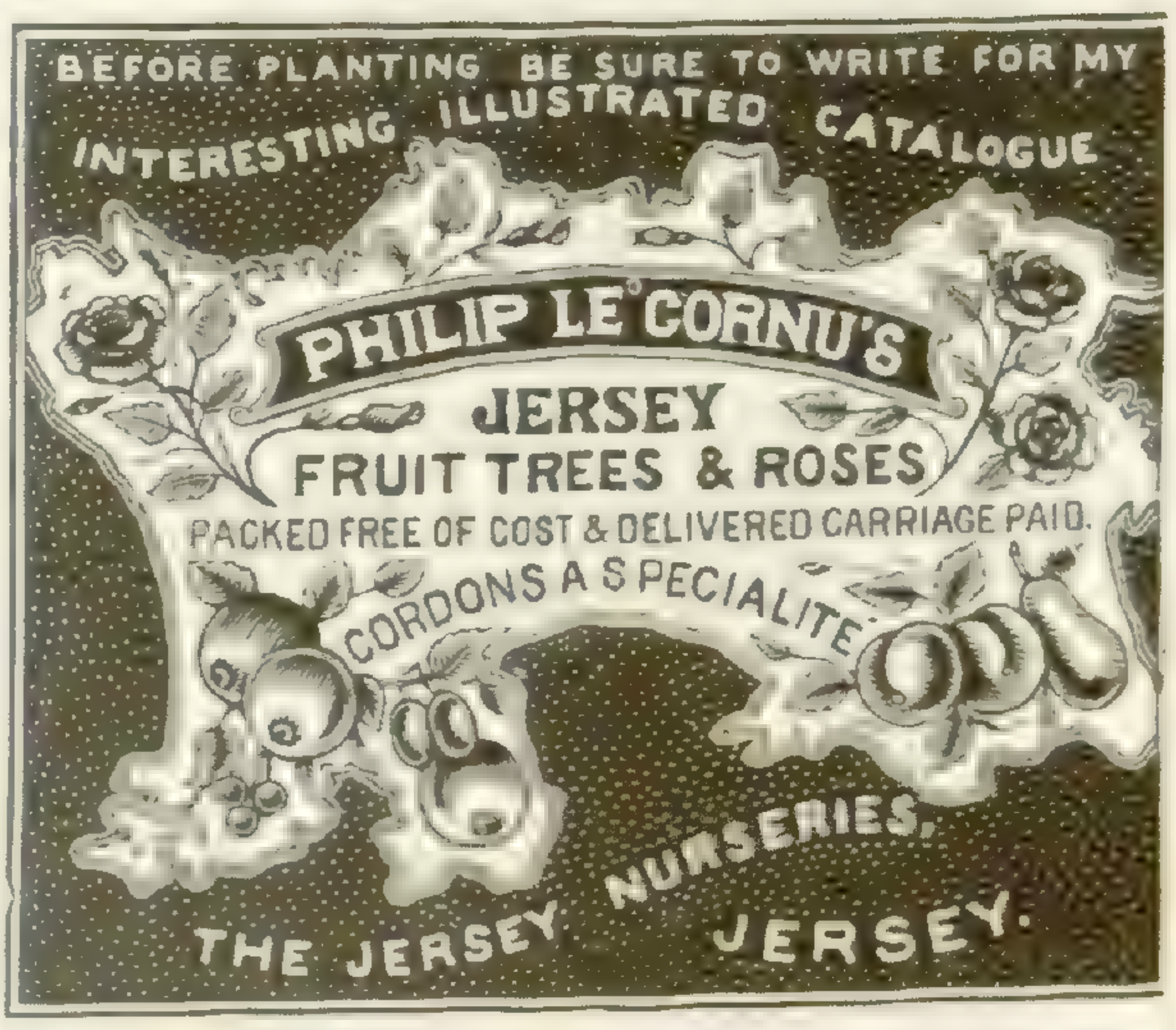
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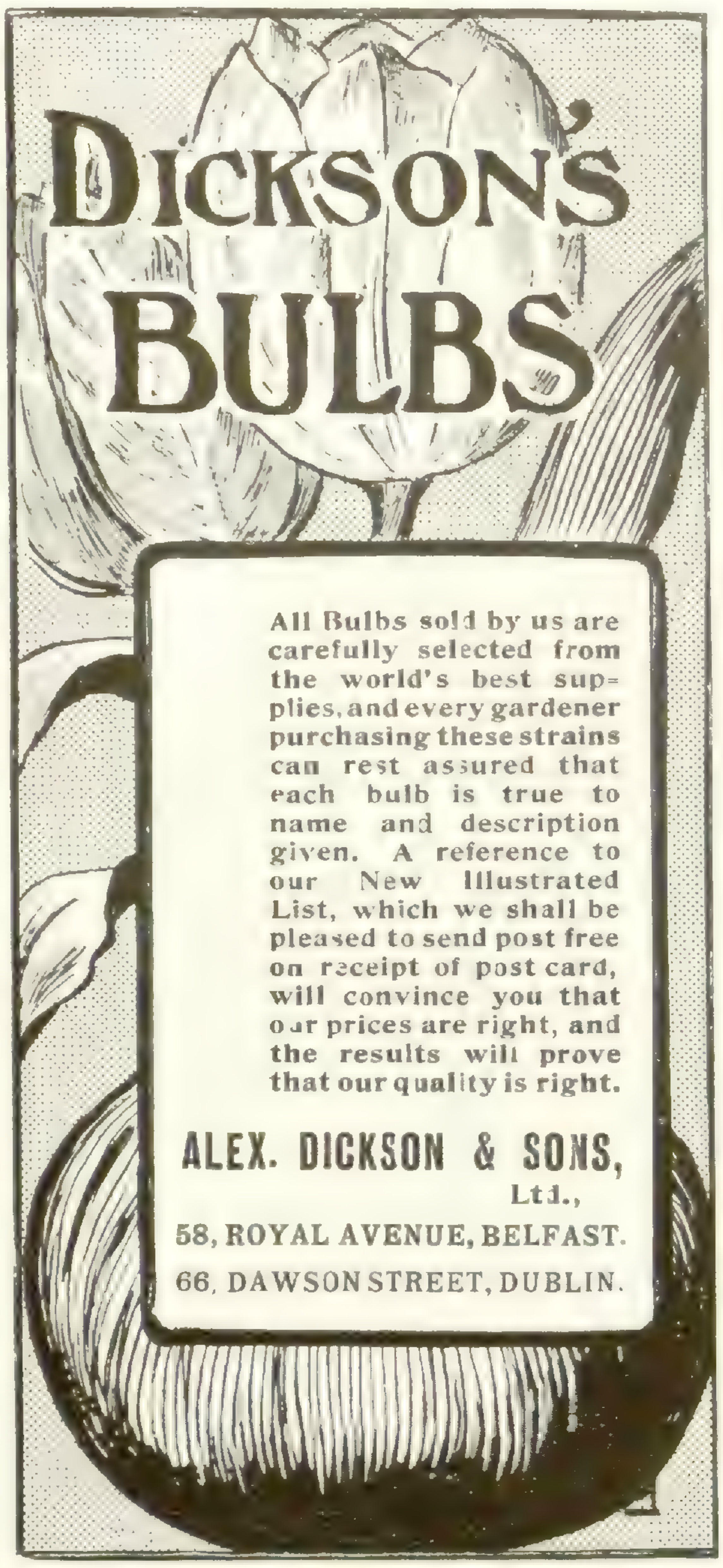

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Royal Nurseries,
CIRENCESTER

VOL. LI.—No. 2,866. SATURDAY, OCTOBER 3, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Vegetable Poisons.

So much interest has recently been evoked by Sir E. Ray Lankester's remarks on the Poison Ivy (Rhus Toxicodendron) and other poisonous plants, that a word or two on the subject generally cannot be out of place. As has been pointed out, the susceptibility to some of these subtle poisons varies greatly in different individuals. Some may handle such plants as the one in question and Primula obconica, or other toxic plant on a larger scale, with impunity, while others suffer seriously, [illegible] maybe, by too close approach. What the difference is in the human constitution which determines such immunity or susceptibility is quite unknown, as it is in the not rare cases where honey cannot be eaten without serious toxic effects, independently apparently of the flowers which yield it. The production of most vegetable poisons we must probably regard as a means of self-defence on the part of the plants concerned. The stinging hairs and toxic juices must be admirably adapted to keep a host of foes at bay. There are also many poison drugs, popularly regarded rather as boons than banes, such as quinine, salicin and other tonics, which are really poisons in the sense that only very small quantities can be taken without severe results or even death. These pervade the barks of the trees concerned, and by their bitterness are presumably well adapted to prevent the attacks of boring insects, which are so often fatal to tree life. It is a curious fact that most of the deadly poisons are vegetable: Strychnine, Aconite, Nux Vomica, and Prussic acid may be cited as instances, the last-named, by its pronounced almond-like odour, betraying its presence in the stones of some of our most prized fruits, such as the peach and nectarine. Belladonna or the Deadly Nightshade constitutes another of these curious associations with nutritious foods, not indeed in itself, but as a member of an order which includes the familiar potato, the foliage and berries of which have slightly narcotic qualities. This order, viz., the Solanaceæ, is peculiar in not merely embracing the two plants named, but also Tobacco, which is deadly enough in its concentrated form; the Henbane, the roots of which have sometimes been mistaken for parsnips, with fatal results; the Datura, of which many species are powerfully narcotic; and the Capsicum, which, if not actually poisonous, is intensely irritant; while, on the other hand, it includes the Tomato, the edible Winter Cherry, and physalis, the so-called Cape Gooseberry, also edible. It is very remarkable that seeds of all of these boons and banes might be planted in precisely similar soil, exposed to precisely similar conditions, and yet the little formative cells of each would form such different chemical combinations out of precisely the same ingredients, the innocuous earthly salts and the equally innocuous, or at any rate, inert, carbonic acid of the air. These are absorbed through the roots and the stomata of the foliage, and, on the one hand, transformed into nutritious tubers or luscious fruits, while on the other these harmless constituents are broken up and rearranged to form some of the most virulent poisons known. It is, however, somewhat a mistake to dub these poisons banes, implying deleterious qualities only, since the physician, by careful study of the effects they produce on the human system, has acquired the power in most cases of utilising them in minute doses as curative boons instead. Nearly every poison, if not all, is only fatal if taken in excess. In effects they differ very markedly from each other, affecting different organs in different ways as many diseases do; and thus by studying the effects of the latter, those of the former are brought in to counteract by opposite action, and thus restore a healthy equilibrium. We thus see that an assumed bane may be a boon in disguise, knowledge only being required as to its application. The plant world is exceedingly rich in material for study of this kind, every species contrives to distil its own particular juices, pleasantly aromatic or nauseous, stimulating or narcotic, nourishing or poisonous, sweet or bitter, and so on ad infinitum. In the old herbals we see an immense accumulation of absurdities based on false assumptions in this connection, but in these later days the researches of the chemist and physician have led to deeper and therefore better knowledge, though, as with all study of Nature's wonders, they do but stand upon the threshold.

MR. GEORGE MASSEE, V.M.H., F.L.S.

Mr. George Massee, V.M.H., F.L.S., the celebrated mycologist, is well known by name and by his works to most of our readers. Mr. Massee has for many years been principal assistant (cryptogams) at the Herbarium of the Royal Gardens, Kew, and it has been his duty not only to identify cryptogams, chiefly fungi, and establish new species, but also to work out the life history of the numerous fungi that attack cultivated plants. Mr. Massee's "Text-Book of Plant Diseases caused by Cryptogamic Parasites" is one of the handiest and best on the subject. Since the Royal Gardens, Kew, came under the Board of Agriculture and Fisheries, much of Mr. Massee's work on plant diseases has been published in leaflet form or in the "Journal" of the Board, and by this means information relating to the cause, identity, and cure of many pests of the farm and garden has been widely distributed. Mr. Massee's work is, naturally, not of a showy character, but it is eminently useful and valuable work, and has been recognised as such by the Royal Horticultural Society, which conferred the honour of V.M.H. upon him a couple of years ago. In his younger days the spirit of adventure drew Mr. Massee to many countries, and placed him in many curious and sometimes dangerous positions, and he has a fund of anecdote relative to his travels which, coupled with a keen sense of humour, makes him a splendid companion, especially when he takes the Kew Botany Club for a ramble, or when he goes on tour for a few days in Yorkshire or Essex, with a naturalists' or field club, in search of rare fungi.

The Pleasaunce Gardens, Overstrand.—For some years previous to his death, the late Lord Battersea very generously gave his neighbours and others an opportunity of participating in the enjoyment which the marvellously beautiful gardens of his marine residence at Overstrand are so well able to afford, by opening them to the public on Sunday afternoons during the summer. This generosity has been highly appreciated and taken full advantage of both by residents in, and visitors to, the district of which Cromer is the centre, and some thousands have visited the gardens each year. The generosity shown by the late Lord Battersea has been continued during the past summer by Lady Battersea, who takes the keenest interest in the delightful gardens of the Pleasaunce; and on the Sunday afternoons during July, August, and September, upwards of 8,000 visitors passed through the gates. A charge of threepence is made for admission, and the whole of the amount received is devoted to charitable and other beneficent objects. The amount received this year is about £100, and from it the Gardeners' Royal Benevolent Institution will receive a grant of £5. It is gratifying to learn from Mr. Naylor, her ladyship's head gardener,that not the slightest damage has been done to plant, fruit, or flower by visitors to the gardens on Sunday afternoons.

Wisley School of Horticulture.—The report of H.M. inspector on the Wisley School of Horticulture for the year 1907-08 is highly satisfactory, inasmuch as it shows that the educational work at Wisley is being well carried out. The inspector reports that the course of instruction is designed to cover two years, but as yet only the first year's course is in full operation. The course is extremely well planned, and is carried out by an efficient staff of instructors. The advantage of the well-fitted laboratory, with good equipment for instruction in the sciences bearing on practical horticulture is pointed out, and it is mentioned with satisfaction that "The laboratory is under the charge of a well-qualified and skilled instructor, and the students receive a very thorough training in the scientific side of their craft." With reference to the practical side, the report states that the students appear to have an unique opportunity of acquiring a knowledge of the cultivation of all the plants that they are likely to meet with in the course of their employment.

John Laing and Sons, Lim.—This company has been formed for the purpose of acquiring the business of Messrs. John Laing and Sons, at Forest Hill, which was purchased some time ago by Mr. William Henry Russell, of Haverstock Hill, and is now carried on by him under that name. The prospectus is now before us, and from this we learn that the capital is fixed at £5,000 in £1 shares, and that the purchase price to be paid to Mr. W. H. Russell, who is the vendor and promoter of the company, has been fixed at a sum of £4,000, payable as to £3,000 in cash and as to £1,000 in fully-paid ordinary shares of the company of £1 each. The leases, stock, etc., mentioned in the contract of sale have, it is stated, been valued by Messrs. Protheroe and Morris as a going concern at £2,906 13s., but no information is given in the prospectus with respect to the area of the nurseries, the length of time the leases have to run, or the value of the stock, points of primary importance to the intending investor. The goodwill is valued by the vendor at £1,093 7s., and that amount of the purchase price will be paid in respect of the goodwill. This appears to us a very liberal estimate of the value of the goodwill, seeing that, according to the prospectus, "the business has for some years been neglected, and allowed to fall off, and, since 1902, it has practically made no profit."

Festivities at the Lowfield Nurseries.—On Saturday, the 26th ult., Messrs. J. Cheal and Sons entertained their employees, with their wives and families, to celebrate the recent marriage of the second daughter of Mr. and Mrs. J. Cheal with Mr. E. Wright, of Manchester. The guests numbered about 250, and having received a hearty welcome from the members of the firm, proceeded to take part in the cricket match, or to explore the nurseries, the great display of dahlias proving highly attractive. At the close of the match the company adjourned to a large marquee, where a substantial tea was served. This function was followed by a tug of war, and in the evening there was a lantern entertainment in the marquee. On the party reassembling for the entertainment, Mr. J. Cheal, in the course of a short speech, referred to the pleasure the firm had in meeting their employees in social intercourse. Mr. Alex. Cheal spoke in similar terms, and Mr. E. Wright thanked the employees for the handsome present they had made Mrs. Wright. Mr. C. W. Chantler and other of the leading members of the staff made brief speeches appropriate to the occasion.

The Public Parks and Gardens of the United Kingdom form a very interesting feature of our national horticultural life, and as the editor of the "Gardening Year Book" for 1909 is anxious to record the correct title and area of these parks and open spaces, he will be very greatly obliged if the superintendents will send him these particulars, as well as their own name and address. Secretaries of horticultural and gardening societies are also requested to furnish him with particulars of their societies, with dates of exhibitions, etc. The information should be sent as early as possible to the Editor, "Gardening Year Book," 148 and 149, Aldersgate Street, E.C.

American Gooseberry Mildew in Kent.—At the monthly meeting of the Maidstone Farmers' Club it was reported that the American gooseberry mildew had now made its appearance in practically every part of Kent where gooseberries are grown in any quantity. One member, who resides in the neighbourhood of Maidstone, stated that he had been obliged to destroy as many as 45,000 trees, and he regarded the outlook of the gooseberry industry in Kent as very gloomy. It was the opinion of the majority of the members that nothing short of the destruction of the affected trees could stamp out the disease. The club passed the following resolution: "That this meeting regrets the inaction of the Board of Agriculture in the earlier stages of the American gooseberry mildew, when the disease might have been stamped out, and urges upon the Government the crying need of a properly qualified department to deal only with fruit culture, upon the lines laid down by the Departmental Committee of 1905."

Damson Crop in Shropshire.—The Market Drayton, Shropshire, damson market was held on the 23rd ult., and for the second successive year, the local crops were so large that fully 100 tons of fruit were sold in the open streets. The price ranged from 4s. 6d. to 5s. 6d. per pot of 90lb., and the greater proportion was consigned to the principal Lancashire and Yorkshire centres, and the Potteries.

The Potato Crop continues in a satisfactory condition, notwithstanding the wet weather experienced during the month of September. Disease has made its appearance in many districts, but, owing to the low temperature that obtained, it has not spread sufficiently to do serious damage, excepting in a few instances. As the late-keeping varieties have practically completed their growth and are in capital condition for lifting, we strongly advise their being taken up and clamped or otherwise stored with as little delay as possible. In some cases a slight increase in bulk might be obtained by leaving them in the ground a little longer, but there will be a risk of loss from disease and a considerable deterioration in quality, more especially in the case of crops on heavy soils.

Mr. H. Hemsley, the author of "Rock and Alpine Gardening," who has for many years been with Messrs. J. Cheal and Sons, Crawley, has now commenced a business of his own, at Crawley, as nurseryman and seedsman. He purposes to make a special feature of Rock and Alpine Gardening, and the laying out of grounds and gardens.

The Dahlia Difficulty. — The beauty and usefulness of the dahlia seems to be in very great danger of being overlooked, chiefly because of the consistency with which raisers strive after exhibition blooms rather than garden plants. If proof of the possibility of this danger is needed, it can be found in the lack of general interest in dahlia exhibitions and the want of widespread enthusiasm for the flower as a class. More dahlias of use for garden decoration are needed, especially among cactus varieties, and we feel sure that a thorough trial of these latter, in some place where it could be readily inspected, would be of immense value to those engaged in the dahlia trade. Could not the National Dahlia Society and the London Dahlia Union combine to conduct such a trial in the London district? "The Times," in an article on "Florists' Flowers," recently pointed out that "the public taste in flowers would be far better and less fickle than it is, if it considered not the flower alone, but the flower in its relation to the plant that bears it." In a large measure this is correct, but if the flower-loving public had an opportunity of determining the relative merits of the varieties for garden decoration, as such a trial would afford, it would soon leave exhibition varieties to competitors and [illegible] those of real garden value.

LILIUM UMBELLATUM.

Originally introduced from Siberia, and named Lilium davuricum, this lily is now generally cultivated in gardens under the name of Lilium umbellatum. This name is clearly derived from the form assumed by the flowers, which usually crowd the stems in the form of an umbel, though not always approximating to the best type of its inflorescence.

Lilium umbellatum is a common lily, robust in growth, free in flowering, and, if it does not approach in beauty the more chaste forms, the fact of being so readily amenable to cultivation in gardens gives it a strong claim to recognition. By judicious planting it is always possible to so [illegible] it that the showy flowers will impart to the less important parts of the garden a spirit of cheerfulness, especially where there are heavy masses of foliage subjects.

The question of soil, which to so many of the best lilies is of much importance, is a matter of extreme indifference to these vigorous subjects. I may instance such [illegible] soils as peat and chalk, in which they not only grow with marked freedom, but in which they increase in a most surprising manner. The plants obtained from a small parcel of bulbs which I had four years ago are now a perfect thicket of [illegible]. The original bulbs of Incomparable—which well merits the name—is this year producing stems fully 4½ft. in height, and crowned by what may be fittingly described as myriads of blossoms. Crowding around the parents are the baby bulbs, which, in many instances, already bear [illegible] developed heads of flower.

The depth to plant these lilies may not always be regarded as of primary importance, yet I find that shallow-planted bulbs have neither the vigour in stem nor yield the flowers with the same freedom as bulbs which are planted a good 6in. deep. This lily develops, under deep planting, a perfect system of basal roots, and to this fact I attribute its marvellous powers of life and its capacity for contesting the ground with the hungry roots of shrubs, for it is evident that these roots will always tap moisture in the lower strata of soil, even in periods of extreme drought.

Lilium umbellatum succeeds either in full sun or in positions not too densely shaded. It is very effective when liberally planted in informal groups among shrubs, to which it makes an effective and pleasing contrast, the strong colouring of some varieties being effectively toned down by the dull foliage of evergreens. This lily may be planted any time after the stems begin to ripen until spring. September is an ideal season for the work, as the bulbs have then every chance of becoming established, and consequently cannot fail to bloom well the following year, the flower-season being from the middle of June till the second week in July.

Varieties of L. umbellatum are numerous, though some are not very distinct; the best is unquestionably Incomparable, which has rich deep crimson flowers, the segments forming a neat goblet-shaped blossom. Grandiflora is second in vigour, the stems are scarcely so tall, the flowers more open and coloured orange-scarlet, with irregular splashes of a deeper colour. Maculatum is similar in colour to the last-named, having small black spots freely scattered along each segment. Erectum is also orange-scarlet, with large blotches of a deeper colour marking the petals. Sappho has light orange-yellow flowers tipped with red. Cloth of Gold, rich yellow, and aurantiaca, orange-yellow, are both hybrid lilies from Umbellatum; in these the colouring is more refined, the stems more flexible, and their general character more elegant than in the forms of Umbellatum already named.

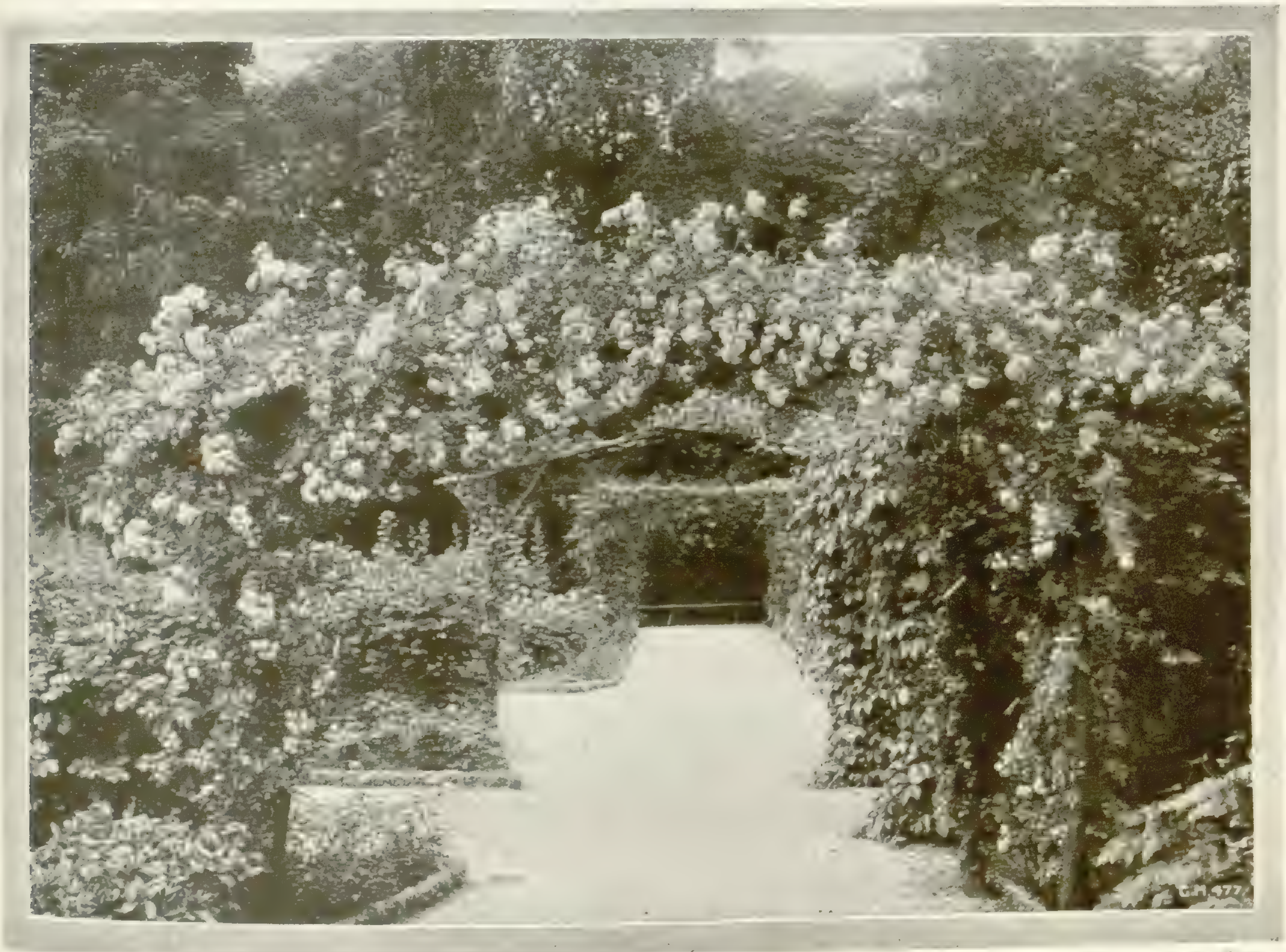
Thomas Smith.

Walmsgate Gardens, Louth, Lincs.

DOROTHY PERKINS ROSE.

This fine rose is unquestionably one of the very finest of our rambling varieties, and it makes a fine companion for such splendid roses as Crimson Rambler and the newer single Hiawatha. I have seen Dorothy Perkins used in a variety of ways, and while it is extremely beautiful when grown up a stout oak post, so as to provide a very fountain of beauty and fragrance, I fancy it is never seen to better advantage than when it adorns a rustic arch. Its merits as a pot plant we all know full well, but the fullest freedom of growth and bloom are only to be seen when, planted in good soil, a plant or plants takes possession of an arch, as in the case of the example shown in the accompanying illustration. Ravenscourt Park, Hammersmith, is not considered an ideal rose district, for it is within the Metropolitan area, but there are many good gardens in the district, and Mr. Gingell, the superintendent of Ravenscourt Park, always provides an excellent display. As a town rose Dorothy Perkins has unquestionably strong claims to attention from owners of gardens large enough to afford room for roses.

K.

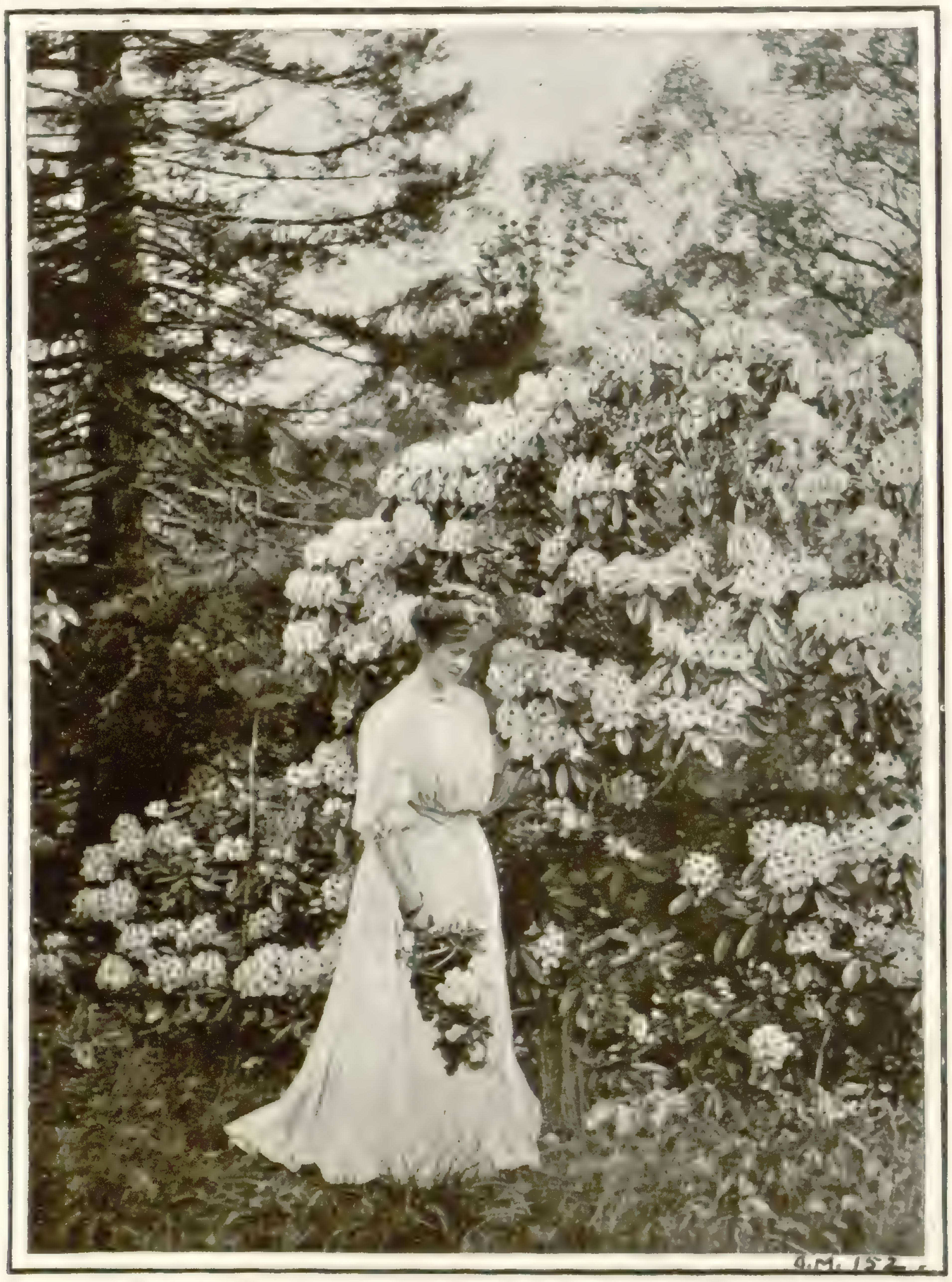


[Photo: H. N. King.

FINE ARCH OF DOROTHY PERKINS ROSE IN RAVENSCOURT PARK, HAMMERSMITH.

RHODODENDRON ARBOREUM AND ITS VARIETIES.

The example of Rhododendron picturatum, herewith so admirably illustrated, represents a group of rhododendrons which are rarely, if ever, seen in perfection in gardens north of London, except it be in a few favoured localities, such as the West coast of Scotland, where the climatic conditions are very similar to those of Cornwall, though it is, perhaps, the commonest type of the genus grown in the south-west counties of England, Ireland, and Wales. This group is composed of a very large assortment of varieties and hybrids, all of which bear more or less resemblance to R. arboreum, which may be cited as the type of this particular group. R. arboreum is a Himalayan species, and thrives excellently in Cornwall, growing to a height of between 30 and 40ft., with tree-like trunks a foot or more in diameter. The best type of R. arboreum bears dense, shapely trusses of blood-red flowers, but there are numerous varieties found wild, with white and pink blooms. These particular forms have been crossed and the various coloured varieties now in cultivation are the result. Very fine examples of R. arboreum and varieties in Cornish gardens are to be found at Tregothnan, Carclew, Penjerrick, Tremough, etc. The last-named garden has long been famous for its rhododendrons, its owner Mr. Shilson being specially interested in the genus. W.



[Photo: Miss S. M. Wallace.

RHODODENDRON PICTURATUM IN AN IRISH GARDEN.

NOTES FROM KEW.

◆

Erica ciliaris var. Mawiana.

This is possibly the choicest of the autumn-flowering heaths, and, although now stocked in quantity by some nurserymen, it has only been during the last five years or so that large numbers of it could be purchased. It is a strong-growing and very free-flowering variety of the European E. ciliaris, and, like that species, it is extremely hairy. E. ciliaris is found in some parts of Britain, notably in the south-west counties, whilst it is common in many parts of the Continent. The variety has a local distribution, and occurs in Portugal. It differs from the species in its denser and more upright mode of growth, more luxuriant leafage, and denser heads of large red flowers. The flowers individually are larger than those of any other hardy heath, and are peculiar by reason of the inflated corolla. The first blooms open during late July, and throughout August a very fine effect is produced. These terminal heads of flowers die, and after about a fortnight with few flowers, a second lot appear from secondary shoots which last in good condition until well on into October. Like other ericas, this is seen at its best when planted in large masses, either alone or associated with E. ciliaris. It may also be used with the white form of E. vagans, and in this way is very effective.

Ulex Galli.

The French gorse, as this species is commonly called, is one of the most effective of our British plants during September, and many a hillside and common is made gay with its rich golden blossoms intermixed with ling and heather. It differs from the other species of gorse by reason of its dwarf, compact habit. Very often it is confused with U. nanus, which, however, is very different, being looser in habit, with softer and less ferocious spines than the French gorse, whilst it is less free in blooming and the flowers are smaller. U. Galli may be distinguished by its dense habit, forming, as it does, dense cushion-like masses a foot or so high with stout, strong spines. At the flowering period the blossoms are borne with such profusion as to almost hide the spines, giving each plant the appearance of a golden globe. Although usually seen in a wild state, it is a subject that might well be introduced into the wilder parts of park or garden, and in conjunction with its natural companions, heather and ling, very effective pictures could be formed.

Nymphæa stellata.

For the past two or three months a fine example of this blue water-lily has been flowering finely in the water-lily pond in the arboretum at Kew, it rarely being without two or three flowers open, whilst on sunny days upwards of half-a-dozen have sometimes been developed at once. N. stellata is a native of tropical Africa and Asia, and is usually grown indoors, though several records have been made of its blooming out-of-doors; in fact, Mr. Hudson, of Gunnersbury House Gardens, has grown it in the open for part of the year for a long while. In the position where it is flowering at Kew it has one great advantage, that being, that the water in its immediate vicinity is slightly warmed, for near by a pipe, carrying waste warm water from the pumping engines enters the pond. That it is quite at home in this position is evidenced by its large, healthy foliage, and large rich-coloured flowers which are thrown up well above the water on strong stalks. The plant was started indoors and placed out in May, the leaves then being about three inches across. A couple of specimens of N. lotus devoniensis have been tried in the same position, and these have also answered well.

Cotoneaster horizontalis.

Of the dwarf-growing cotoneasters this is one of the most beautiful, as it is of distinctly ornamental appearance when in leaf only, whilst it is very attractive in autumn when covered with its bright scarlet berries, and doubly so when the leaves have taken on the orange and scarlet shades previous to falling. As a flowering plant it cannot be recommended, for although it blossoms profusely, the flowers are poor and never open widely, as those of many other sorts. When grown in the open ground it rarely exceeds 1½ or 2 ft. in height, spreading out horizontally to some considerable distance. Planted against a wall it behaves in a rather peculiar manner, for it grows up the wall to a height of 8 or 10ft., and throws out flat branches almost at right angles from the parent stem. It is in this position that the full beauty of the berries is obtained, for they are brought up on a level with the eye, whereas when grown as a low bush they are partly hidden by leaves.

Hibiscus syriacus "Blue Cœleste."

During August and September the hardy hibiscuses make a fine feature in the garden and brighten up many a shrubbery with their purple, white, blue, or parti-coloured flowers. The variety under notice is one of the most distinct of all as regards colour, for the flowers are blue, whereas most of the others are of various shades of purple, red, or white. Like other sorts, it forms an upright bush, and attains a height of from 5 to 7ft. It thrives in ordinary garden soil, likes a sunny position, and may be increased by means of cuttings placed in sandy soil in a warm case in August, by thoroughly ripened wood planted out-of-doors in November, or by grafting on to pieces of root in spring. For the first two or three years growth is slow, but after the plants have attained the height of a foot or so growth is more rapid.

D. K.

REHMANNIA ANGULATA IN THE OPEN.

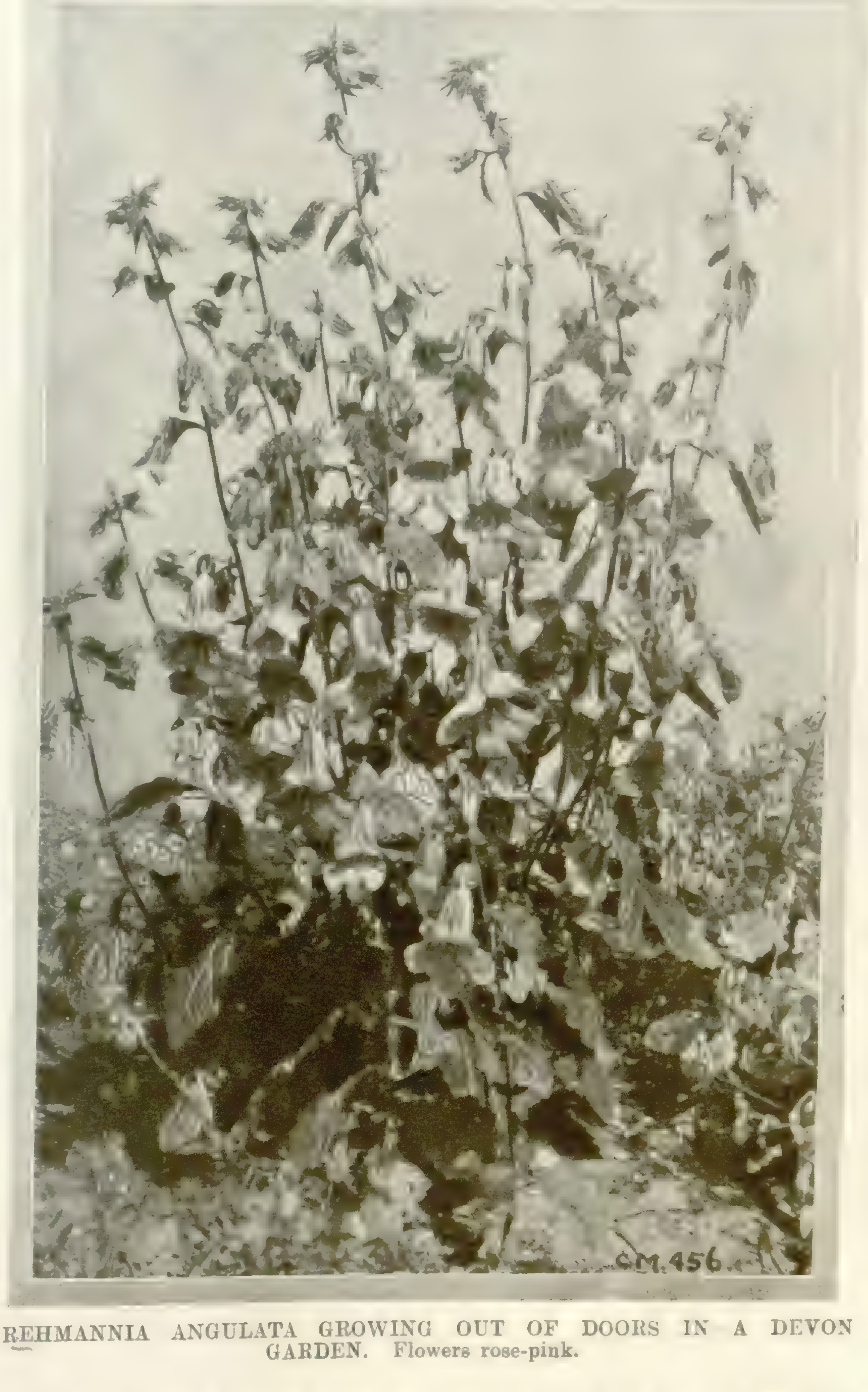
This fine perennial was introduced by Messrs. James Veitch and Sons from Central China a few years ago. In the south-west it proves perfectly hardy, having been uninjured by the two last winters, which were exceptionally severe for that district, though entirely unprotected. The specimen shown in the illustration was well over 3ft. in height, and was covered with flower for many weeks, being a most attractive object in the border. This year, although alive and flowering, it is not so fine, and it is probably advisable to raise plants from seed every year and to plant the seedlings in the open in the spring in order to obtain the best effect, as the old plants appear to decrease in vigour with age. A fine variety of this plant, named Pink Perfection, has been raised by Messrs. Robert Veitch and Son, of Exeter, the colour of which is clearer and more pleasing than that of the type. The large blossoms are of a bright pink tint, and have a distinct pale throat, heavily mottled with crimson-maroon. The spikes are often from 4ft. to 5ft. in height, and it is a notable improvement on the type.

As regards its cultivation, seed should be sown in July or August for flowering the following year, and the seedlings, as soon as they are large enough to handle, should be pricked out of the seed-pan and transferred to 2½in. pots in a compost of one part leaf-mould, two parts loam, and sufficient silver sand to render it porous. The plants should be grown in a frame close to the glass, plenty of air being given them to ensure sturdy growth. When they are thoroughly established they may be shifted into 5in. pots, with a little cow manure introduced into the compost, and in these they will flower well. Should, however, extra large specimens be desired they may be given another shift into 8in. or 9in. pots. This should be done at the beginning of the year. Weak liquid manure given from the time they are established will add appreciably to their vigour.

The plants increase rapidly by offsets, which are often thrown up at some distance from the main clump. It is very useful for the conservatory, where a group will form a very striking and distinct feature with its large bignonia-like flowers. It is of the easiest possible culture, and can be grown well by any amateur.

S. W. Fitzherbert.

Primula Kewensis. — Plants from seed sown in spring are coming into flower, and a few of the stronger ones may be potted on, removing all the flower buds until they are established in the new soil. Help the remainder with weak liquid manure, and give them a light position in the house at all times.—T. B. Field.



REHMANNIA ANGULATA GROWING OUT OF DOORS IN A DEVON GARDEN. Flowers rose-pink.

COLCHICUM BORNMUELLERI.

The variety of the meadow saffrons awaiting the cultivator of such flowers is now much greater than formerly, and the acquisitions of comparatively recent years have added much to the delights given by these flowers in autumn time, even if some have too much of that aggressive purple hue obnoxious to a number of people.

These recent acquisitions, combined with the cheapening of such fine colchicums as C. speciosum, have rather cast into the shade the single varieties of our common meadow saffron, Colchicum autumnale, but they have otherwise increased the store of good things available for our gardens, and, as they are such fine plants in themselves, they are worth securing, even if the price is rather heavier than we care for.

One of the finest of the newer meadow saffrons is C. Bornmuelleri, which differs much from C. speciosum, and is one of the finest of the larger forms. It comes a light lilac, almost white, but gradually passes into a deeper lilac, with a broad white centre, which gives it a good appearance when fully open in the sun. It has flowers of considerable substance, and these thus last longer in perfection than those of some of the other meadow saffrons. The leaves, which do not appear until spring, are bold and veratrum-like in their size and contour.

Like the others of the genus, as a whole, this meadow saffron prefers a strong and rather heavy soil, with a fair amount of moisture, but these are not essential, and it will thrive in any ordinary border or in the grass. Planting should be effected as early as the corms can be secured from the bulb dealers, and the crown should be from four to five, or even six, inches beneath the surface of the soil.

S. Arnott.

There is no better guide to the kitchen garden than Vegetables and Their Cultivation, by T. W. Sanders. It is a complete treatise on the general management of the garden, and the successful culture of vegetables saladings, and herbs for home use. Price 5s. net, by post, in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NATURALLY-GROWN BULBS.

The naturalisation of bulbous and kindred plants in shrubberies, under trees, and amongst the grass in the wilder parts of gardens, parks, and woodlands, forms one of the most pleasing features of modern gardening, and in many instances the judicious introduction of these charming subjects has effectively changed uninviting and uninteresting spots into fairy lands of beauty. At the present time a great many more bulbous plants of various kinds are used for grass-land than for formal beds, and they are infinitely more lovely sprinkled about haphazard amongst grass, than when huddled together in a round or oblong group, as sometimes happens.

Some bulbous plants, of course, are much better suited for naturalisation than others, and with some reservations, species, or good botanical varieties are better than highly-bred garden forms. For instance, several species of tulip may be used effectively, but it is of no use to attempt the many garden varieties. Hyacinths, represented by ordinary garden varieties, are of little value, whilst few sights are more charming than our common wild hyacinth. Many varieties of narcissi, on the other hand, naturalise splendidly, and continue to improve year after year, showing fewer signs of deterioration than those which are grown in beds and lifted annually.

AN EXCELLENT EXAMPLE OF TRUMPET DAFFODILS NATURALISING IN THE GRASS AT KEW.

Some consideration also must be paid to colour for different situations; for instance, reds look out of place in dark places, whilst yellows, whites, and blues can be accommodated almost anywhere. On the other hand, a few small patches, or single examples of a good red tulip are very effective in open grass-land. Then, too, to be successful, one must know whether a particular subject will continue to grow year after year amongst thick turf, for there are some subjects which last but one or two years when placed amongst thick or close turf, but grow luxuriantly in places where the grass is thin.

To obtain good results from bulbs grown in a wild or semi-wild state it is necessary to exercise great judgment in planting, for many an effort has been entirely spoilt by untasteful distribution of the plants. It is very difficult to get some men into the way of distributing the plants in a natural manner. Some have a leaning to perfect squares, others form irregular-shaped patches of unbroken outline, whilst the height of others' ambition is true circles. Anything like formality must be avoided, and wherever a large group is placed it should be of irregular outline, and carried away into the surrounding grass by means of smaller groups, with here and there single bulbs or small patches of two or three. In forming large masses it is a mistake to distribute the bulbs evenly, for they look much better if half-a-dozen or so are placed thickly together, then a few odd ones, and another or larger patch, and so on, with here and there a small space left for bare grass. A very good plan to adopt is to sow the bulbs on the ground, placing both main groups and outriders in position before any are planted. A glance at the bulbs as they lie on the ground will give an idea of the floral effect the following spring, and if any formality appears it can be rectified before it is too late. The planter will then follow on, taking care to plant each bulb where it lies. In planting, one of two methods must be adopted. In one case holes three inches deep may be made with a crowbar, into each of which a bulb can be dropped, after which the holes are filled with good soil. The other plan is the better one, especially where the ground is hard. This is to remove large or small irregular patches of turf, dig up the soil beneath, plant the bulbs, and replace the turf. Foresight must be used with regard to positions, for it must be remembered that although most bulbous plants are very beautiful when in blossom they become rather an eyesore before the leaves are ripe enough to remove, a period, in the case of most narcissi, which is little if any, before the end of June. From this it will be seen that it is not wise to place bulbs indiscriminately on lawns, for most people like to see their lawns close cut. Crocuses can be mown over a month or five weeks earlier than narcissi, consequently they are more appropriate for positions where the grass must be cut early. If planted in fairly good soil bulbs do not readily deteriorate, in fact they usually improve in quantity and vigour for many years.

It is not advisable for amateur planters to try rare or new kinds of bulbs for this work, for if this is done a very great deal of money will have to be expended for a comparatively small display. Old, well-tried varieties, that can be purchased at a few shillings a hundred, are quite as lovely as those which are priced at as many shillings or pounds each, whilst by taking care of old bulbs that have been forced an inexpensive start can be made.

For broad effects there is nothing to equal narcissi, and all are beautiful, from the tiny species minor and its varieties, which open very early in the year, to the common double daffodil, which makes many a wood and park beautiful with its rich golden blossoms during March, and later on to hosts of yellow, cream, and white varieties, some of which last into May. Particularly effective are such standard varieties as Emperor, Empress, Barri conspicuus, Stella, Sir Watkin, Burbidgei, Horsfieldi, and poeticus. The jonquil and campernel are also very lovely, but in dense grass they do not last many years in good condition.

A pretty effect is made in some places with Tulipa sylvestris, a yellow-flowered, somewhat rare British species. It likes light, warm soil, and thin grass, or bare ground beneath shrubs. It blossoms in May.

Among blues we have, during February and March, the pretty, tiny-growing Chionodoxas. Although they deteriorate in dense grass they thrive admirably in places where the grass is thin, beneath trees, etc., and are excellent for carpeting shrubberies and beds. In the latter positions they increase very fast, and may be thinned out every few years. They possess the advantage of losing their leaves quickly after the fall of the flowers. The best are C. Luciliæ, and varieties gigantea and sardensis. The wild hyacinths, or bluebells, are a never-ending source of pleasure to sightseers during May, and they have the advantage of thriving well under the shade of trees; in fact, that is their best place. The Spanish squill, Scilla hispanica, has larger flowers than our common bluebell, and is worth planting extensively. There are varieties with pink and white flowers. A plant far too seldom seen naturalised is Muscari conicum, known under the name of Heavenly Blue. It thrives well, and increases fast in shrubberies, and would doubtless do the same beneath trees.

Crocuses, yellows, whites, and blues, are all excellent for planting amongst grass. They are specially attractive when planted on rising ground, mounds beneath trees for instance, and even in poor sandy ground which is continually trodden during summer, they continue to thrive and increase almost indefinitely. They have the advantage of being cheap, and the leaves die off fairly early. Whether each colour is placed in a separate group or an indiscriminate mixture is made, the effect is equally charming.

Snowdrops are less adapted for planting in dense grass than crocuses, and frequently die out after two or three years. They, however, succeed well in places where the grass is thin, and increase rapidly beneath the shade of trees. For carpeting shrubberies they are also well fitted, and may be procured in large quantities at a cheap rate.

Although not frequently used, the Snake's-head Fritillary, Fritillaria meleagris, looks charming amongst grass. The bell-shaped, speckled flowers having an uncommon appearance.

Among plants other than bulbous there are several which are well worth attention. The winter aconite, for instance, always attracts attention in February when covered with large yellow, buttercup-like flowers, and it thrives excellently as an undergrowth for shrubberies. It rarely exceeds four or five inches in height, and dies down in early May. It possesses a thick, fleshy rhizome, which may be broken up when planting, as each little piece will grow. In the milder and moist counties Cyclamen coum is naturalised in lawns, and when in flower the myriads of rosy-pink flowers are very attractive. Dwarf anemones, such as blanda, nemorosa, and apennina, form excellent subjects for positions beneath trees where the grass is thin, whilst Anemone pulsatilla provides a beautiful spectacle when carpeting a thin shrubbery.

Although there are many more subjects that may be called into requisition, those mentioned will be sufficient to serve as a guide for intending planters.

Kew. W. Dallimore.

BLUEBELLS IN KNOWLE WOODS, KIMBERLEY, NOTTS. [Photo: A. W. Smith.

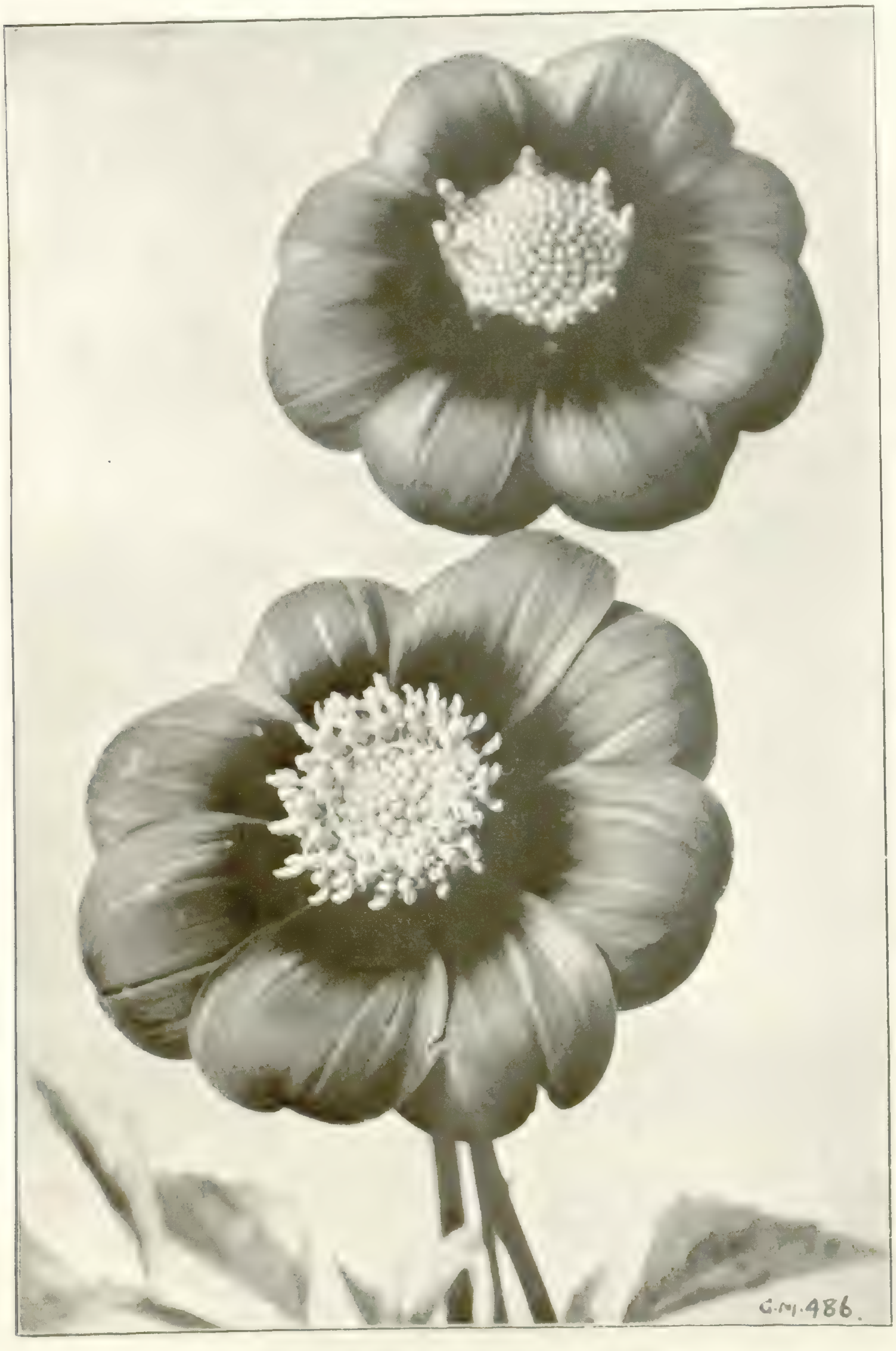
The woods are several acres in extent, and in due season they are carpeted with a mass of beautiful large bluebells, many of the spikes being 3ft. long. The woods are upon Mr. Holden's estate, Nuttall Temple, Notts, and they are visited by large numbers of people who travel long distances to enjoy the lovely bluebell display.

FRUIT TREES UNDER ADVERSE CONDITIONS.

The spring and summer have been fairly favourable for fruit crops generally, as the absence of excessive cold enabled the trees to set a good crop of fruit, and the warmth and showers have fostered its development. I have met instances, however, where fruit trees and bushes have suffered from dryness at the roots through a too porous soil, and others where the trees have been badly treated and their wants not attended to owing to an insufficient knowledge of their requirements, or an insufficiency of labour for supplying them.

A case in point was met with in a garden with a rather heavy loamy soil, situated at the foot of a hill, and having ample means for drainage. Here pyramidal fruit trees, on crab stocks, were growing in the borders alongside the walks in the vegetable quarters. The trees had been planted too close to the edge of the walk, and now they have to be pruned hard back to prevent them blocking the passage. This crude repressive measure gives the balance in favour of the roots, and the result is excessive branch growth. Pinching and summer pruning in all their forms have been practised upon the trees, and various methods condemned because crops of fruit did not follow the processes. As will be readily understood by the experienced fruit grower, the operations were performed at the wrong end of the trees. The buds of the early pinched shoots burst forth, and the resulting growth progressed with so much vigour as to convert the trees into dense masses of foliage and strong succulent shoots, and there was no possibility of light and air being able to play among the branches. Under such conditions the trees could not mature their wood, and fruit buds could not be formed.

The first mistake in the management was in the selection of trees on the crab stock when the area they had to grow in was limited; the second was in planting them within four feet of the edge of the walk; the third in not periodically root pruning them; the fourth in applying a dressing of farmyard manure annually; and the fifth in digging the ground occupied by their roots. This last mistake destroyed all the most valuable roots for producing fruit, and compelled the trees to seek their food in the subsoil. In this stratum the plant food was crude, excepting the nitrogenous compounds washed down from the surface layer. The sun's beneficial influence would also be felt less in this medium than in the surface soil. A crop of fruit on trees growing in such ungenial soil, and treated in this irrational manner, would, indeed, have been a surprise to any enlightened and up-to-date fruit grower.



NEW SINGLE DAHLIA BETTY.

This is a finely formed new single dahlia, shown by Messrs. Joseph Cheal and Sons, Crawley. Rosy-mauve, with crimson shading round the disk. F.C.C., N.D.S., September 3; A.M., R.H.S., September 15. (See pp. 714, 738.)

An example of failure of a fruit crop due to other causes than those referred to, came under my notice recently, and may also be mentioned as illustrating the many things that have to be considered in planting fruit trees and bushes, and the best conditions for producing an annual crop of fruit. In this case the soil was deficient in lime, phosphates, and potash, and no matter what root and branch pruning was done, no fruits made their appearance. This perplexed the grower—a keen and able gardener in other things—and induced him to consult an expert. On learning the deficiencies in the composition of the soil for fruit growing, he worked round the roots of a few of his trees one autumn with a liberal supply of finely-ground bonemeal, and topdressed with lime and sulphate of potash. The following summer attention was given to the early pinching of a number of shoots, so that by autumn those trees were bristling with fruit buds, and the next year (this year) all the trees treated are carrying a heavy yield of what promises to be very fine fruit.

From the foregoing particulars it is very evident that the first step that should be taken by all who wish to make fruit growing a success is to see that the soil contains an ample supply of the necessary constituents of plant food, especially phosphates, lime, and potash, and that the trees are on the stock suited to the purpose for which they are intended. The manipulating of the shoots, and pruning of the roots, are only aids to fruitfulness when rationally performed; but even under the best management in this respect little will avail unless the soil in which they are growing is a rich store of the plant foods most essential to the production of fruit. An excess of nitrogenous manures should be avoided.

The weather is, of course, a potent factor in determining "fruit years," as frosts and cold winds will destroy the blossom, drought will prevent the trees obtaining an ample supply of moisture to enable them to properly develop their various parts, and an absence of sunshine will foster immaturity in the growths. This is generally accompanied by excessive moisture, which favours the same result.

Perhaps Mr. T. H. Slade may have trees similar to some of those referred to in these remarks, as my wall and espalier plants are now showing more than the usual number of fruit-producing buds on the early pinched growths. In fact, King of the Pippins and Cox's Orange Pippin apples are exceptionally fine in this respect this year. I only prune and repress the growths on wall and espalier trained trees. Standards and pyramids are left to grow naturally, and it is only when the weather is bad at the time the blossoms are open that I have any failure of crops.

PEDESTRIAN.

DOG'S TOOTH VIOLETS.

In continuation of my notes on the American erythroniums, which appeared in the GARDENERS' MAGAZINE of the 12th ult., I now give a brief description of other interesting species.

E. albidum is a useful dog's tooth violet which has flowers of a kind of bluish-white or white, produced one on each stem, and having rather long and narrow leaves, which are only occasionally met with mottled. The want of this mottling detracts from the beauty of this Eastern species, which is from six to nine inches high. It requires only the treatment generally indicated.

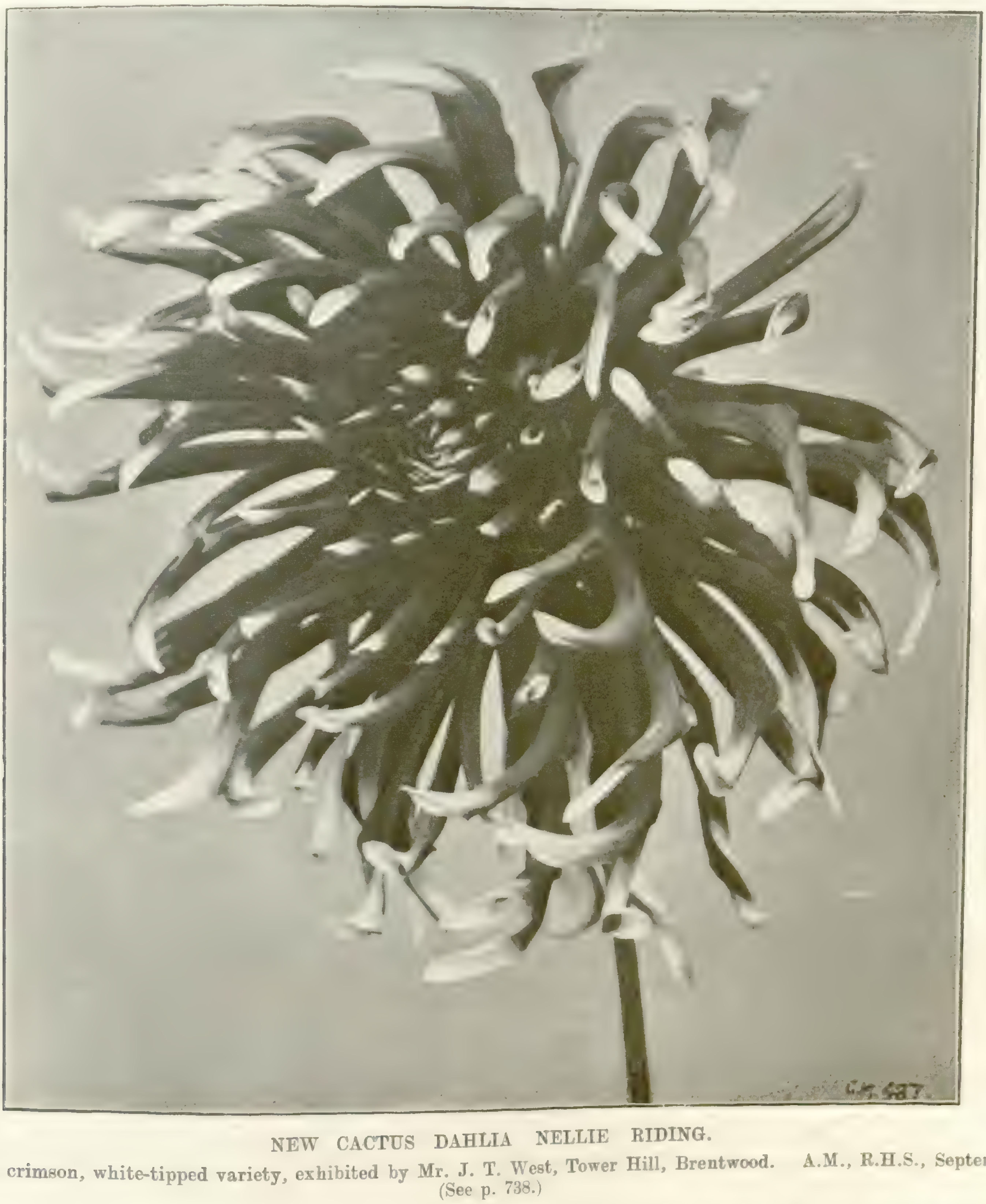
E. citrinum.—Although this is a good species, and its coming from Oregon would almost attest its hardiness, it is rather thin in the substance of its segments for my taste. It has usually three flowers on a scape, these being light yellow, with an orange-colour base, the tips occasionally coming purple.

E. giganteum.—What is understood to be the true E. giganteum is a very beautiful plant, with handsome mottled leaves and creamy-coloured blooms with a reddish band. It is sometimes sold as E. revolutum var. Watsoni, and grows from six to twelve inches high or so.

E. Hartwegi.—This is a pretty dog's tooth violet, with creamy and orange flowers produced in a sessile umbel. Its earliness is in its favour, as it is one of the first to bloom. On the other hand, I have seen its flowers caught by late frosts, and as they are somewhat thin they are not so good as those of some others. The leaves are nicely mottled, a considerable point in favour of this species.

E. Hendersoni.—The colouring of this fine erythronium always appeals to me as giving it a character of much beauty, while I have also found it a good doer. It has pleasing blooms of a fine pale lilac or purple, with a base of deeper purple and yellow, the drooping flowers, on stems six or eight inches long being faintly scented. The dull green leaves are spotted with a kind of purple-brown.

E. Howelli.—This is another good erythronium which is in the market, and which has much to commend it. It bears some resemblance to the preceding species, the flowers being palish pink, with an orange spot at the base, and with white stamens. Some forms of this species come with creamy flowers, passing off to pinkish or purplish.



NEW CACTUS DAHLIA NELLIE RIDING.

A beautiful crimson, white-tipped variety, exhibited by Mr. J. T. West, Tower Hill, Brentwood. A.M., R.H.S., September 15. (See p. 738.)

E. Johnsoni.—One of the most desirable of the genus. E. Johnsoni claims our admiration for its bright salmon-pink flowers, their beauty being enhanced by a yellow centre. As it grows to ten inches high in most gardens it is a most ornamental species, and one which should be widely cultivated.

S. Arnott.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

DENDROBIUM FORMOSUM GIGANTEUM.—There are few orchids more useful than this at the present season of the year, and where there is a demand for flowers during the month of October it should be extensively grown. D. formosum is not always found to grow satisfactorily for successive years after imported, but I think if the plant is treated practically as a stove plant, that is to say, grown suspended in an ordinary stove, and the hard and fast lines of the so-called necessary seasons of growth and resting periods departed from, many of the difficulties would disappear. This, at any rate, is my experience. The plants are annually imported in large quantities, and as they do not belong to the more popular sections of orchids, the imported plants are procurable for a reasonable outlay. I find that if they are removed from their growing quarters immediately the flowers have become expanded, and placed in a cooler and drier atmosphere than that of the stove, there is not so much likelihood of the flowers becoming spotted, and they last longer on the plants, and also when used for cut flower purposes.

VANDA CŒRULEA.—There is no winter-flowering orchid more popular than this blue vanda. Where grown near towns, and in smoky manufacturing districts, unless the plants can be induced to expand their flowers under the favourable atmospheric conditions of September and October they can be rarely induced to display their true colour. A pure, clear atmosphere is essential to the successful flowering of V. cœrulea. It is one of the few orchids which I consider should not be cultivated in districts where fogs are prevalent, for it suffers perhaps more than any other orchid, and if the buds are not entirely destroyed, and the flowers do expand, the latter look washed out, and are worthless. Some of the finest plants I ever saw of this species were grown throughout the year in a Muscat vinery, and the only shade received was from the leaves of the vines. There can be no doubt that where a pure atmosphere is obtained, an intermediate temperature suits the plants. Plants that are at the present time developing their flower scapes should have every encouragement that can be afforded, the more light they receive the better will they develop their colour, but as soon as the flowers have expanded the plants should be shaded, as the colour will quickly bleach out if exposed to strong light.

SOPHRONITIS GRANDIFLORA.—Among the dwarf-growing cool house orchids there is nothing more attractive than this scarlet-flowered species. The plants are at the present season in full growth, and must have every assistance and encouragement to enable them to complete their growth and expand their flowers. Although recognised as a cool house plant, I find that it is benefited if placed in a cool cypripedium house, where the normal temperature is about 55 degrees, but I would not recommend removal from the cool house until the leaves are beginning to open, and the flower bud may then be seen within the leaf. The flowers grow much larger when expanded under warmer conditions. As soon as the flowers have expanded the plants may be placed in the cool house again, where they last a long time in perfection.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

CHRYSANTHEMUMS.—Up to the time of writing the weather is still remarkably fine, mild, and dry, and some of the more backward pot plants may remain outside for the present with perfect safety. The late flowering varieties in particular ought to remain out of doors as long as possible, for bringing them into the comparatively warm atmosphere of the greenhouse or conservatory naturally causes the buds to expand more quickly, while the object is to retard them as much as possible. As long as the weather continues fine, and frost and cold rains remain at a respectful distance, leave such plants outside. Care should be taken to house the plants when the foliage is perfectly dry; they must be ventilated as freely as possible subsequently, and also be watched with the greatest care for some little time. If removed to a close, stuffy atmosphere from the open air a number of the lower leaves will be lost, and the general appearance of the plants be injured, perhaps seriously. Do not crowd the plants—this is a fatal error, particularly when cuttings from them are required. The more space each can be allowed the better. The incurved varieties should be placed where their heads are within a foot or two of the glass, if possible, but in the case of the Japanese varieties this is not of so much consequence. Plants that have been well fed previously should have less liquid manure after being brought inside, and this should be gradually decreased in both strength and frequency until, when the blooms are expanding, they are receiving little or no stimulant.

SALVIA SPLENDENS GRANDIFLORA, and others, should now be put under glass, where they will soon make a bold display. The object of removing them indoors so soon is to avoid soft lateral growth, which is likely to result when they are exposed to the autumn rains and heavy dews. Light feeding should be given if the pots are well filled with roots. Stand them well apart, and give plenty of air. Eupatoriums should be treated in like manner, and no further pinching will be required.

RICHARDIA ÆTHIOPICA.—If wanted to flower at Christmas these should be given a light position in a warm house, but keep a number of the plants in the frames to come on gradually for flowering at Easter. Some of the varieties are perpetual flowering, so that with very little trouble good blooms can be cut all the year round. Plenty of water is necessary, and liberal feeding when the pots are full of roots.

CINERARIAS.—The secret of growing these plants well is to grow them quickly. They want no coddling, but they will not stand neglect, and too much or too little water, carelessness in potting, and the attacks of insect pests, will bring about disastrous results Aphides are the bane of the cineraria at this season, and they should be kept in check by means of fumigation. Do not be in too great a hurry to get the plants into the greenhouse, as the cooler they can be kept the better, as long as frost does not touch them, and abundance of air should be given. I always feel sorry when it becomes necessary, on account of the weather, to remove the plants from the cold frame, where they have grown from the seedling stage, to warmer quarters. They seem to enjoy so thoroughly the conditions of the cold frame. —T. B. Field, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

SUMMER BEDDING.—The brightness of the display is now passing away, or over, so that clearing the beds should be proceeded with, and autumn planting done. If shrubs are to be used for immediate effect, and a number of beds to be filled, it is better to use only one or two sorts in a bed, and all such beds are better not absolutely filled with shrubs, but space should be left between for some of the dwarfer spring bedders or bulbs. Large beds having pyramidal hollies in them might have, as a groundwork, small Berberis aquifolium and wallflowers alternately. Golden privet, with myosotis and scarlet tulips; box, with arabis and daffodils; Retinospora plumosa aurea, with violas and hyacinths, and many other similar arrangements suggest themselves. Beds entirely filled with wallflowers are always appreciated if two or more varieties are used. Clumps of the early doronicums dotted among dark wallflowers are attractive, and tend to break up any evenness of surface. Primroses and daffodils have a natural and pretty effect, but much depends upon the tastes of those concerned; some may still like panels of different colours in each bed, and this can easily be provided by judicious selection. Wallflowers, myosotis, silene, arabis, violas in variety, and primroses may all be used; aubrietias make nice edges or belting to beds, or beds may be entirely carpeted with this, and bulbs in variety allowed to come up through it. Saxifraga umbrosa (London Pride) can be used in same way.

WHERE BULBS ONLY are used for beds the sooner these are planted the better will be the prospect of early and strong flowering, vigorous root action before throwing up flower spikes insuring success. As a rule, the larger the bulbs the deeper they should be planted, though snowdrops are best placed not less than three inches deep, preferably a little more. In all planting I think more pleasing results are obtained from large breadths than small patches.

HERBACEOUS BORDERS must still have attention, and replanting and alterations may soon be commenced. Pæonies re-establish themselves better now than later on, root action being quite active; these should be planted in deeply-dug, well-enriched soil, a liberal application of well-decayed manure being very helpful. Bury the crown of each plant an inch or two below the surface. Aquilegias, doronicums, trollius, Papaver orientale, lupins, and others may all now be attended to. The Michaelmas daisies, some of the heleniums, rudbeckias, helianthus, kniphofias, Anemone japonica, etc., must, of course, wait until their flowering season is past; but where anything has reached a large size and is becoming weak or bare in the centre do not allow another season's growth without lifting, dividing, and replanting.

IN THE ROSE GARDEN all recently-budded plants should be examined, and where necessary ligatures loosened. Briars may be shortened back slightly, but not so as to force the sap into the inserted bud. Where new beds are to be formed, or planting done, these may now be dealt with: give a liberal dressing of well-decayed manure at the bottom of the beds below where the roots will be placed, so that when growth commences the roots will soon find the food and revel in it. Manure should not be placed in direct contact with the roots. Gruss an Teplitz has again given of her abundance, proving her merits to the most favourable consideration for masses of rich colour in autumn.

IN THE ROCK GARDEN remove all old flower stems, seed pods, decaying foliage, weeds, etc., and as the foliage from trees fall guard against any accumulation on or over plants in any of the nooks or recesses. As fern fronds ripen it is generally best to allow them to remain, to afford protection to the crowns during winter.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

GATHERING AND STORING FRUITS.—Every attention must now be given to the gathering and storing of apples and pears. The store room must be clean, sweet, and well ventilated, as the flavour of good apples and pears greatly depends on a sweet atmosphere. It is no uncommon ocurrence to meet with sound, well-preserved fruits late in the spring, but possessing a musty and disagreeable taste that is traceable, in many instances, to a foul atmosphere produced by damp hay, straw, or some such material. We generally gather our choice dessert varieties at intervals, taking a portion of the most forward fruits each time. The fruits are very carefully handled and packed, when perfectly dry, on clean shelves, over which have been placed sheets of clean paper. When the crops are heavy and plentiful, and room scarce, the fruits are placed in suitable sizes two and three layers thick, and when looked over at intervals, any decaying fruit is removed at once without handling or disturbing the good ones. Bruised or damaged fruits are kept apart from the rest, and used up as they are wanted. All very late varieties should be allowed to remain on the trees as long as they are safe, as the fruits will then keep without shrivelling. One of our very best apples for late use is Bramley's Seedling. Old Round Winter Nonsuch, Lane's Prince Albert, and Wellington are likewise excellent kitchen varieties. The best dessert apples with us this season are Cox's Orange Pippin, which has produced heavy crops, the fruits being clean and of good colour from both bushes and espaliers. Kerry Pippin, Worcester Pearmain, and Quarrenden have also borne freely.

NUTS.—As soon as these are in a fit state to gather, "dry and ripe," they should be picked, dried, and stored. Nuts indicate readiness for gathering by the ease with which they part from the twiggy branches, and the outside being of a brownish colour. If placed in a dry, airy position for a few days, and then put into boxes or barrels, and stored in a cool place, not so dry as to cause the kernels to shrivel, they will keep plump and fresh for many weeks. Keep a sharp look-out for vermin, both rats and mice, otherwise much of the crop may be taken in a few nights. This sometimes happens so quickly that most of the crop has been taken without being noticed. Where nuts are appreciated a few bushes might be grown in the place of some other and less profitable crop. When neatly trained, basin-shape, kept properly pruned and attended to, they soon commence to bear fruit. A rather sandy loam, resting on a well-drained subsoil, and not too freely enriched with manure, appears to suit them well.

STRAWBERRIES. — Plants that were raised in July, and planted in August on a well-chosen border, for the production of an early supply of fruit, should be kept free from runners and weeds, and encouraged to form well-developed crowns. Sometimes the balls of roots are apt to become dry, so the plot ought to be examined, and watered if required.—H. Markham, Wrotham Park Gardens.

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EXHIBITIONS AND MEETINGS.

◆

Royal Horticultural Society.

SEPTEMBER 29.

So far as exhibitors were concerned the R.H.S. had to (metaphorically) hang out the sign of "House Full" several days before the date of the show, and those who were late in sending their entries found themselves left out entirely, while others had to be content with limited areas. It will be gathered from this that there was a fine show, and such indeed it was, for hardy flowers were greatly in evidence, dahlias were abundant, fruit was well shown, and the Wisley grapes were a notable attraction; vegetables were plentiful, and orchids also made a brave show. Novelties were numerous, but chiefly florists' flowers.

FLORAL COMMITTEE.

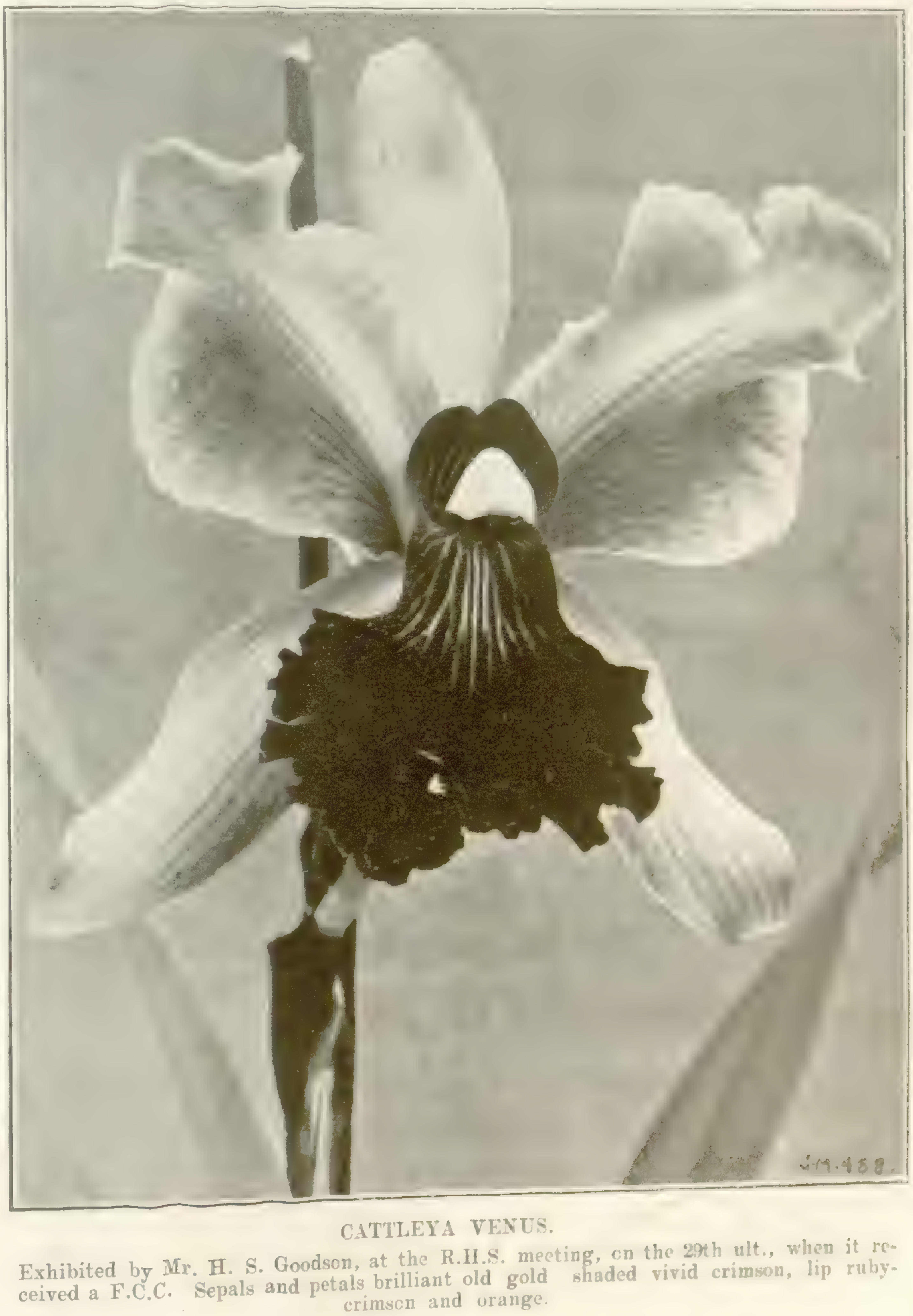
Messrs. Barr and Sons, Covent Garden, were represented by Michaelmas daisies in variety, early chrysanthemums, Gladiolus primulinus, phloxes, etc. A handsome and interesting collection of selaginellas, submitted by Mr. J. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford, was a great attraction. Mr. Davis grows these well, and he had splendid pans of S. elegans, S. Schottiana, S. Douglasi, S. viridis, S. grandis (cultural commendation), S. Vogeli, S. patula, the handsome S. [illegible], and the pretty little S. Poulteri, as well as many others. The whole group was a fine display of comparatively rare plants all finely grown. Mr. J. Emberson, Grove Road Nursery, Walthamstow, had an exhibit of dahlias and early-flowering chrysanthemums. Mr. Russell, Richmond, contributed sprays of berried shrubs, etc.

Messrs. Jas. Veitch and Sons, Chelsea, contributed a finely-grown batch of nepenthes that included grand examples of N. Burkei, N. stella, N. Dicksoniana (splendid), N. Chelsoni excellens, N. Tiveyi, N. Mixta sanguinea, N. Curtisi, N. rubella, N. Dr. J. Macfarlane (F.C.C.), and the useful N. Mastersiana. All were splendidly grown, and carried fine pitchers in plenty. Besides the nepenthes the Messrs. Veitch showed greenhouse rhododendrons, streptocarpuses, nerines, the handsome and useful Begonia Mrs. Heal, B. Elatior, and B. Success, all very beautiful and bright. The Chelsea firm had also a very big exhibit of their new ornamental vines, many of them of exquisite beauty for autumn effect. Vitis Coignetiæ, V. Henryana, V. sinensis, V. Thunbergi, V. armata, V. a. Veitchi, V. flexuosa major, and Ampelopsis Veitchi were especially fine, but there were many others of great merit, beauty, and usefulness. Messrs. Frank Cant and Co., Braiswick, Colchester, contributed a fine bank of late outdoor roses that proved a great attraction, and included handsome bunches of Mons. J. Hill, Frau Karl Druschki, Mrs. Sharman Crawford, Peace, G. Nabonnand, Irish Elegance, etc. Messrs. J. Peed and Sons, West Norwood, submitted alpine plants in variety and Michaelmas daisies.

Sprays of hardy flowering and foliaged trees and shrubs were somewhat thinly displayed by Messrs. J. Cheal and Sons, Crawley, who showed varieties of Veronica Andersoni, forms of Hibiscus syriacus, late [illegible] ceanothuses, maples, liquidamber, [illegible] crabs, heaths, etc., and also, in addition, a selection of single dahlias. Mr. S. Mortimer, Rowledge, Farnham, contributed a number of new dahlias, including [illegible] (A.M.), a new show variety, and [illegible] Turner (A.M.), a pretty salmon buff fancy variety. Messrs. Stredwick and Son, St. Leonards, sent up Monarch, Satisfaction, Saxonia, and Wellington, all cactus varieties, each of which gained an A.M. An interesting collection of sprays of useful subjects for autumn effect, shrubs and trees carrying coloured foliage, berries, or flowers, was shown by Mr. Chas. Turner, Slough, who also had a handsome collection of cactus, decorative, and pæony-flowered dahlias. Montbretias, notably Prometheus, Lady Hamilton, Messidor, and Norvic, were finely shown by Messrs. R. Wallace and Co., Colchester, who also contributed kniphofias and liliums, and Michaelmas daisies, as well as Colchicum speciosum album and some late gladioli.

A bright and attractive exhibit, but one scarcely so elegantly set up as on some occasions, was made by Messrs. W. Wells and Co., Merstham, with early chrysanthemums in great variety, including several new things, and also some pentstemons and Michaelmas daisies. An effective array of beautiful cactus dahlias was set up by Mr. J. T. West, Tower Hill, Brentwood, who showed many very handsome varieties. Pompon dahlias were also well shown, and Mr. West sent a few vases of the increasingly popular pæony-flowered kinds. Very charming was the exhibit of Michaelmas daisies so pleasingly set up by Mr. H. J. Jones, Ryecroft Nursery, Lewisham. Mr. Jones had fairly large vases of each variety, and stood these over a ground of white paper. Ideal, Mrs. S. T. Wright, Grace, Delight, Hilda Morris, Mrs. J. G. Day, St. Patrick, Nancy, Mrs. Gwym Powell, Maggie Matthews, and Nell Fardell were a few of the best varieties, and all were beautiful. A very large, bold, and grand exhibit of cactus and pæony-flowered dahlias was made by Messrs. Thos. S. Ware, Lim., Feltham, who also had a fine mass of their new and useful double Michaelmas daisy named Beauty of Colwall.

Messrs. Gunn and Sons, Olton, sent a couple of baskets of Viola cornuta purpurea, smothered with its small but brilliant violet-purple flowers. Eighteen varieties of heaths, double and single, and in various colours, were shown by Mr. Jas. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton. Some fine plants of Primula capitata, lifted from the open ground, and full of flower spikes, were also shown by Mr. Hudson, and proved their usefulness for autumn flowering. Decorative and pæony-flowered dahlias in great variety were set up in formal bunches by Messrs. H. Cannell and Sons, Swanley; these made a very brilliant display that commanded a great deal of attention. Cut blooms of double and single tuberous begonias, as well as a few gloxinia flowers, were shown by Mr. A. L. Gwillim, New Eltham, Kent, the begonias were all seedlings from the open air. A new



CATTLEYA VENUS.

Exhibited by Mr. H. S. Goodson, at the R.H.S. meeting, on the 29th ult., when it received a F.C.C. Sepals and petals brilliant old gold shaded vivid crimson, lip ruby-crimson and orange.

deep salmon-red tree carnation, named Hon. R. H. Eden, was submitted by the West of England Rose Farm, Lim., Henlade, Taunton; it has a good calyx, and is of medium size. Messrs. J. Backhouse and Sons, Lim., York, submitted beautiful flowers of Colchicum speciosum album, C. s. atro-rubens, and varieties of Colchicum autumnale.

The Guildford Hardy Plant Company, Guildford, was represented by a small collection of hardy flowers. Mr. G. Reuthe, Keston, had a selection of Michaelmas daisies and sprays of Desfontainea spinosa, Guvina avellana, and Lycium barbata in fruit. The new coleus Cordelia was again well shown by Messrs. Wm. Cutbush and Son, Highgate, who also again contributed a very fine lot of perpetual carnations in considerable variety. Some of the older tree carnations, such as Fair Maid, Enchantress, Liberty, etc., were shown in blocks among ferns in variety by Messrs. H. B. May, Edmonton. In one annexe Messrs. J. Hill and Son, Edmonton, exhibited a lot of magnificent plants of the handsome bird's nest fern, Asplenium Nidus-avis; there were a few cyatheas at the back, and many smaller plants in front, and all were perfect and in the perfection of health. Messrs. R. H. Bath, Lim., Wisbech, sent early flowering chrysanthemums, Michaelmas daisies, and carnation Winona (A.M.). Messrs. Carter Page and Co., London Wall, contributed a large collection of cactus dahlias and early flowering chrysanthemums. Roses in pots, chiefly new varieties, in flower, were submitted by Messrs. Paul and Son, Cheshunt, who set up a quite large group in one corner of the hall.

ORCHID COMMITTEE.

Messrs. Charlesworth and Co., Heaton, Bradford, had a comparatively small but choice group of orchids, and the feature of the display was Vanda cœrulea, Sophro-lælio-cattleya Marathon, Cattleya Iris, Vanda Kimballiana, and Brasso-cattleya Mdme. Chas. Maron. Mr. H. T. Pitt, Rosslyn, Stamford Hill, sent a flowering specimen of Acineta densa with a spike of eleven fleshy blooms. Messrs. Hugh Low and Co., Enfield, showed Cattleya Iris, Cypripedium callo-Rothschildianum, C. Godefroyæ leucochilum, and L.-c. Bletchleyensis, etc. Messrs. Sander and Sons, St. Albans,contributed an interesting display of orchids, and the chief attractions were Lælio-cattleya Hildegard, L.-c. Lycidas, L.-c. Nysa, Brasso-cattleya Mdme. Chas. Maron, Brasso-lælia Doria, Catasetum Russellianus, Cypripedium Olivia, and C. Fairrieanum in quantity.

The group of orchids set up by Mr. G. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney, was a pretty one, and contained the charming Odontioda Charlesworthi, Goodson's var. (F.C.C.), the splendid Cattleya Venus (C. Iris x C. aurea) (F.C.C.), Miltonia Bleuana, Lælio-cattleya Golden Oriole (A.M.), Cypripedium insigne Sanderæ, and numerous odontoglossums and Lælio-cattleyas. Mr. W. H. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, sent Cynorchis purpurascens, Habenaria geniculata, and the quaint Cirrhopetalum Andersoni. From Messrs. Stanley and Co., Southgate, came a fine Cypripedium bellatulum and Cattleya T. W. Wigan. Messrs. Moore, Lim., Rawdon, Leeds, sent a very fine form of Cypripedium Charlesworthi, Cattleya Iris, etc. Sophro-cattleya Saxe Westonbirt var. (A.M.), a cross between C. Trianæ and Sophronitis grandiflora rosea, a handsome purple flower with yellow throated lip; and Cypripedium Bianca superba (F.C.C.), a beautiful yellow-green hybrid with a splendid white upper half to the dorsal sepal.

Cattleya Iris and several hybrids from it were contributed by Mr. J. M. Black, gardener to R. G. Thwaites, Esq., Chessington, Streatham; Cattleya Miss Williams, soft lilac colour, was also very pretty in this group, and was interesting because C. Gaskelliana alba and C. Harrisonæ alba were its parents. Messrs. J. Cypher and Sons, Cheltenham, sent a few cypripediums, notably C. Fairrieanum and C. triumphans. M. Chas. Maron sent over splendidly flowered plants of Lælio-cattleya Henry Greenwood, C. Maroni, and C. Davisi, as well as Brasso-lælio-cattleya Ernesti-Digbyana, and the new and brilliant red Cattleya Rutilant (F.C.C.), a cross between C. Maroni and C. Vigeriana. Messrs. J. and A. McBean, Cooksbridge, Sussex, submitted several odontoglossums, Epiphronitis Veitchi, and some good cypripediums. Mr. Ballantine, gardener to Baron Schröder, The Dell, Egham, sent a large plant of Oncidium incurvum (A.M.).

FRUIT AND VEGETABLE COMMITTEE.

A particularly notable and interesting exhibit was the one of grapes shown from the Royal Horticultural Society's gardens at Wisley, and with each variety were a few of the vine leaves. The grapes shown were Black Monukka, Lady Downe's Seedling, Alicante, Mrs. Pearson, Lady Hutt, Gros Maroc, Muscat Champion, Diamond Jubilee, Foster's Seedling, Diamant Traube,Chasselas Napoleon, Prince of Wales, Barbarossa, Syrian, White Nice, Trebbiano, Madresfield Court, Alnwick Seedling, Black Hamburgh, Muscat Hamburgh, Canon Hall Muscat, Muscat of Alexandria, Golden Queen, Lady Hastings, Black Prince, Appley Towers, Bowood Muscat, Duchess of Buccleuch, Muscat of Hungary, Grizzly Frontignan, and Directeur Tisserand. Very fine were the fruited pot vines shown by Messrs. H. Lane and Son, Great Berkhamsted, who showed Gros Maroc, Appley Towers, Melton Constable, Buckland Sweetwater, and Black Hamburgh, laden with luscious fruits.

Potatoes were once again grandly shown by Messrs. Dobbie and Co., Rothesay, who invariably exhibit well. On this occasion they had big baskets of clean, fine tubers of about forty-five varieties, and among these The Factor, Dobbie's Favourite, Sharpe's Victor, Mr. Bresse, Windsor Castle, Duke of York, Milecross Early, British Queen, Midlothian Early, Table Talk, The Crofter, Alpha, and Waverley, attracted our attention. Mr. Chas. Foster, University College Gardens, Reading, showed several dozen superb fruits of James Grieve apples grown on young trees in the college gardens. Miss Nichol, 14, Ashley Gardens, W., showed some splendid Washington Navel oranges from South Australia, and also a few dishes of the rounder Renmark Navel variety.

Some magnificent apples were shown by Mr. R. C. Notcutt, Woodbridge, Suffolk, who had grand dishes of Cox's Orange Pippin, Lady Henniker, Cellini, Chas. Ross, Jas. Grieve, Peasgood's Nonsuch, Allington Pippin, Ribston Pippin, and Blenheim Pippin, the fruits being of large size and grand colour. Of considerable interest were the big American Squash gourds, custard marrows, Pie melons, Trombone gourds, Turk's Cap pumpkins, etc., contributed by Mr. J. T. Boase, Billinghurst, and all grown in the open air.

CERTIFICATES AND AWARDS.

First-class Certificate. — Cypripedium Bianca superba, from Mr. H. Alexander, orchid grower to Lieut.-Col. Holford, Westonbirt; Odontioda Charlesworthi Goodson's var., and to Cattleya Venus, from Mr. Day, gardener to H. S. Goodson, Esq., West Hill, Putney; Cattleya Rutilant, from M. Chas. Maron, Brunoy, France; Prince of Wales grape, from the R.H.S. Gardens, Wisley; Nepenthes Dr. J. Macfarlane, from Messrs. J. Veitch and Sons, Chelsea.

Award of Merit.—Sophro-cattleya Saxe, Westonbirt var., from Lieut.-Col. Holford; Lælio-cattleya Golden Oriole, from Mr. H. S. Goodson; to Renmark Navel, and Washington Navel oranges, from Miss Nichol, 14, Ashley Gardens, S.W.; Apple Rencow (Peasgood's and Cox's), from Colonel Archer Houblon, Newbury; potato Weranha, from Mr. J. Yule, Aberdeen; potato British Champion, from Mr. G. Carter, Cottenham; Willow-leaved beet, from Messrs. Dobbie and Co., Rothesay; and Blood Red and Pineapple beets from Messrs. Sutton and Sons, Reading; cactus dahlias Satisfaction, Monarch, Wellington, and Saxonia, from Messrs. Stredwick and Son; cactus dahlia Elsie Turner, and show dahlia El Vino, from Mr. S. Mortimer, Farnham; Viola cornuta purpurea, from Messrs. Gunn and Sons, Olton; Pennisetum japonicum, from Mr. Amos Perry, Enfield; Selaginella Emileana aurea, from Messrs. J. Hill and Son, Edmonton; Carnation Winona, from Messrs. R. H. Bath, Lim., Wisbech; Nora Reynolds (pompon), and Lady Bountiful (cactus) dahlias, from Mr. M. V. Seale, Sevenoaks; and Nellie Riding, cactus dahlia, figured in this issue, from Mr. J. T. West, Brentwood.

MEDALS.

Gold.—Messrs. Jas. Veitch and Sons, Chelsea.

Silver-gilt Knightian.—Messrs. Dobbie and Co., Rothesay, for potatoes.

Silver-gilt Flora.—Mr. Day, gardener to H. S. Goodson, Esq., Putney.

Silver-gilt Banksian.—Mr. R. C. Notcutt, Woodbridge; Mr. J. Davis, gardener to J. G. Fowler, Esq., Glebelands, South Woodford; Messrs. Thos. S. Ware, Lim., Feltham.

Silver Flora.—Messrs. J. Hill and Sons, Edmonton; Messrs. R. Wallace and Co., Colchester; Messrs. Charlesworth and Co., Heaton, Bradford.

Silver Knightian.—Messrs. H. Lane and Sons, Berkhamsted.

Silver Banksian.—Messrs. Barr and Sons, Covent Garden; Mr. L. R. Russell, Richmond; Messrs. J. Cheal and Sons, Crawley; Messrs. Frank Cant and Sons, Colchester; Mr. Chas. Turner, Slough; Messrs. H. Cannell and Sons, Swanley; Messrs. Wm. Cutbush and Son, Highgate; Messrs. Paul and Son, Cheshunt; Mr. J. T. West, Brentwood; Mr. H. J. Jones, Lewisham; Messrs. H. B. May and Sons, Edmonton; Messrs. Sander and Sons, St. Albans; Messrs. J. Cypher and Sons, Cheltenham.

Bronze Banksian.—Mr. J. T. Boase, Billinghurst; Messrs. Carter Page and Co., London Wall; Messrs. R. H. Bath, Lim., Wisbech; Messrs. W. Wells and Co., Merstham.

Flower Show at the Franco-British Exhibition.

On Wednesday, September 30, a very fine exhibition of horticultural produce was opened at the Franco-British Exhibition at Shepherd's Bush. The Palace of Music was crowded with exhibits, and these overflowed into the court around the building, while a quite considerable portion of the show was to be found in the Congress Hall, above one of the Lyon's cafés, but comparatively few found this portion on Wednesday afternoon. The show was favoured with wonderful weather, and there were crowds of sightseers. There were several competitive classes, but as the various exhibits in these were often far apart, and as the prize cards were not affixed when our representative was compelled to leave, just before two o'clock, we cannot now give the names of the prize-winners. The judges had an unenviable task, and a long and hot one also. A display of this kind, where there are competitive classes, should be judged the day previous to opening, or be ready for judgment at 9 a.m. We may explain that the whole show was arranged chiefly for effect, hence the difficulty of making comparisons with exhibits far apart. An entirely non-competitive display would have been easier to manage.

There have been loud and bitter complaints from competitors because of curtailment of space at the eleventh hour, and in some cases because entries were entirely rejected. A large amount of space was reserved for French exhibits, and many of these might with advantage have occupied a smaller area. The French pears and outdoor grapes were splendid, and though they did not teach us much, they spoke eloquently of bright sunshine and genial climate. We do not think the authorities of the Franco-British Exhibition have made the most of their opportunities, from a horticultural point of view, and they do not, apparently, appreciate the attractive power of flowers and fruits, or the value of cultivating a pleasant feeling among exhibitors.

BRITISH EXHIBITS.

A large and elegant display of fruits, flowers, and vegetables was made by Messrs. James Carter and Co., High Holborn. The flowers, chiefly single and double asters, carnations, begonias, and liliums, were very well set out in vases and hanging baskets, while the whole group was margined with apples and pears. Here and there were baskets of Sunrise tomato, while gourds, marrows, cucumbers, Chinese artichokes, peas, and turnips in variety completed the display. Messrs. Thomas Rivers and Son, Sawbridgeworth, Herts, submitted a grand lot of pot fruit trees, their Cox's Orange Pippin, James Grieve, Cox's Pomona, and Allington Pippin apples, Beurre Fouqueray, Charles Ernest, Pitmaston Duchess, and Louise Bonne pears, various figs, and late cherries won great admiration. Pot vines, and dishes and boxes of selected apples, pears, and Monarch, Primate, President, Golden Transparent, Admiral, Late Orange, and Grand Duke plums were all magnificent. Pot fruit trees were well shown by Messrs. William Paul and Son, Waltham Cross, who had dwarf trees of apples and pears laden with excellent fruits. Dishes and baskets of selected dessert and cooking apples added materially to the general effect, and gave evidence of high culture. The Waltham Cross firm had also a collection of cut roses that included a large number of their own excellent varieties. Messrs. Sutton and Sons, Reading, had a fine lot of tomatoes as picked from the open air, and carrying grand crops; with these were batches of fine Primula obconica, liliums, stocks, etc., and a central display of fringed and other single begonias, and lily of the valley. The picked tomatoes and the Reading melons were a great attraction.

The exhibit of tuberous begonias—a very fine lot of seedlings—together with the new Beauty of Colwall double Michaelmas daisy, and a selection of pæony-flowered dahlias, from Messrs. Thomas S. Ware, Lim., Feltham, was a very bold and beautiful one. Messrs. Stanley and Co., Southgate, had a group of orchids, in which mounds of Oncidium varicosum, Cattleya bicolor, odontoglossums, Cattleya Gaskelliana, and the useful Cypripedium A. de Lairesse were the leading features. Mr. W. P. Bound, who is relinquishing his charge at Gatton to Mr. Collier, set up Sir Jeremiah Colman's group of orchids effectively with nepenthes. The leading features were Dendrobium Phalænopsis, Cattleya Iris, Cattleya Mrs. Pitt, Brassocattleya Mary, Cypripedium Maudiæ, and the very curious and new Bulbophyllum leminscatoides, B. grandiflora, and Cattleya Brownæ.

Messrs. Bunyard and Co., Maidstone, were very large exhibitors, and they arranged a long group of Michaelmas daisies and other autumn flowers in front of the platform in the Palace of Music, but in addition, or rather chiefly, they had a display of pot fruit trees, but even these were not by any means so effective as the splendid apples and pears set up in dishes and baskets in the foreground. We much regret that limits of space and press day prevent us from commenting at some length upon this magnificent exhibit of British fruits.

The platform in the Palace of Music was splendidly filled by three firms. Messrs. W. Wells and Co., Merstham, put up a bold and beautiful display of early chrysanthemums, pentstemons, and Michaelmas daisies; the flowers were in large masses, and admirably and boldly set up. On the one hand Messrs. H. B. May and Sons, Edmonton, arranged a grand lot of specimen ferns, chiefly the newer nephrolepis, and some brilliant crotons; and on the other hand Messrs. Paul and Son, Cheshunt, arranged a striking display of cut roses in great variety, with palms and shrubs. Messrs. J. Cheal and Sons, Crawley, had a grand display of two dozen bunches of cactus dahlias, and Mr. Chas. Turner, Slough, had a fine lot of pompon and pæony-flowered dahlias, as well as show varieties. Mr. S. Mortimer, Farnham; Messrs. Keynes, Williams, and Co., Salisbury; and Mr. W. Tressider, Cardiff, all showed dahlias, show varieties, in great style.

Messrs. J. Stredwick and Son, St. Leonards, showed their newer cactus dahlias grandly, setting up beautiful flowers in great bunches. Messrs. G. and A. Clark, Dover, set up a bright exhibit of kniphofias, delphiniums, pyrethrums, dahlias, colchicums, etc. Mr. M. V. Seale, Sevenoaks, contributed dahlias, as also did Messrs. Carter Page and Co., of London Wall. Mr. J. Knight, Wolverhampton, showed cactus and pæony-flowered dahlias in great variety. Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, put up one of his wonderful displays of vegetables, showing magnificent examples of Ailsa Craig onions, Scarlet Emperor runner beans, celery, Maltese parsnips, cauliflowers, etc.—a superb exhibit and a large one also. Messrs. Clibrans, Altrincham and Manchester, were large exhibitors of finely grown vegetables, and their produce was admirably staged; all the vegetables were grown—and well grown—at the firm's trial grounds at Bramhill. Messrs. J. K. King and Co., Coggeshall, had a splendid lot of roots and other vegetables. Messrs. Toogood and Sons, Southampton, showed a good collection of vegetables arranged on boxes of seedling grass. Mr. B. Ashton, gardener to the Earl of Lathom, Lathom House, Ormskirk, set up a collection of splendidly grown potatoes, consisting of about sixty dishes of beautifully clean tubers of well-known varieties. Messrs. G. Massey and Sons, Spalding, had a big group of potatoes, and their collection of first-year seedlings shows that the firm is continuing its work of raising new varieties.

FRENCH EXHIBITS.

The pears and apples somewhat formally displayed in wire stands by Messrs. Croux and Sons, Châtenay, Seine, France, were greatly admired, as the group contained fine specimens of Souv. de Congres, Chas. Ernest, Beurre Dumont, Beurre Sterckmans, Doyenne du Comice, Belle Angevine (our Uvedale's St. Germain), very fine, Beurre Fouqueray, Beurre Diel, Beurre Baltet Pére, Duchess d'Angouleme, etc. The firm was fortunate in having an abundance of space, and in this matter they were specially favoured. Messrs. Lecomté and Martin, Louveciennes, contributed a large collection of apples and pears, but beyond Beurre Lebrun they had nothing of outstanding merit. From the National School of Horticulture, at Montpelier, France, there came a very wonderful and interesting exhibit of grapes. These had suffered in appearance during transit, but they showed the grand variety of grapes that exists. The fruits were shown in papier-mache dishes, and also in boxes as marketed. There were many familiar kinds, and also large bunches of lesser known ones, some of them with extraordinary names. Flanking this display there were numerous smaller exhibits of grapes, but when our notes were made there were no cards to indicate the owners. Dattier de Beyrouth, white; Picardon, white; Aramon, black; and Reusetti, white, were varieties that appealed to us by reason of their size of bunch and berry, and general appearance. Messrs. Omer Decugis and Sons, Paris, were also large exhibitors of outdoor grown grapes, and they had Gros Guillaume, Muscats, Bicane, Gros Colmar, and Black Hamburgh in good condition. Mons. Nomblot, Bruneau, showed a large collection of apples and pears, all grown in the open.

M. G. Compoint, St. Ouen, sent asparagus in quantity, and examples of seeds, and seedling plants of various ages up to those ready for forcing; the salsafy was also interesting. Messrs. Millet and Sons, Bourg la Reine, Seine, sent Quatre Saisons, St. Antoine de Padoue, Laxton's Perpetual, Alpine, Odette, and other strawberries of a late or perpetual character. Mons. Passy showed pears largely; Doyenne du Comice was grand. M. Louis Granel, Chateau de Bouffar, Aix, brought over a collection of Provence grapes that contained large bunches of Rosaki, Olivette Blanc, the red Angelino, Golden Queen, Sultineih Muscat Hamburgh, etc. M. J. Leccinté, Paris, contributed peaches and pears. The Société Regionale d'Horticulture of Montreuil, had a large and formal display of apples, pears, and peaches, and they had numerous big fruits of Emperor Alexander apples, on which various signs and pictures had been nature printed. These probably attracted far more attention than the fine Beurre Diel, Curé, Doyenne d Hiver, Chas. Ernest, and Doyenne du Comice pears, etc.

Mons. Charles Maron, Brunoy, brought along his orchids from the R.H.S. exhibition, and on these we have commented elsewhere. M. Gustave Chevillot, Thomery, had a very choice collection of grapes, the bunches of good size, tastefully disposed, and carrying their full bloom. Messrs. Vilmorin, Andrieux, and Co., Paris, contributed a selection of varieties of Primula obconica and papilio cyclamens. This firm had also a magnificent group of pumpkins, tomatoes, beans, cucumbers, turnips, beet, capsicums, etc., these making up a brilliant and extensive display that was a great attraction. Messrs. Cayeux and Le Clerc, Paris, had a large collection of rather rough potatoes. The Syndicale des Maraichers de la Seine contributed an interesting collection of vegetables and salading, the latter including dandelion, chicory, capsicums, lettuces, etc. A wonderful display of capsicums, and tomatoes, and potatoes was made by Mons. L. Férard, Arcade Street, Paris.

EXHIBITS IN THE CONGRESS HALL.

In the Congress Hall, upstairs, Messrs. Sutton and Sons had the most wonderful exhibit of potatoes that even the Reading firm has ever set up. It comprised about 500 dishes and baskets, and 300 varieties of potatoes, every tuber clean and beautiful. In addition to the usual kinds there were numerous curiosities, such as Fir Apple and Congo varieties. A remarkable part of the display was that one-half of it consisted of 1907 crop, and the other half of 1908 crop, and one could hardly tell the difference in appearance. The new variety for 1909 is White City, a handsome kidney-shaped potato, very shallow eyed, and a maincrop variety of fine quality.

The Royal Horticultural Society of Jersey sent over a collection of apples and pears, and in this the rich colouring of the apples was the remarkable feature, Peasgood's Nonsuch, Charles Ross, James Grieve, Cox's Orange Pippin, and Cox's Pomona being very fine. Durondeau, Doyenne du Comice, Louise Bonne, Souv. de Congres, Belle de Jersey, Pitmaston Duchess, and Duchess d'Angouleme pears were also magnificent. The secretary of the society is Mr. Aubin, Sunnyside, Claremont, Jersey. Mr. W. T. Stowers, Sittingbourne, had a splendid lot of apples, every fruit a grand one. Mr. R. C. Notcutt, Woodbridge, brought along his fine samples of apples from the R.H.S. meeting.

There were several competitive displays of fruit. Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, showed splendid grapes, peaches, melons, nectarines, apples, and pears, all of the usual high quality we expect from Elvaston. There was another display in which the apples were of remarkable colour, the grapes finely coloured, and the peaches large and tempting; this, we gathered, came from Mr. Barnes, gardener to the Duke of Westminster, Chester, but in this, and several other instances, there was nothing to indicate ownership.

Messrs. H. Cannell and Sons, Swanley, were represented by a large and fine exhibit of apples, in which the samples of popular varieties were all perfectly clean and very bright; it was a fine lot of fruit. Messrs. J. Peed and Son, Norwood, contributed a collection of apples and pears, and Messrs. S. Spooner and Sons, Hounslow, sent a big collection of clean apples. Mr. W. Poupart, Twickenham, sent bottled fruits that appeared to be as near perfection as it is possible to get them. From the Horticultural College, Swanley, came good samples of apples and pears. Messrs. W. and J. Brown, Peterborough, were also exhibitors of fruit.

Messrs. Dobbie and Co., Rothesay, once again showed potatoes finely, their heaped-up baskets of clean tubers of the best old and new varieties attracting a great deal of attention. Messrs. Dobbie and Co. were also exhibitors of dahlias, and they had their exhibit in the cool Congress Hall. Roses in great variety were well set up by Messrs. Harkness and Co., Hitchin, and Messrs. W. and J. Brown, Peterborough.

National Chrysanthemum Society.

The Floral Committee met at Essex Hall on Monday, September 28. There was a good attendance and a large number of flowers. Messrs. W. Wells and Co., Merstham, made a fine display of new singles and earlies, and Mr. W. J. Godfrey, Exmouth, and Mr. E. F. Hawes, Royal Botanic Gardens, Regent's Park, were other exhibitors.

Sandhurst Gardeners' Association.

The first meeting of the new session of the above association was held in the church schools, Sandhurst, on Tuesday, September 22, when Mr. M. Goddard presided over a good attendance of members. Mr. D. Moyes, The Gardens, Firgrove, Eversley, read a most interesting and instructive paper on "Fires and Firing." This paper was of great interest to the younger members. The various kinds of fuel, and the different makes of heating apparatus, and the most economical way of working them were fully dealt with. The members taking part in the discussion that followed included Messrs. M. Goddard, Evans, Dupond, Cooper, Collins, Pendrey, and Sumner. A hearty vote of thanks was accorded Mr. Moyes for his excellent paper. Mr. M. Goddard, The Gardens, Ambarrow, Sandhurst, staged cut blooms of seedling double and single tuberous begonias.

British Gardeners' Association.

LONDON BRANCH.

The second monthly meeting of the autumn session will be held at Carr's, Strand, in the Charles Dickens Room, on Thursday, October 8, at 8 p.m., when the chairman and other members of the Executive Council will address the meeting on "The B.G.A.: Its influence, and how to increase it." Full discussion and questions are invited. All who are professional gardeners are welcomed. A large attendance of nursery employees is expected. It should be pointed out that gardeners in all branches who have had seven years' professional training, and those under 23 years of age with five years' experience, are eligible for membership.

OBITUARY.

MR. JOHN OUVRARD.

Mr. J. Ouvrard, who for upwards of forty years was a conspicuous figure in the Flower Market, Covent Garden, passed quietly away, in his eighty-fourth year, at his residence at Child's Hill, on Tuesday, the 22nd inst., after a very short illness. Deceased, who kept his mental faculties to the last, was a most energetic man. He was the President d'Honneur of the Société Française d'Horticulture de Londres, and a most successful grower of flowering and of foliage plants for market. He started as a propagator at the world-renowned Wellington Nurseries, when these were in their glory. As one of the early fern growers he had few equals, and Pteris Ouvrardi, which is still grown by millions, testifies to his skill and ability.

GARDENING ENGAGEMENT.

Mr. John Podmore, who has been appointed head gardener to Cornelius Hanbury, Esq., The Manor House, Little Berkhampstead, Hertford, was for some years previously head gardener to Lord Lawrence, Chetwode Manor, Buckingham, and for the past two years at Owlbrigg, Cambridge.

R.H.S. EXAMINATIONS IN HORTICULTURE.

The enclosed letter has been sent to the directors of the Botanic and other gardens in our Colonies, as well as to the Colonial Press and others. As the information contained in the letter may be of interest to your readers abroad, I hope you will be able to find room in the columns of your paper for a notice thereon. With very many thanks in anticipation.

W. Wilks, Secretary,
Royal Horticultural Society.

On the invitation of the Government of the United Provinces of India, the "General Examination" of this society in the principles of horticulture is to be modified so as to fulfil the local requirements, and a first examination will be held in April, 1909, at Saharanpur. This suggests that possibly other countries and districts may feel it desirable to enter candidates for a similarly modified examination, in which case the council would doubtless be prepared to organise it.

The examiners are leading horticulturists in England, and, for examinations abroad, will be assisted by suitable experts acquainted with the special horticultural conditions of the various countries desiring to adopt our tests.

The general examination is now an acknowledged standard of qualification in horticulture in Great Britain, and it is thought it may be of similar advantage and assistance in your country. Other details arranged will be communicated on application for the examination, but the prospectus as arranged for 1909 will indicate its general lines and the sort of knowledge required.

If you should think at any time of adopting this proposal, I shall be glad to hear from you, when also I should greatly value the suggestion of the name and address of a competent person in Great Britain, versed in the horticultural conditions of your country, whom we might ask to co-operate with the other examiners appointed by the society.

W. Wilks.

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, October 7.—Royal Society of Arts.
National Chrysanthemum Society, Crystal Palace, two days; Floral Committee at 12 o'clock.
Hayward's Heath Gardeners' Society.
FRIDAY, October 9.—Carluke Horticultural Society.
THURSDAY, October 15.—Royal Horticultural Society's Fruit Show; two days.
Brighton Horticultural Society meeting.
FRIDAY, October 16.—Royal Horticultural Society; Conference on "Spraying." Morning session, 11 a.m. to 1 p.m., chair to be taken by Colonel Warde, M.P., and lectures given by Mr. G. Massee, V.M.H., and Mr. H. F. Getting; afternoon session, 2.30 p.m. to 4.30 p.m., chair to be taken by Colonel Long, M.P., and lectures given by Professor F. V. Theobald, M.A., and Mr. G. Hammond.

THE COWPER AND NEWTON MUSEUM, OLNEY, BUCKS.

AN APPEAL FOR ENDOWMENT.

EIGHT years ago, on the occasion of the Centenary of the death of the Poet Cowper, the house in which he lived at Olney was presented to the town to form a memorial and museum. The Trustees have, with a number of gentlemen resident in the district, formed an Endowment Committee, of which the Bishop of Durham is the chairman. The object in view is clearly stated in the following extract from a letter signed by the Bishop:—

"At present the Institution has an income of only eighteen pounds a year, and this is insufficient for its due maintenance. The front of the Museum has recently been restored, but the two rooms now used for exhibits are overcrowded, and we feel that the whole of the house should be devoted to the public, who would then be admitted to the "John Gilpin" room and other rooms now occupied by the Curator. For this purpose it will be necessary to form a small endowment, and it has been calculated that the sum of £2,200 is required. We sincerely trust that the public will respond generously to this appeal.

HANDLEY DUNELM,
Chairman of the Committee.

The Hon. Treasurer is Mr. Frank Littleboy, of Newport Pagnell, Bucks, to whom contributions should be addressed.

ANSWERS TO CORRESPONDENTS.

MANURE FROM THE FOWL-HOUSE.—A. R. A., Devonport: A good method of dealing with fowl manure is that of mixing it with an equal bulk of very dry, finely sifted soil, and storing it in a dry place. It is a splendid manure for top-dressing various crops, or for incorporating with the soil. About 2lb. of the mixed dry earth and manure per square yard is a good dressing.

SOWING LAWN GRASS SEED.—D. W., Leicester: As the ground is ready, the work of sowing should at once proceed. It would be foolish to wait until next spring now you have an opportunity of beginning. The seeds will germinate and make blades of grass, but the roots will spread out, and then next spring the plants will make rapid progress. Use the seed at the rate of one pound to every 16 or 18 square yards, and sow as regularly as possible.

LONGEVITY OF SEEDS.—C. T., Hailsham: We believe that at one of the American universities experiments are in progress for testing the longevity of seeds. A given number of seeds of certain plants are buried in a jar each year, and at stated intervals these will be uncovered, and some tested for germinating power, and the rest put back for further tests. Speaking broadly, the limit of the germinating power of the commoner garden seeds, in years, is as follows: Asparagus, 6; Bean, 3; beet, 6; borecole, 6; broccoli, 6; cabbage, 7; cardoon, 8; carrot, 4 or 6; cauliflower, 6; celery, 7; chervil, 3; chicory, 8; cress, 5; cucumber, 9; endive, 10; gourds, fancy, 6; kohl rabi, 5; leek, 4; lettuce, 5; melon, 7; mustard, black, 4; mustard, white, 4; onion, 2; parsnip, 2; parsley, 3; pea, garden, 3; pumpkin, 6; radish, 5; rhubarb, 3; sage, 3; salsify, 2; scorzonera, 2; seakale, 2; spinach, 5; strawberry, 3; thyme, 3; tomato, 4; turnip, 5; vegetable marrow, 6.

PRINCESS OF WALES VIOLETS.—F. M. A., Chesham: We have made enquiries, and cannot find that this variety is treated in any materially different way to others prepared for winter flowering. We advise you to follow the system that has proved successful in the cultivation of other violets.

WHITE BLISTERS ON SALSAFY.—T. O., Abergavenny: The trouble is the result of an attack of a white rust named Cystopus tragopogonis, that attacks a number of umbelliferous and some composite plants. Nothing can be done now beyond trimming off and burning the leaves, and taking care not to plant the infected plot with a similar crop next season.

PERENNIAL SUNFLOWERS.—W. E. C., Leighton Buzzard: A large number of species and varieties of helianthus will not be required, except in the largest of gardens. The type, H. multiflorus, is eminently attractive, and should be included in the smallest collection. It attains a height of about four feet, has an elegant habit, and produces an abundance of bright yellow flowers. H. multiflorus major is about the same height as the type, and has rather larger flowers. H. multiflorus maximus grows about two feet taller, and, while not so elegant as the foregoing, is of much value for the back rows of the herbaceous border, and also in the shrubbery. H. multiflorus Bouquet d'Or is the finest of the double forms, and H. multiflorus Météore and Soleil d'Or are two effective forms, with handsome golden flowers with anemone centres; that is to say, clusters of small yellow florets in the centre instead of the usual black disc. H. mollis and H. tomentosum are two handsome species, with flowers of a golden shade, and about four feet high.

OAT SMUT OR SLEAN.—F. E. G., Northants: Select as clean a lot of seed as possible, and, a little previous to sowing, steep the seed oats in a mixture of sulphide of potassium and water, using 1½lb. of the former to each 25 gallons of water. Use a wooden or earthenware vessel, and steep the seeds for twenty-four hours, stirring the whole well at intervals.

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SWEET PEA NANCY PERKIN.—P. S., Cardiff: We believe that this new sweet pea is to be distributed by Mr. W. J. Unwin, of Histon, Cambridge. It was raised by Mr. H. A. Perkin, of Reigate, but, owing to untoward circumstances, he almost lost his stock last year, hence we expect the seeds will not be cheap this season.

NAMES OF PLANTS.

W. G., Leeds.—Rhus Toxicodendron—the Poison Ivy.

F. E. F., Chertsey.—1, Berberis Darwini; 2, Cratægus Lælandi.

H. D., Bidston.—1, not recognised—looks like a tiny Eucomis; 2, Helxine Solieroli.

M. G., Hilperton.—1, Oncidium tigrinum; 2, Cypripedium cardinale; 3, Cattleya Harrisoniæ.

F. L. D., Exeter.—1, Primula capitata; 2, Gleichenia Mendeli; 3, Morisia hypogæa; 4, Leycesteria formosa.

P. C. T., Newbury.—1, Aspilia bupthalmiflora; 2, Eupatorium purpureum; 3, Aster patulus; 4, Polygonum cuspidatum.

B. D. T., Preston.—1, Aster linosyris; 2, Statice Bonduelli; 3, Helenium striatum; 4, Helianthus multiflorus; 5, Lilium auratum platyphyllum.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. SEPTEMBER 20 TO SEPTEMBER 26.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Sept. 20 - Sunday	3 10	68	64	74	52
,, 21 - Monday	3 50	56	55	66	54
,, 22—Tuesday ...	0 20	48	47	60	37
,, 23 - Wednesday .	2 5	59	57	63	47
,, 24—Thursday ...	0 50	56	56	63	54
,, 25—Friday	2 5	53	53	63	49
,, 26—Saturday ...	8 0	58	55	64	51
Means	2 55	57	55	65	49

DATE. 1908. SEPTEMBER 20 TO SEPTEMBER 26.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Sept. 20—Sunday	0·05	59	58	57	49
,, 21—Monday	–	60	59	57	54
,, 22—Tuesday ...	0·02	57	59	57	36
,, 23 – Wednesday.	0·02	57	58	57	46
,, 24—Thursday ...	0·09	58	58	57	51
,, 25—Friday	0·08	57	58	57	47
,, 26—Saturday ...	—	57	58	57	47
Means ...	(total) 0.26	58	58	57	47

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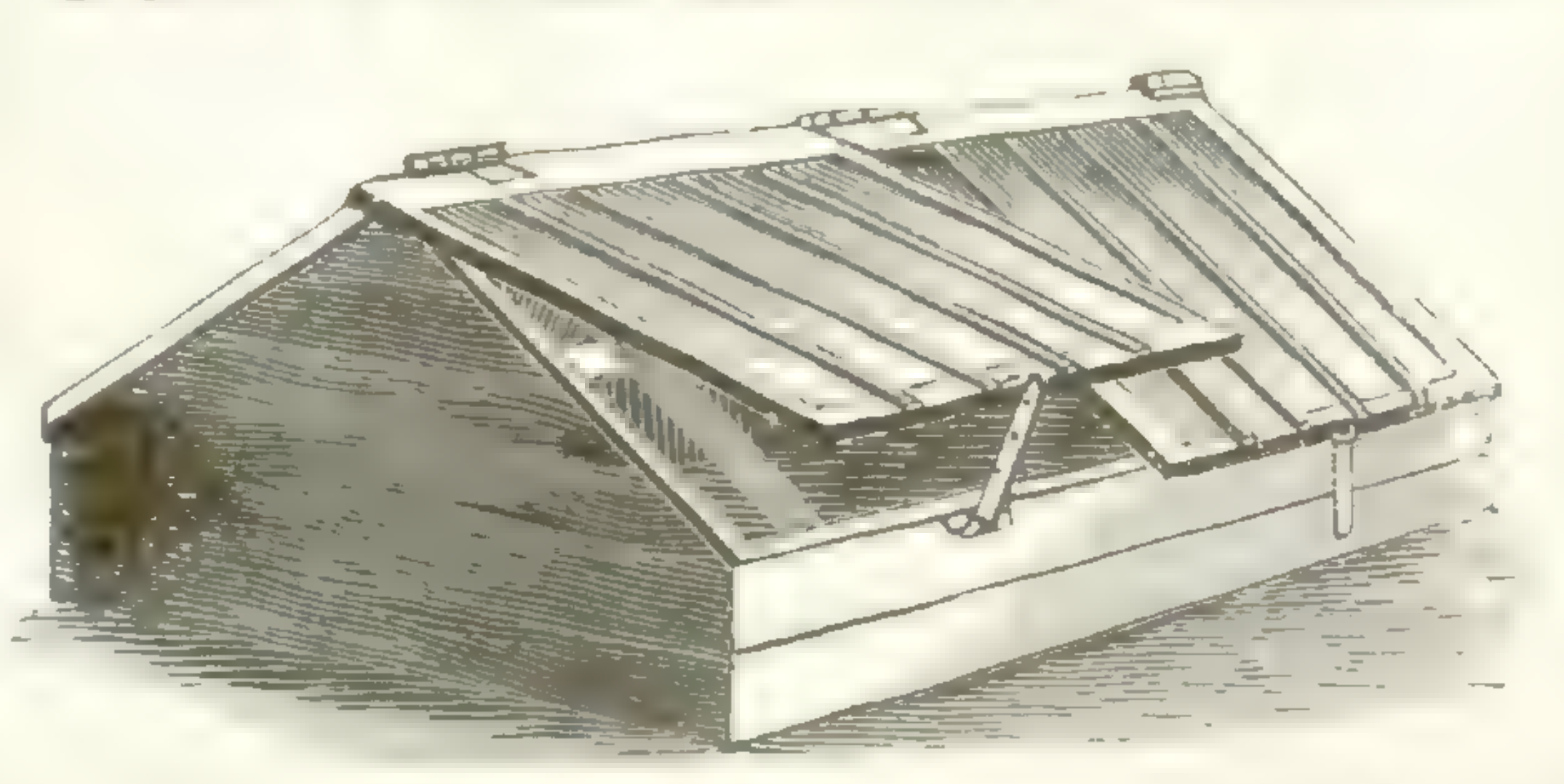

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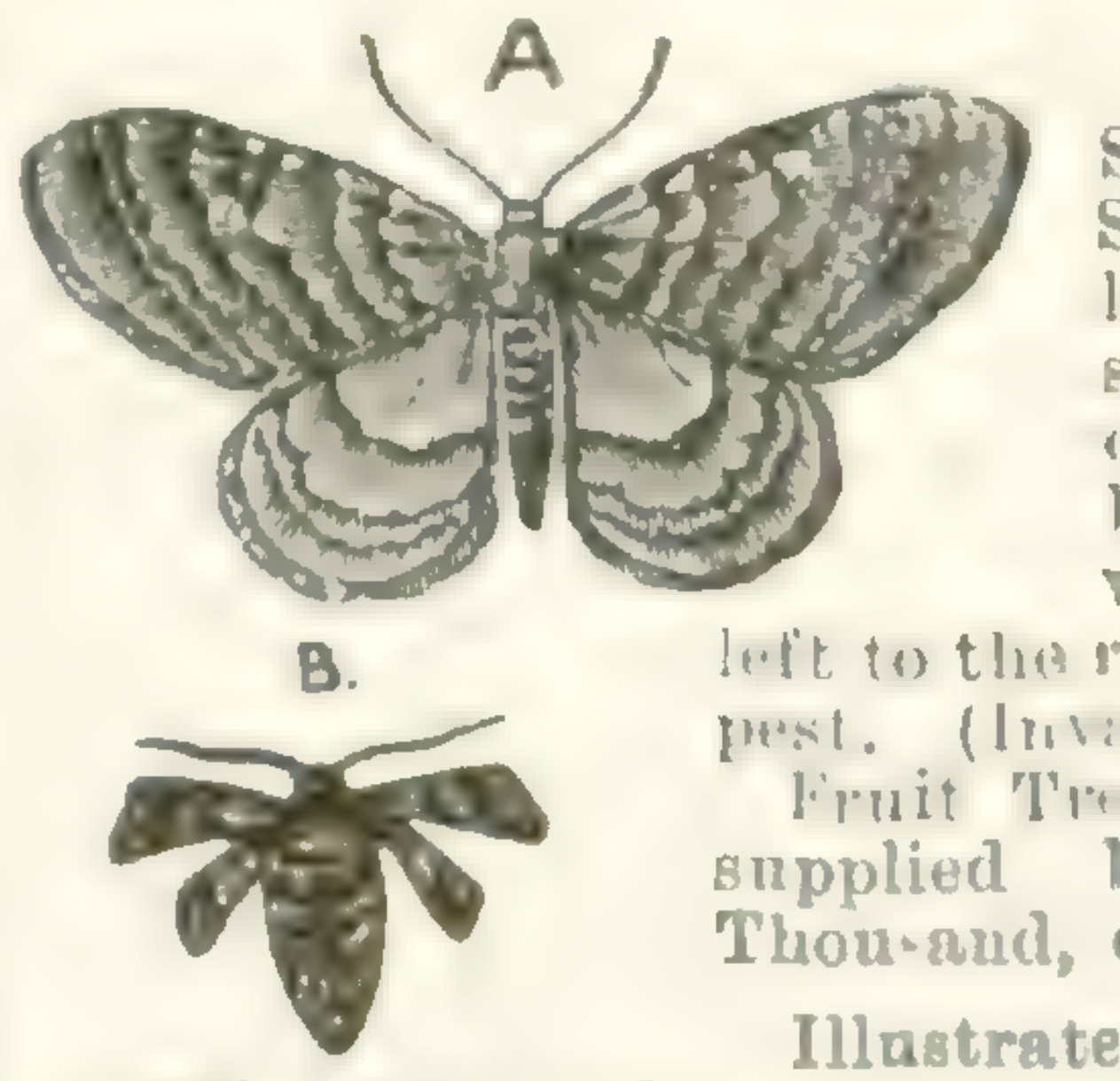

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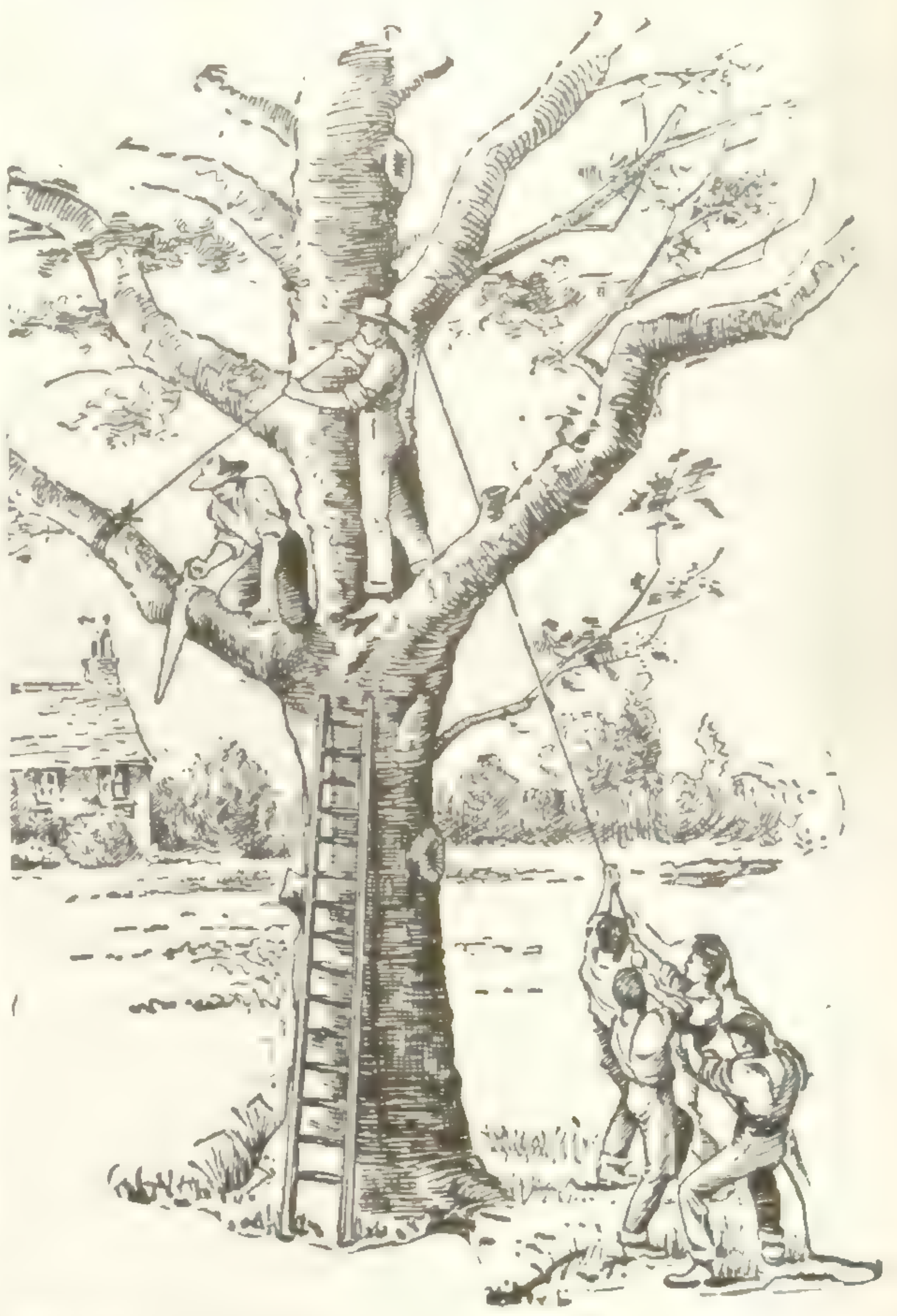

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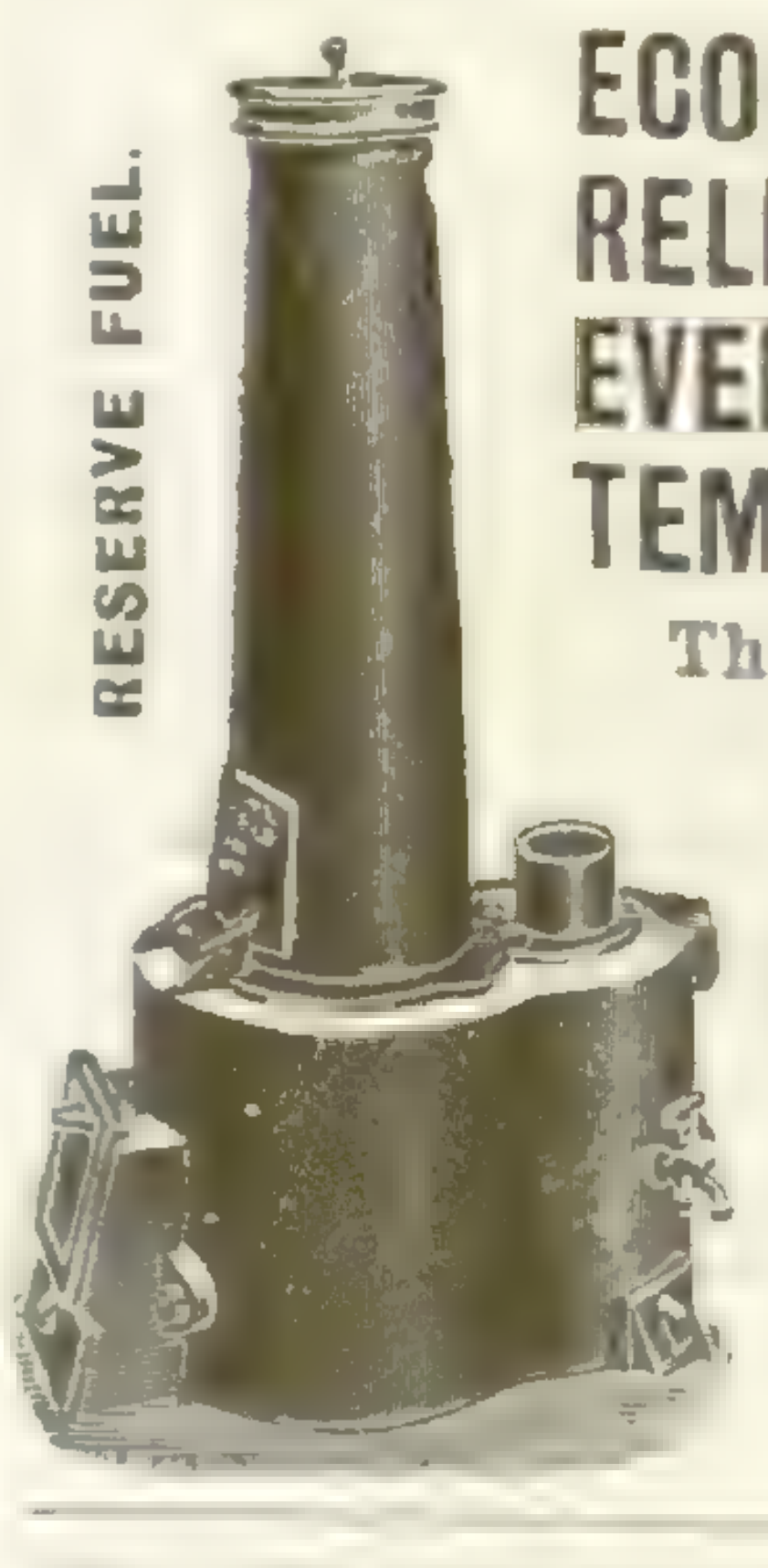
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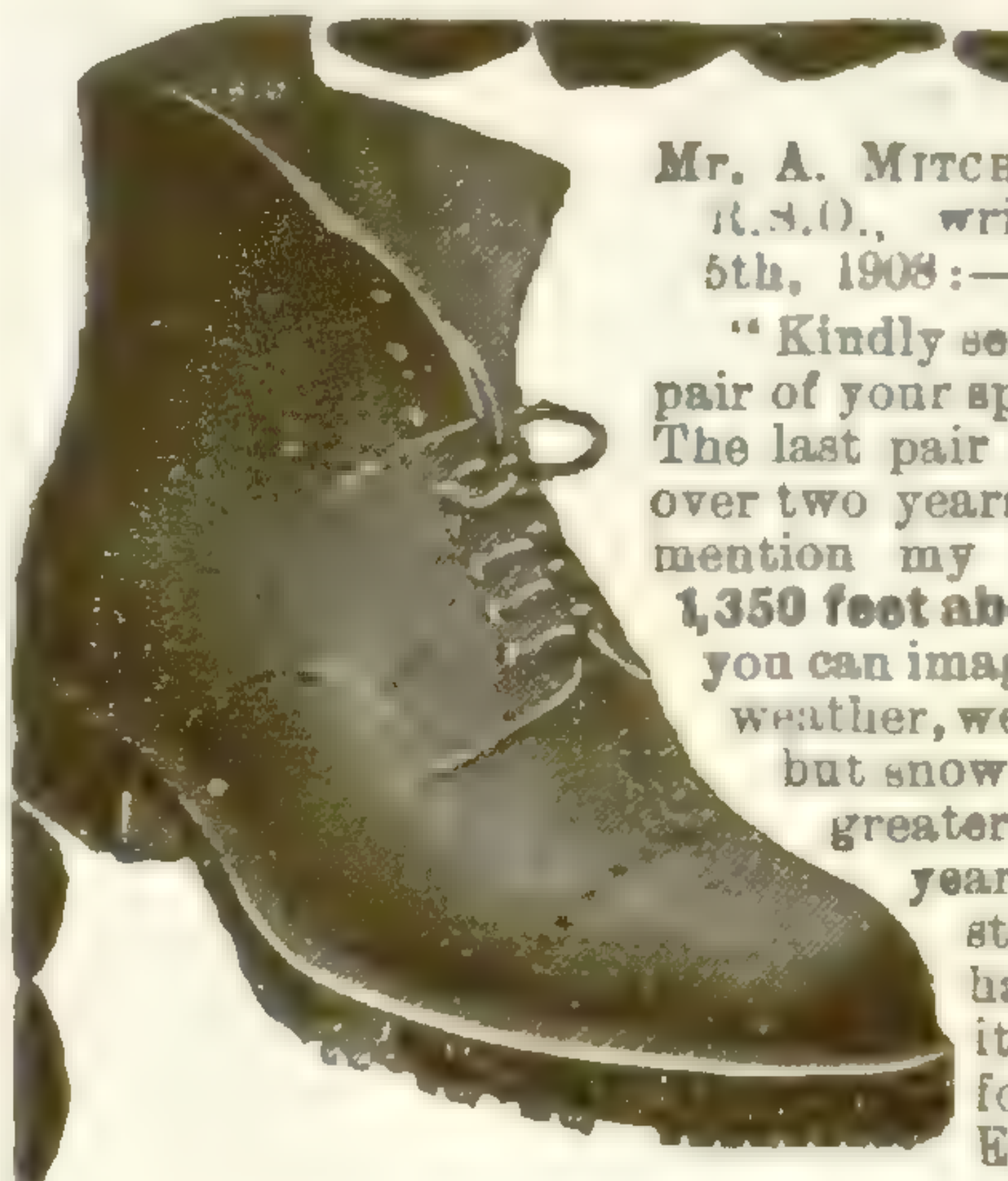

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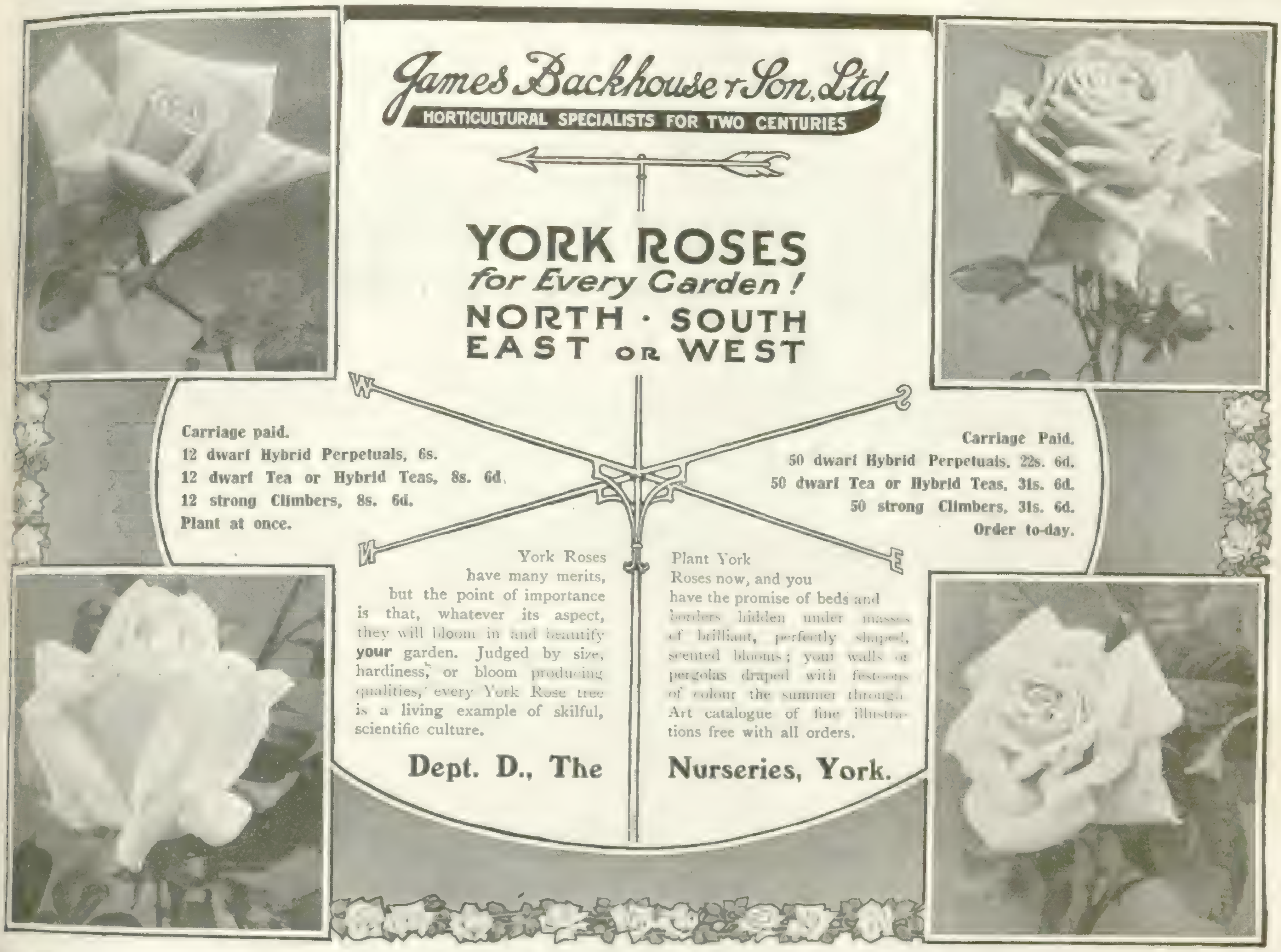

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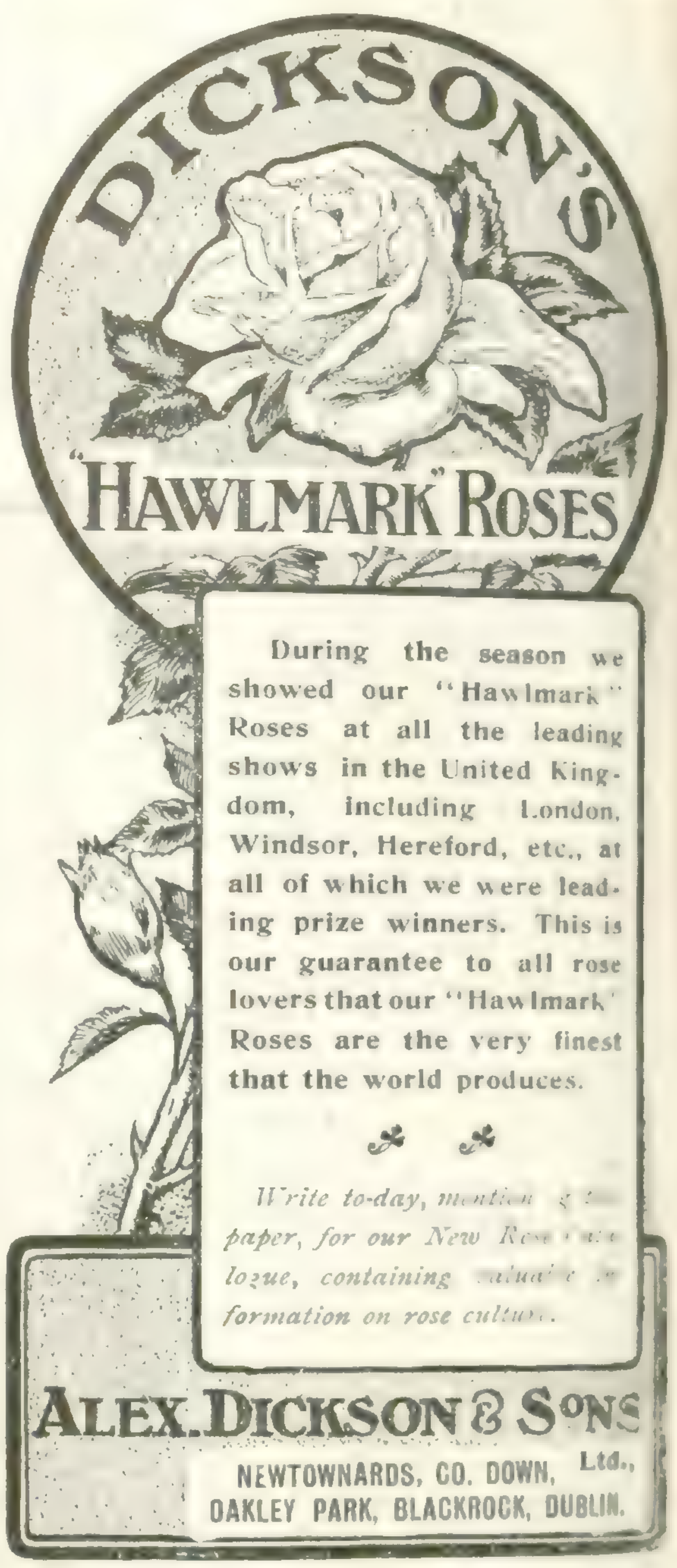

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VOL. LI.—No. 2,867. SATURDAY, OCTOBER 10, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Waste of Effort.

Fully appreciating the importance of giving cultivators and raisers opportunities for presenting the products of their skill to public notice, we have at all times consistently supported both provincial and special societies, as well as the great London organisations that have for their object the promotion of horticulture generally. In urging the claims of the special societies upon our readers, and recording their proceedings, we have been careful to keep in view the need of a concentration of effort, and have from time to time directed attention to the injurious results of an excessive multiplication of special and local societies. When the chrysanthemum was at the zenith of its popularity, and local societies were springing up in all directions, we called attention to what would happen if the course entered on was persisted in, and societies multiplied far beyond the requirements of the case. Some heed was paid to our note of warning, but it is extremely difficult to check a large body of enthusiasts when they have entered on a certain course without having carefully considered what the results were likely to be. The usual course in the case of the chrysanthemum was to establish a society in a central position, and when it had become successful to form half-a-dozen or more societies in the district, some being within a quite short distance of the central organisation, which soon became more or less weakened by the diversion of financial support and interest to the small societies. We might mention many instances, but as we are not now specially concerned with chrysanthemums there is no occasion to proceed to details. What we are now anxious to call attention to is the waste of effort in relation to horticultural pursuits that is represented by having two dahlia societies in London. There are, as a matter of fact, three organisations associated with the dahlia in the Metropolis, but as the third is local in its aims, it is not for our present purpose necessary to refer to it. The existence of two central societies would, under any circumstances, be undesirable; but in this case it is all the more remarkable from the fact that they are not in any way opposed to each other, or conducting their operations on different lines. They are, in fact, doing their work in precisely the same manner, and managed by practically the same executive. There are different presidents and secretaries, but the president of one society is a member of the committee of the other, and the two committees differ but little in constitution. From our personal knowledge we are able to say that the two societies are managed as economically as they possibly could be; but, however economical may be the management, there must, as the result of this duplication, be some unnecessary expenditure and a waste of effort. It is surprising this state of things should have existed for some years, but it is satisfactory to know that the principal members of the two societies have at last recognised the desirability of such concentration of effort as would result from the combination of the two organisations. This recognition is indeed so complete that before the close of the year steps will be taken to effect the amalgamation of the National Dahlia Society and the Dahlia Union, and we have no doubt as to this being successfully accomplished. With the strengthening of the National Dahlia Society that should result from the amalgamation we shall hope that it will initiate a more vigorous policy, and take a broader view of its responsibilities and opportunities. More especially does it appear desirable the society should give largely increased attention to dahlias suitable for beautifying the garden. Exhibition dahlias have their merits, but they are for the few and not for the many, and no society can accomplish its work satisfactorily unless it fully recognises the requirements of the general body of cultivators. Let those who derive pleasure from the production of exhibition dahlias have opportunities for entering into friendly rivalry with each other, and let also the varieties producing blooms of the finest form receive encouragement. But, and here we cannot be too emphatic, the whole of the efforts of the society should not be concentrated upon its exhibitions and varieties that are only suited for competitive purposes. We would strongly urge as a matter of the highest importance to all concerned, the encouragement and the bringing into prominence of varieties that are capable of producing a good display of colour in the flower garden. It should have long since been obvious that as the chief value of dahlias consists in the aid they can give in enhancing the attractions of the garden, special encouragement should have been given to varieties that are free in blooming, and bear their flowers on stiff stalks well above their foliage. Somehow the two societies and the raisers have regarded the production and encouragement of varieties producing finely developed blooms, without regard to their habit, as of the greatest importance. As the result large numbers of cactus varieties have been raised, certificated, and distributed, that, owing to the shortness or the weakness of their flower stalks are of but little value for garden

MR. ARTHUR CHAPMAN.

decoration. In consequence thereof, the interest in dahlias has undergone a material decrease among the great flower-loving public of late years, and with this falling off of interest there has been a considerable decline in the number annually planted. Some waste of effort is also seen in the existence of two societies within the Metropolis devoted to the cause of the carnation. In this case the existence of the second, or younger society has full justification, but there should have been no need for its foundation: nor would there have been had the National Carnation Society been alive to its responsibilities, and recognised the fact that a carnation society should bring within the scope of its operations all sections of this fragrant flower.

Mr. A. Chapman, head gardener to Lieut.-Colonel Holford, at Westonbirt, Tetbury, Gloucester, has charge of one of the finest demesnes in the country. Mr. Chapman is well known to our readers as he has during several years contributed calendarial notes under our general heading of "Work for the Week." At Westonbirt Mr. Chapman's duties are many. He has a very large and splendidly stocked arboretum to care for, pleasure grounds of great beauty and extent to keep in perfect trim, the management of large areas of fruits and vegetables, and the varied contents of many glasshouses to consider. Mr. Chapman's position is by no means a sinecure, but, fortunately, he has a generous and sympathetic employer who not only loves his home at Westonbirt, but also understands the difficulties and appreciates the successes of a gardener. There are several departments of horticulture, in which Mr. A. Chapman greatly excels, but perhaps he is best noted as a fine grower and successful raiser of hippeastrums. The Westonbirt collection of these magnificent flowers is probably the best private one in the country, and that it is so is chiefly due to Mr. Chapman's skill as raiser and grower. Those who have seen the Westonbirt hippeastrums at Westminster, or who saw the grand collection staged at the Ghent Exhibition in the spring of this year, will understand that Mr. Chapman is a gardener of no mean ability, and if any of our readers have visited Westonbirt they will know that this ability is not confined to one class of plants.

A Holiday on the Nile. At the Horticultural Club, on Tuesday, October 13, Mr. A. W. Sutton, V.M.H., will give a lecture, freely illustrated with lantern slides, entitled "A Holiday on the Nile." Those who have heard Mr. Sutton's previous "holiday" lectures will be sure not to miss this one.

Hot Weather and the Apple Crop. From various quarters we have received information concerning the rapid fall of not a few varieties of apples a few days after the commencement of the recent spell of hot, bright weather, and in every case emphasis is laid upon the fact that the apples fell from the trees during the still weather, and were not blown down. We had a similar experience in our own garden, where Lane's Prince Albert began to drop its fruits without any apparent cause. At Gunnersbury, Mr. Hudson had the same tale to tell, and Mr. George Bunyard tells us that during two or three days one large grower near Maidstone picked up 400 bushels of apples in his orchards, and another grower picked up 110 bushels of fallen fruit, all sound, and not windfalls. The reason for this early fall of sound fruits would appear to be found in the weather itself. Evidently the hot weather, following a period of wet weather, caused a great rush of sap in the trees, and the fruits, preparing for their separation from the stem, were literally pushed off by the unusual and untimely flow.

Memorial to Mr. George Nicholson.—A committee is being formed with a view to inaugurating a fitting memorial to the late Mr. George Nicholson, V.M.H., F.L.S., ex-curator of the Royal Gardens, Kew, and editor of the well-known "Dictionary of Gardening." Those who are interested in the proposal may obtain further particulars from Mr. Wilfred Mark Webb, the honorary secretary of the Selborne Society, at 20, Hanover Square, London, W.

Wart Disease (Black Scab) of Potatoes.—The Board of Agriculture and Fisheries desire to make it known that the potato disease known as wart disease, cauliflower disease, or black scab, first drawn attention to publicly in the columns of the Gardeners' Magazine, has been scheduled under the Destructive Insects and Pests Order of 1908. This order requires all occupiers of land on which the disease has appeared to report the fact to the Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W. Wart disease has been somewhat prevalent in the potato crop this year, and cases have been reported from Lancaster, Cheshire, Derbyshire, Leicester, Salop, Stafford, Warwick, Worcester, Merioneth, Glamorgan, and Dumfries. Growers are therefore recommended to examine their potatoes carefully while the crops are being lifted, with the view of detecting this disease, which, if neglected, may do serious injury. When the potato is only slightly attacked warty excrescences grow out from the eyes; in a bad attack, the whole tuber has a distorted, almost sponge-like appearance. A leaflet, describing the disease, and suggesting preventive measures, will be forwarded post free on application to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, S.W.

Penny Postage with America.—On Thursday week the advantages of the penny post were extended to the United States, and the charges for the conveyance of letters from the United Kingdom to America are now the same as those in operation between Great Britain and her Colonies.

The Recent Fine Weather.—Dr. Hugh R. Mill, the famous meteorologist, points out, in "The Times," that "the recent run of hot days so late in the season is without precedent within the last half-century." The temperatures recorded at Camden Square were as follows: Tuesday, September 29, 75 degrees; Wednesday, September 30, 79 degrees; Thursday, October 1, 77.5 degrees; Friday, October 2, 79 degrees; Saturday, October 3, 77.9 degrees; Sunday, October 4, 75.9 degrees. The high temperature of October 2 has only once been exceeded in October since Mr. Symons commenced his records in 1858, and this was on October 4, 1859, when the shade temperature was 80.9 degrees. The only comparable run of hot weather in late autumn occurred in 1895, but this was in the last week of September, and did not extend into October.

The Public Parks and Gardens of the United Kingdom form a very interesting feature of our national horticultural life, and as the editor of the "Gardening Year Book" for 1909 is anxious to record the correct title and area of these parks and open spaces, he will be very greatly obliged if the superintendents will send him these particulars, as well as their own name and address. Secretaries of horticultural and gardening societies are also requested to furnish him with particulars of their societies, with dates of exhibitions, etc. The information should be sent as early as possible to the Editor, "Gardening Year Book," 148 and 149, Aldersgate Street, E.C.

New Hardy Lily Tank for Kew.—It was as far back as 1873 that the aquatic tank in the herbaceous garden at Kew was constructed. Its position in front of the Joddrell Laboratory has never been wholly satisfactory, inasmuch as it is somewhat out of the way, and, moreover, being raised several feet from the ground, the tank suggested nothing more than a low wall from even a short distance. We understand that this state of things is to be remedied, and that in the sunken garden in front of No. II. Museum, where herbaceous plants of economic value have long been grown, a new and suitable aquatic tank will be made. The site seems to be an eminently suitable one, and the work of excavation is now proceeding thereon.

Brussels International Exhibition, 1910.—As we have already announced, horticulture will occupy an important position at the international exhibition to be held at Brussels in 1910. Horticultural products will be included in a separate group, and in this there will be five classes, and for making the arrangements the same number of committees have been formed with from twenty to thirty members each. The committee of organisation is as follows: Messrs. V. Du Pré and F. Lambeau, presidents; secretaries, Messrs. L. Gentil and N. Seghers; members, Messrs. J. Buysseus, F. Claes, E. Draps, C. de Foullon, L. Herrewege, A. Moret-Jamar, F. Stepman, T. Verniewe, and Vander Swallman. The presidents of the group committee are Messrs. Firmin de Smet and M. Firmin Lambeau.

American Gooseberry Mildew in Norfolk.—At a recent meeting held at the Shire Hall, Norwich, Mr. W. U. Hill, the inspector, reported that 285 gardens, in which the gooseberry bushes were infected by mildew, had been scheduled during the current year. In only five cases have the gardens been closed owing to the severity of the attack, and in these the growers were allowed to gather the fruit under the necessary precautions. In two cases legal proceedings were taken against two growers for failing to comply with the order, and in one case a fine of £10 was inflicted, and in the other the fine was £5.

Gooseberry and Currant Leaf-Spot.—Black currant specimens from St. Mary Cray and Norwich, and gooseberry specimens received by the Board of Agriculture from Fakenham and Shanklin, were found to be infested with the gooseberry and currant leaf-spot, Glœosporium ribis, Mont. Injured leaves fall early in the season, and as the disease usually increases in intensity each succeeding season, the bushes are weakened and eventually killed if nothing be done to arrest the disease. It is important that all diseased leaves should be collected and burned. During winter the ground under and around the bushes that have been infected should be turned over and dressed with lime. In the next spring, just at the time when the leaf buds are expanding, a thorough spraying with a solution of potassium sulphide (liver of sulphur), 1oz. in 4 gallons of water, should be given. A second spraying should be given after an interval of three weeks.

The Cedar of Lebanon in England.—Concerning the introduction of the cedar into England, Mr. J. Landfear Lucas, of Hindhead, writes: "While many have thought that cedars were first brought here by John Evelyn (1620-1706), the famous Surrey publicist, of Wotton, Dorking—who travelled abroad at an early age, Lord Pembroke states that the third Earl of Devonshire, who was Lord Chamberlain of the Household to Charles I., and Chancellor of the University of Oxford, together with the Bishop of London of that day, sent out two collectors to the Holy Land, who returned from Lebanon in 1640, with, among other things, some cedars, now flourishing in Wilton Park. Lord Savile states that the great cedar at Rufford Abbey was planted by Charles II., about 1675, as being quite a new importation into England. A specimen at Enfield House was planted about 1683, by Dr. Robert Uvedale, a distinguished botanist of his time. At Oatlands Park, Weybridge, is a cedar said to have been planted by Prince Henry, youngest son of Charles I. One of the most beautiful examples of the tree in full growth is at Titchmarsh Rectory, Northamptonshire. The Rev. F. M. Stopford informs me that this was planted in 1627, and was said to be then twenty years old. It is now over 76ft. in height, and its spread 100 yards in circumference."

Tasmanian Apple Industry.—Within recent years Tasmania has acquired considerable importance as an apple producing country, and now contributes liberally to the supplies of apples in this country during the late spring and early summer months. According to the "British Australasian," forest land is being rapidly cleared on all sides for the purpose of planting it with apples, and the growers are obtaining fairly remunerative rates for their fruit. In the south of the island, in the Huon district, where the apple orchards are oldest and most numerous, they extend in a long, narrow strip on both sides of the river Huon for a distance of over ten miles. Huonville, Franklin, Geeveston, and Lovett are now thriving townships entirely dependent upon the apple industry. In the Glenorchy district the Derwent Valley and the Bagdad Valley the apple is also largely cultivated. For years the people in the south of the State have had the trade of the island in their own hands, but they will soon have a rival, for it has been discovered that apples thrive equally as well in the Tamar country in the north, and orchards are being planted on a considerable scale. At the present time some 20,000 acres in the island are devoted to the cultivation of the apple, and the annual harvest is estimated at over 1,000,000 bushels, of which over 600,000 bushels are shipped to Europe. The orchard land is held in small areas. A block of 100 acres is rare; one of 25 to 40 acres is considered large, and five or six acres of good orchard land are said to be enough to support a family. With few exceptions all the apple country was originally forest land. The present owners obtained it from the Government at the modest sum of 10s. per acre, but the cost of clearing and fencing it brings it up to about £15 per acre. Then from the time the young trees are planted until the orchard begins to pay some six years must elapse. A few farmers have met some of their expenses by growing various crops, such as hay, oats, or small fruits—raspberries, strawberries, etc.—between the rows of apple trees. The favourite varieties are New York Pippin, Scarlet Pearmain, Ribston Pippin, Sturmer Pippin, and Jonathan.

SWEET PEA JOTTINGS.

My wanderings have been many, and far, since the publication of my last "jottings." In each country of the United Kingdom I have had the pleasure of inspecting well-grown sweet peas, and though I should like to be able to state that the best I have seen were in the "West Countrie," truth compels me to write that the best were in Scotland.

The Duns growers form a remarkable group of enthusiasts who fully understand the value of high cultivation, and practise it, and who are favoured with a climate that favours growth and depth of colour. The great trouble at Duns is that the season is rather late, and all too often the heavy autumn rains and cold nights stain the wonderful blooms, and so detract from their merits as exhibition flowers. We all know Mr. Alex. Malcolm, and how he fills his garden with giant clumps of sweet peas and forms great fragrant screens also. It is also becoming known that Mr. Malcolm has gone whole-heartedly into the subject of raising new varieties. I have been to Duns and spent a few hours with Mr. Malcolm, and have seen his seedlings. They are wonderful; especially his new waved lavender; his glorified Helen Lewis; his own-raised Earl Spencer; and his brilliant scarlet varieties. Mr. Malcolm works on Mendelian lines, and secures fixed varieties. The one weakness at Duns is the difficulty of ripening seeds, but glass shelters are now being used to trap the sunshine and keep out the wet.

We, Mr. Malcolm and I, cycled over to see Mr. Ness, Captain Aitkins' gardener, and here it was that I saw the finest cultivated sweet peas that have yet come under my notice. I have a record from the Newcastle district of sweet peas grown in almost pure manure, growing 17ft. (seventeen feet) high; but they gave few flowers. Mr. Ness grows them 13ft. high year after year, and his rows of tall clumps, the plants trained to curved pea trainers, were a picture. They were clothed with flowers from base to summit, and the flowers were beautiful in size, substance, and colour, and the stems were of good length, without being ungainly. We all agreed that excessive length of flower stem detracted from the merits and beauties of sweet peas. I believe that, in August, if he were an exhibitor, Mr. Ness could beat Messrs. Jones, Stevenson, Basile, Usher, and Co. eight times out of ten. What a grand sweet pea show these Duns people could make in their own town!

The Sweet Pea Show at Dublin, in August, was ample proof that the popular annual is increasing in popularity in the Sister Isle. I took the new Provincial Cup over on behalf of the N.S.P.S. and kept a close watch on Mr. Edward's generous gift, from Brentford to Dublin, but I might as well have left it at home, or at any rate in the cloakroom at Euston for Mr. Stevenson to call for on his return. It would have saved a deal of trouble, and I was morally certain the cup would come back to Surrey.

Mr. Andrew Dickson is a sweet pea enthusiast, as many will remember who knew him when he joined forces with Mr. Mackereth at Ulverston. Mr. Dickson has now returned to the Green Isle, and has charge of the new Oakley Park Nurseries at Blackrock, Dublin. These form a branch establishment of Messrs. A. Dickson and Sons, Newtownards. The sweet peas were well grown here in rows, and there were several promising seedlings, including one that is a very pleasing and distinct shade of lavender. The American stocks were very untrue, but the Irish stocks, though not rogueless, were very clean and true, showing that rigid selection is being carried out.

In South Wales I saw sweet peas in abundance, and at Wenvoe Castle I found untrimmed larch poles used effectively for the support of clumps of sweet peas. I found here, as elsewhere, that there are three subjects upon which every gardener is willing (and often waiting) to talk, i.e., the newest sweet peas and fixed stocks; the newer hybrid tea roses; and the prospects of a new disease-resisting maincrop potato to succeed Up-to-Date.

At Penarth I called upon Mr. Gerhold, and over an afternoon cup of tea we discussed the raising of new sweet peas and the right road to fixity of stocks. Mr. Gerhold has long been a raiser, and he keeps faithful records of his crosses. He knows the parentage of almost every one of the newer sweet peas, or at any rate he knows what crosses will give a percentage of these varieties. Mr. Gerhold is a chemist, and he finds healthful recreation in the culture and raising of sweet peas, and he is, moreover, a capital missionary on behalf of the N.S.P.S.

Two early sweet pea catalogues arrived a fortnight or more ago. One from Miss Hemus and one from Mr. H. J. Wright. Both are neat little booklets, but whereas Miss Hemus confines her attention to an almost overwhelming list of novelties, Mr. Wright makes an early offer of new seed of the best varieties already in commerce. I sincerely hope that raisers will not attempt to swamp us with novelties for 1909. I may be quite wrong, but I cannot help thinking that one or two really good and fairly well fixed novelties will prove more effectual from a business point of view than a large number that may or may not be good.

C. H. Curtis.

LILIUM NEPALENSE.

Fears have been more than once expressed that this charming and most distinct lily, which created such a furore twenty years ago when first shown, would soon become lost to cultivation. Present doubts were, however, dispelled at the meeting of the Royal Horticultural Society, held on August 18, when a grand vase of flowers was shown. I well remember the meeting of the Royal Horticultural Society when L. nepalense was first shown, and the excitement caused by the fact that it was so different from the anticipations of everyone, and so distinct from any other lily. Briefly L. nepalense may be described as bearing gracefully reflexed blossoms, which in size and shape are somewhat suggestive of Lilium Szovitzianum, but in colour they are yellow or greenish yellow, with a large chocolate-purple centre. A good deal of individual variation, however, exists in the shade of yellow, and also in the extent over which the purplish portion extends.

Like Lilium neilgherrense, which a few years ago we used to receive in large numbers, L. nepalense does not seem amenable to cultivation in this country, and imported bulbs quickly deteriorate. In a state of nature I believe that L. nepalense, L. Bakerianium or Lowii and L. sulphureum often grow in close association, yet while the first two are difficult to keep in health year after year, the last named not only thrives under cultivation, but can be rapidly increased by the bulbils which form in the axils of the leaves. Perhaps, if seedlings of L. nepalense were raised in this country, their growth would be more satisfactory, as in an instance that lately came under my notice considerable success attended the raising of L. rubellum from seeds.

W. T.

Inoculated Sweet Peas.—Mr. C. H. Curtis said, a few weeks ago, that he had received only negative evidence in regard to the use of nitro-bacterine. I sowed seed of four or five varieties so treated, on May 31. All the plants have made very strong growth, some five or six feet in height, but I doubt if there are twenty flowers on five times as many plants.—C. J.

"DIE-BACK" OF PEACH SHOOTS.

The following contribution by Mr. George Massee, V.M.H., to the current issue of the "Kew Bulletin" is of so much interest to growers of peaches and nectarines that it should have the most careful consideration.

About 58,000 species of fungi have been described, and of this number at least 10,000 are placed by mycologists under the heading "Fungi imperfecti," on the assumption that such are in reality nothing more than stages in the life-cycle of species of the higher fungi, belonging to the phycomycetes, ascomycetes, and basidiomycetes respectively. This line of reasoning is supported by the fact that in many instances such relationship has, by means of pure cultures, been proved to exist. There remain, however, many thousands of these forms that have not yet been connected with any of the higher species, and as it is important, both from a scientific and economic standpoint, that such should be accurately described, they are grouped under "form-genera" and "form-species," thus implying that they are stages which have not as yet been connected with higher species.

Such form-species or conidial stages are unknown in connection with the primitive species of aquatic fungi, and were only evolved as supplementary stages when the fungi passed from their original aquatic habitat and established themselves on dry land. These conidial stages possess many features in common. They are all asexual in origin. The conidia are produced in immense numbers, and in rapid succession, throughout that portion of the season when the host of the fungus is in active growth. The conidia germinate at once when mature, and being dispersed wholesale by wind, birds, insects, etc., are constantly infecting new hosts. In fact, the special function of conidia is to extend the geographical area of the species, while the spores of the original or higher form of the species, which require a period of rest before they are capable of germinating, are only concerned with the survival of the species in time, by tiding it over that period when the host is not in a condition to furnish food for the fungus.

From the above account it will be seen that the conidial form of a fungus is invariably the cause of an epidemic or of a rapid spread of a disease, except in those instances where even this method has been superseded by the presence of hybernating mycelium in the host plant. Conidial forms, as a rule, are rampant parasites, whereas the primitive or sexual stage of the same fungus is usually a saprophyte, and only appears when the host is on the wane, if not quite dead.

The members of the Peronosporeæ illustrate the gradual transition of a primitive group of fungi from an aquatic to an aerial habitat. The sexual and oldest stage of the fungus as yet retains so much of its original nature that the reproductive bodies take the form of zoospores, whose only mode of dissemination is by means of water, which obviously limits their dispersion on land. By the addition, however, of a conidial stage, whose reproductive bodies are dispersed by wind, animals, insects, etc., the various members of the peronosporeæ have been enabled to extend the area of their distribution to the utmost limits of range of the hosts to which they have become adapted.

The parasite which causes the disease about to be considered presumably belongs to the category of "form-species," but as yet there is no direct evidence on the point, since pure cultures of the conidia have hitherto failed to produce any other form of fruit. The fungus is called Næmospora crocea, Sacc., and belongs to the family Melanconieæ, which is characterised more especially by the absence of a definite perithecium or fruit enclosing the reproductive bodies or conidia.

During the past few years numerous inquiries have been addressed to Kew respecting the disease, aptly termed by one correspondent as "die-back of two-year-old peach shoots."

In the spring the leaf-buds expand normally, without any suggestion of disease, but just about the time when the blossom is fully expanded the young leaves suddenly wilt, turn brown, and die within a few days. At the same time the petals change to a rusty brown colour, and the flowers droop, but remain attached to the branch for some time, as also do the leaves. Finally the shoots bearing diseased leaves and flowers assume a deep claret-red colour, and shrivel more or less as the season advances.

The above are the distinctive and unvarying naked-eye characteristics of the disease under consideration. About midsummer, when the dead leaves and flowers have been removed by wind and rain, trees that have been badly diseased can be recognised by the presence of numerous naked shoots, ranging from one to two feet in length. During the months of May and June of the following year these dead branches, if carefully examined, will be found to be more or less thickly studded with minute, dull-orange-coloured, tendril-like bodies, consisting of myriads of spores of a parasitic fungus.

If a section is taken through a branch at the point where such a tendril-like body is protruding, the fungus will be seen to consist of a more or less depressed sphere situated in the cortex. These spheres, which are quite numerous, consist at first of a minute, solid mass of mycelium, which gradually increases in size, becomes hollow, and is eventually lined with closely-packed, slender threads or sporophores, which originate from the cells forming the inside wall of the sphere, with their free tips projecting into the cavity of the fruiting body. The minute spores are produced in rapid succession from the tips of the sporophores, and soon fill the cavity of the fruiting body, which now begins to indicate its position by a slight wart-like protuberance under the epidermis of the host plant. When the fruiting body of the fungus is replete with spores, the sporophores deliquesce and form a highly hygroscopic substance, which increases very considerably in volume when in contact with water. This peculiar property of the distintegrated sporophore-material enables the spores to escape from the fruiting body into the air.

When the spores are mature and the sporophores have deliquesced, the whole are extruded from the fruit through a rupture in the epidermis caused by the increasing pressure of the spore-mass. This extrusion takes the form of tendrils, consisting of myriads of spores immersed in mucilage, and takes place after a shower of rain, the water causing the mucilage to swell to a remarkable extent. At the moment of extrusion these tendril-like bodies are very soft and gelatinous, but they commence to dry and harden the moment they come into contact with the air, and in the act of drying usually become spirally coiled and variously contorted. The extrusion of the entire mass contained in a spore-cavity usually occupies about five minutes. In dry weather the tendrils are rigid and horny, but they become soft and glairy when moistened with rain or dew. These spore-masses are not dispersed by wind, but depend for their dissemination to a great extent on birds, who convey the spores when moist and gelatinous from diseased to healthy shoots by means of their feet.

The shoots are only capable of infection while quite young, but when the mycelium has gained an entrance into the tissues it spreads rapidly and infects the entire growth of the season. Four shoots infected respectively at one point only, when three inches long, and protected from the visits of birds by netting until the end of the year, were found the following year to be infected throughout their entire length—about fifteen inches—and produced numerous tendril-like masses of spores. In another experiment a branch bearing six shoots was selected; three of the shoots were infected with spores, whilst the remaining three were left uninfected as controls. All these shoots were protected by netting, and the following year the three infected shoots were badly diseased, while the uninfected control shoots remained healthy. No success attended the many attempts to infect branches more than one year old, not even when spores were placed in a wound made in the cortex.

The spores do not retain their power of germination for more than about three months.

A NOTABLE TOMATO.

Tomatoes we have galore, a host of varieties and forms which find favour with various sections of the gardening community.

It is a moot point as to which is the favourite tomato with the majority of growers, but I suspect I could give a good guess as to which would come out at the top if a poll were taken amongst the cultivators of the ruddy fruit. Be this as it may, there is always a willingness among growers, especially in private posts, to give a trial to new varieties when they come with good credentials.

At any rate, no apology is needed for introducing America's best tomato to the readers of the Gardeners' Magazine.

This tomato, known as Dwarf Champion, is largely grown in the different States, and has earned fame for itself among the gardeners overseas. But, as far as I am aware, it is but little known in the British Isles. Of its origin I know little, but an extended trial has given me a good idea of its qualities. In growth it is distinct from any other form I have met with. Short and sturdy, close-jointed, with thick, massive leaves, it forms a conspicuous object, whether utilised for glass or outside culture.

The fruits are large, about seven to the bunch, very fleshy, and with fewer seeds than any other variety I know. In colour it is a bright magenta-red, very different to the crimson-hued forms we usually grow, and connoisseurs to whom fruits have been submitted have stated that it is the best-flavoured tomato they have tasted.

For low houses, where the ordinary varieties seem too rampant, this tomato should find a place, and for outside culture it is worth a good trial. Under both phases of culture it has proved itself a meritorious cropper. It cannot be classed as an early tomato, as it is about a week later than Sunrise, but for maincrop purposes it should serve a good purpose.

One other point about Dwarf Champion is that it makes a handsome decorative plant when grown in pots. Its thick, spreading, well-arranged leafage, and sturdy habit, making it quite a useful foliage plant for the summer months.

I do not press the opinion that this tomato should be substituted for tried favourites, but would rather suggest that gardeners should give it a trial, and find out its merits for themselves. It is my opinion that Dwarf Champion might be further improved as a "cropper" by careful selection, and it may yet find an honoured place in our English gardens.

P. S. H.

Pæonies. — Herbaceous and tree pæonies ought to be planted without further delay, as the ground, being yet warm, enables the roots to become partly established before winter. The ground should be deeply dug and liberally manured at planting, thereby enabling them to remain for some years without replanting, an operation they particularly resent.—T. S.

SCHEMES FOR SPRING BEDDING.

The perfection surely, of art has been expended upon the beautiful creation of summer bedding arrangements, but many gardeners are content, as a rule, to repeat each season the same effects in spring beds and borders. There are, of course, fewer flowers and foliage plants with which to construct harmonies, yet I think a number of neglected opportunities might be noted. Rose pink aquilegias may be used to advantage; gardeners who have not raised seedlings of this strain can purchase plants. A charming way to plant them in beds is alternately with double white gardenia-flowered narcissi above a carpet of the pink viola William Niel; another method is to fill a large central place with the columbines and merely broadly edge with the rose Aubrietia Moerheimi. A pure white aquilegia similarly employed with the crimson Aubrietia Leichtlini can be relied on for a fair display.

Scarlet-crimson cowslips give a colour show that is brighter than any gained from polyanthuses, in my experience; the flowers, though smaller, are so numerous and of so true a scarlet, looking almost orange as the light shines through them, that the vivid effect is almost dazzling. Unless massed they lose half their value, so they may well be used as a broad border belt around a taller plant, or round one of equal height if it is desired to see at once the whole expanse. I have found the giant variety of white Bellis perennis excellent as their companion; this is named The Bride, and grows easily to the nine inches of height advertised. Any nearly white late-blooming daffodil would be suitable, or the centre could consist of double white arabis, which is one of our best spring bedding plants when thoroughly staked and tied, not allowed to spread out unduly or to be beaten down by gales and heavy rains. All who treat the double arabis in this style will find it of immense service; edge it with yellow dwarf daffodils or pansies, or give it a centre of golden wallflowers, and it shows up equally well.

Instead of invariably filling a bed almost full with scarlet tulips and giving an edging of white, at least one good-sized bed should be planted with groups of three tall red late tulips at half-yard intervals, and all the rest of the space be given up to Iberis correæfolia Climax, a very fine-blooming variety of the white evergreen candytuft. This carpet can be left on the bed all the year, if wished, and a pelargonium of some rare shade be placed in the spots vacated by the tulips.

Myosotis sylvatica, so commonplace as seen in all gardens bordering wallflowers, gives a new effect as a carpet around deeper blue hyacinths, and can be recommended also as offering an original colour harmony with orange tulips. The white form of Myosotis sylvatica will make a noteworthy delicate bed, with pale salmon-pink hyacinths, while I have seen it employed satisfactorily with a mingling of white hyacinths and tall late white tulips on a lawn between beds in which the colours were vivid. Myosotis dissitiflora is a much better forget-me-not for spring bedding, because it is less tall, and larger as well as brighter of bloom. Yet M. sylvatica should not be discarded altogether, because its effect in a mass is prettier from a slight distance.

There are now special strains of spring-bedding stocks to bloom freely as early as May, of which great advantage should be taken. The white variety makes a pleasing bed, alternated with double gold wallflowers, while the crimson, or magenta one, surrounding a group of double blush white pæonies, and doubly-edged by Aubrietia Leichtlini and Aubrietia purpurea, is certain to give satisfaction.

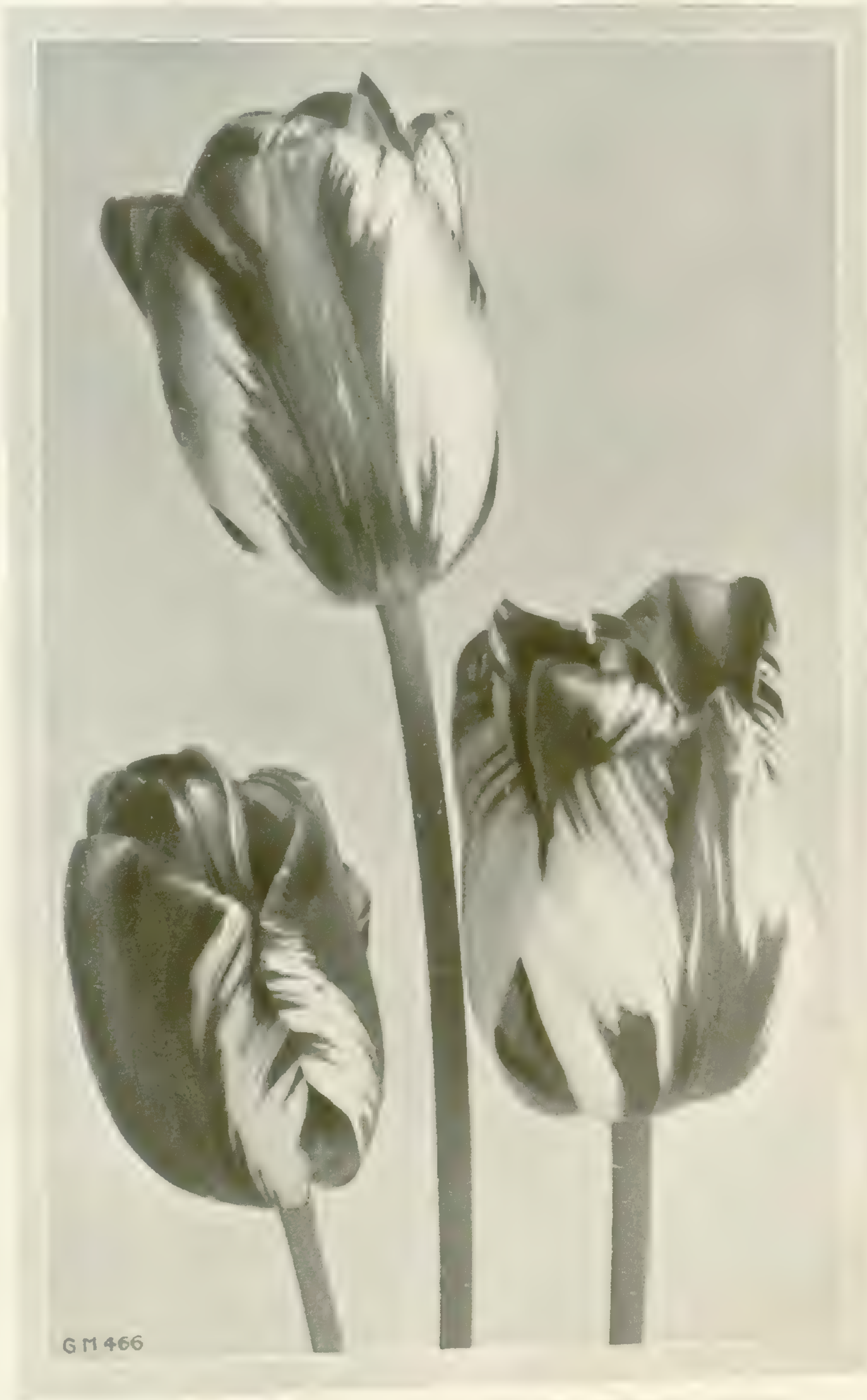
The use of small standard-trained trees as bed centres in spring is not half enough adopted. It is possible to grow many such ornaments in giant pots, sink them in autumn and remove them in June, but in most cases large beds can keep these centre-pieces all the year round without the summer and autumn effect being spoilt. Red and pink hawthorns are charming, and their foliage remains ornamental; a bed in which a standard double-red hawthorn bloomed above white biennial stocks, alternated with double white narcissi, and edged by double red daisies, would undoubtedly be successful. Later on, when summer plants were substituted, a centre ring of white cistus could be set round the hawthorn. Laburnums are especially beautiful when drooping above spring flowers in beds, and small almond trees are now becoming fashionable, as they deserve to be.

M. H.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in EASILY GROWN HARDY PERENNIALS, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London

REMBRANDT TULIPS.

The Rembrandt tulips, to which a brief reference was made in the issue of the GARDENERS' MAGAZINE of September 12, constitute such a distinct and attractive group that a few of the many beautiful varieties should be included in selections of tulips that bloom during the month of May. In habit and in the size and form of their flowers the Rembrandts somewhat closely resemble the Darwins, with which all who take an interest in gardening are now familiar, but there is a wide difference in the colouration of the flowers of the two sections. The Darwins are self-coloured, with occasional breaks, while the Rembrandts have rectified flowers, and in all cases the combination of colours is of the most delightful description.



A BEAUTIFUL REMBRANDT TULIP, VICTOR HUGO.

The flowers are of fine form and feathered brilliant carmine-red and pure white.

As in the case of the Darwins and other May-flowering varieties, the Rembrandts are of much value in the production of broad effects; but I prefer to grow them in such manner that their distinctive characteristics can be more readily seen and fully enjoyed than is possible when they are planted in large masses. I have grown them in various ways, but the method by which the greatest pleasure has been derived from them has been their arrangement in groups in the herbaceous borders. Planted in groups consisting of from twelve to twenty-four bulbs of one variety in each, they produce a rich display of colour, while the markings of the individual flowers are readily seen. The Rembrandts thrive under precisely the same conditions as the other tulips that bloom in May, and the only reference that need be made to cultural matters is to advise the planting of the bulbs as early as possible. I have planted them as late as the end of December for experimental purposes, and have obtained admirably developed blooms in the following season, but I do not recommend the bulbs being kept out of the ground until so late a period. There is no advantage in so doing after this, but there is some risk, and if the bulbs have not been fully matured, the results from late planting will be more or less unsatisfactory.

The following varieties will form an excellent selection: Anne Mary, feathered lilac; Hebe, white, lilac, and maroon; La Coquette, feathered deep maroon on a lilac ground; Eros, white suffused lilac and striped with rose; Marco Spado, white, feathered with bright red; Purity, white, marked with pink; Rosy Gem, bright rose, feathered deep red; Salome, white, marked with rose; Semele, white, with pink feathering; Vesta, lilac, feathered bright red; Victor Hugo, white, feathered brilliant carmine-red, a beautiful variety, as so well shown in the accompanying illustration; Zenobia, white, suffused purple-rose and striped maroon.

The Rembrandts, it may be added, were introduced some years ago by Messrs. Krelage and Son. G. G.

TROUBLE WITH CHINA ASTERS.

In the ordinary course of things these useful annuals should be at their best in September, but this year I have seen a good many beds with bare patches in them, and heard numerous complaints about the way in which asters have damped off and died, even after they appeared to be well established. This, by the way, is no new trouble where the China aster is concerned, but this year the plant seems to have been more disappointing than usual in the above respect. Perhaps propagation has something to do with it, and in my experience plants that are not coddled at all are the least liable to fail. In many cases, however, asters are raised in a high temperature and are planted out when the summer bedding is done, say, at the end of May. These are the plants which frequently damp off, and a better plan is to sow early in a low temperature, so as to secure sturdy specimens, and plant them in their permanent quarters early in May. I followed this course in the present season, planting the asters out about May 9, and, in addition to having a splendid display of bloom, I have not lost a single plant. Some years ago I used to lose a good many bedding calceolarias through the plants dying off in the beds, and it was not until I adopted the method of hardening the plants and getting them out early in May instead of at the end of the month that the trouble was overcome. The difficulty with calceolarias is to clear the beds of other occupants in time for early planting, but I would advise readers who are troubled with the failure of asters to try cool propagation and early planting.

H.

NEW PLANTS, ETC.

◆

CYPRIPEDIUM BIANCA SUPERBA.

A particularly fine cypripedium, derived from C. Leeanum Prospero and C. insigne Sanderæ. It much resembles the latter in the yellow-green colouring of the petals and lip, but differs from it in having a bolder and ampler flower, and in having the upper and larger portion of the dorsal sepal pure white, as shown in the accompanying figure. F.C.C., R.H.S., September 29. Mr. H. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester.

CATTLEYA VENUS.

This very beautiful cattleya was raised by Messrs. Charlesworth and Co., Heaton, Bradford, but passed into Mr. Goodson's collection. Its parents are C. Iris and C. Dowiana aurea, and thus it is a C. Iris with a large addition of D. aurea in its composition. In general outline C. Venus resembles C. Iris, but the parts are rather broader and a little less stiff. The sepals and petals are rich yellow tinged with deep crimson, and giving a lovely old gold effect. The splendid lip is ruby-crimson with orange shading and golden veins. A grand new autumn-flowering orchid; figured on p. 751. F.C.C., R.H.S., September 29. Mr. G. Day, gardener to H. S. Goodson, Esq., Fairlawn, Putney.

ODONTIODA CHARLESWORTHI, GOODSON'S VAR.

This is a beautiful orchid, crimson-scarlet with yellow markings. The flowers shown appeared to be rather larger than those of the type exhibited at the last Temple Show, but we could not see that they differed sufficiently to merit such a high award. F.C.C., R.H.S., September 29. Mr. H. S. Goodson, Putney.

CATTLEYA RUTILANT.

A very bright and distinct cattleya, obtained by crossing C. Maroni and C. Fabia Vigeriana. The flowers are of large size, and have ample segments. The colouring is difficult to describe; it is purple with a heavy crimson suffusion; lip very deep crimson-purple. F.C.C., R.H.S., September 29. Mons. Charles Maron, Brunoy, France.

POPULUS LASIOCARPA.

This is a fine addition to our list of useful poplars. It was inadvertently exhibited as P. albus lasiocarpa, but it is a distinct species, and was named P. lasiocarpa by Oliver in the "Icones Plantarum." A native of Central China, it was found among the Hon Shan Ho Mountains by Mr. E. H. Wilson, who described it as a "fine tree, growing 50ft. to 60ft. high. The leaves of P. lasiocarpa are broadly cordate, and, borne on young plants, they are a foot long by about ten inches wide. The footstalk and chief ribs are of a reddish colour, and these show up well against the deep green of the leaf proper. P. lasiocarpa should prove to be one of our most useful deciduous trees for ornamental planting. F.C.C., R.H.S., September 15. Messrs. James Veitch and Sons, Chelsea.

NEPENTHES DR. J. MACFARLANE.

Another very fine new hybrid nepenthes, with large, bold, and richly-coloured pitchers. The parents are N. sanguinea and N. Curtisi superba. In shape the newcomer most resembles N. sanguinea, but the bright red colouring of the pitcher is freely splashed with the deep crimson found in N. Curtisi superba. The largest pitcher shown was eight inches long. F.C.C., R.H.S., September 29. Messrs. J. Veitch and Sons, Lim., Chelsea.

SOPHRO-CATTLEYA SAXA, WESTONBIRT VAR.

The parents of this dwarf and beautiful orchid are Cattleya Trianæ and Sophronitis grandiflora rosea. Considering the size of the plant, the flower is of large size, and it is finely formed. The colour is very bright rose-purple, with pale orange shading in the throat, and a deep purple apex to the lip. A.M., R.H.S., September 29. Lieut.-Colonel Holford, Westonbirt.

SELAGINELLA EMILEANA AUREA.

Although selaginellas are not very popular, there are signs that these elegant plants, as well as ferns, are returning to favour. Those who are familiar with the beautiful and well defined S. Emileana will fully appreciate the value of this new comer, which has fronds of a soft yellow-green hue. A.M., R.H.S., September 29. Messrs. J. Hill and Sons, Barrowfield Nurseries, Edmonton.

VIOLA CORNUTA PURPUREA.

An exceptionally beautiful variety, and one that blooms with the utmost freedom. The plants shown were a mass of brilliant violet-blue flowers, and though these latter were not individually large, they were abundant. For late flowering, and doubtless also for spring flowering, this viola is excellent. A.M., R.H.S., September 29. Messrs. Gunn and Sons, Olton.

ONCIDIUM INCURVUM.

A well-known species, with long, branching spikes of small rose and white flowers that are charming for many kinds of floral decorations. A.M., R.H.S., September 29. Mr. H. Ballantine, gardener to Baron Schröder, The Dell, Egham.

LÆLIO-CATTLEYA GOLDEN ORIOLE, GOODSON'S VAR.

A useful orchid, with deep golden-yellow flowers, heavily overlaid with bright crimson. The parents are L.-c. Charlesworthi and C. Dowiana Rosita. A.M., R.H.S., September 29. Mr. H. S. Goodson.

PENNISETUM JAPONICUM.

A very beautiful Japanese grass that is of perennial character, and said to be quite hardy. It is a very elegant garden plant, the flower heads being about three inches long and of a light reddish, violet-tinted colour, and silky appearance. Spikes and leaves are about 2½ft. long. A.M., R.H.S., September 29. Mr. Amos Perry, Enfield.

CARNATION WINONA.

A finely formed tree carnation, with fragrant flowers of a deep pink hue. A.M., R.H.S., September 29. Messrs. R. H. Bath, Lim., Wisbech.

ORANGES.

Washington Navel.—A very fine orange of round form, and with a curious navel-like end. The flavour is excellent.

Renmark Navel.—This differs from the former in having rounder or broader fruits, and a less prominent apex. A.M., R.H.S., to each variety, September 29. Miss Nichol, 144, Ashley Gardens, S.W.

APPLE RENOWN.

A fine cropping apple of the same origin as Charles Ross. It is a brilliant variety, not unlike Emperor Alexander, of excellent flavour and fine cooking quality. A.M., R.H.S., September 29. Mr. Charles Ross, Welford Park Gardens, Newbury.

ROSE LADY GWENDOLEN LITTLE.

A decorative variety belonging to the tea-scented section and of considerable value in the garden and for the supply of cut flowers. In growth it is vigorous and free branching, and the medium-sized flowers are freely produced throughout the season, and are attractively coloured golden-yellow and bright pink. Card of Commendation, National Rose Society, September 17. Messrs. John Jefferies and Son, Cirencester.

DAHLIAS.

El-Vino.—A large and well-formed show dahlia of soft lilac hue, the colour deepening at the tips of the florets. A.M., R.H.S., September 29; F.C.C., N.D.S., September 29. Mr. S. Mortimer, Farnham.

Elsie Turner.—A very large cactus dahlia of a soft fawn-buff shade. A.M., R.H.S., September 29; F C.C., N.D.S., September 29. Mr. S. Mortimer.

Lady Bountiful.—A shapely single variety of a deep rose-red hue, with a zone of crimson round the disc. A.M., R.H.S., September 29; F.C.C., N.D.S., September 29. Mr. M. V. Seale, Sevenoaks.

Nora Reynolds.—A bright red self-coloured pompon dahlia of neat form. A.M., R.H.S., September 29; F.C.C., N.D.S., September 29. Mr. M. V. Seale, Sevenoaks.

Monarch. — An orange-tinted amber-coloured cactus dahlia with yellow centre. A.M., R.H.S., September 29; F.C.C., N.D.S., September 29. Messrs. J. Stredwick and Son, St. Leonards.

Wellington.—A cactus variety, deep purplish-red, with white tips. A.M., R.H.S., September 29; F.C.C., N.D.S., September 29. Messrs. J. Stredwick and Son.

Saxonia.—A fine rich red-purple cactus variety, with bright purple shading and white tips. A.M., R.H.S., September 29; F.C.C., N.D.S., September 29. Messrs. J. Stredwick and Son.

Satisfaction.—A very pretty pink cactus dahlia with quite pale centre. A.M., R.H.S., September 29; F.C.C., N.D.S., September 29. Messrs. J. Stredwick and Son.

Nellie Riding.—A handsome crimson, white-tipped cactus variety, figured on p. 749. F.C.C., N.D.S., September 29. Mr. J. T. West, Tower Hill, Brentwood.

POTATOES.

Dewaeka Seedling.—A white, round, maincrop potato. Tested at Wisley for cropping and at Westminster for quality. A.M., R.H.S., September 29. Mr. J. Yule, Aberdeen.

British Champion.—Another white, round variety, and a free cropper. Tested at Wisley and Westminster. A.M., R.H.S., September 29. Mr. J. Carter, Cottenham.

BEET.

Willow-leaved.—A narrow-leaved variety, tested at Wisley. A.M., R.H.S., September 29. Messrs. Dobbie and Co., Rothesay.

Blood Red.—A fine deeply-coloured beet that has been tested at Wisley. A.M., R.H.S., September 29. Messrs. Sutton and Sons, Reading.

Pineapple.—A bright variety that is very attractive. A.M., R.H.S., September 29. Messrs. Sutton and Sons, Reading.

CHRYSANTHEMUMS.

Ethel Blades.—A very fine early-flowering chrysanthemum, with stiff, erect growths that are freely branched, and carry fair sized reflexed blooms of a rich and brilliant crimson scarlet hue with old gold reverse. F.C.C., N.C.S., September 28. Messrs. W. Wells and Co., Merstham.

Tapis d'Or.—A splendid and very free-flowering early chrysanthemum, that has massive sprays of bloom, and comes quite large when disbudded. The flowers are broad petalled, and of a bright canary-yellow colour. A fine variety for massing or for market. F.C.C., N.C.S., September 28. Messrs. W. Wells and Co.

Leslie.—A low-growing, free-branching, and free-flowering early chrysanthemum, with medium sized, graceful Japanese blooms of the richest golden yellow. Long, stiff flower stems. F.C.C., N.C.S., September 28. Messrs. W. Wells and Co.

J. Bannister.—A splendid sport from Perle Chatillonaise, and one that bears a profusion of large and elegant blooms on freely-branched growths. Appears to be a very fine grower. The large flowers are rich fawn-yellow with a delicate tinting of rosy-pink. F.C.C., N.C.S. Messrs. W. Wells and Co.

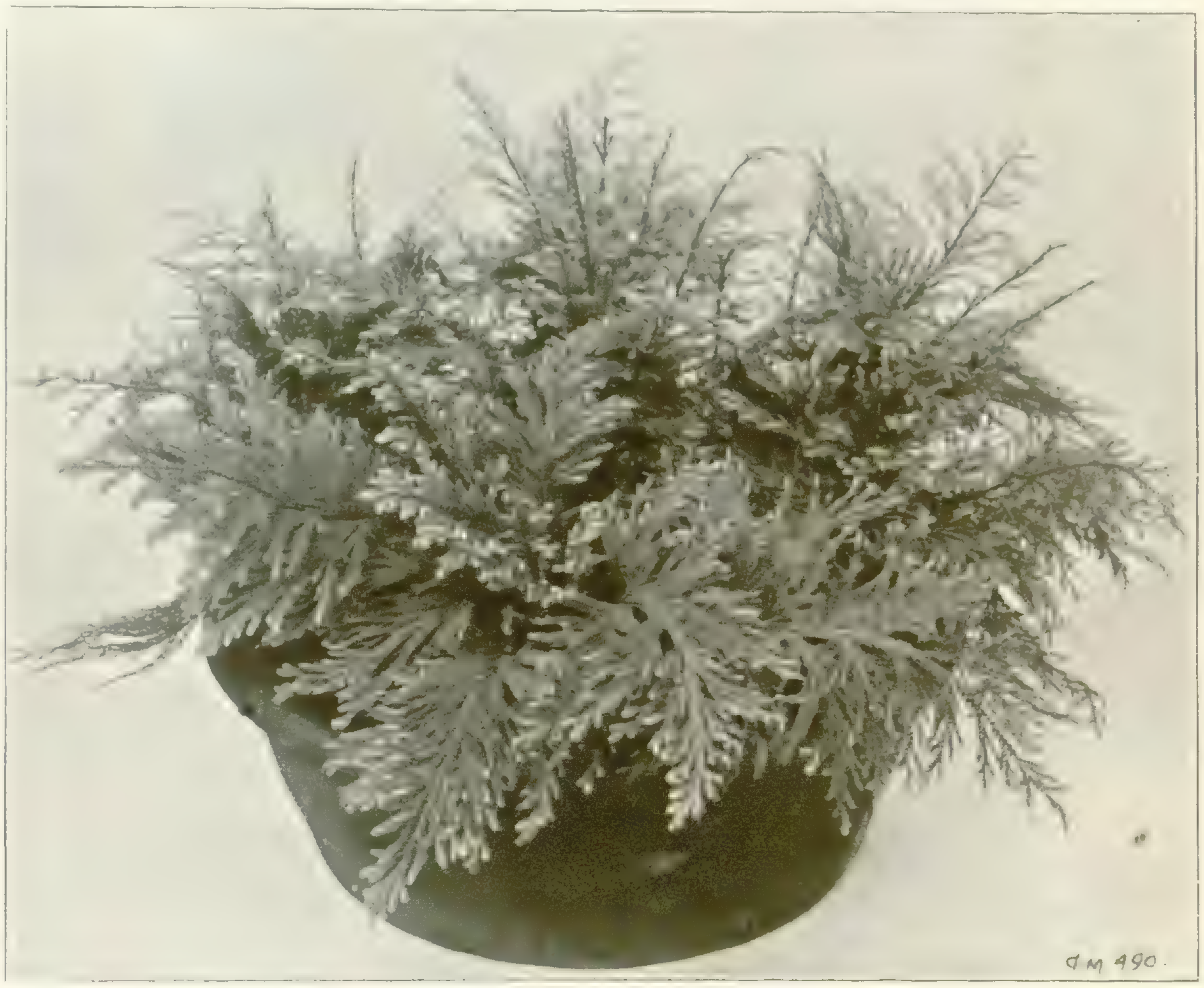
Kathleen.—An effective single variety, free flowering, and of good size. Colour, bronzy-buff, with yellow zone around its high, deep yellow centre. F.C.C., N.C.S., September 28. Messrs. W. Wells and Co.

Normandie.—A very beautiful early-flowering variety, that blooms in fine clusters. The flowers are reflexed, but not stiff, and the outer petals are elongated prettily. The colour is a lovely shade of silvery pink. This is one of M. Nonin's varieties. F.C.C., N.C.S., September 28. Mr. Wm. Sydenham, Melbourne, Derbyshire.

Golden Glow.—A very early flowering, large-flowered, incurving Japanese variety, that will produce big canary-yellow blooms in mid-September. F.C.C., N.C.S. (as a market variety), September 28. Mr. W. J. Godfrey, Exmouth, Devon.

CROCUS SPECIES.

Some years ago we planted a collection of species of crocus in the grass to test their merits in this district. The way we proceeded with the work was as follows. After removing the turf to a depth of about two inches the ground was broken up with a fork, this was then covered with about six inches of light, rich, sandy soil, which was worked in to give a greater depth; when this was completed the surface was made smooth and even with a rake. The corms were then scattered broadcast over the ground, taking care in doing so to keep the various shades together as much as possible, and so prevent one colour from becoming intermingled with the other. That they might be the more readily distinguished, each species was then labelled. The corms were afterwards planted where they fell, using a dibber, taking care in doing so not to put them in too deeply as there was the two inches of turf to be replaced.



SELAGINELLA EMILEANA AUREA.
A.M., R.H.S., Sept. 29. Messrs. J. Hill and Sons, Barrowfield Nurseries, Edmonton.
Colour bright yellow-green.

When a patch had been planted, the surface of the soil was again made smooth, boards were then laid on that the turf might be replaced without again trampling on the ground. As the work proceeded the turf was slightly beaten with the back of the spade, excepting this, the turf was allowed to sink naturally, that the flower buds might the more readily push through the grass.

Some of the more tender species require the shelter of shrubs to ward off the cold winds, as they bloom very early; but given a warm sunny position, and a rich, light, well-drained soil, their flowers are most attractive from February onwards until April. By scattering the corms broadcast on the surface, and planting where they fall, a more natural appearance is given when they are in bloom than would be the case were the bulbs placed at regular distances from each other.

Some may think it unnecessary to prepare the ground as recommended, but where the bulbs are required to remain in the same place for several years, this extra labour will well repay the cultivator for the trouble taken.

When selecting the different species for planting in grass it is necessary to take the locality into consideration, for though as a rule they are hardy enough, some of them bloom during the winter and will thus need protection if their flowers are to be of any value, otherwise they would be spoiled by the frost and snow, and the only reward one would get for his trouble would be a crop of grass-like foliage in spring. Of the vernal species the earliest with us to bloom is Imperati, which in sheltered situations in mild seasons expands its delicate flowers in the early part of February. C. banaticus is a lovely species, the flowers of which are a deep rich purple colour, forming a fine contrast to the green grass during February and March. C. versicolor is a handsome species, flowering during March and April. There are several autumnal flowering species that are well worthy of notice, such as speciosus, sativus, irridiflorus, cilicius, and some others. Anyone who is interested in these gems of the garden, and who live in districts where they will not thrive in the open, would do well to plant them in well prepared beds in cold frames that their flowers can be protected from the inclement weather sometimes experienced during the dull days of winter.

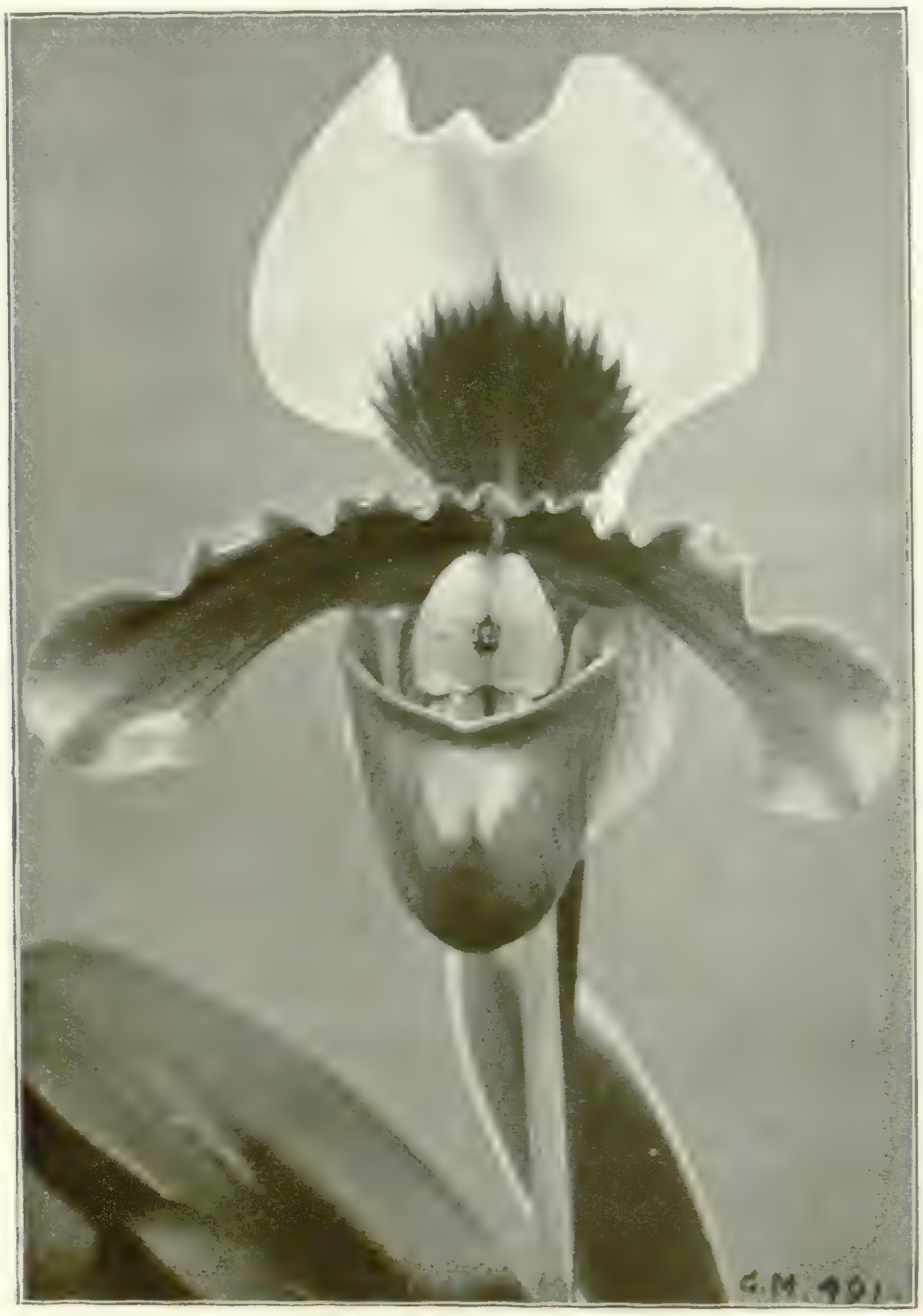
H. C. Prinsep.

Buxted Park Gardens.

Box Edgings may now be replanted, and if such have become irregular or patchy it is best to lift all of it and replant; tall plants may be shortened at both top and bottom. Dig the ground to a good depth, make it absolutely firm and level, stretch a line along, and cut a trench out, leaving one side quite perpendicular, and against this the box should be planted, leaving not less than four inches above ground. Be sure and keep all the plants quite upright or the effect will be spoiled.—E. F. H.

EARLY TULIPS FOR FORCING

For forcing many early tulips are excellent, and a display may be had from December to April without fail, though the very earliest batches are not invariably satisfactory, and unless there is a special demand I should prefer to leave the tulips until well over the New Year, after which, if they have been boxed or potted up early enough, they will readily be brought into flower in three weeks from the time they are taken indoors. The main points in their culture is to get good, heavy, but not necessarily large bulbs potted or boxed up early in September, so that they may have time to root well before any attempt is made to force them. I prefer ordinary propagating boxes to pots, and in each of these are placed from forty to fifty bulbs, in sandy soil, on good drainage, and the bulbs with their tips just showing above the soil.



CYPRIPEDIUM BIANCA SUPERBA.
F.C.C., R.H.S., Sept. 29. Mr. H. G. Alexander, orchid grower to Lt.-Colonel Holford, Westonbirt, Gloucester. Flowers reduced in size, yellow-green and white.

As the boxes are filled they are stood on a bed of ashes and covered with finely-sifted old ashes to a depth of four inches to six inches, and here they remain till wanted, or until the tops have made two inches of growth, by which time they will be well rooted and ready for forcing purposes. If not then wanted they are removed from the ashes and stood in cold frames, shaded for a few days until the blanched appearance has gone from the growth, and protected from sharp frosts. From time to time, as required, batches are brought into a house with an intermediate temperature and stood under the staging, so that they may become slightly drawn to lengthen the stems. When this has been done they are lifted on to the stagings and allowed to develop their flowers, taking care that they at no time become dry at the roots.

If pots of flowers are required they can be made up by lifting a given number of bulbs from the boxes and putting them into the pots, when the buds have almost reached the opening stage. In this way, if well watered in, no harm comes to the flowers, and the pots may be made up to a more uniform height than they became if put into pots at first, as it is generally found that some bulbs take longer than others to develop, and that pots made up at potting time generally contain one or two laggard bulbs that spoil the symmetry of the whole.

During the past few years vendors of bulbs have introduced what they term extra-early ripened consignments, for the purpose of giving flowers at or about Christmas-tide. These I have not found satisfactory, for though the bulbs appear to be good the flowers are produced on very short stems, and lose their symmetrical form, and become squat and ungainly. The fault of this is in the treatment of the bulb before it comes to hand, for I have purposely kept back some of these bulbs, and brought them on gently side by side with later consignments of the same varieties, and they have still retained their faults, while the others have been tall and shapely.

The main points with early forced tulips is to have them well rooted before bringing them into warmth, to let the warmth be gentle, to commence with at least, and to provide plenty of moisture both to the roots and in the atmosphere of the house or pit in which they are being grown, to draw the stems by keeping them in shade during the early stages, and to get them up to the light while the flowers are still in bud.

Satisfactory varieties for forcing are those mentioned below, and they are placed as nearly as possible in the order in which they can be brought into flower: Thomas Moore, Mon Tresor, Yellow Prince, Vermilion Brilliant, Le Matelas, Proserpine, Crimson King, White Pottebakker, White Joost van Vondel, Primrose Queen, La Reine, La Belle Alliance, White Swan, Rose Gris-de-Lin, Duchess de Parma, and Couleur Cardinal. As with the outdoor varieties, there are many others that force well, but in this matter it is best to depend on well-tried varieties for the bulk of the stock, and to test newer ones in small quantities until they have been proved good for the purpose.

J. C. Tallack.

Shipley Hall Gardens.

ZAUSCHNERIAS.

The Humming Bird Trumpets, or Mexican fuchsias, are brilliant flowers of the autumn, and at a season when rock garden plants in bloom are too few and too far between, the brilliant vermilion-scarlet blossoms of the zauschnerias are welcome indeed. They are ideal rock garden flowers for the autumn, and their warmth of colouring is everywhere appreciated when they are in bloom.

Unfortunately, there have been many disappointments experienced with these zauschnerias, as some of them are so late in forming their flower buds, and require so much sun to induce them to open, that they are worthless in our average climates in the United Kingdom. It is wonderfully difficult to secure the best form, and there is only one, I think, and one may order plants as Z. splendens and Z. californica, and be favoured (?) with plants of exactly the same appearance, which, in nine cases out of ten, are of the worthless variety for our climate. This variety is one which differs from the free-flowering, or, rather, early-flowering, one in the presence of a dense pubescence or downy covering on the leaves and stems, while that which flowers freely is much less pubescent. The shy-flowering one is also denser in its habit of growth, and runs more freely at the roots than the best form, which I take to be the correct Z. splendens, and which, I think, may be the variety of Z. californica called mexicana in the Kew Handlist.

This free-flowering or early variety is a little more tender than the late-blooming one, but when it has once obtained a hold among the stones there is little fear of its being lost. I had it in my former garden, where it was hardy and bloomed freely, the others never coming in early enough to flower before frost. It was left behind when I removed to my present garden, and I have only been able to replace it this year. The firm from whom I had this good form once told me they had a quantity of it, but on sending again I received the pubescent, late one. No doubt the latter will flower in some places, but it is worthless mostly, and may be said to take among the zauschnerias the place held by some of the tricyrtises, or the late variety of Stokesia cyanea. There is no lack of buds, but these do not open, save in the warmest and sunniest localities. On the other hand, the early one rarely fails to give a long succession of its bright trumpet-shaped flowers, even in wet and dull localities, although it revels in sunny places and in dryish rockwork.

S. Arnott.

TREATMENT OF SICKLY FERNS.

As a practical example of remedial measures when ferns are out of condition and have even gone so far as to be apparently dead, the following particulars should be of interest to those who have collections, especially of rare varietal forms of hardy ferns, though the same procedure would doubtless equally well apply to many choice exotics.

A friend of mine acquired last year a collection of original wild finds and acquisitions which in its time had been practically unique, embracing many very fine varieties discovered by the owner and confined to his possession. For many years, however, it had been greatly neglected, and most of the ferns, polystichums, scolopendriums, athyriums, and lastreas had developed into masses of impoverished offsets, which were, moreover, heavily handicapped by an unchecked invasion of rank weeds and seedling trees and bushes of many kinds. The ferns which survived were lifted, and, pending preparation of a fitting place at their new home, were all potted on receipt in the autumn, being subsequently replanted in the spring in the open in somewhat dense soil. As a result of original lack of vigour, loss of roots by removal, and the double check involved by the two shifts, very few indeed showed any growth during the past season, practically all, indeed, except some of the athyrias and lastreas, being quite moribund.

Under these circumstances, I was asked for my advice, and, acting upon my experience in connection with propagative operations, particularly with the polystichums, which embraced the choicest forms in the collection, the plants were treated in the following way. All those which showed no sign of life at all were pulled up, all the roots cut close off by scissors, and the caudex thoroughly washed. Commencing then at the base of the caudex or root-stock, which is formed by the persistent bases of the old fronds, which retain vitality for years, all the dead and rotten ones were pulled away until those were reached in which life still remained, as evidenced by their adherence to the caudex, and their appearance when cut across. In nearly every case a living portion was reached in this manner, and from this with a sharp knife all rotten parts were cut away, and the mass then washed again. Each piece was then installed in a thumb pot, in sandy, peaty soil, in which it was embedded halfway, leaving the top exposed. A tumbler fitting inside the pot was then placed over the caudex, and the plants set side by side in a close but well-lighted frame.

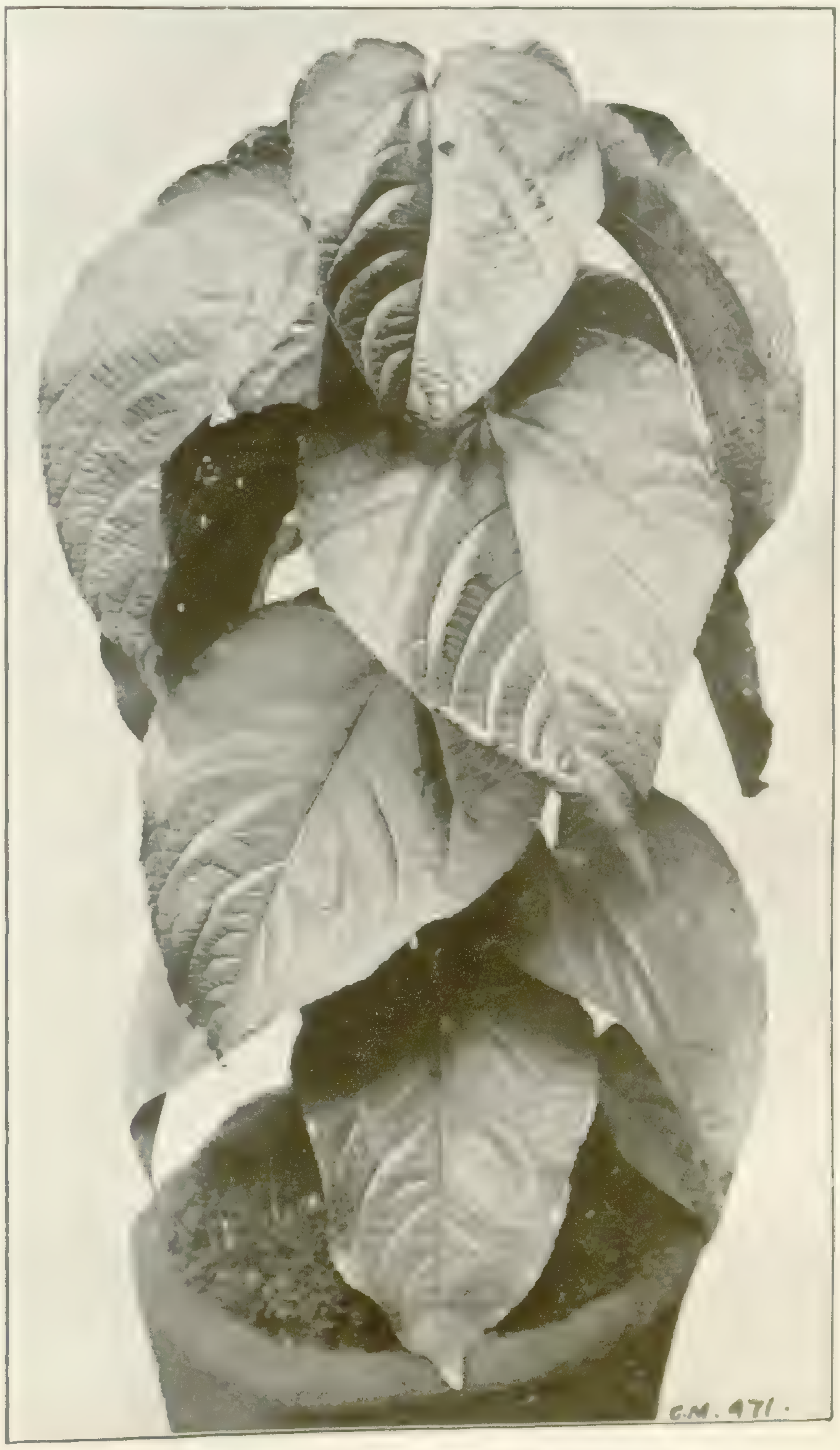
Out of 360 plants thus treated not one has failed to start into growth, either from the central axis or from lateral buds induced by its suppression. Such a wholesale case of resurrection of plants which were to all intents and purposes dead is probably without parallel, and affords incontestable proof that so long as any internal vitality exists, this can be assisted to assert itself if certain principles of fern growth are borne in mind. A fern is distinguished from a flowering plant by the fact that each frond as it rises produces its own independent bunch of roots close to its base, as an adjunct to the general system of roots which have been similarly produced by previous fronds, and which persist as feeders when these perish.

For healthy growth it is essential that these new roots find easy access to nutritive soil or the fronds will not perfect, and under a succession of such checks they will become smaller and smaller, and, deprived of the stimulus healthy foliage imparts to root action, the whole root system becomes weakened and the bulk of it dies. As a result of this, matters become worse and worse, especially with pot plants, since the soil is soured for lack of the circulation induced by healthy root action, and in time becomes a mere mass of dead roots and utterly unfit for plant development. The fern, however, probably continues to produce fronds, but these are entirely at the expense of the stored-up sap in the rootstock, and are consequently stunted in growth, and become weaker and weaker, the rot from below gradually spreading until finally it reaches the very growing point itself, and the fern is absolutely dead. From the success, however, which attended the operations described, it is evident that at any time before this period a fresh start can be induced and the plant be reinstated.

It is obvious, in the first place, that drastic as the treatment appears, it has the effect of permitting new roots to reach fresh soil at once, while the full exposure of the still living parts of the caudex to daylight, and the close, humid conditions, stimulate to the utmost either the renewed growth from the centre of the caudex or the formation of bulbils, which most ferns are capable of producing, as a means of self-preservation if the central growth be destroyed. The Hartstongue, indeed, is so gifted in this respect that the persistent green frond bases which make up the bulk of the old rootstock may be pulled off it, and, after cutting off the roots attached, dropped into a tumbler containing an inch of clean wet silver sand, when, if covered with a glass slip, they will in a month or two, each develop bulbils, at first like little white pimples, which speedily develop into typical plants. The bases thus removed, the central core, with the growing tip intact, if potted up, will soon restore the original specimen.

The above-described operations only embraced Polystichum angulare and Scolopendrium vulgare varieties, but both Lady Ferns and lastreas are open to resuscitation in a similar fashion; these species, however, are less liable to go wrong and must be treated very badly indeed to become as moribund as the Shield Ferns concerned. None of them, indeed, in the collection cited, failed to stand the removals, or required to be treated surgically to preserve them.

Chas. T. Druery, V.M.H., F.L.S.



POPULUS LASIOCARPA.

A fine large-leaved poplar from Central China. Introduced by Messrs. Jas. Veitch and Sons, Chelsea. F.C.C., R.H.S., Sept. 15.

ROSE NOTES.

In no previous season in Devon have our roses been so satisfactory as during the passing summer, which may be attributable to one or two things, partly, perhaps, to liberal feeding, and partly to the season. Although the dry, hot weather set in early, it was surprising the length of time the plants continued flowering. To the clear, brilliant weather may have been due the intense colouring which some varieties showed. The sun did not, as sometimes happens, take out the colour, neither did the darker shades scald, as they are liable to under brilliant sunshine. It may have been a drier atmosphere which had a beneficial influence.

TEA-SCENTED ROSE LADY GWENDOLEN LITTLE.
Awarded a card of commendation by the National Rose Society, Sept. 17. Flowers golden-yellow and bright pink.

Of the varieties which have been especially fine in colouring and quality the following are well deserving of mention:

Madame Jean Dupuy stood out prominently, among others, for in its blooms there is some of the colouring of the old Homere, with the shading sometimes seen in Marie Van Houtte, combined with freeness which makes this rose attractive.

Lady Roberts was exceptionally good, showing a beautiful combination of colour in its long-pointed buds.

Madame Ravary is still the best rose of its distinct shade of colour. It is a very clean-growing rose, with us, being far ahead of Le Progrès; not an exhibition flower, but excellent for all other purposes.

Marie Croiber, a darker Caroline Testout, was of remarkable colour and clean growth.

Victor Hugo, brilliant, without a blemish.

Liberty holds its own well against Richmond, and for shape and floriferousness one of the best.

Hugh Dickson, sweet and good.

Mildred Grant, was well favoured by the season, the blooms being simply immense.

Prince de Bulgarie showed that delicate colouring which is more visible some seasons than others.

Gladys Harkness and Gustave Grunerwald assumed their most attractive colour.

Souvenir de Pierre Notting was again superb. It is to be regretted that the flower stems are too weak to support the blooms, otherwise it would possess all the attributes of a good rose.

Etoile de France.—We really had a good bloom of this disappointing rose.

Earl of Warwick.—Of this fine rose we had some splendid blooms; from other quarters I hear favourable accounts of this rose.

Boadicea was charming; this is a free blooming rose, and delightful in colour; good for massing and cutting.

Sulphurea is free, of the colour indicated by its name, a thin flower, but good in the bud.

Varieties that fell some points behind the foregoing were:

Bessie Brown.—Last season, in a damp summer, and not much sunshine, this rose was good; this season, which one might think just the weather for its thick, full buds, it was useless with us, the blooms not opening.

Mrs. Edward Mawley was another variety which did not come up to last season, probably best from maidens.

Charles J. Grahame was disappointing.

Some of the pink-shaded roses fell far behind the summer of 1907, notably Mrs. Sharman Crawford, Mrs. J. Laing, La Tosca, bad shape and too loosely formed to become a favourite.

These are a few of the not quite satisfactory varieties. Yet withal, the roses have been simply grand during 1908. A recent rain of .92 of an inch is most beneficial in helping to make an autumn show of the Queen of Flowers. T. H. SLADE.

Poltimore Park Gardens.

SCHIZANTHUSES.

These lovely annuals are gaining rapidly in public favour, and there are few more elegant plants for conservatory and corridor decoration during the spring and early summer months. They are often called Butterfly Flowers. S. pinnatus, S. retusus, and S. Wisetonensis are all useful, and possess a great variety of colours, including pure white, orange, pink, and various shades of purple.

When liberally treated S. pinnatus will make specimens quite 8ft. high. The seeds should be sown in early autumn, using a light compost, and placing the boxes in a cold frame to germinate. Transplant the seedlings, placing four in a 3in. pot, and grow on a shelf in a greenhouse, maintaining a temperature of from 50 deg. to 55 deg. As soon as nicely rooted, they should be potted on into 6in. pots, using a compost consisting of two parts loam and one part leaf-soil, with the addition of a little silver sand and charcoal. When well established pinch out the points of growth to induce a bushy habit and promote a sturdy, vigorous growth.

Be careful with the airing, for, although schizanthuses enjoy plenty of air, they are liable to mildew if it is carelessly admitted. Should this attack the plants dust them over with flowers of sulphur. At the end of January the plants will be ready for their final potting, which should be into 10in. pots, using the compost recommended above, to which may be added a little Thompson's plant manure. Do not make the soil too firm, and be careful with the watering when the plants are newly potted, it being advisable to keep them a little dry until well rooted. It will now be necessary to stake the plants, using tall bamboo canes, and looping the growths up neatly with green raffia, taking care not to tie them tightly.

It is beneficial to syringe between the pots on bright days, and a light spray overhead is often desirable in the afternoon. When the pots are full of roots a light top-dressing with Clay's Fertiliser may be given with advantage. Soot water and farmyard liquid manure are also valuable, and may be given twice a week, an excellent plan being to mix the two together.

S. Wisetonensis and S. retusus are rather dwarf in growth, and are best flowered in 6in. pots. The latter is very useful for cutting, being especially stiff in the stem. As basket plants the schizanthuses are among the most graceful I have seen. Those who saw Messrs. J. Carter and Co.'s exhibit at the Temple Show had ample proof of their value when so grown.

J. GARDNER.

Eaton Hall Gardens, Chester.

Roses may be grown to perfection by following the instructions given in ROSES AND THEIR CULTIVATION, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

OSTROWSKIA MAGNIFICA.

The ostrowskia is, without doubt, when seen in vigorous health, the most splendid of all our hardy perennials. It was first introduced into this country from Bokhara in 1887, but, although it has been cultivated in England for over twenty years, it can scarcely be considered a success in the majority of gardens. It apparently appreciates a heavy soil impregnated with lime, as this is the nature of the ground at Lilford Hall, where the splendid specimen shown in the accompanying illustration was grown. The tallest growths of this plant measured seven feet two inches in height, and the bulk of the shoots were five feet six inches high. It is but seldom that this glorious plant is to be seen in such magnificence, and if it could invariably be grown in such superb form, it would, when in flower, be the cynosure of every garden that possessed it.

Unfortunately, however, it is but in few cases that such success is attained. As a rule, in the south it does not exhibit the robust health that it evidences in Northamptonshire, and I have seen numbers of plants whose height did not exceed three feet or four feet, while many have been considerably smaller. It apparently dislikes a hot, dry soil, even when this has been well mixed with old mortar rubble, as in such staple it has made but poor growth. A heavy soil is evidently to its liking, and this should be provided where possible. Its roots are exceedingly brittle, so much so that it is almost impossible to lift a plant from the open ground, even with the greatest care, without breaking them—a circumstance which renders its transplantation without damage a most difficult proceeding.

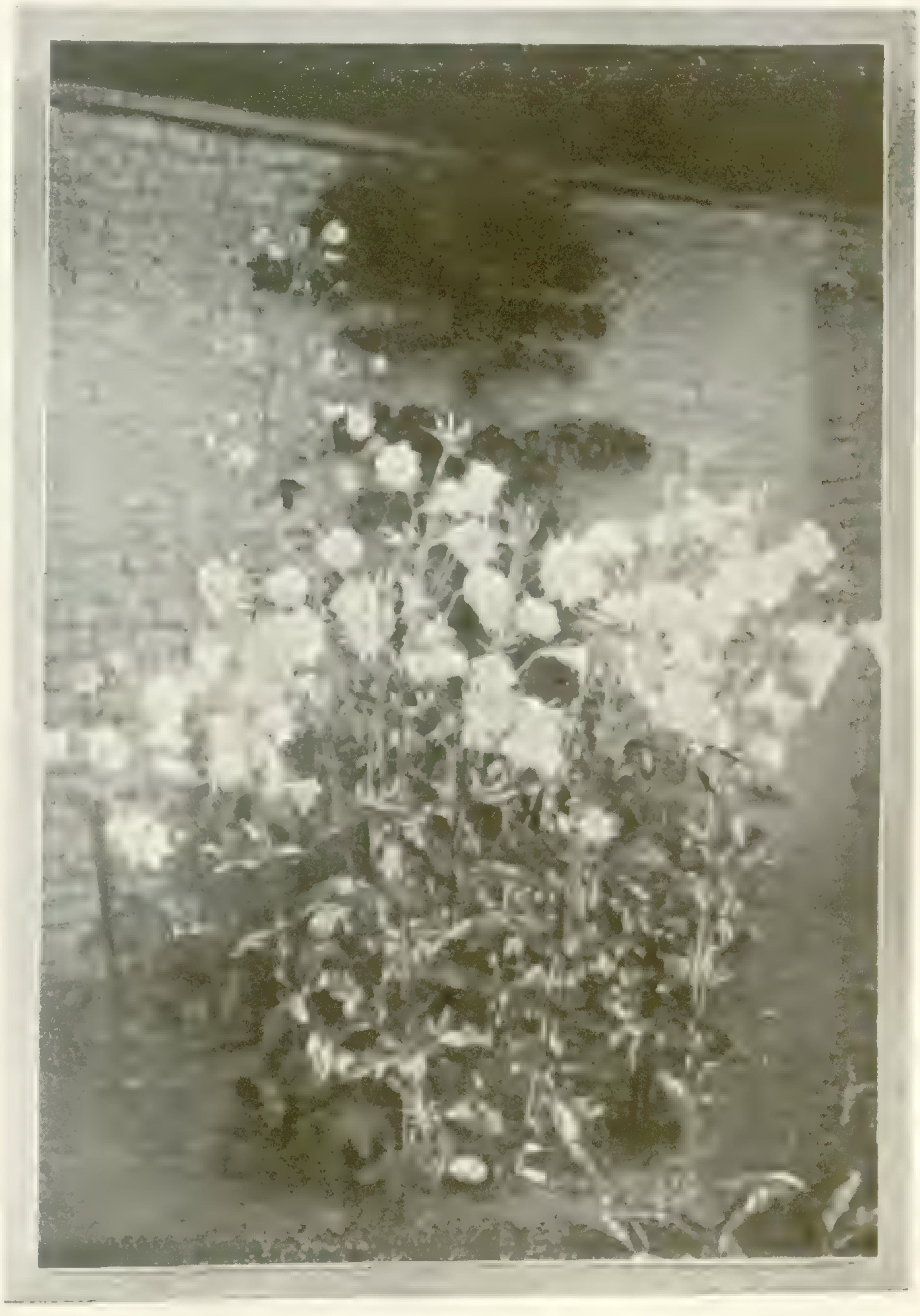
In the south-west plants often die off unaccountably, even when apparently permanently established. This is all the more surprising as the subject comes from a cold climate, and should be perfectly hardy. Opinions as to its winter treatment vary considerably. It has been asserted by some that it commences its root growth in November, and that it is therefore expedient that from that date it should be fully exposed to the winter's rains. This is, however, absolutely opposed to the conditions it experiences in its native land, if I can credit the statement of a friend, that there it is covered with several feet of snow, when it must be perfectly dry. Others advocate its protection during the whole winter under a glass light, until its young shoots break the ground in the spring. Some years since Mr. Archer-Hind had a fine plant of the white variety, about five feet in height, which was protected by a handlight every winter. One year this protection was forgotten, with the result that the plant died, and, consequently, did not appear in the spring. This disastrous effect of the lack of winter protection leads one to infer that it is wiser to keep the plants dry during that season, and, certainly, by so doing the conditions prevalent in the plant's native habitat are more nearly reproduced.

There are, however, many who scout the idea of protecting the ostrowskia, and aver that it is perfectly hardy, and absolutely indifferent to the severest frosts or the most torrential downpours, so that considerable difference of opinion exists as to its correct treatment. In making a bed for the ostrowskia this should be fully three feet deep, as its roots descend a great distance. Heavy soil mixed with old mortar rubble should be used, and frequent waterings given during the season of growth

Perhaps the best method of establishing the ostrowskia is to raise seedlings, and to plant these out when they are about six inches in height. The plants, when in bloom, are marvellously beautiful, the great lavender blossoms, fully six inches across, shining like satin, and remaining fresh in water, if cut, for well over a week. There is also a white variety, which is even more beautiful than the type.

S. W. Fitzherbert.

Silene laciniata Purpusi is, without doubt, one of the finest introductions of recent years. A very rare species, and, not being very well known, there appears to be a doubt as to whether this is a true hardy perennial alpine. The plant is quite hardy, except requiring a little protection, such as given below, and this is only necessary in very exposed positions in the north. It was found by Mr. Purpus growing on the high mountain ranges of Mexico, at an elevation of 11,000 feet. The plant has narrow green leaves, somewhat woolly, is of very graceful spreading dwarf habit, and the flower stems range from about six to eight inches high. The flowers are very freely produced, and of a rich fiery candinal-red, and produced nearly the whole of the summer. It was, as stated in your report, well shown by Messrs. W. Artindale and Son, Sheffield, at Shrewsbury. This variety requires rather a dry position, the roots growing rather deep, and having a liking for stony positions or deep crevices between rock stones. Do not disturb them after once planting if possible; in cultivation one should consider its natural position. A safeguard during winter is a little protection with small branches of dead spruce or shrub.—J. Edginton, Nether Green, Sheffield.



A FINE SPECIMEN OF OSTROWSKIA MAGNIFICA
In the gardens of Lilford Hall, Oundle.

WORK FOR THE WEEK.

◆

THE ORCHID HOUSES.

THE COOL HOUSE.—Where the general repotting has not been done it is advisable that it should now be finished without delay. The weather has been particularly favourable for odontoglossums, masdevallias, oncidiums, etc., that were potted at the end of August and beginning of September. I find that our plants are now rooting freely into the fresh compost, and there is little shrivelling of the pseudo-bulbs or other distress, which is usually more or less apparent after repotting. There is nothing more favourable to cool house orchids than damp and mild outside conditions, and every advantage should be taken of these favourable conditions to provide sufficient ventilation to keep the atmosphere freely circulating, both by day and by night. There will be a tendency to stagnation in the atmosphere of the house if this is not carefully seen to, and I consider a good deal of unsightly spotting and dead tips of the leaves may be traced directly to unfavourable atmospheric conditions.

SHADING.—There are numerous prominent orchid growers who advocate northern aspects for the cultivation of odontoglossums, while others are prepared to condemn such an aspect. We have both span roof and lean-to houses with a northern aspect here in which our odontoglossums are grown, and I have no preference for either structure, as we find little difficulty in growing odontoglossums. But there is one great advantage I find from lean-to houses with a north aspect, and that is the blinds are not required so early in the morning during the summer months, and from the present time until well into the month of March shading is dispensed with altogether. There can be no doubt but this is a considerable advantage, for with the thinnest possible autumn blinds there must, of necessity, be a considerable obstruction of light. We need ample light from now throughout the winter, when a large portion of the plants are in their fullest growth and developing their pseudo-bulbs. Do not bring the blinds into use unless it is absolutely necessary.

AUTUMN AND WINTER TEMPERATURE.—A great deal of the success in the cultivation of odontoglossums during late years may be traced to the winter treatment of the plants. The writer who would now advocate 40 degrees as a suitable night temperature for odontoglossums would, I think, be thought somewhat behind the times at least. I have long held that at a season when the plants are in the most vigorous stage of growth every encouragement is needed, and if cold treatment is afforded we may look to find the dwarfed effect upon plants growing under such conditions. I do not care to see our temperature fall below 50 degrees, in fact 53 to 55 degrees is our minimum at night, with normal outside conditions.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

SELAGINELLAS.—These plants, when well cultivated, are extremely serviceable as decorative subjects: either interspersed with flowering plants, or as an edging plant for the intermediate stove, they have but few equals. They will succeed in almost any kind of soil, providing it is porous, and their propagation is effected by division of the stems. These root very freely, and if from four to six pieces are put into small pans or pots, and kept in a warm, moist position, a most useful plant is quickly obtained. Some of the kinds thrive well in a cool house not subject to draughts, but with very few exceptions a warm intermediate stove is the ideal position in which to grow a batch of these useful plants; they ought to be always well shaded from the hot sun. S. cæsia, if exposed to the sun during the latter part of the summer, will attain a beautiful autumn-tint colour which is much appreciated when it is used for dinner table decoration or associated with white flowers. S. cæsia arborea has a somewhat distinctive character, and is a most useful plant for grouping, or arranging amongst other dwarf subjects.

CALADIUMS.—The corms that have already been thoroughly ripened should be placed in a dry position where the temperature does not fall below 60 degrees.

POINSETTIAS ought now to be placed in the intermediate house, where they may still receive alternate applications of weak farmyard liquid and clear soot water. An occasional top-dressing of some approved chemical fertiliser is also most beneficial to the plants in assisting the development of the bracts. The plants should not be crowded or the foliage at the base will suffer, and the value of the plants for winter decoration will be much reduced.

BOUVARDIAS.—These are now producing a plentiful supply of bloom, and if kept in a genial atmosphere, and steadily growing, a later display of flowers will come in at a time when it will be much appreciated.

GLOXINIAS.—The autumn-sown batch of these useful plants is now ready to be pricked off into shallow pans and placed in a light position near the glass, where the seedlings may remain until ready for potting singly into 60's. Bulbs that are already ripened off may be placed in a dry position, where the temperature does not fall below 50 degrees; they will not require much further attention until they are required for starting into growth again.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

FIGS in pots will be ready for potting on, or reducing, as the case may be. Soil for this purpose should consist of good loam, half-inch bones, and lime rubble or charcoal. No manure should be added to the soil. Figs do not require to be potted every season, but some grow stronger than others. Small oak tubs are perhaps the best receptacles, especially if they are not to be plunged, as they generally burst the pot when they become root-bound, and this is when they carry good fruit. After overhauling the batch they may be plunged back in ashes until required for forcing. See that they are all clean, and take care not to bruise the young fruits that are forming on the young wood.

CUCUMBERS.—The winter batch will now be making good growth and showing fruit. On the first appearance of spider sponge the leaves. If too many fruits are showing thin them out to enable the plants to be regularly productive. The past few weeks of mild weather has enabled them to grow away strongly without the aid of overmuch fire-heat; keep a night temperature of 70 degrees, rising to 75 by day, with the usual damping down, taking into consideration the weather outside. Where they are restricted for root room, as they are grown here on the stage, in a long box, fourteen inches wide, and of the same depth, cucumbers require top-dressing every few weeks, with the addition of diluted farmyard manure. A few more seeds or cuttings may be put in.

MELONS that are ripening their fruits will require a brisk heat, with a little ventilation at all times, and as they show signs of ripening reduce the water supply. Later melons will require constant attention in the way of heat and moisture to get them to mature their fruit satisfactorily; at this time of the year three or four fruits on a plant are sufficient, and these should be swelling fast now, or they will not have much flavour late in the season. Keep water away from the stem of the plant, and be guided to some extent by the weather in the amount of moisture put down in the house. If a great amount of fire-heat has to be used, red spider will make its appearance, and must be sponged off.

PEACHES AND NECTARINES.—Trees that are unhealthy, and have not carried their proper crop of fruit, perhaps through bad drainage, gross wood, or the roots rambling into strong, clayey soil, should be taken in hand. This means partial lifting. If the trees are old half the work should be done in one season. Start as far away as the border will allow, and proceed to undermine the roots, keeping these pegged up out of the way so that one may work more freely with the spade, but the roots should be covered with a wet mat. Tie the tree up to the wall or woodwork of the house, so that it does not sink too low; the new soil can then be better rammed down and the drainage made good; concrete or chalk are the best for a good foundation, but with old trees it is difficult to put a substantial base in the border. The soil should consist of good turfy loam, mortar rubble, or charcoal; if the loam is too heavy some old potting soil should be added, but avoid manure. Ram this well under the tree, and proceed to lay the roots out, keeping them well up to the surface, and damp them if they are at all dry. Cut all the torn, bruised roots off with a sharp knife. Water if necessary, and syringe the tree overhead for a time to prevent the wood shrivelling.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

CAULIFLOWERS.—The young plants from seed sown last month will now be ready for pricking out into hand lights, or planted out into cold frames. By this method they will be well away from the frost, and come in a little before spring-sown ones. Slugs must be guarded against in frames, for they would soon devour these tender seedlings. Autumn cauliflowers that are now turning in, should have the leaves bent over the heads to prevent the frost from reaching them. Those plants that have reached their full size should be pulled up and hung head down in a cool shed having a north aspect. The heads will keep quite fresh in this way for over a week.

CELERY.—This useful vegetable will now require a good deal of attention, but by giving it small applications of soil almost weekly well-blanched sticks may be secured. The earliest batch of plants will now be ready for using, and the latest rows should have their side growths removed and be tied up with raffia, ready for the first lot of soil to be placed round each plant. If the rows are dry a good watering, followed by liquid manure before earthing, will be highly beneficial. It is not wise to feed late celery too much in its earlier stages, for this causes a sappy growth, which will not stand severe and changeable weather.

WINTER ONIONS.—The seeds seem to have germinated very well, and if the hoe is run occasionally through the rows it will assist them considerably, and strengthen the young growths.

WINTER SPINACH.—This crop should now be freely thinned out to about six inches from plant to plant, and the soil between the rows loosened, so that good succulent leaves may be had.

GLOBE ARTICHOKES may now be protected by placing some long litter around their crowns, and if the stock is limited it is a safe plan to pot up a number of offsets in case a severe winter should destroy the old plants; seven inch and eight inch pots are suitable for this purpose. Place them in a cold frame until the following April, when they can be planted out into permanent beds. They will produce nice heads the same year, but probably a little later than the parent plants, which will be all the better, as a succession of useful heads may then be cut.

CHINESE ARTICHOKE (STACHYS TUBERIFERA).—These should now be lifted and stored away in clamps until wanted. They are in season from now till Christmas, but after then the roots become too sweet. This has not become a popular vegetable, perhaps because of its small size, and also the time it takes to prepare it for cooking, but it makes a very agreeable change, and is always liked in the dining-room. Select the largest tubers and store them in sand, which will keep them in a plump condition without shrivelling. A north shed should be chosen and a place that is just out of the reach of frost, for it kept too close they will soon start to grow again.

OUTDOOR TOMATOES have, in this locality, been of fine quality this season. Any fruits that are not quite ripe may be gathered and brought into the houses, where they will finish.

HERBS.—Should there not be a good supply of these gathered no time should be lost in making good the deficiency. Cut the growths when they are perfectly dry, and expose them to the air before storing.—T. W. Birkinshaw, Hatley Park Gardens.

Rose sinica Anemone.—If I had space for but one rose on a south or south-west wall, well exposed to sun, my choice would rest with Rose sinica Anemone. It's beauty is of that kind which will never become commonplace, for whatever amount of pleasure we derive from it in one season, it always appears to be eclipsed as we hail its return in each succeeding year. The flowers, when in bud, are long and pointed, and as they open they reveal petals coloured a soft flesh pink, deepening with age to an exquisite shade of clear shell pink; individual flowers frequently measure four inches in diameter, and for a single rose they remain in perfection longer than any other. The foliage is bright glossy green, and the wood of the stems is of a ruddy purple colour; the combination of so many distinct features cannot fail to commend this rose to amateurs as a gain to their collections at this planting season.—Thomas Smith, Walmsgate Gardens.

CULTIVATION OF GLADIOLI.

The following paper was recently read by Mr. Arthur Cowee, of Berlin, N.Y., before the Philadelphia Florists' Club:—

"I address you this evening upon a subject which, in spite of other business cares and responsibilities, has been uppermost in my ambition and desire to excel; that is, the cultivation of Gladioli."

Doubtless some, if not all, of you are familiar with the exceptionally rapid development and improvement of these flowers during the last ten years or so. Especially I refer to the artistic forms and colouring of enormous flowers, properly arranged on a gracefully bending spike.

The time was not long ago when practically the only gladiolus bulbs commercially offered were of one type, the Gandavensis, with stiff, straight spikes, comparatively small flowers arranged closely together, all of the buds developing at about the same time. The variety of colours also was limited, and it is a wonder to me that, except for massive decorations, the average florist has been slow to take up the growing of this flower.

Our Debt to Groff and Lemoine.

To such hybridisers as Groff and Lemoine we are indebted for the many types of beautiful and artistic flowers which have been recently introduced, and upon which, although it may seem impossible, improvement is constantly being made. These modern hybrids, from their cheapness and adaptability to any kind of decoration, either large or small, are yearly tempting more and more the artistic, critical and exacting florist. I do not wish to appear in the light of condemning the entire Gandavensis family. Such is not my intention, for among the hosts of named varieties of this class are many which I value highly on account of some particular attribute or attributes which render them invaluable for certain purposes. For instance, I have found the varieties Shakespeare, May, Augusta, and Brenchleyensis the most reliable for forcing purposes, one year with another. With a succession of plantings, also, this type can be used with splendid results in masses on extensive lawns, where the contrast in colours is most pleasing.

As my task has been principally in the direction of collecting, selecting, classifying and growing commercially these flowers, my talk will be on this issue rather than from the scientific or hybridiser's standpoint, although I have had considerable experience with hybridising in my early work.

Early Experiences.

Ever since I knew anything about flowers the gladiolus has been my favourite, the growing of which I called a fad up to a few years ago, when, realising the possibilities in the development and consequent demand for these modern types, I concluded, if possible, to make a business of the growing of these bulbs. I was convinced, also, that the soil and climatic conditions of my section of the country were especially adapted to the development of a strong, vigorous bulb, which in the gardens of the amateur and professional growers would give most satisfactory results. How well I have succeeded is indicated by the harvest in 1907 of about [illegible] bushels of bulbs, bulblets, and cormels, all of which stock has been disposed of during the season of 1908-1909, with the exception of such as we were obliged to retain for further growing. This stock is made up of selections from unnamed seedlings and named varieties placed in mixtures and collections, also named varieties of recent introduction, as well as novelties not yet introduced, and, of course, some old varieties, which by reason of some particular attributes are still in demand, are retained.

Comparing the wild species with the modern hybrids, one could hardly believe that the latter were offsprings of the former. Of the wild species referred to, there have so far been discovered 140 or more, a few being natives of Europe and Western Asia, a few from the mountains of tropical Africa. Most of them, however, are from South Africa (Cape Colony and Natal). The leading parents of garden sorts are the species psittacinus, cardinalis, Saundersi, purpureoauratus, Papilio, dracocephalus, Cooperii, Adlami and cruentus. But few of them are of value to the garden, and then only as curiosities. In addition to the use of wild species, many domestic species have been produced which have been of incalculable value in securing new types and colours, as far as the general habits and constitution are concerned.

History of the Gladiolus.

The gladiolus is quite an old flower, for we find that as far back as 1596 Gladiolus segetum was cultivated, and in 1629 Gladiolus Byzantinus was quite popular. Also during the last half of the eighteenth century many species were introduced, causing a great deal of interest in this flower.

At one time Gladiolus segetum and G. communis were highly prized for their medicinal properties, but for what ailments I have been unable to ascertain. The starchy bulbs of some African species were also used by the natives as food. In 1823 Mr. Colvill, of Chelsea, brought to notice the variety Colvillei, a cross between cardinalis and tristis, and this later breeding has shown some beautiful hybrids, especially adapted for early forcing, although the flowers are quite small.

It seems, however, to have been left to Van Houtte to start the ball rolling, when in 1841 he introduced to the trade the Gandavensis type, said by some authorities to be a cross between psittacinus and cardinalis, while others claim it is the result of crossing psittacinus and oppositiflorus. I am inclined to the former theory, although in some so-called Gandavensis hybrids the blood of oppositiflorus is recognised. Especially is it prominent in that old variety, Ceres.

The Lemoinei type, a hybrid of purpureo-auratus and Gandavensis, was first introduced in 1878 by Victor Lemoine, and the Nanceianus, a hybrid of Lemoinei and Saundersi, was introduced in 1889 by the same hybridiser. About this time, or perhaps a little earlier, a cross between Gandavensis and Saundersi was obtained by Max Leichtlin, of Germany, which strain came to America and was named Childsi.

About the year 1887 I happened to see a small planting of gladioli in the garden of a personal friend, which, on comparing quality, vitality, and multiplying functions, were a revelation to me. I found, upon inquiring, that they were hybrids from the trial grounds of H. H. Groff, of Canada, and immediately I made it my business to stock up as rapidly as possible from that source, so that to-day I have between 15,000 and 20,000 seedlings of exceptional merit, the result of crosses made by that hybridiser.

Culture in the Field.

The methods employed in the successful cultivation of the gladioli are too well known to all of you for me to go into full details; hence, I will touch lightly upon this subject. One of the principal points is to select proper soil, for although they will bloom in almost any kind of soil and under adverse conditions, still, like most flowers, it has its choice of soils. Sandy loam is preferable, but if this cannot be supplied, heavy soil may be much lightened by the application of sand. The soil also should be well drained, for the gladiolus will not thrive where there is excessive moisture.

The soil should be well manured in the autumn and thoroughly ploughed, and again in the spring should be well pulverised, at which time the lightening process with sand should take place if required. The planting can be made in rows or in masses, according to the uses which are to be made of the flowers. If space is limited the rows may be as close as eighteen inches apart. Such planting, of course, is intended for cut flowers.

Four inches is shallow enough to plant in any soil for the bulbs to take strong root and to permit of sufficient space for the new bulb or bulbs to form on top of the one planted. By planting this depth, and even a little deeper in especially light soil, the spike from the old corm to the top of the ground is a help toward supporting the mass of flowers which are sure to follow proper cultivation, and, as a general rule, no stakes are required except under extreme conditions, such as continued high winds, sometimes accompanied by driving rains.

Gladiolus bulbs may be carried through the winter year after year in good condition, if stored in a dry place, with as low a temperature as possible above the freezing point.

Propagation.

The multiplication of the same variety is accomplished in two ways: First, by division; the old bulb producing from two to as high as ten new blooming bulbs. Secondly, by offsets or cormels, which are formed among the roots between the old bulb planted and the new bulb or bulbs, which form on the top. A large percentage of these cormels require two years' growth in order to secure blooming bulbs, and the first year may be sowed in rows one inch deep and about twelve inches apart.

New varieties are secured only from seed, and there is no argument which would convince the modern grower that chance seedlings, by bees, butterflies, and other insects, are as good as those produced by hand hybridisation, especially when hybridised by one whose experience and knowledge of the habits and constitution of the parent plants, as well as the proper methods to secure colour results, have taught him when and how to make such crosses. Sports now and then appear in my fields, but, so far, I have been unable to establish and reproduce them.

General Usefulness.

The blooming of the gladiolus, coming as it does at the time of the year when there is comparatively a dearth of other flowers, is a boon to the florists. With its new forms and colouring, there is no decoration for which it is not eminently adapted, and the absence of perfume, as well as the odour from decomposition, which takes place with many other flowers, places it in the lead for table decoration. Beautiful and artistic wedding, funeral, and other designs can be made with the individual flowers, while the spikes can be arranged with green foliage in sprays and other forms, lasting much better than roses or carnations, or, in fact, any other flower, which, by reason of such use, must remain some time without water.

No florist, whether growing for the general or local market, should neglect to force each year at least a few gladioli. Very few are so fortunate as to have their carnation houses entirely free from stem-rot, and consequent bare spaces, in which the gladiolus may be planted with excellent results, and generally with a reasonable profit for the space occupied. Then, too, there are other house crops, among which are chrysanthemums, which can be economically and profitably followed by the planting of gladioli.

Planting in the Bench.

The temperature in which the best results can be secured is that under which the carnation thrives. Corms, after being harvested from the fields in the fall, should be given a reasonable resting period, after which they may be planted in the bench midway between the surface and the bottom of the soil. Sufficient root depth is thereby given and the necessity of staking is also avoided.

The gladiolus is well called the "People's Flower," and I hope that, by careful selection and combination of those varieties best adapted to the use of the craft, the day will not be far distant when it will be a necessary asset to florists in general, and will in due time receive the additional title of the "Florists' Flower."

Spring-flowering Plants. — If there are any surplus plants of either violets or myosotis, after autumn planting is completed, these should be placed in the shrubberies or wild garden; all who saw the splendid effect of myosotis and shrubs at Kew last season must have been impressed with its beauty. Myosotis palustris should be given the damp places.—E. F. H.

CROYDON CHRYSANTHEMUM SOCIETY.
21st ANNUAL SHOW, PUBLIC HALLS, CROYDON, TUESDAY and WEDNESDAY, Oct. 27th and 28th.
Challenge Cups, £35, with £25 money. Total Prizes over £120. Entries close Oct. 22nd.
W. B. BECKETT, "Woodcote," Purley.

KENT COUNTY CHRYSANTHEMUM and HORTICULTURAL SOCIETY.—The TWENTY-FIRST GRAND ANNUAL EXHIBITION will be held in the RINK HALL, BLACKHEATH, opposite Blackheath Railway Station, S.E. and C.R., on Oct. 28th and 29th, 1908. Schedules and all particulars of the Hon. Sec., F. FOX, The Gardens, The Cedars, Lee, S.E.

VICTORIA HALL, EXETER.
DEVON AND EXETER HORT. SOCIETY'S FLOWER, FRUIT, ETC., SHOW.
FRIDAY and SATURDAY, 23 and 24 October.
SILVER CHALLENGE CUP value £30, FOR CUT BLOOMS.
Schedules, etc., from G. W. JACKSON, Hon. Sec., 15a, Bedford Circus, Exeter.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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National Chrysanthemum Society.

OCTOBER 7 and 8.

The first of this society's exhibitions for the present year was held on the above dates at the Crystal Palace. The weather was very favourable, and the flowers were good. On the whole, the competition was also brisk, and the show was a very pretty one. There was one unpleasant circumstance in connection with the show, and that was the disqualification of several competitors, chiefly Scottish growers, who had set up bunches of blooms that were more than the stipulated eighteen inches wide. No doubt the flowers spread a little after they were set up, but as one of the chief offenders had barely finished when judging commenced he could hardly urge this in defence. The regulation, "Not exceeding eighteen inches in diameter," may be a good one or a bad one, but that matters little when it is the regulation under which a competitor enters, and we have no sympathy for anyone, "Jew or Gentile, bond or free," who fails to act according to the regulations, and then feels aggrieved because he is disqualified. We think, however, that as the disqualified exhibits were so fine, some special award should have been made them outside the competition.

OPEN CLASSES.

Two groups of flowers and flowering plants of chrysanthemums were staged, and Messrs. J. Peed and Son, West Norwood, and Mr. F. Brazier, Caterham Valley, were the exhibitors, and they won awards as placed. Each used foliage plants freely in the arrangement, and showed large blooms as well as early-flowering chrysanthemums.

Mr. Parr, gardener to F. A. Bevan, Esq., Trent Park, Barnet, was the only exhibitor of twenty-four Japanese blooms, in vases, eight varieties, and he was awarded first prize for good specimens of Lady Henderson, Valerie Greenham, Mrs. A. T. Miller, G. Mileham, Miss P. Chittenden, Mr. R. Hooper Pearson, Sapho, and Formality. Premier award for a dozen large Japanese blooms, distinct, was won by Mr. Martin Silsbury, Shanklin, Isle of Wight, with handsome examples of some yellow seedlings, Algernon Davis, Mrs. L. Thorn, Mrs. A. T. Miller, Mrs. G. F. Foster, and Bessie Godfrey; Mr. G. Halsey, gardener to Mr. J. Lyon, Riddings Court, Caterham Valley, second; and Mr. H. Parr, gardener to F. A. Bevan, Esq., Trent Park, Barnet, third. For six large blooms the awards were made in favour of Mr. A. C. Horton, gardener to T. L. Boyd, Esq., North Frith, Tonbridge; Mr. F. Blackett, gardener to Mrs. Ford, Park Side, Ravenscourt Park; and Mr. T. J. Broom, gardener to Miss Langworthy, Guy's House, Holyport, in the order of mention.

First prize for twelve bunches of early-flowering pompon varieties was won by Mr. J. Smellie, Pansy Gardens, Busby, Glasgow, who won with Canari, Blushing Bride, Flora, Fred Peale, Scarlet Gem, Piercy's Seedling, Mr. Selby, Alice Butcher, Filberta, St. Croutts, and Mignon. Mr. G. Halsey led for two vases of large blooms, nine flowers in each, and he had bold arrangements of yellow and chestnut coloured varieties, fern fronds, and croton leaves.

Some grand exhibits were put up in the class for a dozen bunches of undisbudded chrysanthemums, from Mr. Smellie and Mr. G. Bowness, who both showed grandly, but they had exceeded the limit of eighteen inches width in their bunches, and so were disqualified, and the awards were made in favour of Mr. A. Hawkins, Gordon Road, Ealing; and Mr. H. Parr, Trent Park Gardens, Barnet, who both showed fairly well, but were a long way behind the disqualified sets. Mr. A. W. Thorpe, South View, Lichfield, was also a disqualified competitor. Polly, Horace Martin, Roi des Blancs, Goacher's Crimson, Galatea, Caledonia, Elstob Yellow, Firefly, Market White, Col. Bernard, Maggie, and Maxim were a few of the best varieties. Mr. Hawkins was awarded first prize for twelve bunches of undisbudded blooms.

Out of ten entries in the open class for table decorations, Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Donnington, Laurie Park, Sydenham, led the way with a pleasing design in yellow and bronze-red flowers and croton leaves. Mrs. H. L. Sell, Kempton Villa, Luton, second, with yellow and orange flowers, prettily disposed; Mr. P. Edwards, gardener to C. A. Morris, Esq., Beechy Lees, Sevenoaks, third. First prize for three epergnes fell to Mr. Trossell, Sydenham, who had small yellow flowers and light maidenhair fern fronds; Miss C. B. Cole, Feltham, second, with a slightly heavier arrangement; and Mrs. G. Knights third.

AMATEURS.

Mr. A. W. Trossell, 12, The Parade, Beckenham, secured the chief award for a table decoration with a pleasing design in soft yellow flowers and ampelopsis leaves; Mr. J. W. Harrison, gardener to R. Girvin, Esq., Ashbourne, Laurie Park, Sydenham, second, with yellow and cream flowers; and Miss E. H. Ekins, Rushden, St. Albans, third, with yellow and orange flowers. For six bunches of disbudded early chrysanthemums Mr. W. H. Chalk, 224, High Street, Slough, led with beautiful flowers of Mrs. T.W. Scott, Nellie Blake, Miss B. Miller, Harvest Home, Perle Rose, and Le Pactole; Mr. R. Sutherland, Auld Aisle, Kirkintilloch, N.B., second.

Mr. A. Hoggan, Strathyre, Busby, Glasgow, led for a dozen bunches of early-flowering pompon chrysanthemums, with a handsome lot that included Filberta, Scarlet Gem, Piercy's Seedling, and Mignon. Mr. A. Hoggan, Busby, scored for three vases of undisbudded early varieties, with Roi des Blancs, Perle Chatillonaise, and James Bateman, all very fine; Mr. C. Fox, Richmond Lodge, Eridge Road, Tunbridge Wells, second; and Mr. W. Webb, third. Seven entries. For three vases of early-flowering varieties, disbudded, Mr. W. H. Chalk led with Le Pactole, Mrs. J. W. Scott, and a seedling; Mr. A. Hoggan, Busby, second; and Mr. W. Webb, third.

OPEN CUT FLOWER CLASSES.

Mr. J. Smellie was a good first for six bunches of early-flowering pompon varieties, showing splendid bunches of Mignon, La Luxembourg, Filberta, White St. Crouts, Bronze Blushing Bride, and J. B. Duvoir; Mr. J. Emberson second, and Mr. W. J. Cornell, gardener to J. H. Payne, Esq., Chatsworth Road, West Norwood, S.E., third. Premier award for six bunches of early Japanese and decorative varieties was won by Mr. J. Emberson with good flowers of Perle Chatillonaise, Claret, Le Pactole, Goacher's Crimson, Dame Blanche, and Rubis; Mr. G. Bowness, Riverside Nursery, Busby, second, and Mr. J. Smellie third.

Mr. G. Halsey, Ridding's Court, Caterham Valley, led for three yellow Japanese blooms with Mrs. W. Knox; Mr. A. C. Horton, gardener to T. L. Boyd, Esq., North Frith, Tonbridge, second with the same variety, and Mr. T. Aley, Knightons, East Finchley, third. For three white Japanese blooms Mr. H. Parr, Trent Park Gardens, scored with splendid flowers of Mrs. A. T. Miller; Mr. T. Aley was second with Miss A. Byron, and Mr. J. Brown third with Beatrice May.

For three large Japanese blooms of any other colour than white or yellow Mr. A. Horton led with Mrs. G. Mileham, Mr. G. Halsey second with the same variety, and Mr. F. Blackett third with Lady Henderson. Mr. J. Smellie, Busby, Glasgow, was easily first for a vase of early-flowering single varieties, and he had a splendid vase. Mr. F. Brazier, Caterham Valley, second, and Mr. J. Emberson, Walthamstow, third.

Miss C. B. Cole, Feltham, led for a basket of chrysanthemums with a bold and handsome arrangement of yellow, bronze, and orange flowers and Asparagus Sprengeri, Mr. J. Emberson, Grove Road Nursery, Walthamstow, second, and Mrs. G. Knights, Parkfield Stables, Sydenham, third; six extries. Miss C. B. Cole, The Vineyard, Feltham, secured the first prize for a basket of autumn berries and foliage with a beautiful arrangement of honesty, purple plum leaves, clematis sprays, blackberries, bryony berries, snowberries, bracken, etc.; Miss E. H. Ekins second, and Miss J. Martin, Lancaster Road, South Norwood, third.

Mr. J. Stevens, gardener to W. H. Stone, Esq., Donnington, Laurie Park, Sydenham, scored for a vase of chrysanthemums; Mr. W. Webb, gardener to J. Chapman, Esq., Melrose, Laurie Park, Sydenham, second, and Mr. E. Houlton, gardener to J. Gardner, Esq., Croxted House, Dulwich, third. Some vases were disqualified in this class because they were over size.

NON-COMPETITIVE.

Messrs. W. Wells and Co., Merstham, were very large exhibitors of early chrysanthemums, Michaelmas daisies, pentstemons, and pyrethrums. They had a very bold central grouping of tall stands of Carrie, Roi des Blancs, Ethel Slade, Perle Chatillonaise, Mrs. A. Thomas, Polly, and other fine early chrysanthemums, set in a groundwork of the lighter Michaelmas daisies, such as Hon. Edith Gibbs, Delight, Ideal, etc. A few large blooms of chrysanthemums were set in the foreground. On either side there were long tables of vases of these several subjects, so that the whole made up a big and effective display. Mr. T. Williams, Oxford Road, Ealing, set up a very artistic display of table decorations, using his silvered receptacles. Messrs. S. Spooner and Sons, Hounslow, contributed a fine collection of handsome apples and pears, their baskets of Hollandbury, Newton Wonder, Winter Pearmain, Vicar of Beighton, Allington Pippin, Peasgood's Nonsuch, Beauty of Kent, and Rival attracting a great deal of attention. Messrs. T. S. Ware, Lim., Feltham, contributed a bold and bright exhibit of early chrysanthemums and cactus and paeony-flowered dahlias, these latter being very fine for so late a date. The chrysanthemums were put up in tall stands, so as to show a mass of each variety, and the dahlias were arranged in low pyramids below them. It was an instructive exhibit, and a compliment to the fine weather. Mr. F. Brazier, Caterham, set up a big group, composed chiefly of Michaelmas daisies, phloxes, and early chrysanthemums; this occupied the far end of the show area, and the bold masses of Mrs. Frank Brazier, Vimineus, Freedom, and Ideal Michaelmas daisies were very fine.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, contributed a fine collection of Michaelmas daisies, tastefully set up in large vases and in large sprays. Coombe Fishacre, Mrs. J. Rayner, Mrs. Huson Morris, May Crump, Hon. Edith Gibbs, Lil Fordell, Elaine, Mrs. S. T. Wright, and Sophie Arnold were a few of the best in a good lot. White and yellow early-flowering chrysanthemums were used as a foreground. Messrs. J. Cheal and Sons, Crawley, brought up a handsome collection of the best cactus, pompon, and single dahlias, with a few early chrysanthemums. Roses formed the chief attraction in the exhibit set up by Messrs. Hobbies, Lim., Dereham, and these were charmingly shown, and in quantity, set up in vases of varying height. These were backed by vases of various light Michaelmas daisies, solidago, and a row of tall stands of Glenton, High Sheriff, Duke Henry, Queen Emma, King Leopold, Nicholas II., and Germania pæony-flowered dahlias. The fragrance of Betty, Medea, Madame Hoste, Countess of Gosford, Joseph Hill, G. Nabonnand, Lady Roberts, and Madame Abel Chatenay roses was delightful.

One of the prettiest of the several non-competitive displays was the one arranged by Mr. Norman Davis, Framfield, Sussex, who had a charming arrangement of Michaelmas daisies set up in tall bamboo stands. The margin of the group was occupied by bowls of fine varieties of Aster Amellus, notably Framfieldense, Charles Davis (lovely), Perry's Favourite, and the early Amellus grandis, and over these rose the stands of the elegant Hon. Edith Gibbs, and Cordifolius elegans, with a bold central stand of large yellow and white chrysanthemums. Solidagos and bronze chrysanthemums formed a pleasing groundwork for the whole display. Messrs. J. Peed and Sons, West Norwood, showed begonia blooms from the open ground. Mr. G. W. Riley, Herne Hill, and Messrs. Dowel and Co., Hammersmith, contributed summer houses and pottery respectively. Mr. P. Ladds sent some pretty pot plants of Esme Reed chrysanthemum from Bexley, and Mr. W. J. Godfrey, Exmouth, showed a new method of staging blooms, consisting of easily adjustable painted slats, and tin tubes, all light, and easily packed up. Messrs. J. Laing and Sons, Forest Hill, showed a group of crotons and dracænas.

MEDALS.

Gold.—Messrs. Hobbies, Lim., Dereham; Mr. Norman Davis, Framfield; Messrs. T. S. Ware, Feltham; Messrs. W. Wells and Co., Merstham.

Silver-gilt.—Messrs. Spooner and Sons, Hounslow. Mr. H. J. Jones, Lewisham; Messrs. J. Cheal and Sons, Crawley.

Large Silver.—Mr. F. Brazier, Caterham Valley; Messrs. J. Laing and Sons, Forest Hill; Mr. G. W. Riley, Herne Hill.

Silver.—Mr. P. Ladds, Bexley; Mr. T. Williams, Oxford Road, Ealing; Messrs. J. Peed and Sons, West Norwood.

Horticultural Show at the Franco-British Exhibition.

Our readers will remember that we gave a report of the show held at Shepherd's Bush on September 30 and October 1 and 2, in our issue of October 3, and that we were unable then to publish the judge's awards because of the delay in making these known. We now publish a list of the chief awards, and refer our readers to pp. 752, 753, and 754 for comments on the show.

GOLD MEDAL AND GRAND PRIX.

To the Société d'Horticulture de Montreuil, for dessert fruit; Societé d'Agriculture du Gard, fruit; Mr. E. Beckett, gardener to Hon. Vicary Gibbs, Aldenham House, Elstree, for vegetables; Messrs. Vilmorin, Andrieux, and Co., Paris, for vegetables; Messrs. G. Bunyard and Co., Maidstone, for fruits and flowers; Messrs. Sutton and Sons, Reading, for fruits, vegetables, and flowers; Messrs. J. Carter and Co., High Holborn, for fruits, vegetables, and flowers; Messrs. H. B. May and Sons, Edmonton, for ferns; Messrs. T. Rivers and Son, Sawbridgeworth, for fruit and fruit trees; Messrs. Paul and Son, Cheshunt, for roses.

GOLD MEDALS.

Messrs. Vilmorin, Andrieux, and Co., Paris, for plants; Mr. Maron, Brunoy, France, for orchids; Sister Ernstine, Warrenhoe, Hertford, for table decorations; Messrs. W. and J. Brown, Peterborough, for orchids; Messrs. J. Stredwick and Son, St. Leonards, for dahlias; Mr. M. V. Seale, Sevenoaks, for dahlias; Mr. S. Mortimer, Farnham, for show dahlias; Mr. Charles Turner, Slough, for pompon dahlias; Mr. J. H. Goodacre, gardener to the Earl of Harrington, Derby, for fruits; Messrs. Croux and Sons, Chatenay, Seine, for fruits; Messrs. Lecointe and Martin, Seine, for fruits; Mr. Passy, Seine et Oise, for fruits; Messrs. H. Cannell and Sons, Swanley, for hardy fruits; the Syndicate des Maraichers, Paris, for vegetables, etc.; Mr. L. Gravel, Chateau de Bouff, Aix, for grapes; Messrs. W. Wells and Co., Merstham, Surrey, for chrysanthemums; Mr. L. R. Russell, Richmond, for trees and shrubs; Messrs. Wm. Paul and Son, Waltham Cross, for fruit trees and roses; Mr. Bound, gardener to Sir Jeremiah Colman, Gatton Park, Reigate, for orchids; Messrs. Dobbie and Co., Marks Tey, for potatoes and dahlias; Messrs. Clibrans, Altrincham, for vegetables; Mr. Kaeska, Rue St. Martin, Paris, for cut flowers; Mr. W. Poupart, Twickenham, for bottled fruits; Messrs. Toogood and Sons, Southampton, for vegetables.

SILVER GILT MEDALS.

Mr. Guichard, Nantes, for plants; Messrs. Stanley and Co., Southgate, for orchids; Miss Riley, Horticultural College, Studley, for table decorations; Messrs. J. Cheal and Sons, Crawley, for cactus dahlias; Mr. C. Turner, Slough, for show dahlias; Mr. M. V. Seale, for pompon dahlias; Mr. Chevillat, Seine and Marne, for dessert fruit; Mr. Dupont, Montreuil, for dessert fruit; Mr. Lacont, for dessert fruit; Messrs. Millet and Sons, Seine, for dessert fruit; South Australian Government, for dessert fruit; Mr. E. E. Grimston, York House, Sutton, Surrey, for dessert fruit; Mr. Stowes, Whitehall Gardens, Sittingbourne, for hardy fruit; Messrs. John K. King and Sons, Coggeshall, for vegetables; Mr. Ferard, Paris, for vegetables; Mr. Dijit, for vegetables; Misses E. and M. Kippin, Hutton, for alpine plants; Messrs. S. Spooner and Sons, Hounslow, for collection of fruit; Messrs. R. Harkness and Co., Hitchin, for display of roses; Royal Jersey Agricultural and Horticultural Society, for collection of pears; Messrs. Carter Page and Co., London Wall, E.C., for cut flowers; Messrs. G. and A. Clark, Dover, for cut flowers; Messrs. T. S. Ware, Lim., Feltham, for begonias, etc.; Messrs. H. Cannell and Sons, Swanley, for cut flowers.

SILVER MEDALS.

Miss M. Holder, Bengeo, for a basket of autumn foliage and berries; Mr. M. V. Seale, Sevenoaks, for show dahlias; Mr. W. Treseder, Cardiff, for show dahlias; Messrs. Keynes, Williams, and Co., Salisbury, for pompon dahlias; Mr. J. C. Sutton, gardener to the Earl of Stanhope, Chevening Park, Sevenoaks, for hardy fruit; Mr. N. F. Barnes, Eaton Gardens, Chester, for hardy fruit, also for collection of apples; Miss Wilkinson, Horticultural College, Swanley, for hardy fruit; Mr. Ben Ashton, gardener to the Earl of Lathom, Ormskirk (two), for collections of potatoes; Messrs. W. and J. Brown, Peterborough, for fruit and cut flowers; Messrs. G. Yuill and Co., Fenchurch Street, E.C., for collection of Australian fruit; Messrs. G. Massey and Sons, Spalding, for collection of potatoes; Mr. J. C. Fordy, North Ham, for collection of gladioli.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, September 29.

Present: Mr. E. A. Bowles, M.A., F.L.S., F.E.S. (in the chair); Dr. A. B. Rendle, Rev. W. Wilks, Messrs. G. Gordon, V.M.H., W. Hales, E. M. Holmes, H. T. Güssow, A. Worsley, W. Fawcett, G. S. Saunders, J. T. Bennett-Poë, J. W. Odell, and F. J. Chittenden (secretary), with Mr. G. Paul, V.M.H., visitor.

THE LATE MR. GEORGE NICHOLSON, V.M.H.—The Chairman referred in feeling terms to the great loss the committee had sustained by the death of Mr. George Nicholson, who had been for many years an active member of this committee, and Mr. J. T. Bennett-Poë moved, and Mr. G. S. Saunders seconded a resolution tendering the sincere condolences of the committee to Mr. Nicholson's relatives. The resolution was carried in silence, the members upstanding in their places.

SPORTING IN RETINOSPORA.—Mr. G. Paul, V.M.H., of Cheshunt, showed a specimen of Retinospora squarrosa sulphurea, which was growing into the adult cupressus form known as "plumosa," and which was still retaining the colour of "sulphurea." The adult form of this variety had not before appeared, though the variety alba had produced the plumosa type. Retinospora is the juvenile stage of cupressus, and this being so it is interesting to note that R. leptoclada has produced fruit and seeds which on germination gave rise to typical leptoclada plants. The form known as obtusa compacta has also produced fertile seeds, but the seedlings have not yet reached a size large enough to judge of their precise character.

VIRESCENT GAILLARDIA.—Mr. E. M. Holmes, F.L.S., showed specimens of gaillardia flowers virescent. These were taken by Mr. Saunders for further examination. Mr. Holmes also showed galls on the stem of willow caused by the dipterous gall fly, Cecidiomyia saliciperda.

PROLIFERATION IN PEAR. Dr. A. B. Rendle, M.A., showed a pear from the top of which several leaves were protruding. The fruit had been formed from a late flower, and such proliferation is not very uncommon.

MALFORMATION IN STREPTOCARPUS.—Mr. Odell showed flowers of streptocarpus in which there were petaloid outgrowths external to the corolla, these outgrowths being reversed, i.e., the part coloured like the inner part of the corolla being turned outwards.

DOUBLING IN CARDAMINE PRATENSIS.—Mr. Fraser, F.L.S., remarked upon the various forms of Cardamine pratensis, especially with regard to the doubling, which results from axial proliferation, the calyx and corolla being repeated again and again, and the flowers being therefore infertile. He showed a specimen of the double-flowered form of the variety palustris of that plant.

GALANTHUS OLGÆ.—Mr. E. A. Bowles, F.L.S., showed flowers and foliage of this autumn-flowering snowdrop, which has been described as having no green spots on the inner perianth segments, but in this specimen they were well developed. The plants came from Mount Tagyetas, and had commenced to flower at Waltham early in September. The form differs from G. octobrensis in having a rather longer flower and commencing to flower at an earlier period. They are probably both forms of G. nivalis.

VEGETATIVE GROWTHS ON INFLORESCENCE.—Mr. Bowles also showed a well-developed vegetative growth from an inflorescence of Kniphofia Northiæ seedling. There were three such growths upon the inflorescence, and while all the rest of the inflorescence appeared dead, there was a green strip of living tissue up the stem leading to the vegetative growths.

FASCIATION IN OXALIS CRENATA.—From Messrs. Barr came a remarkable example of fasciation in Oxalis crenata, the stem measuring over 4in. across. This is the first time a fasciated specimen of any species of oxalis has come before the committee.

MULTIGENERIC HYBRIDS.—Mr. Bowles gave notice that at the next meeting the question of the nomenclature of multigeneric hybrids was to be raised.

TRIALS AT WISLEY GARDENS.

A meeting of a sub-committee of the Fruit and Vegetable Committee was held on Tuesday, September 22, 1908, the mid-season and late potatoes and the beet being grown for trial were examined, and it was resolved to recommend an Award of Merit to Potato 64, Devanha Seedling, from Messrs. W. Smith, Aberdeen; to Potato 84, British Champion, from Mr. G. Carter, Cottenham, Cambs., to

Beet 36, Willow-leaved (for ornamental purposes), from Messrs. Dobbie, Rothesay; to Beet 37, Sutton's Blood Red, from Messrs. Sutton, Reading; and to Beet 40, Sutton's Pine Apple, from Messrs. Sutton, Reading.

A report to the above effect was laid before the full committee at Vincent Square on September 29, together with samples of the produce. After due consideration and examination of the produce the committee adopted the report and sent it up to the Council, who confirmed it on the same date.

Croydon Gardeners' Society.

On Tuesday, September 29, at the Sunflower Temperance Hotel, Mr. M. E. Mills, Coombe House Gardens, took for his subject "Flowering Annuals."

He said, unfortunately there appeared to be no real classification of these flowers, for oftentimes what one sees described as annuals are biennials, or perennials, and this misleading description makes it difficult to compile a list.

The cultivation required is rich soil, deeply dug, and pulverised by winter frosts. Soil of a light nature is best. For the hardy kinds, seed may be sown in the open from March to the end of May, and what he particularly emphasised was the advisability of sowing thinly and gradually thinning out the seedlings. They are mostly branching, and if left too thickly together weedy plants will be the result. Seeds should be only slightly covered, especially the small ones. Some of them, such as nemesias, Phlox Drummondi, summer chrysanthemums, etc., are very effective in beds alone, whilst others are useful in the herbaceous border, lending, as they do, bright colours and fragrance. Many of them are useful for cutting, and one he recommended for this purpose is Salpiglossis grandiflora. Of the half-hardy section, asters and stocks came in for much comment. Sweet peas, godetias, and the Shirley poppy should always be grown.

Owing to lack of time the discussion following was rather limited, but a few remarks from several present added interest to the evening.

A very hearty vote of thanks to Mr. Mills concluded an instructive evening.

Four varieties of annuals were shown by Mr. J. C. Lewis. Mr. R. Cleveland staged a dish of onions. Apples were shown by Messrs. A. Edwards and C. Thrower, the latter also exhibiting a vase of scabious, and Mr. Mills brought a splendid group of cactus dahlias, a dish of outdoor figs, and good specimens of Autumn Giant cauliflowers.

Bristol Gardeners' Association.

A largely attended meeting was held on Thursday, September 24, at St. John's Parish Rooms, presided over by Mr. A. O. Shelton. The subject was "Artificial Manures," and two short papers were given, one by Mr. Attwell, and the other by Mr. Curtis. Each reader gave his experience in the use of various manures. The former recommended an application of nitrate of soda for cabbages and strawberries early in the spring; basic slag he advised as a dressing for asparagus in the autumn, and salt in the spring; while for fruit trees he said nothing was better than the ashes from a refuse fire forked in during autumn. Mr. Curtis said he had been very successful in the use of soot, fowl and cow manure, but the objectionable odour and want of uniformity in the strength of these fertilisers was a serious disadvantage. Chemical manures were cleaner and better to handle. Plants, he said, are much like human beings: when in poor health they do not require strong treatment, but when healthy require constant feeding to ensure their keeping in good condition. Mr. Curtis exhibited some phalænopsis grown in marrow bones, for which he was awarded a certificate. Mr. Harper gave a scientific discourse upon manures and their action upon vegetable life. Messrs. House, Garnish, Lee, Wakefield, Binfield, and Holt took part in the discussion, after which the best thanks of the meeting was accorded to the speakers. For a collection of vegetables, Mr. Young was first, Messrs. Binfield and Holt equal seconds. For a vase of hardy flowers (members under 21), Mr. Whiting was first, and Mr. Perry second. A certificate was awarded to Mr. Hayball for tomatoes. It was a pleasing feature to see so many young men present, who are warmly responding to the society's interest in them.

NOTES OF OBSERVATION.

Bulb Dont's. — Replying to Mr. Thomas Smith's "Dont's" to bulb beginners (p. 718), I certainly agree with all he says, particularly the first "don't," about big bulbs not necessarily producing the largest spike of bloom, and the last one of low-priced bulbs not of necessity being the cheapest. I have noticed recently an advertisement of named hyacinths, eight inches round, at 2s. dozen. Such bulbs are certainly large, and appear cheap on paper, but the probability is that a hyacinth 6½in. to 7in. round would throw a spike of bloom which would give more pleasure to the grower than a whole dozen bulbs 8in. round. Large, swollen bulbs are sometimes those that have been flowered in pots the previous year.—Hy. N. Ellison, F.R.H.S.

Œnothera riparia. — Œnotheras have a well-merited reputation as subjects for garden decoration, combining freedom of flowering with elegant and showy blossoms produced over an extended season. The subject of this note is one of the freest and choicest species within the genus. The radical growth is close and tufted, more or less evergreen in character, from which is produced in early summer crowds of brownish wand-like stems, which later become clothed with medium-sized yellow flowers, having all the features common to the evening primrose (œnothera). I have largely employed this fine species for massing upon the rock garden, as its value here is great, furnishing, as it does, a remarkably effective group when the majority of rock plants are over for a season. The stems, which in the early stages of growth are erect, slightly arch over when in full flower, a trait which adds immensely to their picturesque effect. Œnothera riparia is easily propagated by cuttings taken in autumn, and rooted in sandy soil in a cold frame. It succeeds admirably in any well-drained soil, and in quite raised positions, under these conditions, it proves an easy, reliable, and beautiful dwarf perennial, flowering abundantly during July and August, and attaining a height of fifteen to eighteen inches.—T. S., Walmsgate Gardens.

Sobolewskya clavata. — Although I have not this plant in my garden at present, I was reminded of it the other day, and, as it may please some lovers of rock plants, I venture to pen a short note about it as a reminder that there is such a plant in cultivation. One cannot well class it as among the "hundred best rock plants," as this sobolewskya is far from showy, and its habit is not quite beyond reproach, inasmuch as it is somewhat straggly in its growth, and has other imperfections. But there are few plants without some, and there will probably be found a proportion of alpine growers who may wish to possess this species; while there are others who meet with it in lists, but would like to know something about Sobolewskya clavata, which has, I believe, no popular name. In height it grew about nine inches with me, giving a large number of small white flowers in corymbs from May through June. The general character of these small flowers may be gathered from the fact that the plant is one of the crucifers. The kidney or heart-shaped leaves are rather pretty, being deeply veined, and of rather a silvery tone. The plant can be raised from seeds sown under glass in spring. A native of Armenia, whence it was introduced in 1892, S. clavata is hardy in all but the most arctic winters we are likely to have here. — S. Arnott.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

GENTIANA ACAULIS.—H. S. S., Salisbury: The best time of the year to divide and transplant Gentiana acaulis is the end of September, but as the weather has continued warm and the soil is warm and moist, we should not hesitate to divide and replant at once, selecting good soil and planting firmly.

PLANTING DECIDUOUS SHRUBS. — S. T. D., Winchfield: If you have the ground all ready for planting and it is only a question of moving the trees and shrubs from another part of the garden and the home nursery, then you need not wait until the leaves have all fallen. If the leaves have changed colour, i.e., are no longer green, then you may commence planting, although we should hesitate to plant during the hot weather that we are experiencing at the time of writing because of the risk of some of the wood shrivelling. In your case you could take out all the holes in readiness, and also mark every tree and shrub for its position, then planting could proceed with a promptness that would augur well for the future of the plants. Do not omit staking, and give water if necessary. The work should be completed by the end of the present month.

CANKERED TOMATO ROOTS.—R. T., Elginshire: The cankered and swollen roots were due to a severe attack of eelworms. For such an infestation nothing short of an absolute clearance of the contents of the house, and a thorough cleaning of the structure and fixtures would suffice. A totally different kind of crop should be grown in the house for at least a year to come. We regret your letter was overlooked.

BLISTERED APPLE AND PEAR LEAVES.—W. M. C., Thornaby: The leaves sent give evidence of a bad attack of the Blister Moth that attacks pears and also apples; it is Lyonetia Clerckella. Clear away and burn fallen leaves regularly. Take advantage of an early opportunity in the winter for giving the trees a thorough cleaning. Loosen the trees from the walls and burn all old shreds or tying material. December, when the wood is hard, will be a good time to tackle the job. Spray the trees with the caustic soda and potash solution, and see that the whole of the wall surface is also well sprayed. If all crevices on the wall can be filled up with mortar or cement, so much the better. Tie up the branches loosely in bundles, so that wind can do them no harm, and then in January or February give another spraying, making quite sure that every bit of twig and branch is moistened. Tie up the tree shortly afterwards. After the first spraying and cleaning remove and burn the surface soil beneath the trees, and in its place put new material. These proceedings will kill any pupæ that may remain and reduce the possibility of attack next year to a minimum. At the end of next May or early in June, syringe the trees with a soapy mixture to which some quassia extract has been added; this will render the leaves distasteful to the moths, and eggs will not be laid on them. It is at this period that keen attention must be given the trees, and frequent syringings with clear soot-water or weak quassia solution rendered adhesive by soft soap, will prove useful deterrents.

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EXHIBITING ROSES.—F. P., Plymouth: The subject of new methods of exhibiting roses has been discussed at some length on various occasions, but the ordinary arrangement of flowers in boxes and the more elegant one of setting up the blooms in vases appear to be the best methods for general use. The bamboo stands are not a success, neither are arrangements of tin tubes. The matter was dealt with in these columns last year (pp. 696, 697, Gardeners' Magazine of September 28), and illustrations given of two new methods suggested at the previous July show.

TERRACING.—W. C., Cheshire: The several points must first be marked out on the slope after the turf has been removed. One line of pegs should run 20ft. from the house and parallel with it. The next row should be 10 yards from the 20ft. line and the next 10 yards further out still. Build the wall at the 20ft. line and carry it high enough to hold up the upper terrace. From beyond the 20ft. line throw the soil well back on to the upper portion to bring this to the level of the house steps, and all remaining soil between the 20ft. line and the second row of pegs should be used to raise the ground between the second and third rows of pegs. The middle row of pegs would mark the level for the lower terrace. The wall must be a strong one, and should be buttressed; the spaces between the buttresses could be used for choice plants that are all the better for a little shelter.

LAYERING CLEMATISES.—M. S., Newmarket: It is getting somewhat late to commence layering clematises now, but we may say that many of these useful climbers are readily propagated by layering the growths at the end of summer. It is a good plan to layer the growths in pots, so that, when severed from the parent, the new plantlets may be protected during winter in a cold frame. Follow the same method of tongueing as for carnations.

RIPENING DENDROBIUM GROWTHS.—S. G. W., Cromer: A dendrobium has completed its growth for the season when, at the apex, no new leaves are appearing, and the terminal leaf has fully developed. When this terminal leaf has ceased to increase in size then the resting season should commence, and the first proceeding is a steady reduction of the water supply, and an increase of light and air until presently the plants are placed at the warm end of a vinery, or in an airy house where the night temperature does not fall below 58 deg.

DESSERT PEARS FOR THE MIDLANDS.—H. F. P., Derby: Mr. Woodgate, who has charge of the Rolleston Hall Gardens, has stated in these columns that the best dessert pears forthe Midlands are: Clapp's Favourite, Williams' Bon Chretien, Beurre d'Amanlis, Souv. du Congrès, Emile d'Heyst, Louise Bonne of Jersey, Marie Louise, Thompson's, Beurre Diel, Beurre d'Aremberg, Josephine de Malines, Bergamotte Esperen, and Olivier des Serres.

SWEET PEAS THAT HAVE BEEN SUPERSEDED.—H. M., Trowbridge.—It may be taken for granted that if the National Sweet Pea Society excludes certain of the older varieties of sweet peas from its trials that these varieties have been superseded by others of finer form, size, or colour. We may go a step further and say that these same varieties might well be excluded from all gardens to the great advantage of growers and seedsmen. The excluded varieties are: Admiration, Blanche Burpee, Blanche Ferry, Boreatton, Calypso, Countess Cadogan, Countess of Aberdeen, Countess of Powis, Countess of Radnor, Chancellor, Colonist, Cyril Breadmore, Dorothy Tennant, Duchess of Sutherland, Duchess of York, Emily Eckford, Emily Henderson, Fashion, Firefly, Golden Gate, Gorgeous, Gracie Greenwood, Grey Friar, Her Majesty, Katherine Tracey, Lady Mary Currie, Lady M. Ormesby Gore, Lady Nina Balfour, Lady Penzance, Lady Skelmersdale, Lord Kenyon, Lottie Hutchins, Lovely, Marchioness of Cholmondeley, Mars, Monarch, Mrs. Dugdale, Mrs. Eckford, Mrs. Gladstone, Mrs. H. K. Barnes, Mrs. Joseph Chamberlain, Mrs. Knights Smith, Mrs. Sankey, Oriental, Pink Friar, Prima Donna, Primrose, Princess of Wales, Queen of England, Queen Victoria, Sadie Burpee, Salopian, Sensation, Shahzada, Stella Morse, The Invincible Varieties, Venus, and Waverley.

NAMES OF PLANTS.

W. T. J., St. Mellion.—Escallonia montevidensis.

C. L., Aylesbury.—1, Helianthus decapetalus; 2, Polygonum polystachyum.

J. F., Bowness.—1, Oncidium incurvum; 2, not recognised; 3, probably Selaginella delicatissima.

H. B., Thanet.—We do not recognise the rose; specialists should be consulted in the naming of florists' varieties.

E. E. M., Portmadoc.—1, Androsace sarmentosa; 2 and 3, not recognised; 4, Veronica spicata; 5, Clethra alnifolia.

NAMES OF FRUIT.

Readers who do not find the names of fruit sent in this page will please consult succeeding issues. Sound, full-sized specimens should always be sent, and packed in stout boxes.

F. E. F., Hanwell.—1, Ribston Pippin; 2, Cellini; 3, Alfriston.

H. S., Lincoln.—1, Mere de Menage; 2, Gascoigne's Scarlet; 3, Cox's Orange Pippin.

B. G., Luton.—1, not recognised, a poor specimen; 2, Beurre Diel; 3, Emperor Alexander.

M. E. M., Hythe.—1, Lord Suffield; 2, Beurre Diel; 3, Peasgood's Nonsuch; 4, Beurre Bosc.

L. W. O., Selby.—1, Blenheim Pippin; 2, Waltham Abbey Seedling; 3, not recognised; 4, Court Pendu Plat; 5, Bramley's Seedling; 6, Lane's Prince Albert.

G. S., Ryde.—1, a form of Saponaria officinalis; 2, Spartium junceum; 3, Lithospermum prostratum; 4, Linaria vulgaris; 5, not recognised. The specimens were packed when damp, and hence were in a very bad condition on arrival.

FORTHCOMING ENGAGEMENTS.

THURSDAY, October 15.—Royal Horticultural Society's Fruit Show; two days.

Brighton Horticultural Society meeting.

FRIDAY, October 16.—Royal Horticultural Society; Conference on "Spraying." Morning session, 11 a.m. to 1 p.m., chair to be taken by Colonel Warde, M.P., and lectures given by Mr. G. Massee, V.M.H., and Mr. H. F. Getting; afternoon session, 2.30 p.m. to 4.30 p.m., chair to be taken by Colonel Long, M.P., and lectures given by Professor F. V. Theobald, M.A., and Mr. G. Hammond.

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Arums	per doz.	2 0		4 0
Asparagus	per doz. bun.	1 6		6 0
Asters	per doz. bun.	1 0		2 0
Bouvardia	per doz. bun.	5 0		6 0
Carnations	per doz blms.	1 6		2 6
,,	per doz. bun.	7 0		8 0
,, Malmaison	per doz. blms.	6 0		10 0
Cattleyas	per doz.	8 0		10 6
Chrysanthemums	per doz. bun.	5 0		10 0
,,	per doz. blms.	2 0		3 0
Coreopsis	per doz. bun.	1 6		2 6
Croton leaves	per bun.	1 0		1 6
Cypripediums	per doz. blms.	2 0		3 0
Dahlias	per doz. bun.	2 0		3 0
Eucharis	per doz.	2 0		3 6
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	1 6		3 0
Gladiolus, large flowered,	per doz. spks.	1 6		3 0
Gypsophila	per doz. bun.	2 0		3 0
Lilium auratum	per bun.	2 0		3 0
,, candidum	per bun.	1 0		2 6
,, speciosum	per bun.	1 6		3 0
,, longiflorum	per bun.	2 0		3 6
Lily of the Valley	per doz.	6 0		9 0
Marguerites, white	per doz. bun.	2 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 0		4 0
Odontoglossums	per doz. blms.	2 6		3 6
Pelargoniums	per doz. bun.	4 0		6 0
Roses	per doz.	1 0		3 6
Smilax	per doz. trails	3 0		5 0
Statice	per doz. bun.	2 0		4 0
Sweet Peas	per doz. bun.	1 0		2 0
Tuberoses	per doz. blms.	0 4		0 8

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Apples, cooking	per bush.	3 0	to	4 6
,, dessert	per ½-sieve	2 0		6 0
,, Nova Scotian	per barrel	12 0		16 0
Bananas	per bun.	3 0		9 0
Damsons	per ½-sieve	1 6		2 3
Figs	per doz.	2 0		4 6
Grapes, English	per lb.	1 0		3 6
,, Belgian	per lb.	0 10		1 0
,, Channel Islands	per lb.	0 9		1 3
Gage Plums	per ½-sieve	2 6		3 6
Lemons	per case	6 0		14 0
Melons, Guernsey	each	0 9		2 0
,, English	each	1 0		2 0
,, Valencia	per case	6 0		10 0
Nectarines	per doz.	2 6		12 0
Nuts, Cob	per lb.	0 6		0 8
Oranges	per case	9 0		30 0
Peaches	per doz.	2 6		12 0
,, French	per crate	2 6		8 0
Pears	per ½-sieve	3 6		4 6
Pineapples	each	2 0		4 0
Plums	per ½-sieve	2 0		4 0
Walnuts, green	per ½-bus.	1 6		2 6

Vegetables.

Supplies are liberal and the demand brisk.

		s. d.		s. d.
Artichokes, Globe	per doz.	1 6	to	2 6
Beans, Runner	per bush.	1 0		2 0
Beet	per bush.	1 3		1 6
Brussels sprouts	per ½-sieve	2 0		2 6
Cabbage	per tally	1 6		2 0
Carrots	per doz. bun.	1 6		2 6
Cauliflowers	per doz.	1 6		2 0
Celery	per roll	0 9		1 0
Cucumbers	per doz.	1 0		3 0
Endive	per doz.	1 0		1 6
Horseradish	per doz. bun.	8 0		9 0
Leeks	per doz. bun.	1 0		1 6
Lettuce, cos	per doz.	0 6		1 0
Maize	per doz. cobs	1 0		1 6
Mint	per doz. bun.	1 0		1 6
Mushrooms	per doz. lb.	5 0		10 0
Onions, Pickling	per bush.	1 6		2 0
,, Valencia	per case	7 0		8 6
Parsley	per doz. bun.	1 6		2 0
Peas	per bush.	3 6		4 6
Radishes	per doz. bun.	0 4		0 8
Salsafy	per doz. bun.	3 0		3 6
Small Salading		1 3		1 6
Spinach	per bush.	1 6		2 0
Tomatoes, English	per doz. lb.	1 6		3 0
,, Guernsey	per doz. lb.	2 0		2 6
Turnips	per doz. bun.	1 6		3 6
Vegetable Marrows	per tally	2 0		4 0
Watercress	per doz. bun.	0 4		0 6

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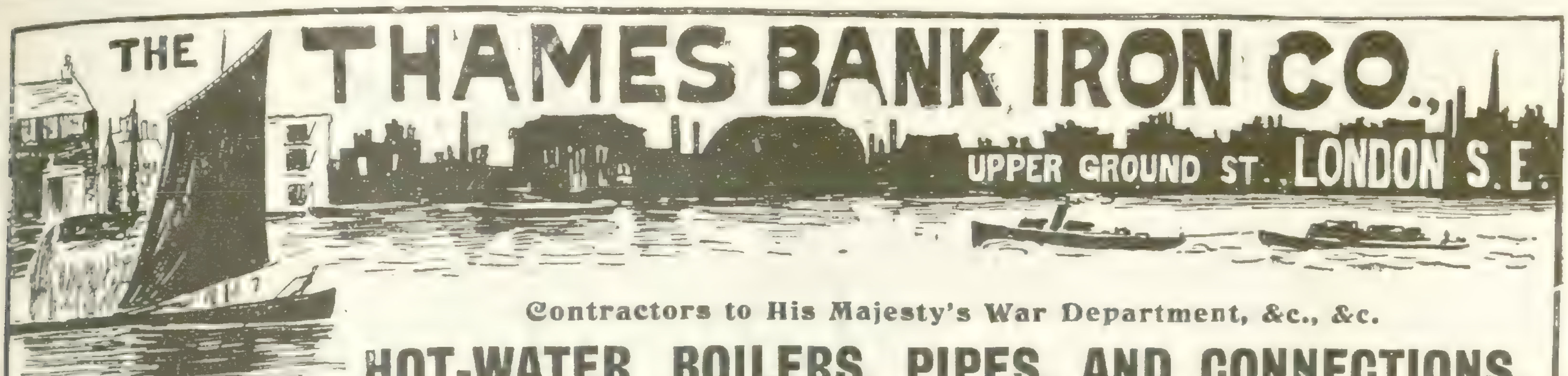
		s. d.		s. d.
British Queen	per ton	55 0	to	60 0
Epicure	per ton	50 0		65 0
Duke of York	per ton	55 0		65 0
Sharpe's Express	per ton	60 0		65 0
Up-to-Date	per ton	55 0		60 0
Early Puritan	per ton	55 0		65 0
Evergoods	per ton	50 0		60 0



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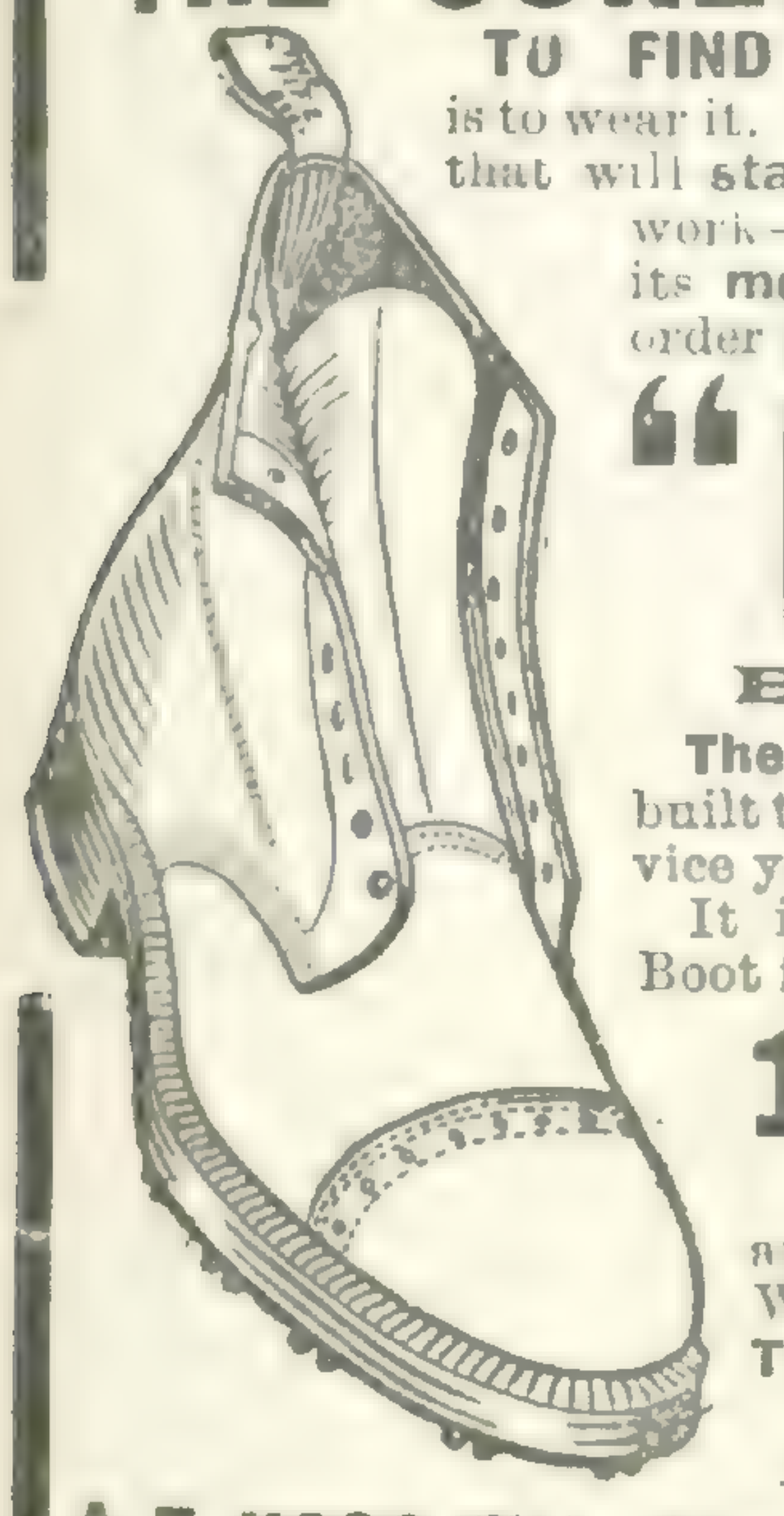

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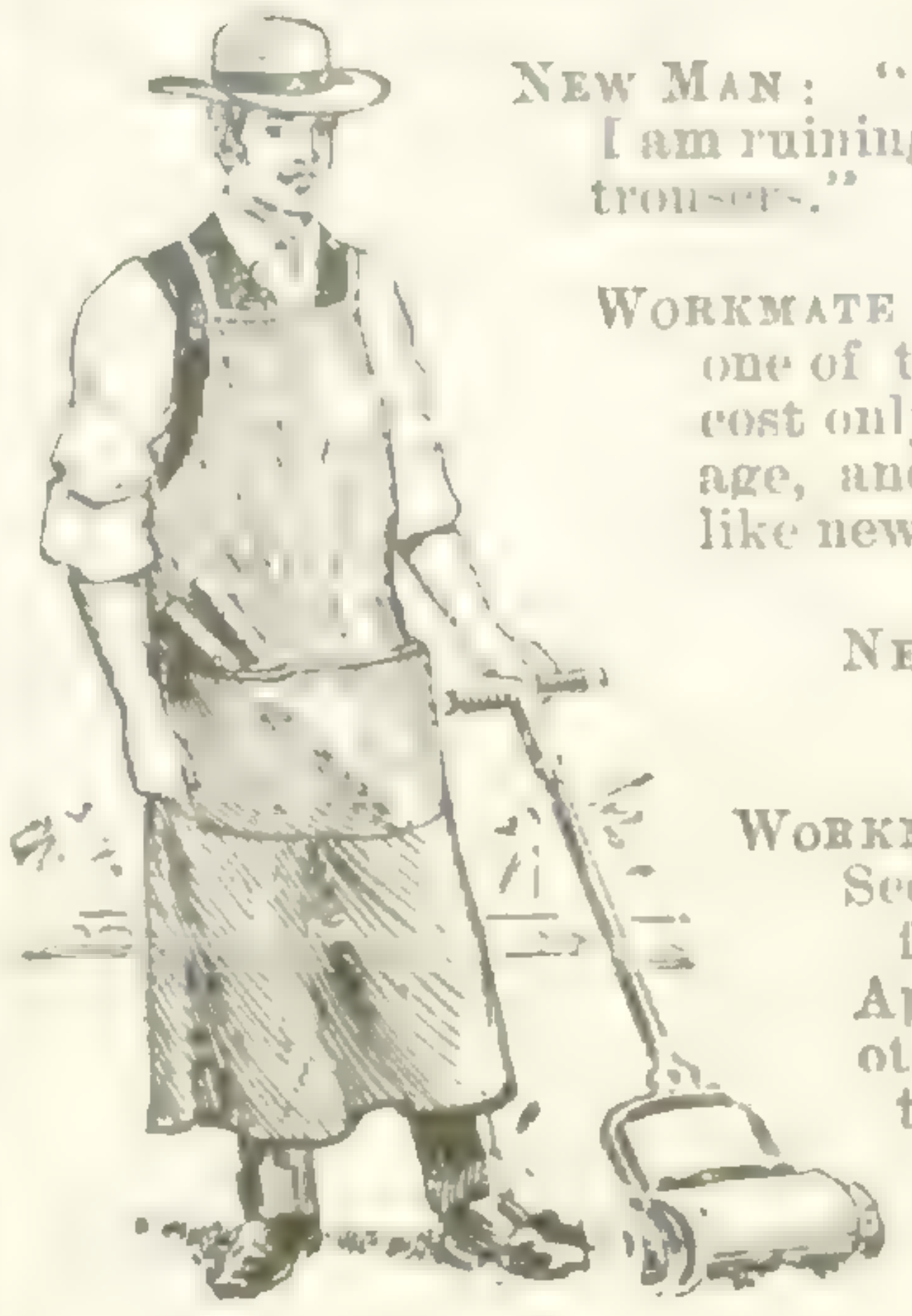

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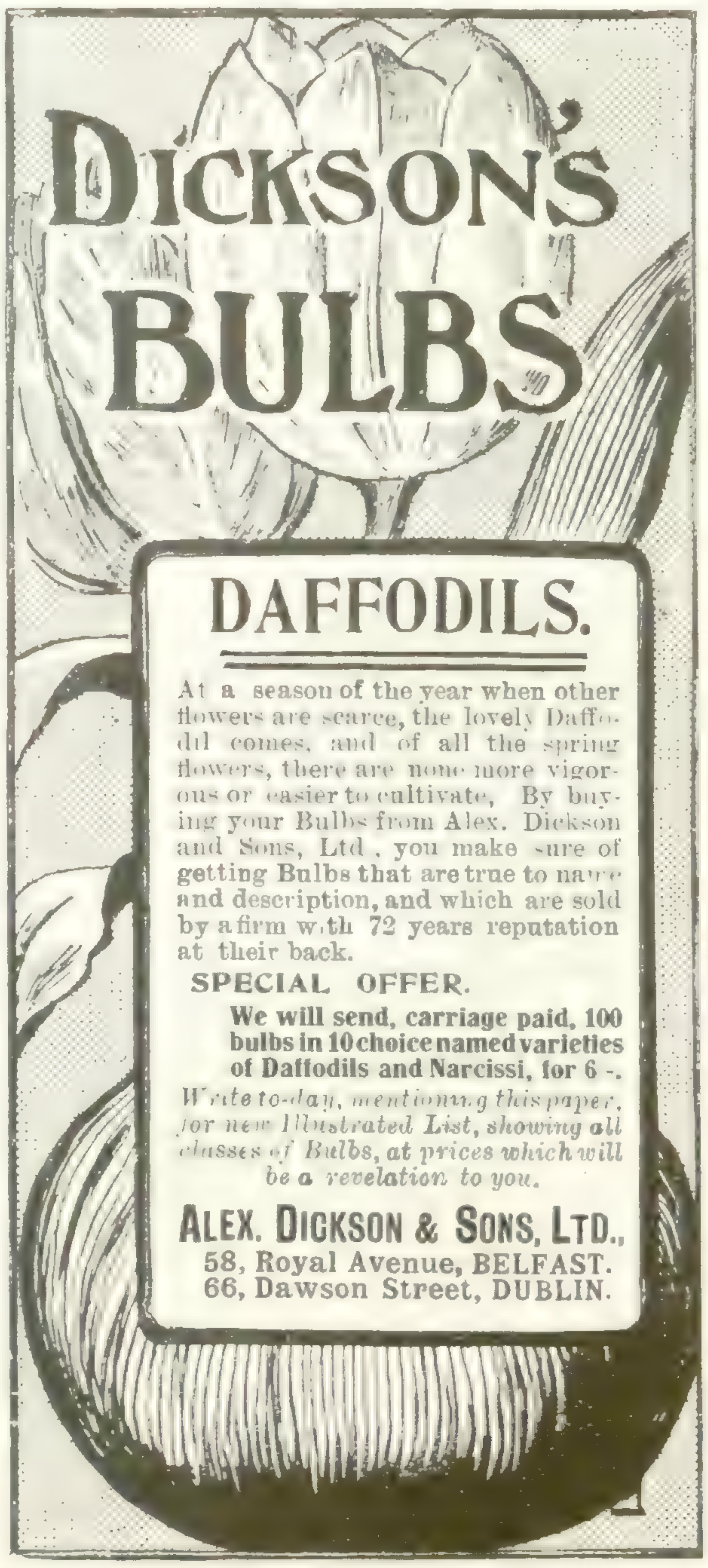

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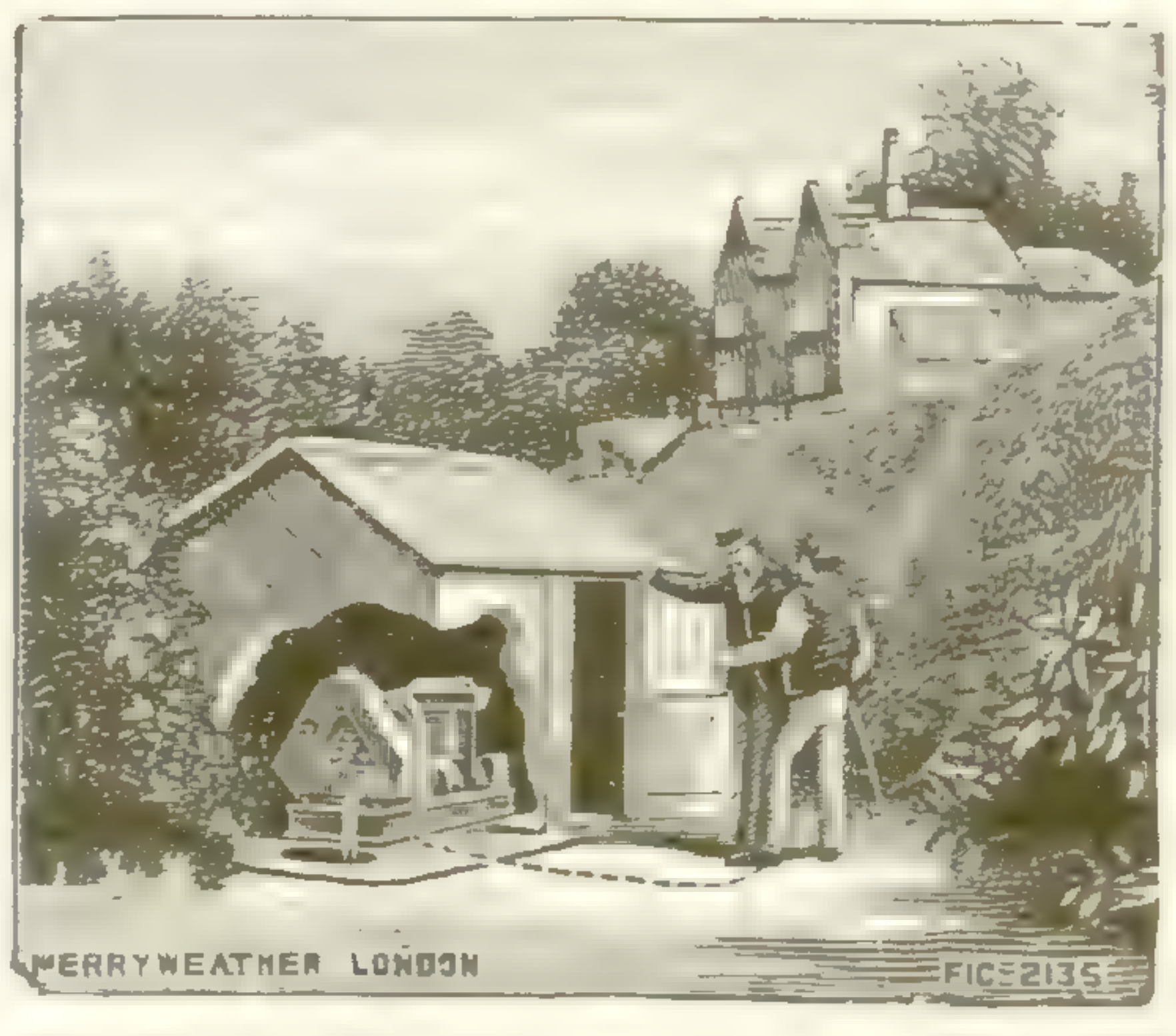

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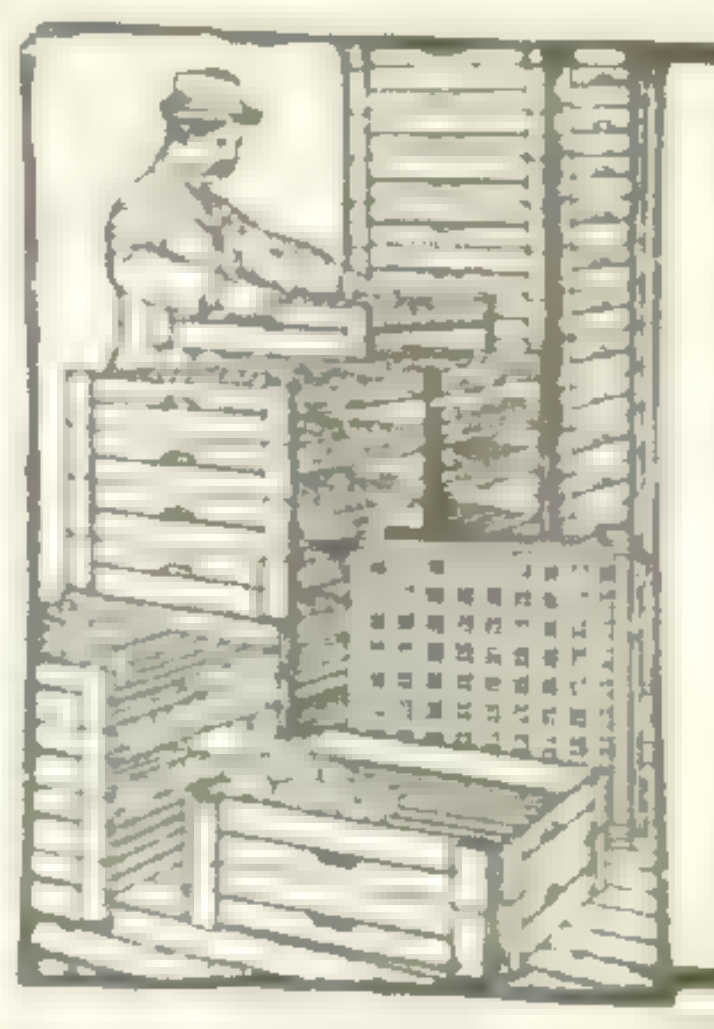

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VOL. LI.—No. 2,868. SATURDAY, OCTOBER 17, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Dead Leaves.

Although we are accustomed to regard each separate plant, whether tree or shrub or smaller vegetation, as an individual, it is in point of fact a colony of individuals, the leaf being the individual proper, which during its brief period of existence, as compared with that of the plant itself, other than an annual, is busily occupied in collecting and elaborating the material necessary for increasing the size and strengthening the structure, and also for the formation of the seed for an independent generation of plants, and of the buds for a succeeding generation of working leaves of the following year. In deciduous trees and plants generally, the active life of the leaf endures but for part of a year, from the bursting of the buds in the spring to the season of perfected fruit in the autumn. Its task is then completed, and as it is now of no economical use to the tree it has helped to fashion, and would indeed be a source of danger under the stress of wintry gales and heavy snowfalls if retained upon the branches, Nature has contrived that its hitherto firm attachment shall be loosened; a definite line of demarcation is drawn between the dead tissue of the spent leaf-stalk and the living tissue adjacent to the bud at its base, and at this point the shrinkage of the dead cells ensures separation, and the useless appendage falls to the ground. Nature, however, knows no waste, the leaf is still a more or less elaborate network of woody matter plus a certain residue of cellular tissue, and the fall of the leaf to the ground consequently returns this to the soil as a contribution to the future nourishment of the root system. The busy earthworm may seize it and bury it, fungi may attack it, a myriad of tiny insects may devour it, but nevertheless, whatever be its immediate fate, its constituents are sooner or later restored to the soil, and not an atom is lost. The brilliant colours which most arboreal leaves exhibit in the late autumn are due to changes in the normally green chlorophyll, which has been the active agent during the growing period. All the summer through it has been greedily absorbing the vital sunbeams, and under their genial impulse has fashioned the juices within the cells and transmitted them throughout the entire system of the tree, here contributing their contents to build up the annual ring of wood in trunk and branch and twig, and there transforming them into luscious fruits or armour-plated nuts or other infinitely diverse forms of seed as final phases of that reproductive scheme which is the prime end and aim of Nature. In the autumn, all its duties fulfilled, its work done, it ceases to absorb all but the green rays of the spectrum, and now breaks up the sunbeam into all its rainbow components, one and the same leaf often passing through the whole gamut of brilliant tints ere it assumes the brown and dusky hue of death. Evergreen trees and shrubs, as a rule, simply retain their foliage longer, shedding it subsequently to the new growth of the following season, but the life history of the individual, i.e., of the leaf, is practically the same. In this country and others similarly situated as regards climatal conditions, the deciduous or leaf dropping character of trees and shrubs is determined by the alternating seasons of heat and cold, but in tropical countries, where such extremes do not occur, it is determined by alternating periods of drought and moisture. In every environment in point of fact the plant world seems subject to an ebb and flow of vitality, traceable in most cases to climatal fluctuations, but where these are fairly equipoised, to an inherent need for a period of rest. At first sight, the autumnal aspect of the landscape when the brilliancy of colour of the dying foliage has faded, and the bare boughs are beginning to assert themselves as a presage of winter, is apt to induce a feeling of sadness; but when we reflect that every scar those dropped leaves have left marks the birthplace of a vigorous bud, which, after a few months' sleep will redrape the prospect with all the fresh verdure of the spring, we should be easily able to comfort ourselves with the consoling thought that Nature is but temporarily dormant and by no means dead, and possess our souls in patience.

MR. ALEX. MALCOLM.

Mr. Alex. Malcolm is well known by name and repute to every lover of sweet peas who takes more than a passing interest in his or her flowers. His home is at Duns, in Berwickshire, and here for many years past he has made the culture of sweet peas a hobby, growing them extensively and well, and he has been eminently successful as a prize-winner at Edinburgh and Shrewsbury. He is acknowledged to be the chief sweet pea expert across the border, and there are probably very few in the southern counties of England who know the varieties and their capabilities so well as he does. At present Mr. Malcolm is turning his attention to the raising of new varieties, and he is working along strictly scientific lines that are already leading him to a reward for the trouble taken. Mr. Malcolm's enthusiasm leads him to place his expert knowledge at the service of the National Sweet Pea Society, and, as a member of that body's Floral Committee, he annually makes the journey from Duns to Reading for the purpose of adjudicating upon the new varieties that are being tested in the gardens of the University College. Mr. Malcolm is also a great lover of daffodils, of which he has a small but choice collection. Pictures and old china are other hobbies, consequently Mr. Malcom's home and garden are both of a very interesting character.

Fruits and Fruit Culture.—Our next issue will be of special interest to those who are concerned with the all-important question of fruit production. We shall give a freely-illustrated report of the great exhibition of British grown fruit that is being held by the Royal Horticultural Society as we are going to press. We shall also give a report of the Conference on the Spraying of Fruit Trees held at the Horticultural Hall on the 16th inst. The contents of the issue will include several articles dealing with fruits and fruit culture.

Retirement of Sir Daniel Morris.—We learn that Sir Daniel Morris, K.C.M.G., has resigned his post of Imperial Commissioner of Agriculture for the West Indies, a post he has held with great credit to himself and value to the Empire. Educated at Cheltenham and Dublin, and gaining a gold medal for natural science, he became Assistant Director of the Ceylon Botanic Gardens in 1877, where his investigation of the coffee disease brought him public thanks. He became Director of the Jamaica Botanical Department in 1879 and Assistant Director of the Royal Gardens, Kew, in 1886, where his wide knowledge of tropical economic plants was of the greatest value to the establishment and to the Empire. He was appointed scientific adviser to the West India Royal Commission of 1896-7, and appointed to the post he is now resigning in 1898. He was created C.M.G. in 1893, and K.C.M.G. in 1903. Sir Daniel Morris has done more than any other man to improve agriculture in the West Indies; to him is due the revival of the sugar industry, and the improvement of the banana business, while under his care cotton, rubber, cocoa, arrowroot, orange, and lime cultivation has been extended and improved throughout the West Indies. It is safe to say that agriculture has been so systematised, and so much enthusiasm and enterprise have been brought into it as a result of Sir Daniel's generalship, that the industry is certain to progress for long years to come.

National Rose Society.—The Metropolitan exhibition of the National Rose Society will in 1909 be held in the gardens of the Royal Botanic Society on Friday, July 2. The provincial show will be held at Luton on a date yet to be fixed, and the autumn show will be held on September 16 at the Horticultural Hall, Westminster. The society continues to extend its list of members at a rapid rate, 350 having joined during the past five months.

Foreign Fruits were imported in considerable quantities during September, such fruits as bananas, lemons, oranges, and nuts being especially plentiful. With the exception of apples, cherries, and strawberries, the fruits which can be successfully grown in this country were imported in smaller quantities than in the corresponding month of last year. Of apples the imports aggregated 178,532 cwt., of the value of £98,810, or an increase in quantity of 92,549 cwt., and in value of £48,638. The imports of apricots and peaches amounted to 220 cwt., of the value of £382, a decrease of about 50 per cent. Of bananas 682,276 bunches were imported, or an increase in number of 69,486 bunches and in value of £13,482. The cherry imports were 132 cwt., of the value of £209, and these are of interest from the fact that in the corresponding month of 1906 and 1907 no cherries were received from abroad. The imports of currants dropped from 201 cwts. of the value of £203 in September, 1907, to 54 cwts. of the value of £66 last month. In the imports of grapes there was a decrease in quantity of 41,338 cwt., and in value of £21,006, the total having been 110,091 cwt. of the value of £106,652. Pear imports also show a material decrease, both in quantity and value; the aggregate having been 134,847 cwt., of the value of £119,268. The imports of plums amounted to 43,844 cwt., of the value of £31,128, or a decrease in quantity of 3,590 cwt., and in value of £1,652. Strawberries made their appearance for the first time in the September returns, and of these fruits the imports were 6 cwt., of the value of £6. The imports of unenumerated fruits are of interest from the fact that while there was a decrease of 21,753 cwt., there was an increase in value of £5,255. The total value of the imports for the month was £701,706, or an increase of £19,866.

National Dahlia Society and Dahlia Union.—Meetings of the committees of these societies were held on Tuesday for the purpose of considering the question of the amalgamation of these two organisations. At the meeting of each committee, it was decided that the fusion of the two bodies was desirable. A sub-committee consisting of equal numbers of members of the two committees has been formed for the purpose of preparing a scheme of amalgamation, and there is now justification for the belief that this desirable end will be satisfactorily accomplished.

Messrs. Charlesworth and Co., who have for many years been growing and raising orchids at Heaton, Bradford, have now removed from Yorkshire to Sussex, where they have constructed very fine ranges of houses, connected by covered corridors. The new address, to which all communications should now be sent, is Hayward's Heath, Sussex. We wish the firm every success in its new premises, a success we feel they deserve because the new nursery is as up-to-date as experience and skill can make it.

Vegetables of Foreign Growth were less plentiful in British markets during September than usual. The principal decrease was in the imports of potatoes, the abundant yield in this country and the comparatively low prices now ruling having imposed a severe check upon importations of these tubers. The aggregate imports of potatoes during the month were 167,250 cwt., of the value of £27,791, against 259,942 cwt., of the value of £52,929 in the corresponding month of last year. Of onions the imports were 819,719 cwt., of the value of £97,219, or a decrease in quantity of 103,032 cwt., and in value of £5,962. Tomatoes, on the other hand, show an increase in quantity of 18,662 cwt., and in value of £8,332, the cold, wet weather of September having hindered the maturation of the outdoor crop in this country.

The Gardeners' Royal Benevolent Institution.—The Rev. W. Wilks, M.A., secretary of the Royal Horticultural Society, has forwarded a cheque for £10 to the funds of this institution, being the proceeds of the harvest thanksgiving offertories at Shirley Church, Croydon, of which he is the vicar.

Flower Sellers in Oxford Circus.—An effort has been made to prevent the continuance of flower selling by women in Oxford Circus. A resolution before the Marylebone Borough Council to the effect that no one should occupy the position for business purposes after September 29, 1909, was defeated by an amendment that no newcomers should be allowed to sell flowers without permission from the Council, but this amendment, on becoming a substantive motion, was defeated by another that no action be taken in the matter. So the flower sellers continue unmolested at present, and as Mr. Leveson Gower has said he has no wish that the women be removed, they are likely to remain unless some breach of the peace is made.

Extension of Putney and Wimbledon Commons.—A strong effort is being made to secure by public subscription the vacant lands that lie between Putney and Wimbledon Commons and Richmond Park. Richmond, Putney, Wandsworth, Merton, Wimbledon, Coombe, Malden, Roehampton are all directly interested in the movement, and leading ladies and gentlemen from these places have joined the provisional committee formed at the instance of the John Evelyn Club. The Commons Preservation Society and the Public Gardens Association associate themselves with the scheme, and several members of the Surrey County Council are interesting themselves in the matter. We do not know the full area of the land it is proposed to secure, but there are thirteen acres in the strip that runs from Robin Hood Bridge to the Robin Hood Gate of Richmond Park, and this certainly should be secured if possible. The scheme is a commendable one.

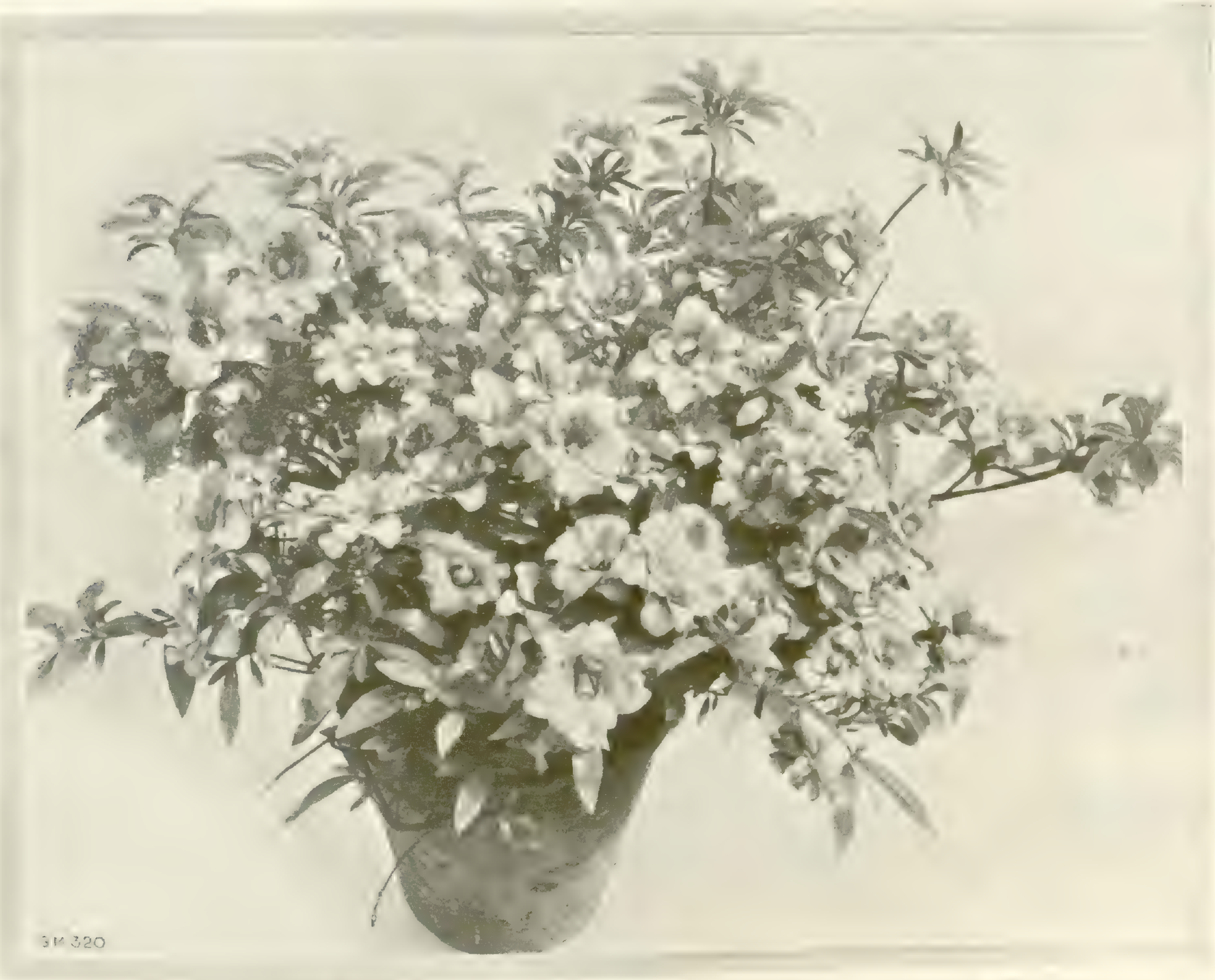
Barren Strawberry Plants.—Among the commonplace notes in the current issue of the R.H.S. "Journal," is one on the causes of barrenness in strawberry plants, and as the matter is one of much interest to a very large number of our readers we herewith reproduce it. "Every year we have complaints about the non-fruiting of strawberry plants, but this year the complaints are more numerous than usual. We think there are two principal causes—(1) propagating from barren plants and (2) a want of fresh stock. It is well known that barren plants produce the earliest and strongest runners, and the man sent to layer or take runners usually selects the strongest and best he can get, irrespective of whether the parent plant was fruitful or not. These are planted in beds or rows, and a greater number of plants are unfruitful than usual. Runners are again taken, the best being selected, until the majority of the plants in the beds bear no fruit. Some years ago we carefully chose runners from barren plants, giving them special attention, but not one runner developed into a fruitful plant. We again took runners for two years following, but in every case the result was the same. We all know how essential it is to change our seed of corn, potatoes, and other crops, and unless we can give a change of soil it is equally necessary to occasionally introduce fresh stocks of strawberries, if we desire to maintain vigour and fertility. Some varieties, like Royal Sovereign, will go on bearing very satisfactory crops for much longer periods than others, but we think the quality suffers. Another cause of failure, or partial failure, is the planting of strawberries where strawberries were grown before. No good gardener permits this to happen, but we find it occurring sometimes, and if the result is disappointing the blame is entirely the planter's."

A Redeemed Apple Tree.—We have received from Mr. J. Melville, superintendent of Finsbury Park, a photograph of a heavily-laden apple tree, which is growing in the garden of Lieutenant Tuckwell, of Beckenham. The tree is of the variety Stirling Castle, and was planted in 1903. Other trees planted at the same time did well from the first, but Stirling Castle languished, and Lieutenant Tuckwell considered it to be dying. Fortunately, Mr. Melville visited the garden in October, 1904, and promptly advised that the tree should be lifted and replanted, but not so deeply as before. This was done, with the result that during 1905 the tree regained health, but bore no fruit. The following year a fair crop was produced, and in 1907 and this year apples were produced in plenty. Indeed, the photograph (which we regret is unsuitable for reproduction) shows that, in the words of Lieutenant Tuckwell, "the tree is all apples." Readers who have [illegible] fruit trees which appear to be unhappy will do well to take a hint from this circumstance.

A Venerable Italian Larch.—A correspondent of "The Scotsman" tells of a venerable larch tree situated in Italy, on the northern flank of Mont Chetif, in the direction of the huts of Pian Veni above Courmayeur, a few steps from the [illegible] that skirts the limit of the meadowland. Due allowance being made for the extreme slowness with which the larch grows, for the altitude above sea level ([illegible] metres) at which it is rooted, and for its northerly exposure in the near neighbourhood of the glacier, where the cycle of its development is barely five months every year, this venerable larch, untouched alike by woodman's axe and thunderbolt, cannot be less than 2,000 years old.

Bees in the Orchard.—In the course of an address given before the Ontario Beekeepers' Association, on "Bees in Relation to Horticulture," Professor H. A. Surface, of Harrisburg, declared that bees are not injured by proper spraying methods. With reference to Bordeaux mixture, he said: Emphasis should be made of the fact that this preparation is not an insecticide, would not kill bees nor other insects, and is used only as a fungicide or preventive of certain plant diseases. If, however, Paris green or some other arsenical poison, such as London purple or arsenate of lead, were added to the Bordeaux mixture, or used as a spray, and the bees could be induced to sip the liquid through its falling into widely-opened nectar-yielding blossoms, or through excessive thirst of the bees, sipping it from the leaves where it temporarily remains, it is possible that these beneficial insects might be killed by such means and at such times. However, it is Professor Surface's opinion that if water be placed in the apiary regularly, as it should be, the bees will learn to go to it, and will not seek the drops of poisoned spray liquid that may remain temporarily on the leaves in spraying for the codling moth. Finally, on this particular point, it may be said that the codling moth is the only pest for which arsenical sprays are recommended as a regular annual practice, and for it the spraying should be done soon after the petals fall, and again within a week or ten days. But few bees are flying in the tree tops at such time.

Southampton Chrysanthemum Show.—We are informed by the secretary of the Southampton Royal Horticultural Society that owing to unexpected circumstances connected with the hall, it has been found necessary to alter the date of the chrysanthemum show from November 2 and 3 to October 28, 29, and 30.



THE BALSAM-FLOWERED AZALEA (AZALEA INDICA BALSAMINÆFLORA).
One of many fine plants shown earlier in the year by Messrs. H. Low and Co.

THE BALSAM-FLOWERED AZALEA.

There are several very beautiful and useful azaleas that once received specific rank, but which now are regarded as well-marked varieties of Azalea indica, though even this latter type, if we would be quite up-to-date, we must now call Rhododendron indicum. One of the distinct varieties of the Indian azalea is A. indica balsaminæflora. This was formerly regarded as a true species, and as such was figured in the "Revue Horticole" in 1882. It has also been known as Azalea Rollisoni because the late firm of Rollisons, of Tooting, brought the plant into prominent notice, and, indeed, introduced it to general cultivation. The late Mr. William Bull was also much attracted by this Japanese azalea, and a large illustration of a plant figured in his catalogue of many years ago. Another name, and one that is still quite commonly used for this azalea is A. rosæflora.

The two names—balsaminæflora and rosæflora are both descriptive of the double, compact blooms that the plant under notice so freely produces. The flowers are of medium size, finely doubled, and the margins of the petals recurve a little, so that each bloom has a very neat appearance. The colour is bright salmon-red. In the matter of habit of growth this azalea is very bushy and gracefully spreading, as a glance at the accompanying illustration will show. Although it is as a pot plant for conservatory and greenhouse decoration that the balsam-flowered azalea is best known and most valuable, it is, like A. indica, hardy in many parts of the country. It is a beautiful plant and one that ought to be better known. B.

APPLES AT GOODRICH COURT.

The soil and climate of the West of England are well known to be generally suit-suitable to the culture of hardy fruits, and among the counties no other is more noted for apples and pears than is Herefordshire, while probably in no private garden in that fruitful shire are these fruits to be found better cultivated, or in greater variety, than at Goodrich Court, Ross, the seat of H. C. Moffatt, Esq. The truth of this opinion will appeal to those readers who have seen the exhibits that have from time to time been staged by Mr. Spencer.

I have for many years had the pleasure of paying Mr. Spencer an annual visit at the end of August, when the character of his crops of apples and pears could be fairly estimated, and this season I made one more visit. Pears at Goodrich, both grown on walls and as pyramids in open quarters, have many times been seen carrying better crops of fruit than they do this season, and this defect may be rightly attributed to the dull, wet weather experienced last summer, together with the cold of last spring.

The orchards were not visited, and my remarks are therefore confined to the garden crops. By far the greatest number of trees are in their prime, and they were planted upon maiden soil when the garden was formed. The garden is extensive, and it is intersected by walks, by the sides of which the trees, moderately-sized pyramids and bushes are placed in single lines. This method of culture affords every facility for the trees being conveniently attended to, and, moreover, the wood down to their base, as well as the fruit, reaps the fullest benefit from sun and air. Mr. Spencer evidently fully appreciates the influence of these elements, for he has been very careful to well thin the branches of his trees. This, I fear, is a necessary detail in the management of the apple that some of us do not sufficiently pay attention to. Winter spraying for the destruction of injurious insects and lichen is never neglected. Summer and winter pruning and thinning of spurs is carried out in the ordinary manner, with the result that the branches their entire length are properly furnished with fruitful spurs.

The trees are worked upon the paradise stock, and consequently it has not been found, except in a very few instances, necessary to root-prune the trees. That this operation is not needful is plainly apparent by the general satisfactory condition of the trees, though their size is moderately limited. As a fertiliser, supehphosphate of lime is used, because the soil is deficient of lime, and a dressing of bonemeal is given early each spring, these being lightly pointed in. The trees are mulched with stable litter early in summer, once the soil has become warmed by the sun, and watered when necessary, if time can be spared to attend to it. This season, however, it has not been even once done, though we in the West of England have, perhaps, had less rain than have most other folks in these isles, and yet, neither the trees nor their crops gave the least indication of having suffered in any way.

There are about fifty varieties of apples cultivated, and each of them is represented by several trees. Of dessert kinds there are most of Cox's Orange Pippin (fifteen trees), and of kitchen varieties there is the greatest number of Lane's Prince Albert, viz., twenty trees. Newton Wonder, Stirling Castle, Ribston Pippin, Allington Pippin, and come next in point of numbers. Of the newer varieties, Charless Ross, James Grieve, The Houblon, Rival, and Norfolk Beauty are each represented by a few trees. With but few exceptions the trees were all heavily cropped, with remarkably fine clean fruit, which in most cases had been considerably thinned. Especially fine fruits of Cox's Orange and Ribston Pippin, with some others, were observed growing upon trees trained against walls.

T. Coomber.

Hendre Gardens.

THE ORIGIN OF THE CULTIVATED POTATO.

The familiar potato must certainly rank among the most remarkable plants known as regards the immense variety of form and colour into which its tubers have sported. The foliage and the flowers also vary, but by no means to the same extent as the tuber, as no attention has been paid to these by the selective cultivator. So far as can be ascertained, all these varieties belong to one and the same species, since, although there are a number of other tuber-forming solanums, to which genus the potato of commerce belongs, none of these, apparently, have responded to the cultivator's attempts to render the tuber of economical value.

Curiously enough, however, the particular species which has yielded such marvellous results has remained undetermined until quite recently, and it is the object of this paper to relate how the mystery has at last been solved. Early in the last century the potato disease suddenly asserted itself to such a devastating extent as to cause terrible privation and suffering to those whose main support was thus destroyed. On the reasonable assumption that this scourge was not solely due to abnormal weather conditions, but was probably also due to feebleness of constitution engendered by long cultivation, the idea was conceived that a cross with the original wild species might impart renewed vigour and thus check the ravages of the pest. To this end a considerable number of wild species of solanum were obtained through collectors abroad, and Mr. A. W. Sutton, V.M.H., F.L.S., of Reading, with the aid of these, made a number of experiments in the way of hybridisation, but attained no results of value; nor among these wild species were any which agreed closely enough in specific character with the potato of commerce to be regarded as the original type.

As a consequence of the negative results obtained the experiments ceased, but a controversy arose a few years ago regarding an alleged "sport" from one of the wild types (S. Commersoni) in France, which "sport" possessed all the characteristics of the potato of commerce, the tubers being of a marketable size and equal in every respect to many well-known varieties. Mr. Sutton thereupon resumed his investigations, one result of which was to prove to the satisfaction of every practical potato grower and expert that the "sport" in question was really due to the accidental presence of an ordinary potato in the soil. Another result, however, was far more satisfactory. Among the wild potato plants to which attention was thus recalled was one named Solanum etuberosum, or the non-tuber-bearing solanum, a name which, as we shall presently see, is entirely inappropriate. This species differs from the cultivated potato in having somewhat hairy foliage, which is also of different habit. Mr. Sutton received tubers of it from Edinburgh some 20 years ago, when the tubers it produced were no larger than marbles, but were white and edible when cooked, but in the course of 19 years' cultivation the tubers have greatly increased in size. During the whole of this period no seed berries had been observed, but in 1906 a solitary one was noticed, carefully protected, and the contents were sown in 1907. It may here be remarked that previously when seed from the various wild species was sown, the seedlings were perfectly true to the parental type, and Mr. Sutton's surprise may therefore be imagined, when the 20 plants resulting not only widely varied among themselves, but could not be distinguished from a batch of plants such as would result from a seed berry of the common potato. The tubers also displayed equal diversity, and among them were some of quite marketable size. The common potato, it may be mentioned, gives equally and similarly diverse offspring from its seed, and can only be propagated truly from the tuber.

This result naturally led to the idea that the seed berry in question had been fertilised by pollen from one of the ordinary potato blooms in the vicinity, a possibility, however, which Mr. Sutton doubted, as the wild seedlings previously raised had been subjected to the same risk, and cross-fertilisation, moreover, in his experience did not occur. To test the question, however, flowers of S. etuberosum were carefully self-fertilised in 1907 by hand and protected from alien pollen, the result being several more berries, the seeds of which have this year, 1908, yielded similarly diverse seedlings to those of the suspected berry, the batch being again indistinguishable from one raised from common potato seed. It was then suggested that S. etuberosum, as introduced, might really not be a wild species at all, but an escape from cultivation in its native country, but here, however, the botanist steps in to determine the question. All the wild species of solanum which have been examined have pollen grains of equal size and of symmetrical long, oval, or elliptical form, while those of the common potato in all cases examined are of very unequal size, very irregular shapes, and symmetrically oval or elliptical ones cannot be found. S. etuberosum pollen is purely of the wild elliptical form, as is the case in two of the seedlings from it which have white flowers, while that of all the lilac-coloured flowers examined exhibits, curiously enough, precisely the same irregular types as the common potato. The true specific character of S. etuberosum is thus fairly established, while that it is the original progenitor of the potato of commerce can, in face of such results, hardly be contested. Finally, a most important economical fact emerges from these data.

For the 20 years S. etuberosum has been cultivated at Reading there has never been a trace of disease on haulm or tuber, though year after year it has been subject to the risk of infection from closely associated diseased plants of the ordinary varieties. This immunity, coupled with the fact that by self-fertilisation it will yield marketable potatoes, implies an even better result than was aimed at originally, since the need of a cross with the enfeebled potato is eliminated, and perfectly pure blood is transmitted from the start. We may therefore regard it as a fact that not merely has the question of origin been definitely settled, but that a really disease-proof, or at any rate, disease-resisting potato has at last been attained.

Chas. T. Druery, V.M.H., F.L.S.

FRUIT AND VEGETABLE PRODUCTION IN FRANCE.

In view of the large quantities of fruits and vegetables that come to this country from France, any information respecting their cultivation and despatch is of interest to British growers, and particularly now that a good deal is being said and written in many quarters concerning French gardening. Accordingly we extract the following account from the reports of the several Consuls as these have appeared in the "Journal of the Board of Agriculture."

DUNKIRK.

According to a report received from H.M. Consul at Dunkirk (Hon. R. Walsh), the export trade from that port to the United Kingdom of fresh fruit locally grown, which was at no time an important trade, has declined very much of late years, as the gardeners find a more profitable market for their produce in their own country and in Belgium. At one time there was a considerable cultivation of gooseberries, currants, pears and apples, all along the coast between Dunkirk and Gravelines, and much of the produce found its way to the English market, but this industry has now practically disappeared, and the ground has been cleared for the cultivation of beetroot and chicory.

The only district where market gardening is still carried on to any extent is that of Rosendaël, where some 600 to 700 acres have been cut up into small gardens and are devoted to the cultivation of cherries, gooseberries, plums, and vegetables. The gardeners of Rosendaël have formed an association with one of their number as president, who undertakes all the organisation of the supply, the fixing of prices, and various other details connected with the trade. It is proposed to establish a bureau, with a paid staff, whose business it will be to find new markets for all garden produce, and to collect information affecting the trade. Mr. Walsh understands that hopes are entertained of establishing a regular export trade to the United Kingdom, particularly in vegetables. The present shipping arrangements, however, would not admit of the British market's being served at fixed times by the existing routes, and the cost of carriage to Calais or Boulogne and thence to the United Kingdom would probably be too high to leave a margin of profit.

CALAIS AND BOULOGNE.

Mr. C. A. Payton, H.M. Consul at Calais, reports that very little fruit or vegetables of local production are exported to England; the large exportation, which takes place in summer, by special cargo boats belonging to the South Eastern and Chatham Railway, arranged so that the consignments reach London early in the morning, comes from the neighbourhood of Paris and the south and centre of France. The principal periods of shipments are for cherries, strawberries, and green peas from May 31 to June 26, and for plums, peaches, apricots, melons, French beans, etc., from July 22 to August 16.

In the same way the large shipments from the port are not of local production. Mr. Vice-Consul Farmer reports that [illegible] are practically the only local vegetables exported. The climate enables these to be placed on the British markets, via [illegible], London, and Goole, some three weeks earlier than the home produce. It is an ephemeral traffic, lasting about four weeks, and ceasing when prices fall below 2d. per dozen bunches.

DIEPPE AND CAEN.

Mr. Vice-Consul Lee-Jortin reports that cider apples are chiefly grown in the Dieppe district, but after these plums are perhaps the most grown. A certain quantity of the ordinary kinds of plums are exported to the United Kingdom, chiefly in September, the better sorts being either consumed locally or sent to Paris. Table apples are exported in small quantities in October. Fairly large quantities of potatoes, grown in the neighbourhood of Le Mans and Orleans, are also sent away.

Mr. Vice-Consul Hettier reports that cherries, gooseberries, plums, and other small fruits are not produced in the Caen district in large quantities, but the local authorities are making a great effort to promote small associations to encourage the growth of these small fruits and also of pears. The cultivation of vegetables is practised only on a narrow strip of land bordering the sea coast from Ouistreham to Courseulles. Potatoes are very early there, but the exports are small, and only amounted to 130 tons in 1906. Carrots and onions are also successfully grown, but are chiefly consumed locally.

HONFLEUR.

Horticulture is one of the principal resources of this part of Normandy, and Mr. Charlesson, the British Vice-Consul, reports that all the farms in this part of France are divided into plots surrounded with thick hedges, and planted with cider apple, plum, cherry, and pear trees. The land is grazed by cattle and regularly manured every spring. In properly-managed orchards, apple trees over 15 years old have the bark scraped off with a special tool in January or February, and are then lime-washed to destroy insects and fungi. The soil chosen for the cultivation of both cider and table apples is generally of inferior quality, dry and stony slopes being favoured, but those facing south and south-west are preferred.

The varieties of cider apples mostly cultivated are Bedan, Bouteille, Joïy, Cimeterre, Belle fille, Sorte à Renoult, Taureau, and Peau de vache. The apples are made into cider locally, but several thousand tons are sent annually to Germany. Table apples are chiefly consumed in the country, though a few are sent to England. The varieties grown are Eclat, Reinette de Caux, Reinette d'Angleterre, Reinette de Bretagne, Pigeonnet, and Calville Blanc.

Several varieties of small pears are grown, such as St. Clair, Liberge, Mouy, Rozé, Beurré gris, Rousselet doré, Souris, Fontaine, and Catillac, the two latter being stewing pears. The fruit is packed loose in boxes and sent to London and Birmingham.

Cherry and plum trees are abundant. The fruit is packed in baskets holding 17lb. and sent to the North of England, Birmingham, Liverpool, Manchester, Hull, etc. Better soil is selected for cherries and plums than for apples and pears, and valleys are preferred. The varieties of plums grown are Orleans, Egg plum, Cherry plum, Gaillon, and Greengages, and the varieties of cherry are Angers, Collet, Guigne dure, Red and White Hearts.

Table pears are grown in gardens which are surrounded with brick or stone walls, or sometimes by clay walls, which, in fact, are considered the best. Espaliers are planted 10ft. apart and trained on the Leverrier system; these are called "candelabres," or chandelier shape, and yield the finest fruit; while another method is the "Palmette" or palm-leaf shape. The latter are planted 13 feet apart, as they cover more space. The "Leverrier" takes about three years to yield fruit in any quantity, while the "Palmette" requires at least five years. This latter system is much practised, as the trees last longer than the "Leverrier," and attain a greater development on the walls, some covering 30ft. and yielding between 250 and 300 fine pears. The varieties cultivated on walls are Williams' Duchesse, Louise Bonne, Doyenné du Comice, Beurré Hardy, Beurré Clairgeau, Beurré Superfin, Beurré d'Aremberg, Doyenné d'Hiver, Olivier de Serres, Crassane, Passe Crassane, General Totleben, and Pitmaston Duchess. The same varieties are grown in the open part of the gardens as pyramids, being planted 13ft. apart each way. Those grafted on quince are preferred. The grafting is always level with the ground, and the young pear trees are allowed to grow gradually, being pruned every autumn. A tree planted three years after grafting takes 12 years to come into full bearing, and it may then produce 200 pears. The fruit, of course, varies in size, but when there are signs of an abundant crop, part of the fruit is plucked off when about the size of a nut.

Packing is a very important point with table pears, and the greatest care is exercised. The fruit is put in layers in boxes with wood fibre, from 36 to 70 Williams' pears being put in a box, according to size.

The cultivation of gooseberries has been almost abandoned, but red and white currants are largely grown.

COTE D'OR.

In this Department agricultural produce is extremely varied according to the nature of the soil and climate. In the valley of the Saône, where the soil is light and permeable, market gardening is extensively carried on. The Côte, which gives its name to the Department, is a narrow stretch of country mostly planted with the vine from which the renowned wines of Burgundy are derived, but a portion of the district is devoted to fruit growing. Cherries, peaches, and currants are cultivated on an extensive scale. The area under potatoes is estimated at about 55,000 acres, and hops occupy about 2,300 acres. Local breweries absorb about one-fiftieth of the production, the remainder being exported to various centres in France and to London. The hops of Burgundy form a third of the French production, and are held to be of first-rate quality.

Fruit production in this Department gives rise to an extensive trade with Paris and England, the fruit exported being chiefly cherries, black currants, and raspberries. An improvement is said to be noticeable in the varieties of cherry selected for cultivation. Peaches and apricots are mostly consumed locally. Peas, haricot beans, asparagus, and onions are grown on a large scale.

OISE.

In several districts vegetable growing, chiefly dried haricot beans, French beans, and artichokes, is conducted on an extensive scale for the supply of the Paris market and for export to England. About 2,000cwt. of cherries, known as "Guignes," are sent to Paris and England in June and July, and about 500cwt. of black currants. Peas are also exported to some extent.

SEINE-ET-MARNE.

Near Coulommiers and beyond Crécy on the slopes of the hills bordering the valley of the Grand Morin, fruit growing is extensively carried on; in good years in this district the sales of the blue plum to agents who forward to Paris and to England amount to 4,000cwt., of other varieties some 1,000 cwt., of the Reine Claude 1,400 cwt., of small early peas 1,000 cwt., and some 800 to 1,000 cwt. of currants and raspberries. The fruit is packed in round baskets containing about 22lb. net. In 1902 some of the growers, in view of the large profits reaped by the middlemen, formed an association, and as the result of this co-operative movement succeeded in obtaining double the amount previously received for the early Carrière pear and for blue plums. In 1903 another association was formed near Crécy with similar results. In the sandy soil about Melun the potato is largely cultivated, the output of the district amounting to 7,000 or 8,000 tons. The potatoes are exported from the end of August to February or March, and a portion of the supply comes to England.

SEINE-ET-OISE.

This Department encircles the Department of the Seine, and provides the bulk of the vegetables and forage required for the supply of Paris. Potatoes, tomatoes, and asparagus are forwarded to London. In several communes special attention is paid to the cultivation of table pears, the favourite varieties being Duchesse d'Angoulême, Louise Bonne, Beurré Diel, Williams' Bon Chrétien, Beurré Hardy, and Doyenné du Comice. The fruit is sold by auction at Paris, or to buyers on the spot, who send it to England and to Russia. An association has been formed at Groslay which makes consignments to England.

LOIR-ET-CHER.

This Department is almost entirely agricultural. The cultivation of haricots and peas is increasing every year. Peas are grown principally on the hillsides bordering the valley of the Loire, and the potato is cultivated throughout the Department; a large portion is consumed locally, and the remainder goes to Paris and London. Owing to the facilities for communication with Paris and other centres, vegetable growing is carried on in most districts. The cultivation of the asparagus, only recently introduced, now occupies some 3,200 acres, with an annual output valued at £40,000.

Bulbs in Grass.—Planting should also now be proceeded with on as bold a scale as possible, but never in formal clumps. If desirable to have as long display as possible two or three varieties may be used. First decide on the outline of the group, then prepare all the holes, and if the soil is impoverished place a shovelful of better soil in each hole, then take the earliest variety and plant one-half of the holes in the entire clump, replacing the turf as planting proceeds; then act in the same way with the other one or more varieties. Tulips and narcissus are most suitable for planting in grass, as are snowdrops, aconites, and anemones.—E. F. H.

LILIES AT LEONARDSLEE.

During the past four or five weeks nothing has been more lovely or interesting than the lilies growing in outside borders. I mention this fact because these plants are not so generally grown as their beauties merit. They are perfectly hardy, and will grow almost anywhere; they should, however, be accorded liberal treatment, but not be subjected to what may be described as coddling.

It is an easy matter to give them a good supply of the soil they best thrive in, should the staple of the district not be suitable. They will do well in rhododendron beds, herbaceous borders, or even may be given a border to themselves, as their flowering extends over a long period, but it is during August and September that they are of special value for brightening up the lawns and shrubberies.

[Photo: J. E. Tyler.

FORTUNE'S TIGER LILY (LILIUM TIGRINUM FORTUNEI).

A handsome form of the strong-growing and free-blooming tiger lily, with large, rich orange-red flowers.

Lilium auratum and its varieties rubrovittatum and platyphyllum are most lovely when seen carrying large quantities of flowers on stems rising from 6ft. to 8ft. in height, and they are much admired. L. speciosum and its varieties rubrum, Kraetzeri, Melpomene, and album appear, when grown well in the open, to produce larger flowers than when grown in pots, and are most attractive.

Lilium longiflorum is also very fine, and grows well. L. tigrinum and its fine variety L.t. Fortunei (see figure), are most beautiful, and when planted in groups of 6 to 10 bulbs each they are highly effective; L.t. flora plena is also very fine.

Lilium Browni, with its large trumpet-shaped flowers, is attractive, and of much interest. L. chalcedonicum (Turk's Cap) is very showy in its season, especially when arranged in bold groups. L. giganteum, one of the most stately of the lilies, thrives here, and produces tall, finely-developed spikes of its large white flowers. L. Henryi, the beautiful golden yellow, is a valuable addition to the flowering lilies, and grows vigorously and blooms profusely here. L. pardalinum, bright scarlet and apricot, is one of the most attractive of lilies. The spikes often reach 9ft. This species does remarkably well by the side of the water, and succeeds admirably in soil which has had a little peat added to it.

All the liliums delight in deeply cultivated soil, to which has been added plenty of well-rotted cow manure. The manure should, however, not be put so that the bulbs will rest upon it, but lower down, so that the roots will reach it after they have become established, and are busily engaged in search of food. When the ground has been prepared, and the bulbs are ready for planting, take out holes to the depth of 8 or 10in., and put in a little fine material, such as leaf-soil and peat. Also add a little sharp silver sand, and a sprinkling of flowers of sulphur. That latter will help to keep bulbs free from fungoid diseases. Plant the bulbs as soon as received, as it is an advantage to keep them sound and plump, and put them quite six inches deep. During the winter they may have ashes (coal) or a little peat spread over them to keep them safe from frost. Watch the growths in the spring, and then a little more soil may be placed around the growths, or taken away if need be. But it is a wise thing to do to add more, as the material prevents the slugs attacking the succulent shoots. The lilies must be looked to occasionally to see that they are kept free from aphis, which is a troublesome enemy to the new growths. When sufficiently advanced they should be supported by sprays or small sticks, and eventually have some good stout stakes, and be tied with soft string.

Lilies under such conditions as here suggested will be satisfactory for several years. It is necessary to top-dress annually, and supply liquid manure or fork in a little bone-meal occasionally during the summer.

Renewing the bulbs must have attention as soon as the growths show the least signs of weakness. They should be lifted and the ground trenched quite two feet deep, and all roots of trees or shrubs in the vicinity be removed. The soil should be partially renewed with material such as was advised at the initial planting. The bulbs will probably be lower than when planted, but on being replanted they should be given the depth of six inches as previously advised. The largest bulbs should be selected for planting where they are required to flower, but the smaller ones should be put in a nursery bed to gain strength. The planting should be done as soon as the stems have ripened, and some ashes, cocoanut fibre, or peat be placed over the surface.

The usefulness of lilies cannot be over-estimated, as they are most valuable when cut with long stems for the embellishment of the drawing-room or for other home decorations. To those starting lily growing I would strongly advise procuring the best sized bulbs, as small, cheap bulbs often produce unsatisfactory results, which means loss of time and a great disappointment.

W. A. Cook.

THE CAUCASIAN POPPY.

Under the name of Papaver arenarium I received some seedling poppies, which have proved to be different from Papaver arenarium as described in Nicholson's "Dictionary of Gardening," and have turned out to be P. caucasicum, as I once grew it several years ago. The former plants came to me from the late Rev. C. Wolley Dod, and I have no reason to doubt that he was right in sending me these plants as P. caucasicum. That there is some confusion is not to be surprised at, seeing that both P. arenarium and P. caucasicum come from the Caucasus and adjacent regions, and that P. arenarium was described as P. caucasicum by Henning in 1823. But the flowers of P. arenarium are purple, with dark spots, while those of P. caucasicum, as I have it, are of a brick red, deeper than the salmon or terra cotta of P. rupifragum and P. pilosum.

It is, however, a very distinct and beautiful poppy, although my previous experience leads me to consider it biennial, and the inflorescence is so great, and so numerous are the flowers, that one can hardly imagine that such a small plant could bear the strain of flower and seed production to such a degree without injury to its life.

Of my few plants only one has flowered this year. This is on the top of a low wall, and it has thrown out a great stem, some two feet or more long, which has been allowed to hang down, and whose side branches have been thrown up in an erect position. On the branches there are many flowers, but only a few open at a time, so that the flowering period is prolonged. The flowers open out flat, and are about three inches across, and, as already said, are of a brick-red, a somewhat pale brick, it is true.

The foliage and the stems are quite beautiful in their colouring, reminding one, so far as regards hue, of the Horned Poppy, Glaucium luteum, but more of a sea green. The leaves, however, are exceedingly prettily cut, and are highly ornamental in form, as well as delightful in the sea green tone of the leaves and stems, which look like some carved and frosted work.

As already indicated, this poppy is probably biennial or annual, but, as it seeds freely, there ought to be no difficulty experienced in keeping up a succession of plants. It should have a light soil, and, even if it never bloomed, the effect of the leafage is remarkably beautiful.

S. Arnott.

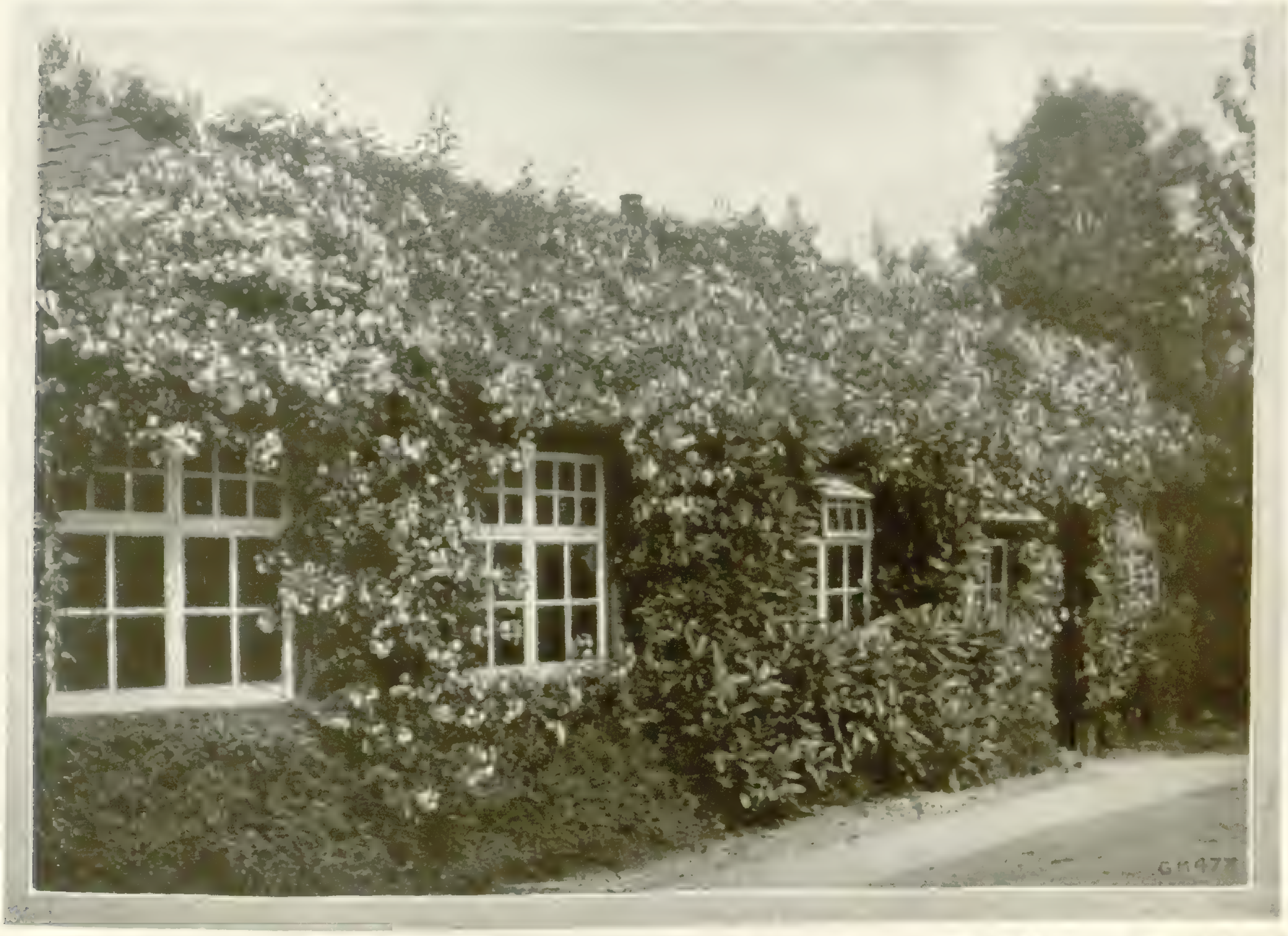
DUNDEE RAMBLER ROSE AT OVERSTRAND.

The attractions of the delightful gardens of The Pleasaunce, Overstrand, are many and varied, and it would be difficult to visit them at any season of the year without finding some feature possessing much interest. The late Lord Battersea had a strong affection for roses, and this affection was shared to the full by Lady Battersea. Consequently when the gardens were being furnished these exquisitely beautiful and fragrant flowers were planted in a lavish manner. Beds and borders were filled with roses, in dwarf and standard form; hedges were formed with them, and pergolas erected for the display of their charms. With so full a representation of the several classes the feast of roses during the summer season is such that one hesitates to refer to it lest it be thought that he is indulging in the use of extravagant language.

With a view to avoid the suggestion of exaggeration I will not do more than say that the display of roses in the gardens of Lady Battersea's marine residence is surpassingly beautiful, and of so varied a character as to afford excellent examples of the various methods by which the several sections can be the most successfully cultivated. I have had the pleasure of enjoying the display of roses on several occasions, and of the various forms in which the roses are grown none have been more interesting to me than the fine examples of Dundee Rambler that have for their support the carpenter's shop, which occupies a position in one of the nooks on the outskirts of the Tudor garden. It must be twelve years since Lord Battersea directed my attention to it as an example of the facility with which a building somewhat unsightly may be converted into an object of beauty, and since then my interest has been in no way abated in the use to which this fine rambling rose has been so successfully put.

There is no occasion to describe the manner in which the building is clothed or to refer to cultural matters. The illustration is a reproduction of a photograph that I had the pleasure of taking at the beginning of July, and from this it will be seen that some of the spaces are filled with Magnolia grandiflora, and that the other parts of the walls and the roof are covered with the growth and flowers of this fine old rose. As a matter of course a certain amount of old wood is removed annually to make way for the new growths in accordance with the practice adopted by the most successful rose growers.

George Gordon.



DUNDEE RAMBLER ROSE TRAINED OVER CARPENTER'S SHOP AT THE PLEASAUNCE, OVERSTRAND.

Rose Madame Eugenie Boullet.—This variety has again been very good this season. It is not a show rose, but one very useful for garden decoration and the supply of cut flowers. Blooms are fairly large, cup-shaped, beautiful in the bud, and when half-expanded the colour is especially attractive. It is described as bright yellow, shaded rose and carmine, but it also shows other shades, and, therefore, is variable in colour. A good grower, with clean, healthy foliage, making it one of the best.—T. H. Slade.

GARDENERS' WAGES.

"Wanted a gardener, married, age about 30; must understand pruning and the growing of fruit and vegetables; nine men kept; wages, 18s., and cottage."

The above advertisement recently appeared in the columns of a weekly paper, and it would appear from the reading of it that the successful applicant for the situation will have the charge and responsibility of an establishment in which nine men are employed, and in return for his labours he will be rewarded with the magnificent stipend of eighteen shilling a week, with a cottage thrown in. Just think of it! Three shillings a day for looking after a place big enough to employ nine men. I wonder if the latter are paid on the same scale.

One may well ask what things are coming to. And what has a man got to do in order to qualify himself for a charge like the above? He begins, we will say, as a garden boy, pot crocking, and the rest, and then goes through the journeyman stage, perhaps serving in several different establishments during this period, and learning the routine of his business. He may have risen to the dignity of a foreman, and at 30 be on the look-out for a head place. What a reward after long years of probationship—eighteen shillings a week and a cottage. Fortunately, instances of such beggarly wages as the stipend offered in the above advertisement are the exception rather than the rule, but the fact nevertheless remains that gardeners are lamentably underpaid, and this, added to the uncertainty of the occupation, prevents parents who have due regard for the welfare of their children putting the latter into it.

Take those gardeners who may be termed fortunate, inasmuch as they are fixed in comfortable situations; generally speaking, they do not bring up their sons in their own occupation if they have any choice in the matter, because they know the uncertainties of the calling and the low remuneration which gardeners are offered. Despite the latter fact, however, gardening is overcrowded, though it is said that really good gardeners are none too plentiful. If this is the case, then the overcrowded state of gardening, and the comparative scarcity of first-class men must be the result of poor prospects and low wages. In these days private gardening does not appeal to parents who are anxious to give their sons a fair start in life, because the prospects are not good enough, but the door is nevertheless open wide, and all sorts and conditions pass through. In other words, there is a good deal of drift in the process of gardener-making, and lads who go into gardens merely for the sake of earning a living, and with no particular ideas about the future, roll on with the stream, and in due course help to swell the overcrowded ranks of gardeners.

By this loose process of gardener-making the standard is lowered, and men who set out early in life to become gardeners, and are fully qualified both as regards capabilities and intellect, are put on a level with the rest, and have to accept the same standard of wages. There are scores of youths today working in gardens who would serve a useful purpose in the world if they remained as labourers, but it is no kindness to them to push them on and make so-called gardeners of them, because they have no particular inclination and little capacity. In short, they are gardeners through sheer force of circumstances, and if the low wage they command is as much as they are worth, infinitely better men are remunerated according to the same standard. It is hoped that the B.G.A. will be the means of altering this state of affairs, but so long as the present loose and unsystematic method of making gardeners continues, overcrowding and low wages are inevitable. H.

PLANTS AND THE DROUGHT

In this locality the present summer has been exceptionally dry, less rain having fallen for the first seven months of the year than in any season except 1902, when the fall was about an inch below that of the present year. Up to the present the fall has been: January, 1.70 inches; February, 2.29 inches; March, 3.48 inches; April, 3.12 inches; May, 2.11 inches; June, .90 of an inch; July, 1.90 inches. In June .58 of an inch out of the total fall of .90 fell on the 2nd, so that for the remainder of the month only about a quarter of an inch fell, and from June 17 to July 10, a period of twenty-three days, not a drop of rain fell. In July rain fell on the 10th, 11th, 12th, 13th, 14th, 16th, 17th, 18th, 19th, and 20th, but mostly in small quantities, and from the 20th until the date of writing, August 20, a period of thirty-one days, there has been practically no rain, only a shower, in which .02 was measured, having fallen. In all probability there will be a drenching September, a contrast to last season, when September was the finest month in the year, absolutely dry and sunny, after a dark and damp summer.

The plants have suffered intensely from the long-continued droughts, many perfectly hardy ones having perished. In this dry and stony soil, with its very steep slope, heavy rain is needed at least once a week to keep the soil in good condition. Aster grandiflorus died in the July drought, as did all the plants of the Foam Flower, Tiarella cordifolia. In the drought that we are at present experiencing Campanula abietina has succumbed, and many other plants are in wretched condition. The mossy saxifrages, such as S. Wallacei and others, are brown tufts; the double arabis has its entire foliage wilted, and hanging limp, and even the hartstongue ferns in the hedgerow are flaccid.

In periods of prolonged drought a thorough watering of every plant in the garden is the ideal one would wish to attain, but this is, of course, impossible, and a sprinkling of water is worse than none at all. Where water is given at all it must be a thorough soaking. In most gardens systematic watering has to be confined to a few plants, and that is the case here. A large specimen of Veronica Hulkeana against a wall is well syringed every evening, as is the clianthus, both red and white; Lonicera Hildebrandiana, which is flowering finely; Berberidopsis corallina, Mutisia decurrens, Brachysema acuminata, Sollya heterophylla, and lapagerias. The Shamrock Pea, Parochetus communis, and Ourisia coccinea are well watered every other night. Among shrubs and plants that have shown the effect of the lasting drought are Clethra arborea, Callistemon salignus, and Salvia azurea grandiflora, better known as S. Pitcheri. South African plants, as a rule, do not appear the least distressed by the weather conditions, Bowkeria Gerardiana and Leonotis Leonurus being in the best of health. However much trouble is taken in watering, it has not the effect of rain, and it is to be hoped that a good downpour is not far off.

S. W. Fitzherbert.

Kingswear, S. Devon.

[Publication unavoidably delayed.—Ed.]

PROFIT FROM VACANT LAND.

Generous provision of land for ornamental purposes and recreation is now ensured in most large cities, and the Metropolis is particularly fortunate in having several public bodies concerned in this important work, which they perform in an admirable manner. To a limited extent land is also provided for cultivation around London as allotments, but this is mainly for those in full employment or who can afford to bear the expenses of rent, cultivation, and cropping.

Beyond these there is a considerable section of the community—the partially employed—for whom, hitherto, there has been no cultivable land available within their means and opportunities. A large proportion of such men deserve both sympathy and aid; they are often struggling bravely against adverse circumstances caused by ill-health, advancing age, or other difficulties; and every help rendered in these cases is a service to the community, assisting to maintain the independence of worthy members and reducing the demand upon ratepayers.

Here is, indeed, a great and important sphere of work, and it is the purpose of the Vacant Land Cultivation Society to render substantial help in the direction indicated. This society is being developed upon the plan initiated in the United States where highly gratifying success has been achieved in Philadelphia, New York, Cleveland, and other large cities. The loan of vacant land is secured from private owners or public bodies, and this is divided into plots which are let free of rent, rates, and taxes, to men in partial employment. These are required to cultivate and crop the land with vegetables to the best advantage, and they are assisted by the society in attaining that object. The whole of the produce is the property of the men for home use or sale, and no contribution is exacted from them in any way.

With industry, and under expert direction, very satisfactory results can be obtained, and the advantages to the cultivators are threefold. First, physical, as the men are greatly benefited by working in the open air, especially those suffering from lung troubles. Secondly, moral, for the men are encouraged to find pleasure in useful work, and learn the advantage of performing it thoroughly. This means a decrease of street-corner loafers and a lessening of wasted time in other ways on unoccupied days. Thirdly, there is a material benefit. A well-cropped plot of 20 square rods, or, say, one-eighth of an acre, can be made to yield a useful supply of vegetables over a great part of the year, thus reducing home expenses and ensuring that fresh, wholesome garden produce forms an essential part of the daily diet--a benefit to the whole family.

By the sale of the produce, from £3 to £5 has been had from a plot of the size named. This is no fanciful estimate, it has been repeatedly accomplished and even greatly exceeded in some places. The amount is not large, but only those who have experienced the hardships of life can realise what it means to a poorly-paid man with a family.

It will be gathered from the foregoing that the Vacant Land Cultivation Society has undertaken a work that must prove helpful to thousands in and around the Metropolis. It should also prove a public good, and assist in preventing the pauperising of many deserving men and their families. The society therefore earnestly appeals for support to all who are anxious to better the conditions of the less fortunate members of society who are really striving to help themselves in a legitimate way. The funds required are moderate in amount, as the expenses are reduced to a minimum. In the laying out of public ornamental gardens from £200 to £300 per acre has been expended in London, and the cost of maintenance is in some instances as much as £100 per acre per annum. The expense of the work performed by the Vacant Land Cultivation Society, even when dealing with most unfavourable land, would not exceed £15 per acre, and in most cases it will be under £10, for the preparation, manuring, and stocking of the land, while the annual expense per acre will be almost nominal when the whole scheme is fully developed.

If funds permitted it might be possible to include the unemployed who were fitted for the work within the scope of the society, as payment could be made for labour expended upon cultivating portions of the land commercially, the society selling the produce to reimburse it for the outlay.

At present the land held by the society comprises about two acres at High Street, Fulham, lent by the London County Council; seven acres at Townmead Road, Fulham; and 17 acres at Canning Town, the two latter being lent by the Gas Light and Coke Company. Upon these tracts some 200 plots have been marked out and the whole are already in course of cultivation, while other offers of land are receiving consideration.

Applications for further information, offers of land, seeds, or plants, and contributions to the funds (which are much needed), should be addressed to the office of the society, 39, Wilson Street, E.C.

R. Lewis Castle.

CAMPANULA PUNCTATA.

This campanula has a wide range, being a native of Siberia, and being also found in China, Japan, and Corea. It is an old inhabitant of our gardens, but is seldom met with, a rather surprising fact when its ornamental properties are considered. When in good health it is a vigorous perennial, about 2ft. in height, with large, hairy, cordate-ovate leaves. Its flowers are bell-shaped and drooping, and fully 2in. in length. As a rule the blossoms are white, and are spotted internally with minute purple dots. In some cases, however, the flowers are of a delicate rose-tint, and in others violet. The white form is, however, the commonest, and is, perhaps, the handsomest, for large clumps, over 3ft. across, such as that depicted in the accompanying illustration, when covered with hundreds of their large pendent white bells, are as attractive border plants as can well be imagined. In the shape of its flowers it bears a strong resemblance to the hybrids C. Burghalti and C. Van Houttei. If it shows signs of failing health it should be lifted and replanted in rich porous compost. The colony here shown, however, has been in its present position for three years, and shows no sign of loss of vigour. S. W. Fitzherbert.

Root Pruning of Fruit Trees.—No amount of summer or winter pruning of fruit trees is of any avail in correcting unfruitfulness unless root pruning is systematically attended to. Planted out trees in the orchard house should receive first attention, continuing the operation with early and midseason varieties in the open, leaving late varieties to be treated in November. Where the work is carefully ordered only a percentage will require root pruning in any one season.—Thomas Smith, Walmsgate Gardens.

[Photo: S. W. Fitzherbert.

THE SPOTTED BELL FLOWER (CAMPANULA PUNCTATA).

Flowers white or rose colour, spotted on the inner side with purple.

DRAINAGE AND WATER SUPPLY.

The draining of surplus water from the land may be considered the very foundation of good cultivation. It will avail little to have at command a plentiful supply of skilled labour and an abundance of manure if the land be wet and cold through imperfect drainage. Better crops may be obtained than if the supply of labour and manure were less, but nothing like an adequate return from this two-fold expenditure can be obtained while this first operation of good tillage is neglected.

It cannot be too often stated that air and warmth are essential to the life of a plant, and must be regulated to the roots as well as to the top. If the soil be loaded with water there will be a water monopoly, and air, with its attendant warmth, becomes excluded, the process of converting food into a usable form is stopped, and the growth of the plant is brought to a standstill. Some soils have sufficient natural drainage, and expense is thereby spared.

If the subsoil be of a heavy clay texture water cannot freely pass through, and it therefore remains in the upper layer of soil. If, on the other hand, the subsoil be gravelly, the water will pass through and leave the top soil amenable to the beneficial influences of air and warmth.

There are many methods of drainage, but no one method can be pointed out as being the best under all circumstances, for the class of soil material at hand, declivity, amount of capital and labour at command have all to be taken into consideration.

Once the contour of the land is found the position and direction of the main drain can be decided on. This, of course, must be larger than the others, just as a river is larger than its tributaries. A splendid object lesson in drainage is the study of a river as shown on a map, or, when possible, on the land, itself. The water will be found always to follow the line of least resistance, and take the lowest path. Ponds, rivulets, streams, brooks, and rivers are valuable means of draining the land in a natural manner. But they only partly do the work. Ours is to further feed these streams and rivers.

The main drains having been duly mapped out, there arises a question relative to the depth and distance apart of the secondary drains. If the subsoil be of a close, impervious texture, it is evident that the drains will need to be nearer the surface and nearer to each other. In a light sandy soil they could be 2½ft. deep and 20 to 30ft. apart. The figures for a clayey soil would be 1½ft.—2ft. deep, and 10 to 15ft. apart. The main drain may, with advantage, be somewhat deeper than its tributaries.

Earthworms play a part in the drainage of the soil. By their repeated excavations the water passes more readily through the soil. It is a mistake to regard these creatures as garden enemies, for, besides this method of drainage, there stands to their credit the conversion of mould into available plant food. That they are a nuisance in pot plants and on lawns is undeniable, but in the latter case their castings can easily be scattered with a birch broom.

The tile drain is the most common form, and should, preferably, be egg-shaped, with the smaller end downwards, and, of course, it should be level and quite straight. Two and three-inch pipes will be found sufficiently large for ordinary drainage, with the main somewhat larger. The tributaries should be so arranged that they strike the main at an angle less than a right angle.

Other forms of drains are stone drains,

brick drains, rubble drains, sand drains, and open ditches. The open drain may be dismissed from our consideration as being obsolete. Unless ample material is at hand stone drains are very expensive. They may be made in the form of a square, or of a triangle. Bricks may be formed into a box drain, but the question of expense usually debars their use. Rubble drains need not be despised by small cultivators. Brickbats and clinkers are eminently suitable for the purpose. There should be six inches of rubble, and this should be covered over with turf to prevent the fine soil from filtering into it and proving an obstruction. Sand drains have been recommended, and would probably prove useful. An implement has been made that will take out the trench for a drain and deposit several inches of sand at the bottom. It is an interesting experiment, but has not been sufficiently tried to merit confident recommendation. Badly-built drains will certainly not prove economical. Either they will have to be relaid or the effect will be seen on the crops.

The question of water supply is so intimately associated with tillage that I need not apologise for coupling it with drainage. Wherever there is a garden a plentiful supply of water becomes a necessity. Success in growing cannot be maintained unless there is a plentiful supply of water available during times of drought. Many plants will continue to grow during a drought, and even be useful afterwards, but such a check is one from which they seldom wholly recover. The water supply is before all things a local question. A few general hints may, however, be advantageously given. Where the garden is on a slope there is no difficulty in distributing the water once it can be got to the highest point, for we have but to take advantage of the law of gravitation. To get it to the highest point a ram or a wind pump may be needed. In such a case a large store tank should form the basis of distribution by gravitation. The larger the tank the greater the supply that may be had in reserve.

A well-watered garden is one every part of which can be supplied with water at a minimum expenditure of power and labour. If by mechanical means a sufficiency of water can be conveyed to the land there should be no great difficulty in distributing it. The expenditure of capital in this respect will bear considerably interest in the saving of labour, and the better health of the crops. To have a plentiful supply and an inadequate distribution betrays a misconception of the true meaning of economy. By the free arrangemen of tubs and taps, and the means of fastening to the taps lengths of hose piping, there need be no difficulty in conveying water readily to all parts of the garden. Where an adequate supply cannot be arranged the crops should be so regulated that those standing in most need of much water are nearest the supply, and those able to shift for themselves farthest away. When we consider the quantity of rain water which goes to waste during heavy showers it is sad to think that so little effort is made to collect it for use during a dry season. Wherever there are buildings a splendid opportunity presents itself of catching many hundreds of gallons of water by running along the eaves a length of house piping, and arranging, by means of tubs and tanks, for a large supply during a drought. By the use of a few pipes much of the water so saved can be distributed to various parts of the garden by the accommodating power of gravitation. WILLIAM F. ROWLES.

NEW BOOKS.

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INSECTIVOROUS PLANTS.

By Charles Darwin, M.A., F.R.S. Revised by Francis Darwin, M.A., F.R.S.

Although this important work by the late Charles Darwin was published thirty-three years ago, it has lost none of its freshness or interest, and the revision by Mr. Francis Darwin places the reader in possession of the results of the investigations that have been made by other scientists since the author concluded his experiments and inquiries. Hence the publication of a cheap edition that leaves nothing to be desired as regards paper, printing, and binding is a matter of considerable moment to those who take an active interest in plant physiology and cannot well afford the work in its more expensive form.

In the course of the summer of 1860, or some fifteen years before the publication of the original work, Charles Darwin was much surprised to find how large was the number of insects that were caught by the leaves of the common Sundew (Drosera rotundifolia) growing on a heath in Sussex. He had heard that insects were thus caught, but knew nothing further on the subject. He gathered by chance a dozen plants, bearing fifty-six fully-expanded leaves, and to thirty-one of these dead insects or remnants of leaves adhered. On one plant all six leaves had caught their prey, and on several plants the largest leaves had caught more than a single insect, one had the remains of thirteen insects adhering to it. The largest insect that Darwin had seen caught was a small butterfly, but a correspondent informed him that he found a living dragon fly with its body firmly held by two leaves. It soon became evident that drosera was well adapted for the special purpose; the subject greatly interested the author, and during the next thirteen or fourteen years he devoted a large share of his attention to its investigation. The results, as well known, were highly remarkable, those of special importance being—the great sensitiveness of the glands to slight pressure and to minute doses of certain nitrogenous fluids, as shown by the movements of the so-called hairs, or tentacles; the power possessed by the leaves of rendering soluble or digesting nitrogenous substances, and of afterwards absorbing them; and the changes in the cells of the tentacles when the glands are excited in various ways. Mr. Darwin also investigated several other species of drosera, namely D. anglica, D. intermedia, D. capenses, D. spathulata, D. filiformis, and D. binata, and the description of his experiments with the several species extends over twelve chapters, which occupy 230 pages.

The other plants that were investigated with a view to determine their powers of movement, their capability for catching insects, and their digestive powers,included the Venus' Fly-trap (Dionæa muscipula), which from the rapidity and force of its movements is described by Darwin as one of the most wonderful plants in the world; Aldrovanda vesciculosa, which may be called a miniature dionæa; Drosophyllum lusitanicum, a rare plant growing freely in Portugal and Morocco, and so attractive to flies that it is known among the villagers near Oporto as "the fly-catcher," and is suspended in the cottages for this purpose. Pinguicula vulgaris, a native plant, with attractive flowers, and several species of Utricularia, a genus of aquatics furnished with bladders that serve the purpose of capturing small aquatic animals which are utilised in the nutrition of the plants.

We need not say that this, like other of Darwin's works,is written in an entertaining style, but we would suggest that young gardeners and others who are desirous of becoming acquainted with the methods by which insectivorous plants capture their prey and assimilate their nutrient properties should take advantage of the publication of this cheap issue to study Darwin's investigations first hand.

BULBS AND THEIR CULTIVATION.

By T. W. Sanders, F.L.S. (W. H. and L. Collingridge, 148 and 149, Aldersgate Street, E.C.) Price, 2s. 6d.

An admirable book, at once comprehensive and inexpensive, on the cultivation of bulbous and tuberous-rooted plants. Hardy, half-hardy, and tender bulbs and tubers receive a full share of attention, and the various methods by which the several kinds can be utilised in beautifying the home, the conservatory, and the garden are fully described. The description of the several kinds is ample, the cultural directions are full and explicit, and the selections given will save the reader from perplexity when making purchases.

THE FRENCH GARDEN.

By C. D. McKay, F.R.H.S. ("Daily Mail," London, E.C.). Price 6d.

For some years past Mr. McKay has taken special interest in the question of intensive culture as represented in the French market gardens, and towards the end of 1904 he urged upon the market gardeners in the Evesham district to visit the market gardens around Paris, with a view to the introduction to this country of the methods of culture adopted therein. He was so far successful that in the following year a party of market gardeners visited France, and, it may be added, were much impressed with what they saw. With a view to further assist in disseminating a knowledge of the practice that obtains among French cultivators, Mr. McKay has written this book, and issued it in an inexpensive form. The information given is clear and concise, and free from exaggerated statements with regard to profits.

ALPINE PLANTS

By W. A. Clark, F.R.H.S. (L. Upcott Gill, Bazaar Buildings, Drury Lane, London.) Price, 3s. 6d. net.

An admirably arranged and clearly written book on the cultivation of alpines which has attained to a high degree of popularity, as evidenced by the fact that it has passed through two editions. The cultivation of several hundred of the finest of the rock plants is fully described, and there are selections arranged according to the positions for which they are specially adapted. There is also a chapter on small rock gardens, which is especially deserving of the attention of those desirous of entering on the cultivation of alpine plants in gardens of limited dimensions.

THE BOOK OF FERN CULTURE.

By Alfred Hemsley, F.R.H.S. (John Lane, The Bodley Head, London.) Price, 2s. 6d.

As in the case of the other handbooks on gardening published by Mr. John Lane, this is essentially practical, and is wholly devoted to such matters as the cultivator who would achieve success must give his closest attention. The author is well known for his knowledge of ferns and fern culture, and those who take him for their guide will have good reason to be satisfied with their choice. More space should have been devoted to British ferns, and we hope this will be done in a second edition.

ELEMENTARY BOTANY

By M. A. Liversidge. (Blackie and Son, 50, Old Bailey, London.) Price, 1s. 6d.

An excellent class-book of elementary botany, specially adapted to the requirements of the middle and lower forms of secondary schools. It covers the syllabus of work for the Oxford and Cambridge Junior Local Examinations, the subject matter is clear and well arranged, and the illustrations are numerous and of excellent quality, and well adapted to the elucidation of the text.

THE GENUS CISTUS.

Thanks to the increased attention that is being devoted to hardy subjects, these beautiful shrubs have of late years become a prominent feature in many gardens. The numerous records of failure, loss in winter, and complaint that the plants were tender and not fit subjects to withstand our trying climate, in years gone by, could often be traced to their being transferred to permanent quarters late in the autumn, or to their having been placed in a shady position for some weeks or months. We now recognise the fact that excessive moisture about the roots and in the atmosphere does infinitely more harm than a very low temperature, and since care has been exercised to select suitable sites, the losses are few indeed.

One of the principal points that demand attention in their cultivation is the selection of a site in which they will receive the fullest possible exposure to the sun. Another point is to guard against planting in a soil that is retentive of moisture in winter. There is really no excuse for failing to provide the situation and soil essential to their free development, as no great amount of labour is necessary to secure ample drainage for heavy ground and adding a fair amount of porous and sandy soil.

The dwarf kinds are not, in my opinion, half so beautiful, or appear to be so much at home as when luxuriating on the most sunny and exposed positions in the rock garden. Therefore, amateurs generally cannot do better than utilise them in this way, and some of the species of tall growth may be arranged to furnish the background. Previous to planting the various kinds, some consideration must be given to the growth of the plants that will be their near neighbours for the purpose of guarding against their being overcrowded.

Probably C. laurifolius may claim to possess the most robust constitution, and to be the hardiest of the genus, and it has been known to our gardens since the 17th century.

C. maculatus is very beautiful and distinct.

C. ladaniferus is known as the Gum Cistus, and more frequently met with than any other species, and is a handsome shrub of comparatively strong growth.

C. ladaniferus maculatus has white petals, with crimson spots at the base.

C. obtusifolius has white petals, with yellow base.

C. villosus has reddish-purple petals, and is synomymous with incanus and undulatus, while C. albidus is a very attractive species with purple flowers, the petals yellow at the base.

Much better plants are obtained from seeds than from cuttings, and the seeds germinate freely enough in an unheated frame, and seedlings may be expected to make their appearance in about five weeks from the date of sowing, and require careful treatment in their young stages. A good practice is to put them in [illegible] pots, and later shifted into 48's, when they may be plunged in the open, or reserve garden until November. During the winter they should have the protection of a frame. It is unadvisable to place them in their permanent quarters until the following spring. Cuttings may be rooted in a propagating case placed in a warm house or under a bell-glass in the greenhouse. Early in the spring and the beginning of the autumn are good times for proceeding with the work of rooting cut-

Walter H. Aggett.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

SUMMER - FLOWERING CYPRIPEDIUMS.—The plants of C. Lawrenceanum, C. L. Hyeanum, C. Curtisi, C. callosum, C. c. Sanderæ, and other kinds, which flower in the late spring and summer months, that have not already been attended to in the matter of repotting, should now be seen to without delay. They are both growing and rooting freely at the present season, and are thus in the best condition for repotting. When they can be induced to become re-established with the least possibly delay there is little danger of their receiving a check from the effects of disturbance at the roots. Practically all the above-mentioned kinds and allied species are what may be termed surface or shallow rooting kinds, and it is advisable to provide drainage in the pots accordingly. The pots should be clean and filled at least from one-half to two-thirds of their depth with clean drainage. The potting compost we find suitable consists of about equal portions of peat and fibrous turfy loam, some chopped sphagnum, and sand or finely broken crocks may be added in sufficient proportion to render the compost porous. This compost should be made firm, but not hard. It is a good plan to water them, using rain water, immediately repotting is completed. Sufficient water should be given to wet the compost through. Shade from excessive sunlight for a few days after repotting, and maintain a humid atmosphere.

INCREASING THE STOCK, whether of choicer varieties or the ordinary forms, should have attention. It is desirable to produce more stock where necessary, and to increase the size of the specimens when possible. If we examine any of the above-mentioned kinds when they first reach this country in an imported state, we find that there is distinct tracings of a long succession of annual growths, with no attempt whatever to produce back breaks, unless some injury has befallen the leading growth. Then we have nature inducing one or more lateral growths to break from the base, and make good the deficiency. Plants under cultivation do not always behave the same as those growing naturally, as the attention they receive has a tendency to increase the normal vigour of the plants, and two or more growths may be found advancing together from the same leads. But even the back growths of some years standing, that have retained their foliage, are quite capable of producing breaks, or new growths from their base, but they rarely do so unless the rhizome connecting the growths has been severed. It is not a bad plan to examine the plants some time previously to their being repotted, and to cut through the rhizomes between the growths with a sharp knife. If done in this way any active roots that may still be attached to the severed growths will naturally be of some assistance to aid the development of new growth, and where such growths appear they may be either removed to make stock, or retained to increase the size of the specimen at the potting season. The back growths I consider are of no advantage to the plants, and should be removed at the potting time if there are no good roots attached. Where they are taken off in this way they may be potted up in small pots, using plenty of chopped sphagnum moss and sand in the potting compost, and placing the plants in a warm, moist position.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

HERBACEOUS CALCEOLARIAS.—Many of these are still in small pots, and they should now be examined, and any becoming pot-bound should be potted. A fairly rich soil suits them well, such as good sound loam with plenty of silver sand, and about one-sixth of the bulk should consist of dry cow manure rubbed through a sieve. Where the latter is not at hand decayed horse droppings form a good substitute. The shift should not be a large one at this time of the year, and the plants should be potted firmly. Calceolarias abhor fire-heat, so where it is possible keep them in cold frames all the winter, matting them up when the weather is severe. They like moist surroundings, and never do better than when the leaves have beads of moisture on them when the frame is opened for the day.

TUBEROSES.—The African bulbs are now coming to hand, and may be potted singly in 4½ inch pots, or three in a 6 inch pot. They do best in a compost of fibrous loam and leaf-soil, with sufficient sand to keep the soil porous. The compost should be used in a moist condition, and no water will be necessary at present. Plunge the pots in cocoanut-fibre refuse with a bottom heat of about 65 degrees or 70 degrees, and cover the bulbs with flower pots. The American tuberoses come to hand in December and January.

NERINES.—The flower spikes are now

HOARY-LEAVED ROCK ROSE (CISTUS ALBIDUS).

Flowers pale purple with yellow centre.

showing themselves, and a light feeding should be given. Give water with great care or disaster will soon follow. When in full flower nerines are among the most beautiful of greenhouse bulbous plants, and flowering as they do during autumn and winter, they deserve to be more largely grown. Nerine Fothergilli and Fothergilli major are the most useful.

FERNS.—At this season less atmospheric moisture must be given, and all dead and decaying fronds be regularly removed. Allow plenty of space between the plants, as this will keep damping of the fronds in check. Plants that have been growing all the season, and have their pots well filled with roots, should be given a stimulant.

CHRYSANTHEMUMS.—Plants cultivated to produce large flowers will now be full of interest, and each bud and bloom will be watched with keenest anxiety. No insect pest must be allowed to lurk among the blooms. Green-fly is perhaps about the most troublesome of all when once allowed to establish itself among the petals, as when it obtains a foothold it is difficult to eradicate, and, not only so, but seldom is the flower worth much, as it will lack colour and freshness. Thrips are also responsible for many badly-finished flowers, but these little creatures, being so minute, are often overlooked. Frequent light fumigations must be persisted in.

SHADING MATERIALS.—Sunshine is not now sufficiently strong to injure plant life under glass, and the removal of shading should at once be undertaken. Select a day when the material is quite dry, and store the blinds in proper order; this will save time and confusion when they are again in request.

ROMAN HYACINTHS.—The ease with which these can be brought into flower, well in advance of any other forced bulbous plant, makes them of great value. An essential point to success in their cultivation is that the bulbs shall have been potted up sufficiently long to have practically filled their pots with roots before they are removed from under the ashes or other material with which they have been covered, and taken into heat. Given this, the rest is easy, and there is no fear but what good flowers may be had at an early date, but to remove and attempt to force them before strong root action has been set up will result in failure. Bulbs potted in August have already formed a network of roots round the pots, and these may at once be started. After removing them from the ashes it is best to give them a day or two in a cold frame until the crowns become green, then they may be taken into a house or pit with an intermediate temperature. Stronger heat may be given when the flowers commence to open, if it is thought desirable to draw the spikes out. The lower temperature will produce shorter spikes, with flowers of greater substance and lasting power. Very little water will be needed to begin with, but the syringe may be freely used with advantage until the flowers develop.—T. B. FIELD, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

CLEARING AND REPLANTING BEDS.—Continue to remove summer bedders, and refill or prepare the beds for winter. The sooner this is now completed the better will be the results in winter and spring. Probably if the weather continues mild a few things may still be bright, yet it is but waning glory, and, all things considered, it is best not to wait until every flower has disappeared before replanting.

LAWNS.—The recent warm weather has given grass quite an impetus after the previous heavy rains and low temperature, and the mowing of lawns must be attended to. It may be advisable to mow grass much later than usual. Grass left unduly long gives an untidy appearance to the lawns throughout the winter. Defects in lawns will be noticeable, and this is a good time to remove them. In many cases a dressing of basic slag may be applied with advantage.

COLLECTING LEAVES.—As leaves fall have them collected and carted away. If allowed to remain either as they fall or in heaps, they will soon weaken or disfigure the grass, especially if shade has been at all dense. Continue to sweep and collect leaves from all walks and drives; if allowed to remain they not only become unsightly, but are trodden or pressed into the gravel, and if there is a considerable amount of traffic they discolour and spoil the appearance of the surface.

AUTUMN PLANTING of trees and shrubs should now be proceeded with. If a screen of trees or shrubs is at once wanted, permanent ones should be first arranged at suitable distances apart, and the intervening spaces be filled with cheaper or common subjects, to be afterwards removed as required. With the wealth of beautiful foliage and flowering shrubs at command none but those really good should be planted. Far too many shrubberies consist of the commonest and least beautiful kinds only. Due consideration should be paid to autumn effects.

EARLY CHRYSANTHEMUMS.—As these pass out of bloom old stems should be removed. Also decide what varieties to retain and what fresh ones to add next season. In most cases old chrysanthemums will live outside throughout the winter, but where it is known that they suffer, either protect them where they are growing or lift them and store close together in a quite cold frame.

DAHLIAS.—Should frost disfigure these they should be cut quite down, and, on a fine bright day, be lifted and left on the ground a few hours to dry before taking them into store for winter. If the tubers are turned bottom upwards they will dry better, and also allow any moisture in the hollow stems to drain away. Cannas that are still out can be treated in a similar way. In storing roots a little quite dry soil should be placed round them, unless the store is unduly damp, when they are best without it; almost any cool, dry, frost-proof place, not necessarily dark, is suitable for the storage of dahlias and cannas.

PAMPAS GRASS.—Where the plumes of the pampas grass and arundo are used for decoration during winter they should now be cut and taken indoors. If not already fully open they will soon expand if held a short distance from a gentle fire, of course, guarding against too close a contact. The stems of Physalis Franchetti and P. Alkekengi are also useful for winter decoration if cut when the outer envelope of the fruits is of a good colour, and hung up in a light airy place to dry.—E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

APPLES.—The time for planting fruit trees will soon be at hand, so that no time should be lost in making a careful selection of the most suitable varieties. Apples are very numerous, and amongst them are kinds which, if carefully planted, will be suitable, and seldom fail to crop in the more unfavourable climates. With regard to standards, the following will be found good varieties to plant: Dessert.—Irish Peach, Worcester Pearmain, Lady Sudeley, James Grieve, Ribston Pippin, Summer Golden Pippin, Cox's Orange Pippin, King of the Pippins, Baumann's Red Winter Reinette, Allington Pippin, Cox's Pomona, Scarlet Nonpareil, Duke of Devonshire, and Sturmer Pippin. Kitchen apples of special excellence comprise Lord Grosvenor, Lord Derby, Golden Noble, Warner's King, Bismarck, Blenheim Pippin, Lane's Prince Albert, Tower of Glamis, Bramley's Seedling, Dumelow's, Northern Greening, Newton Wonder. There are many other varieties good for the different purposes, and in certain districts yield heavy crops of excellent fruits. Where planting has to be done on a large scale the land ought to be in readiness for the trees so soon as they arrive from the nursery, remembering that with most large firms the orders are executed in rotation, hence the necessity for early ordering. All planting if possible, ought to be taken in hand and finished before frosty weather sets in, as the early autumn-planted trees usually start away freely the following spring, and make rapid progress the first season. On the other hand, those planted late in spring make but little growth, and especially should the weather prove very dry, and watering be neglected, which sometimes is the case when other work is very pressing.

PREPARING FOR PLANTING.—If the land to be planted is under grass (where the fruits generally attain better colour), remove from six to eight feet square of the turf where the trees are to be planted. Throw out the top spit, and break up the subsoil to the depth of two and a-half to three feet. If the soil is poor and unsuitable it should be carted away, and replaced with a better and more suitable compost; otherwise the bottom soil may be ameliorated by mixing road scrapings, wood ashes, and well-decayed manure. When planting trees it is most essential to have the drainage good, so that the water may pass away freely. A layer of brickbats, stone, or old lime rubble will also be favourable to the future growth. It should be made firm before placing turves over it and filling up the stations. Some prefer trenching the whole of the land before planting, which is probably a very good practice if the plot is not extensive, but the cost and labour would be too heavy when planting on a large scale.

DISTANCE AT WHICH TO PLANT.—The larger-growing and spreading varieties of apple should stand at from 30 to 40 feet apart; plums, 20 feet, and less for damsons if planted to form a shelter to the apples and more tender mixed fruits. Between the apples might be planted bush or half-standard trees, if desirable, and these may remain for some years. When becoming crowded the latter may be cut out, so that the permanent trees can more fully develop. Orchard land should be, if possible, sloping to the north, and the trees should be in lines running north to south.

PEARS.—Although some varieties do well planted as standards, there are others which are not at all suitable to plant. Good stewing pears, I believe, such as Catillac, Black Beurre, Beurre Clairgeau, Vicar of Winkfield, etc., might be more largely planted with a view to profit. Good stewing pears from about Christmas onwards are usually in demand, and not so plentiful as they should be.

PLUMS.—In some districts plums are not found doing well as standards, and producing the best quality fruits. In the south and Midlands they may be profitably planted, and in the majority of orchards good fruits in most seasons will be the rule. Victoria, Pond's Seedling, Pershore, Kirke's, Bush Plum, River's Early Prolific, Sultan, Jefferson's, and Monarch are excellent free-bearing varieties to grow.

CHERRIES.—Bigarreau Napoleon, Elton Heart, Black Tartarian, Black Cluster, May Duke, Early Rivers, and Noble should be selected for planting, although there may probably be others equal to them.—H. MARKHAM, Wrotham Park, Barnet.

Hardy Ferns in Pots.—Some of the commonest of our hardy ferns are very useful when potted and grown either for the greenhouse, or for positions in the dwelling house where it is not possible to have flowering plants owing to insufficient light. One of the prettiest is the Lady Fern (Athyrium filix fœmina), but the Hartstongue, as well as many others, should now be procured, potted, and placed in cold frames until the spring, when, brought into gentle heat, they soon unfold their fronds. I have often wondered why hardy sorts, like the Hartstongue, for example, are not oftener grown in the greenhouse: I like to see them under the stages and on the margins of the pathways; they add variety to the greenhouse in spring. Now is the best time to procure plants for this purpose, just before the foliage dies away.—T. B. FIELD.

DEVIZES CHRYSANTHEMUM SHOW will be held in the CORN EXCHANGE, DEVIZES, on TUESDAY, Nov. 10th, 1908.
For 36 Blooms, Incurved (not less than 18 varieties), prizes, 140s., 100s., and 60s.
For 36 Blooms, Japanese (not less than 18 varieties), prizes, Cup, 70s., and 40s.
For Schedules, apply to A. J. RANDELL, Hon. Secretary, Exchange Place, Devizes.

HUDDERSFIELD and DISTRICT CHRYSANTHEMUM SOCIETY.—The SEVENTEENTH EXHIBITION of the above Society will be held in the TOWN HALL, HUDDERSFIELD, on FRIDAY and SATURDAY, November 13th and 14th, 1908. Schedules and Entry Forms may be obtained on application to JOHN BELL, Hon. Sec., Marsh, Huddersfield.

KENT COUNTY CHRYSANTHEMUM and HORTICULTURAL SOCIETY.—The TWENTY-FIRST GRAND ANNUAL EXHIBITION will be held in the RINK HALL, BLACKHEATH, opposite Blackheath Railway Station, S.E. and C.R., Oct. 28th and 29th, 1908. Schedules and all particulars of the Hon. Sec., F. FOX, The Gardens, The [illegible], Lee, S.E.

VICTORIA HALL, EXETER.

DEVON AND EXETER HORT. SOCIETY'S FLOWER, FRUIT, ETC., SHOW.

FRIDAY and SATURDAY, 23 and 24 October.

SILVER CHALLENGE CUP (value £30) FOR CUT BLOOMS.

Schedules, etc., from G. W. JACKSON, Hon. Sec., 15a, Bedford Circus, Exeter.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

OCTOBER 13.

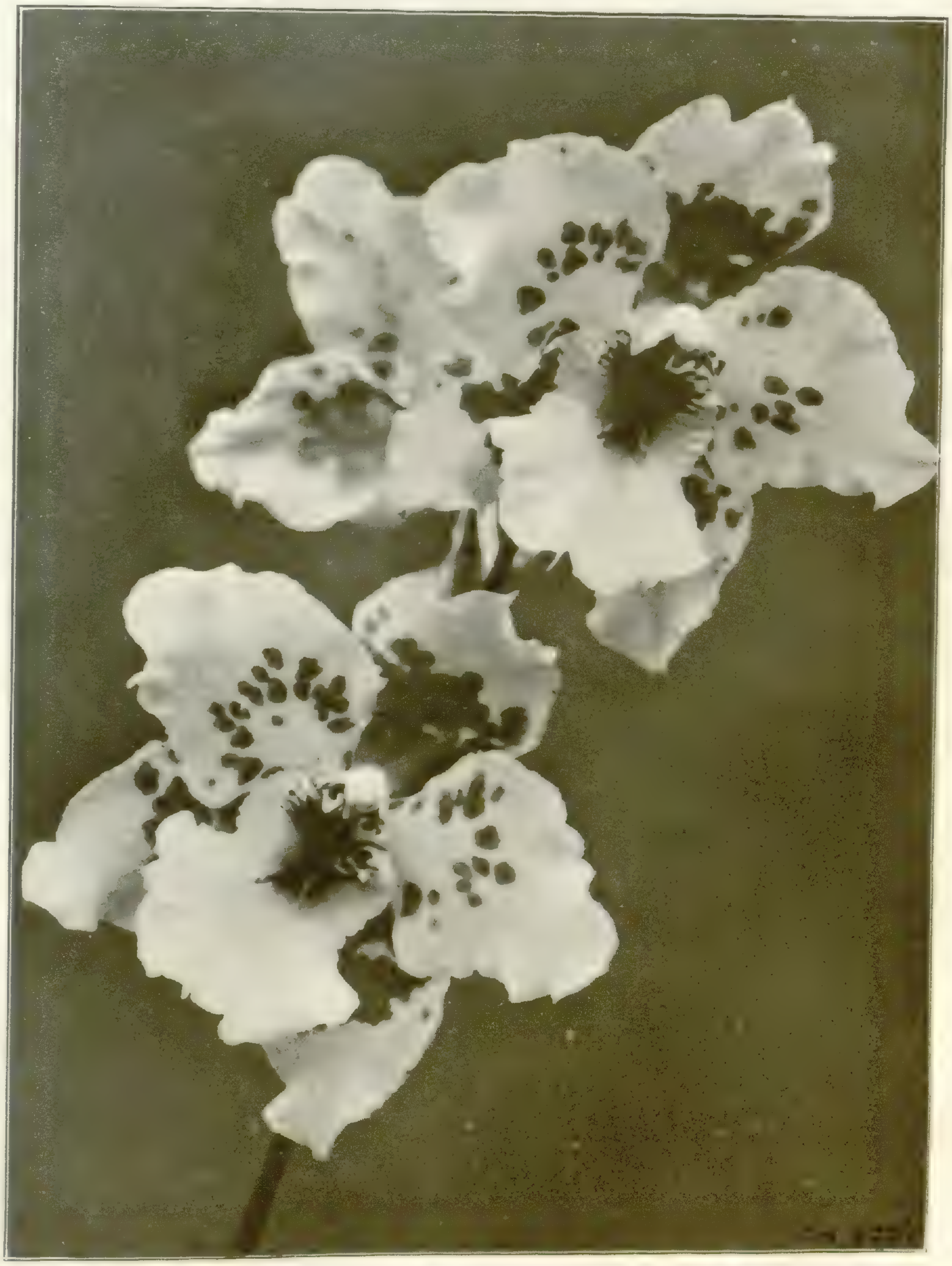
It was a difficult matter to believe that we had reached mid-October on Tuesday last, when the R.H.S. Hall was crowded with bright exhibits and well filled with visitors. Early chrysanthemums and Michaelmas daisies, dahlias and carnations, orchids and apples, choice conifers and roses, were all present in quantities, and made up a very attractive exhibition.

FLORAL COMMITTEE.

Messrs. H. B. May and Sons, Edmonton, brought up a group of the choicer hardy ferns, and these included a great variety of frilled and crested Hartstongues, Lomaria magellanicus, plumose and tasselled Lady Ferns, broad and elegant Male Ferns, the beautiful Polypodium Schneideri, that is hardy in and below the London district, P. vulgare cambricum, and osmundas. A few standards and bushes of varieties of Veronica Andersoni were also shown by the Messrs. May. Hardy flowers were largely exhibited by Messrs. G. Bunyard and Co., Maidstone, who, among many other good things, had Stokesia cyanea, Aster cordifolius elegans, Lilium tigrinum Fortunei, a few late poppies, Polygonum filiforme variegatum, Cimicifuga simplex, and a selection of kniphofias. Messrs. W. Wells and Co., Merstham, put up a very fine group of early chrysanthemums and pentstemons, the former predominating. Some large Japanese blooms of newer varieties occupied a central position, and all along the back were tall stands filled with Mrs. A. Thomson, October Snow, Edith Blades, Mrs. J. W. Scott, etc. Below these were the groups of pentstemons and vases of varying size filled with Marvel, Blue Boy, Perle Chatillonaise, a scarlet seedling, Spitfire, and other good early chrysanthemums.

The white-berried Pernettya mucronata alba, and pyramids and bushes of Citrus sinensis, or Otaheite oranges, freely fruited, made up the bulk of a bright exhibit set up by Messrs. William Cutbush and Son, Highgate. The Highgate firm had, in another group, a charming lot of perpetual carnations set up in vases of varying heights. Of Enchantress, the new pink Winona, Robert Craig, The President, Victory, Mrs. Burnett, Harlowarden, and Mrs. T. W. Lawson, there were fine vases of blooms, and in addition there were several good seedlings, including a deep purple. Mr. L. R. Russell, Richmond, contributed hardy variegated and berried shrubs. The Misses Hopkins, Shepperton, showed a few Michaelmas daisies and alpines.

A very large, attractive, and instructive group of coniferous trees and shrubs was arranged by Messrs. James Veitch and Sons, Chelsea, and it included handsome specimens of Sciadopitys verticillata, Abies pungens glauca, Cedrus atlantica glauca, and C. a. aurea, the bright Cupressus Lawsoniana Stewarti, and still brighter Retinospora obtusa aurea Crippsi, the rare Libocedrus macrolepis, the bold Abies magnifica, Retinospora filicoides, Cupressus nootkatensis argentea nova, Pinus Armandi, and the very graceful Retinospora filifera aurea. The Chelsea firm had also a brilliant group of winter-flowering begonias, all of Begonia Elatior, very freely bloomed and bright. Messrs. Harkness and Co., Hitchin, Herts, submitted a large group of delightful roses that admirably demonstrated the value of those varieties that bloom freely in the autumn; they had a bright and fragrant exhibit.


ODONTOGLOSSUM PESCATOREI SANDERÆ.
Exhibited by Messrs. Sander and Sons at R.H.S. meeting on the 13th inst., when it received an Award of Merit. Flowers white with pale brown markings.

Roses in mid-October are not usually numerous, but Messrs. Frank Cant and Co., Colchester, showed that this season the autumnal bloom is wonderful by staging delightful bunches of clean, fresh flowers of La Tosca, Gustave Regis, Irish Elegance, White Maman Cochet, Mrs. E. Mawley, Madame Antoine Marie, Antoine Rivoire, Papa Gontier, etc. Messrs. McGredy and Co., Portadown, Ireland, sent over three beautiful new roses, i.e., Mrs. E. J. Holland (A.M.), Mrs. Alfred Tate (A.M.), very lovely, bright copper-red; and Mrs. Wakefield Cristie Miller (A.M.). Messrs. J. Jefferies and Son, Cirencester, displayed coniferous trees and shrubs largely, and in their extensive exhibit they had Abies pungens glauca, Cedrus atlantica glauca, golden cupressus, and retinosporas, golden yews, and other choice and beautiful subjects.

Cactus dahlias were very charmingly arranged by Mr. M. V. Seale, Sevenoaks, who put up large stands, but set the flowers up lightly with grasses, sprays of Michaelmas daisies, and set bowls of ceanothuses among and below them, making up a very attractive display. Messrs. G. and A. Clarke, Dover, showed their large form of Cimicifuga simplex, a beautiful autumn-flowering plant, and around this grouped gaillardias, delphiniums, anemones, Michaelmas daisies, liliums, etc. Messrs. Dobbie and Co., Rothesay, showed some delightful dahlias, setting these up in the orthodox bunches, and displaying the best cactus varieties. Messrs. Barr and Sons, Covent Garden, contributed a group of hardy flowers, that included Cimicifuga simplex, kniphofias, pampas grasses, and Michaelmas daisies. Messrs. Paul and Son, Cheshunt, exhibited sprays of trees and shrubs; this was a most interesting collection, and contained Calycanthus occidentalis, cratægus in variety, crabs, cornuses, liquidamber, various bright-leaved oaks, and other useful trees and shrubs.

A splendid collection of Michaelmas daisies was put up in a most attractive manner by Mr. Edwin Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree. The fine sprays of elegant blooms were put up in large stands, and they were a great feature of the show. Amellus, Maia, Osprey, Climax (A.M.), very large soft blue flowers; Hon. Edith Gibbs, Wm. Marshall, cordifolius elegans, Mrs. J. T. Rayner, White Diana, Silvery Star, Triumph, Maidenhood (A.M.), small, white, very free; Jessie Crum, and Brightness were among the best, but the collection contained many fine seedlings, and the two varieties that gained awards were raised at Aldenham. Messrs. T. S. Ware, Lim., Feltham, submitted a collection of alpines, Michaelmas daisies, phloxes, etc. Messrs. J. Cheal and Sons, Crawley, set up a bright lot of single and cactus dahlias, very fine for mid-October. Messrs. Eggett and Son, Thames Ditton, showed choice hardy ferns in a small rockery.

Messrs. Heath and Son, Cheltenham, showed a collection of scented-leaved pelargoniums and a new perpetual carnation named Lady Audley Need, that is very like Marmion, but is said to be a better grower. Nerine Countess of Altamont (A.M.), bright carmine-pink, was shown by Mr. T. D. Godman, South Lodge, Horsham; it is a distinct and handsome variety. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, showed cut perpetual carnations and Otaheite oranges.

Michaelmas daisies were largely shown by Mr. H. J. Jones, Ryecroft Nursery, Lewisham, who again set up these charming flowers in a very pleasing manner, and, besides the best varieties in commerce, he had several new seedlings of merit; Calliope and Flora were conspicuously good. Mr. G. Reuthe, Keston, had Tropæolum tuberosum, Desfontainea spinosa, Abelia floribunda, Berberidopsis corallina, Gloriosa superba, nerines, colchicums, and other interesting plants. A very bold group of Michaelmas daisies and early chrysanthemums was well arranged in the lower annexe by Mr. F. Brazier, Caterham Valley. Phloxes were also well shown, and the whole group was very effective.

ORCHID COMMITTEE.

A bright group of orchids was set up by Messrs. Cypher and Sons, Cheltenham, and this contained a good batch of Cypripedium Fairrieanum, C. Niobe superbum, C. Maudiæ, Cattleya labiata, the graceful Oncidium incurvum album, Dendrobium Phalænopsis in variety, the bright Phaio-cymbidium Chardwarensis, and the bold Cypripedium gigas Corndean variety. Mr. G. Day, gardener to H. S. Goodson, Esq., West Hill, Putney, put up a large and bright group of orchids, in which Cypripedium insigne Sanderæ figured largely and well. Other good things were Cattleya Iris, the fine Laelio-cattleya St. Gothard (F.C.C.), Odontoglossum crispum in variety, Brasso-cattleya Digbyano-Warneri, and Miltonia Bleuana.

Vanda cærulea was splendidly shown by Messrs. Sander and Sons, St. Albans, the spikes being not only of fine size but of fine colour. Several laelio-cattleyas, the fine Cattleya Venus Sander's var., Cypripedium Lord Ossulston Sander's var. (A.M.), and Odontoglossum Pescatorei Sanderæ (A.M.), white, with soft brownish markings, were also good. This latter is very distinct, the lower half of each sepal being almost wholly of the pale red-brown colour. Mr. Maurice Mertens, Mont St. Amand, Ghent, brought over a few choice odontoglossums, including a richly-coloured seedling form of O. crispum. Mr. Morgan, gardener to H. J. Bromilow, Esq., sent Cypripedium Charlesworthi Bromilowianum (F.C.C.), a very pretty form, with transparent white, green-based dorsal sepal, and pale translucent green petals and lip.

Messrs. Charlesworth and Co., Heaton, Bradford, brought up Lælio-cattleya Golden Oriole, Sophro-cattleya Leda, Phaius flavus—with no yellow in it; Vanda Kimballiana, Zygocolax Wiganianus, Miltonia spectabilis Moreliana, L.-c. Luminosa, and several fine new hybrids, and a beautiful form of Odontoglossum Lambeauianum. Messrs. Stanley and Co., Southgate, were responsible for a small group of orchids, in which some pretty forms of Cattleya labiata were conspicuous, together with C. Minucia, C. Miss Williams, and Lælio-cattleya elegans Harrisi. Messrs. J. and A. McBean, Cooksbridge, Sussex, showed some fine examples of Cypripedium insigne Sanderæ, C. i. Harefield Hall var., C. Rossetti, the very bright C. Albertianum, and a few odontoglossums. Two other fine things were plants of Cattleya Bowringiana and C. fulvescens, each of which gained a cultural commendation.

Cypripedium Melba, Cattleya Iris, Cypripedium Fairrieanum, and Cattleya Patrocini figured well in the group from Messrs. Moore, Lim., Rawdon, Leeds. Messrs. Heath and Son, Cheltenham, sent up Dendrobium formosum giganteum, D. Phalænopsis, Cattleya Harrisoni, and cypripediums, and showed these largely. Vanda Kimballiana, Lælio-cattleya Firefly, Dendrobium formosum giganteum, Cypripedium Thalia gigantea, C. Maudiæ, and Cymbidium erythrostylum were the features of Messrs. Hugh Low and Co.'s group of orchids.

Mr. H. Alexander, orchid grower to Lieut.-Colonel Holford, showed Lælio-cattleya Cornelia (A.M.), Brasso-cattleya Heatonense delicata, and Sophro-lælio-cattleya Danæ aurea. Mr. Howard, gardener to H. Little, Esq., Baronshalt, Twickenham, had a large exhibit of Cattleya Bowringiana, C. Mantini inversa, C. Portia, C. labiata, Vanda cœrulea, and numerous oncidiums and cypripediums.

Miss M. Walters Anson, Streatham, showed a collection of orchid paintings, representing dendrobiums, odontoglossums, lycastes, and cypripediums; the paintings were good, but the backgrounds to the flowers were not pleasing.

FRUIT AND VEGETABLE COMMITTEE.

Some wonderfully fine apples were shown by Mr. James Whittle, gardener to Lieut.-Colonel Borton, Cheveney, Hunton. The collection was a large one, and the fruits were put up in neat baskets. Conspicuous varieties were Bismarck, Blenheim Pippin, Charles Ross, Gascoigne's Scarlet, The Queen, Peasgood's Nonsuch, Lord Derby, Allington Pippin, Mere de Menage, Annie Elizabeth, Emperor Alexander, James Grieve, Ribston Pippin, Warner's King, and Newtown Wonder. This was one of the finest collections of apples we have seen, and for a private establishment it was a splendid effort, and one that reflected great credit upon gardener and employer.

Some excellent examples of Bramley's Seedling, Allington Pippin, Court Pendu Plat, Bismarck, King of the Pippins, Tyler's Kernel, and Blenheim Pippin apples were shown by Messrs. Hugh Low and Co., Enfield. Mr. J. Leakey, Newland's Park, Sydenham, showed a box of small bunches of the Brandt grape grown out of doors at Sydenham.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Lælio-cattleya St. Gothard, from H. S. Goodson, Esq., West Hill, Putney; Cypripedium Charlesworthi Bromilow's var., from Mr. H. J. Bromilow.

Award of Merit.—To Lælio-cattleya Cornelia, from Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester; Cypripedium Lord Ossulston Sander's var., from Messrs. Sander and Sons, St. Albans; Odontoglossum Pescatorei Sanderæ, from Messrs. Sander and Sons, St. Albans; Dracæna Bruanti variegata, from Messrs. William Cutbush and Son, Highgate; to H.T. roses Mrs. E. J. Holland, Mrs. Alfred Tate, and Mrs. Wakefield Cristie Miller, from Messrs. McGredy and Son, Portadown, Ireland; Asters Climax and Maidenhood, from Mr. E. Beckett, Aldenham House Gardens, Elstree; and Nerine Countess of Altamont, from Mr. F. D. Godman, South Lodge, Horsham.

MEDALS.

Silver-gilt Hogg Medal.—Mr. Whittle, gardener to Lieut.-Colonel Borton, Cheveney, Hunton.

Silver-gilt Flora.—Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree.

Silver-gilt Banksian.—Messrs. Harkness and Co., Hitchin, Herts; Messrs. James Veitch and Sons, Chelsea; Messrs. W. Wells and Co., Merstham.

Silver Flora.—Messrs. William Cutbush and Son, Highgate; Messrs. J. Jefferies and Co., Cirencester; Messrs. H. B. May and Sons, Edmonton; Mr. Howard, gardener to H. Little, Esq., Baronshalt, Twickenham; Messrs. Charlesworth and Co., Bradford; Messrs. Cypher and Sons, Cheltenham; Messrs. Sander and Sons, St. Albans.

Silver Banksian.—Mr. H. J. Jones, Lewisham; Mr. F. Brazier, Caterham; Mr. M. V. Seale, Sevenoaks; Messrs. Hugh Low and Co., Enfield (one for orchids and one for fruits); Messrs. Stanley and Co., Southgate; Messrs. Moore, Lim., Rawdon, Leeds; Mr. Maurice Mertens, Mont St. Amand, Ghent; Messrs. J. and A. McBean, Cooksbridge, Sussex.

Ideal Home Exhibition at Olympia.

There is ample room for a wide difference of opinion as to what constitutes an ideal home or an ideal garden, and whether either has been realised in the exhibition that is now being held at the Olympia might well be regarded as an open question. There can, however, be no doubt as to the exhibition containing much to interest those concerned with the home and its surroundings, or that an hour or two can be spent in inspecting the large display of manufactures employed in the furnishing and decoration of the dwelling-house, and the features of the garden, which extends over an acre or so of the floor space of the huge building.

With the model rooms, the articles of furniture, and the materials for decorations we are not immediately concerned, and we need only say that they fully illustrate the prevailing taste in house furnishing, and are well arranged for inspection. The garden, which forms a distinct and refreshing feature of the exhibition, comprises a large expanse of turf, intersected by broad, gracefully-curved walks, and furnished with numerous beds and borders containing flowering plants, and trees and shrubs of various descriptions. The garden was designed by Mr. Edward White, of the firm of Messrs. Milner, Son, and White, landscape architects, of Victoria Street, S.W. There are two geometric schemes and several flower beds, placed singly on the lawn, and the whole of these have been arranged with suitable plants by Mr. Henry Eckford, of Wem, Shropshire. In the scheme on the eastern side of the garden Mr. Eckford has employed pink and scarlet bouvardias, rose, red, and pink carnations, with good effect. On the other side of the garden there is a group of beds contiguous to the bungalow erected by Messrs. Boulton and Paul, Rose Lane Works, Norwich, and these are filled with dwarf scarlet salvias and orange and yellow chrysanthemums, and present a highly attractive appearance. Not far distant from these beds is a long border of considerable breadth, and in this Mr. Eckford has arranged a rich display of golden chrysanthemums.

The spacious borders that occupy a prominent position in the general scheme have been planted by Messrs. J. Veitch and Sons, of Chelsea, and in these there is an excellent representation of tree and shrub life. The coniferous trees include well-developed specimens of Cupressus Lawsoniana in variety, Cedrus atlantica glauca, golden yews, and among the evergreens are fine examples of the choicer green and variegated hollies, and of elæganus, osmanthus, olearias, veronicas, and aucubas.

The bungalow which Messrs. Boulton and Paul have erected and furnished is an excellent model of what such a structure should be, for it is elegant in design, substantial in construction, and conveniently arranged. It has also the advantage of being inexpensive. Messrs. Boulton and Paul exhibit in association with their bungalow specimens of the garden trellises, to which they devote special attention, and also chairs and other garden furniture.

Contiguous to the bungalow mentioned in the preceding paragraph Messrs. Messenger and Co., Lim., of Loughborough, Leicestershire, and 122, Victoria Street, S.W., have erected a span-roof conservatory or plant house, which is of interest as illustrative of the success of the firm in combining elegance of design with substantial workmanship. On the same side of the garden Messrs. Pulham and Son, of 71, Newman Street, Oxford Street, and Broxbourne, have, in the comparatively large space allotted them, arranged a large pool, with a charming cascade and surrounding rock work. The pool, which holds about 3,000 gallons of water, is spanned by a stone bridge, and this is in the style of many Welsh stone bridges. On the bold rockwork which flanks the cascade are arranged evergreen shrubs of various sizes.

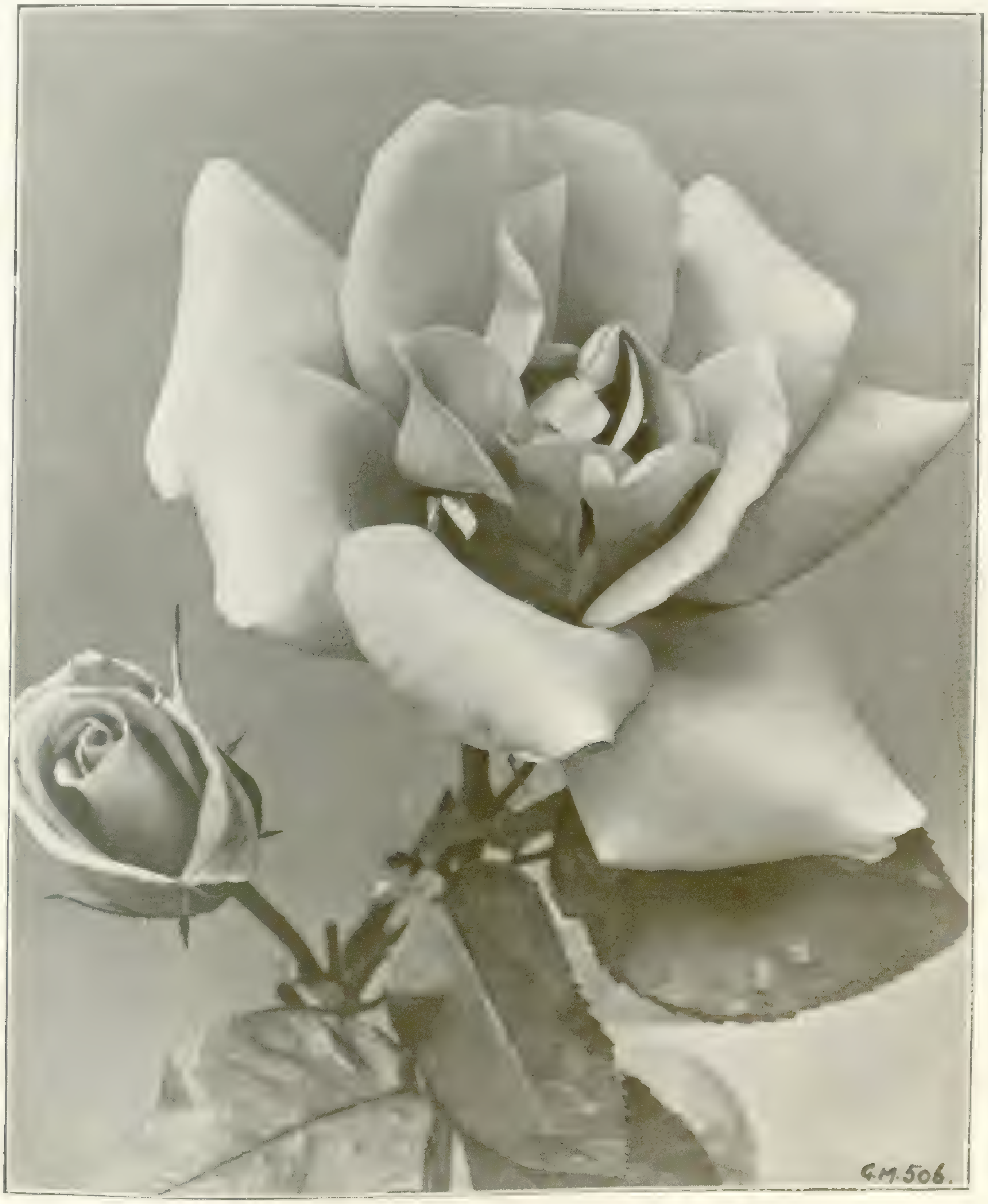
The King's Acre Nursery Company, Hereford, contribute a collection of fruit trees in pots, which are carrying heavy crops of splendidly developed fruit, and also baskets of richly-coloured fruits; Messrs. J. Veitch and Sons exhibit a collection of finely-fruited apple trees, and gathered apples of high quality.

Messrs. Sutton and Sons, of Reading, are represented by a collection of vegetables that is equally remarkable for the high development of the individual specimens, and the taste evinced in the arrangements. Included in the magnificent display are beet, carrots, cauliflowers, cucumbers, onions, parsnips, and potatoes, representing the finest types of those kinds. The melons associated with the vegetables are also noteworthy for their high quality, and the flowers tastefully arranged among the several products materially enhance the general effect.

Mr. Henry Eckford, of Wem, who is responsible for the flower garden to which we have alluded, has an exhibit of sweet pea and other perfumes.

A small French garden has been arranged by Messrs. Watkins and Simpson, of Tavistock Street, Covent Garden, W.C., but the space is not sufficient to adequately represent the methods of cropping adopted by the French market gardeners, and the results obtained therefrom.

Messrs. Ransomes, Sims, and Jefferies, Lim., Ipswich, exhibit hand and other lawn mowers; Messrs. Walter Voss and Co., Lim., Millwall Road, E., exhibit their chemical preparations for the destruction of insect pests, etc.; the Studley Horticultural College for Women, Studley Castle, Warwickshire, exhibit fruits, vegetables, etc.



NEW HYBRID TEA ROSE (MRS. ALFRED TATE).
Exhibited by Messrs. McGredy and Son, at the R.H.S. meeting on the 13th inst., when it received an Award of Merit. Flowers, coppery red.

Mr. John Walker's Onion and Carrot Show.

OCTOBER 6.

For nearly a quarter of a century Mr. John Walker, Thame, Oxon, has arranged a competition among his customers of agricultural roots and other produce, usually about the tenth month. It was found, however, more convenient to the farmers generally to compete at the Oxon Agricultural Exhibition in September, hence it has happened that carrots and onions have been the only products in competition at the October show.

Liberal prizes are offered, and for a dozen bulbs of Walker's Exhibition onion twenty-two lots were staged. The type is a useful form of white Spanish, originally somewhat concave at the base, but during the past few seasons there has developed a more convex outline, which must be regarded as an improvement. Mr. W. Turnham, gardener to W. W. Barber, Esq., Culham Court, Henley, headed the list with bulbs eighteen inches in circumference; Mr. C. Marcham, gardener to G. W. Bennett, Esq., Tiddington House, second, whose bulbs were slightly less in diameter; Mr. Geo. Neal, Bampton, was third with very uniform, shapely bulbs; Mr. J. Holton, gardener to Rev. the Provost of Worcester College, Oxford, and Mr. Adams, Tiddington, being placed equal fourth. The carrots, an old-fashioned type of Intermediate, were presented by fifteen competitors, many of the best specimens for size and colour being marred by insect blemishes; the premier award going to Mr. James Broadfoot, gardener to Colonel J. Miller, Shotover Park; Mr. A. Briscowe, Haddenham, second; Mr. T. Anstiss, Brill, third; and Mr. C. Marcham, fourth.

There were quite a number of extra productions, including some fine collections of vegetables, notably excellent turnips and celery, and grand dishes of Up-to-Date, The Factor, Walker's Reliable, and Covent Garden white potatoes, from Mr. Moses Brown; Mr. C. Marcham adding five dozen onions (much on a par with his prize set); Mr. Turnham also staging two dozen onions of exceptional merit. Mr. A. Briscoe sent Globe mangold (very shapely), and fine Intermediate carrots; Mr. W. James made a brave show with Long Red and Globe mangolds, Intermediate, and Short Horn carrots (both types bulky), Edgecote Purple, Reading Russet, and Up-to-date potatoes, Autocrat peas, red cabbage, marrows, turnips, and celery. From Mr. J. Walker's trial grounds came large quantities of Intermediate carrots, dishes of Reliance and The Factor potatoes; Mr. Anstiss, Brill, sent Intermediate carrots; and Mr. Amos Oliver, carrots, onions, and Up-to-Date potatoes.

The plenitude of apples in the district was demonstrated by baskets of Emperor Alexander, Bismarck, Blenheim Pippin, Cox's Pomona, Cox's Orange Pippin, Newtown Wonder, Duchess's Favourite, and Peasgood's Nonsuch, all very large and richly coloured, some examples of Peasgood's from Dr. Lee, Haddenham, turning the scale at eighteen ounces. Some dishes of very showy Devonshire and John Downie crabs were noticeable for their glorious colouring. Mr. Briscoe exhibited an orange-coloured gourd weighing 63lb.

The exhibits were arranged on tables with a back line of nearly six dozen vases filled with dahlias in variety, viz., singles, twelve flowers each; cactus, six to eight blooms each; and pompons, fourteen to sixteen flowers each. Mr. Walker also displayed his trophies, viz., four silver cups, five gold, thirty-three silver, and ten bronze medals.

Reading Gardeners' Society.

The opening meeting of the autumn session of the above flourishing society was held in the Abbey Hall, Reading, on Monday, October 5, the president of the association (Mr. Alderman F. B. Parfitt) occupying the chair. About one hundred members assembled to listen to the paper announced to be given by Mr. T. Tunbridge, F.R.H.S., the subject being "Perennials." To illustrate his lecture, Mr. Tunbridge had staged a splendid collection of flowers, which were greatly admired by all present. The lecturer, in the most able and lucid manner, took his hearers through a large number of examples, giving many valuable hints on colour combination, grouping, cultivation, etc. At the close of his remarks, discussion was invited, and a very animated and instructive debate ensued, among those taking part may be mentioned the president, Messrs. T. J. Powell, G. Hinton, F. W. Exler, W. J. Townsend, T. Judd, W. Turnham, D. Harris, and others.

A group of seedling Cryptomeria gracilis was staged by Mr. A. F. Bailey, and awarded a certificate; a collection of fruit exhibited by Mr. G. Tovey was highly commended. Mr. F. W. Exler had on view a nice batch of Primula obconica (raised from Messrs. Sutton's seed), and Mr. Timms brought a basket of very fine Up-to-Date potatoes. Several new members were elected, and the meeting terminated with a vote of thanks to Mr. Tunbridge and the chairman.

Haywards Heath Gardeners' Society.

At the October meeting of the Haywards Heath Gardeners' Association a most interesting discussion took place on a paper entitled, "Vegetables for Exhibition," which was read by Mr. George Porter, gardener to Lieut.-Colonel Dudley Sampson, of Buxshalls, Lindfield. Mr. Porter, who is a successful grower and exhibitor, spoke on ten kinds of vegetables suitable for exhibition, and invited questions after each kind had been referred to—a novel but successful way of raising a discussion. After the paper the Rev. T. G. Wyatt, who is a keen vegetable grower and exhibitor, raised the question of having a fixed standard for judging, and pointed out what a help it would be to exhibitors if all judges acted on the same principles. Exhibitors, he said, should know beforehand what standard they had to work to, and by what standard they would be judged. What was required was a common standard to bind both exhibitors and judges. This was provided by the Royal Horticultural Society in their book on judging, which he thought should be strictly followed, and accepted as the rule for all. He advised associations and societies to press this forward continually, and secretaries of shows should state, when obtaining judges, that the R.H.S. code book was to be followed. Putting it merely in the schedule of a show was insufficient; it should be made a condition of judging. If this was done generally it would greatly help and encourage all exhibitors, as they would then know beforehand the principles which would guide the judges in making their awards.

Bristol Gardeners' Association.

The first fortnightly meeting for the current session was held on Thursday, October 8, at St. John's Parish Rooms, and Dr. Barclay Baron presided over a large attendance. Mr. Cooling, of Bath, read an interesting and instructive paper upon "Autumn-flowering Roses." The lecturer, in the course of his paper, said that beds of one variety produced the best effect upon lawns, and grouping the varieties in borders was preferable to indiscriminate planting. Mulching the beds twice in the year was recommended, and spring and autumn were mentioned as the best times for applying mulching materials. Spent hops were suggested as the best for spring dressing. The term hybrid perpetual was, in Mr. Cooling's opinion, somewhat of a misnomer, as most of those known as such were only so in name. The new varieties of hybrid teas, now so popular, were more worthy to be described as such, as they come into bloom in June, and continue till late in the autumn. What are required now are autumn-flowering pillar roses of the Dorothy Perkins type. Raisers are working in that direction, and he believed they would soon be successful in obtaining such varieties. Trier, a new German climbing rose, was recommended as useful for autumn flowering. A few varieties that Mr. Cooling had found mildew-proof included Souv. de Pierre Notting, Dainty, Queen Mab, Rainbow, Papa Gontier, and Grus an Teplitz. Mr. Cooling staged a lovely lot of the newer varieties of hybrid teas, including Earl of Warwick, Dean Hole, Souv. de Marie Zayas, Lady Rossmore, Richmond, Betty, and Pharisaer, and was awarded a special certificate. For three bunches of hardy flowers Mr. Binfield was first, and Mr. Holt second.

Cardiff Gardeners' Association.

The opening meeting of the current session of this society was held at St. John's Schools, Queen Street, on the 6th inst., Mr. H. R. Farmer presiding. An address was given by Mr. F. G. Treseder on "Seed Culture, and the Countries which produce the Greatest Quantities." The lecturer considered that California and Germany were the two largest seed producing countries in the world, and from them seedsmen in this country obtained large supplies. The lecture was most interesting, and many of the members took part in the discussion which followed. A hearty vote of thanks to Mr. F. G. Treseder was proposed by Mr. T. Malpass, and seconded by Mr. C. Cossam, and carried unanimously.

EARLY-FLOWERING CHRYSANTHEMUMS.

In your report of the show of early-flowering chrysanthemums held by the National Chrysanthemum Society, in your issue of the 10th inst. (page 768), your reporter says, "no doubt the flowers spread a little after being set up, but as one of the chief offenders had barely finished when the judging commenced he could hardly urge that in his favour." As I am that chief offender, will you kindly allow me space in your valuable paper to defend myself. As it takes two hours' good work to set up twelve bunches correctly, if the last one has no time to spread, the first one has certainly plenty. The bunches set up were no larger than those staged in previous years, and they were not disqualified, therefore what reason had the judges (or committee) for enforcing the rules so strictly on this occasion. I had a vase to finish at eleven o'clock, and asked the superintendent for a few minutes' grace, and was told I may as well leave it, as I would be disqualified anyhow. So it appears to me that the committee had the whole thing planned beforehand. I am an old competitor, and do not, as a rule, grumble at judges' decisions, but I consider it rather hard on an exhibitor, after travelling 500 miles to a show, to be used in such a manner.

John Smellie.

Pansy Gardens, Busby.

ONE PENNY WEEKLY, by post 1½d.

FARM AND GARDEN

THE DAIRY—POULTRY—PIGS—LIVE STOCK—ALLOTMENTS—MARKET GARDENING, etc.

This week's issue (Oct. 17) contains the following:

THE DAIRY SHOW—FULL ILLUSTRATED REPORT.
MILK TESTS IN LANCASHIRE.
EARLY WINTER SEEDS FOR COWS.
CHURNING.
THE QUALITY OF MILK.
THE PIG TRADE.
HAY FOR STORE CALVES.
DIRECT TRADING.
FOOD VALUE OF POULTRY.
SEASONABLE NOTES ON POULTRY.
LIFTING AND STORING BEETROOT.
FRUIT PLANTATIONS.
SELECTING EWES.
SEASONABLE NOTES ON MARKET GARDENING.
THE HOUSEHOLD.

SOLD BY ALL NEWSAGENTS.

OFFICES: 148 and 149, ALDERSGATE STREET, London.

ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

FUNGUS ON CHERRY ROOT.—J. T., Feltham: We have had the roots carefully examined, and find that the fungus on them is Didymium farinaceum, one of the Myxogastres. But as this is merely a saprophite growing on the dead wood, and not a parasite growing in the wood, it follows that it is not the cause of the death of the cherry tree. You must look in another direction for the cause. If you let us know the circumstances connected with the death of the tree, and give us some idea of its position and treatment, we may be able to help you.

SHELTER FOR A GARDEN.—H. S., Wellingborough: So much depends upon the elevation of the site, and the prevailing winds, that it is not an easy matter to advise you in the absence of information on these matters. We believe a stout, close fence would be far better than a hedge, and it would provide further opportunities for fruit culture. Beech or hornbeam make good shelter hedges. If the wall faces east some of the early peaches might succeed against it, provided the rising ground, trees or houses, give some shelter from east winds, without obstructing light. Peaches so grown need to be protected with blinds or fish netting during the time the flowers are opening. Any of the best pears that do well in the district could be grown satisfactorily on the wall facing west, notably Jargonelle, Williams' Bon Chretien, Louise Bonne of Jersey, Beurré d'Amanlis, Thompson's, Doyenné du Comice, Beurré Diel, Marie Louise, and Duchess d'Angoulême.

SHANKED GRAPES.—G. G., Hants: The specimens sent show that the grapes are shanking badly, and shanking may be caused by over-cropping, excess of moisture, and unripened growth the previous year. If you have not over-cropped the vines it is desirable that the border be tested to find out the condition of the soil and roots. Write us again.

STONELESS PLUM.—S. B. J., Faversham: There is a variety of plum known as Stoneless, and it is so named because it has no hard stone surrounding the kernel, and only a thin membrane to take its place. We do not know where the variety is in cultivation now, but as it is small-fruited, and by no means a good bearer, we imagine it has now quite gone out of cultivation. The variety is a very old one, and was probably introduced from France by London, who was at one time at Versailles. The fruits are purple-black with a blue bloom.

EXAMINATION IN HORTICULTURAL PRACTICE.—S. L. F., Epsom: The following syllabus of horticultural operations and practice is issued by the Royal Horticultural Society, and shows what is expected of the student, or, at least, what he may be examined in: (1) Surveying and landscape gardening. Elements of. (2) Choice of site for garden. (3) Description and use of implements under each head. (4) Operations connected with the cultivation of the land, with explanations and illustrations of good and bad methods, digging and trenching; draining, hoeing, stirring the soil and weeding; watering; preparation of seed beds; rolling and raking, sowing, transplanting and thinning, potting, planting, aspects, positions, and shelter, staking; earthing and blanching, etc. (5) Propagation, elementary principles, cuttings, buddings, and grafting, stocks used, layering, division, branch pruning, root pruning, old and young trees and bushes, training. (6) Fruit culture—open-air and under glass; small fruits; apples and pears; stone fruits; gathering and storing; packing, marketing; selection of varieties, etc. (7) Vegetable culture, open air and under glass; tubers and roots; green vegetables; fruits and seeds; rotation of crops and selection of varieties. (8) Flower culture, outside and under glass. (9) Manures and their application. (10) Improvement of plants by cross-breeding, hybridisation, and selection. (11) Arboriculture: Trees and shrubs and their culture. (12) Insect and fungus pests; prevention and treatment.

WHITE INSECTS ON FERN ROOTS.—A. B., Reynoldston: The insects belong to the aphis family, and are not so troublesome as some members of it. Clear soot-water will make things uncomfortable for them, but perhaps the best method of dealing with them will be to stand the pots in water for twenty-four hours. The pots must be put well under water, and the water must be at the same temperature as the house. Lay the plants on their sides for an hour or two after immersion, and then allow them a little extra fire heat and increased ventilation for a few days. Small plants may be washed out, and potted in sterilised soil. Examine the staging, and any material that is used on the staging to hold moisture, as there may be insects on or in these. We have found the method of suffocating insects on plant roots by immersion in water to be an excellent one.

BLISTERED APPLE AND PEAR LEAVES.—W. M. C., Thornaby: You will find the answer to your question on p. 770 of our issue of October 10.

HIDALGOA WERCKLEI.—R. C. D., Ryde: This pretty free-growing composite loves the sunshine, and will not flower well unless it has plenty of light. It is not so free flowering as one could wish, but its brilliant scarlet, dahlia-like flowers are very effective. It is readily propagated from cuttings, and thrives best in an airy conservatory or greenhouse. The young growths die back a good way each year, but the plant does not die down annually, as in the case of the garden dahlia. Overwatering is often the cause of trouble with this climber. Good loam and some coarse sand form a suitable rooting medium.

NAMES OF PLANTS.

W. H., Yeovil.—1, Should have been sent earlier; 2, Caryopteris mastacantha.

J. T., Feltham.—Send us a flower and leaf at some other time; the specimen was insufficient for identification.

W. P., Shenley.—1, Spiræa Douglasi; 2, apparently a Weigela growth; 3, probably Ligustrum chinensis; 4, Escallonia macrantha; 5, Spiræa prunifolia; 6, not recognised. Nos. 2, 3, and 6 should be sent again when in flower.

NAMES OF FRUIT.

W. H., Guildhall.—Gloria Mundi.

A. S., Christchurch.—Duchess' Favourite.

W. C., Worcester Park.—Scarlet Nonpareil.

J. G., Norfolk.—1, Fearn's Pippin; 2, Histon Favourite; 3, Nouvelle Fulvie.

A. P., Over.—1, Belle Julie; 3, Beurre Capiaumont; 5, Hawthornden; others not recognised.

J. B., Seaforth.—Hill's Seedling is probably correct, but the colouring is not up to the usual standard.

R. N., Stoke Newington.—1, Lord Suffield; 2 and 4, not recognised; 3, Madame Treyve; 5, Adams' Pearmain.

E. S., Belvedere.—1, Withington Fillbasket; 2, Northern Greening; 3, Catshead; 4, not recognised; 5, Emile d'Heyst.

H. H., Godstone.—1, Bedfordshire Foundling; 2, Claygate Pearmain; 3, Yorkshire Beauty; 4, not recognised; 5, Sops in Wine; 6, Round Winter Nonsuch.

T., Barnet.—1, Gloria Mundi; 2, Grenadier; 3, Lord Suffield; 4, Morgan's Sweet; 5, fruit badly crushed, probably Souv. du Congrès; 6, Round Winter Nonsuch.

Why should Pests Plunder your Plants?

Whether your gardening merely consists of the care of a window box or potted plants—whether you have charge of large gardens or cultivate a farm, you know the way plants suffer from the ravages of insects, slugs and snails, beetles, woodlice, wireworms, etc. We wish to day to tell you of a way by which insect pests can be banished for ever.

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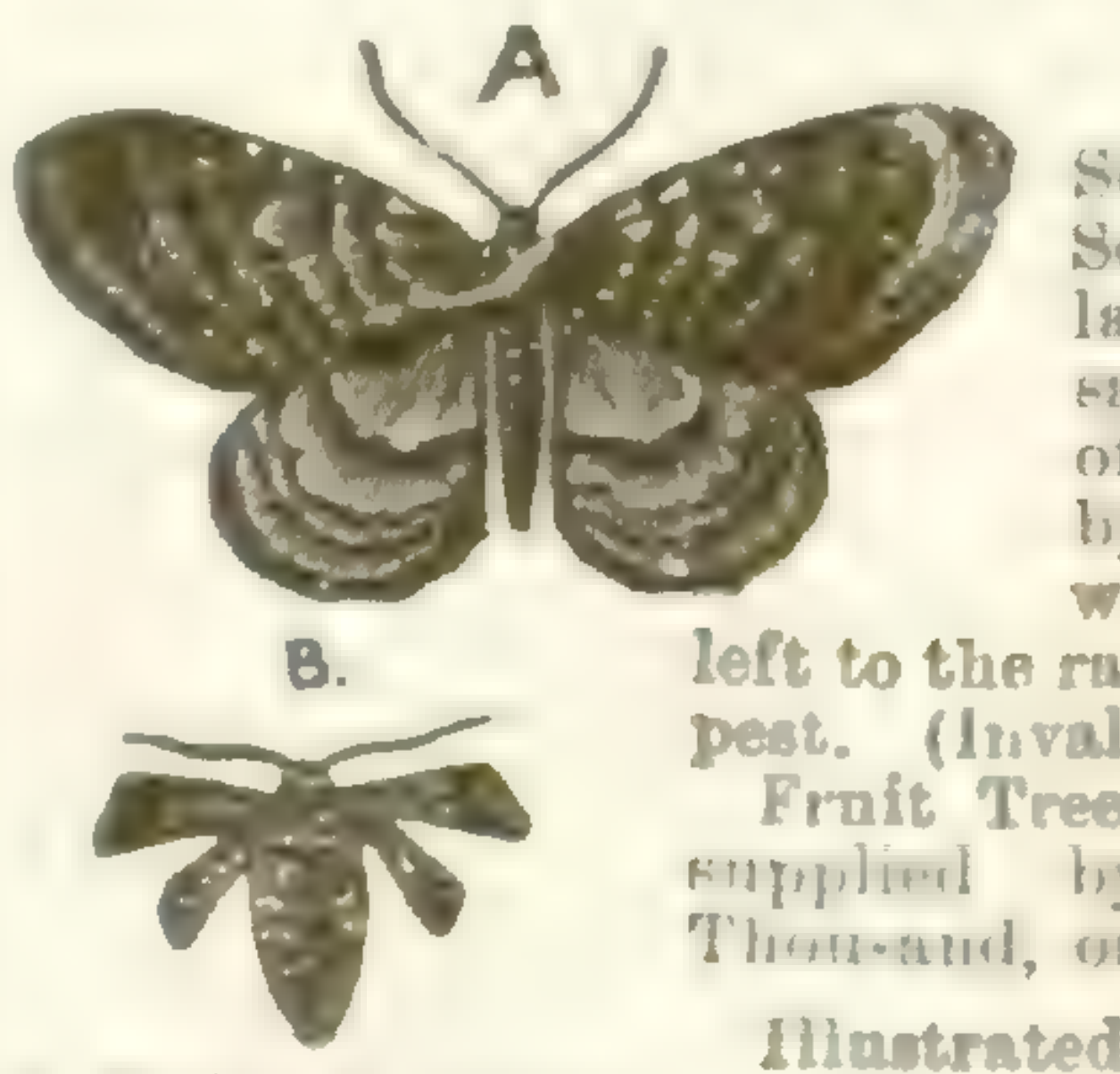

A, Male; B, Female.

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OBITUARY.

Dr. Douglas Law Freeland.

Mr. Horace J. Wright sends us the following: I was delighted to read your generous appreciation, and see the life-like portrait of my greatly respected friend, Dr. Freeland, in your issue dated September 19. Now, full of grief, I take up my pen to tell the many readers of the Gardeners' Magazine who knew and respected him, if by name alone, that he has passed to his rest. Truly are the ways of the Almighty beyond understanding. Here has been taken from us one whose whole serious life, alas, all too short, was devoted unceasingly and uncomplainingly to alleviating the pains and sympathising with the troubles of others. His was a life of real value and help to others, but the call has come to him, and he, perforce, has had to respond. For myself, I knew Dr. Freeland as a husband, a master, a doctor, a rosarian, a horticulturist, and, above them all, I knew him as a man, straight, true, ever ready to do his duty by himself and by all the world. I recall many happy hours in the rose garden at Delamere, Snodland, in which he found his delight and recreation, where we talked of roses and sweet peas, of men and matters, of manners and customs, and times without number I have enjoyed the "abundant hospitality" of Dr. and Mrs. Freeland. Dr. Freeland passed away at 2 a.m. on Saturday, the 10th inst., and the interment took place at Snodland on Wednesday, 14th inst., at 3 p.m. I am sure that every reader of the Gardeners' Magazine will unite with me in offering to Mrs. Freeland most sincere condolences in the terrible and irreparable loss which she has sustained.

TRADE NOTE.

Mr. Amos Perry, Hardy Plant Farms, Enfield, has secured the whole of the collection of hardy ferns formed by W. L. Buster, Esq., of St. Mary's Cray. The collection comprises some 400 varieties, and over 30,000 plants, and includes the finest varieties in cultivation, many of which are not yet in commerce.

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, October 21.—Royal Society of Arts.

TUESDAY, October 27.—Royal Horticultural Society; Committees meet at 12 o'clock; lecture on "Garden Design," by Mr. T. H. Mawson; Scientific Committee at 4 o'clock
Croydon Chrysanthemum Society; two days.

WEDNESDAY, October 28.—Royal Society of Arts.
Lindfield Chrysanthemum Society; two days.
Southampton Royal Horticultural Society; three days.

Rose Antoine Rivoire.—In colouring somewhat resembling Prince de Bulgarie, but the blooms are not quite so broad-petalled; this is a medium-sized rose of very attractive shape, and clean, vigorous growth; apparently a good rose for autumn, as we have some nice blooms at the present time. During August we had between two and three inches of rain, and with good weather through September, not only the variety under notice, but other roses have made a good autumn display.—T. H. Slade.

The Public Parks and Gardens of the United Kingdom form a very interesting feature of our national horticultural life, and as the editor of the "Gardening Year Book" for 1909 is anxious to record the correct title and area of these parks and open spaces, he will be very greatly obliged if the superintendents will send him these particulars, as well as their own name and address. Secretaries of horticultural and gardening societies are also requested to furnish him with particulars of their societies, with dates of exhibitions, etc. The information should be sent as early as possible to the Editor, "Gardening Year Book," 148 and 149, Aldersgate Street, E.C.

MARKETS.

COVENT GARDEN.

Flowers.

Business is a little slack, but there are signs of improvement. Dahlias are still plentiful.

		s.	d.		s.	d.
Adiantum cuneatum ...	per doz. bun.	5	0	to	9	0
Arums	per doz.	2	0		4	0
Asparagus	per doz. bun.	1	6		6	0
Asters	per doz. bun.	1	0		2	0
Bouvardia	per doz. bun.	5	0		6	0
Carnations	per doz blms.	1	6		2	6
,, ...	per doz. bun.	7	0		8	0
,, Malmaison	per doz. blms.	6	0		10	6
Cattleyas	per doz.	8	0		10	6
Chrysanthemums	per doz. bun.	5	0		10	0
,, ...	per doz. blms.	2	0		3	0
Coreopsis	per doz. bun.	1	6		2	6
Croton leaves	per bun.	1	0		1	6
Cypripediums	per doz. blms.	2	0		3	0
Dahlias	per doz. bun.	2	0		3	0
Eucharis	per doz.	2	0		3	6
French fern	per doz. bun.	1	0		3	0
Gardenias	per doz.	1	6		3	0
Gladiolus, large flowered,	per doz. spks.	1	6		3	6
Gypsophila	per doz. bun.	2	0		3	0
Lilium auratum	per bun.	2	0		3	0
,, candidum	per bun.	1	0		2	6
,, speciosum	per bun.	1	6		3	0
,, longiflorum	per bun.	2	0		3	6
Lily of the Valley	per doz.	6	0		9	0
Marguerites, white	per doz. bun.	2	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	0		4	0
Odontoglossums	per doz. blms.	2	6		3	6
Pelargoniums	per doz. bun.	4	0		6	0
Roses	per doz.	1	0		2	6
Smilax	per doz. trails	3	0		5	0
Statice	per doz. bun.	2	0		4	0
Sweet Peas	per doz. bun.	1	0		2	0
Tuberoses	per doz. blms.	0	4		0	8

Fruits.

Prices are a little firmer for the best apples. Damsons continue good.

		s.	d.		s.	d
Apples, cooking	per bush.	2	0	to	4	6
,, dessert	per ½-sieve	2	0		6	0
,, Nova Scotian	per barrel	8	6		12	0
,, Californian	per case	8	0		10	6
Bananas	per bun.	3	0		10	0
Damsons	per ½-sieve	1	6		2	3
Figs	per doz.	2	0		4	6
Grapes, English	per lb.	1	0		3	6
,, Belgian	per lb.	0	10		1	0
,, Channel Islands	per lb.	0	6		1	3
Gage Plums	per ½-sieve	2	6		3	6
Lemons	per case	6	0		14	0
Melons, Guernsey	each	0	9		2	0
,, English	each	1	0		3	0
,, Valencia	per case	6	0		10	0
Nectarines	per doz.	2	6		12	0
Nuts, Cob	per lb.	0	6		0	8
Oranges	per case	9	0		30	0
Peaches	per doz.	3	0		10	0
,, French	per crate	2	6		8	0
Pears	per ½-sieve	3	6		5	6
Pineapples	each	2	0		4	0
Plums	per ½-sieve	2	0		4	0
Walnuts, green	per ½-bus.	1	6		2	

Vegetables.

Plenty of excellent produce is brought in. Beans are about over. Cauliflowers are very fine.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	2	6
Beans, Runner	per bush.	2	0		3	0
Beet	per bush.	1	3		2	0
Brussels Sprouts	per bush.	3	0		4	0
Cabbage	per tally	1	6		3	6
Carrots	per doz. bun.	0	9		1	6
Cauliflowers	per doz.	1	6		2	0
Celery	per roll	0	9		1	4
Cucumbers	per doz.	1	0		3	0
Endive	per doz.	1	0		1	6
Horseradish	per doz. bun.	8	0		9	0
Leeks	per doz. bun.	1	0		1	6
Lettuce, cos	per doz.	0	6		1	0
Maize	per doz. cobs	1	0		1	6
Mint	per doz. bun.	1	0		1	6
Mushrooms	per doz. lb.	5	0		10	0
Onions, Pickling	per bush.	1	6		2	0
,, Valencia	per case	7	0		8	6
Parsley	per doz. bun.	1	6		2	0
Peas	per bush.	3	6		4	6
Radishes	per doz. bun.	0	4		0	8
Salsafy	per doz. bun.	3	0		3	6
Small Salading		1	3		1	6
Spinach	per bush.	1	6		2	0
Tomatoes, English	per doz. lb.	1	6		3	0
,, Guernsey	per doz. lb.	2	0		2	3
Turnips	per doz. bun.	1	3		2	0
Vegetable Marrows	per tally	2	0		4	0
Watercress	per doz. bun.	0	4		0	6

LONDON POTATO MARKETS.

There is no serious alteration of price, supply or demand, to record.

		s	d.		s.	d
British Queen	per ton	55	0	to	60	0
Epicure	per ton	50	0		65	0
Duke of York	per ton	55	0		65	0
Sharpe's Express	per ton	60	0		65	0
Up-to-Date	per ton	55	0		60	0
Early Puritan	per ton	55	0		65	0
Evergoods	per ton	50	0		60	0

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. October 4 to October 10.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 4 Sunday	6 5	52	52	76	49
,, 5 – Monday	—	56	56	61	49
,, 6—Tuesday ...	9 10	57	53	65	44
,, 7—Wednesday.	5 5	45	45	69	40
,, 8—Thursday ...	1 55	59	58	66	45
,, 9—Friday	—	63	61	64	57
,, 10—Saturday ...	4 40	54	53	63	52
Means	3 50	55	54	66	48

Date. 1908. October 4 to October 10.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Oct. 4—Sunday	—	59	59	58	46
,, 5—Monday	—	59	59	58	46
,, 6—Tuesday ...	—	57	59	58	36
,, 7—Wednesday.	—	56	58	58	37
,, 8—Thursday ..	—	58	58	58	43
,, 9—Friday	0·14	58	58	58	50
,, 10—Saturday ...	—	58	58	57	50
Means ...	(total) 0.14	58	58	58	44

CATALOGUES RECEIVED.

CHARLES TURNER, SLOUGH.—Two catalogues, one of bulbs and one of auriculas, carnations, picotees, cloves, and pinks.

GEMEN AND BOURG, LUXEMBURG.—An illustrated list of Dutch bulbs and dahlias.

GEO. MASSEY AND SONS, SPALDING.—A concise bulb list.

MISS HEMUS, UPTON-ON-SEVERN.—An advance list of new and exhibition sweet peas.

JAS. MURRAY AND SONS, DEPTFORD, S.E.—A catalogue devoted to liliums, Dutch bulbs, azaleas, and roses.

DANIELS BROTHERS, NORWICH.—Cultural notes for the various bulbs, fruit trees, roses, etc., listed, is one of the features of this catalogue.

DICKSONS, CHESTER.—A freely illustrated [illegible] catalogue, concluding with a comprehensive list of garden sundries.

FRANK DICKS AND CO., DEANSGATE, MANCHESTER.—A well arranged list of bulbs, roses, and sundries.

DOBBIE AND CO., ROTHESAY.—An autumn catalogue in which pansies, violas, and roses occupy as much space as the bulbs.

HORACE J. WRIGHT, 32, DAULT ROAD, WANDSWORTH.—A very handy and quite unique catalogue of sweet peas, together with cultural details, and an announcement of a Sweet Pea Information Bureau.

JOHN PEED AND SON, WEST NORWOOD.—A useful list of bulbs, gloxinias, plants for forcing, etc.

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AN APPEAL FOR ENDOWMENT.

EIGHT years ago, on the occasion of the Centenary of the death of the Poet Cowper, the house in which he lived at Olney was presented to the town to form a memorial and museum. The Trustees have, with a number of gentlemen resident in the district, formed an Endowment Committee, of which the Bishop of Durham is the chairman. The [illegible] in view is clearly stated in the following [illegible] from a letter signed by the Bishop:—

"At present the Institution has an income of only eighteen pounds a year, and this is insufficient for its due maintenance. The front of the Museum has recently been restored, but the two rooms now used for exhibits are overcrowded, and we think that the whole of the house should be devoted to the public, who would then be admitted to the "John Gilpin" room and other rooms now occupied by the Curator. For this purpose it will be necessary to form a small endowment; and it has been calculated that the sum of £2,200 is required. We sincerely trust that the public will respond generously to this appeal.

HANDLEY DUNELM,
Chairman of the Committee.

The Hon. Treasurer is Mr. Frank Littleboy, of Newport Pagnell, Bucks, to whom contributions should be addressed.

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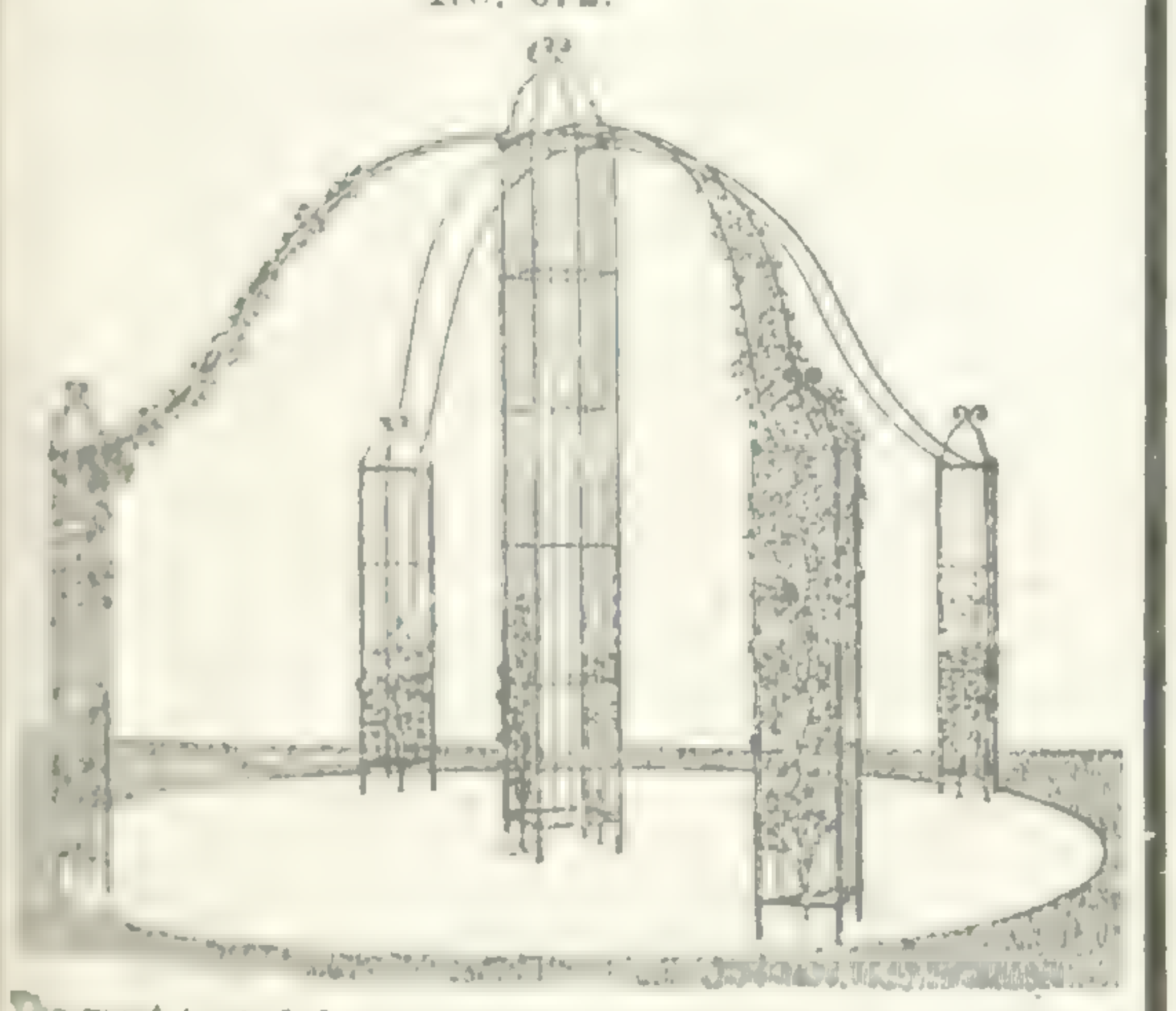

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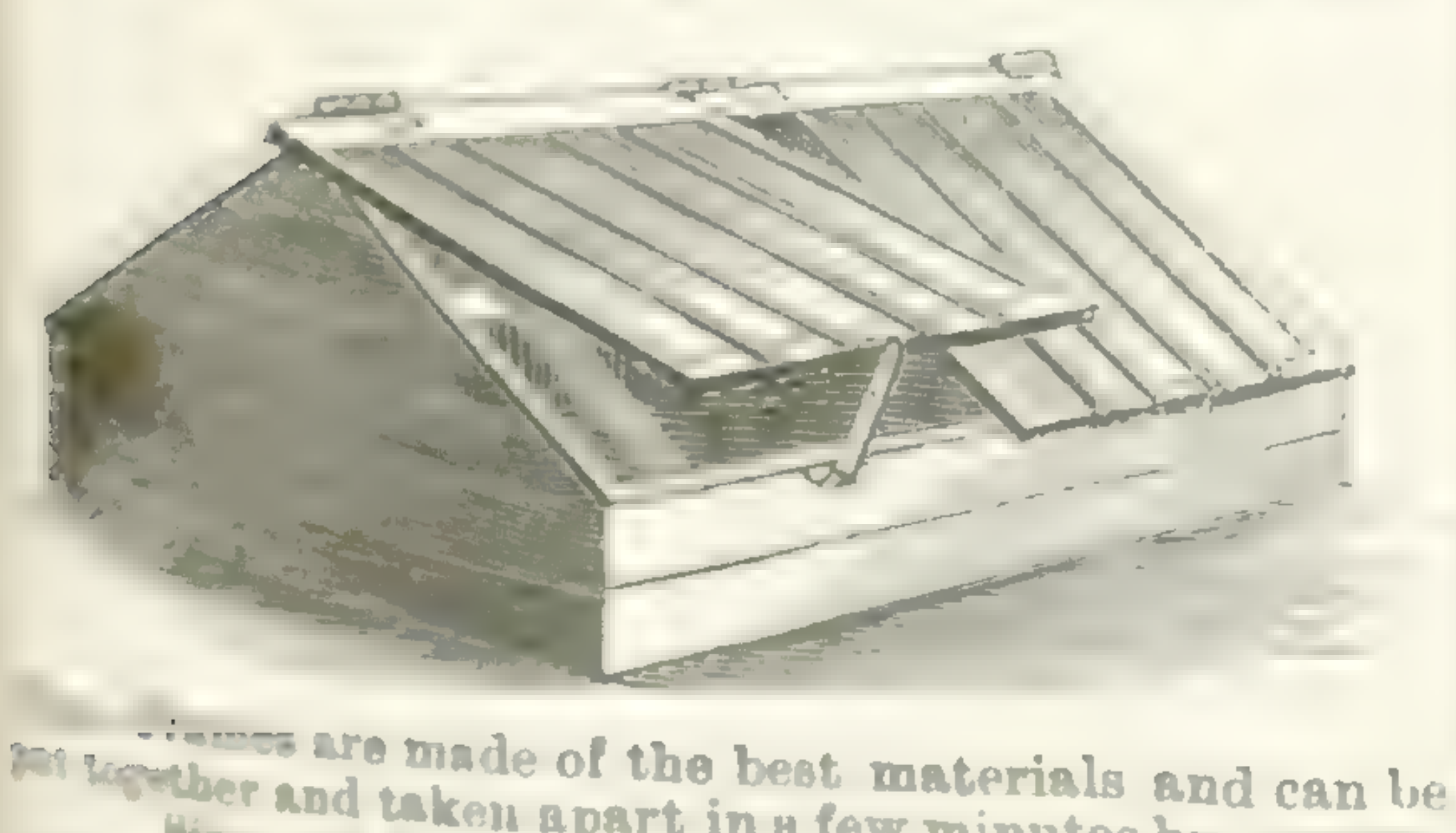

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6ft. ,, 5ft. ,,		2	15	0
12ft. ,, 4ft. ,,		4	0	0
12ft. ,, 5ft. ,,		4	15	0
12ft. ,, 6ft. ,,		5	12	6

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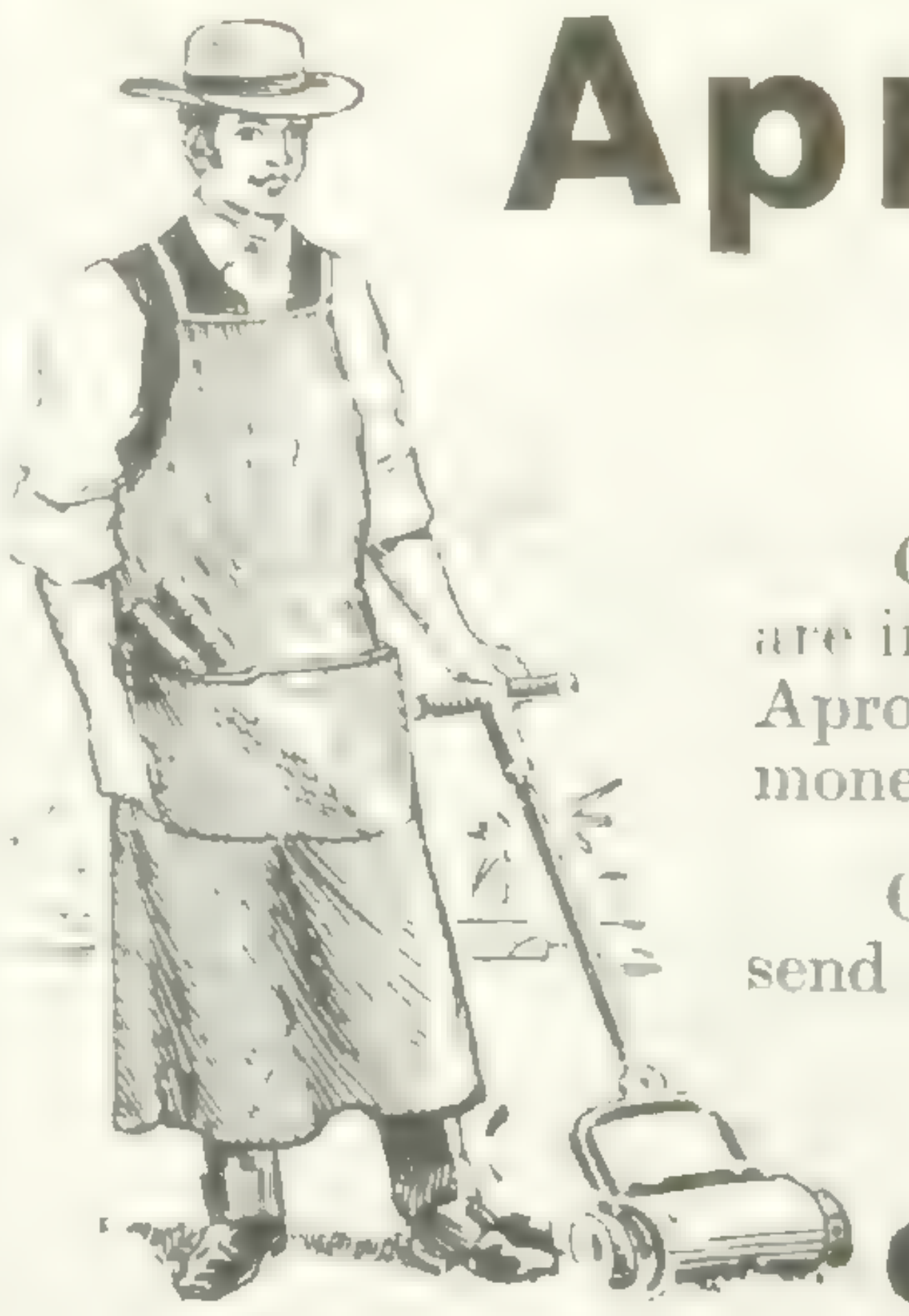

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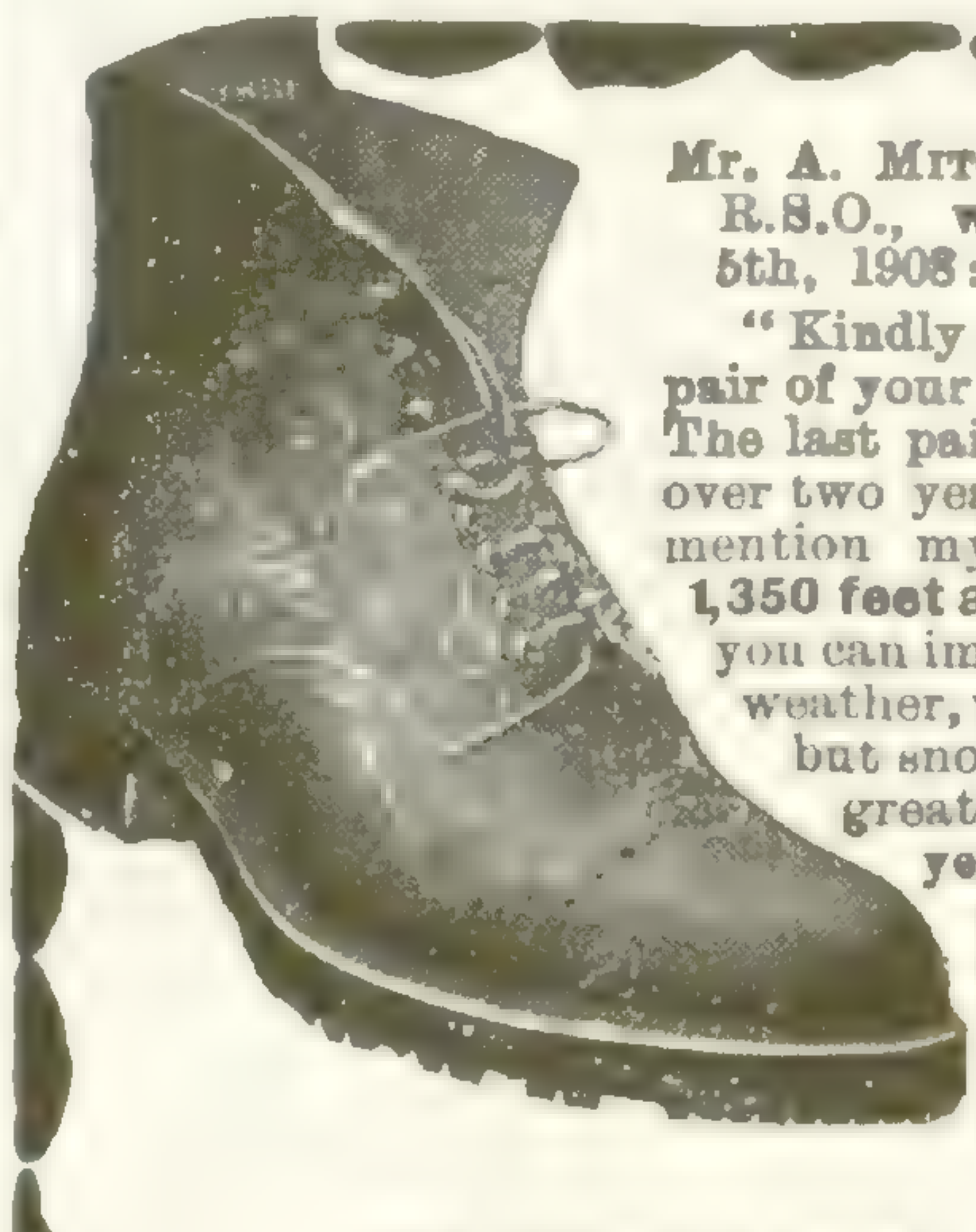

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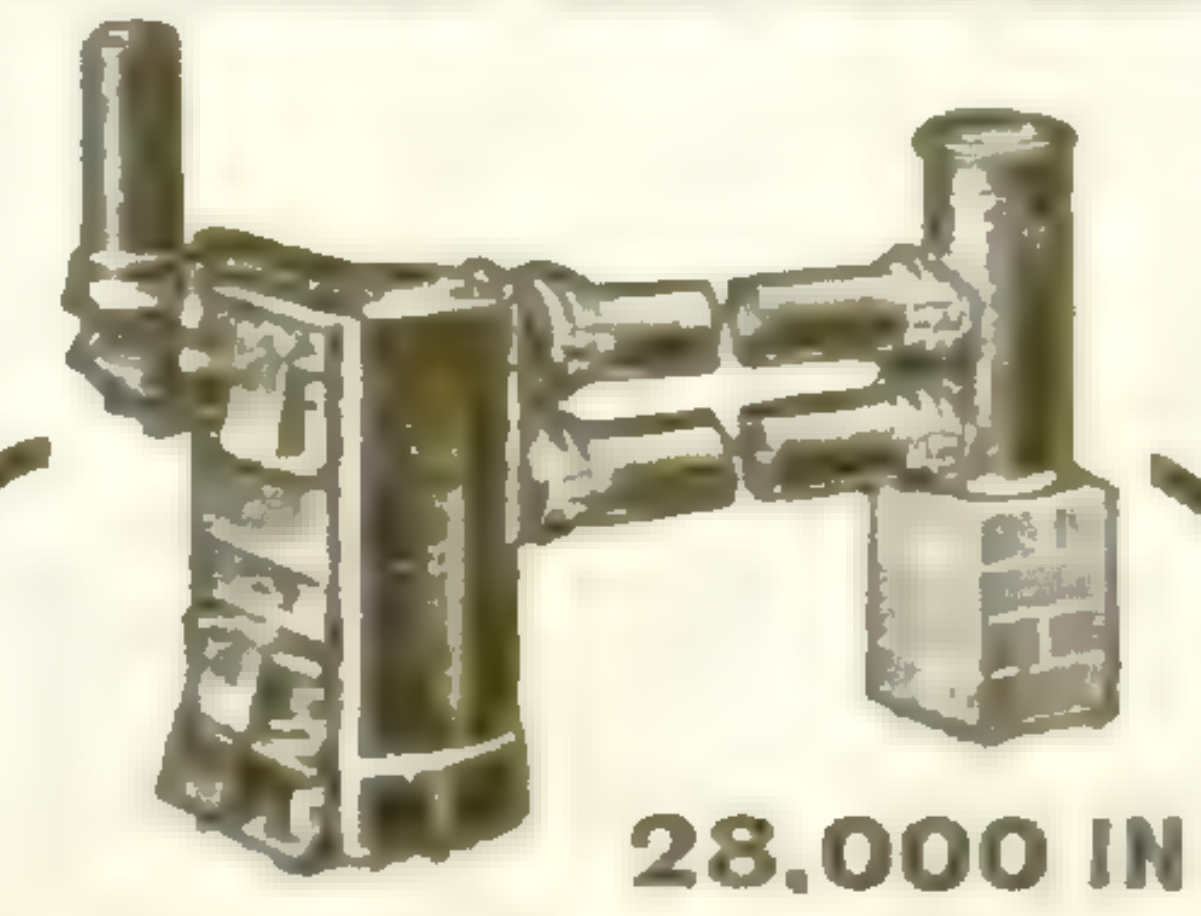

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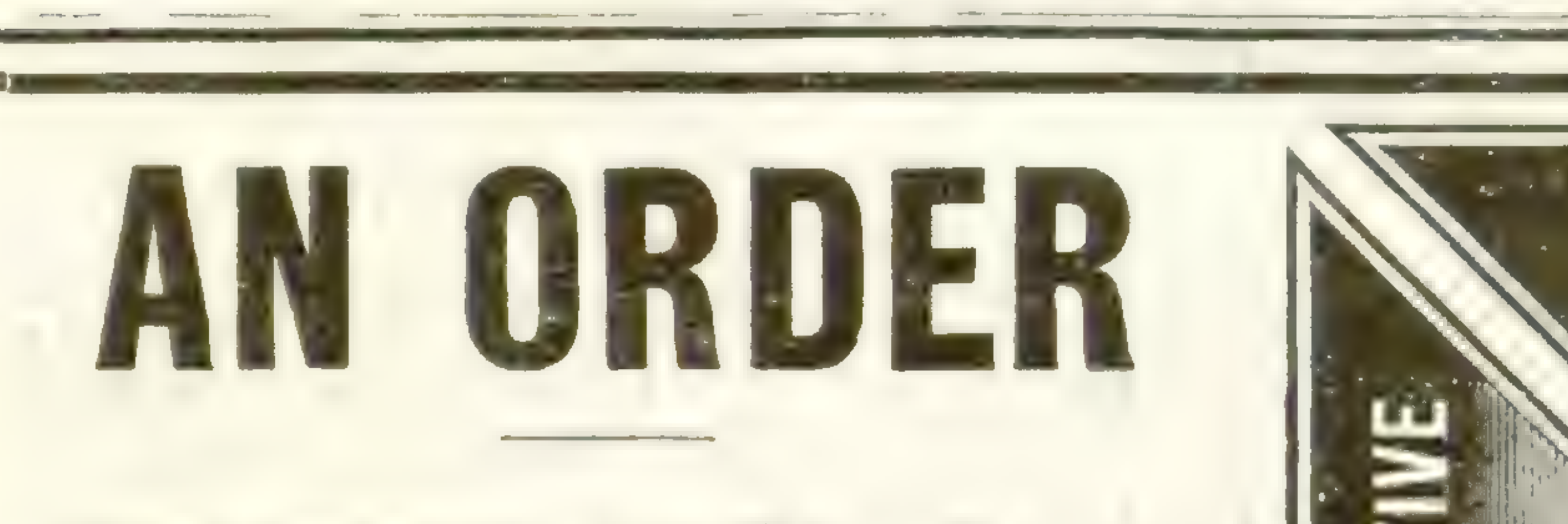

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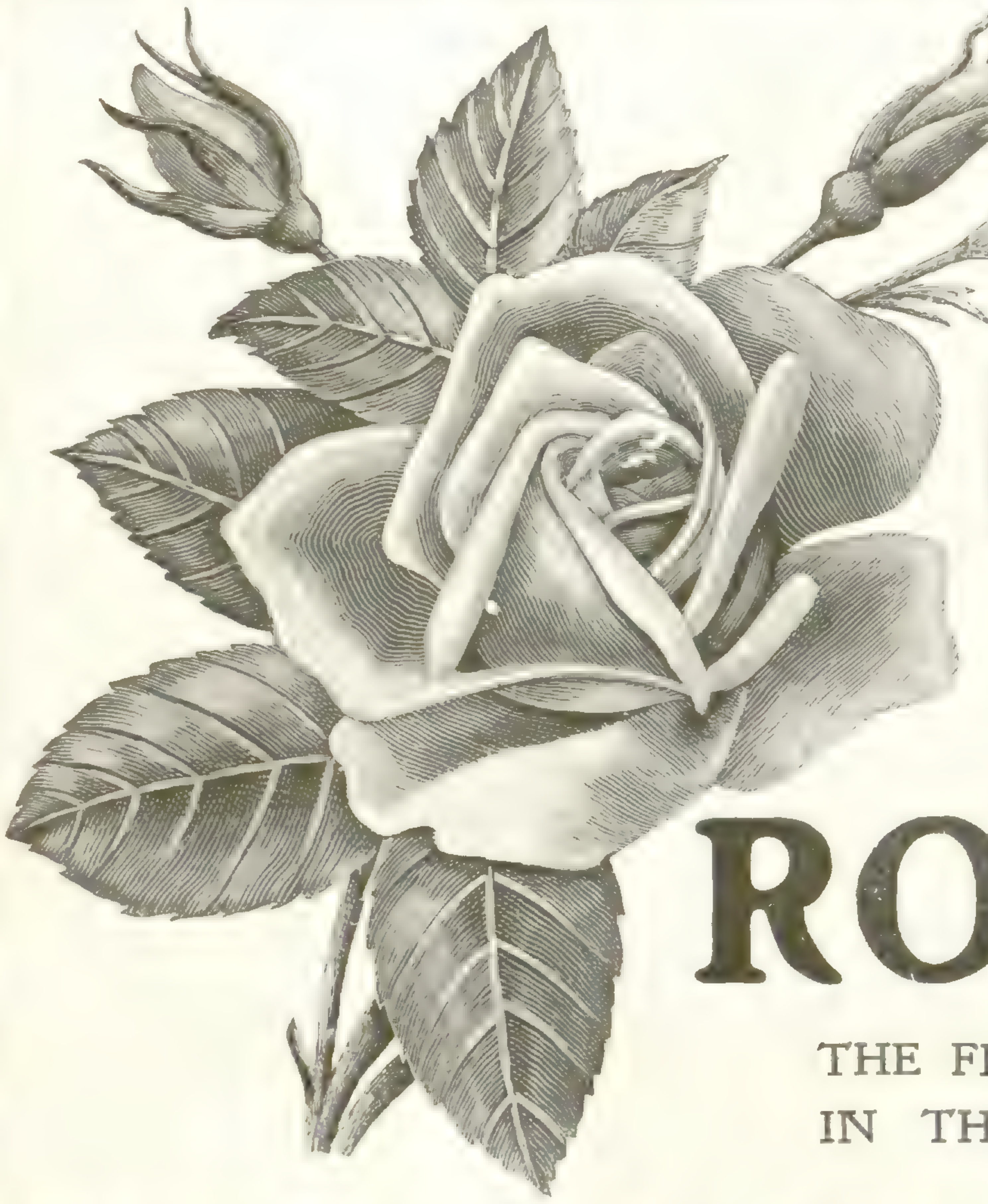

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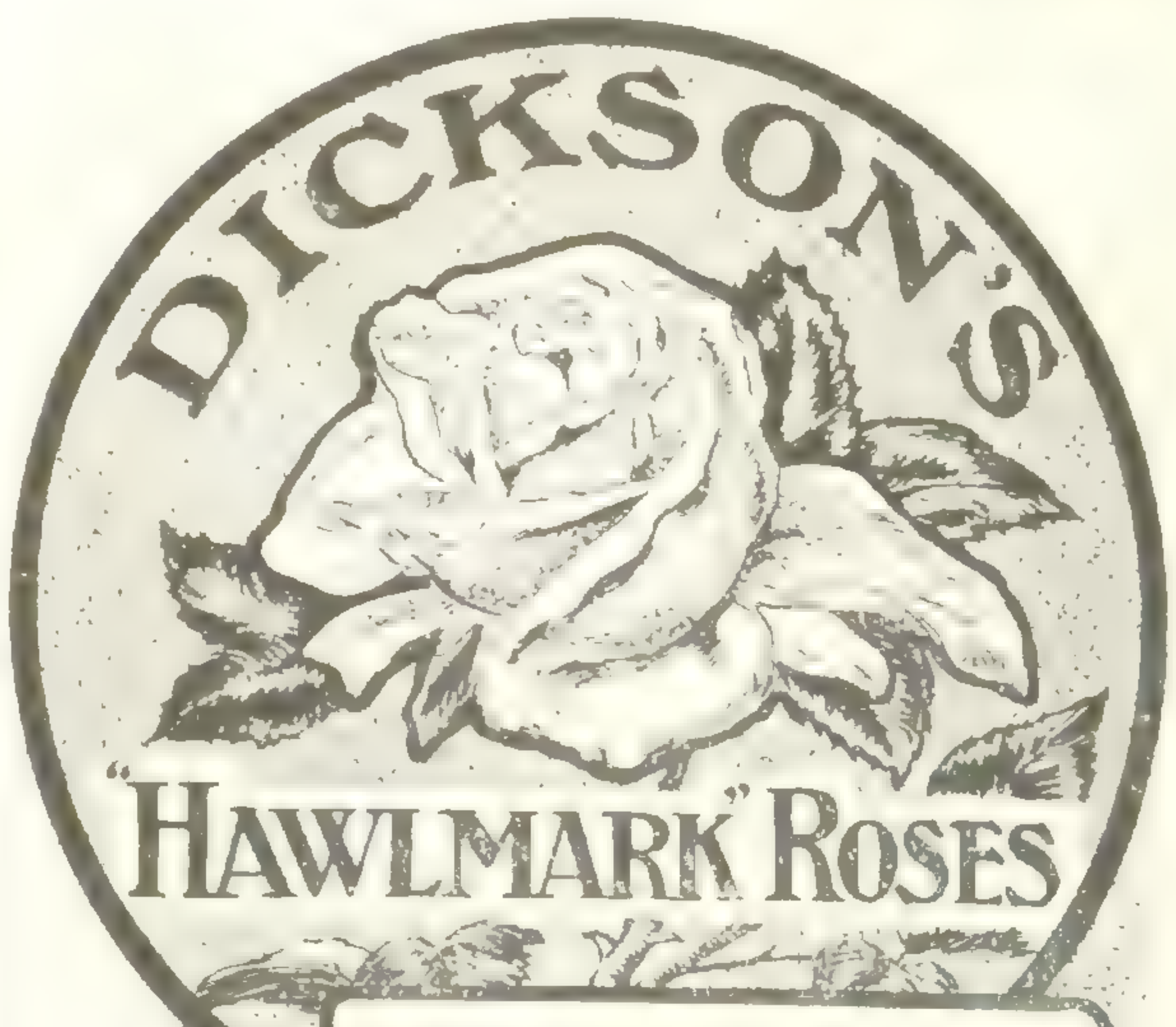

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THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Hardy Shrubs for Forcing.

The rapidly increasing popularity of the hardy shrubs that are remarkable for the beauty of their flowers for contributing to the attractions of the conservatory early in the year, is a matter that cannot well fail to give much satisfaction to those who take an active interest in the ornamental aspects of gardening. We have among these shrubs kinds that are distinguished by their elegance of habit, the delightful colouring of their flowers, or some other attribute of beauty; and they are all more or less amenable to the artificial conditions under which it is necessary to place them to ensure the development of their flowers considerably in advance of the usual season of blooming. The best of the kinds are sufficiently numerous to produce a series of the most varied and delightful colour effects, and to add thereby immensely to the charms that a well-furnished and tastefully arranged conservatory possesses. Few among past generations of gardeners could have had other than a vague idea of the possibilities of shrub culture for flower production under glass; for the number who utilised hardy shrubs for indoor decorations was small, and in no case were they used other than in a very sparing manner. Now it is quite common to find conservatories so liberally embellished with them as to afford a series of displays of exquisite beauty. So generally is the value of hardy shrubs for conservatory decoration recognised that it is somewhat surprising to find anyone to raise an objection to their being so employed; but there are some who do not regard with favour the flowering under glass of shrubs that bloom profusely in the open quite early in the spring season, and produce effects at once distinct and beautiful. We confess to a difficulty in understanding the feelings of those who take up this position, because it is possible to fully appreciate the flowers of shrubs growing under natural conditions after having enjoyed the display produced by those which have had their season of flowering accelerated. Much has been accomplished in the improvement and the extension of the culture of shrubs for forcing, but there is something more to be done before it can be said that further progress is unnecessary. There are still gardens in which their value is not fully recognised, and there are instances in which the selection of kinds should be improved.

MR. CHARLES ROSS.

We would suggest to those who have not used the more beautiful of the flowering shrubs for forcing, to put their utility to a practical test during the forthcoming season by forcing a few of them. With regard to the selection, it may with advantage be pointed out that it is not advisable to have a large number of kinds, but to select a few of the very best and have several examples of each. The lilacs are of special value, for they are unsurpassed in charm of colouring, are delightfully fragrant, and their flowers retain their freshness for a considerable period. If but one group is forced, the lilacs should have the preference, and such varieties as Charles X., Dr. Lindley, Madame Lemoine, Marie Legraye, and Michel Buchner be selected. Next in importance are the forms of Azalea mollis, and if there is no objection to the small additional cost, such fine varieties as Anthony Koster should be selected, otherwise good seedlings should be obtained. Of much value is Prunus triloba, which is so largely grown in Germany for conservatory decoration. This beautiful shrub is admirably adapted for association with the lilacs, and the delicate pink hue of the flowers presents a delightful contrast to the soft colours of the lilacs. The double-flowered peaches have much to recommend them, and the double-flowered cherries are of the highest value. The rose and crimson varieties are the most desirable of the varieties of the double-flowered peach, and the best of the cherries are Cerasus pseudo-cerasus fl.-pl., C. pseudo-cerasus J. H. Veitch, and C. avium fl.-pl. The forms of Pyrus malus floribunda differ materially in decorative value, and the best of those obtainable at ordinary rates is Scheideckeri. Magnolia conspicua, M. Soulangeana, and M. stellata are all useful, but they require to be well set with buds to justify their being forced into bloom. The Philadelphus includes several good forms, notably Lemoinei and Boule d'Argent, both of which are of free growth, and profuse in flowering. Deutzia gracilis, which has long enjoyed considerable popularity for flowering under glass, should be included in the smallest selection, and with it should be associated D. Lemoinei, one of the finest of the white-flowered shrubs. A few of the shrubby spiræas should be included, S. confusa, S. arguta, and S. prunifolia fl.-pl., comprising some of the best. In addition, may be mentioned Viburnum opulus sterile and V. plicatum. There are other good shrubs suitable for forcing, but it is not now necessary to refer to them as our object is not to give an exhaustive list, but to mention a few that possess so much merit that they should have the preference in making a small selection. We need hardly state that in the preparation of shrubs for forcing good cultivation is essential to success. The plants must be well furnished with fibrous roots, and, if well established in pots, it will be a great advantage; and they must have stout, short-jointed growths, and large plump buds, and there will be no great difficulty in the production of examples of this description provided a generous course of culture is adopted.

Mr. Charles Ross, the veteran gardener and fruit raiser, has done a great deal to make fruit culture more interesting than it used to be. We have great pleasure in presenting our readers with a portrait of Mr. Ross at this time, because this fine old gardener is now proposing to retire from active participation in professional horticulture, and also because Mr. Ross is now quite famous as a raiser of new apples. Born at Dundas Castle Gardens, Linlithgow, on December 22, 1824, Mr. Ross was early taken to Dalmeny Park, where his father became forester and estate manager. Here, under Cuthbertson and Melville, Mr. Ross commenced his gardening career. In 1846 he went to Fullarton House Gardens, Ayrshire, and then spent several years at Middleton Hall, Blackadder, Berwick, and with Messrs. Dickson and Co., of Leith Walk, Edinburgh. On March 3, 1851, Mr. Ross entered service under Charles McIntosh, at Dalkeith, and he was told that his services would not be retained a moment longer than they gave full satisfaction. Young Ross evidently gave satisfaction, for in August of the same year he gained leave of absence for one week, and in that time he visited the Great Exhibition in Hyde Park, Kew Gardens, Hampton Court, the Royal Botanic Society's Gardens at Regent's Park, and the Royal Coliseum. He also subsequently became general foreman at Dalkeith, and this at a time when McIntosh was writing "The Book of the Garden." In 1854 Mr. Ross became head gardener to Mr. Joseph Ridgeway, at Fairlawn, in Kent, and in 1862 he became head gardener at Welford Park, Newbury, where he has remained until now. Colonel and Lady Archer-Houblon, the owners of Welford Park, have nothing but praise for Mr. Ross, and the several tenants have regarded him as a friend. Besides certificates and cups and medals, Mr. Ross has won about 1,200 prizes, largely for fruit. He has raised numerous good apples, such as Charles Ross, The Houblon, Rival, Encore, Renown, etc., and he has long been held in high estimation as a judge of fruits. Though 83 years of age, Mr. Ross is hale and hearty, and walks as briskly as many men a score of years younger, and he was one of the keenest of pomologists at the R.H.S. fruit show last week. That he may for many years continue to have good health, and thus be able to fully enjoy the well-earned rest of retirement is the heartiest wish of his many friends.

Nomenclature of Orchid Hybrids.—The following resolution was received by the R.H.S. Scientific Committee at its meeting on the 13th inst. from the Orchid Committee: "That the Scientific Committee be asked to consider and advise upon the proper nomenclature of tri-generic, quadi-generic, and other hybrids, as it appears to the Orchid Committee that not more than two generic names can conveniently be combined in defining the origin of the hybrids." Several letters upon the subject were considered, and suggestions were made as to the best methods of forming names for these hybrids. It was finally proposed by Mr. Veitch, and seconded by Mr. Hurst, that a sub-committee should be formed, to consist of five members of the Scientific Committee and five of the Orchid Committee, who should confer together and further consider the subject. This was carried, and Dr. Rendle, Messrs. Bowles, Fawcett, Hurst, and Rolfe were appointed to represent the Scientific Committee.

Improvements at Balmoral.—The King has decided to make several alterations in the grounds and plantations of Balmoral Castle. A considerable number of trees are to be cut down, and many of the newer kinds of trees and shrubs will be planted. The alterations will be made in accordance with plans prepared by Lord Redesdale, and will be carried out during the ensuing winter and spring.

Union of Gardeners' Societies.—On the second day of the Royal Horticultural Society's exhibition of British grown fruit, the first annual meeting of the Gardeners' Mutual Improvement Associations in affiliation with the R.H.S. was held at the Horticultural Hall. The Rev. W. Wilks presided, and there was a large attendance, the No. 1 Committee Room being crowded with delegates. The report presented was satisfactory, both as regards the number of societies in affiliation and the provisions made for meeting the requirements of societies in need of lectures. The business proceedings were of short duration, and within a quarter of an hour of the chair having been taken the meeting proceeded to the consideration of the two subjects that had been arranged for discussion. One of these was the definition of an amateur, and the other, methods of competition at public exhibition. The discussion on the first subject was opened in an admirable manner by the representative of the Radlett Society, and the second with a paper read by Mr. Jay, of St. Barabas, Sutton, which evoked considerable criticism. It is somewhat remarkable that the whole of the meeting should have been occupied by the discussion of questions that more immediately concern horticultural societies holding annual exhibitions, instead of some portion at least being devoted to matters that concern mutual improvement societies. One representative made a vigorous protest against the meeting having been devoted to exhibition questions.

Franco - British Exhibition Awards.—The list of awards made to British exhibitors at the Franco-British Exhibition has been published; and from this we learn that the following awards have been made in the classes for horticultural products and appliances. In Class 46 for trees, shrubs, and ornamental plants and flowers, the awards made were: Diploma for Grand Prize, Messrs. Sutton and Sons, Reading, and Messrs. James Carter and Co., High Holborn, W.C.; Diploma for Gold Medal, Messrs. Kelway and Son, Langport, Messrs. J. Cheal and Sons, Crawley, and Messrs. Carter Page and Co., London Wall, E.C.; Diploma for Silver Medal, Miss Babbington. In Class 48 for horticulture and nursery seeds, the awards were: Diploma for Grand Prize, Messrs. Sutton and Sons and Messrs. J. Carter and Co.; Diploma for Gold Medal, Messrs. Stead and Co.; Diploma for Silver Medal, Mr. J. Osborn. In Class 43 for appliances and processes used in horticulture and arboriculture, the awards were: Diploma for Grand Prize, Mr. Alex. Hamilton, Bromsgrove; Diploma of Honour, Mr. J. Burn; Diploma for Silver Medal, Messrs. J. Carter and Co., Mr. G. W. Riley, and Messrs. H. and J. Cæsar; and Diploma for Honourable Mention, Messrs. F. Reddaway and Co., Lim. In Class 58 for preserved vegetables, fruits, etc., the Horticultural College was awarded the Diploma for Gold Medal.

What Constitutes an Amateur?—This question was discussed at some length, and we hope with considerable profit, at the meeting of Gardeners' Mutual Improvement Associations, which was held at the Horticultural Hall on the 17th inst. The discussion was opened by the representative of the Radlett Society, who described what had been done by his society with a view to place the amateur in his rightful position. Considerable success, it would appear, had been achieved, but the practice that had been adopted seemed rather faulty. Other representatives proceeded to state their views, which were of a most divergent character, and the discussion soon made it evident that many of the difficulties that had arisen had been due to a failure to appreciate the fact that all who take an interest in gardening and do not regularly sell the produce of their gardens are amateurs. Much confusion has arisen from the practice that obtains in some societies of describing certain classes open to gardeners without restriction as to the number of men employed, others to gardeners with one or two assistants, and some to single-handed gardeners. Mr. Wilks, who presided, submitted a scheme for the classification of exhibitors who are not engaged in commercial horticulture, and, as this is based on the proper definition of an amateur, its general adoption would be an immense advantage. Briefly stated, Mr. Wilks divided amateurs into four classes, namely, those who employ a gardener with a considerable number of men under him; those who have a gardener with one or two assistants; those who employ a gardener without assistance, and those who do the work of their garden themselves, with or without occasional assistance. Mr. Wilks directed attention to the importance of great care in the drawing up of regulations relating to the classification of amateurs, so that there may be no ambiguity in the wording. At the close of the discussion Mr. Wilks promised to send a copy of his scheme to the societies in affiliation, so that the several committees may have an opportunity of fully considering it, and adopting it if they should be so disposed.

A Conference of Fruit Growers will be held at the South-Eastern Agricultural College, Wye, Kent, on November 27, under the chairmanship of Mr. C. W. Radcliffe Cooke, president of the National Association of English Cider-makers. "Insecticides" will be discussed by Mr. Spencer Pickering, F.R.S., "Spraying and Spraying Machinery," by Mr. E. S. Salmon, and "Grading and Packing" by a representative from British Columbia.

Purchase of Small Holdings.—It is not yet fully recognised that, in addition to the powers which are given to County Councils by the Acts of 1892 and 1907 for the purchase or hiring of land for small holdings, they are empowered by section 17 of the Act of 1892 to advance money to sitting tenants of small holdings to enable them to purchase their holdings. In this connection it is most interesting to learn that in consequence of the sale of the Penrhyn and Vaynol estates in Carnarvonshire sixty-eight of the tenants applied to the County Council for advances to enable them to purchase their holdings, and sums amounting to £4,436 have been advanced by the Council for the purpose.

SOME REASONS WHY APPLES SELL BADLY.

Speaking generally, there is a fairly plentiful supply of apples this year, and one hears the usual story when crops are up to the average, about glutted markets and low prices. This is the outcry at the moment of writing early in October—and yet I fully expect that a few months hence English apples will be difficult to buy and the markets will be mostly supplied with foreign fruit. It seems incredible that this country produces more apples than its population can consume, and even in a season of plenty one cannot help thinking that there must be something wrong with the methods of distribution when one hears that the prices received by the growers are insufficient to pay expenses, much less show a profit. Let us therefore just look into one or two of the causes of this unsatisfactory state of affairs.

Ungraded Fruit.

The other day we happened to be in a big fruit market in a West of England town where most of the fruit is grown in orchards in the vicinity, and is brought in by the farmers to be sold by auction. We happened to get into conversation with one of the latter, who was complaining about the miserably low price he had received for his fruit. It was barely enough to pay for the picking, and what, asked the man, is the good of spending time and trouble in looking after orchards if that was all the reward one got? On the face of it the argument sounded feasible, and we asked to see the fruit. There it was basket after basket, filled with apples, good, bad, and indifferent, all jumbled up together, even the varieties in some cases being mixed, and no attempt at sorting or grading. It may be added that the fact of the baskets being lined and the fruit covered with half-dirty newspapers did not improve the appearance of the fruit. We ventured a remark about the mixed state of the fruit, which was met with the response that it was no good bothering with it when the market was glutted with fruit, and there was nothing to be got for it. With that the man went on his way grumbling.

In the meantime we got into conversation with the individual who had bought the fruit, who was a dealer, by the way, and was about to remove the apples to a town in the Midlands. Would he sell them as they were? The man smiled, but there was a world of meaning in the smile. "Not quite," he observed drily, and went on to explain that the apples would be removed from the receptacles they were in to his own baskets. The best would be all put together, and he knew where he could place them, while the small and malformed specimens would go for what they would fetch, and if they fetched nothing he would get enough for the best samples to show a good profit. While he, shrewd man, was making this arrangement and seeing money at the end of it, the original owner of the fruit was enlarging on the rotten state of the apple trade to a little crowd of ready listeners who fully agreed with what he said. They were also growers, whom the dealers were quietly making a nice bit of money out of.

Proper Grading and Packing.

Most of the apples in the market were of the same rough and ready order, but we noticed a few baskets that were nicely graded and presented for sale in a pleasing manner. These samples certainly sold better than the rest, but the price was lamentably low, and one seller asked in all sincerity what was the good of going to the trouble of careful packing and grading when the fruit fetched so little more than that which was sold just as it came from the trees. The question was not an easy one to answer, but it can be explained why the really good apples only fetched so little more than the second-rate samples. There was a preponderance of the latter, which set the market in the manner that markets are set, and when the auctioneer came to a really good lot, the bidding became a little brisker, and the price rose a few shillings per cwt., but the average figure being fixed, as it were, the buyers would not go much beyond it, and got good bargains at the expense of the few men who had been careful in selecting and packing. What we contend is that if the whole of the produce in the market had been of the same high order, it would have fetched considerably more than the few lots referred to, and this the grower of good and graded fruit stands to lose when he sells it in a market that is practically made up of second and third-rate produce. In this case, of course, it was the buyers who got the benefit out of the care and trouble bestowed on the fruit by the vendors, and if the latter get discouraged and send in fruit of the same type as most of that in the market one can hardly be surprised. It is experiences of this kind which cause a levelling-down instead of a levelling-up; or, in other words, the value of good fruit is reduced owing to the overwhelming amount of rubbish that is offered for sale.

Selling Varieties in Season.

Just now local markets are glutted with fruit, and largely because growers will not go to the trouble to discriminate between varieties and dispose of the apples when they are in season. The prevailing anxiety seems to be to get rid of the stuff as soon as possible and have done with it. On the occasion referred to, we saw basket after basket of Blenheim Pippin, Bramley's Seedling, Wellington, and other varieties of this type, that would keep for months if carefuly stored, being sold side by side with apples that were ripe and fit for disposal. In regard to this point, it may be added that there are men who eagerly buy up late keeping apples, which are sold by auction as soon as they are picked, and after selecting the best samples they carefully store them and sell them about Christmas time when fruit is less plentiful and prices are better.

The Storage Question.

Thousands of apple trees have been planted in orchards and plantations during the past few years, and amongst them a large proportion of late-keeping varieties; but amongst those who have planted I wonder how many have made provision of any kind for storage. Doubtless this is done to a certain extent amongst those who make fruit growing a business, but in the case of farmers and also others, apple growing is one item, and in too many instances it is not treated seriously enough. There are apples in plenty just now, you can buy them for an old song; and under the trees in orchards may be seen fine specimens that have been allowed to fall, and if they are picked up at all they will go into the cider mill.

This is the state of affairs at the beginning of October; how shall we stand next January? In all probability, the stock of English fruit will consist of small scrubby little specimens that can only be called rubbish, and a certain quantity of picked, well-preserved specimens which are offered by those who do make a point of storing fruit for late sale, but the price then is generally too high for the man in the street. But he gets apples all the same when English crops

R.H.S. FRUIT SHOW—CULINARY APPLE, BEAUTY OF NORFOLK. EXHIBITED BY MESSRS. H. CANNELL AND SONS.

have been disposed of somehow, for in every shop where fruit is sold there is a barrel of foreign apples standing in the corner and the fruit at the bottom is as good as it is at the top. Is there any need to wonder that the foreign fruit grower has got such a firm footing in our markets when we consider the trouble he goes to over the details of cultivation, grading, packing, and shipment? It is said that it does not pay home growers to adopt the methods of the foreigner. This may be, but it would have done so if the former had been quick enough in the past to seize the opportunities which the latter has made the most of.

H.

CLIMBING ROSES UPON TREES.

In the excellent articles upon "Roses for Arches," and "Roses for the Rock Garden and Rootery" (pp. 730 and 732), there are many useful hints; but not a word is said for beautiful roses when used upon old tree stumps.

Pergolas, arches, and masses of roses are very handsome, but there is, after all, a certain amount of formality about them. Recently I was in a garden, part of which used to be an old orchard. Here and there a favourite tree has been left; in short, the trees have been weeded out from time to time until the last few are mere stumps, with just sufficient life left in them to retain a firm root hold. Irregular paths wind among these; and, wherever space admits, there are beds of herbaceous and other subjects in profusion. The owner styles it his "Wild Garden." An appropriate, and yet inappropriate name, for everything receives a little attention at the right time.

To get to my subject a little closer, there is nothing more pleasing than roses and a few other climbers among these old branches. Sometimes a little away from the path, at others almost overhanging it · and a little further on two or three old stumpy trees close together. Even if one wished to train the trees in a formal manner it would be impossible; and I am sure no art could improve upon the effect given by the irregular and invariably graceful forms taken by roses when supported upon such stumps.

Here we can grow our earliest and latest varieties. Even when not in flower they are far from unsightly. Nor is the fruit tree stump unpleasing early in the season, with its few blossoms mingling among growth that will presently be a mass of roses. Very little tying is needed; indeed, the less of this the better, as all we want is one or two stout pieces of cord or string to keep the main branches in order. The lateral growths carrying flowers will always find the most artistic positions for themselves; and the more these are left at random the better the effect.

In the excellent notes from Mr. Molyneux and Mr. Dallimore, most of the strong-growing varieties suitable for this purpose are named, but I miss one of the very best, viz., the Wichuraiana type, a pure white, in flower early, mid-season, and late. This is a picture in itself when growing from old fruit tree stumps. Trails of pure white, with showy golden stamens; the shining green foliage, and almost evergreen leafage are charming; a few stumps covered with this and with Jackman's clematis and the scarlet Flame Flower (Tropæolum speciosum), apparently planted without any idea of effect, yields a combination so good that one could not but admit Nature was the best guide in the matter of artistic beauty.

A. Piper.

FERTILISERS FOR GARDEN VEGETABLES.

There are no crops on which it is more profitable to use artificial manures than on garden vegetables, provided they are used in the right way and in the proper forms. Many failures with these concentrated fertilisers are caused by lack of knowledge of the simple principles of plant food.

Mr. A. D. Hall, director of the Rothamsted Experimental Station, says, in reference to this subject: "Artificial manures are powerful tools by which the development of the plant may be shaped by the gardeners along certain directions, but like all powerful tools they require to be used with knowledge and discretion or they will do as much harm as they can be made to do good." The great value of artificial manures is that they can be used to meet certain special difficulties of soil and climate in a manner that would otherwise be impossible.

Stable and farmyard manure, when used in sufficient quantities, almost invariably produce good results, while the unintelligent use of concentrated fertilisers did not do so well. In this way many gardeners were persuaded that there was nothing equal to farmyard or stable manure, which they continued to use in large quantities, paying in many cases fully twice as much for it as the plant food it contained was worth. There is no doubt but that stable manure is very valuable as a fertiliser, and in many cases is indispensable owing to its liberal supply of humus matter which concentrated fertilisers do not give; but at the same time the quantities necessary to produce the results now obtained could be greatly reduced by using artificial manures to supply the plant food, and only enough farmyard or stable manure to give lightness and friability, and to add humus to the soil.

Use of Fertilisers.

For crops like cabbages, beet, lettuce, turnips, spinach, etc., that it is desirable to force to rapid maturity, the form in which the plant food, and especially nitrogen, is applied is of the greatest importance. Many fertilisers sold for this purpose have all the nitrogen they contain in an insoluble and only slowly available form, so that it requires a considerable time for the plants to derive benefit from it. Another fault is that they do not contain enough nitrogen or ammonia.

Stable manure contains, on the average, in one ton weight, 10lb. of nitrogen, 10lb. of potash, and only 5lb. of phosphoric acid; while the average complete fertiliser, such as guano, contains more than twice as much phosphoric acid and nitrogen. The late Mr. Nesbit, F.C.S., estimated that one ton of nitrogenous guano was equal to 33½ tons of good farmyard manure or 21 tons of horse dung. A fertiliser for quick-growing vegetables should contain as much nitrogen as phosphoric acid, and at least half this nitrogen should be in the form of nitrate, which is the only form in which it is immediately available to plants. When farmyard or stable manure is used in addition to the artificial manures all the nitrogen applied should be in this form, and in most cases it is better to have it all in this form, whether stable manure is used or not.

The best manure for cabbages, cauliflowers, onions, turnips, carrots, etc., is a mixture of equal parts of nitrate soda and superphosphate. A small quantity of sulphate of potash should be added when the land is naturally poor or of a sandy character. The proportion of nitrate to superphosphate can be varied according to the kind of soil and previous manuring of the land. Soils on which farmyard manure has been used in considerable quantities for a number of years, and on peaty land full of decaying vegetable matter, the proportion of nitrate should be smaller than on sandy soil or on land that has not been manured properly, and contains only a small amount of vegetable matter or humus.

Bearing these facts in mind, it is easy to judge about what proportion of each material to use on the different kinds of soil.

Root Crops.

Root crops, such as turnips, onions, carrots, parsnips, etc., are generally manured. It is, however, quite possible to grow very heavy and excellent crops of these vegetables without any manure at all; but it is not, as a rule, desirable to attempt this. The actual food required by the crop can be easily supplied by artificials, but a moderate dressing of manure affects the temperature and moisture-holding powers of the land at a time when these considerations may be very important to the crop, viz., the time between germination of the seed and thinning out the plants. It is then that the plant is most subject to its enemies—whether insect pests or climatic influences; under such trying circumstances a manured area of young roots will sometimes pull through, when an unmanured area would fail.

This fact was well exemplified in the Rothamsted experimental crop of mangolds this year. At the same time it is a mistake to over-manure, simply because it is wasteful. About ten tons of manure per acre is to be regarded, generally speaking, as an average manuring for garden crops of roots. Less will generally suffice. But what is essential, unless we use exceptionally large dressings of manure, is a dressing of phosphoric manure put in with or under the seed. A vast accumulation of experience shows that root crops, and their relations, the cabbage tribe, require a plentiful and early store of phosphates in their young stages of growth.

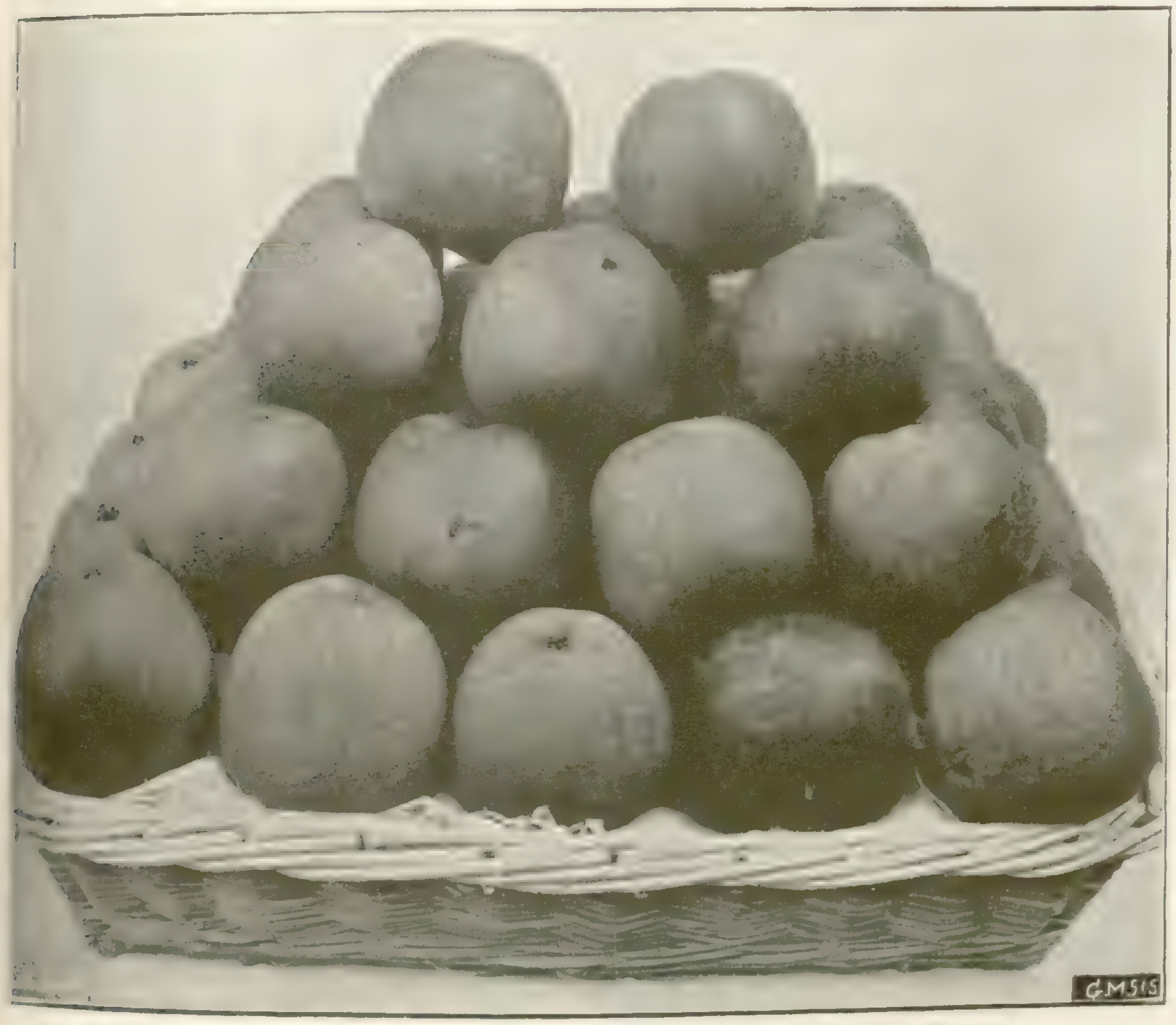
Harpenden. J. J. Willis.

(To be continued.)

Trenching.—Many of the crops will by now have finished, and they should be cleared off the ground. It will be too late to plant others, therefore early opportunity should be taken to trench the ground, with a view of securing an early crop next spring. Trenching is, no doubt, a slow process, especially where labour is somewhat limited, but if it can be done it more than doubly pays for itself. For instance, where peas are grown on deeply trenched soil, the haulm is stronger and grows to a greater height. There is more produce, of much better quality, and the season is more prolonged than on untrenched land. It is advisable to trench early and manure the ground well, so that it is in readiness for cropping in the springtime. Light, sandy soils should have the second and the bottom spits brought to the surface, but if the subsoil is clayey, thoroughly break up the bottom of the trench, and put in plenty of leaf-mould, wood ashes, and anything else that would tend to lighten the soil. Another method of dealing with heavy, retentive soils is to throw it up in ridges as early as possible, so that frost and air may reach it and bring it into better tilth. Spread the necessary amount of manure on the ground and work it in as the work proceeds. Wood ashes, leaf-soil, and road sweepings are excellent for improving strong soils.—T. W. Birkinshaw.

PROMISING NEW APPLES.

Mr. Charles Ross, the veteran raiser of so many new apples, has again been successful in securing the coveted honour of an Award of Merit for another of his numerous seedlings. Renown was exhibited on September 29 last, and is the result of still another seedling from Peasgood's Nonsuch crossed with Cox's Orange Pippin. The fruits are large, and take more after Peasgood's in shape, but are more conical than that variety; the flesh, too, is deeper in colour, and, from fruits tasted, it is of very good quality for dessert, although it is recommended as a kitchen variety. From trees seen growing in the gardens at Welford Park, viz., the parent and two grafted heads, its growth is free and healthy, and as fruitful as may be expected from young, vigorous trees. Mr. Ross has still more seedlings not yet fruited, but has already shown us several excellent varieties that in time will take a high place among the most popular apples to grow for use in quantity.



R.H.S. FRUIT SHOW—CRAWLEY REINETTE APPLE. EXHIBITED BY MESSRS. J. CHEAL AND SONS.

Miller's Red Victoria.

I should predict a far greater future for this apple than the variety known as Victoria, which is really very much like Lord Grosvenor in habit, and also in the fruit. So far as I have seen, however, it is not so large or so prolific as Lord Grosvenor, and has nothing to advance its claims over that variety. Red Victoria is a large, highly-coloured, handsome market apple very similar to large highly-coloured Gascoigne's Scarlet, it is, however, very different in the flesh to that variety, and the apple would be described as an Ecklinville Seedling in texture and earliness, but with its exceptionally fine appearance, it will no doubt be very largely grown, particularly as I understand that it is an extraordinarily free cropping variety. Certainly it should be tried in every district for market use. It has a distinct advantage in appearance over any early cooking variety now grown. When recently submitted to the R.H.S. Fruit Committee by Mr. C. W. Miller, Clarkson Nurseries, Wisbech, an Award of Merit was made in its favour.

Feltham Beauty.

This is a seedling raised by Messrs. James Veitch and Son, and is an early dessert variety of very good quality, ready for use during August, and larger than many of our very early varieties. Its parents, Cox's Orange Pippin and Gladstone are good. The offspring, in appearance, takes after Goodenough's Nonsuch, or good Lady Sudeley, as regards its colouring. It has been awarded an A.M., and ought to be given a trial amongst other of our early dessert fruits.

Langley Pippin.

This is another of the Chelsea firm's early dessert fruits, very sweet and of good quality, certainly much better than some of our older varieties, because it keeps in condition over a longer period.

Hector Macdonald.

This is likely to prove of universal merit. An apple with a very clear skin and bright colouring, with the hardened appearance of Annie Elizabeth. As seen growing and fruiting with the raiser, it has every quality to recommend it as a new, good, and vigorous variety.

Lord Stradbroke.

This is a very old apple, found growing in Suffolk. The tree is a very vigorous grower, and in some seasons an immense cropper. The fruits are large, ribbed, and in some years are black-red in colour. It is a late variety, with greenish flesh; valuable for its keeping qualities, and late market use. This was known formerly as Fenn's Wonder, but received an A.M. under the above name in 1905.

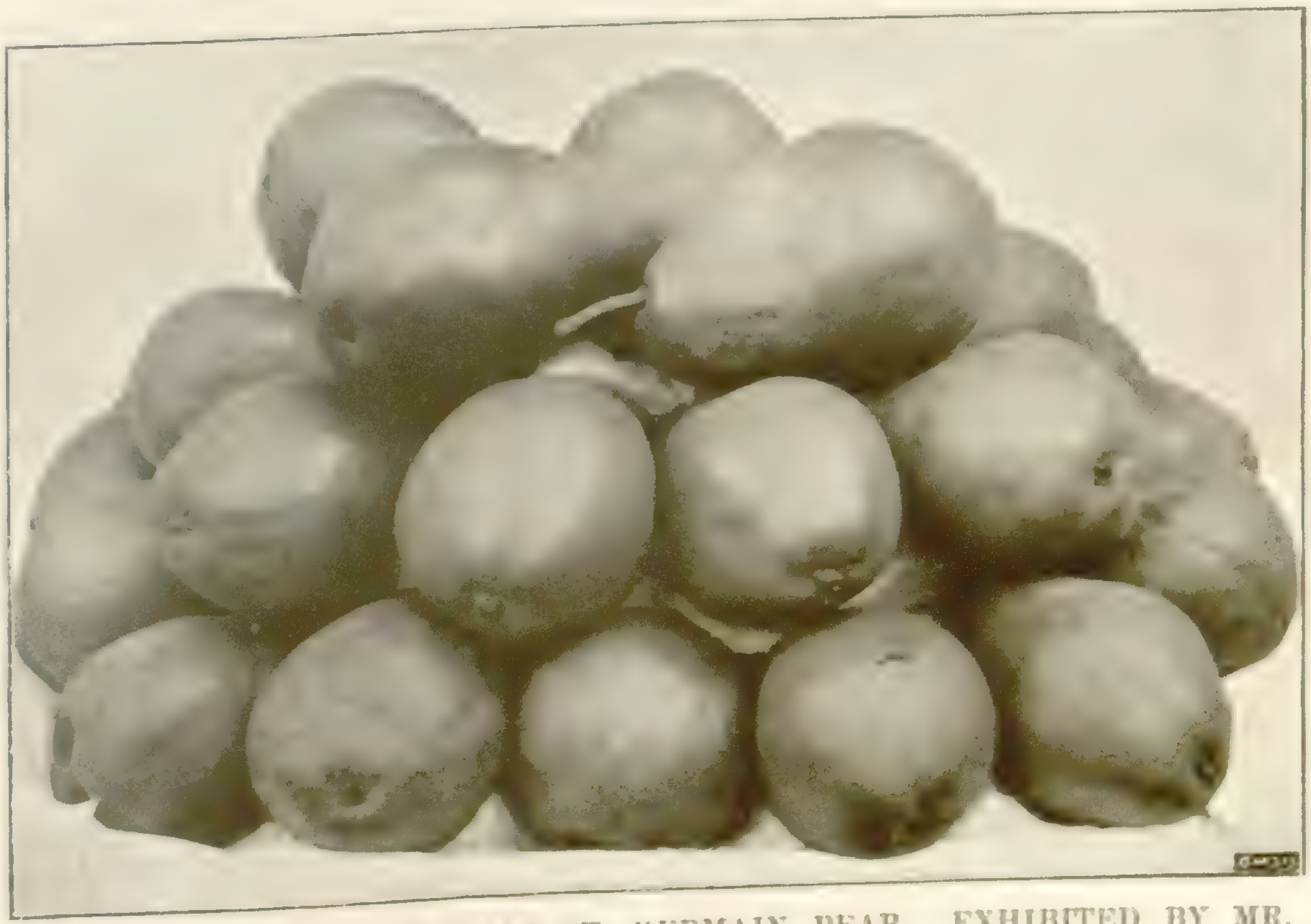
Ruddy.

Ruddy is another of Ross' seedlings, and likely to prove a valuable early market apple. It is the result of a cross between Ecklinville Seedling and Mère de Ménage, and like this latter variety, is very brightly coloured. Mr. Ross thinks a good deal of this apple, and certainly at Welford Park it is grand. The greatest drawback in connection with it is that birds are very fond of the fruit, which is soft. It is an excellent cooking apple.

Excelsior.

Excelsior has not yet left the hands of the raiser. Its appearance appeals to me very much, as it is one of those varieties that fills up well at both ends. The eye is open, set very shallow, and the stalk is very distinct, mostly set on one side of an enlarged base. The parents are Peasgood's Nonsuch and Duke of Devonshire. The variety takes more after Duke of Devonshire in its season, and also in colour, but is in every way superior, giving very fine, large, deep fruits, that were hanging upon the trees as late as October 5. From its appearance one might have expected Waltham Abbey Seedling to be one parent. I think this is a variety everyone will want to grow.

C. Foster.



R.H.S. FRUIT SHOW—UVEDALE ST. GERMAIN PEAR. EXHIBITED BY MR. W. TAYLER, HAMPTON.

RED OR GRIZZLY GRAPES.

In the ordinary course of things red grapes are an abomination, and especially when they ought to be black ones. When an amateur or a professional gardener cannot persuade the grapes they grow to colour up properly, then there is disappointment and sometimes a good deal of trouble also, while if the grower is also a competitor the red colouring proves a very serious handicap. The grower for market also finds that red grapes will not realise the prices that finely finished black berries of the same variety do.

But it is not of red grapes that are such because of some cultural defect that I would write, but of those varieties that are still red, or reddish, when finely finished. Of course, I am seeking after trouble in venturing to suggest that red or grizzly grapes possess any merit, because ninety-nine out of every hundred growers tell me that their employers will not look at red grapes, and, when I was at the old Chiswick Gardens, and discovered that red or grizzly grapes were, in many cases, of unusually high quality, the late Mr. Barron quenched my ardour by declaring most emphatically that it was next to useless recommending these varieties, simply because most folks preferred fine appearance, i.e., black or amber berries, even though they lost something in quality.

Of course, I have no quarrel with Muscat of Alexandria, Madresfield Court, and Black Hamburgh, and Muscat Hamburgh grapes, except it be that they so seldom come my way nowadays; nor do I forget the merits of such delicious grapes as Ascot Citrionelle, Strawberry, etc., but I want to put in a plea for the red grapes in the hope that some may be tempted to try them, and that those who have tried them may be induced to state with what success. It is interesting to remember that Mr. Barron's selection of seven varieties of "grapes of the highest quality" consists of five white and two red varieties—not a black one among them!

One of the finest, perhaps the finest, grapes in the newly-formed collection at the R.H.S. Gardens, Wisley, is Muscat Champion, and yet, I wonder if it is cultivated in more than a dozen or two of gardens. I visit many gardens annually, more than most people, and yet I never hear the praises of Muscat Champion sung. Those who saw the Wisley bunches recently must acknowledge that this red grape is of fine appearance, and those who have tasted it know full well that the quality is exceptionally high. Both in bunch and berry it attains a fine size. The variety was raised by Melville, at Dalmeny Park, and is the result of crossing Mill Hill Muscat with Cannon Hall Muscat. At the exhibition recently held at the Franco-British Exhibition at Shepherd's Bush, I saw and tasted a fine red grape of somewhat similar character to Muscat Champion. It was shown by Mons. Louis Gravel, from Chateau de Bouffar, Aix, and was named Angelino, a name I cannot find in Hogg's or Barron's works. The flavour may be scarcely up to that of Muscat Champion, but Mr. Charles Pearson, of Lowdham, and I agreed that it was a splendid variety, and one well worth testing under glass in this country.

Grizzly Frontignan, judging from the fact that it is seldom met with now, must be fast disappearing from general cultivation, but those who love good things, and believe that the proof lies in the eating rather than in the appearance, need not to be reminded that this is one of the finest of grapes from the point of view of high quality. Dr. Hogg considered the correct name to be Red Frontignan. It is not so red in colour as Muscat Champion, but is a yellowish grape prettily clouded over with red.

Barbarossa, the true Barbarossa—and not the monstrosity so often shown as it, but which is Gros Guillaume, and, in my humble opinion is only fit for making a display at harvest festivals—is another fine red or grizzly grape with Muscadine flavour, only more so. This appears not to be in cultivation in this country, but I feel quite sure it was shown by some of the French growers recently, at Shepherd's Bush, as Uva Barbarossa. It has been described as "the king of dessert grapes."

There is no need to labour the point. All red grapes are not necessarily good, but some of the finest grapes are to be found among the red ones. Other varieties beyond those named are Madeira Frontignan, first imported from France by the Messrs. Rivers, of Sawbridgeworth, and at one time grown in the Chiswick collection; Ahbee, an Indian grape of no special merit beyond its handsome appearance; Chasselas Rouge or Red Chasselas, a sweet water grape suitable for a cool house; Gromier du Cantal, a lightly grizzled variety, large-berried, but a poor keeper; and Lombardy, a very large and handsome grape, but of second rate quality and one that was raised at Wantage from the seed of a dried raisin and exhibited before the R.H.S. as far back as 1812 by Mr. Wilmott, of Isleworth.

Chas. H. Curtis.

ROOT PRUNING AND LIFTING FRUIT TREES.

I do not think that the root pruning and lifting of fruit trees are practised half as much as they should be, seeing how very frequently we meet with trees strong and apparently healthy, but which rarely produce even a moderate supply of fruit. Young trees, if they have only been planted a few years, I prefer to lift bodily and replant them again, believing that by lifting the whole of the roots, pruning them, and then laying them in fresh suitable soil at a nearer distance to the surface, better results follow. Peaches, plums, cherries, pears, and apples all readily respond to this treatment; when the work is carefully done they soon begin to yield heavy crops.

It is not strong coarse growth that is required on fruit trees, but medium, firm, short-jointed, and well matured shoots, and to secure these there is nothing for it but to lift the roots with all care possible, prune them, making clean cuts with a keen-edged knife, and replant them. The immediate effect is a reduction of the supply of nourishment, a less rapid development of shoots, and the formation of flower buds instead of wood buds. I have for many years practised the lifting and replanting of all kinds of fruit trees, bushes, espaliers, cordons, and standards, with first rate results, young trees being quickly brought into a state of bearing, and old ones made to produce clean, good-sized and highly flavoured fruits.

As the best time for lifting and root pruning is at hand, I would strongly advise that there should be no delay in commencing the work and pushing it forward before the soil becomes cold. Though at any time during the autumn and spring root pruning can be satisfactorily practised, the earlier after this date it is proceeded with the better, as it then gives time for the callusing of cuts and the formation of new roots before the end of the season. With regard to wall trees—in fact, all trees—if the roots and soil are dry, it will be advisable to give them a good soaking with water a day or two previous to lifting. Then dig out a trench three to five feet away from the stem, according to the age and size of the tree; let the trench be two feet wide and two feet deep, then work gradually towards the tree, removing the soil from among the roots with great care. All roots which may have penetrated the subsoil should be cut, and trimmed back a little. Work well beneath the ball of roots and then gradually raise the tree. Cleanly cut all jagged wounds and relay the roots in fresh sweet soil at various depths and at different angles. Make the new soil firm as the work proceeds, and should the weather prove dry and the soil be in need of water give a good watering.

The shoots and branches of the trees, having already been unfastened from the walls, should then be carefully secured against damage by wind, but in a way that the whole of the tree may sink with the soil.

When lifting trees early in autumn, and when they are still in full leaf, the heads and stems should be well syringed two or three times daily in bright weather, as this will greatly assist the young wood and enable the leaves to hang much longer than otherwise. I have lifted very large trees in the first week in October, with excellent results; in fact, with the exception of a better growth the following season, no one would ever have imagined they had been taken up and replanted the previous autumn. Lifting should be practised in all cases where trees are apt to break away into coarse wood during the second year, and again probably two seasons after, but when once the growth is checked, and is of a suitable strength to produce fruit no further attention in that direction is needed. I am more than satisfied that in many cases too much attention is paid to the tops of the trees and too little to the roots. A tree with reasonable growth and plenty of healthy fibrous roots as a rule will arrive at a good bearing state in a comparatively short space of time. Hence my advice for keeping the roots fibrous and near the surface where they can in due course be well supplied with suitable food.

Larger trees, which rarely produce fruit satisfactorily, can, if they are good varieties, be vastly improved by taking up the roots and pruning them, but in the case of such large trees it is well to do half the work at each operation so as not to check the top growth too severely the first year. When operating on old trees, every care must be taken to see that no descending roots escape attention, and with such trees that are too large to lift, after cutting a descending root, and to prevent further trouble, it is a good plan to push a piece of tile or slate just below the cut. The drainage should be made good, and all the roots should be trimmed and relaid in good soil. Turfy loam, old brick rubble, burnt earth, and well decayed manure, with a good sprinkling of crushed bones will suit the growth of most fruit trees. After the work has been made complete, mulch well with short manure, rather strawy than otherwise. Standard apples can be treated, if only a few years planted, but, as a rule, if the trees were carefully planted at first, the roots being neatly spread out near the surface, with plenty of room for the extension of the shoots, such trees soon bring themselves into a good bearing state.

H. Markham.

Wrotham Park Gardens.

DAHLIA NOTES.

In the Gardeners' Magazine of October 3 attention is called to the dahlia difficulty, or in other words, to the necessity of holding dahlia trials on the same lines as those adopted with sweet peas by the National Sweet Pea Society, not so much to test the flowers themselves as to select the best varieties for general garden decoration.

The trials that have been carried out at Wisley have not been successful from a dahlia fancier's point of view, neither do I think they have taught us much. Such trials should be carried out in a more accessible place, and in any case the trials should be continuous, for the number of good garden varieties are, to say the least of it, very limited. One has only to walk through a collection of a hundred varieties to observe how few there really are of garden decorative value.

This failure or limitation has undoubtedly been brought about by the craze for size, which has been all too apparent during the last five years. Raisers produce flowers for exhibition purposes only, but I sympathise with them because the so-called garden varieties are never seen by the flower-loving public, consequently, there is little or no demand for them, and it does not pay to produce new varieties that do not sell. I am sure that many good garden varieties are thrown on the rubbish heap annually because they are not large enough for trade or exhibition purposes.

To make the cactus section really popular we shall have to produce a hardier plant, one that will flower earlier in the season, and one that will give flowers that do not collapse so soon when cut for decorative purposes, and this popularity will not be attained until the National Dahlia Society gives encouragement in the right direction.

There is plenty of material to begin with, for we have many varieties with good stiff stems, which could be improved were it in the interest of the raisers to do so; at present the reverse is the case.

It is to be hoped that the valuable suggestions as to a trial ground, made in the issue referred to, will not be lost upon the National Dahlia Society.

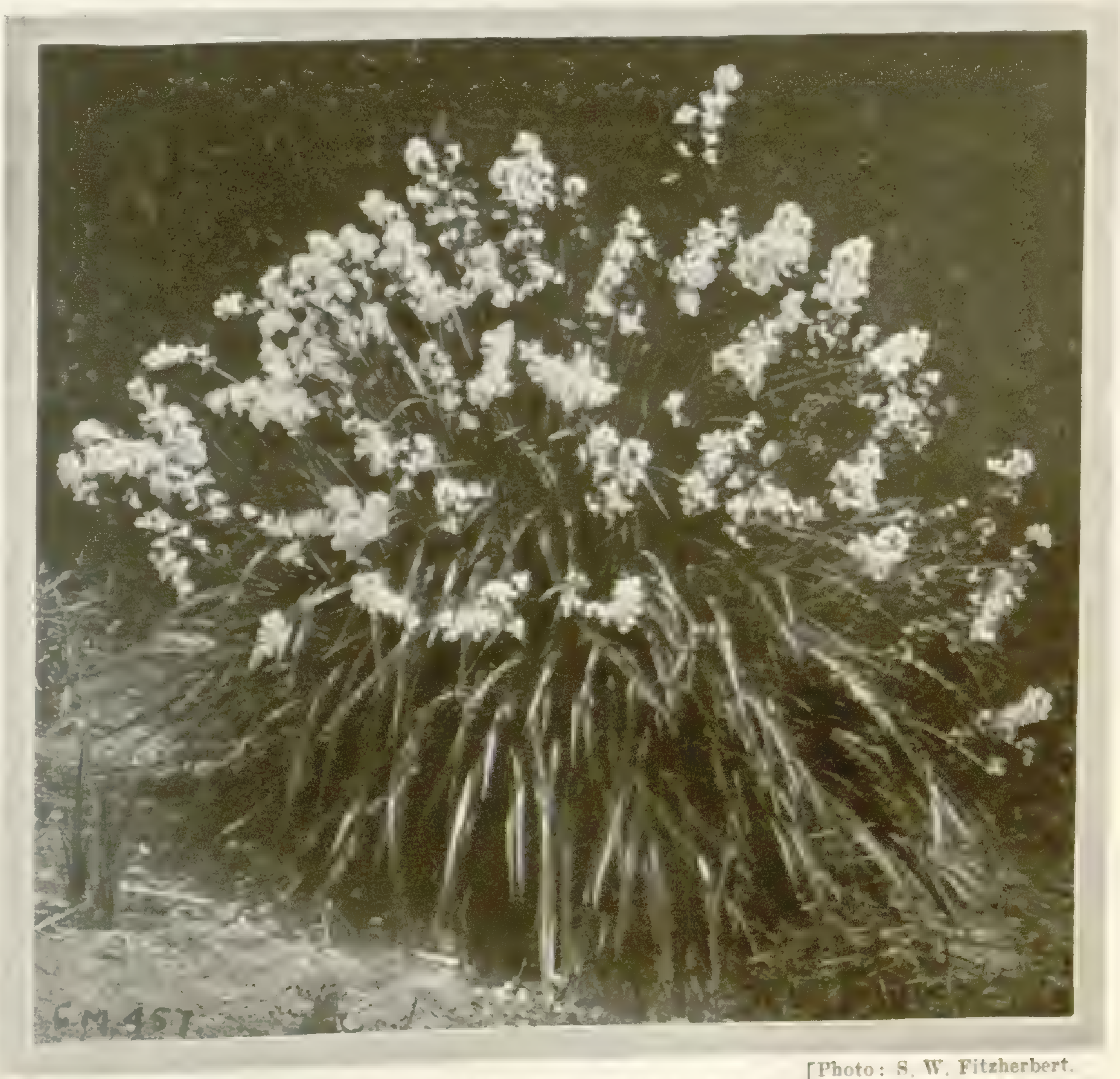
J. B. Riding.

Eremuri and Ostrowskia are among the noblest of perennials, and both have tuberous or fleshy roots. They ought [illegible] planted while some warmth remains in [illegible] ground, and it is advisable to protect [illegible] crowns during the first winter. Select [illegible]ions where the morning sun does not [illegible] them in early spring, as their growth [illegible] developed at a season when frosts are [illegible]alent, and rapid thawing by sunshine is [illegible] to destroy the young shoots and [illegible].—Thomas Smith.

Gruss an Teplitz Rose.—As a [illegible] of your valuable paper I thought it would be interesting to relate that I have growing in my garden a Gruss an Teplitz [illegible] with over a hundred buds on it (October 4), and if we are so fortunate as to be [illegible]ed with a continuance of this delightful weather for another week or two there [illegible] no reason whatever why the rest of the [illegible]s should not properly develop. I suppose [illegible] attribute this to the summer-like [illegible]ther we are experiencing at the present [illegible]ment. But for the webs which the spiders [illegible] assiduously and wondrously weaving [illegible]his period of the year, suggestive of [illegible]tumn, one would imagine that we were [illegible]ring the rose season; I have now about [illegible] dozen blooms on this bush alone. In [illegible]pinion Gruss an Teplitz is one of the [illegible], if not the finest, hybrid tea-scented [illegible] that we have extant.—Rosa, Manor [illegible]k.

LIBERTIA FORMOSA.

This lovely spring-flowering plant is a native of Chili, whence it was introduced in 1831. It appears to be fairly hardy, as it has been recorded as succeeding as far north as Berwickshire, where it was said to grow to a height of between two and three feet, and to flower freely. It will not, however, flourish in all places, and generally fails in heavy retentive soil of a clayey nature, but in warm soil of a porous character it is almost always a success. The individual blossoms are pure white, three-petalled, and rather under an inch across, often covering the end of the flower-spike for the length of a foot. They are borne in May, and remain in beauty for some weeks.



[Photo: S. W. Fitzherbert.

A FINE SPECIMEN OF LIBERTIA FORMOSA IN A DEVONSHIRE GARDEN.
Flowers pure white.

Even when out of bloom the plants are by no means unornamental, their long, tapering leaves, erect in the centre of the clump, and gracefully arching to the ground on the outside, having an elegant effect. It is a very rapid grower, a small root-division attaining a height and spread of three feet in four years, and bearing upwards of two hundred flower-spikes. In the gardens at Abbotsbury Castle, Dorsetshire, it is grown in quantity in the neighbourhood of water, and does remarkably well, and in another garden in Devonshire it is grown on both sides of a streamlet, and has spread over many yards of ground.

That water is not indispensable for its successful culture is, however, shown by the specimen figured in the accompanying illustration, which is growing on a slope in an exceptionally dry garden in hot and stony soil. This example was planted as a small offset eight years ago, and now has a circumference of more than twenty feet. Its leaves are over three feet in length, and its flower-spikes are nearly five feet in height. Some hundreds of bloom-shafts are carried every season, and a beautiful picture is created. Numberless self-sown seedlings have sprung up round this plant, which have been lifted and given away to such as required them.

S. W. Fitzherbert.

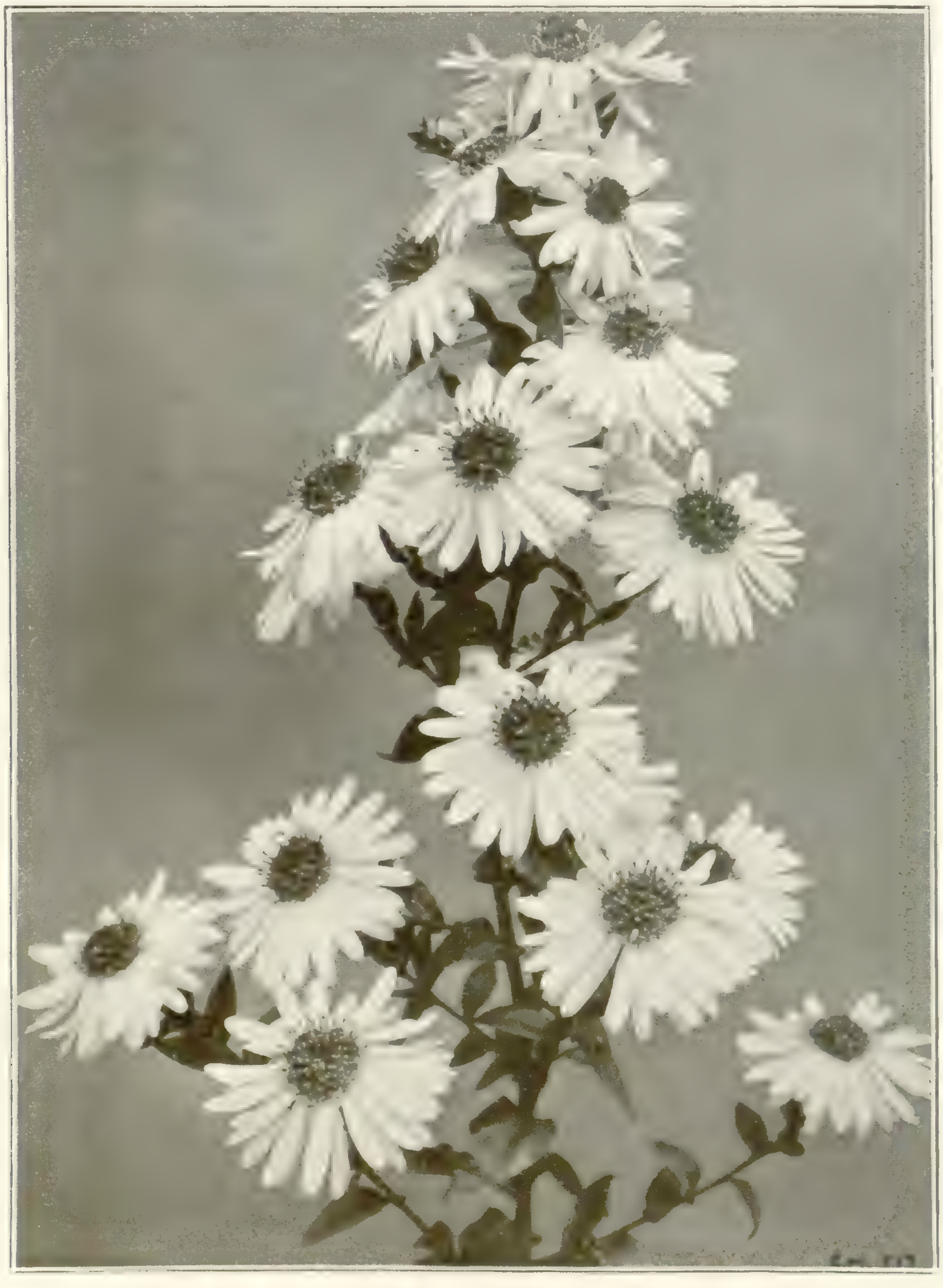
ROSA SERICEA VAR. PTERACANTHA.

Rosa sericea is a very variable species, and recent explorations in China have revealed several very distinct forms, which, in many cases are distinctly attractive. The type is recognised by its four-petalled cream-coloured flowers, which open near London earlier than any other rose, flowers frequently being borne during April. The variety under notice is remarkable by reason of its large, bright red, almost transparent spines. These spines cover the branches thickly, and are interspersed with red bristles. The flowers are hardly so large as those of the type, but they are followed by rich orange berries, which form a pleasing contrast to the red spines. Between this and the type there are many intermediate forms, some of which are worth growing for their attractive fruit alone. Although the type may be grown successfully in comparatively poor soil, the variety pteracantha must have rich food material to bring out the spines to their fullest extent. It is somewhat difficult to propagate from cuttings, but may be grafted or be grown from seed.

Kew. W. D.

FRUIT STORAGE.

The storage of fruit, especially apples and pears, is quite an important detail in fruit production, not only to the private gardener but to those concerned in fruit culture for profit. To the latter the proper storing of apples may make a considerable difference, for it permits the disposal of a quantity of fruit at Christmas, and the price is better than that obtained when the fruits are gathered early in October. For instance, take a large crop of Dumelow's Seedling (Wellington) or Bramley's Seedling, at picking time. In some localities the best price obtainable for such sorts as these is 5s. per bushel of 48lb., whereas in three months hence the price may easily be doubled, especially now that Bramley's Seedling is becoming so well known for its fine quality. The end of September and the first two weeks in October form about the worst season to sell apples in a general way, for usually at that time there is such a quantity of inferior fruit on hand, consequent upon the general ingathering and a thorough overhauling of the better fruit for storing.



NEW MICHAELMAS DAISY (CLIMAX).
Exhibited by Mr. E. Beckett, V.M.H., at the R.H.S. meeting on the 13th inst., when it received an Award of Merit. Flowers very large, soft blue. (See New Plants.)

To the gardener, amateur, or even the cottager, the question of fruit storage is an important item when but a limited quantity of fruit is available, and that is expected to last a considerable time. Seldom is the ordinary garden fitted with what may be termed an up-to-date fruit room, a rustic looking isolated building, with an over-hanging roof thatched with Norfolk reeds for the sake of its coolness and durability. No doubt such a structure is a distinct boon to many, but not many gardeners are fortunate enough to participate in such a luxury. An ordinary shed, situated at the back of a south wall often has to do duty for a fruit room, and right well it serves the purpose when well managed.

The chief points to observe about fruit storage are careful handling of the fruit, gathering it at the right time, and an entire absence of examples that exhibit the smallest sign of decay, as such contaminate perfect samples. The common method of arranging the shelves in an ordinary shed fruit room is that of narrow strips of wood with a space between each so that a current of air is constantly passing about the fruit. This, I am certain, is not a desirable method, as too much air in close contact is liable to produce shrivelling, a loss of flavour, and general deterioration. The floor of a cool cellar is considered to be an ideal place for the storage of fruit, especially apples. If this is so, and I do not think it will be doubted, then the lattice shelves suspended in mid-air cannot be of equal value for the preservation of fruit in the best possible manner. I often notice, too, those who have these lattice-made shelves very often cover them with brown paper, which is an indication that they wish to limit the quantity of air about the fruit. One of the cheapest structures, and certainly one of the best fruit stores that I have seen is at Rookesbury Park. The soil there is of a sandy character, and a site on a bank under some trees and hidden from view by Rhododendron ponticum was selected. The space, 20ft. by 12ft., was dug out, the sand forming the walls. Larch posts were used for uprights, rafters, and stage supports. A thick coat of straw thatch was put on the roof, coming down on to the bank at the sides and end. On each side of the entrance the sand was banked up, making the whole quite air-tight. Ventilation is provided at the top, at each end, with a hit-and-miss shutter, double doors being provided for the entrance. The floor is of sand, and the shelves are erected on each side of a central path. Abundance of room is provided for fruit, which can be kept in an even temperature of 45 degrees without any risk from frost after the first sweating of the fruit has taken place. Clean deal shelves, well seasoned, are provided for the fruit. In this structure, which is quite an inexpensive one, the fruit keeps admirably. The cool and equable temperature maintained so easily by its position, and the fact of the floor being of a cool nature, renders the storage of the fruit quite a success.

When gathering the fruit, apples or pears, they should be at once graded to save further handling, and if the quantity is more than the space at command will accommodate, layers of three thick can be arranged. In this way the fruits will keep as well as those laid out singly. I need hardly say the smallest, bruised, cracked, or otherwise disfigured fruits should be at once removed for use, as they are detrimental to the keeping of the sound ones. Abundance of air should be provided until the first sweating has taken place, but after that darkness should prevail, and an equable temperature, as near 45 degrees as possible, should be regularly maintained. Seldom is it necessary to provide artificial warmth, but if it is so, and hot-water pipes are not available, much may be done to prevent the temperature getting too low about the apples by covering them with several thicknesses of stout brown paper. At no time should hay be used as it is certain to leave a taint behind it.

Apples can be effectively preserved in barrels, keeping them in a darkened site after the sweating of the fruit has taken place. Stand the tubs on the floor of a cellar, as the cool situation is exactly to the liking of the fruit. The colouring of many varieties of apples can be much emphasised by placing them on moss in a shallow box at the time of gathering, and standing them out-of-doors in a sunny site for a month or so. The warmth of the sun, coupled with heavy dews does certainly emphasise the colour.

Swanmore Park. E. Molyneux.

New Asters.—Despite the dry season in this district, asters have been very satisfactory in our heavy soil. There was sufficient rain after the plants were put out to give them a good start. Two novelties I have tried this season are Mammoth Shell Pink and Salmon Pink. The last-named is a new shade in asters, and the plants come fairly true to colour; the flowers are of the Victoria type, of good size, the plants growing about 18 inches in height. The shell pink is correctly described as Mammoth, the blooms being of the largest. The height of the plants is over two feet, the habit branching, and the blooms are borne on long stems, rendering them very suitable for cutting.
T. H. Slade.

THE LOGAN BERRY.

Of the several new soft fruits that have been brought prominently into notice during the past few years the logan berry is undoubtedly the most important from a commercial point of view, and there can be no doubt that it may be grown as a profitable crop in almost every garden. Without going to the extreme of supporting the views of one grower, who, in speaking of its merits, told me last year that it was fast ousting the raspberry in his district, so fast, in fact, that the raspberry seemed doomed as a market grower's berry, one may safely say that it is a very valuable addition to the fruits suitable for cooking and for jellies and preserves. Many people are fond of its peculiar raspberry-blackberry flavour, and its brisk acidity, while as a good hardy grower and heavy cropper, it is perhaps superior to any fruit of its class.

The logan berry has its defects. The crop comes in with a rush and is soon over, and as the berries soon turn mouldy in wet weather, there is a risk of having much of the fruit more or less spoiled if moist conditions coincide with the ripening of the crop. As a dessert fruit I do not consider it a great success, for the berries have to be perfectly ripe to ensure their being highly flavoured and fully appreciated by most people, and this exact stage of ripeness is so fleeting that no fruit I know requires so much care in selecting. On the other hand, it comes in at a very convenient season—after strawberries, and before the raspberries are in full picking.

As regards the growth, the logan berry proves to be as robust as any of our native brambles, making strong shoots up to fifteen and twenty feet in length in heavy or rich soils, with fine foliage to correspond, while it is equally amenable to culture in any aspect, and most valuable as a cover to rough fences or low buildings.

Here we grow most of the stock on a split oak fence facing east, and in heavy cold soil. It appears to enjoy both the soil and position, and grows and crops remarkably well. We plant at fifteen feet apart, and the plants would do with even more room than this. The canes grow so freely and plentifully that up to the time the fruit is gathered, the fruiting canes cut out, and the young ones for the next season tied in position, the plants cover a big space and other crops should not be grown very near. Hence the advisability of utilising for the culture of this fruit any out-of-the-way fence which may have been erected primarily to hide an unsightly portion of the ground.

The main cultural details, when once the plants are established, are to see that the principal young canes are well looked after from the first, and that those that have fruited are cut away directly the crop is over to make room for the young canes, which should then be tied in or otherwise secured in position. About three rows of strong wire running along a fence of, say, eight feet or nine feet high, will be quite sufficient for providing support for the canes. In the spring the canes should be examined, and any damaged tips removed, cutting back into sound wood, but no farther, as the longer the canes the heavier the crop. In dry seasons or in poor soil a good mulch of manure would be useful, though where the soil is heavy and the position rather shaded there is no need for any application of the kind until, perhaps, the plants show some signs of exhaustion. The general treatment is that applied to the raspberry, except that cutting back should not be so severe, and propagation is effected in much the same way, though useful suckers are not so plentifully given. If a large increase of stock is required layering would be a good method of increase. Seedlings, too, may be raised easily, and will prove interesting if their development is watched throughout and selections made.

Shipley Hall Gardens. J. C. Tallack.

[Photo: J. E. Tyler.

WELL-GROWN FRUITS OF THE LOGAN BERRY.

Rose Madame Jules Grolez.—The colour of this variety, satiny China rose, appeals to many, and, combined with this is good form and a free-flowering habit. It was described on its introduction as an acquisition, and so far has worthily maintained a high position. Some seasons perhaps it is better than others, but, on the whole, it is a variety to be depended upon. For filling a bed of one colour, or for planting more sparsely, its evenness of growth renders it especially valuable.—T. H. Slade.

ENDIVE.

The endive plant is without exception the most accommodating one we have for winter salading to take the place of the valuable lettuce. It is not sufficiently hardy to stand severe frosts without injury. It is also susceptible to decay from damp during the extreme wet and dull months of the year. Therefore protection of some form is necessary to ensure the plants passing safely through the winter, and giving a satisfactory and unbroken supply until March.

For the production of suitable heads over the above period a sowing of seed should be made about the second week in July, and another about the middle of August. The first sowing will produce plants of a large size, and will be found most serviceable in carrying the supply over the earliest part of the winter. Where appearance is considered the curled varieties are to be preferred, as they certainly give a very inviting and decorative appearance to the salad, and they are usually satisfactory for the first sowing. But I have noticed that invariably these kinds are the first to suffer from damp, and for this reason I prefer the broad leaf Batavian for the August sowing. The plants, if raised from seed sown on a high, sheltered border, will, by the end of October, have grown into medium-sized heads, and will be more suitable for passing through the winter than larger plants, especially if they have been grown hard, by thinning out the plants to eight to ten inches apart in their early growth to allow steady development from the beginning. This latter is one of the most essential points, as when drawn up the soft leafage will succumb to the first extreme of either frost or damp. Plantations of the thinnings of the plants from the rows should be planted out in suitable sheltered places in quantities, and possibly these will be found most acceptable during the scarce time of February. For instance, under south walls growth continues longer during the autumn and the early part of winter, resulting in stocky, medium-sized plants, which will stand unless the winter is very severe and they are required for blanching.

The main stock of plants, after growth is fairly complete, are best lifted carefully with a ball of earth and their roots intact, and planted in pits or frames moderately close together to save space, but sufficiently far apart to allow the air to circulate between them. Wintered in this way they are under control whatever the weather may be. During bright days the lights may be quite drawn off to give full exposure, which is most beneficial, and dispels stagnant moisture. In such weather the lights should be so arranged as to throw off the rain, with a liberal amount of air admitted at the top by tilting them about six inches high. When sharp frosts set in the frames must be closed down and protection given by covering the lights with mats or suitable material, according to the severity of the weather. In cases where it is found that the frost has entered the frames it is much better to allow the plants to thaw before removing the covering; if this is done, no harm whatever will accrue.

There are several methods of blanching endive for use, such as placing a piece of slate over the heart of the plants a week or ten days before cutting them, or placing a six-inch or seven-inch inverted flower pot over them, according to the size of plants, with a covering on the hole to keep out light. There is also the plan of having frames of different sizes to fit the borders, but instead of using glass lights the tops are fitted with shutters. These are simple, but effectual in keeping out light and rain, and are to be recommended for saving time, as they can be quickly arranged and protected as required. At mid-winter the lifting of batches of plants from the store frames and placing them in the mushroom house as required, is to be preferred. The hearts grow what under the influence of heat and darkness, and if kept liberally supplied with water at the roots, and daily syringed over their leaves, they will be crisp and clean for use. This treatment can be given them quite independent of the extreme weather that is usual at this season.

C. Flack.

Cholmondeley Castle Gardens.

BULB CULTURE.—A practical treatise on the cultivation of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "Bulbs and their Cultivation," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London

THE EIGHT BEST PEARS FOR SMALL GARDENS.

I do not give my opinion of what I consider the best eight pears for small gardens without being aware of the fact that it is a matter of impossibility to make a selection that would prove to be the best under all circumstances. The pear varies considerably, not only when planted in different kinds of soil and positions, but the fruits from one and the same tree cannot always, owing to the changeableness of our climate, be depended upon to be of the same degree of flavour, even for two seasons in succession. My selection will, however, include varieties that have proved, for several years past, to be most generally the best here upon a heavy soil not altogether well suited to pears. The varieties are also selected with a view to giving a supply of fruit over a good length of the time pears are in season, though the limited number must not be expected to cover the time without interruptions.

Williams' Bon Chretien.

This, a well-known old favourite, ripens in August and September. It bears freely upon the quince stock as a pyramid, espalier, or wall tree. Its fruit is large, pyriform in shape, and when ripe, yellow in colour, with streaks of dull red on the sunny side. Its flesh is white, buttery in texture, and of rich, slightly musky flavour. It is a better cropper than Souvenir du Congrès, which ripens at the same time, and is its offspring. In ordinary warm seasons it is better flavoured than in very hot ones.

Beurre d'Amanlis.

This is one of the most certain bearers, either grown as a pyramid, espalier, or cordon, though even on the quince it is a rather robust grower. The trees are hardy, but their blossoms are amongst the first to suffer from frost. The fruits are large, greenish, though slightly bronzed on the sunny side, ripening at the end of September. The flesh is buttery, juicy, and good in flavour.

Louise Bonne of Jersey.

The fruit of this variety is large and handsome, yellow, with bright crimson on the sunny side, buttery, juicy, and very richly flavoured. It ripens in October. The tree does well in any form, though it is not a robust grower. It is a very heavy cropper, and will in that way often exhaust itself, unless its crops are properly thinned. Trees of limited growth should be worked on the quince.

Beurre Hardy.

This gives a successional supply of fruit to the last named. Its fruits are large and handsome, greenish and bronzed where exposed to the sun. Flesh white, melting, and pleasantly flavoured. The tree is robust, and does well in any form, and when covered with its fine foliage and worked on the quince it makes a particularly handsome pyramid. Its fruit ripens at the end of October. This variety has been included in preference to Beurre Superfin, because the latter is rather delicate here.

Marie Louise.

This is one of the very best of pears, and a long supply of its fruits may be obtained by planting trees in different aspects—and it succeeds even on a north wall—and gathering the fruit at intervals. Its fruits are large, pyriform, straw coloured, and russetty. Flesh white, buttery, and very richly flavoured. The tree makes a good cordon, and fine pyramid, espalier, or wall trained specimen, but, except as a cordon, it does not bear freely in a very young state.

Doyenne du Comice.

This is generally considered to be the best of pears. The fruits are large, greenish yellow, and marked with russet. Flesh buttery, juicy, and deliciously flavoured, tree hardy and a good bearer in any form. It does here exceedingly well, compared with many others, and is best as a cordon or pyramid when grown on the quince. It ripens at the end of October and beginning of November, and keeps well after it is ripe.

Olivier des Serres.

This is the smallest pear of my selection, and it is grown here only as a cordon, and trained tree on walls, but it also makes a good pyramid. Fruits medium in size, roundish, cinnamon coloured, and covered with delicate russet. Flesh yellow, and of rich flavour. Ripe in January.

Easter Beurre.

This does best on a wall, except in favourable situations, though near here it succeeds well even as a standard. We grow it as a wall-trained tree, pyramids, and as cordons, and we secure the best fruits from the last-named. In each case it is a free bearer. Fruits large, colour almost green, with brown cheek on sunny side. Flesh white, buttery, and good in flavour. It ripens in January and February.

T. Coomber.

The Hendre Gardens.

BRITISH v. FOREIGN POTATOES.

The wonderful versatility of the potato as regards the shape, colour, and size of its tubers could not possibly be better exemplified than by the recent exhibits of Messrs. Sutton, of Reading, and Messrs. Dobbie, of Rothesay, at the Franco-British Exhibition. The former firm staged no less than three hundred distinct varieties, each one represented by a dish of typical tubers, round, oval, elongated, smooth, rough, and of all tints— white, yellow, pink, red, and purple, this last tint approaching to black, and even pervading the flesh in some cases, though without in the least affecting the flavour. One curious type resembles roughly a pine cone, the "eyes" being arranged spirally in the axils of bluntly pointed projections, suggesting morphologically an extremely fleshy shoot with axillary buds. An interesting feature of this exhibit was that one-half of it were last season's crop, which, owing to careful storage under cool conditions, could not be discriminated in any way from this season's crop represented by the other half, not a trace of budding or shrivelling being perceptible. A comparison of both exhibits cited with those of French origin showed their superiority to a very surprising degree, the latter, in one of the most prominent exhibits, consisting not only of irregularly-shaped and sized tubers, disfigured by projecting knobs and other defects, but with eyes filled with soil, dirty, scaly skins, and, in short, in such a condition as no firm on this side of the Channel would dream of putting forward competitively. The contrast, indeed, will doubtless involve an instructive lesson for our French friends, and is the less explicable, as the preparation and transport of potatoes present no such difficulties as are experienced with fragile flowers or even large standard fruit trees, such as some of the foremost French nurseries contrived to send over and display to the very best advantage. In point of fact, we have heard so much lately of French high culture of vegetables for the table that this inferiority in the direction of the potato is nothing less than a puzzle.

C. T. D.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

ONCIDIUM CHEIROPHERUM.—There are many less attractive orchids that are more extensively cultivated than this small-growing, yellow-flowered, and winter-blooming plant. Moreover, it is a plant that always appealed to me as one suitable for cultivation in the neighbourhood of large towns, and in fog-affected areas. I have known it to pass through a prolonged period of November fog uninjured in the neighbourhood of London, and it should thus find favour where plants have to be cultivated under unfavourable conditions. It is most effective when several plants are placed together in shallow, well-drained pans, so that they may be suspended near the roof glass. They are best suited in a cool intermediate house, where the temperature does not fall below 55 degrees during the winter months. The flower scapes will now be expanding, and every encouragement must be afforded the plants to properly develop their flowers. Care is particularly necessary to see that the plants do not remain in a dry state at the roots for any length of time while the spikes remain on the plant, but as soon as the flowers have been removed only sufficient moisture is necessary to keep the pseudo-bulbs plump.

O. ORNITHORHYNCHUM is a useful winter-flowering cool house oncidium, that succeeds well when grown under the conditions that prevail in the odontoglossum house. It may be treated in every way similar to odontoglossums, with the exception that repotting is best attended to immediately the plants have passed out of flower. Ample drainage should be afforded, and a good open and porous potting compost is desirable. The white variety, O. o. album, is one of the most charming of winter-flowering orchids, and when grown into a large specimen, such as may produce a dozen or more flower spikes, it becomes a most attractive plant either for exhibition or home decoration. I have found this variety succeed best in a temperature a few degrees higher than that in which the type does well. Although it will do well in the cool house during the warm months of the year, the growth is liable to become dwarf, and the flower scapes stunted, if allowed to remain there during the winter. The conditions found suitable for Miltonia vexillaria I have found suits O. o. album during the winter.

ONCIDIUM INCURVUM and O. i. album are also useful autumn and winter-flowering orchids, and when grown satisfactorily they make a fine display. The flowers are produced on long racemes, and last a long time in perfection. The white variety I have found the more robust growing of the two, and it also flowers later. They both do very well either in the cool house or cool intermediate house, potted and treated in every way the same as odontoglossums, the only exception being that after flowering they may remain practically dry for a few weeks, only sufficient moisture being necessary to prevent shrivelling of the pseudo-bulbs.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

STEPHANOTIS FLORIBUNDA.—As the plants complete their flowering season they ought to be kept somewhat drier at the roots, and syringing must be discontinued throughout the resting season. They may also be allowed more air and a temperature reduced to about 55 or 60 degrees for the winter months. The surplus growths may be thinned out to allow the permanent shoots to become thoroughly ripened. As stephanotis will not require much attention until the new year, it is advisable to thoroughly cleanse them. As time permits the specimens planted out should have their borders examined, with a view to renewing them if necessary.

GESNERAS.—Throughout the autumn and winter these ornamental-leaved plants should be given more air and less water, and with the tuberous-rooted kinds this treatment should be continued until the foliage has ripened up thoroughly. The pots may then be placed in a position secure from drip, at the coolest end of the stove, or where the temperature does not fall below 55 degrees.

BEGONIA GLOIRE DE LORRAINE, and its various sports, are now developing their blooms freely, and the atmosphere of the flowering house may be kept somewhat drier, but a plentiful supply of water should be given to the roots. Ventilation must be given very judiciously, or serious harm may be caused from cold draughts. Light feeding may still be continued, and this will greatly assist in prolonging the flowering season by producing further growth, which eventually develops abundance of bloom. In arranging the plants some taste ought to be displayed, in order to show off the plants to best advantage. A dwarf edging of Panicum variegatum, and the light variety of Fittonia argyoneura are very pretty for association with the pink begonias.

R.H.S. FRUIT SHOW—EMILE D'HEYST PEAR. EXHIBITED BY MESSRS. LAXTON BROTHERS.

LUCULIA GRATISSIMA.—Considering the magnificent display of autumn flowers this will produce I consider it well worthy of more extensive cultivation. As the plants pass out of bloom they should be subjected to a season of rest, but in no case must the foliage be allowed to suffer from excessive dryness, or red spider will be found very troublesome. Luculia gratissima will winter successfully in the intermediate stove, where the temperature does not fall below 55 degrees.

MARANTAS have a very pleasing effect associated with other fine foliage plants, and on account of their distinct markings they usually command their share of attention. They ought not to be allowed to grow throughout the winter months, and so the roots must be kept rather dry.

GENERAL REMARKS.—Most of the occupants of the stove are now approaching their usual season of rest, and syringing is being discontinued, with the few exceptions of those favourable occasions when the operation can be carried out in time to allow the plants to become thoroughly dry before evening. Damping down the floors and stages is done only once before noon, and again towards evening.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

LATE VINERIES.—Grapes in the late house will be ripe, and every care should be taken to ward off damp. The pipes should be well warmed at night, and also in the day, especially when dull weather prevails. The vines must not become dry at the roots or shrivelling of the berries will commence, but watering must be done on a bright day, and a little extra fire heat given to dry up the moisture: air should be given at all times, and the netting kept over the openings for the admission of air until the bunches are cut. Keep a night temperature, with fire heat, of 45 to 50 degrees, with ventilation. It has been a good time for colouring late grapes, as the recent fine weather has permitted ample ventilation. The variety Ambrose's Seedling or Melton Constable does not colour very freely here yet. Lady Hutt makes a good late grape, but does not colour to perfection, and as the season advances the berries become marked. Prince of Wales will evidently make a good market grape, as it colours up well. Any bunches that show signs of shrivelling may be cut and have their stalks put in bottles containing water, as they keep well so treated; place some charcoal in the bottles, and keep the temperature of the fruit-room at 45 degrees. Examine the bunches carefully every few days for bad berries, as the damp soon spoils the bunches. As soon as the bunches have been cleared examine the borders to see if they are dry; farmyard liquid may be given, diluted if too strong, and well syringe the rods with insecticide or clean water.

TOMATOES.—The sunny weather has well matured these, especially the late crop in unheated pits and houses. Those in pots for a winter crop are swelling away and have set well; Lye's Early Prolific is still grown here for winter and early spring supplies, and I find it has recently come out with honours at the Wisley trials. As soon as the shoots reach the top of the wires they may be stopped, and these top shoots may be made into cuttings to give plants for providing fruit early in the spring. Plants now bearing fruit require to be watered carefully. Keep a night temperature of 60 degrees with plenty of ventilation.

BANANAS.—As the bunches are cut turn out the old stools to make room for young ones. The former will probably throw up a strong sucker, and this is an inducement to keep the old stool, but though these generally make strong stems they fail to throw out their fruits satisfactorily. This is the case with bananas grown in tubs, but when they are planted out it is as well to leave one sucker and cut the old stem right out and fill the hole with new compost. Any plants that require to be potted should receive attention, but do not pot any weak suckers at this time of the year. If possible, this structure should now be cleaned, as great heat and moisture make the glass and woodwork dirty.

EARLY POT VINES.—The house or pit for these should be put in readiness to receive them. Fill the bed with leaves, but at the same time there should be a flow and return pipe as well to keep up the required bottom heat, as any check is detrimental. The leaves will give enough heat for some time. Prune the vines back to a suitable eye, and apply a little styptic to the cuts; the roots should be kept rather dry after pruning to keep the stems from bleeding. The canes should be washed and the roots top-dressed, but nothing is gained by making too early a start.—A. B. WADDS, Paddockhurst Gardens.

THE KITCHEN GARDEN.

LEEKS.—The earliest batch of plants for the main crop will by now have made good growth, the stems being well above the surface of the soil, consequently the earth may be drawn up to these to increase the blanched portion of the stems. Those plants that have paper collars around them should be examined occasionally, for if they have no attention only partially blanched stems will be the result. It is not necessary to feed the plants after this date, and any plants that are inclined to "bolt" should be pulled up and used without further delay.

LATE PEAS.—We are still sending dishes of Autocrat, Webb's Talisman, and Late Queen to the kitchen, and they are very serviceable. These were sown on trenched ground on July 10 and 16. They were watered during the hot, dry weather we had early in the present month, which assisted them very much. Some gardeners keep up the practice of sowing a few rows in the autumn, and where this method still exists now is the time for doing the work. William the First is a good variety for present sowing, as it will stand a good deal of changeable weather, especially if it can be given a position on a warm, sheltered border.

CABBAGES.—Another batch of cabbage should be planted out, choosing an open quarter for the purpose. The cabbages will come in a little later than those already planted on sheltered borders. There will also be fewer run away to seed; plant them very firmly, so that they may make a sturdy growth and be better able to withstand the winter. It is always prudent to prick out a few score of seedlings in a bed, so that if gaps occur in the permanent quarters they may be filled up again. Red cabbage plants will now require to be dealt with in the same way, pricking them out about five inches apart each way. This will enable the plants to grow strongly and thicken at the stems.

PREPARING FOR WINTER.—It is now quite time that the necessary arrangements should be made for the forcing of vegetables, and where a good-sized mushroom house exists a good deal of this work may be carried on satisfactorily. Such a place is most useful for rhubarb, seakale, chicory, and for blanching endive, also for bringing on mustard and cress in boxes. Asparagus is better accommodated in heated pits, or on hotbeds made up with leaves and long litter. And just at the present time there are plenty of good leaves to be had, which will give a lasting and gentle heat suitable for vegetable forcing.—T. W. BIRKINSHAW, Hatley Park Gardens.

EXHIBITIONS AND MEETINGS.

Great Exhibition of British-Grown Fruit.

OCTOBER 15 and 16.

A very fine exhibition of home-grown fruit was held in the Royal Horticultural Hall on the above dates, and some of the fruit, notably apples, have rarely been seen in finer condition. Grapes were good, and there was a fine competition in the smaller of the two classes for a collection of dessert fruits. The pears shown were, on the whole, very good, but the competition was not so keen as one could have wished, due not a little to the rapid ripening of many varieties during the last few weeks.

Spectacularly the show was not a success, and this was due not a little to the absence of fruit trees in pots, but also to an entire lack of plants of any kind on the flat tables. The nurserymen's classes, with their raised dishes, prevented any flatness at the clock end of the hall, but there was nothing at the other end to relieve the monotony. Of course, fine fruits need nothing to enhance their beauty, but a few pot fruit trees or table plants along the centre of the benches would have improved the show greatly.

The attendance was good on the first day, and at both the conferences on spraying there was a large and interested audience.

COLLECTIONS OF DESSERT FRUIT.

There were two competitors in the class for nine dishes of ripe dessert fruit, at least six kinds, and here Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, was once more supreme, winning the chief award and silver cup with grand clusters of Muscat of Alexandria and well-finished Madresfield Court grapes, a seedling melon, Princess of Wales and Sea Eagle peaches, Victoria nectarines, Ribston Pippin and Cox's Orange Pippin apples, finely coloured, and a splendid dish of Doyenne du Comice pears; Mr. R. Aldarman, gardener to C. R. Adams, Esq., Babraham, Cambridge, came second, and he had a fine dish of Pitmaston Duchess pears.

In the class for six dishes of ripe dessert fruits, at least four kinds, there were no fewer than eight competitors, and here the leading prize winner was Mr. T. Pateman, gardener to M. W. Price, Esq., The Node, Codicote, Welwyn, who had good examples of Muscat of Alexandria and Alicante grapes, Lady Palmerston peaches, Royalty melon, Cox's Orange Pippin apples, and Louise Bonne of Jersey pears; Mr. J. Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden, came second with a good collection, and Mr. E. Neal, Tilgate Gardens, Crawley, came third.

GRAPE CLASSES.

The leading grape class was for five distinct varieties, three bunches of each, and in this there were three entries. The prizes were given by the Veitch Memorial Trustees. Mr. J. H. Goodacre led with fine bunches of Muscat of Alexandria and Alicante, and excellent samples of Golden Queen, Madresfield Court, and Gros Maroc, all well coloured and of good size; Mr. J. G. Weston, gardener to H. J. King, Esq., Eastwell Park, Kent, came second with good Muscat of Alexandria, Alicante, Lady Downe's Seedling, and Chasselas Napoleon; Mr. A. B. Wadds, gardener to Sir F. Weetman Pearson, Bart., M.P., Paddockhurst, Sussex, third.

Premier award for a brace of bunches of Black Hamburgh grapes was won by Mr. J. Doe, Rufford Abbey Gardens; Mr. E. Neal, Tilgate, came second, and Mr. H. Prime third, but there was nothing of outstanding merit in the class. There were six entries in the class for a pair of bunches of Mrs. Pince, and here Mr. J. Doe, gardener to Lord Savile, Rufford Abbey, Ollerton, Notts, secured first prize with well-finished, chubby bunches; Mr. C. Earl, gardener to O. E. d'Avigdor Goldsmitt, Esq., Tonbridge, Kent, second with larger, but poorly-coloured bunches, and Mr. J. H. Goodacre third. Alicante was shown by ten competitors, and the best pair of bunches came from Mr. H. H. Brown, gardener to W. G. Raphael, Esq., Castle Hill, Englefield Green; Mr. H. Poulton, gardener to C. T. Cayley, Esq., Tunbridge Wells, Kent, second, and Mr. J. R. Tooley, gardener to Hugh Andrews, Esq., Toddington Manor, Winchcombe, Gloucester, third.

Only four competitors came forward with Madresfield Court grapes, and here Mr. J. Doe was again to the front with long, characteristic clusters of well-finished berries; Mr. Billings, gardener to F. R. Rodd, Esq., Trecartha Hall, Launceston, second, and Mr. H. Prime, gardener to the Marquis of Salisbury, Hatfield, third; the latter had bunches that showed a deposition of sulphur. In the class for two bunches of "any other black" grape, there were fourteen entries, the winning clusters being splendid ones of Gros Maroc, shown by Mr. W. Allan, Gunton Park, Norwich; Prince of Wales, shown by Mr. W. Lintott, gardener to Sir W. Greenwell, Bart., Marden Park, Caterham, was fine; these were scarcely up to their best in colour, the bases of many berries being reddish, but this would have been remedied if the bunches had been hung a little longer. They gained third place, Mr. H. H. Brown coming second with Gros Maroc.

For a pair of bunches of Muscat of Alexandria, Mr. J. H. Goodacre led well with large-berried and richly-coloured clusters, leading from eleven other competitors; Mr. W. Lane, gardener to Sir E. Durning-Lawrence, King's Ride, Ascot, second with long, clean bunches; Mr. H. H. Brown third with heavy clusters that showed a little sign of shrivelling. In the "any other white" class Mr. H. Cornish, gardener to A. Benson, Esq., Merstham, Surrey, scored with Mrs. Pearson, and Mr. A. B. Wadds came second with Lady Hutt.

HARDY FRUITS.

In the class for a collection of hardy fruits, arranged on a space 12ft. by 3ft., and to consist of thirty dishes, distinct, there were three entries, the premier award falling to Mr. J. Whittle, gardener to Lieut.-Colonel Borton, Cheveney, Hunton, Kent, who had magnificent specimens of Mère de Ménage, Emperor Alexander, Peasgood's Nonsuch, Sandringham, and Charles Ross apples; Marie Benoist, Pitmaston Duchess, Beurre Diel, and Doyenne du Comice pears; Golden Drop and Monarch plums, Golden Eagle peaches, nuts, and cherries. Second prize was awarded to Mr. G. M. Bacon, gardener to Sir Marcus Samuel, Bart., Mote Park, Maidstone, who had big apples and pears, but these were not well coloured; he had nuts, peaches, plums, currants, cherries, and quinces. Mr. J. Cornford, gardener to Major Powell Cotton, Quex Park, Isle of Thanet, third.

NURSERYMEN ONLY.

In this division there were three classes, but the one of these that was for orchard house fruit and trees was conspicuous by reason of its non-entries, for one of the things missed from the show was the display of well-grown pot trees.

For a display arranged on a space of 24ft. by 6ft., Messrs. G. Bunyard and Co., Maidstone, secured the premier position and gold medal, for, they state, the twenty-fourth time. They had a very fine exhibit, and had raised their central dishes of fruits on neat stands, so that the group was attractive by reason of its arrangement, as well as by reason of the fine quality of the apples and pears staged. All the fruit had to be out of doors grown, and the Maidstone collection consisted of no fewer than one hundred and seventy-five varieties. Mère de Ménage, Byford Wonder, Lord Grosvenor, Allington Pippin, the new and very handsome Viscount Castlereagh, Bismarck, Lord Derby, Royal Jubilee, King of the Pippins, Peasgood's Nonsuch, and Rival apples were very fine, as also were the dishes of Catillac, Conference, Beurre Alexander Lucas, Doyenne du Comice, and Pitmaston Duchess pears.

Another very fine group was the one from

Messrs. H. Cannell and Sons, Swanley, Kent, which gained second prize. Here, too, the fruits were well set up, and the collection contained King of the Pippins, Norfolk Beauty, Cox's Pomona, Chelmsford Wonder, Hambling's Seedling, Warner's King, Stone's, Allington Pippin, The Queen, and many other apples in perfect condition. Messrs. J. Cheal and Sons, Crawley, were awarded third place, and they had grand samples of Crawley Reinette, King of the Pippins, Jubilee, Bismarck, Chas. Ross, Castle Major, and Allington Pippin among many other good things. Other exhibitors in this class were Messrs. J. Laing and Sons, Forest Hill.

In the section for a display, arranged on a space 16ft. by 6ft., there were nine competitors, and here Mr. Will Tayler, of Hampton, Middlesex, secured first prize, and showed that splendid clean fruit can be grown quite close to London. His finest apples were King of the Pippins, Barnack Beauty, Newton Wonder, Lord Derby, Peasgood's Nonsuch, Jubilee, Lane's Prince Albert, Bismarck, Cox's Orange Pippin, Emperor Alexander, and Blenheim Pippin, while his basket of Uvedale's St. Germain, Beurre Hardy, and Doyenne du Comice pears were of high merit. Messrs. W. Seabrook and Sons, Chelmsford, came second in this competition with a remarkably fine collection, especially meritorious being Peasgood's Nonsuch, Bramley's Seedling, Cox's Pomona, Warner's King, Bismarck, The Queen, Jubilee, Lord Derby, Gascoigne's Scarlet, King of the Pippins, Cox's Orange Pippin, and Dumelow's Seedling apples. Messrs. Laxton Brothers, Bedford, gained third prize with a fine and well set-up display. Other exhibitors in this class were Mr. R. C. Notcutt, Woodbridge, who, among fine apples, had a dish of ripe fruits of Vitis Coignetiae; Messrs. S. Spooner and Sons, Hounslow; Messrs. J. Peed and Son, West Norwood; Messrs. Paul and Son, Cheshunt, who had a very attractive exhibit.

MARKET GROWERS.

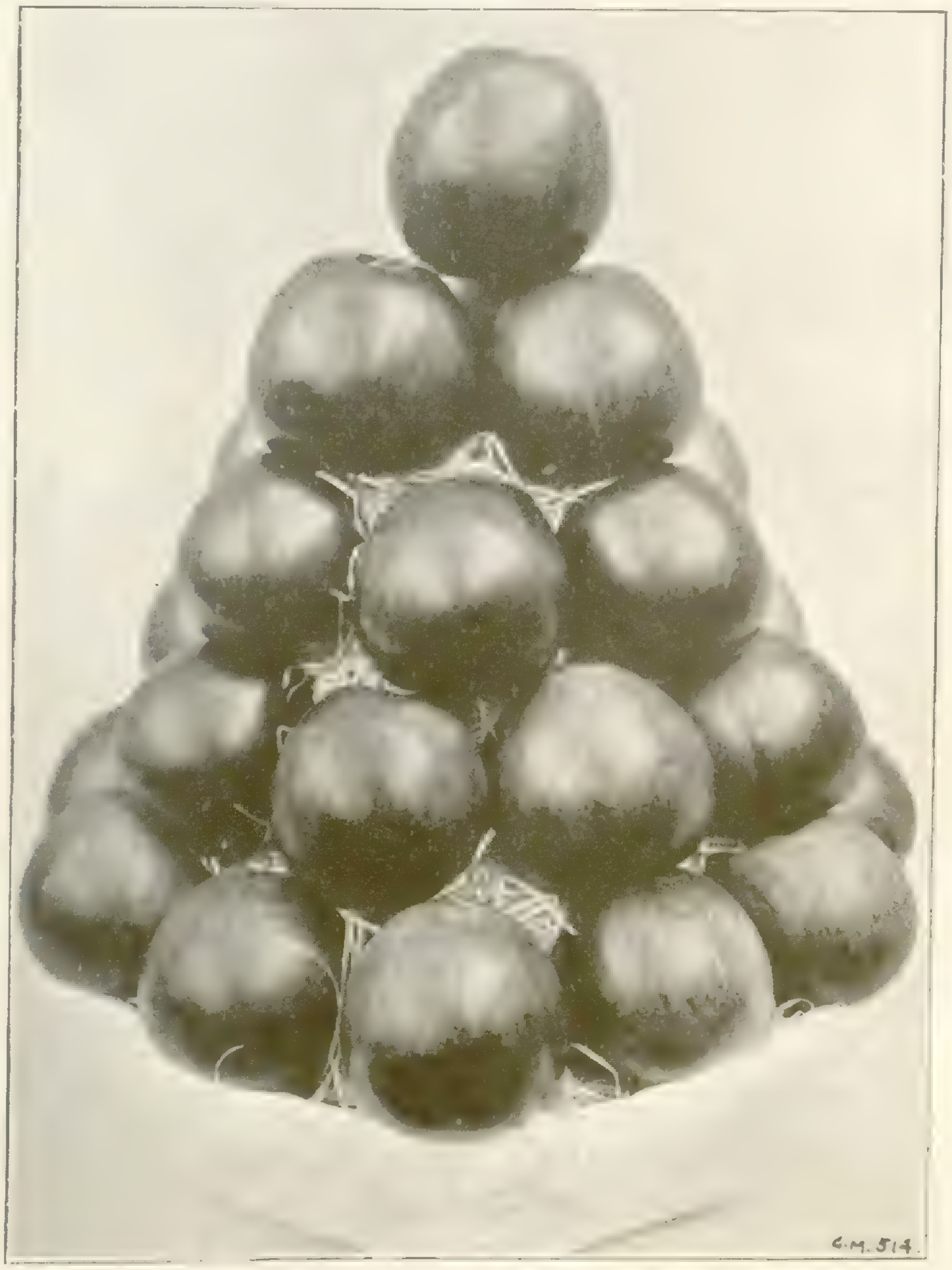
Mr. W. Stowers, Harold Road, Sittingbourne, Kent, was a capital first for a display of outdoor fruit in the market growers' division. On a space 12ft. by 6ft. he had dishes and baskets of wonderfully fine Emperor Alexander, Mère de Ménage, Rambourg Perfection, Allington Pippin, Annie Elizabeth, Peasgood's Nonsuch, Charles Ross, Hambling's Seedling, Rival, and Royal Jubilee apples. Second place was accorded Mr. Owen G. S. Croft, Pomona Fruit Farm, Withington, Hereford, who showed well-packed fruits in boxes ready for market, and some dishes of fine fruit; Messrs. W. [illegible]t and Son, Heston, Middlesex, came third.

For a display on a space 18ft. by 6ft., the Horticultural College, Swanley, gained second award for a good set, but, so far as we could gather, there was no other competitor, and no first prize awarded.

In the same division there was a class for six dishes each of dessert and cooking apples, and here there were three competitors, but the "dishes" were mostly baskets. Mr. H. T. Mason, Hampton Hill, Middlesex, won first prize with wonderfully fine, clean, and bright specimens of Cox's Orange Pippin, Allington Pippin, King of the Pippins, Ribston Pippin, Worcester Pearmain, Dumelow's Seedling, The Queen, Golden Noble, Bismarck, Lady Sudeley, Newton Wonder, and Peasgood's Nonsuch—a grand exhibit; Mr. A. E. Mason, Rectory Farm, Hampton Hill, a good second; and Miss K. M. Courtauld, Knight's Farm, Earl's Colne, Essex, third.

COLLECTIONS OF APPLES.

Seven competitors came forward with twenty-four dishes of apples—sixteen of cooking and eight of dessert varieties. Mr. J. Whittle, Cheveney Gardens, Hunton, led the way with splendid examples of Mère de Ménage, Bismarck, Lady Henniker, Warner's King, Belle Dubois, Emperor Alexander, Peasgood's Nonsuch, Newton Wonder, The Queen, Gascoigne's Scarlet, Belle Pontoise, Bramley's Seedling, Sandringham, Lane's Prince Albert, Lord Derby, Annie Elizabeth, Ribston Pippin, Allington Pippin, The Rival, Christmas Pearmain, American Mother, King of the Pippins, Wealthy, and Cox's Orange Pippin—this was a wonderful display, probably the finest of its kind ever shown in London. Mr. G. W. Bacon, gardener to Sir Marcus Samuel, Bart., Mote Park, Maidstone, was a capital second, and he had grand specimens of popular varieties; Mr. F. J. Gerrish, gardener to J. S. Williams, Esq., Pendley Manor, Tring, was third, and he had probably the best set of eight dishes of culinary varieties, showing Chas. Ross, Cox's Orange Pippin, and Melon Apple grandly. Mr. H. Whiteley, St. Mary Church, Torquay, had a very pleasing and interesting lot of fruits, all grown in a field; these were not over large, but they were very clean and bright, and King Edward VII. and Chas. Ross were the finest dishes.



R.H.S. FRUIT SHOW—NEW APPLE, LORD CASTLEREAGH. SUITABLE FOR COOKING AND DESSERT. EXHIBITED BY MESSRS. G. BUNYARD AND CO.

There were seven entrants in the class for twelve dishes of cooking and six dishes of dessert apples, distinct, and here the winner was Mr. R. Aldenham, gardener to C. R. Adams, Esq., Babraham, Cambridge, who scored with beautifully clean, weighty examples of Lane's Prince Albert, Gascoigne's Scarlet, Bramley's Seedling, Peasgood's Nonsuch, Mère de Ménage, King of the Pippins, Cox's Orange Pippin, etc.; Mr. J. Cornford, gardener to Major Powell Cotton, Quex Park, Isle of Thanet, a good second; and Mr. C. Earl, Tonbridge, Kent, third.

For twelve dishes of apples, eight cooking and four dessert varieties, Mr. A. Basile, gardener to the Rev. T. McMurdie, Woburn Park, Weybridge, was a good first, with excellent fruits of Mère de Ménage, Peasgood's Nonsuch, Gascoigne's Scarlet, Warner's King, Rival, and Christmas Pearmain; Mr. F. H. Skinner, gardener to Lord Arthur Butler, Hunton, Kent, came second.

There were nine competitors in the class for six dishes of cooking apples, distinct, and once again Mr. Whittle came to the front with grand fruits, showing Peasgood's Nonsuch, Mère de Ménage, Emperor Alexander, Warner's King, Bismarck, and Bramley's Seedling; Mr. W. H. Bacon second, and Mr. P. Aldenham, third. Out of eight competitors Mr. Whittle was easily first for six dishes of dessert apples, distinct, winning with clean, very bright, and particularly handsome fruits of Allington Pippin, American Mother, Chas. Ross, King of the Pippins, Cox's Orange Pippin, and Wealthy; Mr. W. H. Bacon a good second.

COLLECTION OF PEARS.

Premier award of Hogg medal for eighteen dishes of dessert pears, distinct, was well won by Mr. W. J. Finch, gardener to F. A. White, Esq., East Grinstead, Sussex, who had wonderfully clean and large specimens of Duchesse d'Angoulême, Beurre Bachelier, Pitmaston Duchess, Doyenne du Comice, Beurre Superfin, Glou Morceau, Beurre d'Anjou, Beurre Diel, Durondeau, Easter Beurre, Beurre Hardy, Doyenne du Comice, Fondante de Thirriott, Princess Conseiller de la Cour, Thompson, Beurre Alexandre Lucas, and Louise Bonne of Jersey. Mr W. H. Bacon second, and Mr. J. Whittle, Hunton, third.

The Silver Medal of the Fruiterers' Company and first prize for twelve dishes of pears, distinct, was won by Mr. A. Basile, Woburn Park Gardens, Weybridge, with a very even set, consisting of Beurre Bachelier, Duchesse d'Angoulême, Charles Ernest, Pitmaston Duchess, Beurre Alexandre Lucas, Beurre Fouqueray, Durondeau, Beurre Baltet Pere, Doyenne du Comice, Glou Morceau, Conseiller de la Cour, and Beurre Hardy; Mr. T. Pateman second, and Mr. F. H. Skinner, third.

The best six dishes of dessert pears came from Mr. G. Mackinlay, gardener to the Hon. Whitelaw Reid, Wrest Park, Beds, who had very brightly coloured dishes of Louise Bonne of Jersey, Marie Louise d'Uccle, Beurre Superfin, Pitmaston Duchess, Beurre Diel, and Marechal de la Cour; Mr. H. Cornish, gardener to A. Benson, Esq., Merstham, Surrey, second.

Mr. J. Cornford was awarded first prize for three dishes of stewing pears,for Uvedale's St. Germain, Catillac, and Gilogil; Mr. F. King, gardener to the Rev. H. A. Bull, Kingston House, Westgate, second. Mr. Davison, gardener to Major Petre, Westwick, Norwich, showed enormous fruits of Catillac, General Todtleben, and Uvedale's St. Germain in this class, but they received no award owing to the fact that a curious regulation excluded Mr. Davison (being a competitor in single dish classes) from competition in this division.

PEACHES AND PLUMS.

Mr. A. R. Searle, gardener to the Marquis of Northampton, Castle Ashby, Northampton, led for a dish of peaches with Sea Eagle; he was first for nectarines with Pineapple, and he also led for three dishes of plums with Jefferson, Coe's Golden Drop, and Late Transparent; Mr. J. Vert, Saffron Walden, second. Mr. Vert led for three dishes of outdoor-grown plums with President, Coe's Golden Drop, and Monarch; Mr. Searle second. For one dish of Coe's Golden Drop plum Mr. Birkinshaw, gardener to Sir C. E. Hamilton, Bart., Hatley Park, Beds, led, and for any other dessert variety Mr. Vert scored with Jefferson. Mr. Gerrish led for Morello cherries, and Mr. J. R. Smith, gardener to F. A. English, Esq., Addington Park, Surrey, had the best basket of outdoor grapes, showing neat little bunches of Alexandria and Chasselas Vibert; Mr. G. E. Cripps, Chelsham Road, Croydon, second with Black Cluster.

COUNTY CLASSES.

As on previous occasions, a division was set apart for county classes, two classes for each county division, one for six cooking and four dessert apples, and one for six dishes of pears, all distinct. The first prize in each case is 30s., and third-class railway fare from the competitor's home; second prize, 15s. and railway fare.

In the Kent class, Mr. J. Bond, gardener to W. E. T. Drax, Esq., Olantigh Towers, Wye, led for apples with heavy fruits of Peasgood's Nonsuch, Hambling's Seedling, Mère de Ménage, The Queen, Allington Pippin, and Worcester Pearmain; Mr. R. Edwards, gardener to C. A. Morris Field, Esq., Beechy Lees, Sevenoaks, second. For pears, Mr. J. Skelton, gardener to the Dowager Lady Hillingdon, Wildernesse Park, Sevenoaks, led with good dishes of Durondeau, Beurre Bosc, Beurre Superfin, Doyenne du Comice, Emile d'Heyst, and Pitmaston Duchess; Mr. R. Edwards second.

In the division formed by Surrey, Sussex, Hants, Dorset, Somerset, Devon, and Cornwall, the prize-winner for apples was Mr. G. Lock, gardener to B. H. Hill, Esq., Newcombes, Crediton, Devon, who was strong with Alfriston, Peasgood's Nonsuch, Emperor Alexander, and Stone's; Mr. W. Turton, gardener to F. J. B. Wingfield Digby, Esq., Sherborne Castle, Dorset, second. For pears Mr. Turton led with splendid fruits, and Mr. W. A. Cook, gardener to Sir Edmund Loder, Bart., Leonardslee, Horsham, second.

Mr. A. Carlisle, gardener to C. Gurney, Esq., Henlow Grange, Biggleswade, scored for apples in the division composed of Wilts, Gloucester, Oxford, Bucks, Berks, Beds, Herts, and Middlesex; his Gascoigne's Scarlet, Peasgood's Nonsuch, and King of the Pippins were very highly coloured; Mr. W. Hutt, gardener to Captain Farwell, The Priory, Burnham, Bucks, second. For pears Mr. C. Page, gardener to J. B. Fortescue, Esq., Dropmore, Maidenhead, was first, and Mr. J. R. Tooley, Winchcombe, second.

Essex, Suffolk, Norfolk, Cambridge, Hunts, and Rutland formed another county group, and in this one Mr. G. D. Davison, gardener to Major Petre, Westwick House, Norwich, led for pears, followed closely by Mr. W. Allan, gardener to Colonel the Hon. C. Harbord, Gunton Park, Norwich; while in the class for apples Mr. J. Lee, Kingscroft, led with Allington Pippin, Mère de Ménage, etc., and was followed by Mr. A. Andrews, gardener to the Hon. W. Lowther, Wickham Market, Suffolk.

Entries were not numerous in the section devoted to growers from Lincoln, Northampton, Warwick, Leicester, Notts, Derby, Staffs, Shropshire, and Cheshire, but some excellent apples were staged by Mr. J. Lee, Kingscroft, Higher Bebington, Cheshire, who had weighty but not highly coloured fruits; Mr. W. H. Divers, gardener to the Duke of Rutland, Belvoir Castle, Grantham, second; the latter was also second to Mr. A. R. Searle, Castle Ashby gardens, for pears, Mr. Searle showing very bright fruits of Souv. de Congrès, Beurre de Mortilett, Marie Louise, etc.

The western counties of Worcester, Hereford, Monmouth, Glamorgan, Carmarthen, and Pembroke, made up another section, but not at all a strong one. First prize for apples was awarded to Mr. Denis Best, Temple Langhern, Worcester, who had a very fine dish of Lane's Prince Albert; Mr. P. Norbury, The Norrest, Malvern, second. For pears, Mr. R. M. Whiting, Credenhill, Hereford, was the only competitor, and he received first prize.

The Welsh growers did not come forward in large numbers, but left Mr. G. Aitkens, gardener to P. Yorke, Esq., Erdigg Park, Wrexham, Denbigh, to secure first prize for apples and first for pears, there being no other competitors. In the group composed of the six northern English counties to the Isle of Man there was but one entry in each class, this being from Mr. J. E. Hathaway, gardener to J. Brennard, Esq., Baldersby Park, Thirsk, Yorks, who was awarded first prize for apples and also for pears, and showed well in each case.

In the Scottish class Mr. James Day, gardener to the Earl of Galloway, Galloway House, Garliestown, Wigtownshire, was the only competitor, and he was awarded first for pears—Beurre Diel, Emile d'Heyst, Conference, Gratioli of Jersey, Marie Louise, and Beurre Bachelier; and second for apples—Warner's King, Washington, Lane's Prince Albert, Bramley's Seedling, Ribston Pippin, and The Queen, all somewhat small. From the Sister Isle there came three competitors—Mrs. Blackmore, of Piltown, co. Kilkenny, who led for apples; Mr. C. B. Broad, Aghern Conna, co. Cork, who was second; and Mr. Murphy, Whitechurch, Carrick-on-Suir, who was unsuccessful. The growers in the Channel Islands did not send any fruits at all, for competition or otherwise.

SINGLE DISHES OF DESSERT APPLES.

A number of classes are provided for single dishes of specified dessert apples, and in these we give the name of the variety and the winner of the first prize in each case: Adams' Pearmain, fifteen entries, Mr. A. R. Allan, gardener to Lord Hillingdon, Hillingdon Court, Uxbridge; Allington Pippin, twenty-two entries, Mr. R. M. White, Hereford; American Mother, twelve entries, Mr. Turton, Sherborne Castle Gardens, Dorset; Ben's Red, two entries, Mr. J. G. Weston, gardener to H. J. King, Esq., Eastwell Park, Kent; Blenheim Pippin, sixteen entries, Mr. T. Beesley, gardener to Earl Nelson, Downton, Salisbury; Charles Ross, eleven entries, Mr. P. Norbury, The Norrest, near Malvern; Christmas Pearmain, five entries, Mr. G. Lock, gardener to B. H. Hill, Esq., Newcombes, Crediton; Claygate Pearmain, nine entries, Mr. W. Barnes, gardener to A. F. Walter, Esq., Bearwood, Wokingham; Cox's Orange Pippin, thirty-five entries, Mr. A. R. Allan, Hillingdon Court, Uxbridge; Egremont Russet, ten entries, Mr. W. Turton; Fearn's Pippin, fifteen entries, Mr. W. Barnes, Bearwood Gardens; Golden Reinette, two entries, Mr. E. Montague, gardener to Colonel Biddulph, Grey Court, Ham, Surrey; Houblon, four entries, Mr. W. Barnes, Bearwood Gardens; James Grieve, eleven entries, Mr. T. Atkinson, Montrose Villa, Caversham, Reading; King of the Pippins, eighteen entries, Mr. A. R. Allan, Hillingdon Court Gardens; King of Tomkins County, eight entries, Mr. A. Tidy, gardener to C. H. Combe, Esq., Cobham Park, Surrey; Lord Hindlip, five entries, Mr. H. Hocking, gardener to Rev. S. Baring Gould, Lew Trenchard, Lew Down, Devon; Margil, eight entries, Mr. G. Lock, Newcombes Gardens; Ribston Pippin, seventeen entries, Mr. J. Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden; Rival, ten entries, Mr. R. M. Whiting, Credenhill; Roundway Magnum Bonum, five entries, Mr. J. C. Sutton, gardener to Lord Stanhope, Chevening Park, Sevenoaks; Scarlet Nonpareil, nine entries, Mr. G. Lock; St. Edmund's Pippin, five entries, Mr. W. Barnes; Wealthy, fourteen entries, Mr. J. G. Weston, Westwell Park Gardens; any variety not already mentioned, twenty-nine entries, Mr. A. R. Allan winning with an unnamed variety; Mr. A. Tidy second with Gravenstein (?); and Mr. Skelton third with Mabbott's Pearmain.

CHOICE COOKING APPLES.

In this division single dishes were required, and we again name the specified variety and winner of the chief prize: Alfriston, seven entries, Mr. Turton, Sherborne Castle Gardens; Annie Elizabeth, ten entries, Mr. T. Beesley, Salisbury; Beauty of Kent, nine entries, Mr. G. Lock; Bismarck, nine entries, Mr. W. Hutt, gardener to Captain Farwell, The Priory, Burnham, Bucks; Bramley's Seedling, thirteen entries, Mr. W. Barnes, Bearwood Gardens; Dumelow's Seedling, eight entries, Mr. C. Page, Dropmore Gardens, Maidenhead; Ecklinville, seven entries, Mr. T. Beesley; Edward VII., one entry, Mr. R. M. Whiting, Hereford; Emneth Early (syn. Early Victoria), no entries; Emperor Alexander, eleven entries, Mr. Allan Voss, Rayleigh, Essex; Gascoigne's Scarlet, nine entries, Mr. J. Bond, Olantigh Gardens, Wye; Golden Noble, twelve entries, Mr. Turton; Golden Spire, six entries, Mr. J. Lee, Higher Bebington, Hereford; Grenadier, four entries, Mr. C. Page; Hambling's Seedling, ten entries, Mr. J. Bond, Olantigh Gardens; Hector Macdonald (Northern counties), no entries; Hector Macdonald (Southern counties), one entry, Mr. C. Ross, Welford Park Gardens, Newbury (the prizes in the two foregoing classes were offered by Messrs. J. R. Pearson and Sons, Lowdham, Notts); Hormead Pearmain, three entries, Mr. Turton; Lady Henniker, five entries, Mr. G. Lock; Lane's Prince Albert, nineteen entries, Mr. Turton (a fine dish); Lord Derby, fifteen entries, Mr. D. Best, Temple Longherne; Mère de Ménage, ten entries, Mr. G. Lock; Newton Wonder (northern counties), six entries, Mr. Carlisle, gardener to C. Gurney, Esq., Henlow Grange, Biggleswade; Newton Wonder (southern counties), twelve entries, Mr. W. Burnes, Bearwood Gardens (the prizes in the two foregoing classes were given by Messrs. J. R. Pearson and Sons, Chilwell); Norfolk Beauty, one entry, Mr. G. Lock; Peasgood's Nonsuch, sixteen entries, Mr. A. Carlisle, Henlow Grange Gardens (with a magnificent dish weighing 7¾lb.; heaviest fruit, 1lb. 11oz.), Mr. J. Bond second; Potts' Seedling, six entries, Mr. C. Turner, gardener to F. W. Platt, Esq., Ken View, Highgate; Royal Jubilee, six entries, Mr. G. Lock; Royal Late Cooking, no entries; Sandringham, seven entries, Mr. W. Barnes, Bearwood Gardens; Stirling Castle, six entries, Mr. E. W. Caddick, Caradoc, Ross; The Queen, sixteen entries, Mr. J. Vert, Saffron Walden; Tower of Glamis, thirteen entries, Mr. J. G. Weston; Warner's King, thirteen entries, Mr. Denis Best; any other variety than those specified, sixteen entries, Mr. Charles Ross, Welford Park, Newbury, first with a fine new apple, named Encore (F.C.C., R.H.S.); Mr. T. W. Herbert, gardener to J. T. Charlesworth, Nutfield Court, Nutfield, Surrey, second with Chelmsford Wonder.

SINGLE DISHES DESSERT PEARS.

The single dish classes were very interesting, and brought out a fair competition, but it was evident that in many cases intending competitors had had to withdraw because of the rapid ripening of many pears just in season, owing to the continuance of bright warm weather.

SINGLE DISHES OF DESSERT PEARS.

Beurre Alexander Lucas, three entries, Mr. Turton (fine specimens); Beurre d'Amanlis,

BRADFORD CHRYSANTHEMUM SOCIETY.
The 22nd ANNUAL EXHIBITION will be held in ST. GEORGE'S HALL on FRIDAY and SATURDAY, November 13th and 14th, 1908.
£27 for 24 Blooms, Japanese (on Boards).
Prize Money and Classes again increased for Open Competition.
Entries Close November 7th.
Schedules, with Entry Form, post free from
H. SPENCER, Hon. Sec.,
Horton Park, Bradford.

BRISTOL CHRYSANTHEMUM SOCIETY.
The 45th GRAND EXHIBITION at the DRILL HALL, BRISTOL,
NOVEMBER 18th and 19th.
Tickets and Schedules from all Seedsmen and Florists; or of the Secretary,
W. ELLIS GROVES,
Durdham Down Nurseries, Bristol.

BROMLEY and DISTRICT CHRYSANTHEMUM SOCIETY.
27th ANNUAL EXHIBITION,
DRILL HALL,
WEDNESDAY and THURSDAY,
November 4th and 5th.
Hon. Sec., R. S. PATTERSON,
The Gardens, Bromley Palace, Kent.

CORN EXCHANGE CHRYSANTHEMUM AND FRUIT SHOW,
To be held at the
CORN EXCHANGE TAVERN, MARK LANE,
WEDNESDAY, November 11, 1908,
In aid of the Funds of the Corn Exchange Benevolent Society.
TWO SILVER CHALLENGE CUPS, of the net value of £10 10s. each, will be given, the Cups to become the property of the winners after being won [illegible] times.
(Not necessarily in succession.)
ONE CHALLENGE CUP for the best 12 blooms exhibited by a Member of the Corn Trade.
ONE CHALLENGE CUP for the best 12 blooms exhibited by a non-member.
For full particulars of entries, apply to Hon. Secretary,
J. H. MITCHINER,
36, Mark Lane, London.
N.B.—From considerations of space, the Committee reserve the right to limit the number of entries.

NATIONAL CHRYSANTHEMUM SOCIETY.
GREAT AUTUMN COMPETITION AT THE CRYSTAL PALACE,
November 4th, 5th, and 6th.
Apply at once for Schedule and particulars of membership, from the Secretary,
Mr. RICHARD A. WITTY,
St. James's Villa, Swains Lane, Highgate, London, N.

SOUTH SHIELDS and NORTHERN COUNTIES CHRYSANTHEMUM SOCIETY.
ANNUAL EXHIBITION in the ROYAL ASSEMBLY HALL, SOUTH SHIELDS, on WEDNESDAY and THURSDAY, November 11th and 12th.
£150 in prizes, Seven Silver Cups, Medals, etc.
First Prize for 36 Japanese, £10.
Entries close Nov. 6.
Schedules and all particulars from ALLEN PURVIS, 63, King Street, South Shields.

YORK.
The 29th GRAND ANNUAL CHRYSANTHEMUM SHOW will be held on 11th, 12th, and 13th November.
About £220 offered in Prizes. Groups, Cut Flowers, Fruit and Vegetables. (36 Japanese Cut Blooms, £20 10s.) Medals for Trade Exhibits.
Entries due 4 November.
Schedules on application to the Secretary,
GEO. F. W. OMAN, A.S.A.A., 38, Petergate, York.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

three entries, no prize awarded, all fruits semi-rotten; Beurre d'Anjou, no entries; Beurre d'Avalon, no entries; Beurre Bosc, [illegible] entries; Mr. M. Birkinshaw, Hatley Park Gardens, Sandy; Beurre Dumont, two entries, Mr. J. Skelton; Beurre Hardy, three entries, Colonel Archer Houblon, Hallingbury Place, Bishop's Stortford; Beurre Superfin, four entries, Mr. J. Skelton; Charles Ernest, three entries, Mr. Turton; Comte de Lamy, three entries, Mr. J. Skelton; Conference, four entries, Mr. G. D. Davison; Doyenné du Comice, ten entries, Mr. Turton (fine dish); Durondeau, seven entries, Mr. G. D. Davison; Emile d'Heyst, five entries, Mr. F. Blackett, gardener to Mrs. [illegible], 1, Parkside, Ravenscourt Park, W.; Fondante d'Automne, no entries; Fondante de Thiriot, no entries; Glou Morceau, seven entries, Mr. G. D. Davison; Josephine de Malines, thirteen entries, Mr. Turton; Le Lectier, four entries, Mr. J. Vert (fine specimens, very heavy); Louise Bonne of Jersey, two entries, Mr. J. Bond, Olantigh Gardens; Marguerite Marillat, no entries.

Marie Benoist, two entries, Mr. G. Lock; Marie Louise, seven entries, Mr. W. Allan, Gunton Park Gardens; Nouvelle Fulvie, eight entries, Mr. Turton; Pitmaston Duchess, nine entries, Mr. G. D. Davison (huge, clean, but not brightly coloured fruits); President Barabé, three entries, Mr. W. Allan; St. Luke, one entry, Mr. C. Page; Souv. de Congres, no entries; Thompson, four entries, Mr. Turton; Triomphe de Vienne, one entry, Mr. W. Hutt; Winter Nelis, five entries, Mr. G. Lock; any other variety, six entries, Mr. F. King, Westgate, first with Seckle; Mr. Mead, St. Mary's, Teddington, second with Gratioli of Jersey.

The Horticultural Club.

"A HOLIDAY ON THE NILE."

On Tuesday, the 13th inst., at the Hotel Windsor the house dinners of the Horticultural Club were resumed, Mr. Harry J. Veitch, V.M.H., taking the chair, and between forty and fifty members and guests being present to hear the lecture by Mr. A. W. Sutton, V.M.H., on "A Holiday on the Nile." The lecture was illustrated by a large number of beautifully coloured lantern slides from photographs taken by Mr. Sutton during his travels. His previous lecture on "A Camping Tour from Damascus to Petra in Arabia," illustrated in like fashion, had evoked great expectations, which were in every way realised, the brilliancy, sharpness, and artistic effect of many of the photographs evoking intense admiration, coupled with surprise when Mr. Sutton explained that many of them were snapshots taken from horse, donkey, or camel back. The interest of the lecture however was largely enhanced by the lecturer's descriptions embracing allusions to the political, historical, and artistic lore of Egypt past and present. A splendid view of Cairo, for instance, gave occasion for an allusion to its conquest by a small body of exhausted British soldiers, barely 150 in number, under the command of Major Watson, who, leaving his men outside the walls, coolly walked in, demanded that the sleeping Commandant of the 8,000 soldiers should be awakened and told to surrender, which he accordingly did, handing over the keys with profuse apologies for the delay involved by his nap, his men then retiring to make room for the British handful.

A previous set of slides gave a series of charming pictures of the Suez Canal, starting from Port Said, particular allusion being made to the admirable service established by Messrs. Cook for oriental trips and exploring parties. Views of the Pyramids followed, including the oldest of all, the Step Pyramid at Sakkara, supposed to have been built about B.C. 4300, i.e., about 6,200 years ago. The largest Pyramid is estimated as having originally been about seventy feet higher than St. Paul's Cathedral, with a base as large as Lincoln's Inn Fields, comparisons which clearly bring home to the Londoner's mind the stupendous nature of the edifice, while baffling all comprehension of how it was constructed, especially as the immense blocks of stone composing it had to be conveyed some 600 miles from the far away quarries at Assouan. Both the art and the architecture of old Egypt as exemplified by and in existing monuments, involve much of the mysterious. The Tombs of the Kings, for instance, although of later date, being estimated at only some 3,000 years, are remarkable for being entirely excavated in a hillside. Externally nothing is seen but small cave-like apertures in the soil, and yet penetrating these a series of spacious halls is reached after passing through a long and spacious corridor to match. The marvel here is that every inch of the surface of the walls and the ceilings is occupied by brilliantly coloured mural paintings of the most ornate hieroglyphic and pictorial character, the colours being evidently as bright to-day as when first applied. By means of flash lights a number of photographs were obtained, but the puzzle is what system of lighting was used by the artists, since nowhere is there a trace of smoke such as primitive torches or other illuminants would presumably produce. These pictures, as do most of the carvings covering the gigantic columns and walls of the ancient cities of Thebes, Memphis, and Karnac, views of all of which were given and explained, are practically records of contemporary history, and possess, therefore, additional interest to the antiquarian apart from their merely artistic merits. Several views were given of the great dam at Assouan, designed to control the water supply of the Nile, and so reduce the risks of periodical famine to which ancient Egypt, both by biblical records and their confirmation by the mural ones aforesaid, was as subject as the Egypt of later date. The slides illustrating this magnificent specimen of engineering design and skill formed a fitting conclusion to the lecture, and proved at any rate that the engineer of the present day can not merely vie with the Egyptians of old in vastness of construction, but can infuse immensely more practical value into the work achieved for the benefit of humanity, since after all is said and done, the great bulk of these ancient monuments were mere temples of vanity erected by tyrannical monarchs solely for their own honour and glory.

A very hearty vote of thanks to Mr. Sutton concluded the meeting.

Dutch Bulb Growers' Society.

The following awards were made at recent meetings of the Floral Committee:—

First-class Certificates.—To pæony-flowered dahlia, Andrew Carnegie, light rose; cactus dahlias, Cecilia, Dorothy, Elsa Ellrich, Eureka, Hamlet, Harold Peerman, Ivernia, Kathleen Bryant, Rev. Arthur Bridge, and Rosa Starr; Montbretia Prometheus; Watsonia Ardernei; Anemone japonica Autumn Queen, a large flowering semi-double variety, clear rose; Anemone japonica Geant des Blanches, a very large flowering semi-double variety; flowers pure white.

Awards of Merit.—To Acidanthera bicolor, a rare species from Abyssinia, allied to gladiolus, flowers creamy white, with brownish-red blotches; cactus dahlias Apricot, Crespy, Charles H. Curtis, Elysian, Flame, Gazelle, Spanish Prince, and C. E. Wilkins; Gladiolus gandavensis America; Gloriosa Leopoldi, a little-known hothouse climbing plant, with elegant pure yellow flowers; Lupinus polyphyllus roseus; Phlox decussata Gruppenkönigin, large trusses of deep rose coloured flowers, centre dark violet; Aster Novæ-angliæ Ryecroft Pink, a very free-flowering variety with large magenta rose, copper centred flowers, Aster puniceus pulcherrimus, with large white flowers, shaded with light blue; Aster ibericus Ultramarine, large deep blue flowers, Aster cordifolius Sprühlicht, with small soft blue flowers, a very free-flowering variety; Helleborus niger præcox, flowers white, smaller than those of the common Christmas rose, and opening out of doors from September till February.

United Horticultural Benefit and Provident Society.

The monthly meeting of this society was held at the Horticultural Hall, Vincent Square, Westminster, on Monday, October 12. Mr. C. H. Curtis presided. Eleven new members were elected, making a total of 63 this year so far. Sick pay was much lighter during the last month, the amount being £25 10s., against £39 13s. the previous month. Mr. A. C. Hill, of West Kensington, was co-opted on to the committee to fill the vacancy caused by the resignation of Mr. A. Hemsley. The usual quarterly payments were passed for old members on the benevolent fund.

CONFERENCE ON SPRAYING FRUIT TREES.

With the hearty concurrence of the National Fruit Growers' Federation, the Royal Horticultural Society organised a conference on spraying for the second day of the fruit show. There were two sessions, one at from eleven to one a.m., and the other from 2.30 to 4.30 p.m. There was a very good attendance at each session.

Morning Session.

At the morning session Colonel Warde, M.P., presided, and opened the proceedings by briefly thanking the Council of the Royal Horticultural Society for organising a conference upon a matter of very vital importance to the fruit-growing industry.

MR. G. MASSEE, V.M.H.

Mr. Massee did not read a paper, but, with a few notes to assist him, he talked easily about fungi and fungicides, and at once pointed out that it was with fungi and fungicides he proposed to deal, and not with insects and insecticides. From the fruit-grower's point of view, Mr. Massee's remarks were eminently depressing, as he stated very emphatically that too much was expected of fungicides, that spraying machines did not yet permit the complete covering of affected leaves, that a month after spraying with Bordeaux mixture fungi spores would germinate on the leaf surface, that the mixture does not always prevent the spread of fungus, and that it was a fallacy to believe that even if Bordeaux mixture covered the leaf it would kill or prevent the spread of apple scab. He had noticed that spores developed at the same rate on sprayed as on unsprayed trees, thus showing that spraying was not to be so much depended upon as was generally supposed. What was needed were proper tests with control plants to show exactly the value of spraying. Spraying as a preventive was of some value, and he urged that the spraying mixtures, notably Bordeaux, should be made at home. Changes of weather often served to reduce the value of spraying as a preventive, either by inducing chemical changes or by diluting the mixture and rendering it ineffective. At its best Bordeaux mixture is not a perfect spray mixture, and it is most ineffective when the fungi are most in evidence.

Mr. Massee urged that summer spraying was not specially useful because a fungicide strong enough to kill the fungi would usually scorch the tender leaves, and would be practically useless on old hard, uninfectable leaves; moreover, coating a green leaf with a fungicide reduced its usefulness to the plant because it excluded some light, and hence reduced the amount of starch manufactured. No amount of spraying, said the lecturer, would atone for uncleanliness. Good work in the orchard, good cultivation and cleanliness would do the most good. He urged the thorough examination of fruit trees in winter, the removal and burning of dead and all infected branches, and so remove the cause of the disease, instead of attempting to prevent or cure it when it had commenced to grow and produce spores. Winter work tells best, said Mr. Massee, and is the most effectual method of combating fungi. He pointed out that so many people now went into the fruit industry to make money for themselves and retire, and not with a view of gaining a livelihood and providing a business for their sons, hence insufficient care was taken in the matter of culture and cleanliness, and there was neglect until the fungus attacked the fruit itself, and thus affected the pockets of the proprietors.

Mr. Massee stated that in a Mortlake orchard, careful pruning and removal of dead and diseased branches and shoots, followed by two sprayings in the winter, did far more good than spraying the trees when the foliage was young and soft. There was not yet a spraying machine that gives the fineness of division (water vapour) that was needed for successful spraying; what was wanted was an enveloping vapour after the nature of a London fog, from which the moisture would soon evaporate, leaving the effective part of the mixture on the leaf to do its work. The lecturer then showed a few lantern slides that portrayed good and bad spraying and numerous fungi that attack fruit crops.

MR. H. F. GETTINGS.

Following immediately upon Mr. Massee's lecture came the paper contributed by Mr. H. F. Gettings, of Glewston Court, Ross, which was read, in his absence, by the Rev. W. Wilks, M.A.

Mr. Gettings urged spraying as a preventive of insect and fungus attacks, and strongly advocated regular spraying because it was almost impossible to continually examine the trees to find whether there was an attack. Further, when an attack was discovered it was usually too far advanced to be satisfactorily dealt with. Spraying for aphides should take place just before the bloom buds opened. For the apple sucker spraying should be left as late as possible, and should be done at the hatching period, as nothing would kill the eggs of this pest. Mr. Gettings dealt with the expense of spraying and the need for mixing effective materials in the right proportions. He deplored the lack of expert advice such as could be obtained for the asking in the United States. Mr. Spencer Pickering and the Duke of Bedford had done a good deal, but what was needed was a sub-department of the Board of Agriculture to deal with the whole subject of insect and fungi attacks on fruit crops, their prevention and cure, and the need of a properly equipped experimental station for its use. He also thought that a body of growers might be induced to visit the United States, and report for the benefit of their fellows at home upon the methods there adopted. He wished some of the fairy tales advertised respecting washes for fruit trees were fact, and he thought the cure-all advertisement defeated the end of the advertiser. Washes should all be very carefully tested before use. Proper spraying depended largely upon the operator, and should not be condemned merely because it had sometimes been ineffective. Bordeaux mixture he regarded as the best spraying mixture, though, possibly because of the nature of the lime used, it often did a great deal of harm to the foliage. Liver of sulphur, he said, was an insecticide (for aphis) as well as fungicide. He advocated nicotine and tobacco mixtures, and hoped that these might be cheapened by the removal of duty from tobacco juice. He cautioned growers against the use of paraffin with caustic soda, as he believed the harm done by paraffin was not noticeable for some time after its use. Mr. Gettings concluded with some remarks concerning the fruit spraying outfit at Glewston, and the need of keeping down the cost of labour and material to secure a reasonable profit on the undertaking.

DISCUSSION.

Dr. Guthergood, of Wisbech, expressed the disappointment he felt at the pessimistic tone of the papers read. He had spent thousands of pounds on spraying, and if spraying was useless it was impossible to stop the ravages of insects and fungi, and therefore impossible to grow fruit successfully. He pleaded for practical examples of success or failure in dealing with individual pests. He had cleared his orchards of the apple sucker by the use of petroleum in the winter dressing of caustic soda and potash, and gave as his formula 3lbs. of soda, 3lbs. of potash, and one gallon of petroleum to 30 gallons of water.

Professor Salmon, of Wye College, advertised a fruit conference at Wye on November 27. and went on to say that fine spraying, i.e., the deposition of the mixture in dust-like particles was the cardinal point of successful spraying, and he urged that there were machines capable of giving this fineness of spray. He emphasised Mr. Massee's advice as to the benefit of making Bordeaux mixture at home, but he traversed numerous statements made by the eminent mycologist, notably observing that it was impossible to combat apple scab without summer spraying. Mr. Salmon suggested self-boiled lime mixture for spraying peach trees, peach leaves being so tender and liable to scorch if treated with Bordeaux mixture. He also urged the formation of a sub-department of the Board of Agriculture, and instanced as the passing of the Destructive Insects and Pests Act what fruit growers could do if they combined and organised.

Mr. Baker spoke at some length, but not very pointedly, on insecticides. He said it was essential the lime solution should be c[illegible] before being added to the copper sulphate solution in the manufacture of Bordeaux mixture. Good lime was difficult to secure, and he had used common soda instead of lime with success.

Mr. Percy Bunyard referred to the value of nicotine preparations and their expensiveness at present. Mr. Meamé said that apple scab had been almost cleared by the use of Bordeaux mixture directly before and directly after flowering. Rev. G. H. Engleheart, wanted a remedy for apple leaf spot on Cox's Orange Pippin; he had tried every remedy recommended, and had cultivated thoroughly well, but the leaf spot was still a terrible plague in the Salisbury district. Professor Collinge said that upwards of twenty advertised washes tested had proved absolutely useless. He thought there should be a small committee of chemists and growers to standardise Bordeaux mixture; they also needed a mixture that would give the greatest amount of "wettability." Mr. Crook advocated early spraying as being the most effective.

Afternoon Session.

Colonel Long, M.P., presided over the afternoon session, and started the proceedings promptly. There was again an excellent attendance, the Lecture Hall being comfortably filled.

PROF. THEOBALD.

The paper contributed by Prof. Theobald dealt with insect pests, insecticides, and their use. It was a paper that will, doubtless, prove far more valuable as a contribution to the subject of "Spraying," when we can read it in the Royal Horticultural Society's Journal. Professor Theobald did not read his paper, but addressed the meeting using his marginal notes; hence, owing chiefly to the time limit, much had to be passed over, and possibly owing to these facts, a wrong construction may have been placed upon his remarks. He said that at present we knew very little about spraying. At present they had arsenical washes to poison the food of biting insects, and emulsions to kill other insects, like aphides, by contact. He hoped, however, that—as Mr. Spencer Pickering had suggested it might be—it would become possible to make one wash that would do for both kinds of insect pests. Professor Theobald is no friend of wash manufacturers, for all through his address he deplored the widespread use of spraying mixtures, averring that huge sums were wasted upon them, and with little advantage, any advantage gained in the reduction of insect pests not outweighing the damage done to the trees. He appeared to be strongly opposed to the use of mineral washes, to spraying in general, and to winter spraying in particular. He said no wash was a preventive, but it might be a remedy. But he made two exceptions in favour of quassia and nicotine preparations, both of vegetable origin, useful to ward off attacks of aphis, etc., and harmless to the trees sprayed.

It was desirable to keep fruit trees clean, and hence winter spraying with caustic preparations did some good by removing the hibernating quarters of many insects, it would not kill the eggs of the apple sucker, and he believed that where it was supposed that a large proportion of eggs had been killed, it was usually the fact that [illegible] per cent. of the eggs were unfertile. Regular spraying with a caustic wash would, he said, prove injurious to the trees, reducing their vitality after six or seven years of regular application. Spraying when young insects emerged, and before they could do any harm, appeared to be the only sensible method, but it was a waste of time and money to spray because insects might come—the insects or their eggs would be there or not there. Spraying, after all, could only do some good. He advocated cutting down the bill for spraying, and said that almost any wash would suffice for winter dressing, and, curiously enough, he suggested the [illegible] wash as a good one—this is the addition of paraffin and soft soap to the soda and potash. A mixture of lime and salt [illegible] settle about the leaf scars and prevent the young apple suckers, or most of them, from reaching the buds. The self-boiling lime and sulphur wash he suggested as good for the pear blister mite, but he condemned [illegible] purple and Paris green. Arsenate of lead needed to be properly mixed, and should be left to the chemists to prepare, and the mixture should be of guaranteed strength. Referring to emulsions of paraffin, he suggested that the best mineral oils [illegible] were Solar Distilled Oil and Tea Rose [illegible] suggested that a basic sulphate was [illegible] than soft soap for emulsing paraffin. [illegible] thought there was as much likelihood of ever getting one preparation to cure all the ills of fruit trees as one pill to cure all the ills of humanity.

MR. G. HAMMOND.

Mr. Hammond was inclined to let his paper stand over to permit of lengthy discussion of Professor Theobald's views, but the meeting would not allow this. Mr. Hammond's [illegible], written by his son, and combining the results of good culture, observation, and experiment conducted by father and son at [illegible]ntwood, was an eminently practical one. [illegible] straight from the orchard itself, [illegible] brought with it the fragrance of fruit, [illegible] good fruit too. There was no denying the absence of Governmental aid. [illegible]demnation of spraying, but a good, [illegible] lecture that told of good culture, [illegible] tests, preventive measures, useful [illegible]dies and good crops. After the pessi[illegible] the other papers it was quite a treat [illegible] to the plain tale of a successful grower; indeed we might sum up Mr. Hammond's remarks in his own advice, to keep the trees in good condition and they will throw off attacks of insects and fungi. Cli[illegible] vagaries, he admitted, were the cause of much trouble, as they reduced vitality, [illegible] the same time provided conditions [illegible] to fungi and insect attacks. [illegible] he regarded as a regrettable neces[illegible], but without it there was no remedy [illegible] loss of fruit crops. Mr. Hammond's [illegible] and advice were identical with [illegible] given from time to time in these [illegible] acknowledged masters of fruit [illegible] experience and advice that has done [illegible] to put the fruit growing industry [illegible] and profitable basis. What is [illegible] that all fruit growers should act [illegible] that the average of quality may [illegible] all round. The use of a sulphur compound, such as copper sulphate and [illegible] of sulphur, was advocated by Mr. Hammond as a preventive of fungi attacks. He pointed out the need of two or three sprayings, the difficulty of late spraying when soft fruits were grown under hard fruits, and also the difficulty of securing men who would do the work of spraying properly—he urged that the proprietors or their sons should give close attention to the matter. He suggested that remedies should not be adopted wholesale too quickly, and urged that the Board of Agriculture should be perfectly certain of the efficacy of a course of procedure before advocating it, or the fruit growers might suffer very greatly. Winter spraying he advocated, though he said that it was doubtful whether the eggs of many pests were killed by the caustic dressing. He found hot lime wash, 1½ bushels of lime in forty gallons of water, self boiled for ten minutes, and then applied hot as a thick mixture, very efficacious as a winter dressing, and satisfactory if used during the first fortnight in April, against the apple sucker, though not wholly successful against apple scab. Iron sulphate made a good emulsion with paraffin, and this was a good wash for apple sucker, but it left a rusty deposit that might reduce the value of the crop if not washed off by rains. He suggested liver of sulphur for red spider on gooseberries, and hellebore powder for the gooseberry sawfly.

A fine spray, a suitable mixture, a pressure of 60 to 100 lbs. per square inch, calm weather, and an intelligent operator, were points that Mr. Hammond emphasised as essential to proper, effective, and economical spraying. Mr. Hammond also suggested that many of the mixtures were best obtained from chemical manufacturers, in guaranteed form, rather than made up at home. Mr. Hammond was listened to with close attention, and was loudly applauded when he had finished. Hope seemed to have returned after the scientists had bid it depart.

Mr. F.W. Moore, V.M.H.,Glasnevin, livened things up also by asserting that the scientists had discounted the intelligence of the grower. They had heard diametrically opposed views; one said spray by all means; another said spraying was useless—who was to decide? For himself he was convinced, as a result of experiments conducted in Ireland, that spraying was of the utmost value, and he urged growers not to give up winter spraying, and he did not believe this did any harm to the trees, but was convinced that clean limbs and clean surroundings were of as great importance to fruit trees as to human beings. He urged that there was a great need of a standardisation of washes, and it was essential that growers should know the right percentage of purity needed in the various ingredients used in the washes, and he said that of the specimens of damaged leaves of fruit trees sent to the Department of Agriculture in Ireland for inspection, 30 per cent. were damaged by the use of over strong or badly mixed washes. Several other gentlemen spoke, and the meeting then concluded with a vote of thanks to Colonel Long and those who had contributed papers.

NEW PLANTS, ETC.

◆

MICHAELMAS DAISIES.

Climax.—A splendid Michaelmas daisy, and one that grows about five feet high, producing branched growths, and an abundance of large soft blue flowers. In size, form, and colour, and habit this variety is a great advance upon known varieties. A.M., R.H.S., October 13. Mr. E. Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts.

Maidenhood.—This is a particularly graceful and beautiful variety, evidently derived more or less directly from Aster ericoides. It has small, starry, white flowers, that are abundantly produced on arching and much-branched spikes. A beautiful variety. A.M., R.H.S., October 13. Mr. E. Beckett.

LÆLIO-CATTLEYA ST. GOTHARD.

A very fine orchid, derived from L.-c. Gottoiana and C. Hardyana. It has good size, shape, and colour, and appears to be a fine grower. The sepals and petals are bright rose-purple, and the broad apex of the lip is deep rich crimson-purple. F.C.C., R.H.S., October 13. Mr. Day, gardener to H. S. Goodson, Esq., West Hill, Putney.

CYPRIPEDIUM CHARLESWORTHI BROMILOWIANUM.

This is a distinct and beautiful orchid, but there are some doubts as to its being a variety of C. Charlesworthi, the leafage and the shape of the dorsal sepal being somewhat different from those of this species. For purposes of description it may be regarded as an albino of C. Charlesworthi, the pure whiteness of the dorsal sepal and staminode contrasting finely with the pale green of the petals and lip. F.C.C., R.H.S., October 13. Mr. Morgan, gardener to H. J. Bromilow, Esq., Rann Lea, Rainhill, Lancashire.

ODONTOGLOSSUM PESCATOREI SANDERÆ.

An unusually distinct and very pretty variety of a species that does not vary much. The ground colouring is pure white, but the base of each sepal is marked with a blotch, formed of confluent spots of soft brown, with one or two other spots separated from the blotch. On each petal, towards the base, there are a few free spots of the same colour. A very good idea of the arrangement of the colour markings can be obtained from the illustration, from a photograph, on p. 785. A.M., R.H.S., October 13. Messrs. Sander and Sons, St. Albans.

CYPRIPEDIUM LORD OSSULSTON, SANDER'S VAR.

A fine cypripedium, obtained by crossing C. Leeanum Clinkaberryanum with C. Charlesworthi. It has green petals and lip, and a green base to the very broad, large, and rounded white dorsal sepal. A.M., R.H.S., October 13. Messrs. Sander and Sons, St. Albans.

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ANSWERS TO CORRESPONDENTS.

CORRECTION RE CERTIFICATED DAHLIAS.—Messrs. J. Burrell and Co., of House Nurseries, Cambridge, write that in our issue of October 3, p. 752, we credit Messrs. Stredwick and Son with having gained an Award of Merit for dahlia Monarch at the Royal Horticultural Society, whereas this variety was raised by the Messrs. Burrell, and the award was made in their favour. We gladly publish this correction. The error was due to the fact that we gave the award as it appeared on the official list, and also because the dahlia was arranged with other flowers from other exhibitors in the annexe of the hall, and there was no card attached denoting ownership.

FORCING ROSES.—T. S., Gloucester: We have read your letter with a great deal of interest, and not a little amazement. It is quite impossible to properly force a rose into flower during the winter if the plants are dug up early in November, potted and placed in heat. They would most likely die if so treated, and in any case would be miserable specimens. We have no hesitation whatever in stating that the advice of the Continental nurseryman, that November lifted roses would stand early forcing, is utterly at fault, and likely to cause a vast amount of trouble and disappointment. If the advice were followed, with the unhappy results indicated, and the blame was laid upon the shoulders of the Continental nurseryman who gave it and supplied the plants, then the case would not be so very bad. But, unfortunately, the blame is not always rightly distributed, and in such a case as this, the gardener would probably receive it instead of the tradesman, even though he knew full well what the results of such advice, given to the employer, would be. We cannot too severely condemn such advice and methods as those you have indicated.

AMATEUR CHRYSANTHEMUM GROWERS.—S. C., Bridgwater: We have many times given our advice upon this matter. Your society might adopt the definition of an amateur prepared by the National Chrysanthemum Society. It is as follows. Definitions of the term, amateur. — The society recognises two sections of amateur cultivators of the chrysanthemum: (a) For those who mainly, if not entirely, personally cultivate their chrysanthemums, and employ but one assistant regularly, and do not grow for sale. Single-handed gardeners who grow for their employers, can also exhibit in this section, but in all cases of entry the name and address of the employer in full must be given. (b) For those who employ no paid assistance whatever in the culture of their chrysanthemums, and are the bona fide growers of their plants. No person who is employed in a nursery, or public or private garden, can compete in this section, and any act of selling cuttings, plants, or blooms will disqualify. Note: A single-handed gardener is defined as one who is alone constantly employed in the garden, though he may have occasional help. The committee reserve to themselves the right to apply to the employer of any single-handed gardener for verification of his qualification to exhibit, and to require proofs of the bona fides of any person entering as an amateur.

RIDDLED ROSE LEAVES.—M. F. B., Oxford. The cause of the trouble is the Rose Slugworm (Eriocampa rosæ), a pest that appears about May, deposits its eggs on the leaves, and these hatch out and the grubs or slugworms devour the upper leaf surface, and the leaf-substance, but curiously enough they do not eat the lower epidermis, and so, though the leaves present a riddled appearance at a slight distance, they are not really riddled through. Two or more broods may appear in a year, hence the necessity for keeping a close watch upon bushes that have been once attacked. Hellebore powder, or a hellebore wash made by mixing 1oz. of freshly ground hellebore powder and 2oz. of flour, with three gallons of water, will kill the slugworms. If not killed these grubs mature, fall to the ground and pupate in cocoons in the soil. The removal of surface soil from beneath rose bushes that have been infested is recommended, and the work should be done in winter, the removed material being burned or deeply buried, and new rich material substituted.

PLANTS CATS WILL AVOID.—We shall be glad if some of our suburban readers will give us their experiences concerning plants that cats will avoid in answer to the plaint of a reader who writes as follows from Surbiton: "Is there any plant, easy and convenient to grow in a small garden, which cats will avoid? I find that in one part of my garden nothing will grow well. I have had failures there from January to October. Coreopsis, anemones, poppies, and asters that do well elsewhere are no good in this particular place, and I can only account for the failure by the fact that a cat is in the habit of frequenting the spot, hence I should like to know whether there are plants the cat would avoid, or whether there is anything I could strew over the ground that would keep the cat away and not injure the plants." We may say that while we shall be glad to hear of suitable plants that cats avoid, we think the remedy lies rather in making things unpleasant for the cat. A free distribution of cayenne pepper over the spot, applied when the soil is dry, and just before the time the cat usually arrives on the scene will cause the beast to find another resting place, and if cayenne, or even common strong black pepper is used occasionally the cat will not stay. Sprays of some thorny plants, such as hawthorn, placed among the plants, will make the place uncomfortable for pussy. A hose is also a useful instrument, and if it is trained upon the favoured spot, and the water is turned on whenever the cat attempts to settle down, the animal will soon seek less exciting quarters.

NAMES OF PLANTS.

S. L. J., Exeter.—1, Aster vimineus; 2, Cupressus macrocarpa.

F. C. H., Skipton.—1, Quercus cerris; 2, Pelargonium quercifolium.

M. E. M., Colchester.—1, Polygonum Baldschuanicum; 2, Aster sinensis, 3, Buddleia globosa; 4, Garrya elliptica.

T. H. B., Plympton.—1, Begonia Pres. Carnot; 2, Calceolaria Burbidgei; 3, Helxine Solieroli; 4, Euonymus radicans; 5, Hedera helix dentata.

NAMES OF FRUITS.

R. R., Summerscales.—1, Claygate Pearmain; 2, Beurre Diel; 3, Catillac.

M. C., Faversham.—1, Ribston Pippin; 2, not recognised, poor specimen.

T. R. E., Dorking.—1, Duchess' Favourite; 2, Norfolk Beefing; 3, Annie Elizabeth.

S. H. L., Horsham.—1, Lane's Prince Albert; 2, Betty Geeson; 3, Adam's Pearmain.

N. S. L., Rottingdean.—1, Court Pendu Plat; 2, Waltham Abbey Seedling; 3, Dumelow's Seedling.

C. L. L., Rugby.—1, Cellini; 2, King of Tompkins County; 3, King of the Pippins; 4, Alfriston; 5, Golden Noble.

GARDENING APPOINTMENTS.

Mr. S. W. Wyatt, for three and a-quarter years inside foreman at Leonardslee, Horsham, has been appointed head gardener to J. Stuart, Esq., Stonehurst, Ardingley, Somerset.

Mr. A. Bennett, for the past three and a-half years' gardener at Newton Kyme Hall, Tadcaster, and formerly seven and a-half years' gardener to H. Stanton, Esq., at Byford Court, Hereford, has been appointed gardener to this gentleman at Snelston Hall, Ashbourne, Derbyshire, and enters on his new duties on October 26.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

DATE. 1908. OCTOBER 11 TO OCTOBER 17.	SUNSHINE.	TEMPERATURE OF THE AIR. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 11—Sunday	6 24	54	52	63	45
,, 12—Monday	8 30	57	56	65	43
,, 13—Tuesday ...	1 12	54	54	63	48
,, 14—Wednesday .	3 48	53	52	65	51
,, 15—Thursday ...	6 42	48	48	70	43
,, 16—Friday	3 54	55	54	66	48
,, 17—Saturday ...	0 30	56	56	62	54
Means	4 26	54	53	65	47

DATE. 1908. OCTOBER 11 TO OCTOBER 17.	RAIN.	TEMPERATURE OF THE SOIL. AT 9 A.M. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	LOWEST TEMPERATURE ON GRASS.
	ins.	deg.	deg.	deg.	deg.
Oct. 11—Sunday	—	56	58	58	36
,, 12—Monday	—	55	57	57	38
,, 13—Tuesday ...	—	56	57	57	43
,, 14—Wednesday.	—	56	57	57	45
,, 15—Thursday ..	—	56	57	57	41
,, 16—Friday	0·27	55	57	57	44
,, 17—Saturday ...	—	56	57	57	49
Means ...	(total) 0.27	56	57	57	42

FORTHCOMING ENGAGEMENTS.

MONDAY, October 26.—National Chrysanthemum Society; Floral Committee at Essex Hall, at 3 p.m.

TUESDAY, October 27.—Royal Horticultural Society. Committees meet at 12 o'clock; lecture at 3 p.m. on "Modification of Leaves and Stipules for Special Purposes," by the Rev. Prof. G. Henslow V.M.H.; Scientific Committee at 4 o'clock.

Croydon Chrysanthemum Show; two days.

WEDNESDAY, October 28.—Royal Society of Arts. Lindfield Chrysanthemum Show; two days.

Kent County Chrysanthemum Society; two days.

Southampton Royal Horticultural Society; three days.

Sale of Botanical Books.—The important library which will be sold by Messrs. Hodgson and Co. at their rooms, 115, Chancery Lane, W.C., on Wednesday, November 4 and two following days, is rich in botanical works. Among others of special interest are the "Index Kewensis" with the first and second supplements; Paxton's "Magazine of Botany," Loddige's "Botanical Cabinet," and Redouté's "Les Liliacees." The botanical books will be included in the first day's sale.

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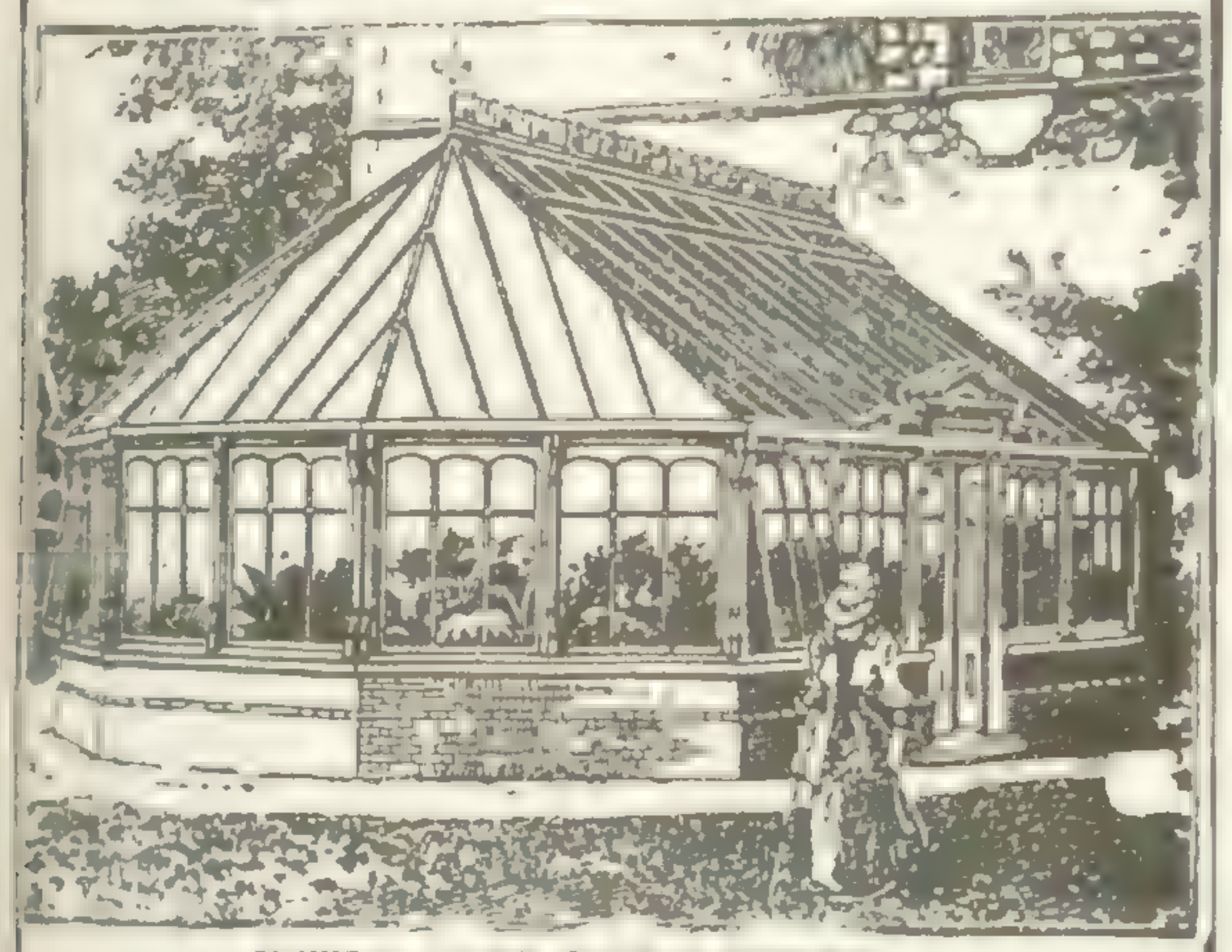

ESTIMATES SUBMITTED.

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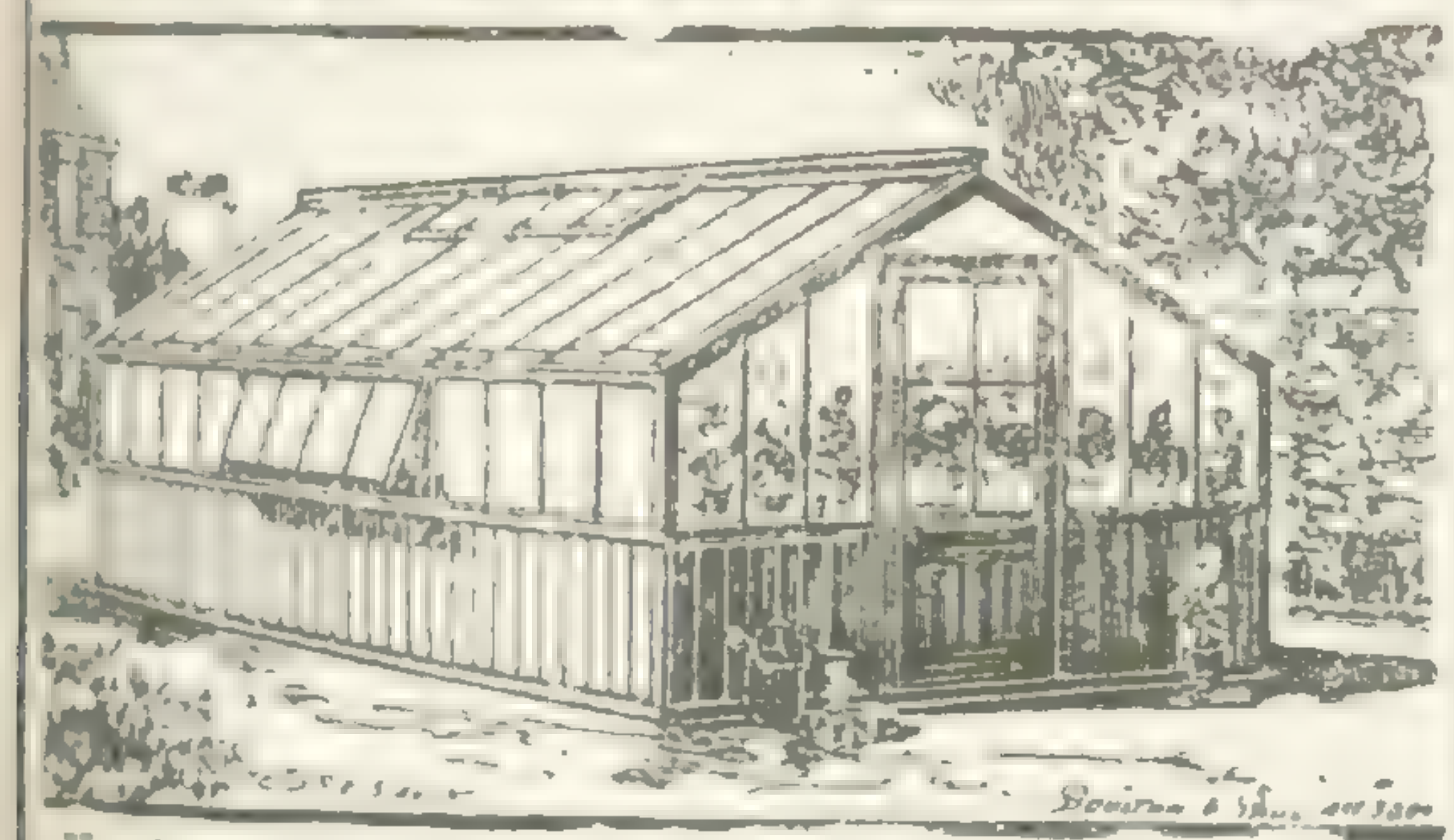

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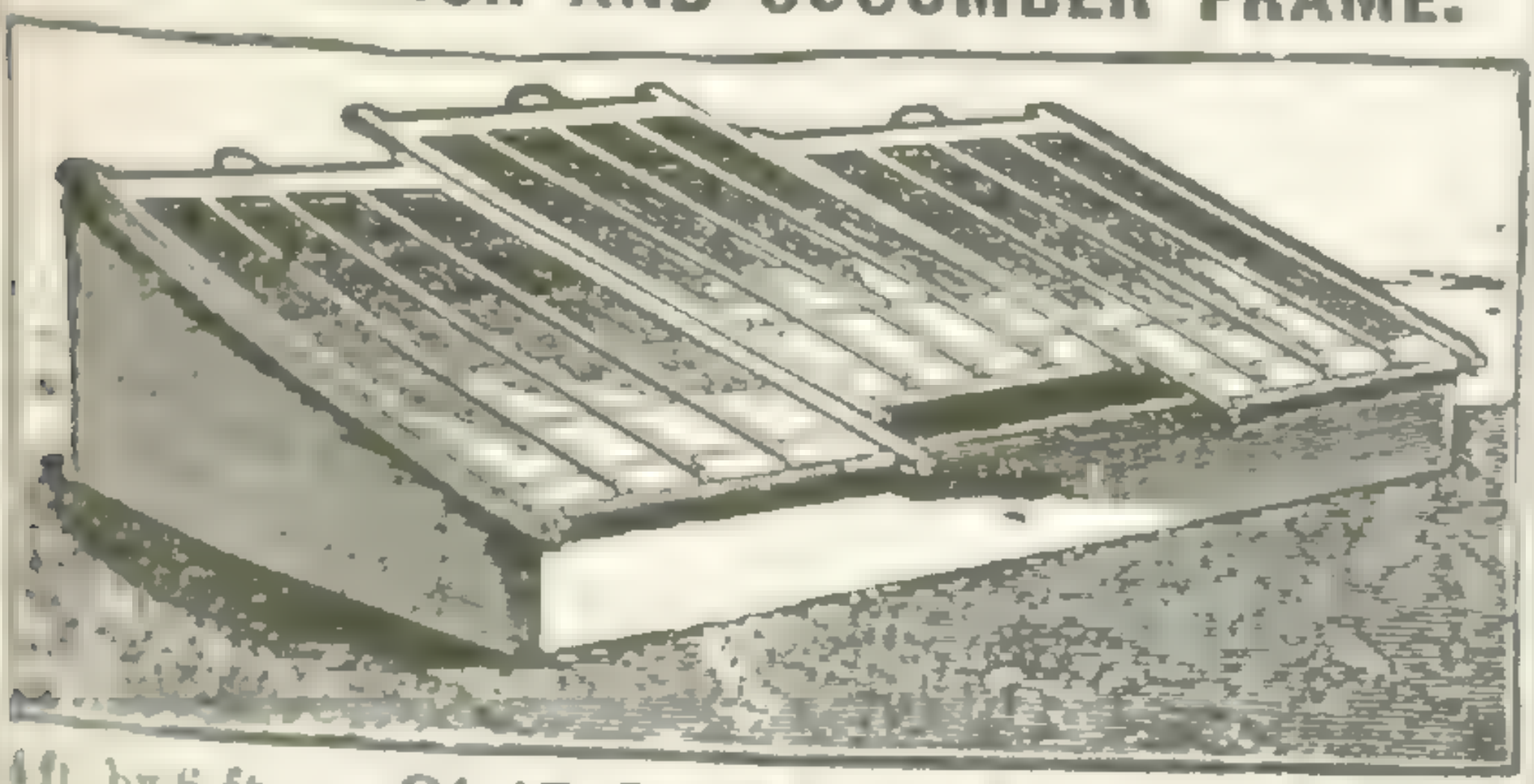

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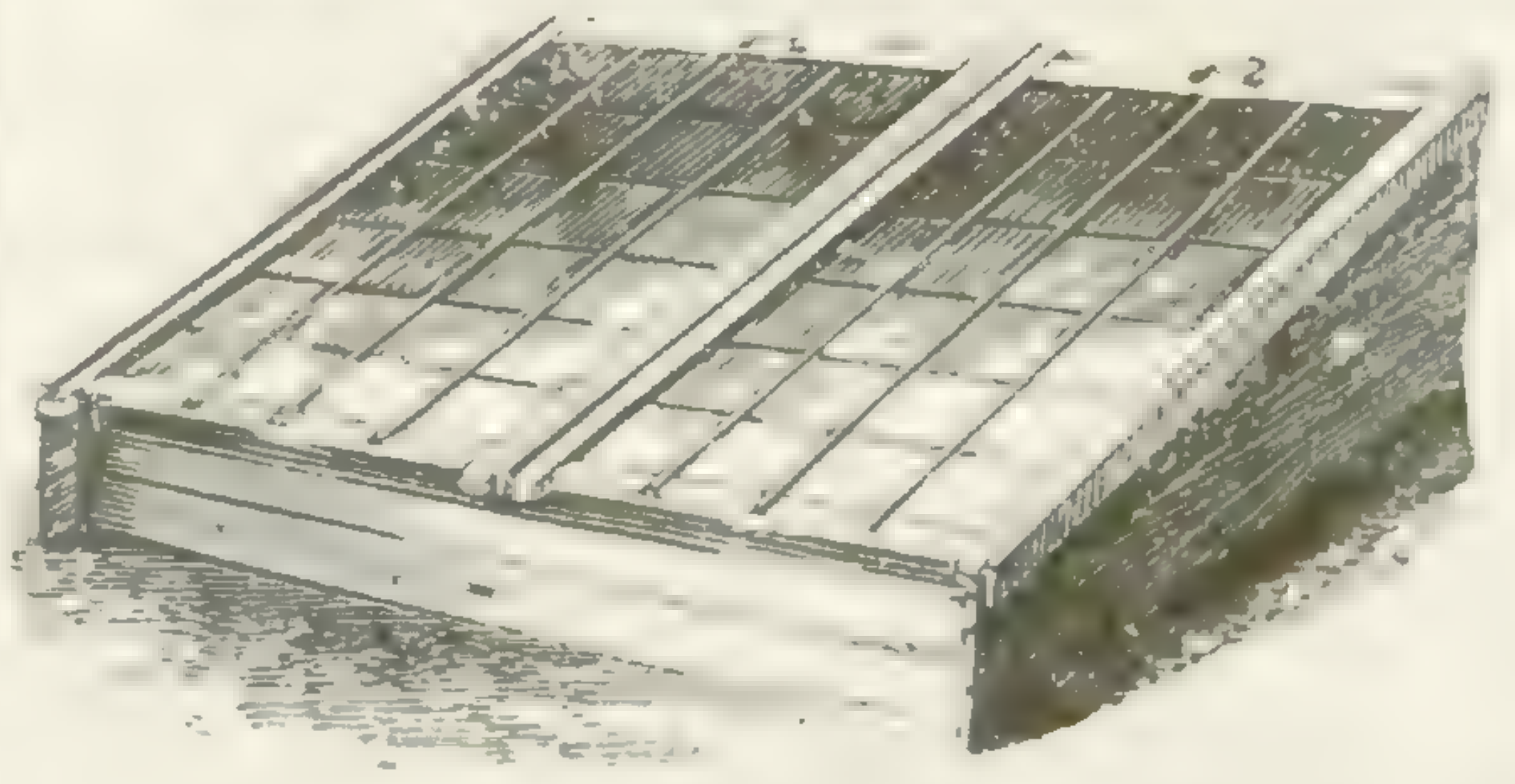

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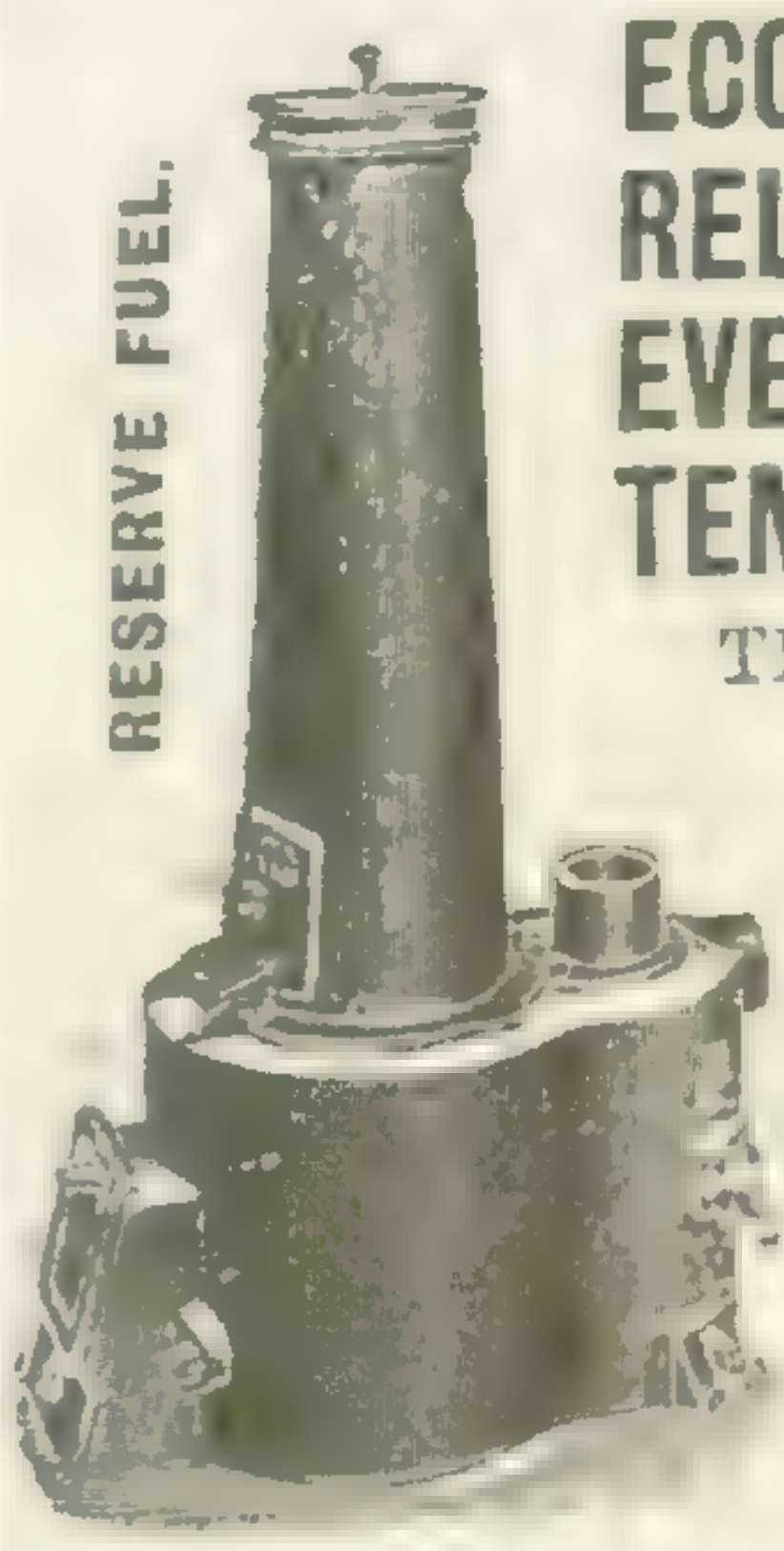
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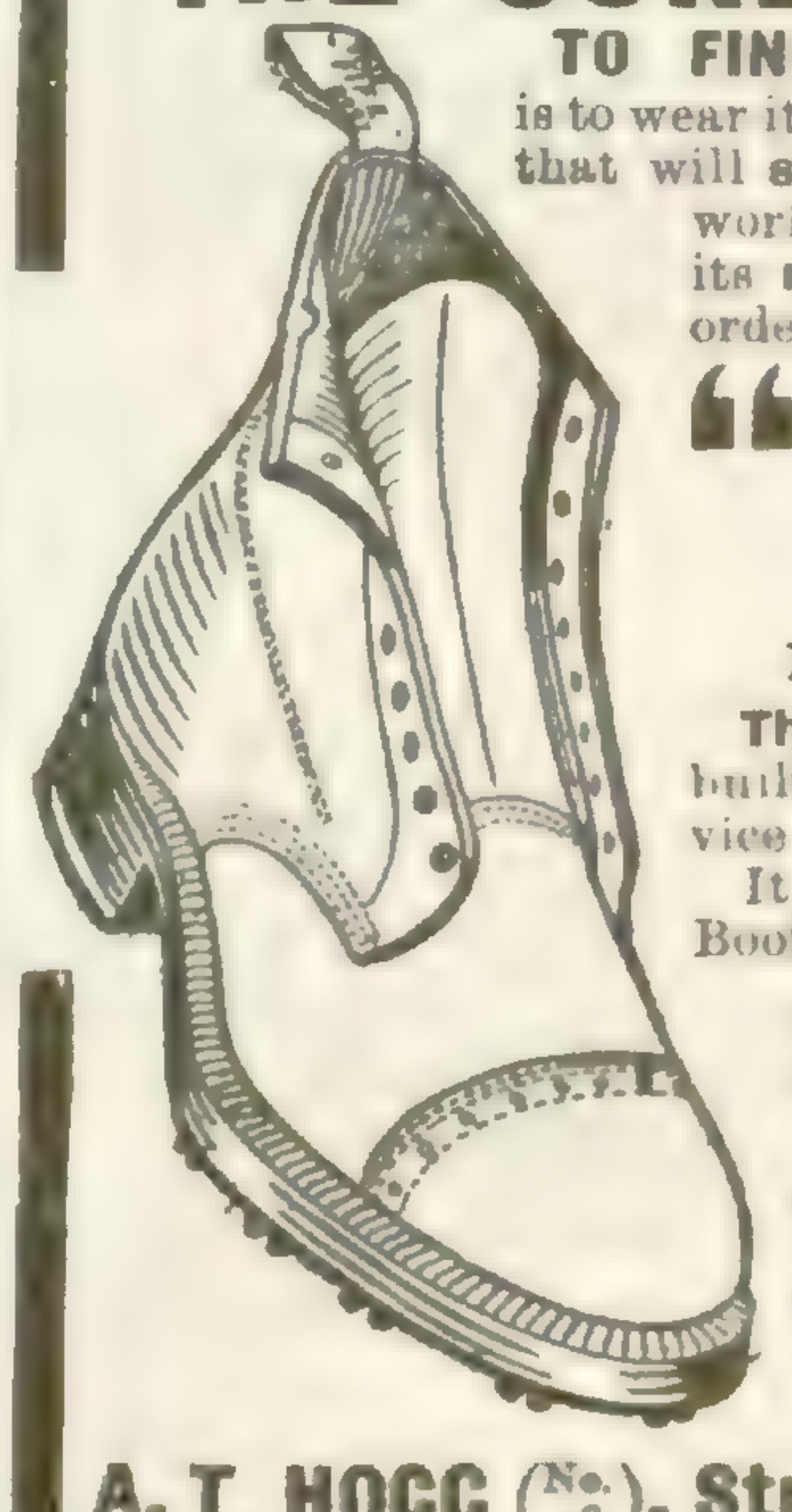

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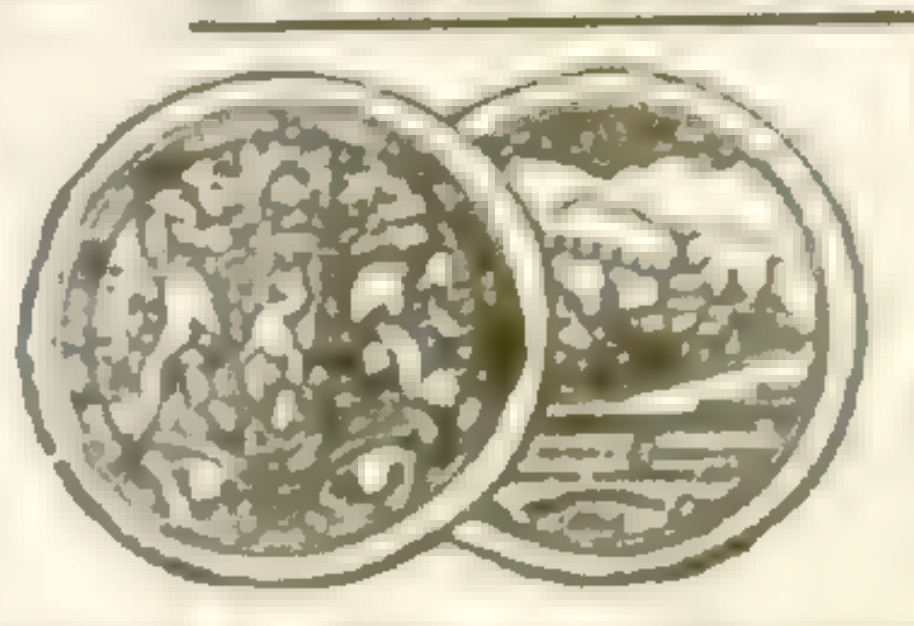

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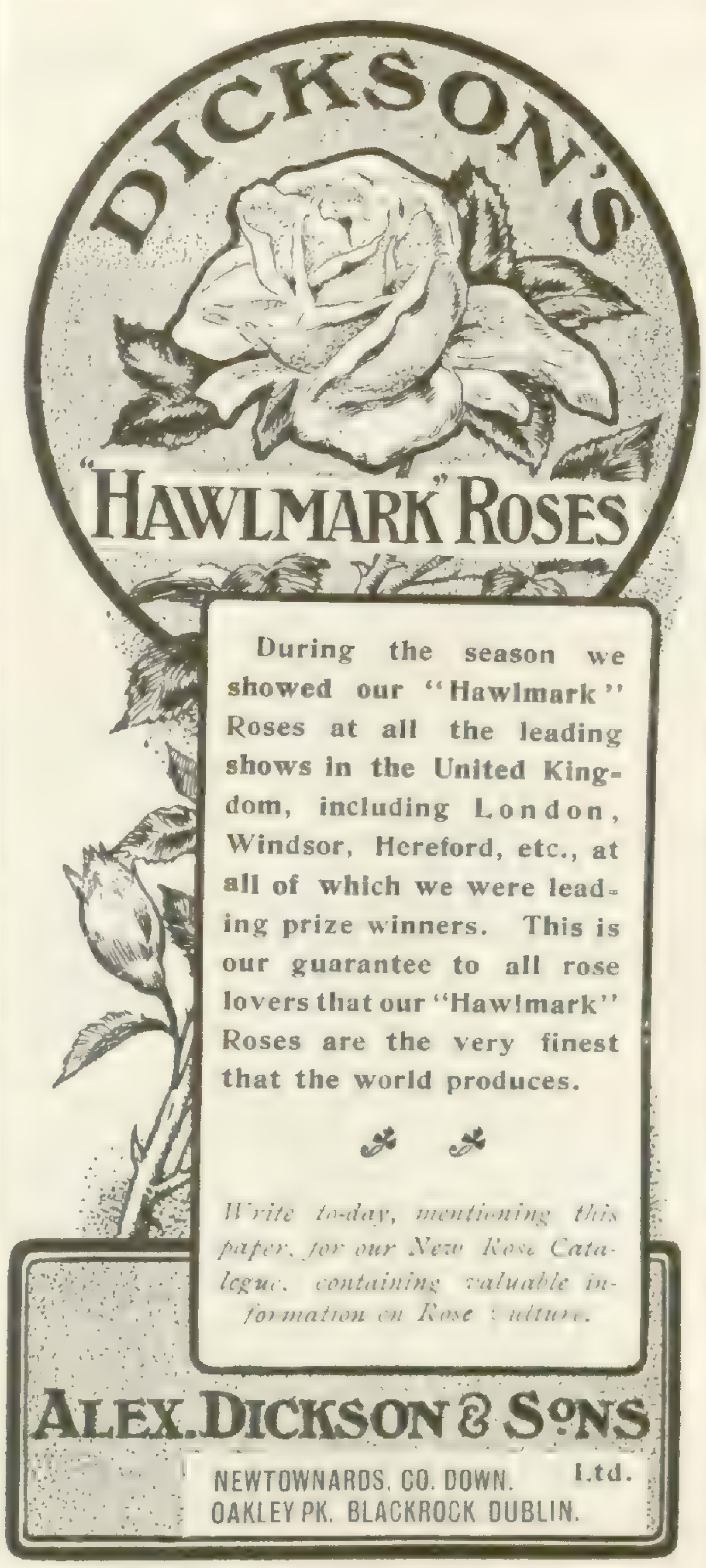

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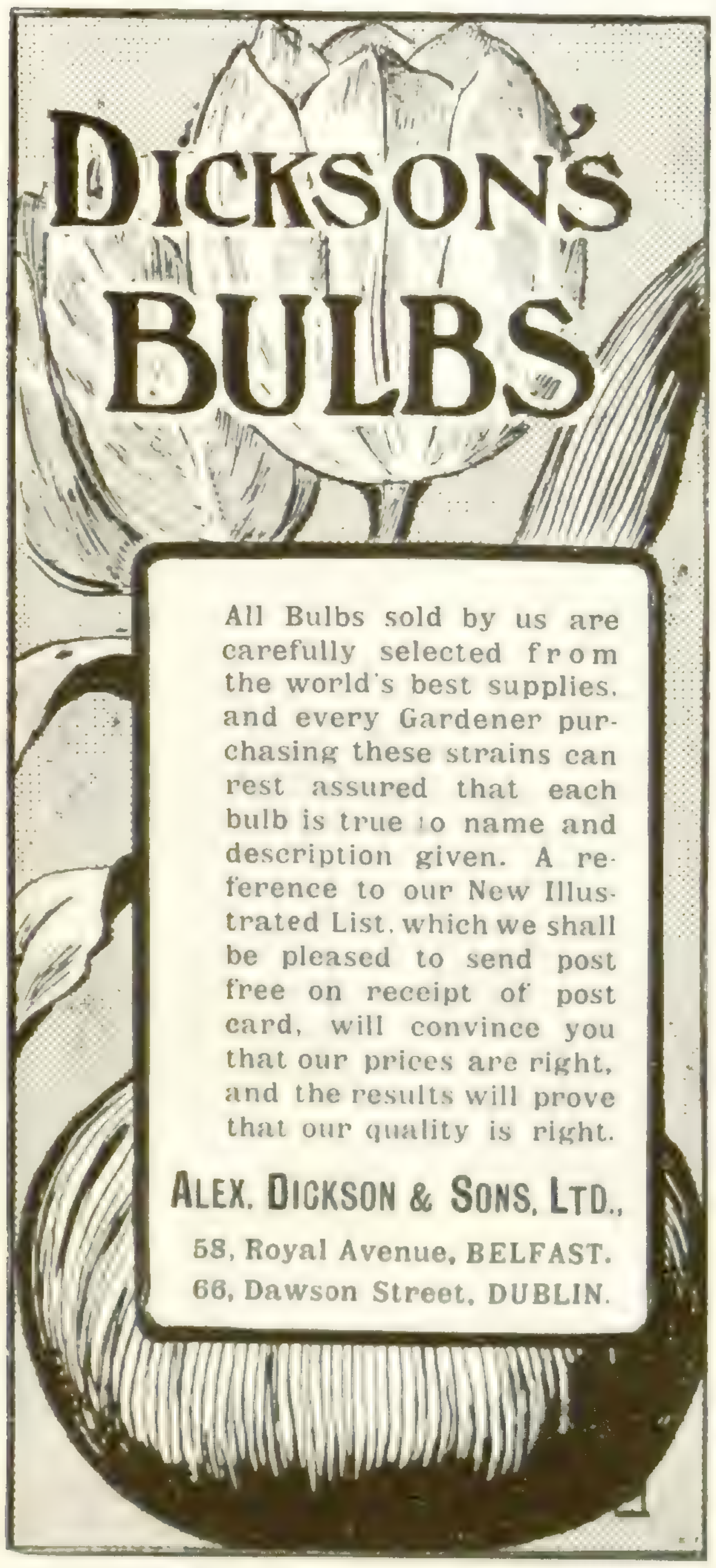

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VOL. LI.—No. 2,870. SATURDAY, OCTOBER 31, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Deciduous Trees and Shrubs.

The life of a leaf, as distinct from that of the form of vegetation which bears it, is almost invariably of much briefer duration. In all trees, even the evergreens, a few seasons sees them drop or dry up and perish, but in those which are termed deciduous, they all die off annually, fall to the ground and rot away, and in this fashion restore to the soil at least some of the material which the roots have extracted from it during the growing season. Deciduous trees are found in the tropics dropping their leaves in the dry season, while the greater number which are found in temperate and higher latitudes do so in the autumn, and therefore in a season usually very humid. We have, therefore, probably two distinct evolutional causes for the fall of the leaf. In the tropical dry seasons, when great heat and great drought prevail, it is difficult to conceive of the possibility of full foliaged trees being able to withstand the immense resulting transpiration, hence they are, as it were, shed wholesale. In temperate regions, on the other hand, though there is ample moisture both at the roots and in the environing atmosphere, not only does the great fall in the temperature check activity of growth, but widespread dense foliage and landscape, if maintained, would become very apt to lead to the destruction of the tree by severe winter gales, and be still more imperilled by the snowfall usually prevalent in cold regions, and which would inevitably break them down by the sheer weight of the clinging snowflakes. Non-deciduous northern trees consequently consist mainly of the needle-leaved pine tribe, the foliage of which is the least adapted to retain such a burden, while other non-deciduous examples, such as hollies, laurels, meet this difficulty by having highly polished leaves well adapted to let the load slip off before it accumulates to a dangerous extent. We all know, however, that a heavy snowfall is often accompanied by considerable breakage of evergreen shrubs, despite these provisions for protection. As a rule, the fall of the leaf is not determined merely by its death, but by the actual provision of an arrangement for throwing it off when it has fulfilled its last functions of completing its contribution to the annual ring of bark and fattening up the axial bud at its base which is destined to replace it the following season. At the point of its attachment to the tree there is usually a joint, and at the time indicated the segment next the tree swells, while that of the dying leaf shrinks, the result being a severance. In some trees, such as the beech, there is no such joint, and the dead leaves consequently remain attached until broken off by the wintry gales. It is during the dying period of deciduous leaves, and as they are presumably parting with any sap within them which may be of service to the sustaining tree, that those beautiful changes of tint occur which give such gorgeous colour effects to the autumnal woodland prospects. Subtle changes occur within the cells as the vital chlorophyll perishes, which causes the normal green tint to change into a series of pale greens, yellows, oranges, and reds, into, in short, all the tints of the rainbow; and as each kind of tree has its own peculiar gamut of colours, and these are all run through within a comparatively short period, it is little to be wondered at that the effect is so entrancing. Finally, as a rule, these tints merge into browns, which really indicate that decay has set in, but by this time the fall has usually taken place, and it is now the turn of the fungus and insect tribes to complete the work of dissolution, always provided that that universal undertaker, the omnipresent worm, has not drawn them into his burrow beforehand. In any case, the material will be restored to the soil and to the roots, and doubtless play its part time after time in the regeneration of the woodland, added to, moreover, by the draught which the living leaves have made throughout their growth and activity upon the carbon stored in the air we breathe.

MR. THOMAS HUMPHREYS,
Curator Edgbaston Botanic Gardens.

Mr. Thomas Humphreys, whose portrait we have much pleasure in giving herewith, was some five years ago appointed to the important position of Curator of the Edgbaston Botanic Gardens, and during that period has more than justified the wisdom shown by the Council in the selection of a successor to Mr. W. B. Latham, and won golden opinions from all who are interested in horticulture in the Birmingham district. In giving Mr. Humphreys' portrait, it is interesting to call to mind that for some years he occupied in the Royal Gardens, Kew, the position of arboretum propagator, which he relinquished about sixteen years ago, when he was appointed by the Council of the Royal Horticultural Society assistant superintendent at Chiswick. Here, under the late Mr. A. F. Barron and

Mr. S. T. Wright, he rendered such splendid service as to afford abundant proof of his remarkable abilities. During the period he occupied this position he acted also as secretary of the R.H.S. Floral Committee, and consequently he entered on his duties at Birmingham with an experience that was quite unique in garden management and the conduct of horticultural meetings and exhibitions. Since his occupying his present position, Mr. Humphreys has effected many important improvements in the Edgbaston Botanic Gardens, has organised various flower shows on quite new lines, and in other ways endeavoured to make the gardens the centre of horticultural activity in the district. Among other honorary positions filled at the present time, Mr. Humphreys is the secretary of the Midland Carnation and Picotee Society, one of the most successful of the associations in the United Kingdom that have for their object the advancement of these fragrant flowers.

Chestnut Avenue, Bushey Park.—The work of repairing the damage done to this historic avenue by the great storm of June last, is now in progress. The damaged chestnut trees are being replaced by trees of moderate size from Richmond Park, and the blanks caused in the outer rows of limes have been filled with young trees.

Paris Chrysanthemum Show.—The chrysanthemum show to be held in the greenhouses on the Cours la Reine on November 6 to 15, will be the twenty-fifth exhibition of the kind held by the National Horticultural Society of France. Great preparations are being made to celebrate the event, especially as it will be the last one to be held in the greenhouses, which have been condemned by the Municipality of Paris. Part of the show will be devoted to a retrospective exhibition of the popular autumn flower. Exhibits of old varieties are provided for, and a remarkable collection of books, pamphlets, old catalogues, prints, engravings, and other literary and artistic objects connected with the chrysanthemum have been collected for the purpose.

A British Fern Society.—Mr. C. T. Druery writes: Although the British Pteridological Society, established at Kendal, has done good service as a centre of the British fern cult for many years, there is no doubt that its purely local character militates against its wider usefulness, and that now that our beautiful, and, in many cases, unique British ferns are becoming popular, a society on a more extended basis is desirable. The objects of such a society should embrace a periodical publication describing and illustrating new finds and fresh developments in cultural selection, and also providing such general data as may assist the amateur in growing and propagating and acquiring a knowledge of what is being done in this particular direction. The writer would be glad to hear from their admirers by a simple postcard in order to judge whether such a society is practicable on the basis of a moderate subscription sufficient to cover printing and other expenses incidental to the programme indicated. Mr. Druery's address is 11, Shaa Road, Acton, W.

Wrest Park Gardens.—In our next issue we shall give a freely-illustrated account of the gardens of Wrest Park, Ampthill, Beds., the residence of the Hon. Whitelaw Reid, the American Ambassador.

Pentstemons from Hawick.—From the Hawick Nurseries Mr. John Forbes sends us a large gathering of named pentstemons, and, notwithstanding their long journey, the splendidly developed spikes present a charming appearance arranged in plain glass vases upon our table. Some thirty or more varieties are represented in the gathering, and they are of much interest as a practical demonstration of the immense improvement that has been effected in these attractive flowers within recent years. The spikes are stout and of great length; the flowers large, of fine form and well arranged, and the colours are rich and varied. Especially remarkable for their high quality and effectiveness are H. J. Alsopp, rich purple, with white throat; Mrs. D. McAinsh, bright carmine pink, with crimson markings; Mrs. Forbes, deep ruby crimson; Marchioness of Linlithgow, brilliant pink; Peach, white, with picotee edge of pink; Mrs. A. Brown, white, suffused rose; Sir Dighton Probyn, brilliant scarlet, very effective; Lady Chesterfield, bright ruby-purple; Pink Beauty, delicate pink, the flowers of medium size, a fine variety for bedding purposes; Thomas Hay, white, with pink lobes; Sir W. T. Thiselton Dyer, rich scarlet; John Deacon, white, with well-defined purple margin; Dr. R. Koch, purple rose, the flowers very large and somewhat frilled; Ernest Bichat, rich violet; and Lord Rothschild, rich pink. White Newbury Gem must have special mention, forming as it does an excellent companion to Newbury Gem, one of the very best of the high-coloured pentstemons for bedding.

Manchester Children and Flower Culture. — The Education Committee of Manchester, anxious to encourage flower culture among the children in the Board Schools, offered plants at a small fee in the spring of 1907, but was able only to accommodate 16,000 of the 29,000 applicants. In the spring of 1908, thanks to the generosity of many ladies and gentlemen and the aid of the Parks Committee's resources, no fewer than 32,000 plants were sold to the children. At a given date the plants are submitted for examination, and the best 25 out of every hundred are selected for public exhibition, two such exhibitions being held during the year. Prizes are awarded at the rate of about one to every twenty plants. Fuchsias and pelargoniums appear to be the most popular subjects.

Curious Growth of Potato.—Mr. Veitch submitted to the R.H.S. Scientific Committee, on behalf of Mr. Rumsey, of Leyton, a curious potato, which had been growing in the light but out of the soil for eighteen months. It had, as usual under such conditions, produced a number of short purplish shoots reaching in all a length of about 2in. to 2½in., and from these were developed a large number of closely oppressed greenish roots.

Trials at Wisley in 1909-10.—The Council of the Royal Horticultural Society have arranged for trials at the Wisley Gardens of the following fruits, flowers, and vegetables during 1909: Fruits—Autumnal raspberries, 15 canes of each variety, to be sent at once. Flowers—Tree carnations, two plants of each variety; annuals, seed to be sent in January; garden dahlias (show and cactus excluded), early-flowering outdoor chrysanthemums, and pentstemons, two plants of each variety in each class, to be sent in April. Vegetables—Potatoes, 20 tubers of each variety to be sent by February; also experiments with the same variety of potato secured from as many varying sources as possible, under different soil and climatic conditions; cauliflower, ¼oz.; lettuce, ¼oz.; and kidney beans, ½ pint of seed of each variety. Each variety of potato must be labelled as being "early," "mid-season," or "late." Everything sent for trial must be named and the name and address of the sender attached, and all parcels should be sent to the Superintendent, R.H.S. Gardens, Wisley, Ripley, Surrey.

"**Points in Fruit Culture,**" formed the subject of an instructive address given by Mr. E. Molyneux, V.M.H., before the Basingstoke Gardeners' Association the other evening. Mr. Molyneux strongly advised the planting of varieties that were not only good, but were well adapted to the conditions that obtain in the garden or plantation where they are to be grown. Attention was directed to a method of procedure by which Blenheim Pippin can be brought into a productive state in five or six years. The practice that frequently obtains of purchasing inferior trees because of their being low in price was condemned, as was the practice of allowing the grass to grow close up to the stems of orchard trees, which frequently did much harm. Mr. Molyneux advised the trenching to a depth of three feet of strong soils to be planted with apple trees, and stated that while the expense was comparatively heavy, it would give an ample return. With reference to the all-important question of pruning, Mr. Molyneux suggested that the shoots of newly-planted trees should be pruned back to within three or four buds of the base, and that subsequently the pruning should be so carried out as to ensure the branches being far enough apart for the air to circulate freely among them, and the light to reach the whole of the growth. Root pruning was another point that had reference made to it, and Mr. Molyneux advised that when trees were so luxuriant as to fail to produce well ripened wood freely set with fruit buds, the roots should be carefully pruned for the purpose of checking the growth. It was not, he said, of any use to cut the shoots back for the purpose of restoring unduly vigorous trees to a state of fruitfulness, but the pruning of the roots would accomplish all that could be desired.

Salisbury Plain and the War Office.—The purchase of 6,000 acres of land for military purposes on the Devizes side of Salisbury Plain has given rise to considerable anxiety among the tenant farmers and others affected thereby. The Secretary of War having had his attention drawn to the hardship likely to be entailed upon those engaged in the cultivation of this large area, states that the site selected for the additional artillery ranges required is the only one that is really suitable. He has also promised that should special cases of hardship arise among the labourers they shall be considered with a view to compensation. It is much to be regretted that so large an area of excellent land should be withdrawn from cultivation.

The Azalea Gall, which is produced by the fungus known as Exobasidium japonicum, Shirai, is the subject of an interesting note in the new part of the R.H.S. "Journal," by the editor, Mr. F. J. Chittenden. Twelve years ago Mr. Shirai described a gall upon the Indian azaleas, and stated that it was common upon these plants at Tokyo. The gall was found to be due to the attack of a fungus which up to that time had not been described, and this Shirai described and named. Recently specimens of galls have reached the Royal Horticultural Society from Cornwall and the Continent, and have been investigated by Mr. Chittenden at the Wisley laboraery. The galls are of relatively large size, being in many cases fully an inch in diameter, and are greenish or yellowish green at first, sometimes pink, but later become covered with a whitish bloom, owing to the breaking through the epidermis of the fruiting threads of the fungus. Sometimes, according to Shirai, the fungus causes the malformation of a single leaf only; but in all the specimens that have come under the notice of Mr. Chittenden, the whole of the terminal bud of the shoot has been involved in the swelling. Mr. Chittenden states that the best method of controlling the pest is to remove the galled leaves on the appearance of the galls and burn them. If this is done before the spores are produced there will be but little danger of the disease spreading.

N.C.S. Annual Dinner. The annual dinner of the National Chrysanthemum Society and presentation of prizes will take place in the Throne Room, Holborn Resturant, High Holborn, W.C., on Thursday, November 26, 1908, at 6.15 p.m. for 6.30 p.m. Sir Albert Rollit, D.C.L., LL.D., president of the society, will preside. The challenge trophy, the Holmes Memorial cups and medals will be presented to the winners during the evening. Tickets, 5s. each (exclusive of wine), to be obtained from the secretary, Mr. Richard A. Witty, St. James' Villa, Swain's Lane, Highgate.

An Interesting Ceremony.—On the occasion of the visit of M. Fallières, the President of the French Republic, to the Paris autumn show, a great granddaughter of Capitaine Blancard, who introduced the chrysanthemum to Europe in 1789, will present to M. Fallières a bouquet of chrysanthemums. It will be remembered that two of the granddaughters of Blancard are living in England, and have been for many years past. "Le Chrysanthème," in its current number, gives several pages to an account of the life and doings of Blancard, who, in spite of his hazardous career as a navigator in the 18th century, died at the age of 85 years.

Sweet Peas and Their Cultivation.—We have before us the second edition of "Sweet Peas and Their Cultivation," by Mr. Charles H. Curtis, hon. secretary of the National Sweet Pea Society, and we find it even more interesting and useful than the first edition. The first edition was dated January 1, 1908; the second edition is dated October 1, 1908. Could anything more eloquently show the widespread love for sweet peas and the high value set upon Mr. Curtis's advice? An entirely new chapter has been added, and it deals with the propagation of sweet peas from cuttings, a subject of importance and interest to those who have seedlings of merit. Not a few people now sow sweet peas in pots in late autumn and winter them in cold frames, and to such, as well as to all who are anxiously awaiting the advent of seed catalogues, the new edition of this little work comes in excellent time, as it contains up-to-date lists of the best varieties of sweet peas in their respective colours, the most promising novelties for 1909, and additions to the lists of Too-Much-Alike and Outclassed and Obsolete varieties. The best of the old illustrations have been retained in the new issue, but, in addition, and this is of great importance, portraits of the best novelties seen this season are given. We believe the new issue will run its course as rapidly as the old one. The price of the book is 1s. net (by post 1s. 2d.), bound in cloth 1s. 6d., or by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

CIDER ORCHARDS.

According to the Board of Agriculture, the general revival of interest in cider making suggests that a leaflet dealing with the planting of cider orchards—a somewhat neglected question—and the selection of suitable varieties, would prove useful to a wide circle of growers. Many orchards which are being planted are stocked with varieties reputed to be useful for cider purposes, and of vigorous growth, without any regard being paid to suitable proportions of each kind and similar points of importance from the vintage point of view. The present leaflet is an attempt to deal briefly and practically with these important questions.

Necessity for Planting Fresh Orchards.

The future welfare of the industry chiefly depends upon a large increase in the planting of fresh orchards during the course of the next few years. Probably the majority of existing orchards have long passed their best days, and are now dying out; and few are being planted to fill their places. In unfavourable seasons the supply of fruit is by no means equal to the demand, with the result that prices are high, and it is difficult to manufacture pure cider at a reasonable profit. The present state of affairs points to a regular and more serious shortage of cider fruit within a few years, and this, unless something be done, means a decline of the industry from the position it now occupies. The matter is so serious that it cannot be too forcibly impressed upon those interested that fresh orchards must be planted, if a suitable supply of fruit is to be maintained. The number of young orchards is small, and inquiries show that the demand for young trees is still limited. It is indeed stated that in many nurseries, where cider trees were formerly extensively raised, their propagation has been given up in consequence of the lack of demand.

Characteristics of a Cider Orchard.

Since it is of importance that fresh orchards should be planted, and since there are indications in some quarters that the need is beginning to be recognised, it may be opportune to consider what the essential characteristics of a good cider orchard should be from the cider-makers' point of view. The general arrangement and the selection of varieties for a vintage orchard are matters which involve questions of some complexity, quite distinct from those met with in connection with the laying out of orchards for market purposes. It must be borne in mind that the value of an orchard for vintage purposes is determined by the quality of the cider which can be made from its produce; and the quality is primarily determined by the kinds of fruit and the relative proportions of the three main types of cider fruit, viz., sharp, sweet, and bitter-sweet apples.

The suggestions here made for the construction of a cider orchard have been based to some extent upon the general experience of cider-fruit growers, and are supported by the results of experimental work which has been carried on at the National Fruit and Cider Institute.

Selection of a Site.

An important point to be remembered is that, the more the fruit is exposed to the sun, the better is the quality of the cider. The situation should, therefore, be such that the trees can catch the maximum amount of direct sunlight. A slope facing to the south or south-west is perhaps best. Cider makers with extensive experience agree that the best and most full-bodied ciders are made from fruit grown on a heavy soil, especially a stiff loam with clay subsoil.

Methods of Planting.

The methods of planting, the distance of the trees from one another, and their general treatment do not differ materially from those suitable for apple orchards in general, details of which will be found in Leaflet No. 134 (Apple Culture). It is, however, customary in the West of England to allow cider orchards to become grassed over, even if, as is the rule, they are not originally started on grass land. The fruit, which is commonly gathered by being shaken off the trees on to the grass, can thus be obtained in a reasonably clean condition and free from adherent soil.

Arrangement According to Varieties.

Mixed Orchards are Unsatisfactory.—The special feature of a vintage orchard should lie in the selection and arrangement of the varieties of the fruit. Many existing orchards are composed of a very large number of varieties, with but few trees of a kind, some orchards consisting mainly of sharp fruit, and others of sweet or bitter-sweet sorts. Cider made from the produce of any one of such orchards may be of inferior quality on account of the predominance of one or the other type. To obtain the best results, it is necessary to blend the fruit with fruit of the types which are deficient, obtained from other orchards, or to utilise only a portion of the fruit of the predominating type. Other drawbacks of these miscellaneous orchards are: (1) All the varieties do not ripen at the same time, the fruit-gathering season in a single orchard thus being spread over probably the whole cider-making season from September to December, while the orchard is not available for grazing purposes during that period: (2) the tendency is to gather varieties before they are properly ripened, in order to get the orchard cleared of fruit; (3) in gathering, the task of keeping different varieties separate is difficult, if not impossible; (4) there is not a sufficiently large quantity of any of the varieties to enable cider of a regular standard to be made; and (5) the number of varieties utilised for cider purposes is so large, that it is impossible to become properly acquainted with the vintage qualities of more than a few sorts, control of the quality of the product being thus practically impossible.

General Arrangement.—There are clearly then the following points regarding the general arrangement of the orchards which might with advantage be adopted:—

(a) The varieties having different ripening periods should be separated into distinct orchards. There should be at least three classes of orchards:—(1) Early, containing varieties ripening from September to the end of October; (2) Mid-season, containing varieties ripening from the end of October to the end of November; and (3) Late, containing varieties ripening in December and later. The advantages of such a system are obvious.

(b) The number of varieties should be restricted, but relatively large numbers of trees of the varieties selected should be propagated. By this means only can the comparative uniformity of a maker's produce from season to season be attained, and that control guaranteed which is the outcome of a thorough knowledge of the qualities of the varieties in use.

(c) The varieties selected for any orchard should be chosen and planted in such proportions that the whole of the fruit grown in that orchard if mixed together, would yield a good cider that would not require blending. The object in view here is to make each vintage orchard self-contained for vintage purposes, and quite independent of other orchards. The advantage to the maker in such a case would be considerable. While the number of varieties which it would be necessary to plant depends upon the characters of those selected, it would probably be advisable, in order that the total produce might yield a satisfactory blend, not to plant more than three kinds in each orchard—(1) a sharp, (2) a sweet, and (3) a bitter-sweet variety. There is no necessity to increase the number; while, if each of the three types just mentioned is represented, it is possible to obtain a cider of any desired standard of chemical composition by the adjustment of the proportions of the number of trees of each kind. In many instances three varieties would not be necessary, as there are several pairs of varieties which go well together, and do not, owing to their chemical composition, require a member of the third class to complete the blend. In certain cases only one variety need be planted, the juice in this instance having a suitable chemical composition without blending. As an example, the Kingston Black variety may be quoted. As a rule, however, a single variety has some element in its composition either superabundant or deficient, and blending is therefore required to correct the proportion.

While these are the general lines upon which the selection and proportion of the varieties may be based, the matter will not be found so simple in practice. For instance, most cider varieties only bear full crops once in two years, and it does not follow that the bearing season for all the trees will be the same. The proportions of fruit of the different classes each season would thus be disturbed, possibly to a serious extent. Again, in bad apple years, sharp and sweet cider varieties are usually sold largely for market purposes and for jam making, thus causing a preponderance of bitter-sweets for cider making. This, however, could not be avoided under any arrangement, and the simplest way out of the difficulty would appear to be to reduce the planting of the bitter-sweet types to the lowest practical proportions. Such an arrangement represents a considerable advance beyond the usual method; and whether or not the cider maker may eventually decide to make all varieties up separately, and to blend the juices or the ciders instead of the fruit, as at present practised, the fact that the produce, as a whole, of a single orchard could be relied upon approximately to yield a good cider, would facilitate matters considerably.

(d) Trees of the same variety should be planted in blocks or groups. Undoubtedly the most scientific method of dealing with fruit for vintage purposes is to have the different kinds gathered and kept separately, so that the maker can either mix the fruit himself in the proportions which he desires, or can press each sort separately, and blend the liquor afterwards. By planting comparatively few varieties, but a large number of trees of each sort, and by grouping trees of one sort together, it will become perfectly practicable to deal with the fruit in this manner.

There seems to be considerable reason for believing that some varieties, at any rate, fruit more abundantly if their blossom is cross-fertilised; and consequently it may be of importance that too large a number of trees of any one kind should not be planted in proximity.

(To be continued.)

WINTER SALADS.

Though, as a rule, salads are not so much in request during the winter months as they are through the hot weather in summer, still, where there is a large establishment to supply, it is necessary to always have plenty of material. If we take into consideration the number and variety of plants that were formerly grown for this purpose, some idea may be formed of the care that was necessary to keep up a constant supply; but since the days of cheap glass and hot water, many of the plants that were formerly used have either gone out of cultivation or are only grown in large old-fashioned gardens. There is the American cress, for instance. Most gardeners are well acquainted with various species of erysimum as flowering plants for the herbaceous border, but there are not many that cultivate them in these days as a salad for winter. Formerly many native plants were used, but of late years there has been but little call for them, as many others more tender and palatable are to be found.

At one time there were two species of erysimum grown, E. præcox and E. barbarea, the former being a biennial and the latter a perennial. The first-named was sown in the autumn to give a supply of leaves in the spring; the latter was increased by divisions of the roots. The young leaves taste much like those of the common cress, but are more bitter. Another plant not much in request now is the common sorrel, Rumex acetosa and R. scutatus. These plants being evergreen, the foliage was formerly much in request by the French chefs for making or mixing with salads. To obtain the finest and most tender leaves a fresh plantation should be made each year, and this can be effected either by sowing seed in the spring, and transplanting the seedlings a foot apart, or by dividing the roots in September, as then the plants have time to become established before winter. There were numerous other plants, such as chives, which took the place of the young onions. These were propagated by division of the roots.

During late years it has been possible to have good tender crisp lettuce all the year round, especially by the use of a gentle hotbed, and growing the quick-hearting varieties, such as Golden Queen. Endive, too, may be had all through the winter if the precaution be taken to have the plants lifted before severe frost sets in, and stored away in an open shed where the foliage may be kept dry. By placing a few of these plants in a dark place, where a gentle heat is provided, young, tender white leaves are soon formed, which are very acceptable. On light dry soils and in elevated situations endive will usually withstand the severity of our winters, but in low-lying places where the soil is retentive the plants suffer much, therefore, it is advisable to afford them protection.

Chicory is another plant that is now grown largely for winter salading. To have nice, clean, crisp, well-blanched leaves two things are absolutely necessary. One is to have strong, well-grown roots, and the other to have a suitable place for blanching the foliage in. If the seed is sown in well-cultivated soil about the first week in July, and the plants thinned out to a foot apart each way to allow the foliage to develop, very few will run to seed, and strong roots will be formed, which will produce crowns similar to those of seakale. When the foliage has died down these may be lifted and planted in the mushroom house or other like structure where light can be excluded, and blanched in the same way as recommended for endive.

Small salads are such as are usually used in the seed leaf; these include mustard and cress, small onions and others. The two former are easily grown, a few days sufficing to produce a supply. It is not so, however, with the latter, as during the dull winter months the seeds germinate slowly, therefore it is necessary to make sowings some time in advance of the time they are required. Some people have very peculiar tastes. I once lived with a nobleman who would have young onions sent up for salad every day, and they must not be more than three or four inches high, having just formed their second or third leaf, and the celery had to be about the same. Where a quantity of such things have to be provided it is necessary to pay close attention to the various sowings, otherwise there might be a blank just at a time when they were most needed. It is the attention to these little details that enables the gardener to keep on friendly terms with the cook and other heads of the establishment.

H. C. Prinsep.

Buxted Park Gardens.

NEW PLANTS, ETC.

◆

LÆLIO-CATTLEYA CORNELIA, WESTONBIRT VAR.

This might well be described as a glorified Cattleya labiata, as it resembles a very shapely, bright, and substantial bloom of that well-known species. It is derived from Lælia pumila and C. labiata, and the former parent has given shape and substance. Sepals and petals bright rose-purple; lip rich deep crimson-purple, margined with lilac-purple. A.M., R.H.S.

ROSES.

Mrs. Alfred Tate.—An exquisitely beautiful hybrid tea rose, figured on page 787. It has big broad petals, but these are not numerous enough to make up a first-rate show flower. The buds are elongated and very pretty, indeed this is a charming rose, and its copper-red colouring makes it very distinct. A.M., R.H.S., October 13. Messrs. S. McGredy and Son, Portadown, Ireland.

Mrs. E. J. Holland.—A soft, rosy-pink, hybrid tea rose, of considerable beauty. A.M., R.H.S., October 13. Messrs. S. McGredy and Son, Portadown.

Mrs. Wakefield Christie Miller.—A large-flowered globular hybrid tea rose, of bright rose-pink colouring, shaded with silvery-pink. A very attractive rose. A.M., R.H.S., October 13. Messrs. McGredy and Son, Ireland.

DRACÆNA BRAUNTI VARIEGATA.

An elegant and useful dracæna, with leaves freely variegated with bright yellow. This is sure to become a favourite plant. A.M., R.H.S., October 13. Messrs. W. Cutbush and Son, Highgate.

CHRYSANTHEMUMS.

Kathleen Lambrick.—A soft rosy-mauve Japanese variety that appears to be admirably suited for pot culture, as the plant carried five good blooms in a seven-inch pot. F.C.C., N.C.S., October 7. Mr. W. Seward, Boston Road, Hanwell.

Mrs. J. Kempley.—A large Japanese variety of deep old rose colour and golden reverse. A pretty variety. F.C.C., N.C.S., October 17. Mr. W. Seward.

Master James.—A full-sized, solidly-built Japanese variety that is very effective; rosy-chestnut, with deep golden reverse. F.C.C., N.C.S., October 7. Messrs. H. J. Jones, Lim., Ryecroft Nursery, Lewisham.

Shanklin.—A well-proportioned and large Japanese variety, with broad florets of a pleasing blush tint, shading to white. F.C.C., N.C.S., October 7. Mr. M. Silsbury, Isle of Wight.

October Gold.—A very handsome and free-flowering variety that should prove very useful. Its colour is a deep and rich old gold colour. This is of Source d'Or type. F.C.C., N.C.S., October 7. Messrs. W. Wells and Co., Merstham.

Fee Parisienne.—A deep pink or mauve, decorative variety. It flowers freely, and the colour is enhanced by the silvery reverse. The plant grows about 2½ft. high. F.C.C., N.C.S., October 7. Messrs. W. Wells and Co.,

Nellie Riding.—This is a very pretty and useful single chrysanthemum of bright rich terra-cotta colouring. Very free, and a [illegible] addition. F.C.C., N.C.S., October 7. Messrs. W. Wells and Co.

RHODODENDRON MICRANTHUM.

A compact growing species from Northern China, and bearing terminal racemes of white flowers. Bot. Mag., t. 8,198.

BULBOPHYLLUM FASCINATOR.

A handsome species, with large pale [illegible] flowers, marked with crimson. Bot. Mag., t. 8,199.

DIDYMOCARPUS CYANEA.

An interesting species, native of [illegible] in the Malay Peninsula, and bearing [illegible] blue flowers. It has been grown some [illegible] at Kew, but has not proved a success. Bot. Mag., t. 8,204.

ERIGERONS.

Although the species of erigeron known to science are numerous enough to form a comparatively large genus, but few possess sufficient merit to justify their inclusion in collections of hardy plants, except they be of a very comprehensive character. The number of really good garden plants is so small that they can be counted on the fingers of one hand, and to these the general body of cultivators should confine their attention.

The finest of all the species for beds and borders is unquestionably the free-blooming and handsome Erigeron speciosus, of which there are two varieties of much merit. This species is now so well known in gardens that there is no occasion to it in detail or eulogise its merits. grown under favourable conditions ains to a height of about two feet, produces its daisylike purple-lilac in such profusion as to produce a rming effect in association with other herbaceous plants. The variety rbus, which has been in cultivation for years, differs from the type in the r size and more perfect form of the Quakeress, of which an illustration herewith, is a fine variety of introduction. This originated Mr. G. Davison, the able gardener at House, Worstead, the residence Petre. Mr. Davison, who has one of the most successful cultiof hardy perennials, selected this seedlings raised in the West- gardens, and has exhibited it occasions in his winning collec- Norwich and elsewhere in Nor- also has flowers of larger size than are those of the type, and they are somewhat deeper in colour and of fine form. Neither of these varieties differ so materially from the type as to enable those not specially acquainted with the erigerons to at once recognise the difference when cut flowers are placed before them without flowers of the type for comparison. When seen growing side by side, there is no difficulty in distinguishing them, and the superiority of the last-named form over the species is most marked.

The cultivation of this and other of the forms thriving in beds and borders is of the simplest. They require a moderately rich and deep soil, and previous to planting the stations selected for them should have a moderate dressing of well rotted manure, and the soil be broken up to a depth of eighteen inches. In the breaking up of the soil the manure, it need hardly be said, should be well mixed with it. Subsequently the soil can be enriched by annual top-dressing of stable or farmyard manure or artificial fertilisers, as may be most convenient. E. speciosus and its varieties can be readily increased by division, which can be accomplished in the spring or early in the autumn. It is a good practice to lift plants that show signs of a diminution of vigour, divide them into portions having four or five growths, and replant in fresh positions. This, of course, can be done in either of the seasons mentioned.

The other species of value for the garden include E. salsuginosus, a handsome North American species, attaining a height of about fifteen inches, and blooming freely, the flowers being of large size, and a soft mauve hue. This is well adapted for planting along the front of the mixed border, and also for broad ledges in the rock garden. E. alpinus grandiflorus, a pretty native plant bearing small purple-lilac flowers. E. mucronata, an Australian species, the ray florets white marked with pink at the tips. E. Roylei, a Himalayan species with blue-purple flowers. The three last-named are all of dwarf growth, and best suited for culture in the rock garden.

G.

ERIGERON SPECIOSUS VAR. QUAKERESS AT WESTWICK HOUSE.
Flowers large and finely formed; the ray florets purple-lilac and the disk florets bright yellow.

AMONG THE ALPINE FLOWERS.

"Swift summer into the autumn flowed,
And frost in the midst of the morning rode,
Though the noonday sun looked clear and bright,
Mocking the spoil of the secret night."
—Shelley.

Alpine flowers give us their sweetest pleasures early in the year, and they, as a rule, have their mission of brightening our gardens in the spring and early summer time. Thus autumn is by no means a welcome time for the lover of the plants of the rock garden, save, possibly, that it tells him that the spring is on its way again to bear him her precious cargo of delightful flowers and charming leaves. Yet the autumn is not devoid of pleasure to those who have many such flowers. Even though those which naturally bloom in autumn are few and far between, there are others which gave us their beauties earlier in the year which have once more come into bloom, and welcome are their flowers, even though they have come, as it were, "out of due season." It is no slight pleasure to see these blooms at a time when days grow short and the sun wanes in strength, even although in this October we are having some compensation for the dreary September time through which we have passed.

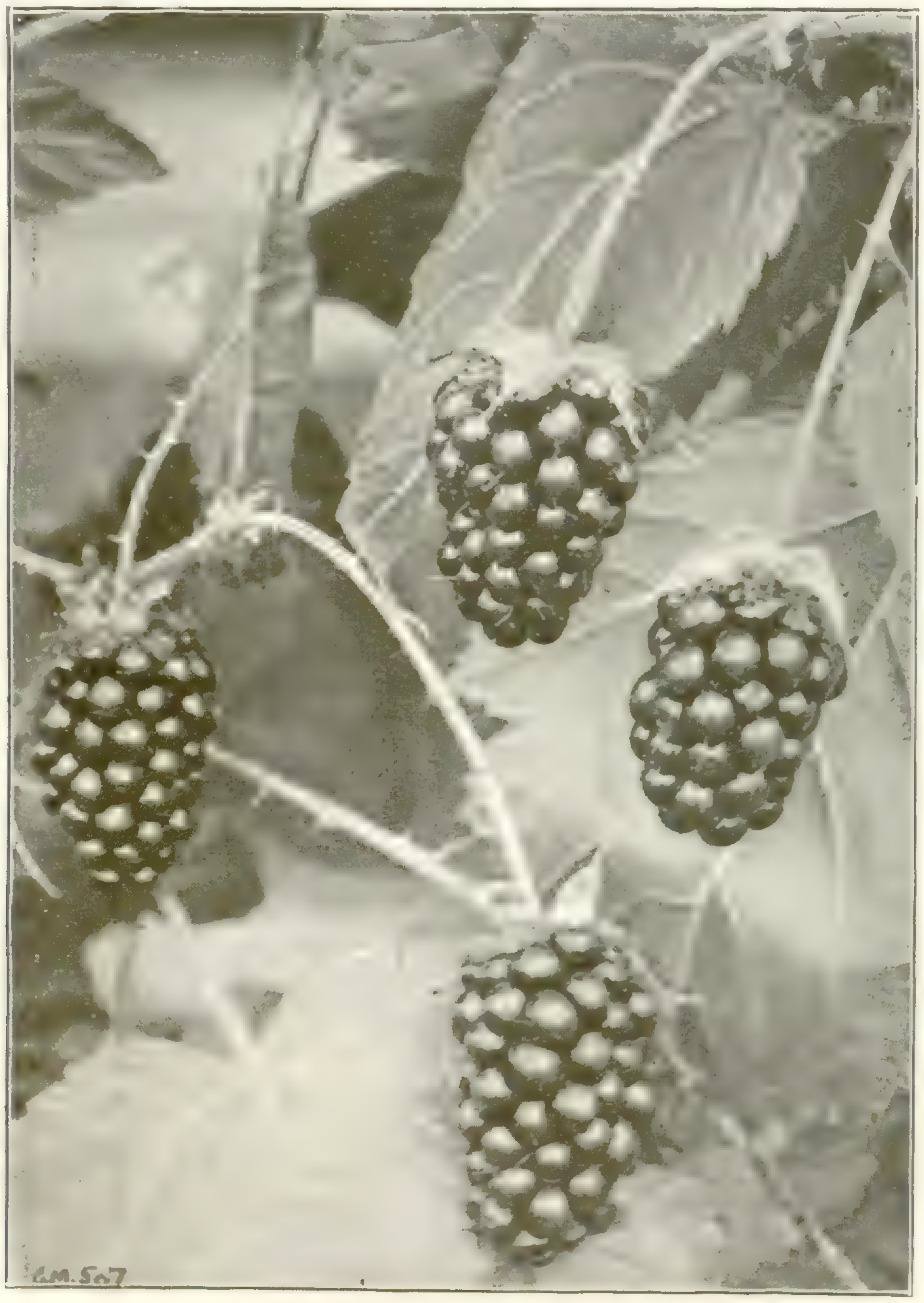
But there are also flowers of the time

plants which have their mission to serve in the brightening of the gardens at this season, even should the spring and summer bloomers fail to give a second show.

None of these are more delightful than the autumn crocuses, and of all these none is so charming as the fine

Crocus iridiflorus

of which I have spoken before in these pages, but which cannot have its value too prominently or too frequently brought before one's readers. It is a gem among crocuses which come in autumn, and it would be difficult to find for it a rival at any season, even in the gay crocus time of spring when the earth is aglow with the various species and the noble Dutch varieties of Crocus vernus, or the shining flowers of the golden yellow one. Crocus iridiflorus is unique among the race in respect of its form, inasmuch as it is really iris-like in its shape, and is a standing witness to the discernment of the botanist who called it "iridiflorus" or "iris-flowered" crocus. Then its colouring is so beautiful, of a fine purple-lilac, set off to the highest by the lovely white anthers, the combination forming a tout-ensemble almost unique among these flowers. Its form caused one author to consider that it should form a separate genus, to be distinguished as Crociris, but there is nothing structurally to differentiate it from the other crocuses of the autumn and spring. It is a true lowland plant, and one, too, which is not devoted to the sunshine, seeing that it grows naturally in woods and thickets in the district bordering on the eastern Carpathians, where, according to Maw, who gives the information regarding its habitats, it grows in chalky alluvium. This gives a hint to those who have such a soil or one to which some chalk or old lime can be added. Crocus iridiflorus is variable, and I have in my own garden several very beautiful forms, besides the type and C. iridiflorus majus, a fine variety. Some of my plants were raised and selected by the late Mr. James Allen, and these give a succession of bloom for a considerable time. As this is being written some are past, but others are in full blow, and very beautiful are they. There are others in bloom, such as C. lævigatus, C. speciosus and its variety Aitchisoni, the form of C. sativus called autumnalis, C. pulchellus, and one or two more.



A NEW HYBRID FRUIT—THE LOWBERRY.
The result of crossing the Loganberry with the Blackberry. A.M., R.H.S., July 7.
Messrs. Hugh Low and Co., Enfield.

The Double White Meadow Saffron.

One never grows tired of the double white meadow saffron, by which name we call Colchicum autumnale album fl. pl., an old flower, but one which is still too high in price to be planted by the dozen by all save a few with well-filled purses. The double white colchicum increased more slowly than the other double varieties, and it is hence much higher in price than they. It has been in my garden for many years, and its blooming is always looked forward to, so distinct does it look near the front of the border with its narrow ribbon-like segments of ivory white. It is always admired, and my clump lasts a wonderfully long time in flower, although in September, when the first flowers opened, they had a sorry time indeed with drenching rains and furious winds.

The October Snowdrop.

The first of my snowdrops to appear this year has been one received through the kindness of Mr. D. Melville, of Dunrobin, more than two years ago. It is one of the octobrensis forms of Galanthus nivalis, of which there are several of more or less worth. This particular one, which is practically fixed in its October blooming, is a bold variety for a group generally small and of less appearance than some of the spring snowdrops, and it is now charming with its green stem, and its snowy flowers with their green ovary drooping from the stems with all the grace and beauty of the flower so familiarly known to us as the "firstling of the infant year." It is all very well for those who know them not to speak of the autumnal blooming snowdrops as "unnatural and unseasonable," but to those who cultivate them they are welcome flowers, growing in their affections from year to year, and helping to shorten over the long interregnum which too often interrupts our enjoyment of the garden because the flowers are at rest.

The Hairy Gargano Bell-flower.

It is always worth while to recall to the thoughts of one's readers particularly meritorious flowers, especially at a season when flowers are scarce, and I thus venture once more to pen a word or two in praise of the hairy variety of the Gargano bellflower, whose name is Campanula garganica hirsuta. It is such a delightful little plant with its greyish foliage, and its charming light-blue flowers, together with its moderately trailing habit, that it is always a charming thing when in bloom, and never more so than in these October days, when the plants are covered with hoar frost in the morning, and are lightened up by bright sun through the day. This variety of the Gargano bellflower is a much finer thing than the typical Campanula garganica, and no one who has ever grown it in the rock garden is willing to discard it for anything else, however rare. Something else may have to be cast into the outer darkness, but never this variety of the Gargano bellflower.

Other Flowers.

Were it not that the considerations of space are imperative, one might talk at some length of sedums showing plenty of second bloom; of hardy heaths than which no flowers are more beautiful in the rock garden in autumn; violas in plenty, although not so full of flower as in the halcyon spring days; arenarias, achilleas, hardy crane's, and heron's bills; some potentillas, a few alyssums; the neat little Polygonum vaccinifolium, with its small spikes of pinkish flowers; a few St. John's-worts, and a number of others, trifling in themselves as they may appear, yet combining to give us some gleams of brightness to show that the rock garden, though not like the border, glowing with sunflowers and asters, is yet full of pleasure to those who love these little denizens of the mountains.

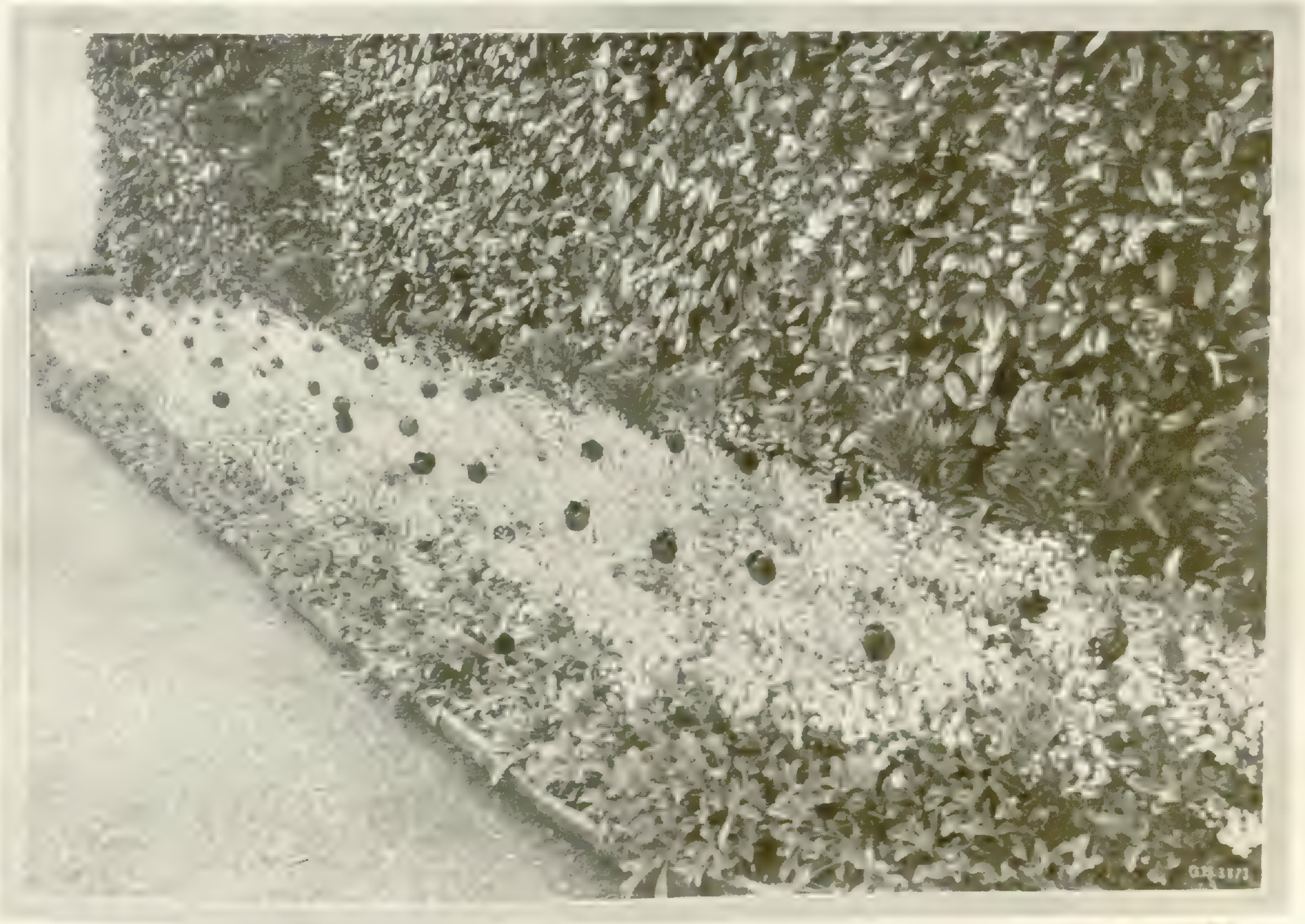
S. Arnott.

Snails and Water Lilies.—Mr. G. S. Saunders contributed leaves of Nymphæas eaten by water snails to the R.H.S. Scientific Committee, and in the course of the discussion Mr. Hudson stated that he had found that an insecticide forced into the water so that it would rise just underneath the leaves had proved an effective remedy against the attacks of these pests.

A NEW BERRY.

A few years ago it seemed possible that any number of new berry fruits might be forthcoming, as the success of the loganberry set hybridisers to work in the hope of securing other distinct and useful novelties. Then there were new introductions, or old plants brought into prominence, and we had various blackberries, the aforesaid loganberry, the wineberry, the so-called strawberry-raspberry, the Mahdi, and possibly others also. Then there came several years of quietness, so far as new berries were concerned, but now a newcomer of considerable excellence has appeared on the scene, and it has been called the Lowberry. Messrs. Hugh Low and Co., of Bush Hill Park, Enfield, have introduced this new fruit, which is the result of crossing the loganberry with the native blackberry. The fruits were first shown at the Holland House Show, in July last, and on that occasion an Award of Merit was granted by the Royal Horticultural Society. The fruits then staged had been produced under glass, and were from one to one and a-half inches long, very deep black and extremely pleasant in flavour. This hybrid appears to be a good grower and free fruiter, and it is interesting because of the length of the fruit stalks. The illustration herewith gives a good idea of the form of the fruits, and shows that they are very [illegible].

Turnips.—When it is seen that the roots are large enough for use they should be pulled up and put into a pit, for if left in the ground too long they become woolly, and useless for culinary purposes. Garden swedes are very useful, and provide a little extra variety for the winter, but it is necessary to obtain a good strain of seed, as the ordinary field swede is always too strong in flavour, and also "gritty."—T. W. B.



[Photo: J. E. Tyler.

A BORDER OF DOUBLE FLOWERED WHITE ARABIS AND SCARLET TULIPS.

COMBINATIONS OF SPRING FLOWERS.

We have been careful to constantly keep before our readers the desirability of associating with the spring-flowering bulbs used in filling beds and borders in the open suitable fibrous-rooted plants that bloom at the same season. There are two reasons for our having consistently advocated the practice, and these can be stated in a few words; the first being the improved appearance of the beds and borders during the winter months, and the second the greater beauty and charm of the effect produced when the bulbs are in bloom.

As so well known to all who have had experience in the employment of bulbs in the production of colour effects in the flower garden during the season of spring, beds that are filled with bulbs present a bare appearance throughout the late autumn and winter months unless carpeted with plants that retain their foliage throughout the year. This bareness is nowhere pleasant, but when the beds are contiguous to the dwelling house, and constantly under the eye, it is very objectionable. By planting the beds with arabis, silene, myosotis, dwarf wallflowers, or other suitable subjects, and putting them close enough together to form a moderately thick carpet, they will present a pleasing appearance from the time of planting the bulbs until they come into bloom. When this stage is reached the fibrous-rooted plants will be growing freely, and yielding of their floral beauty, and, provided the combinations have been formed with due regard to colour harmony, the general effect will be greatly enhanced.

There is no great difficulty, so far as relates to the association of spring-flowering bulbous and fibrous rooted plants, in the production of colour contrasts that will satisfy artistic perceptions, and evidence in support of this assertion may be readily obtained on all sides during the spring months. The two points to observe are the use of fibrous-rooted plants that will when in bloom be of such height as to carry the flowers of the bulbs well above them, and the combination of colours that will harmonise. The illustration given herewith depicts a border furnished with scarlet tulips and the double white arabis, and one can readily see that with its glossy green background the display was highly attractive. The effect would, no doubt, have been better had the tulips been more thickly planted, and, generally speaking, all the bulbs used in spring displays should be planted closer together than is usually the case. There is no occasion to write at length on colour contrasts, as for our present purpose it will suffice to state a few rules that should have attention in associating the two classes of plants under consideration. On a carpet of white-flowered plants hyacinths and tulips having pink, rose, scarlet, or lemon-yellow flowers, present a charming appearance. On a light blue carpet, such as that formed by a light blue forget-me-not, white, pink, or pale yellow flowered bulbs appear to the greatest advantage. Beds having a golden carpet, such as that formed by Alyssum saxatile, or dwarf wallflowers, should be planted with scarlet, crimson, and bronze-coloured tulips. For crimson carpets, such as those formed by dark wallflowers, primroses, and polyanthuses, yellow tulips and daffodils will be preferable. A pink carpet, such as that of Silene pendula compacta, will form a pleasing contrast to white and purple tulips.

We need hardly add that the sooner the planting of both bulbous and fibrous-rooted plants is completed after this date the better are the results likely to be. G.

THE FUTURE OF THE HYACINTH.

The past few years have seen a great decline in the "cult of the hyacinth," especially in England. Narcissi and tulips have indeed ousted these one-time favourites from their high position, until at the present time there is but comparatively little of the public interest vouchsafed them. Times have changed, and one seldom sees the groups of hyacinths exhibited at the spring shows, such as were shown in years past by Cutbush, and Paul, and Bull. The probable reason for the decline of the hyacinth is furnished by the change in public ideals of floral beauty, and in a lesser degree by the wondrous improvements which have been made among the daffodils and narcissi. Flowers, to be popular nowadays, must be specially adapted for cutting purposes. The day of the pot plant has, to a great extent, gone by, and the need of the moment is light, graceful, and lasting blossoms for vases, etc.; therefore the hyacinth has dropped from its high pedestal.

It must be admitted by all flower lovers that our present subject, although very showy, and boasting of a glorious range of colouring, falls far short of present-day requirements. It is heavy in structure, and even when grown as a pot plant, it is far from satisfactory, as its perfume is exceedingly heavy and oppressive, a fact which bans it from the boudoir.

To all intents and purposes the hyacinth may be regarded as a part of Holland itself. Holland is essentially the home of the hyacinth, for there it has reached its highest development; there have been grown the bulbs which in their day have delighted the gardening world, and there a host of varieties first saw the light. There is no doubt that the hyacinth was a leading factor in fostering the Dutch bulb industry, and its present decline has hit the bulb growers of Holland very hard indeed.

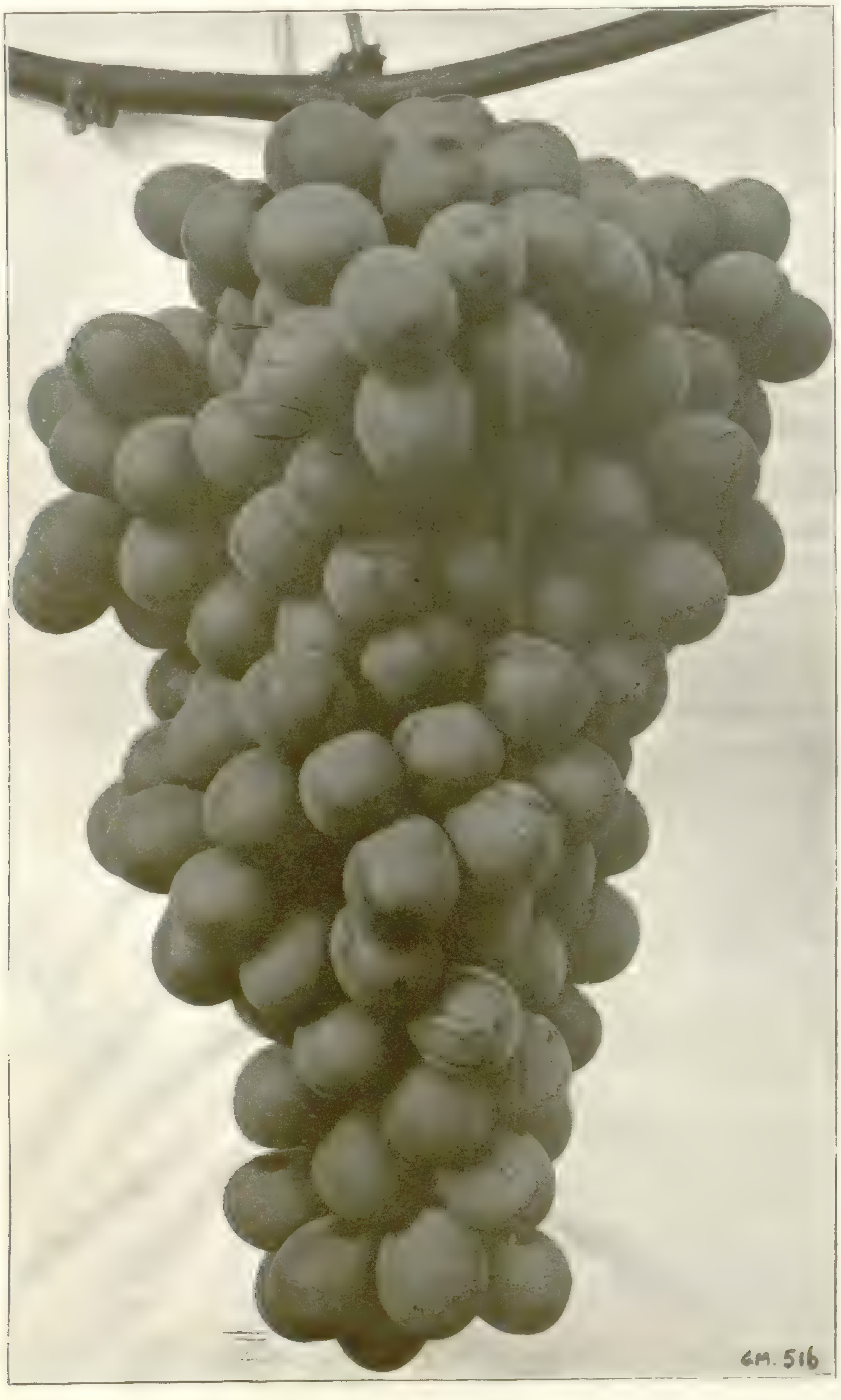
Many importers of Dutch bulbs could readily tell of diminished sales of these bulbs (hyacinths), and moreover where they previously dealt largely with first-sized bulbs in named varieties, the principal demand now is for the second and third sized bulbs. And when you add to this the fact that in the culture of tulips and daffodils, both England and Ireland are establishing themselves as successful competitors to Holland, it must, indeed, be admitted that the lot of the Dutch grower is not a particularly happy one.

A noteworthy endeavour is being made to combat this state of affairs. The Dutch Bulb-Growers' Society has taken the matter up, and to stimulate greater interest among English customers it is offering cash prizes for collections of hyacinths, to be staged at the Royal Horticultural Society's exhibition on March 9, 1909. The prizes for amateurs and gardeners in private gardens approximate in value about £50, and the classes are for "eighteen hyacinths in single pots," "twelve in single pots," and "four pans each containing ten bulbs." Whether this prize scheme will have the intended effect in reviving a new interest in these bulbs it is difficult to say, but I should very much doubt (even if such an object were achieved) that it would prove lasting.

Be this as it may, I certainly wish for a good entry, and a keen competition for these prizes, if only to show to our horticultural friends in Holland that we in England fully appreciate the good work they have accomplished among bulbs generally.

To enumerate a list of the finest varieties would tax the keenest mind, and the readiest pen, and in view of coming competition, it would be wise to forbear. In closing, I may refer to three new hyacinths of merit. These are Correggio, a glorious satiny pure white, grand in all respects, early in blossom, with a fine spike, and the bells large and well formed. La Victoire, a grand variety, with bright carmine blossoms, produced in giant trusses, well formed, and early flowering; and Queen of the Pinks, a first-rate sport from King of the Blues. This is a deep rose-pink, with large satiny bells, and rather later in blossoming than the two preceding varieties.

One point the Dutch Bulb-Growers' Society has insisted upon in view of the competitive exhibits, is that "single varieties only be shown." This seems a very wise decision, for if the hyacinth is to be lifted again into public favour it must be by means of the single forms, for the doubles, with their ultra-heavy effect, would defeat the end in view. P. S. H.



NEW BLACK GRAPE PRINCE OF WALES.
(F.C.C., R.H.S., Sept. 29, 1908.)

NEW GRAPE PRINCE OF WALES.

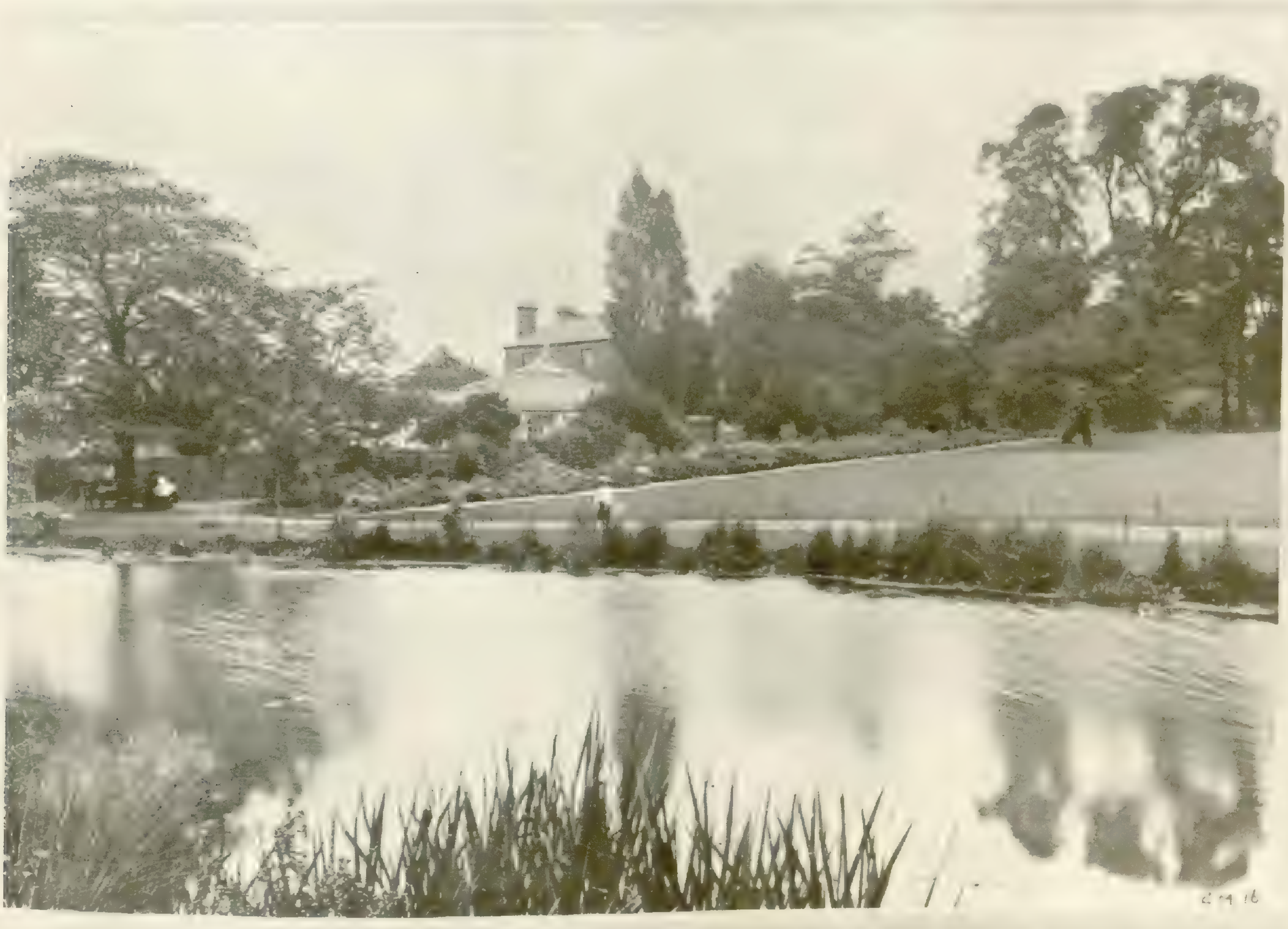
This fine new grape has been brought into special prominence during the present autumn, and, as a consequence, its merits are now likely to become more widely appreciated. Prince of Wales is a handsome grape, deep black, with roundish-oval berries, and elongated, shapely bunches that taper slightly. The newcomer is a sport from Mrs. Pince's Black Muscat, and it is of fine quality, with a distinct Muscat flavour; moreover, it is an attractive exhibition grape. Prince of Wales was introduced a few years ago my Messrs. James Veitch and Sons, Chelsea, and it gained an Award of Merit, but when shown in the collection of grapes brought up from the Royal Horticultural Society's gardens at Wisley to the Horticultural Hall, on Tuesday, September 29 last, the variety secured the higher award of a First Class Certificate. The bunch we now figure is also grown by that well-known cultivator, Mr. Lintott, gardener to Sir Walpole Greenwell, Marden Park, Caterham Valley, who exhibited it successfully on the occasion of the Great Fruit Show, on October 15 and 16.

WATER SCENERY IN PUBLIC PARKS AND GARDENS.

It is rarely controverted that water scenery is well-nigh essential in the proper design and upkeep of a public park or garden of any pretensions, and yet, not seldom, it is omitted because of its cost. When considering the cost of water scenery one point is frequently forgotten, i.e., the beneficent influence of water, in the form of pond, lake, or stream, upon the surroundings. With few exceptions plants and trees used in parks and public gardens do well in the vicinity of water, so that the water not only adds to the interest and beauty of the place, but also aids the growth of plants near it. Of course, since water gardening has become so popular, the attractions of water scenery have been materially increased. Fortunately the plants needed to beautify water margins, or even the surface of the water, are not really expensive, and the lovely results that follow their careful use are full justification for the expense incurred.

At this season of the year it is usual to commence alterations and additions to parks and gardens, private and public, hence this little plea for the inclusion of water scenery in any new operations, wherever this is practicable. It is not given to everyone to secure such a splendid [illegible] of water as that in Roath Park, Cardiff; or the long stream and falls found in Jesmond Dene, Newcastle; or the charming, well-furnished lake at Kew. But where there is a will the way can mostly be found. In these pages numerous examples of both large and small views of water scenery in the park and garden have been given, and now another is presented, where little else but the commonest plants have as yet been pressed into service. A simple little lake or pond is the one at Ruskin Park, one of London's newest open spaces, but it, like the famous Ruskin Avenue, gives character and beauty to the place, and helps to make this one of the most interesting of our metropolitan public gardens.

C.



WATER SCENE IN RUSKIN PARK, LONDON.

AN OCTOBER REVERIE.

Perhaps the one season of the year when the gardener can, so to speak, lay aside his armour and put his sword into the sheath, is from the middle to the end of the month of October. His apples and pears are all garnered, and arranged on the fruit-room shelves, his late grapes are ripe, his peaches and nectarines gone, and his flower garden is over for the summer. The lawn mower and scythe are put away, the peas are a pleasant recollection, his potatoes are all harvested, and, beyond a stray one or two, his melons are done, and small fruits are forgotten; in short, it is a transition period between one season and another.

It is quite true the chrysanthemum season is just commencing, and we wonder how our winter carnations will flower, but still it is a very interesting time, as the memory is still fresh with our successes and failures of the past season. The days are shortening fast, and the longer evenings give time for reflection. It is really wonderful, when we start our early vinery in November, and our early peach house about Christmas, or a little after, how soon another season is upon us.

In country establishments the winter is rather a dull time for the gardener, and his young men in the bothy; the garden labourers arrive later, and leave work earlier as the days shorten, and this adds to the quietude of the surroundings. Long evenings were rather monotonous when the only illuminant was a tallow candle, and the snuffers were an old pair of vine scissors, though some young men could remove the superfluous wick with a sharp, dexterous pinch with their finger and thumb. Nowadays good lamps prevail, if not gas, and in one case I know the bothy is electrically lighted, which is much more conducive to the young men's comfort, and also more encouraging for them to study the "G.M." and good gardening books, as with the old flickering light they could more easily see to play dominoes or cards.

By the middle of October the gardener has all his charges safe in either houses or frames, so that he can cover them or shut them up as the weather requires, out, speaking generally, he is not troubled with much frost or the labour of excessive firing till towards the end of the year. Even with the orchid grower October is, so to speak, a restful time, shading in abeyance, less damping down, less watering and syringing—every condition, as far as possible, to induce rest. Surely with such a strenuous life as gardeners live it is good to have a little breathing time once a year, so there is little wonder that after the rushing torrent of summer work they welcome the comparative quietude of October.

Cheshire. W. M.

Jerusalem Artichokes.—These have now completed their growth, so the stems may be cut down and a portion of the crop lifted. The tubers should be graded, and the planting sets picked out for next year's crop. It is important to gather up all the small tubers, for if left on the ground they will become covered with soil, and be a nuisance next season. The tubers for present use, and also for planting, may be stored in clamps the same as potatoes.—T. W. B.

CHRYSANTHEMUMS.

Hints to Young Judges.

Every year sees the advent of new judges, as it should do, but those who have not previously acted as judges must of necessity feel some trepidation when making their first award, especially if the class is well filled with exhibits close in point of merit. Exhibits in some classes judge themselves, but when the competition is keen, it is then that a good method of adjudicating is beneficial. Often, too, much more difficulty is experienced in finding the third prize than the first. This class of prize deserves as much attention as does the first.

The enormous increase of varieties in the Japanese section during the last twenty years alone requires the adoption of a quick, and at the same time a sure method of dealing out justice to exhibitors.

In the case of cut blooms prizes are generally offered for a specified number of blooms, and not for a stand collectively irrespective of its number. Every bloom should be judged upon its individual merits or why ask for "Twelve Incurved distinct"?

There are various methods adopted of arriving at a definite issue as to the relative merits of exhibits, and I contend that all judges should be able and willing to give the reason why Stand A is better than Stand B. If a judge is able to give a reason why he has made an award, then there is little cause generally to think a mistake has been made in the awards. I am a believer in giving exhibitors the information they require as to their position in a competition, because it is very often a lesson of much value to them afterwards.

One cannot get away from the fact that adjudicating on the many blooms placed before the judges is very much a matter of individual opinion and taste. For instance, one judge may consider the broad incurving florets of some variety to represent higher culture than his colleagues will admit, while the latter may have a leaning to varieties with semi-drooping, and possibly narrow florets. One very strong point to observe is that those varieties extremely difficult to produce should have full weight, and here a practical knowledge of culture is an advantage to the adjudicator.

There are two methods of judging in vogue, i.e., pointing and comparison. Twenty years ago, when varieties were less numerous, we found the same varieties in nearly every stand, and comparison under such circumstances was possible; but now, with such a vast number of varieties in competition comparison does not do justice, except, of course, in two stands that are wide apart in quality. Apart from the justice of the case, in close competition, the comparison method entails much unnecessary labour, as well as loss of time. How can any set of judges carry in their mind's eye, as it were, the merits of a stand of twenty-four blooms, much less forty-eight or sixty, especially when there are as many as fifteen competitors? At Birmingham once, I had twenty exhibitors in a forty-eight-bloom class of Incurved and Japanese. To me it seems a waste of time to carry a stand of blooms about a show for the purpose of comparison. Some experts select what they think is the best stand of blooms in a certain class, and place it in front of all others in competition with it; very often a better is found, and the first must then be replaced, and so on goes the wearisome task of finding the winner. Surely this cannot be the easiest, quickest, and most accurate method of dealing with competitive exhibits.

Some judges have a weakness for giving equal prizes to stands close in point of merit. This is a doctrine that I strongly condemn. It is an easy way for judges to avoid a knotty point, and they think such a decision will please the competitors. I do not think it will; there is a first always, and it should be found.

It is a safe thing to say that no person can select two sets of twelve blooms and make them really equal, and for this reason I do not agree with the granting of equal prizes.

How to judge the blooms should be my next point. I have spoken strongly against the comparison method and those who complain should produce a remedy. In all well-arranged shows the exhibits in one class are placed together, or as nearly so as possible, except under exceptional circumstances. Judges should make themselves acquainted with the rules of the particular society they are acting for, such as classification or conditions, remembering they are not there to make laws, but to administer those made by the society they are acting for; even if, in their opinion, these are faulty. A walk round the room is then taken, and this may prove of much value later on, as it gives the key to the class of blooms to be dealt with, and may guide an adjudicator in fixing the scale of points. I have known judges fix the maximum at too low a rate when dealing with the first set of blooms, and later, they find superior specimens, and their previous calculation is upset. This cursory glance enables a judge to understand what he is likely to encounter, and enables him to allocate the points accordingly. A mere glance at some of the competing stands is sufficient to know that they will not require closer scrutiny. Those that necessitate a closer inspection are noted in some way. If a second glance is not sufficient to settle the position of each, then the individual merit of each bloom is considered.

The judges, generally two in number (and here let me say, I think two are equal to three in a set; very often one has to deal with large classes single-handed, but this involves a serious responsibility, especially when valuable prizes are hanging in the balance), fix upon a maximum number of points, or the committee desire them to adopt their standard of points, which may be twelve. It matters not whether the points are upon a high or a low basis, the result is the same, but perhaps the twelve point maximum is more pleasing to the exhibitor when they see their blooms gain ten or eleven points, even if they do not gain the coveted award.

Now comes the question of allotting the points. If the new judge is a cultivator and an exhibitor he will be conversant with the properties of chrysanthemum blooms, such as size, depth, solidity, breadth of petal, finish, freshness, form and colour. If he is not a cultivator he should be posted up in these points. Size is not determined by diameter alone, some exhibitors take too much note of extra wide flowers, But too often these lack depth, which is of primary importance; or again, it may display a want of freshness, density of colour for the variety, or the florets may be narrow and lacking in substance. Such defects deprive it of the maximum number of points, and seldom indeed do we find maximum blooms, as generally there is a defect of some kind. On a low point basis half points are valuable, and I have even known quarter points brought into use. Some may say this splitting of points is ridiculous. In my opinion, it is the only way of dealing out justice accurately. A bloom may be too good for five points, it is not up to maximum, and five and half is then given, and so on, throughout the stand; and when a total is then made of the points, seldom do two stands come equal. If they do, then the setting up of the blooms and arrangement of colour should be taken into consideration. On the high point basis half points are not necessary.

There is a growing tendency amongst exhibitors to stage blooms not fully expanded, and while this may be preferable to blooms that are stale and display a lack of colour for the variety, such young blooms cannot merit the maximum.

When it is determined that a number of stands, perhaps four, have to be pointed, I write a letter or a figure in pencil on the class card or name card, and make a corresponding mark in my note-book, which is most useful for future reference. Instead of taking each bloom separately from left to right beginning at the back row, I commence at the left-hand end of the stand, taking the blooms in rows of three, upwards or downwards, it matters not which, so long as the practice is the same throughout the show. I would here impress upon beginners the importance of preferring quality in a flower, such as depth, richness of colour, shape, and a well-filled centre; in fact, a fully-developed bloom in which the art of "timing" has been shown thoroughly, in preference to one that has but mere size of diameter. Perhaps if I give one example of pointing, this article on a difficult subject may appear more clear to the uninitiated; even exhibitors like to know how their blooms were dealt with for future experience.

The front row bloom is a full-sized one of Reginald Vallis, but has lost that richness of tint that is so pleasing in this variety, to this is given four points on the lower basis. The middle bloom lacks size, but is in every other respect a perfect one of Bessie Godfrey; to this is given five and a-half points. The back row bloom is a full-sized one of Mrs. A. T. Miller, but the lower florets are stale; to this is also given five and a-half points, making in all fifteen points, and so on, until all the rows are done. In the case of an equal number of points being given to two stands, and it is felt they should be gone over again, it is a good plan to start from the opposite end, and should they again be equal, then the arrangement of colour and method of display will decide the difference.

Swanmore Park. E. Molyneux.

Beetroot and Carrots.—Where these have not already been lifted the grower should give his attention to the work. Both these useful roots should be taken up with care, not bruising them in any way or they will not keep. They keep firm if placed in clamps outside, with a covering of straw and a fair thickness of soil on the top of them. —T. W. B.

Winter Moth.—No time should be lost in placing a band of Willesden paper round the stems of standard trees, etc., and dressing this with prepared grease to prevent the wingless females ascending the trees. The grease should be renewed at intervals. In this way a great number may be caught. This prevention, together with a good spraying with caustic soda, will prove very efficacious. The latter cleanses the trees from mussel scale and other injurious insect pests, but it must be carefully used and kept from the skin and clothes, etc., as it is very powerful and burning.—H. Markham, Wrotham Park, Barnet.

SOME USEFUL EXHIBITION ROSES.

When a boy at an elementary school gains a medal for regularity of attending, the credit may be wholly or partly his own, but in nine cases out of ten it is to the influence of his parents that he really owes his position; it is the parents rather than the boy who should have received the medal. In other words, the scholar owes his position to other influences in addition to his own good conduct. And so it is with a rose analysis.

In compiling a list of exhibition roses there are contributory circumstances to which the rose owes its position in the list such as is here given, the chief one being the number of plants grown of each variety. Of course, this plays an important part and will naturally be borne in mind when examining the list, but at the same time we must recognise that unless a variety is a good one, it will not be grown in greater numbers than others.

As has already been explained in former years, the subjoined list is based upon the roses staged by the exhibitor during the season of 1908. At each show, as soon as the judging is over, and if time permits, the names of the roses staged are taken down—a sort of rose attendance is compiled—and at the close of the exhibition season the roses are tabulated. It is not a table made out at one particular show; if that were done we should have a preponderance of early or late-flowering varieties, according to the date on which the list was made. This table, on the contrary, is based on the roses appearing in an amateur's exhibition stands at shows ranging from June 24 to August 4; at early, mid-season, and late summer shows respectively.

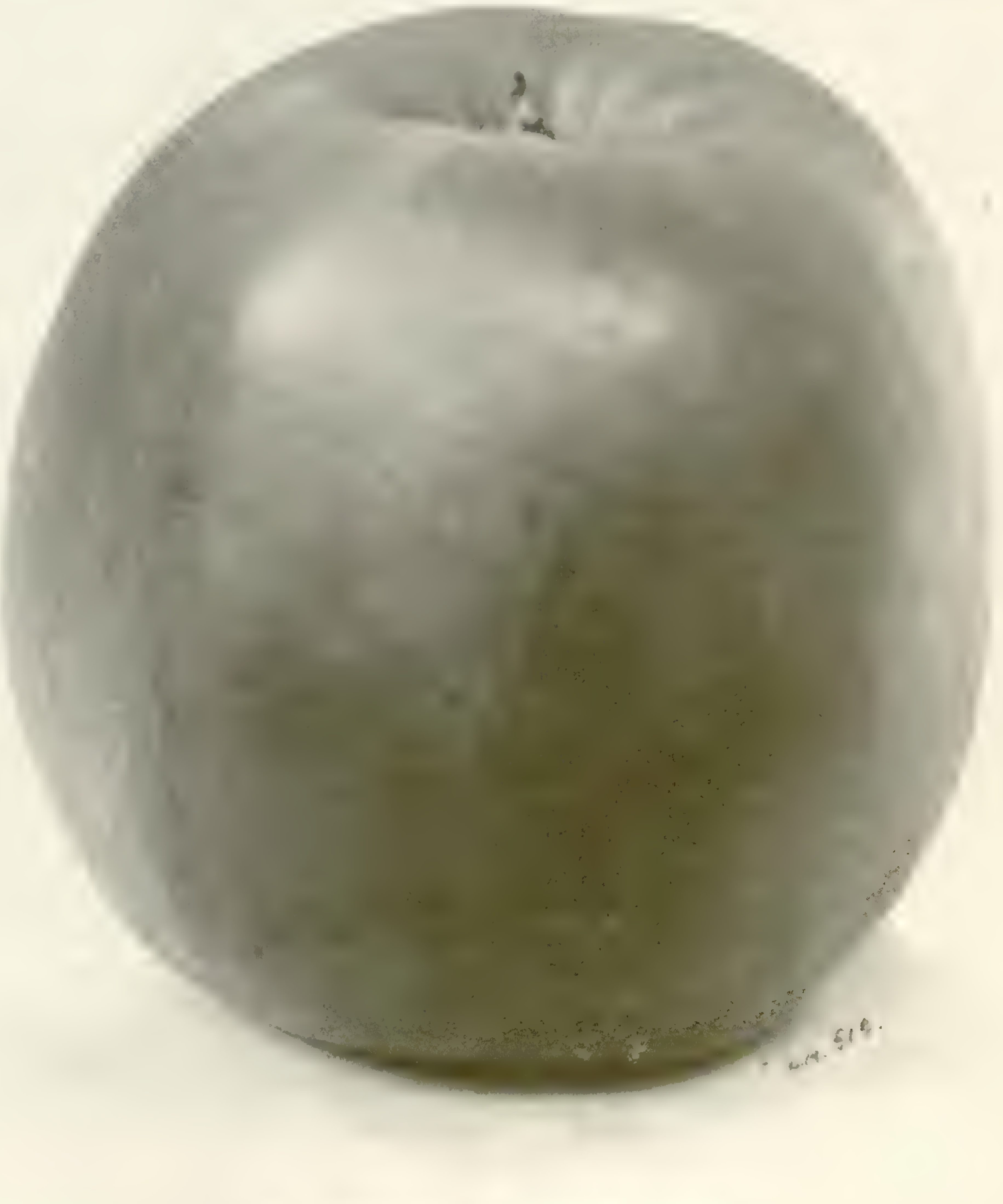
Before giving the list, let us offer a few remarks on the premier nine varieties; those that have obtained double figures. With two exceptions, A. K. Williams and Mrs. John Laing, all are hybrid teas. A. K. Williams owes its position to its colour and form, very few, if any, of the flowers this year being up to the average size. Another thing to be noticed is that with the exception of A. K. Williams and Mildred Grant, all are free-flowering varieties equally appropriate for the garden as for the exhibition bench. Early and late, one can always cut blooms of Dean Hole, Bessie Brown, Florence Pemberton, Frau Karl Druschki, and Mrs. Theodore Roosevelt. These varieties are all very active, and give a constant succession of blooms well on into the autumn. We had bunches of Frau Karl Druschki, Bessie Brown, Dean Hole, Lady Ashtown, and Florence Pemberton at the autumn show of the N.R.S., and all except Mildred Grant found a place in the box of eighteen distinct exhibition varieties. So that would be a fallacy to think that an exhibition rose is not also a good garden variety.

Name.	Times Exhibited.	Name.	Times Exhibited
Dean Hole	24	Comte Raimbaud	3
Bessie Brown	22	Dupuy Jamain	3
A. K. Williams	19	Lohengrin	3
Florence Pemberton	17	Lady Moyra Beauclerc	3
Frau Karl Druschki	17	Earl of Warwick	3
Mildred Grant	14	Marshall P. Wilder	3
Mrs. John Laing	14	J. B. Clarke	2
Mrs. Theodore Roosevelt	10	Comtesse de Nadaillac	2
Lady Ashtown	10	Kaiserin A. Victoria	2
Helen Keller	9	Rosamund Gravereaux	2
Charles Lefébvre	8	O. H. Terks	2
George Laing Paul	8	Ben Cant	2
Beauty of Waltham	8	Suzanne Marie Rodocanachi	2
Mamie	7	Etienne Levet	1
Alice Lindsell	7	E. Y. Teas	1
Hugh Dickson	7	Col. S. R. Williamson	1
Souv. de Pierre Notting	7	Mrs. Harold Brocklebank	1
Mdme. Jules Gravareaux	6	Countess of Derby	1
Marquise Jean de Chataugneraye	6	Danmark	1
Caroline Testout	6	Freiherr von Marshall	1
Ulrich Brunner	6	Marie Baumann	1
Horace Vernet	6	Mdme. Constant Soupert	1
Farben Konigin	5	M. H. Walsh	1
Her Majesty	5	Mdme. Joseph Hill	1
Gustave Piganeau	4	Marie Corelli	1
Francois Michelon	4	Mrs. E. Mawley	1
William Shean	4	Le Havre	1
White Maman Cochet	4	Muriel Grahame	1
Mrs. W. J. Grant	4	Killarney	1
Papa Lambert	4	W. E. Lippiatt	1
Maman Cochet	4	Avoca	1
Mrs. John Bateman	3	Princess M. Merchertsky	1

JOSEPH H. PEMBERTON.

NEW APPLE ENCORE.

This new apple appears likely to be one of the best of the varieties raised by Mr. Charles Ross, of Welford Park, Newbury. It is the result of crossing Warner's King with Northern Greening, and these parents have produced a strong-growing apple that is also a free bearer. Encore will take a prominent place among late cooking apples, as it has been proved to keep admirably, under favourable conditions, until June of the year following that in which it was gathered. The fruits are rather higher than wide, but they are rounded, and not ribbed. The greenish-yellow skin shows a slight flush on the sunny side, but does not take on a brilliant colouring. This is a fine cooking apple, and it won for Mr. C. Ross the first prize at the recent fruit show for the best dish of cooking apples in the "any other" class. Encore is to be distributed this season, and Messrs. J. Cheal and Sons, Crawley, are sending it out. We may add that Encore gained an Award of Merit from the Royal Horticultural Society in December, 1906.



NEW COOKING APPLE ENCORE.

PROFITABLE FRUIT GROWING for Cottagers and Small Holders of Land.—By John Wright, V.M.H. A Gold Medal Essay, written for the Worshipful Company of Fruiterers. Fully illustrated. Price 1s., by post 1s 3d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

SOWING ODONTOGLOSSUM SEED.—The general practice of keeping orchid seed until the turn of the days before sowing may be departed from in the case of odontoglossums, but it is well that only a portion of the seeds should be sown as they ripen, the remainder being held over until the end of January. If this line is followed it gives an opportunity of seeing whether or not the seed is germinating, and, if not, of sowing again later, when the days are lengthening and more encouragement is given to rapid germination. I have particularly noticed here that when seeds are sown in the late autumn they germinate even more satisfactorily than is the case during the hot summer months. This, I have no doubt, is owing to the condition of the atmosphere. I do not think that a frequent use of the watering can is altogether advisable when seed is in its earliest stages of germination, so the advantage of being able to retain the seed bed in a moist state for a long period lies with autumn sowing, and it is of considerable importance to those engaged in raising as well as to the young plants themselves. I have no doubt there would be many difficulties to be contended with in the matter of sowing seed of odontoglossums in autumn in districts affected by fog.

SUITABLE SEED BEDS.—The question of a seed bed is by no means an easy one to solve, because one finds that if you sow seed on, say, half a dozen seed beds, that is to say, half a dozen different pots in which odontoglossums are growing, it will generally be found that the seed altogether fails to germinate on some, while on others they grow practically as thick as mustard and cress. The uncertainty of having a suitable bed for germination of seed being so great, it is desirable to select plants that may appear to be the most suitable, and the only way to combat possible failures is to sow on a number of pots. It is best to select plants that have been potted some weeks previously, and all moss and growing material, which may have a tendency to overgrow and choke the seeds, should be removed. This being done, the seeds should be sprinkled thinly and evenly over the surface of the potting compost. Care should be observed to have no other plants handy when sowing the seed except those on which it is intended to sow, or the possibility of the light seed being blown on to other plants may lead to confusion of the records. It is remarkable how seeds are carried to the surface of other plants on which no seed has been sown, and it is still more curious to find that such seeds so frequently produce plants. I am often asked why we are so successful in raising seedling odontoglossums now, while in years gone by large quantities of seeds were sown by those who are the most successful raisers to-day, and yet they failed. Speaking from my own experience, it is a difficult question to answer. The only difference now in our treatment of odontoglossums is that we grow the plants a few degrees warmer, and include in our potting compost a small percentage of broken leaves. Otherwise, as far as I am concerned, there is no apparent reason to account for our present success. — H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

WALLFLOWERS AND MYOSOTIS.—In gardens where there are few if any plants of the usual forcing type, or means to do them justice, there is no need for an absolute dearth of flowers in spring, especially where there is enough glass to shelter a few of the early outdoor flowers. Take, for instance, the wallflower in its many varieties. A batch of these sown at the usual time, transplanted once, will new lift with good balls of soil, and if carefully potted up, and placed for a while in a cold frame to be brought on gently later on, will give a magnificent display of sweet-scented and valuable flowers. If well watered in and shaded for a few days they will scarcely lose a leaf. Then, again, we have the forget-me-not. Under the roughest treatment these plants will flower well if only afforded the shelter of glass, and it is amenable to forcing, so that a batch will cover a long season if only sufficient are potted up. The value of myosotis for forcing is not recognised as it should be. I find them most useful for many purposes when grown in small pots.

ROMAN HYACINTHS.—Where a batch of these was potted early in August or early in September, a few pots may now be taken from the plunging bed and brought into any fairly warm house or pit, where, in the course of from two to four weeks or so they will expand and fill the place with their delicious perfume. The Paper White narcissus will also respond to the same treatment, though not quite so quickly. If there is at hand a warm frame or plunging bed, some lilies of the valley may also be forced into bloom very quickly. At this early season the retarded roots force much more easily and quickly than others.

TUBEROUS PLANTS.—Gloxinias, achimenes, and tuberous begonias will now be dried off. They winter well in a suitable temperature if left in their pots and stood under the stages where they may be kept dry, but if the accumulation of pots is thought to be untidy, a better way is to shake out the various tubers and put them thickly in boxes of dry sand or cocoanut-fibre refuse, covering them well over. The gloxinias will require warmth in which to winter, and if they have to occupy shelves where they might be damped by the syringe, it is a good plan to cover each box of tubers with some stout material. This will prevent wet getting in among the tubers, and also help to prevent shrivelling.

SOLOMON'S SEAL.—This plant is most useful for the embellishment of the greenhouse in early spring. If the plants are forced gently into bloom, the long, arching shoots studded with thin, small drooping blossoms form an exceedingly pretty feature. They should be grown with several spikes in a pot. To obtain this result plants are lifted in the autumn from the open ground and divided into single crowns, selecting only those for potting that are stout enough to flower well. These selected crowns may be grouped in any way that is likely to be useful, about half a dozen spikes in a pot six inches or seven inches in diameter being convenient for general purposes. The forcing must be gradual, as if too much heat is used the spikes will be weak and greatly inferior to those brought on gently. The true Solomon's seal, Polygonatum multiflorum, is the best for forcing.—T. B. Field, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

AUTUMN PLANTING should be forwarded as much as possible while the weather is suitable, and before the ground has lost its heat, as root action is still active enough for cuts to heal over and new roots to be formed, thus enabling plants to start into vigorous growth in spring. Deciduous trees will now have lost their foliage sufficiently for transplanting; in all cases be very careful not to damage the roots more than is absolutely necessary, and when lifting start well away from the stem of the plant and work well under the roots. If a plant has only to be removed from one part of the grounds to another retain as large an amount of soil as possible. Cut off all damaged ends of roots with a sharp knife, and the wound will soon heal over. Use good soil on the roots, and very carefully work it between them; spread all roots out and in the proper direction for them to go. See also that everything large enough to require it is carefully staked, and if the ground is in the least dry give a good soaking with water after planting.

ROSES.—Now is the best time for transplanting these, and many of the foregoing remarks apply to them, but unless the ground can be properly prepared, do not attempt to plant. Planting in unsuitable soil or site is a waste of labour and money, though in some cases what is unsuitable for one kind is suitable for another. Noisettes, teas, and H.T.'s appreciate a lighter and warmer soil than H.P.'s, but all like a nice depth of good soil to grow in. Beds should be prepared at least two feet deep; if on a hot, gravelly bottom, a layer of clay three to four inches thick should be given, and well trodden down all over, raising the centre so that water will not remain on it; then fill with soil, and a good loam with a liberal addition of well-decayed manure is most suitable, except just on the roots, where soil without manure should be used. With dwarfs plant so that where the bud was inserted is just below the surface; roots of standards should be about three inches below the soil and evenly spread out. Where there are a number of beds much better results are obtained by massing one variety in each bed than if several varieties are used, as the habit of growth in each is more even, and the display of colour more effective. If pillar or climbing roses are being planted, whether singly, in groups, or on arches, prepare for them in the same way, and, if such are procurable, the best supports that can be given are yew tree stems with the branch stems left about six inches long. These will last a large number of years, and, sometimes, when large alterations are being made, a number of these can be obtained.

ROCK GARDEN.—Carefully clean over the rock garden, and remove any accumulation of fallen leaves. Some amount of thinning out or shortening back may be also necessary where growth has been very vigorous. See that no roots are unduly exposed by the removal of growths, and note if there are any vacancies for filling, either now or early in spring.

GENERAL.—In many gardens suitable sites may be found for planting bold clumps of pampas grass, Arundo donax, tritomas, yuccas, etc.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

TOP DRESSING FRUIT TREES.—This is a matter of great importance, and one that at this season of the year might be more generally practised, remembering that where such work has been properly carried out the trees have improved both in growth and in the quality of their fruits. In fruit growing it has often been experienced that the trees have grown freely from the time they were planted, and within a comparatively short space of time commenced to bear good crops of fruit in proportion to their strength, and continued bearing for some few years, but even under good management this vigorous and free-bearing condition suddenly comes to an end. This, in many instances, is due to the soil having become exhausted, hence feeding the roots, and top dressing when once the trees begin to bear good crops, especially if the soil is rather light, should not be neglected. Good maiden loam or turf from old pastures, is generally recommended for all kinds of fruit, but sometimes this is, to the inexperienced, a most deceiving material, which may be too light, or just the reverse. That of a brown fibrous character should, if possible, be obtained, and if stacked for twelve months so much the better; all fruit trees, if needed, may be top dressed at this season with advantage. For pears on walls remove several inches of the top soil, using a four or five-tined fork; if the roots are near the surface, as they should be, less soil need be removed, but if not, then reach down to the roots and bring some of them nearer the surface, and relay them in the new soil. Good dressings of a suitable compost are most essential if the trees are expected to keep on bearing. Old lime rubble, wood ashes, or burnt earth, and a good sprinkling of crushed bones or bone-meal, may be worked carefully amongst the roots before filling up with the mixture of turf and well-decayed manure. After each tree has been top dressed lay a moderate quantity of strawy litter over the new soil. I have top dressed pears, apples, plums, in fact, all kinds of fruit trees, early in autumn, and have been well satisfied with the results.

PEACH AND NECTARINE TREES.—The recent warm, dry weather has been a great help toward the ripening of the new fruiting wood; the foliage, with us, has this year kept very free from insects, and the growth is not too strong. Our trees, which cropped heavily, have been well supplied with nourishment, but those on a west aspect, lightly cropped and inclined to grow too strong, have not received a watering at all this season. The leaves are stout and the wood looks well and is changing to the right colour. I hope to purchase a few fresh trees to grow for a couple of seasons, and then take the place of those requiring renewal. Trees planted and trained for the different purposes in view are the better for this treatment, and if taken up carefully and replanted against the peach wall proper they fill up a good space, and begin fruiting almost at once.

FRUIT GATHERING.—If not gathered all the very late kinds of both apples and pears should be carefully plucked when dry, and then stored. Midseason pears with us were soon over, owing to the heat, but the flavour was excellent. Those about to plant should not omit that valuable pear Nouvelle Fulvie; with us it bears freely, and is one of the best flavoured late pears we grow. Keep a sharp look-out for decayed fruits, and remove these at once from amongst the sound ones. Be careful not to bruise any of the fruits when looking over them, as they are very tender, and easily damaged. Keep the atmosphere sweet, and the room clean and free from anything which might impart a bad taste to the fruits.—H. Markham, Wrotham Park Gardens.

BOLTON.

The 22nd GREAT EXHIBITION of CHRYSANTHEMUMS, ORCHIDS, FRUIT, etc., November 20th and 21st, in the ALBERT HALL.

Upwards of £160 cash Prizes, 4 Silver Cups, 4 Gold and Silver Medals, and other Special Prizes.

Entries close Nov. 14th.

Schedules on application to the Secretary,
GEORGE CORBETT,
Heaton Grange Gardens, Bolton.

BRADFORD CHRYSANTHEMUM SOCIETY.

The 22nd ANNUAL EXHIBITION will be held in ST. GEORGE'S HALL on FRIDAY and SATURDAY, November 13th and 14th, 1908.

£27 for 24 Blooms, Japanese (on Boards).

Prize Money and Classes again increased for Open Competition.

Entries Close November 7th.

Schedules, with Entry Form, post free from
H. SPENCER, Hon. Sec.,
Horton Park, Bradford.

NATIONAL CHRYSANTHEMUM SOCIETY.

GREAT AUTUMN COMPETITION AT THE CRYSTAL PALACE,
November 4th, 5th, and 6th.

Apply at once for Schedule and particulars of membership, from the Secretary,
Mr. RICHARD A. WITTY,
St. James's Villa, Swains Lane, Highgate, London, N.

SCOTTISH HORTICULTURAL ASSOCIATION.

CHRYSANTHEMUM EXHIBITION.

The Association will hold its next Great Chrysanthemum Exhibition in the WAVERLEY MARKET, EDINBURGH, on the 19th, 20th, and 21st November, 1908.

Copies of the Prize List, which contains all particulars as to Prizes, conditions of competition, etc., may be obtained on application to the Secretary,
A. D. RICHARDSON,
19, Waverley Market, Edinburgh.
Entries close on 11th November.

SHEFFIELD CHRYSANTHEMUM SOCIETY'S GREAT ANNUAL SHOW.

CORN EXCHANGE, SHEFFIELD,
FRIDAY and SATURDAY, Nov. 13th and 14th.

£25 for 8 Vases Japs. (First £10).
Special Vegetable Classes.

Schedules and particulars free on application to Secretary.
C. COOK, City Road, Sheffield.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

OCTOBER 27.

There were many bare table spaces at the Royal Horticultural Hall on the above date, but this notwithstanding, there was a fine display of orchids, chrysanthemums, ferns, begonias, and fruits.

FLORAL COMMITTEE.

A large, bold, and effective exhibit of chrysanthemums, comprising single varieties of great beauty, huge Japanese blooms in various colours, fine decorative varieties, and outdoor-grown varieties of the semi-early section, was set up by Messrs. W. Wells and Co., Merstham. Tall stands of a variety were put up at the back, and the exhibit was gracefully mounded and had an informal front line. It was also of great interest and value because it contained a large number of plants, thus showing the habit and freedom of the varieties. We were specially attracted by such single varieties as Mary Richardson, Florrie Stevens, Annie Stevens, [illegible], Pink Beauty, Mrs. R. Redden, Ladysmith, Merstham White, and the new, large crimson-scarlet Jessie Curtis. One very fine decorative variety, with fair-sized reflexing soft velvety crimson flowers, was Clara Vernum; this makes a grand bush plant for conservatory decoration. The Messrs. Wells also had pentstemons and Michaelmas daisies.

Mr. P. Ladds, Swanley Junction, showed a creamy-white market chrysanthemum of reflexing Japanese form, named Felton's Favourite (A.M.); this promises well. Mr. Silsbury, Mr. Mileham, and several others showed chrysanthemums. Mr. H. W. Thorp, Darrington, Woking, sent H. W. Thorp (A.M.), a large creamy-white incurved variety, and Mr. D. Fairweather, Bifrons Gardens, Canterbury, gained an A.M. for Mrs. R. H. B. Marsham, a big, solid, creamy-white Japanese variety. Outdoor chrysanthemums, late phloxes, and a number of Michaelmas daisies were boldly staged by Mr. Frank Brasier, Caterham Valley; Soleil d'Octobre, Diana, Jimmie, Mary Richardson, Le Pactole, and Mrs. A. Thomas were a few of the best of the chrysanthemums.

Ferns, chiefly gleichenias, were finely shown by Messrs. J. Hill and Son, Barrowfield Nurseries, Edmonton, this firm occupying half the space along the end of the hall. These graceful ferns were represented by G. splenuncæ, G. semivistita, G. Mendeli—an old favourite, G. dicarpa longipinnata—one of the best, G. dichotoma, and G. flabellata. Conspicuous, at the back of this group were a few exquisitely beautiful plants of Nephrolepis todeaoides. Winter-flowering begonias were largely shown by Messrs. James Veitch and Sons, Chelsea, who had batches of B. Elatior, the dwarf pink B. Agatha compacta, and B. Mrs. Heal—large-flowered and brilliant, one of the very best of this useful race. The Chelsea firm also staged a small group of choice single chrysanthemums in pots, showing the usefulness of these flowers for greenhouse decoration.

Begonia Gloire de Lorraine, B. Turnford Hall, and B. Mrs. Leopold de Rothschild were all well shown by Messrs. H. B. May and Sons, Edmonton, this firm also submitting a batch of the very useful late-flowering varieties of Veronica Andersoni, bouvardias, statice, plumose nephrolepises, and carnations. The pretty Erica gracilis and E. vernalis, the fragrant Daphne indica rubra, groups of bright berried pernettyas, and Skimmia japonica, as well as Otaheite oranges, were effectively grouped by Messrs. W. Cutbush and Son, Highgate, who also set up a very pretty exhibit of fine blooms of such popular perpetual carnations as Enchantress, Helen M. Gould, Robert Craig, White Perfection, Victory, and General Roosevelt. A pan of the charming Iris alata was also an attraction in the Highgate exhibit.

Mr. L. R. Russell, Richmond, sent up berried aucubas, variegated ivies, and other useful shrubs. Mr. Henry Perkins, gardener to H. W. D. Smith, Esq., Greenlands, Henley, sent a number of bright new seedling chrysanthemums; Master David (A.M.), Sir Frank Crisp (A.M.), and Lady Crisp being the best. A large-flowered single pink chrysanthemum, named Hilda Lawrence (A.M.), was shown in bush form, undisbudded, by Mr. Lawrence, gardener to Mrs. Gregory, Shoreham Cottage, Shoreham; this is a pretty variety. The Misses Hopkins, Shepperton, showed rockwork and alpine plants. Messrs. Hugh Low and Co., Enfield, had a pretty exhibit of perpetual carnations arranged in tall glass vases.

A very interesting plant was Nicotiana colossea variegata, a bold-leaved plant, with soft green leaves heavily variegated with cream and paler green. This was shown by Mr. Markham, gardener to Lady Marcus Beresford, Englefield Green, and the plants were but lifted from the open ground on the previous Wednesday, and were grown from cuttings put in last March. Succulent plants in variety, saxifragas, sedums, and a small group of Salvia splendens grandiflora were shown by Messrs. John Peed and Son, West Norwood. Very bright and beautiful were the bunches of fine zonal pelargoniums set up by Messrs. H. Cannell and Sons, Swanley, Kent; in size of pips and truss, and in brilliance and purity of colouring these single pelargoniums were excellent. Mr. G. Reuthe, Keston, showed a pretty collection of nerines. Miss Fanny Farrer, Shaa Road, Acton, exhibited numerous oil paintings of flowers, the odontoglossums and wallflowers being specially good.

ORCHID COMMITTEE.

A glorious exhibit of orchids from Lieut.-Colonel Holford's collection at Westonbirt, Tetbury, Gloucester, beautifully arranged by Mr. H. Alexander, was the feature of the show. Mr. Alexander seems to continually surpass himself, both as a grower and exhibitor, and on this occasion he had what was probably the best-finished display he has ever made. He contrives to set up an abundance of plants and flowers, but nowhere, even in a big display, does he crowd anything. In this magnificent and brilliant group there were superb plants of the glorious Cattleya Fabia, C. Lord Rothschild, the very useful Cattleya Mantini, and the rounded C. Mantini Westonbirt var., C. labiata Kate Brassier, a white-petalled form, C. Mrs. Pitt, C. Hardyana, C. Dusseldorfi, C. aurea, C. gigas, and a fine plant of C. fulvescens. The cypripediums included a C. insigne Sanderæ with fifteen splendid blooms; C. i. Harefield Hall var., with fourteen immense blooms; C. Fairrieanum, C. Charles Rickman, C. Rossetti, C. Germaine Opoix Westonbirt var., the old C. nitens-Leeanum Hannibal, and C. Maudiæ. Other conspicuous things in this wonderful exhibit were Cymbidium erythrostylum, with three spikes of beautiful blooms; two masses of the elegant Vanda Kimballiana, the rare white Dendrobium Phalænopsis hololeucum, and Odontoglossum crispo-Harryanum. Maidenhair fern and green moss were used as a groundwork for the plants, and not a pot could be seen. Tall palms formed a suitable background, and from among these the long spreading spikes of golden flowers of Oncidium varicosum Rogersi arched out over the bold and gorgeous cattleyas, etc., arranged below. To Lieut.-Colonel Holford and his able orchid grower we tender our heartiest congratulations upon this splendid addition to their many fine successes

An interesting little exhibit of flowers of Cattleya labiata, in variety, came from Mr. C. Moore, Hackensack, New Jersey, U.S.A., the blooms had been cut about twenty days, and some were in almost perfect condition. Mr. H. Lovegrove, gardener to H. Spicer, Esq., Aberdeen Park, Highbury, showed a small group of Cypripedium Spicerianum. Mr. A. W. Jensen, Lindfield, Hayward's Heath, contributed a small exhibit of the beautiful Cattleya aurea. Messrs. Stanley and Co., Southgate, brought up good forms of Cattleya labiata, C. l. ignescens, C. Mrs. Pitt, C. aurea, Cypripedium insigne Sanderæ, and C. nitens. An effective little group of orchids was set up by Mr. G. Day, gardener to H. S. Goodson, Esq., West Hill, Putney, and in this display the leading features were Cattleya Mantini, C. Hardyana, C. Fabia Goodson's var., C. labiata, C. Alicia, L.-c. Clonia, Miltonia vexillaria, the white Lycaste Skinneri alba, Cypripedium insigne Harefield Hall var., C. i. Sanderæ, and a pretty hybrid between Cattleya Harrisoniæ and C. Hardyana.

Messrs. Charlesworth and Co., Hayward's Heath, Sussex, had a famous group of orchids wherewith to signify their first display from their new quarters. Here they had fine examples of Lælio-cattleya Luminosa in the centre, with Vanda cærulea in fine form, and the lovely pure white variety Charlesworthi (F.C.C.), Brasso-cattleya Queen Alexandra, Cattleya Mantini, Cattleya Venus, Vanda Sanderiana, Brasso-cattleya Mrs. Maron—very beautiful, Lælio-cattleya Portia gigantea, Cattleya Aliciæ, and Oncidium varicosum Rogersi. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, had a thinly arranged group of orchids, and prominent in this group were the white forms of Cattleya labiata, notably C. l. R. I. Measures, and C. l. Reedleyensis; other good things were Oncidium ornithorhynchum album, Cypripedium Maudiæ, C. triumphans, C. Ajax, Cœlogyne pandurata, and a long spike of the quaint Cycnoches peruviana.

Mr. Black, gardener to R. G. Thwaites, Esq., Chessington, Streatham, sent the bright Lælio-cattleya Ophir, Cattleya Fabia, etc. Messrs. Cypher and Sons, Cheltenham, showed a few good cypripediums, notably C. triumphans, C. gigas Corndeani, and C. Fairrieanum. The beautiful and brilliant Renanthera coccinea, with a big branching spike, was shown by Mr. Flack, gardener to Mrs. Joel, Worthing. Mr. Chapman, gardener to N. C. Cooksen, Esq., showed Calanthe Angela, a brilliant ruby-coloured hybrid. Cattleya aurea, in variety, was well shown by Mr. J. S. Moss, Wintershill, Bishop's Waltham.

Mr. White, orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, sent the little Vanda dasypogon, Sigmatogyne Pantlingi, and Lælia pumila margaritacea. Mr. W. Watson Butler, Edgbaston, sent a white-petalled Cattleya Hardyana. M. Maurice Mertens, Mont St. Amand, Ghent, showed a few odontoglossums, and Mr. Moore, Chardwar, Bourton-on-the-Water, showed Cypripedium Actæus var. Milkmaid.

MAGNIFICENT GOLD MEDAL GROUP OF ORCHIDS.

Exhibited by Mr. H. Alexander, orchid grower to Lieut.-Colonel Holford, of Westonbirt, Tetbury, at the meeting of the Royal Horticultural Society on Tuesday, October 27.

FRUIT AND VEGETABLE COMMITTEE.

A very fine collection of fruit and fruit trees in pots came from Messrs. T. Rivers and Son, Sawbridgeworth, who invariably show finely. They had finely cropped trees of Gascoigne's Scarlet, Buckingham, Melon, and other apples, and some pears, in pots, while their picked samples of King of Tomkins County, Cox's Pomona, Bismarck, St. Martin's, King of the Pippins, Blenheim Pippin, Hambling's Seedling, Peasgood's Nonsuch, Cox's Orange Pippin, Thomas Rivers, and Ribston apples, were splendid and beautiful. Potatoes were largely and well shown by Mr. R. W. Green, Wisbech, who put up a good collection of clean, shapely tubers, the leading varieties being Eldorado, Beauty of Hebron, Snowdrop, Early Rose, Windsor Castle, King Edward VII., Duke of Albany, Superlative, Satisfaction, Eclipse, Epicure, and Green's Favourite.

A few dozen baskets of very clean apples were set up by Messrs. Hugh Low and Co., Bush Hill Park, Enfield, and the varieties that attracted us most were King of Tomkin's County, Blenheim Pippin, Royal Jubilee, Sturmer Pippin, King of the Pippins, Gascoigne's Scarlet, Lord Derby, and Lane's Prince Albert. Mr. H. W. Whiteley, Endsleigh Place, Torquay, set up a small collection of apples, all clean and bright; Newton Wonder, Mère de Menage, Charles Ross, and Cox's Orange Pippin were good.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Vanda cœrulea Charlesworthi, from Messrs. Charlesworth and Co.

Award of Merit.—Brasso-cattleya Madame Hye superba, from Lieut.-Colonel Holford, Westonbirt, Tetbury, Gloucester; Lælio-cattleya Ortrude superba, from Lieut.-Colonel Holford. Dendrobium Cœlogyne maximum, from Messrs. Charlesworth and Co., Haywards Heath; Brasso-cattleya Queen Alexandria, Glentherne var., from Mr. Gurney Wilson, Glenthorne, Haywards Heath; Lælio-cattleya Lustre gigantea, from Lieut.-Colonel Holford; Chrysanthemum Hilda Lawrence, from Mrs. R. Gregory, Shoreham; Chrysanthemum Mrs. R. H. B. Marsham, from Mr. R. H. B. Marsham, Canterbury; Chrysanthemums Master David and Sir Frank Crisp, from Mr. Henry Perkins, Greenlands Gardens, Henley; Chrysanthemum Felton's Favourite, from Mr. Philip Ladds, Swanley; incurved Chrysanthemum H. W. Thorp, from Mr. Thorp, Darrington, Woking.

MEDALS.

Gold.—Mr. H. Alexander, gardener to Lieut.-Colonel Holford, Westonbirt, Tetbury, Gloucester.

Silver-gilt Hogg.—Messrs. T. S. Rivers and Son, Sawbridgeworth.

Silver-gilt Medal.—Messrs. W. Wells and Co., Merstham; Messrs. Charlesworth and Co., Haywards Heath

Silver-gilt Banksian.—Messrs. W. Cutbush and Son, Highgate; Messrs. J. Hill and Son, Edmonton.

Silver Flora.—Miss Farrer, Shaa Road, Acton; Mr. Day, gardener to H. S. Goodson, Esq., Putney; Messrs. Hugh Low and Co., Enfield.

Silver Knightian.—Messrs. Hugh Low and Co., Enfield (fruits).

Silver Banksian.—Mr. J. S. Moss, Bishop's Waltham; Mr. C. Moore, Hackensack, New Jersey, U.S.A.; Messrs. H. Cannell and Sons, Swanley; Messrs. Hugh Low and Co., Enfield (carnations); Messrs. H. B. May and Sons, Edmonton; Messrs. James Veitch and Sons, Chelsea; Mr. F. Brazier, Caterham Valley; Mr. R. W. Green, Wisbech.

Croydon Chrysanthemum Society.

The twenty-first exhibition of this society, held on October 27 and 28, in the Public Hall, Croydon, was a comparatively small one, compared with some of the earlier efforts of the society. All the flowers are shown in vases at Croydon, boards are not used at all. Some excellent flowers were staged.

Mr. T. Butcher decorated the platform with palms, ferns, and flowering plants, and he showed floral designs. Messrs. C. W. and S. Rogers, Croydon and Thornton Heath, showed cloches and cheap frames suitable for the cultivation of salading plants, and these created a good deal of interest. Mr. G. J. Allen, Coombe Cliff, Croydon, contributed a group of ornamental foliage plants.

CUT FLOWERS.

There were four entries in the open class for thirty Japanese blooms, distinct varieties, set up in six vases, and here the premier position was won by Mr. T. Beeson, gardener to J. Newton Mappin, Esq., Headley Park, Epsom, who also won the Champion Challenge Cup in this class in 1907. He had fine examples of Mrs. A. T. Miller (also a premier bloom), Henry Perkins, Valer Greenham, Bessie Godfrey, Mrs. J. Mileham, Mrs. R. H. Pearson, Madame P. Rada Mrs. A. H. Lees, Mrs. W. Knox, Mdll [illegible] A. Bertrand, Miss E. Smith, [illegible] W. Paget, Mrs. G. Hearne, Mary Inglis, W. Beadle, Mrs. F. W. Vallis, J. H. Silsbury, Chrysanthemiste Montigny, Miss O. Mill White Venosta, Algernon Davis, J. H. Doyl Lady Henderson, Norman Davis, Mrs. Norman Davis, Reginald Vallis, George Lawrence, Duchess of Sutherland, Mrs. F. Beckett, and Beatrice May. Second priz fell to Mr. C. J. Dicker, gardener to the executors of the late Hon. Louisa Canning, Frant Court, Tunbridge Wells; and Mr. G. Halsey, gardener to Mrs. Jeremiah Lyon, Riddings Court, Caterham, was placed third.

For fifteen blooms, in three varieties, arranged in vases, Mr. T. Beeson was again to the front, leading with Miss Edith Smith, Reginald Vallis, and Bessie Godfrey in good form; Mr. W. Graysmark, gardener to R. Barclay, Esq., Bury Hill, Dorking, second; and Mr. C. J. Dicker third; five entries. Mr. Halsey scored for ten incurved blooms, in one or more varieties, set up in two vases, and he led with bold specimens of Romance, Lady Isabel (2), Buttercup, Frank Tristram, Pantia Ralli (2), Boccace, and Mrs. G. Denyer; Mr. C. J. Dicker won second place with ten bright flowers of Romance; and Mr. C. Crett, gardener to B. F. Smith, Esq., Hetherset, Leigham Court Road, Croydon, third. Mr. Beeson, who was not placed, had the premier incurved bloom in a very big, full flower of Buttercup.

The leading local class was for twenty Japanese blooms, in four distinct varieties, arranged in four vases, and here Mr. C. Crett led with Mons. G. Rivol, Mrs. Norman Davis, Reginald Vallis, and Madame Paolo Radaelli, all fine; Mr. G. Edwards, Windmill Cottage, Shirley, came second, and he had Mrs. F. S. Vallis and Bessie Godfrey in fine form; Mr. R. Gladwell, gardener to A. Lawrence, Esq., Portland Road, South Norwood (the winner in 1907), was placed third; five entries. The best ten Japanese blooms came from Mr. T. Tomlinson, gardener to R. Hcffman, Esq., Tower House, Streatham, who showed Mrs. George Mileham and Madame P. Radaelli, the last very good. Mr. L. Gooch, gardener to F. Wickham Jones, Esq., Selhurst Road, Croydon, second; and Mr. P. Gladwell third.

The best vase of five blooms of one or more varieties of incurved blooms was one of C. H. Curtis, exhibited by Mr. G. Edwards; Mr. A. J. Beacon, gardener to F. Allen, Esq., Duppas Hill Terrace, second, with Romance; and Mr. C. Mearing, gardener to J. M. Paice, Esq., Park Lane, Croydon, third. For one vase of five Japanese blooms, one or more varieties, Mr. L. Gooch won first prize; Mr. Finch, gardener to G. H. Fisher, Esq., Downs View, Godstone Road, Croydon, second; and Mr. C. Mearing third.

In less important cut bloom classes Mr. F. A. Beadle, Newark Road, led for single varieties; Mr. W. Philpot, 57, Church Street, led for pompones; and Mr. H. E. Marden, Godstone Road; Mr. F. A. Beadle; Mr. C. R. Clark, 23, Neville Road; Mr. F. F. [illegible]ight, Holmesdale Road, South Norwood; and Mr. Norman Wrightson, 53, Elgin Road, were the leading winners in various Japanese classes.

PLANTS AND GROUPS.

Plants were not a great success. Mr. G. Lewry, gardener to the Misses Blake, Duppas Hall, led for three plants of single varieties, and he had a good specimen of Ladysmith. First prize for nine foliage plants suitable for table decorations was won by Mr. W. [illegible], gardener to Sir Walpole Greenwell, Bart., Morden Park, Caterham, with elegant crotons, dracænas, and aralias; Mr. F. [illegible], gardener to G. H. Fisher, Esq., Downs View, Godstone Road, second. Mr. Mills, gardener to Frank Lloyd, Esq., [illegible] House, Croydon, scored for Begonia Gloire de Lorraine, three plants, with beautiful examples; Mr. A. Fry, gardener to H. [illegible], Esq., Heathfield, Addington, second; and Mr. A. J. Beacon, third.

Groups of miscellaneous plants were dis[illegible]. Mr. G. Lewry gained the first prize, Mr. A. J. Beacon was second, and Mr. J. [illegible], gardener to H. Hales, Esq., [illegible], Kenley, was third. There was only one group of chrysanthemums, and this was a good, though rather formal one, set up by Mr. Frank Brazier, Addison Road, Croydon. It contained fine flowers of Mrs. Norman Davis, Leslie Morrison, Mrs. L. [illegible], etc.

A rather cold design in silvery-pink chrysanthemums won for Mrs. Vaughan, Bonnie Cot, Beulah Hill, the first prize for table decorations; Mrs. Green, London Road, West Croydon, second; and Mrs. Houlton, The Cottage, Station Walk, Dulwich, came third.

FRUIT AND VEGETABLES.

Mr. Lintott was an easy first for two bunches of black grapes, with Prince of Wales, the new variety figured in the present issue; Mr E. Houlton, gardener to J. Gardener, Esq., Croxted House, Dulwich, second; and Mr. T. Beeson third. Mr. Lintott was the only exhibitor of white grapes, and he was awarded first prize for good bunches of Muscat of Alexandria.

For six dishes of pears Mr. Lintott was again forward, with Beurre Bachelier, Conference, Beurre Diel, Doyenne du Comice, Pitmaston Duchess, and Souv. du Congres; Mr. W. Paulley, gardener to Dr. Jackson, Thornton Heath, second. Mr. Paulley had the best nine dishes of apples, six kitchen and three dessert varieties, and here he was followed by Mr. W. Lintott and Mr. C. J. Dicker, these three sets making a fine display. Mr. O. Jeal, gardener to M. Waterall, Esq., Waddon Lodge, scored for three dishes of dessert apples, and he also led for three dishes of culinary apples, while Mr. J. Johnson, gardener to Mrs. A. Crowley, Bramley Oaks, Croydon, scored for three dishes of pears.

In the vegetable classes Mr. T. Finch, Mr. C. Lane, gardener to E. H. Coles, Esq., Burntwood, Caterham; and Mr. F. J. Hainge, were the leading prizewinners.

National Chrysanthemum Society.

A well-attended meeting of the Floral Committee was held at Essex Hall, Strand, on Monday afternoon, October 26. There was a fine display of flowers, indeed one of the best seen for two or three years, not forgetting one very fine meeting last year. Messrs. W. Wells and Co., Merstham; Mr. D. Fairweather, Bifrons Gardens, Canterbury; Mr. H. Perkins, Greenlands Gardens, Henley; Mr. Martin Silsbury, Isle of Wight; and Mr. H. W. Thorpe, Woking, were the leading exhibitors. Several varieties gained certificates.

In the evening there was a large attendance at the meeting of the General Committee, Mr. T. Bevan presiding. It was resolved that this year, as last, the prize money for the three shows be not paid until after the conclusion of the last show for the season. The Secretary reported a balance of £45 14s. to the good on the accounts to date. The annual dinner (November 26), and the allocation of the Dean Medal at the November show, were matters considered. It was agreed to provide six sets of two judges each for the November show, and twelve gentlemen, with six reserves, were duly elected to fill these onerous and honorary positions.

The election of new members raised a good deal of enthusiasm; the president, Sir Albert Rollit, sent a good list of nominations. The result was that five members at 21s., eight at 10s. 6d., and sixteen at 5s. subscription were duly elected, and one society was admitted to affiliation.

United Horticultural Benefit and Provident Society.

There was a good attendance at the Waldorf Hotel, Aldwych, on Thursday evening, October 15, when the above-named excellent society held its twenty-second annual dinner, under the presidency of Dr. Robert Boxall, of Abinger, Dorking. The tables were handsomely decorated with flowers and plants and fruits sent by numerous members and several traders who have always been firm friends of the society. The arrangement of the decorations was in the capable hands of Mr. J. Bulford, Mr. J. Hudson's foreman at Gunnersbury House, Acton.

After dinner, following the toast of "The King," and liberty to "fumigate," the Chairman proposed "Success to the United Horticultural Society," and in a very capable speech he pointed out the excellencies of the several funds, the soundness of the society, and the special advantages offered to young gardeners. He thought there was need among all classes for greater providence, and he could not understand why so few, comparatively, joined their society. The rules seemed to meet every possible occasion, while the management was economical in the extreme, and in the matter of safety the society was in a very fine position, having about £31,000 invested. He much regretted that, though long interested in horticulture, it was not until a few months ago he knew even of the existence of the society, but he promised to advance its interests and advertise its advantages among gardeners whenever the opportunity offered.

Mr. Charles H. Curtis, chairman of committee, responded, and thanked Dr. Boxall for his presence and kindly interest in the society, an interest shown in a practical way inasmuch as the chairman had become an honorary and life member. Mr. Curtis pointed out that the society was progressing steadily, and had now about 1,100 members, and £31,000 invested funds, £1,100 having been invested during the present year. Everything worked so smoothly that there was a danger the members might become so self-satisfied as to neglect to advance the claims and advantages of the society among their fellows, and he, therefore, urged a warmer interest be taken, and a stronger endeavour made to secure the membership of the younger members of the profession. Just recently someone had severely criticised the society and endeavoured to pour contempt upon its methods, but it was interesting to note that eleven new members joined on the previous Monday, probably as a result of the attention that such criticism had drawn to the society. For himself Mr. Curtis said he was satisfied with the report of the U.H.B.P. as to method and finances issued by the Registrar of Friendly Societies, and in view of that report he felt that criticism and protests from outsiders could do no harm, but by advertising the society, would do it a great deal of good.

Mr. A. J. Brown, of the School of Handicrafts, Chertsey, proposed "The Honorary and Life Members," and referred to the kindness and generosity of those who carried such household names as Sherwood, Veitch, Sutton, Marshall, etc., and who had always shown their appreciation of the good the society was doing by retaining their honorary membership. He hoped that others might follow the excellent example thus set, because he was convinced the society was one of the best of its kind. He ventured to hope that even though the committee might not see its way to form a branch or section for members' wives, that at any rate at future anniversary dinners members might be allowed to bring wives or sweethearts to enjoy such a pleasant function.

Mr. Cox, of Messrs. Hurst and Son, Houndsditch, briefly and pleasantly responded, and also expressed a hope that at future anniversary dinners ladies would be admitted.

"The Visitors" was ably proposed by Mr. J. Harrison Dick, who said that visitors were always welcome, because it was found they usually became honorary members after a visit. He urged the importance of securing more of the young gardeners as benefit members, and hoped that the visitors present would spread a knowledge of the society's work among their horticultural acquaintances.

Mr. A. E. Bowles, M.A., chairman of the R.H.S. Scientific Committee, responded in a very neat little speech and confessed that though long connected with horticulture and horticulturists, he had no idea the society was such a large, useful, and wealthy one. He would do his part in making it better known, and said that this would be the last, as it was the first, time he would be present as a visitor.

Mr. Riley Scott proposed thanks to the donors of fruit and flowers, to Mr. Bedford for the decorations, and to Mr. Winter and his friends of the Waverley Glee Party for the admirable music rendered. This was accorded most heartily, and Mr. Bedford and Mr. Winter replied, both agreeing that the success of the meeting, so far as they had contributed, was ample thanks.

Mr. E. F. Hawes proposed "The Chairman," and this toast was heartily received, and accorded musical honours. Dr. Boxall expressed his pleasure at being present, and said he felt a great honour had been conferred upon him in being invited to preside over such an important gathering.

Mr. Curtis asked leave to propose one other toast, that of the health of their hard-working secretary, Mr. Collins. This was cordially accepted, and Mr. Collins replied in his usual modest way.

Miss R. Green, Miss C. Green, Miss E. Little, and Messrs. W. L. Helsdon, Charles Brown, and Ralph Paine discoursed sweet music during the evening, under the direction of Mr. Winter, and they gave their services.

The meeting was a very successful one, the speeches short and the music abundant and good. Among those present were: Messrs. G. Gordon, James Hudson, T. Bevan, W. Anderson, J. Wheeler, J. George, J. Heal, W. P. Thompson, J. Gunner, Pusey, Frogbrook, Wesker, Linford, Archer, Macdonald, etc., etc., in addition to those previously named.

British Gardeners' Association, London Branch,

The second meeting of the autumn session was held at Carr's Restaurant, Strand. It proved to be a most successful gathering, at which several new members were nominated. The chair was taken by Mr. E. F. Hawes, and it was resolved to hold committee meetings at seven p.m., and general meetings at half-past seven, instead of eight p.m. It was also decided to set apart a time for mutual instruction before the usual paper is read. Each member is invited to bring up one question on paper, and hand it to the chairman, and this will be answered by the members as fully as time will permit.

A splendid collection of conifers was brought by Mr. R. J. Frogbrook (vice-chairman of the branch), many of which were bearing cones, and several instructive remarks were made upon them by Mr. Frogbrook, to whom a hearty vote of thanks was accorded.

The Chairman introduced a discussion on the subject of "The B. G. A., its influence, and how to increase it." He was ably supported by Messrs. Frogbrook, Hill, Hartless, and others present.

East Anglian Horticultural Club.

There was a full meeting of members at the October gathering of this club held at the Boar's Head Hotel, Norwich. Mr. J. Powley was in the chair, supported by Mr. James Forder and the prominent professional and amateur horticulturists of the district. Mr. E. Peake was to have given a lecture, but his time being so much occupied he had enlisted the help of five members of the botanical department of which he is leader. These all came prepared with short papers, or lecturettes, as follows: Mr. H. Perry, on "How Plants Feed"; Mr. H. Goude, on "Leaves"; Mr. L. Smith, on "The Leaf Insect"; Mr. T. Notley, on "Our Native Poisonous Plants"; and Mr. C. Burtenshaw, on "Summer Bedding." Each had thoroughly thought out his subject, and dealt with it in an interesting manner. The range of subjects opened out a wide field for debate, and this was heartily entered into by the President, Messrs. E. Peake, J. Forder, J. C. Abel, C. Hubbard, and others.

The exhibition tables were filled with choice cultural examples. Apples and pears were fine specimens. The plants of Begonia de Lorraine, shown by Mr. W. Palmer and Mr. W. Shoesmith, were fine examples of good culture. Messrs. Daniels, Bros., Lim., Norwich, offered prizes for their new potatoes, Prince Edward and Royal Norfolk, and fine tubers of these two varieties were staged. Messrs. Hobbies, Lim., Dereham, exhibited very good autumn rose blooms from their fields in the county, and a new dark cactus dahlia named Vigil, from this firm, also attracted much attention. A novelty in vegetable growth was put upon the table by Mr. S. Hunt, gardener to Mrs. Willis, Ipswich Road, Norwich. It was a carrot, which in its young state had passed through the neck of a broken bottle and had developed on each side of it. New members still continue to be enrolled, and the secretary, Mr. W. L. Wallis had a busy evening.

Beckenham Horticultural Society.

Under the presidency of Mr. Cardross Grant, the first lecture of the winter session of the above society was given on Friday, the 9th inst., by Mr. E. H. Jenkins, proprietor of the Queen's Road Nurseries, Hampton Hill, the subject being "Methods of Propagation."

There was a very full room, and a most instructive discourse was followed very closely. Leaf cuttings claimed first attention, and begonias and gloxinias were taken as examples of plants increased by this means. The propagation of lilies by bulbils and bulb scales; examples of plants increased by root cuttings; and succulents also received attention. The physiological reasons were given for making the base of cuttings immediately under a joint or "node." The making of the carnation cutting received a little extra attention, and the lecturer favoured cuttings made in the ordinary way rather than those stripped off, as often advised, giving as his reason the larger rooting surface; and he considered the splitting upwards of the cutting, which is often done, of no advantage whatever. Some few questions were asked and replied to by the lecturer, after which the hearty thanks of the meeting was accorded both lecturer and chairman.

A special certificate was awarded Mr. Abrahams for eight dishes of apples, and an exhibit of outdoor grown tomatoes secured to Mr. Chandler a certificate. At the previous ordinary meeting Mr. F. W. Price, of Broadclyst Gardens, secured a special award for well-grown apples, and Mr. Webster also placed on the table four beautiful examples of The Queen apple.

On Monday evening, by kind invitation of the committee of the Beckenham Congregational Church Guild, a strong contingent of this society attended a lecture given by Professor Bottomley, of King's College, London, on "Microbes, friendly and otherwise." This was highly appreciated.

Birmingham Gardeners' Association.

The second meeting of the autumn session was held on October 19, with Mr. Walter Jones presiding. Considerable interest was centred in the fact that Mr. George Giles, head gardener at Harborne Hall, the delightful suburban seat of Edwin Nettlefold, Esq., had been scheduled to give an essay on "The Winter-flowering Carnation."

In the course of his thoroughly practical remarks, the essayist, in adverting to the various systems of propagating the carnation, remarked that the most successful method he had adopted was not altogether in harmony with the stereotyped one of placing cuttings in a warm frame, and regularly every day until rooted wiping the condensed moisture from the glass, and admitting a little air. He preferred to keep the light or sash closely shut, and ignore the wiping of the glass, thus keeping the frame almost hermetically sealed, except when an occasional slight spraying of the foliage seemed needful. This resulted in a considerably quicker rooting of the cuttings, and with less attention. The history of the perpetual or winter-flowering carnation, soils, manures, diseases, and other items connected with the general cultivation of the plants were included in the essayist's remarks, and Mr. Giles was duly thanked for his instructive address.

An interesting discussion followed, in which Messrs. Wm. Spinks, A. R. Brown, Wm. Gardiner, Thos. Humphreys, A. Cryer, and W. L. Deedman participated. One of the members brought a bunch of a polygonum for identification, and this proved to be the too sparsely grown and somewhat rare P. amplexicaule oxyphyllum, with whitish inflorescence and peculiarly long pointed lanceolate foliage.

Cardiff Gardeners' Association.

This association held its fortnightly meeting on the 20th inst. at the Central Free Library, by the kind permission of Mr. Ballinger and the Library Committee. Mr. H. R. Farmer presided. The minutes of the last meeting were read and confirmed, and the Chairman, in his opening speech, drew the attention of the members to the number of books on horticulture and forestry that Mr. Ballinger had so kindly arranged for the benefit of the members for the evening. Mr. Ballinger replied that he was pleased to welcome the members of the association, and hoped that they would be interested in the collection. During the past twelve years the members have enjoyed this privilege, and the number of books on the subjects mentioned had been materially increased. At the close of the inspection Mr. F. G. Treseder offered a hearty vote of thanks to Mr. Ballinger and Mr. Farr, and referred to the loss the society would sustain when the former would take up his new appointment as chief librarian to the Welsh National Library at Aberystwith. Mr. Mountney seconded the proposition, which was carried with applause. Mr. Farr suitably acknowledged the compliment.

Sandhurst Gardeners' Association.

There was a good attendance of members and friends at the meeting held on Tuesday, October 20, with Mr. L. Dupond in the chair. The subject for the evening was "A Garden at Different Seasons of the Year," by Mr. W. J. Townsend, Sandhurst Lodge Gardens, who illustrated his lecture by about 125 lantern slides made by himself. These showed various garden scenes and plants at Sandhurst Lodge. Some of the snow scenes (taken last April) being especially good. The discussion that followed was sustained by Messrs. Dupond, Pendry, C. W. Goddard, Shepherd, etc. A hearty vote of thanks was accorded Mr. Townsend. Mr. L. Dupond, Crowthorne Nurseries, staged a well-flowered pot of nerines, and Mr. W. H. Chapman, Hilfield Gardens, Yateley, contributed two dozen bunches of dahlias.

OBITUARY.

MR. P. FAIRGRIEVE.

A distressing accident occurred on Monday the 12th inst., and terminated fatally in the Worksop Hospital on the following Wednesday evening, the unfortunate victim being Peter Fairgrieve, the foreman under Mr. J. Gibson, in the gardens at Welbeck Abbey. The sad ending spread quite a gloom over the whole estate, where the deceased was one of the most popular figures, and a great favourite with all classes, including the Duke and Duchess of Portland. The accident happened in rather singular fashion. Deceased was very fond of animals, and whilst in the gardens on Monday morning, offered an apple to one of the horses attached to a cart. In order to facilitate its eating, Fairgrieve undid the bit, with the result the horse bolted. The unfortunate man tried to stop its career, but was knocked down, the wheel passing over the lower part of his body. His remains were interred in Cuckney Churchyard on Saturday, and he was carried to the grave by his bothy comrades.

ANSWERS TO CORRESPONDENTS.

GARDENER AS DOMESTIC SERVANT.—T. R. P., Branksome: In somewhat similar cases it has been decided that a gardener resident on the place is a domestic servant. If you resided in the garden then you should make a claim upon the executors for the sum named in the will, and failing a satisfactory answer, place the matter in the hands of a solicitor.

HOLLIES.—R. B., Leeds: Yes, both green and variegated hollies can be successfully transplanted at this season of the year. The large specimens you are desirous of moving from one part of the garden to the other should be lifted with as large a ball of soil about the roots as possible. Take the necessary precautions to prevent the ball of soil splitting during the removal, and if the soil is dry give a good soaking of water when the planting is finished. When water is given while the planting is in progress there is a risk of the soil being converted into a puddle, and when this happens the roots do not push very readily into it. In the case of those obtained from the nursery you should be careful to allow the packing material to remain about the roots until you have everything ready for planting them. Much harm is sometimes done unwittingly by exposing the roots to atmospheric influences longer than is really necessary. The roots of hollies and other shrubs suffer less from exposure now than at other seasons, but this fact does not in any way render it less necessary to avoid undue exposure.

DAFFODILS.—F. G. S., Herts: Daffodils may still be planted with satisfactory results, provided the bulbs have been well ripened and kept under conditions that have ensured their remaining dormant. In other words, daffodils such as are supplied by the trade will, if planted within the next few weeks, bloom satisfactorily. Bulbs that have remained in beds and borders cannot now be transplanted with any measure of success. They are now furnished with roots and growing freely, and will suffer a severe check if removed.

ROOT PRUNING.—Young Gardener: We published an article on this subject in our issue of the 24th inst., from the pen of Mr. H. Markham, one of the leading fruit growers at the present day, and we would advise you to take advantage of the information contained therein. We would strongly advise you to commence the work at once, and proceed with it as rapidly as circumstances will permit. The soil will rapidly lose its heat from this time, and the weather may be such as to put a stop for a time to the moving of trees.

ERADICATING THE COLTSFOOT.—M. B., Hants: We quite agree with you that when once established the colt-foot is very difficult to eradicate, but in expressing this agreement, it is important to point out that the difficulty is not so great that it cannot be surmounted. The colt-foot is propagated by means of the seeds, and by the roots, and those who, like yourself, have land much infested with it should give first attention to seed reproduction. The flowers are produced quite early in the year, in advance of the leaves, and, owing to their insignificant appearance, their importance in the economy of the plants is frequently quite overlooked. The yellow flowers are of comparatively small size, and are borne on scaly stalks from six to ten inches high, the height depending upon the vigour of the plants. If the conditions are favourable to pollination each flower head produces a large number of seeds, which are distributed by parachute-like appendages, not unlike those of the dandelion. Therefore, one means of checking the spread of this weed is to cut off with hoe or other implement the flower stalks as they rise in February and March, and thus prevent the development of the flower heads and the production of seeds. Owing to the great depth to which the roots extend in the soil it is practically impossible to wholly clear the soil of them. Where the ground is so fully occupied with the coltsfoot as in your case, the soil should be dug over during the winter or spring, and every scrap of root be picked out and burnt. This will not clear the ground, but it will reduce the plants and render the work of the hoe later on more effectual. No plant can live for any great length of time when it is not allowed to make top growth, and we suggest that immediately there are signs of young leaves the hoe be brought into requisition, and that the ground be hoed over at comparatively short intervals. It is a somewhat tedious process, but your persistence will be amply rewarded.

UNHEALTHY BEGONIAS.—H. J., Wrexham: Your begonias have been seriously injured by the begonia mite, a destructive pest when efficient repressive measures are not adopted at an early stage of the attack. Dusting the leaves with tobacco powder, spraying them with tobacco water, or other solution of nicotine, and fumigating the house or pit with a nicotine compound are excellent remedies.

PROPAGATION OF ASPIDISTRAS.—M. H. F., Sussex: Aspidistras are propagated by division, and this is best done early in March, when new growth is commencing, and if you will write then we shall be pleased to give you the necessary information relating thereto. For the present allow them to remain undisturbed at the roots.

ROMAN HYACINTHS.—S. S., Wolverhampton: The bulbs, having commenced to make new growth, the proper procedure will be to remove them from the plunge bed and put them in an unheated frame, or in the greenhouse, for a few days, and then remove them to a pit or house where they will have the assistance of a temperature of about 60 degrees.

GRAPES SHANKING.—M. H. W., Essex: You need not apologise for stating the case so fully, as the information you have given enables us to advise you with a greater degree of confidence than is possible when we have to base our opinions on a few meagre details. There can be no doubt that the border is too deep, and the drainage imperfect; and until the latter is improved the shanking will continue. As the vine borders are inside the houses they should have sloped from the front to the back, and a pipe drain laid along the lower side of the bottom of the border to carry the surplus water into the nearest drain. This is the best possible period of the year in which to improve the borders, and we suggest the vines be lifted, the bottom of the borders be made to slope from the front to the back, and when this has been done be trodden firmly, and covered with a six-inch layer of concrete. On the concrete put a twelve-inch layer of broken bricks, which should be covered with thin turf. Lay along the lower part of the border, and on the concrete, a pipe drain, and connect it with a main drain outside. It will also be advisable to block up the arches along the front wall to prevent the roots extending beyond the house and pushing into the cold clay. We need hardly say that the lifting and replanting of the vines will require great care, and that the work should be proceeded with as expeditiously as possible. Only two vines should be lifted at a time, and immediately they are lifted the roots must be carefully gathered up and have damp mats wrapped about them. If the work is done at once in accordance with the advice given herewith, the vines will not receive a great check, but next year the crop should be reduced somewhat, as compared with that taken this year. We suggest you lift the vines in one house this year, and those in the other house twelve months hence, in case you may make a slip in carrying out any of the details. There is, however, really no risk in lifting vines at this season. We have lifted vines in July, when in full growth, made new borders, and then replanted them with satisfactory results; but to lift a house of

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vines in that month is so risky that we certainly do not recommend it. Moreover, much better results are obtained from lifting when the vines are at rest, or passing into the resting stage.

NAMES OF PLANTS.

E. B., Warminster.—1, Cupressus macrocarpa lutea; 2, C. Lawsoniana erecta-viridis.

T. P., Londonderry.—1, Physalis Alkekengi; 2, Begonia fuchsioides; 3, Ficus radicans.

S. T. B., Brighton.—1, Erica gracilis; 2, Pernettya mucronata; 3, Oncidium varicosum Rogersi.

C. E. S., Upminster.—1, Aster Amellus; 2, Salvia splendens; 3, Gleichenia dicarpa longipinnata; 4, Nephrodium molle corymbiferum.

M. B., Leicester.—1, Juniperus chinensis; 2, Taxus baccata aurea; 3, Abies Nordmanniana; 4, Cedrus atlantica; 5, Taxodium distichum.

J. C. F., Huntingdon.—1, Cattleya labiata; 2, Cypripedium Leeanum; 3, Cryptomeria elegans; 4, Abies nobilis; 5, Sequoia sempervirens.

J. H., Upminster.—1 and 2 are garden forms of Begonia Rex; 3, Aster ericoides; 4, a form of Aster Novi-Belgi; 5, Retinospora plumosa.

NAMES OF FRUITS.

T. E. S., Worcester.—Not recognised.

W. M., Wimbledon.—1, Dumelow's Seedling; 2, Beurre Diel.

O. V., Radlett.—1, Beurre Superfin; 2, Catillac; 3, Blenheim Pippin.

F. S. N., St. Neots.—1, American Mother; 2, Court Pendu Plat; 3, not recognised; 4, Seckle.

N. A., Canterbury.—1, Worcester Pearmain; 2, Lane's Prince Albert; 3, Bramley's Seedling.

R. C. C., West Bromwich.—1, Marie Louise; 2, Dumelow's Seedling; 3, Worcester Pearmain.

T. H. D., Winchester.—1, Lord Derby; 2, Gascoigne's Scarlet; 3, King of the Pippins; 4, Sturmer Pippin.

L. B. T., Torquay.—1, King of Tomkin's County; 2, Newton Wonder; 3, Adam's Pearmain; 4, Golden Noble.

A. N. D., Biggleswade.—1, Minehall Crab; 2, Waltham Abbey Seedling; 3, Cox's Orange Pippin; 4, Ribston Pippin.

METEOROLOGICAL OBSERVATIONS.

TAKEN IN THE R.H.S. GARDENS AT WISLEY, SURREY.

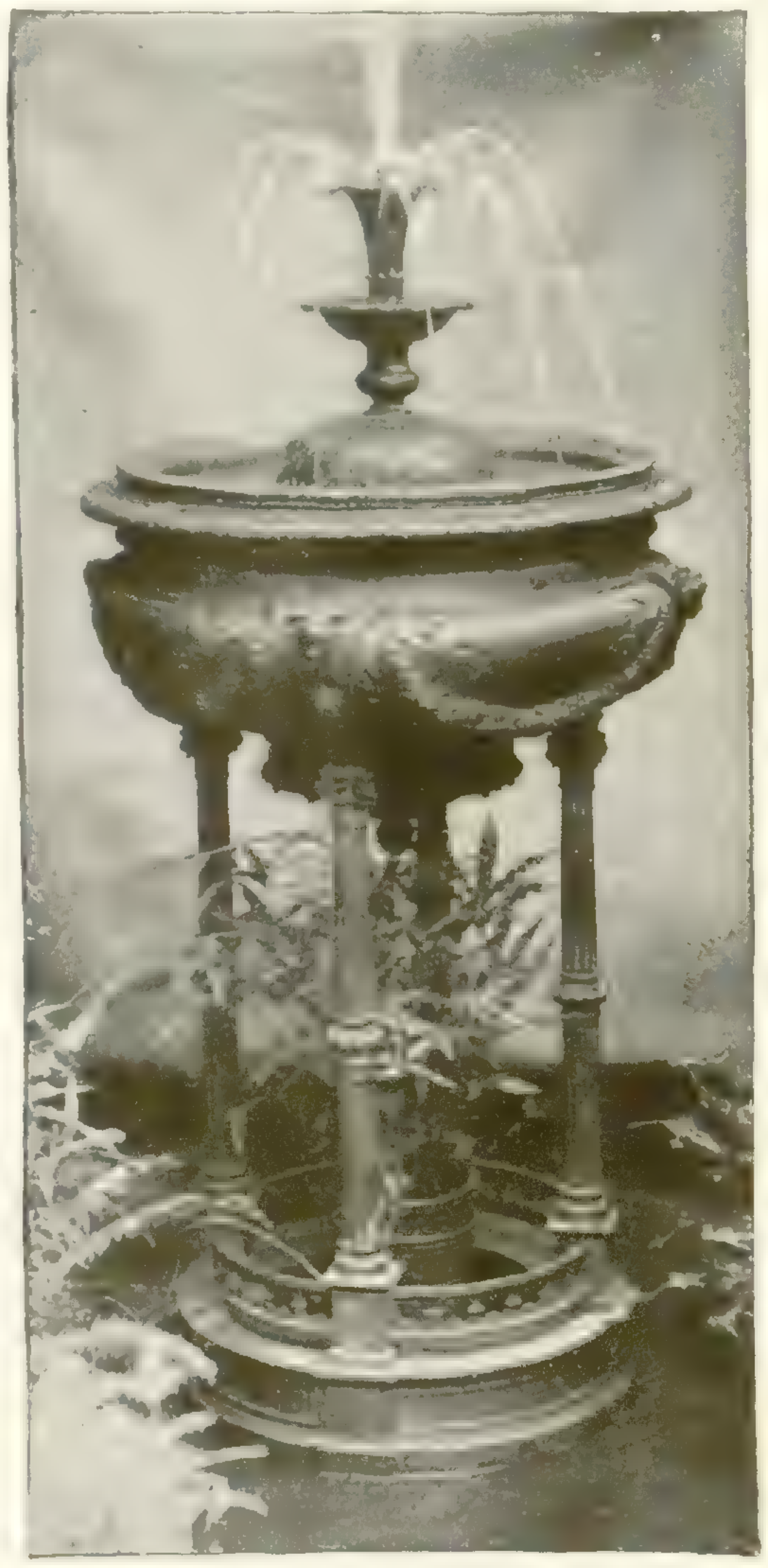
Height above Sea-level, 150 feet.

Date. 1908. October 18 to October 24.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 18—Sunday	4 40	54	54	63	46
,, 19—Monday	—	56	56	59	52
,, 20—Tuesday ...	—	49	48	50	49
,, 21—Wednesday .	2 0	42	42	47	42
,, 22—Thursday ...	5 35	37	37	48	32
,, 23—Friday	—	42	41	49	37
,, 24—Saturday ...	2 0	42	41	45	34
Means	2 0	46	46	52	42

Date. 1908. October 18 to October 24.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Oct. 18—Sunday	1·22	56	57	57	44
,, 19—Monday	—	56	57	57	49
,, 20—Tuesday ...	0·45	56	57	57	50
,, 21—Wednesday.	0·02	54	56	56	43
,, 22—Thursday ..	—	50	55	56	27
,, 23—Friday	—	49	53	56	34
,, 24—Saturday ...	0·04	48	53	55	31
Means ...	(total) 1.73	53	55	56	40

ELECTRIC FOUNTAINS.

At one of the recent meetings of the Royal Horticultural Society Messrs. W. Wood and Son, Wood Green, N., exhibited several of the electric fountains for the adornment of the dwelling-house and conservatory that they are introducing; and having regard to their unique character it is not surprising they should have attracted much attention. Elegant in design and ingenious in construction, they enable one to have a fountain amid the foliage and flowers in the conservatory without any of the difficulties associated with small fountains that derive their water supply direct from main or tank. What is perhaps still more important, they afford an opportunity of utilising fountains in the adornment of indoor apartments and indeed for the embellishment of the dinner table. The fountain we have the pleasure of illustrating is made of antique bronze, and is equally suitable for rooms and small conservatories contiguous to the dwelling-house, but various designs are made in silver plate suitable for dining-room tables. This fountain was designed by the Chief Art Decorator of the Vienna National Museum, and the casing manufactured by the Royal Bronze Works of Vienna.



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MARKETS.

◆

COVENT GARDEN.

Flowers.

The colder and wet weather has finished off outdoor flowers, hence prices are firmer.

		s.	d.		s.	d.
Adiantum cuneatum ...	per doz. bun.	5	0	to	9	[illegible]
Arums	per doz.	2	0		4	[illegible]
Asparagus	per doz. bun.	1	6		[illegible]	[illegible]
Bouvardia	per doz. bun.	5	0		[illegible]	[illegible]
Carnations	per doz blms.	1	6		2	[illegible]
,, ...	per doz. bun.	7	0		[illegible]	[illegible]
,, Malmaison	per doz. blms.	6	0		[illegible]	[illegible]
Cattleyas	per doz.	8	0		[illegible]	[illegible]
Chrysanthemums	per doz. bun.	5	0		[illegible]	[illegible]
,, ...	per doz. blms.	2	0		[illegible]	[illegible]
Croton leaves	per bun.	1	0		[illegible]	[illegible]
Cypripediums	per doz. blms.	2	0		[illegible]	[illegible]
Eucharis	per doz.	2	0		[illegible]	[illegible]
French fern	per doz. bun.	1	0		[illegible]	[illegible]
Gardenias	per doz.	1	6		3	0
Gypsophila	per doz. bun.	2	0		3	0
Lilium auratum	per bun.	2	0		3	0
,, candidum	per bun.	1	0		2	6
,, speciosum	per bun.	1	6		3	0
,, longiflorum	per bun.	2	0		3	6
Lily of the Valley	per doz.	6	0		9	0
Marguerites, white	per doz. bun.	2	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	0		4	0
Odontoglossums	per doz. blms.	2	6		3	6

Fruits.

Apples are plentiful, and sell readily, but there are quantities of badly graded fruits that spoil the markets.

		s.	d.		s.	d.
Apples, cooking	per bush.	2	0	to	4	6
,, dessert	per ½-sieve	2	0		6	0
,, Nova Scotian	per barrel	8	6		12	0
,, Californian	per case	8	0		10	6
Bananas	per bun.	3	0		10	0
Damsons	per ½-sieve	1	6		[illegible]	[illegible]
Figs	per doz.	2	0		4	[illegible]
Grapes, English	per lb.	1	0		3	[illegible]
,, Belgian	per lb.	0	10			
,, Channel Islands	per lb.	0	6			
Lemons	per case	6	0		[illegible]	[illegible]
Melons, Guernsey	each	0	9		[illegible]	[illegible]
,, English	each	1	0		[illegible]	[illegible]
,, Valencia	per case	6	0		[illegible]	[illegible]
Nectarines	per doz.	2	6		[illegible]	[illegible]
Nuts, Cob	per lb	0	6		[illegible]	[illegible]
Oranges	per case	9	0		30	0
Peaches	per doz.	3	0		[illegible]	[illegible]
,, French	per crate	2	6		6	0

Vegetables.

Cauliflowers continue good, and Brussels sprouts are now plentiful. Business is good.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	1	6	to	2	6
Beet	per bush.	1	3		2	0
Brussels Sprouts	per bush.	3	0		4	0
Cabbage	per tally	1	6		[illegible]	[illegible]
Carrots	per doz. bun.	0	9		[illegible]	[illegible]
Cauliflowers	per doz.	1	6		[illegible]	[illegible]
Celery	per roll	0	9		[illegible]	[illegible]
Cucumbers	per doz.	1	0		[illegible]	[illegible]
Endive	per doz.	1	[illegible]		[illegible]	[illegible]
Horseradish	per doz. bun.	8	0		1	6
Leeks	per doz. bun.	1	0		[illegible]	[illegible]
Lettuce, cos	per doz.	0	[illegible]		[illegible]	[illegible]
Maize	per doz. cobs	1	0		1	[illegible]
Mint	per doz. bun.	1	0		10	0
Mushrooms	per doz. lb.	5	0		2	0
Onions, Pickling	per bush.	1	6		8	6
,, Valencia	per case	7	0		2	0
Parsley	per doz. bun.	1	6		0	8
Radishes	per doz. bun.	0	4		1	6
Small Salading		1	3			

FORTHCOMING ENGAGEMENTS.

TUESDAY, November 3.—Brighton Chrysanthemum Society; two days.
Sutton Chrysanthemum Show; two days.
Southend Chrysanthemum Show.
WEDNESDAY, November 4.—National Chrysanthemum Society, Crystal Palace; three days.
Cardiff Chrysanthemum Show; two days.
Hayward's Heath Chrysanthemum Show; [illegible]
Guildford Chrysanthemum Show; two [illegible]
Liverpool Chrysanthemum Show; two da
THURSDAY, November 5.—Newport (Mon.) [illegible]themum Show.
FRIDAY, November 6.—South Croydon Chrysanthemum Show.
Windsor Chrysanthemum Show.

CATALOGUES RECEIVED.

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BENJAMIN R. CANT AND SONS, OL GARDENS, COLCHESTER.—A freely illustra of very comprehensive catalogue of all kinds of

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DICKSONS, CHESTER.—A large catalogue of roses with varieties grouped in colours and for various purposes.

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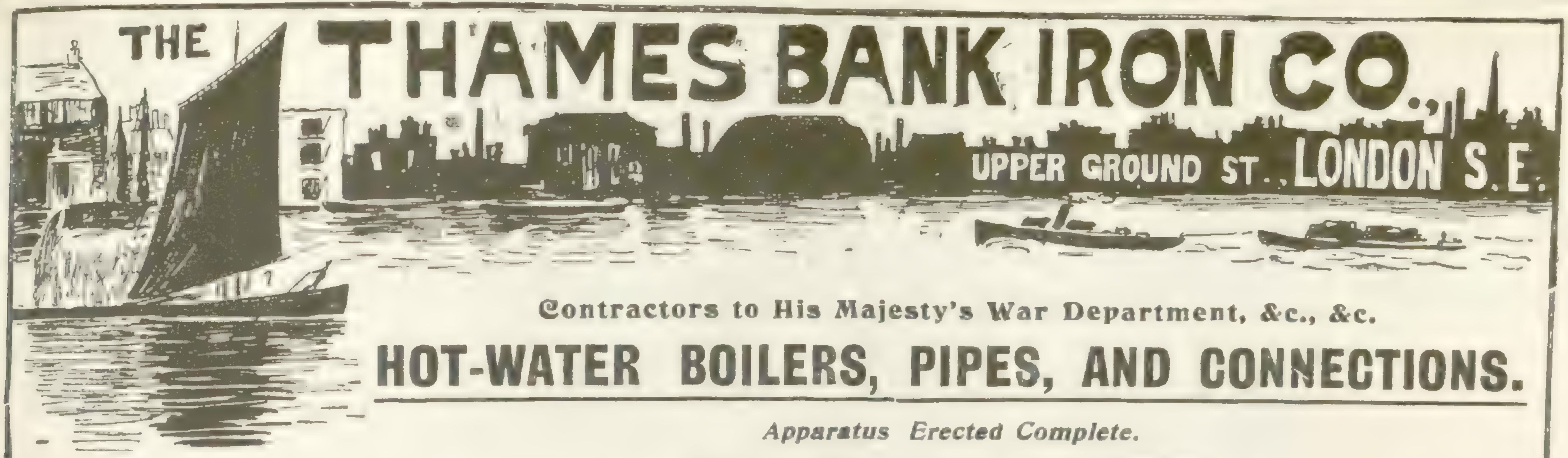
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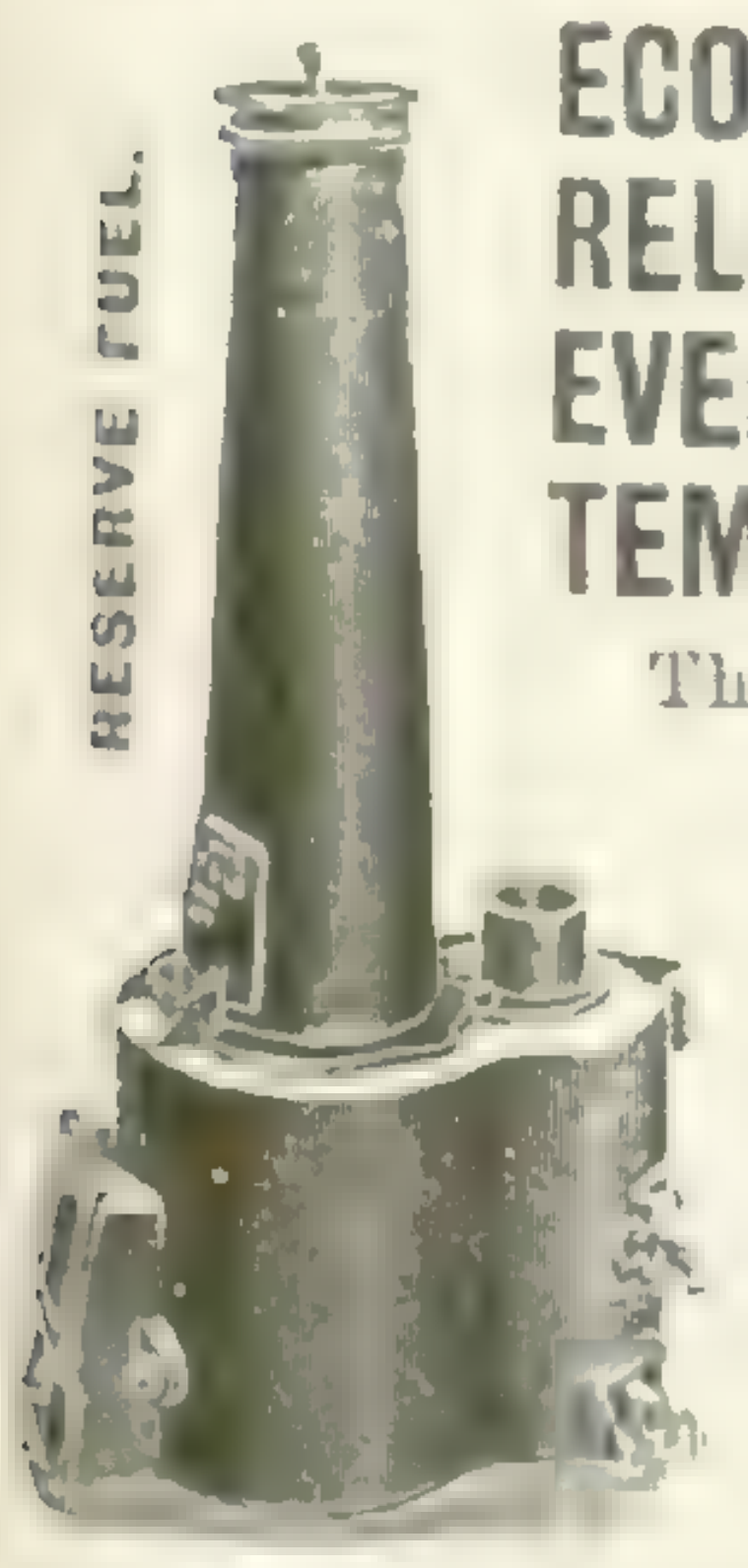
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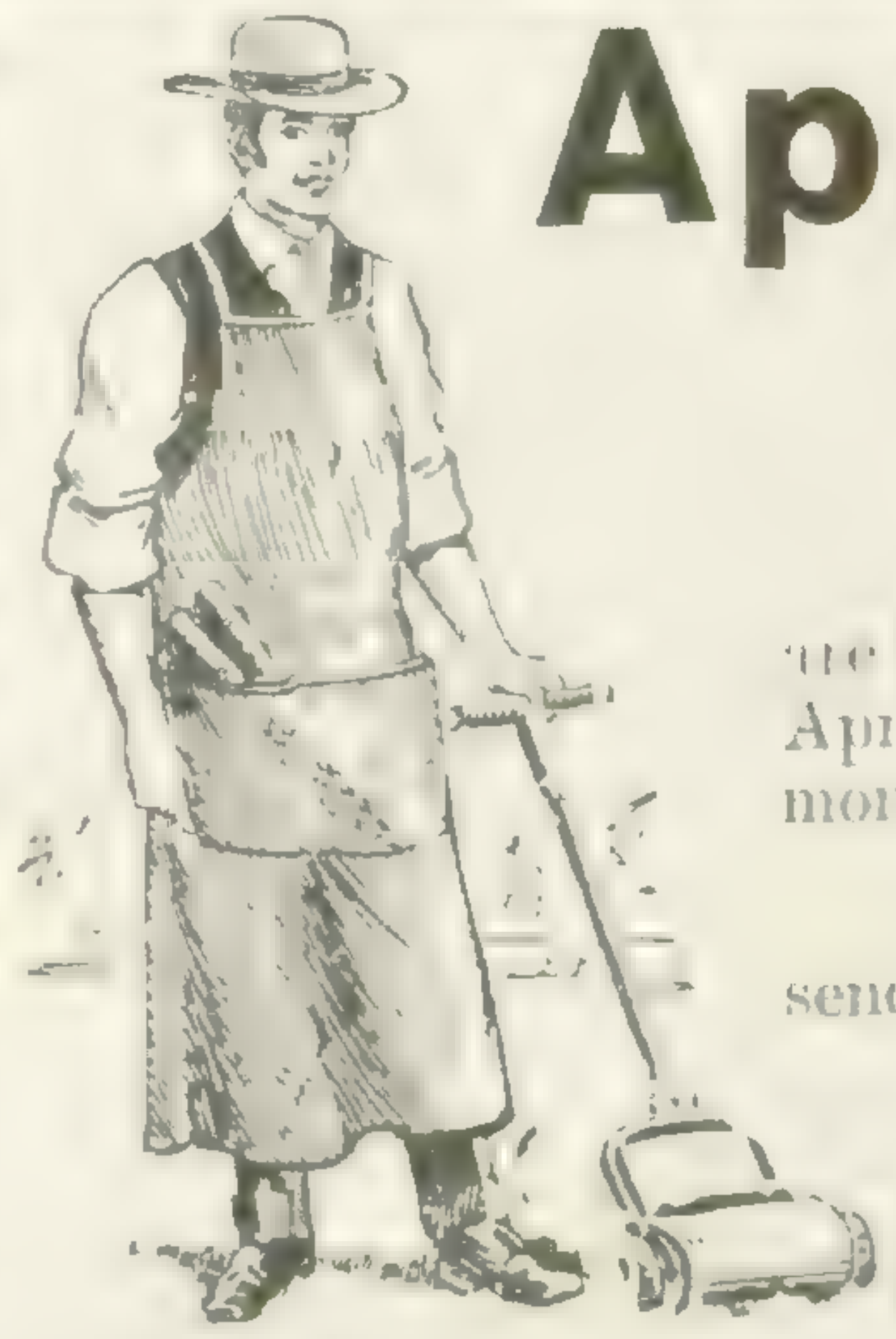

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The Gardeners' Magazine, November 7, 1908.

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GARDENER (Head Working or Single-handed); age 39; married, two children; good all-round experience Inside and Out; cows and poultry if required; good references. G. A., 49, Norman Road, Ilford.

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GARDENER (Single-handed or with help), 20 months' good character; 8 years' previous; age 33; abstainer. H. HUNT, 10, Herongate, Brentwood.

GARDENER (Single-handed or charge of Kitchen Garden); 1 year and 8 months in present situation; 8 years previous; good references; age 32; total abstainer. Apply GARDENER, St. Michael's Cottages, Ingrave, Brentwood.

GARDENER (Single-handed or otherwise); willing to be useful; 5 years' good reference from last place; life abstainer; age 26; married when suited. A. S., Trammere, Sunbury-on-Thames.

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JOURNEYMAN (Inside).—Mr. ADCOCK can highly recommend Young Man as above; seven years present place; age 24. Apply N. WELLS, Gardens, Ditcham, Petersfield, Hants.

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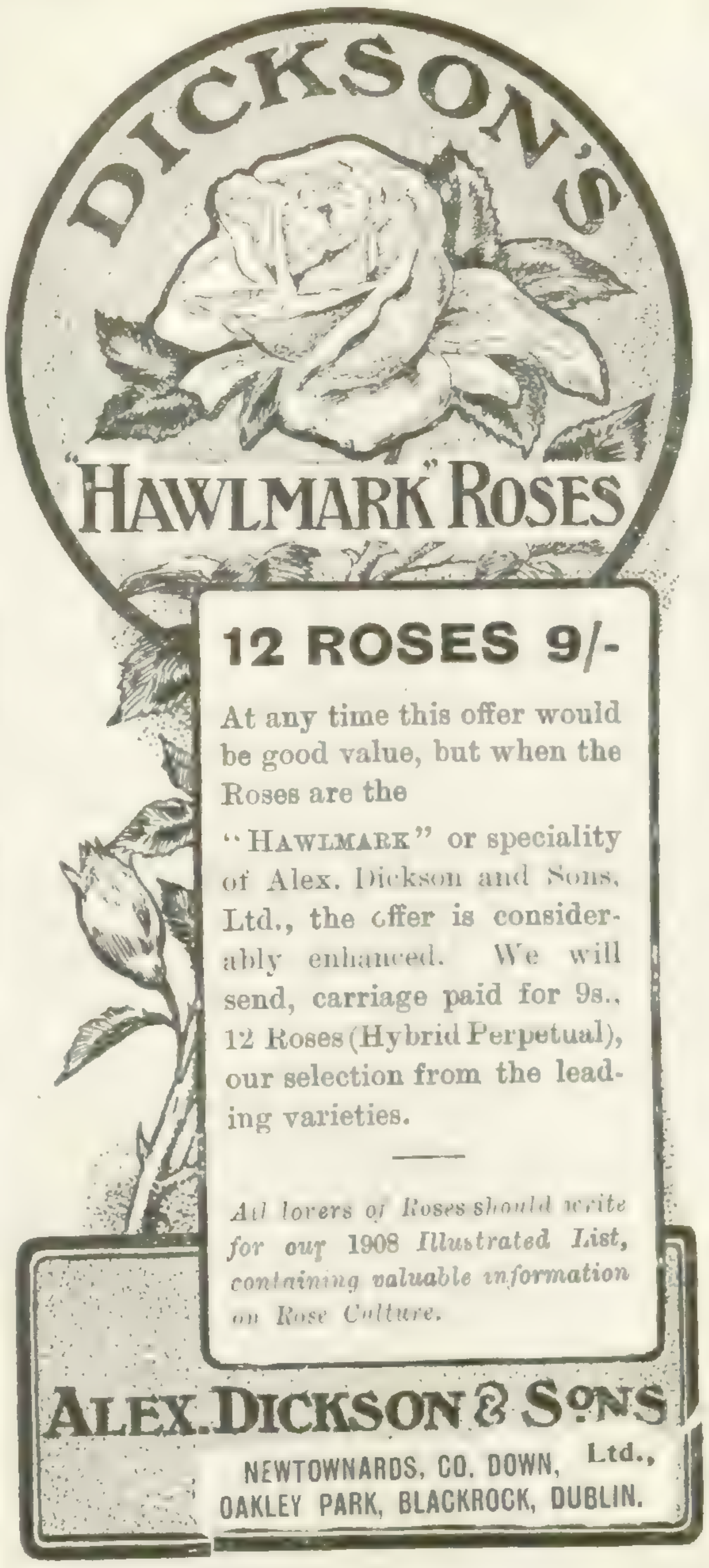

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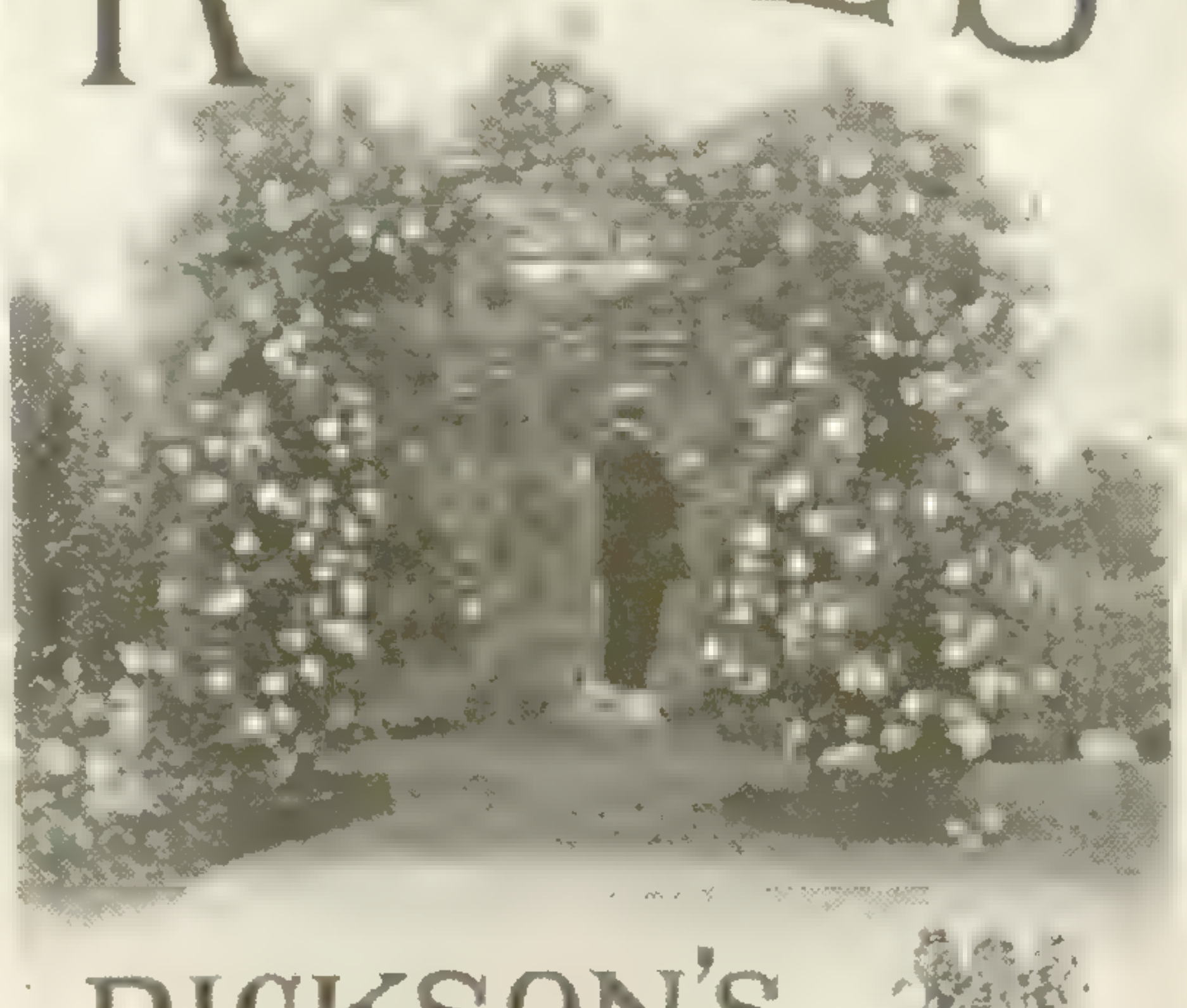

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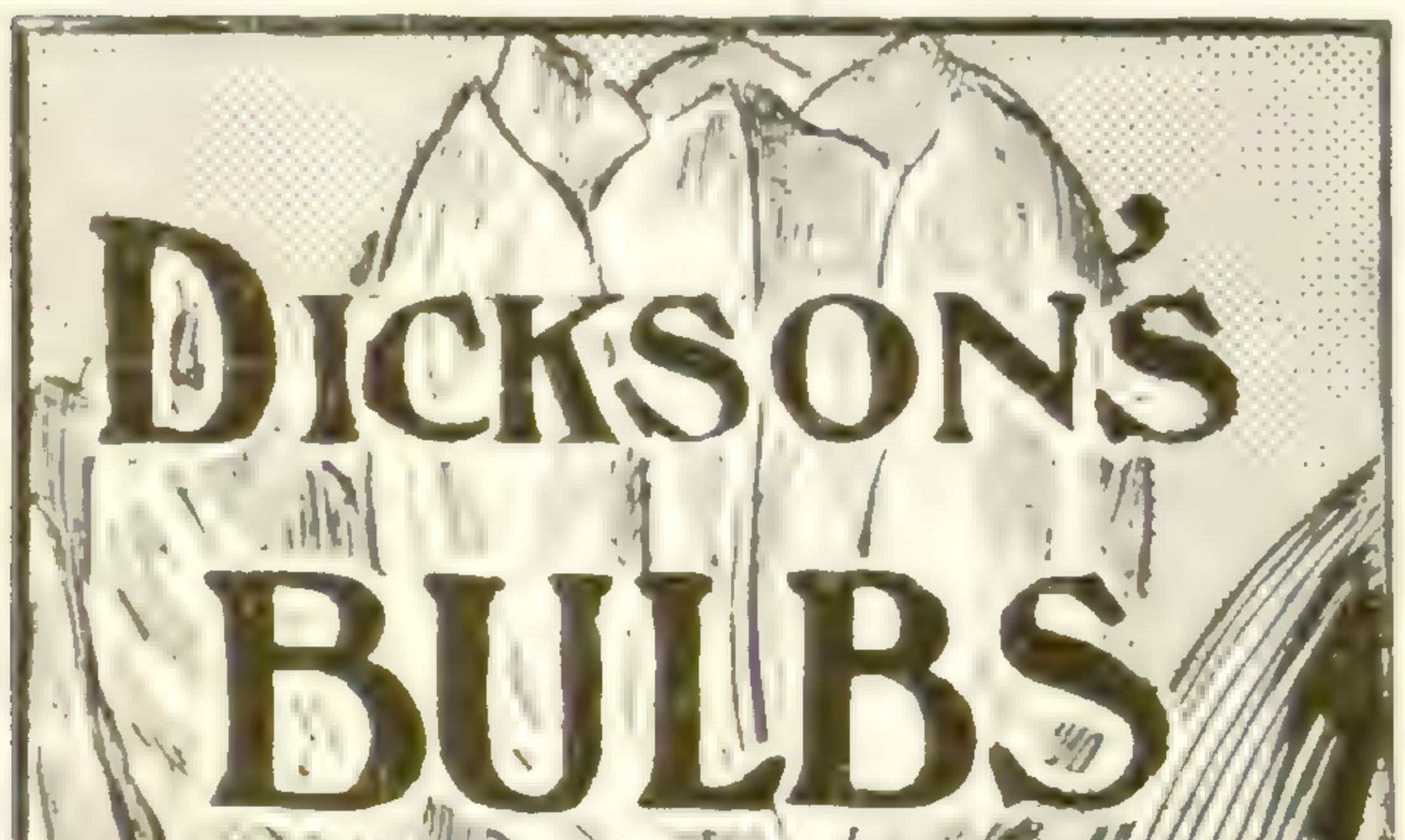

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VOL. LI.—No. 2,871. SATURDAY, NOVEMBER 7, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Tilth.

Considering how large is the amount of attention devoted by those engaged in experimental work in this country to testing the action of various manurial agents on garden and farm crops, it might, with some justification, be assumed by those who had but little experience in tillage operations that the chemical condition of the soil is the first point that should be considered in crop production. This, however, is not so, and although we might draw other conclusions from what is being done, we have no doubt that the majority of those who are giving attention to manurial experiments are in full agreement with ourselves upon this point. Prominence is given to the experiments with manures at training colleges, and in the experimental stations because they can be carried out with a large measure of success in a limited area, and results can be obtained from a set of experiments in a comparatively short period. The second of these two points should not have undue consideration from those engaged in experimental work, but many things not altogether desirable may be justified on the ground of expedience. For teaching purposes experiments that can be carried through in a year or two are the most useful, and public bodies such as County Councils like to be in a position to show that they are active in the interest of cultivators. Manurial agents are, we need hardly say, of immense importance in the cultivation of garden and farm crops, and it is desirable cultivators should receive the assistance that experiments are able to give, and be thus placed in a position to use them to the best advantage. Exclusive attention should not, however, be devoted to them, for the foundation of successful culture is a good tilth. This fact was recognised in the United States many years ago, and much work has been done at the experimental stations with a view to effect a solution of the many problems associated with the management of soils. Experiments well-nigh innumerable and extending over long periods have been conducted with a view to the solution of such questions as to the best depth at which to cultivate, the conservation of moisture in the soil, and the influence of a fine tilth on plant growth. The results obtained from these experiments have brought into prominence the enormous advantage of a soil in such condition that the roots can extend freely on all sides, and that air and water can pass readily through it, and in the course of their passage assist in setting free some portion of the food constituents locked up within the particles. If the soil is regarded as a store-house of plant food rather than as an inert mass, the value of efficient tillage will be the more readily appreciated. Further aid in the appreciation of thorough cultivation will be obtained by remembering that the soil contains immense numbers of micro-organisms actively engaged in breaking down certain of its soil constituents and converting them into a form in which they can be utilised by the plant in building up its structure. For these not less than for the roots, air, moisture, and warmth are necessary, and these can only be obtained in proportions favourable to the maintenance of bacteria in an active state when the soil has been prepared in accordance with advanced practice. Depth is essential to a full development of the root systems other than those which do not extend far below the surface, and it is not less necessary the soil should be converted into a comparatively fine tilth throughout its depth. The soil of land under cultivation consists of organic and inorganic matter, the one derived from decayed plants and animals, and the other from the débris of rocks. The percentage of the former is in some degree the measure of the soil's fertility, for while contributing to the available food supply, it renders valuable service in conserving the moisture in the soil. The inorganic matter, or humus, does not serve directly as a plant food, but the products of its decay do so, and are important sources of nutrient matter. Humus varies in character according to the conditions of moisture, and undergoes various changes in process of decomposition, and this is continued until it is resolved chiefly into water, carbonic acid gas, and nitrates. The decomposition of organic matter is materially assisted by bacteria, and both the process of oxidation involved in the decay and the work of the micro-organisms in the liberation of nitrogenous substances are dependent upon the passage of the air through the soil, and this is practicable only when the soil is thoroughly broken up and maintained in a more or less loose state on the surface. Moisture is equally as essential to nitrification as air, and as the activity of bacteria is greatly checked by drought, a fine tilth that will materially check the evaporation from the surface, and maintain the capillarity of the soil in a high state of efficiency is essential. That plants suffer from drought is a matter of common knowledge, but it is not so generally known that the injury to the plant or crop is not so much due to it having been deprived of a sufficiency of water for a certain period as to the food supply having been greatly reduced for some time after the restoration of the soil to a moist condition. Hence

MR. W. H. DIVERS.

it is imperative that strenuous endeavour should be made to conserve the moisture in the soil. In making this endeavour the first step will be to dig or trench deeply, and well break up the whole of the soil when the ground is undergoing its needful preparation, and the second to use the hoe freely during the spring and summer months. The observant cultivator is so fully acquainted with the beneficial results of the free use of the hoe in dry weather that we need not refer to this point at any length. Were it necessary we could give figures of the most striking character in support of our views, but with reference to this point it will suffice to say that the best results are obtained by hoeing to a depth between two and four inches.

Mr. W. H. Divers, whose portrait we have the pleasure of giving in this issue, has for so long a period occupied a prominent position among the leading practical horticulturists of his day, that there are but few who take an interest in gardening to whom he is not more or less well known. Mr. Divers is not only well known, but is held in the highest respect, for he has shown that he not only possesses cultural skill and administrative ability of a very high order, but is keenly alive to all that concerns the welfare of gardeners, and ever ready to support the movements which have for their object the advancement of the craft or the support of those members who have in their old age fallen on evil days. When for many years in charge of the gardens of Ketton Hall, Mr. W. H. Divers made for himself a high reputation as one of the leading authorities on, and cultivators of, hardy and other fruits. We remember with pleasure the many fine collections he has presented to public notice at the exhibitions of the Royal Horticultural Society and elsewhere. Some fourteen years ago Mr. Divers was, on the death of Mr. William Ingram, appointed head gardener at Belvoir Castle, the seat of the Duke of Rutland. These gardens had become famous for their wondrous displays of hardy spring flowers; and while maintaining his interests in fruits and fruit culture, he entered fully into the spirit of the Belvoir gardens, and succeeded in enhancing their deservedly high reputation. To have maintained their traditions would have been an accomplishment of which any man might well have been proud; but to have surpassed them brings into strong relief the ability to which reference is made at the commencement of this brief note. From the first Mr. Divers has shown a warm sympathy with the objects and work of the British Gardeners' Association. He has served on the Executive Council, and has occupied the position of its chairman, and in both he has rendered valuable service. As chairman he contributed in no small degree to the success of the association, for his occupancy of that position was a proof that the business would be conducted on lines wholly free from the objectionable features of trade unionism, and that the endeavour to improve the position of gardeners would be made in a manner free from anything to which the employers of gardeners could well take exception.

Royal Society's Medals.—Two of the Royal Society's medals have been awarded by the President and Council to naturalists. The Copley medal to Dr. Alfred Russell Wallace, on the ground of the great value of his numerous contributions to natural history and the part taken by him in working out the theory of the Origin of Species by Natural Selection. The Darwin medal to Professor August Weisman in recognition of his eminent services in support of the Doctrine of Evolution by means of Natural Selection.

Horticultural Club.—The next house dinner of the club will take place on Tuesday, November 10, 1908, at 6 p.m., at the Hotel Windsor, when Mr. C. D. McKay will talk about "French Gardening."

Weather in October.—We need hardly tell our readers that the temperature of last month was considerably above the average for October, but it may be of interest to mention that the mean temperature for the month was higher than in any previous October during the past thirty-seven years. The mean maximum temperature registered in London for the month was 62.6 degrees, or 5.8 degrees above the average, and the mean minimum temperature 48.9 degrees, or 6.0 degrees above the average. There were twenty-two days in which the maximum temperature was above 60 degrees, and only one in which the maximum temperature was below 50 degrees. The average maximum temperature during the first seven days of the month was 71.71 degrees; the lowest maximum day temperature was 47 degrees, and the lowest night temperature 35 degrees, this temperature being experienced on the nights of October 25 and 26. There have been four other mild Octobers during the past thirty-seven years, and these occurred in 1874, 1886, 1898, 1906. In the last-named year the mean maximum temperature was 61 degrees, and in 1898 it was 60.3 degrees, in 1886 60.6 degrees, and in 1874 60 degrees. There have been two exceptionally cold Octobers during the period mentioned, and these were in 1905 and 1887. In 1905 the mean maximum temperature was 53 degrees and in 1887 52.8 degrees, and the frosty nights were seven and eight respectively, as compared with one only in the five mild Octobers, which was recorded in 1874. The sunshine registered in London during last month was 98 hours, or 29 hours above the average, but the total was less than in 1903.

National Sweet Pea Society.—This society will hold its London show in 1909 at the Royal Horticultural Hall, Westminster, on July 23, and the Provincial show will be held at Saltaire, in conjunction with the Saltaire Horticultural and Rose Society, on July 13. The annual meeting of the society for 1908 will be held at the Hotel Windsor on December 11, at three o'clock. Arrangements have been made for holding trials of sweet peas in the gardens of the University College, Reading, in 1909, and it is proposed to make a charge of 2s. 6d. per variety sent for trial, and to receive varieties only from the raisers or original distributors. Any information respecting the forthcoming trials will be given gladly by the hon. secretary, Mr. Chas. H. Curtis, Adelaide Road, Brentford.

George Nicholson Memorial.—We gladly give publicity to the following communication from the Rev. W. Wilks: The Council of the Royal Horticultural Society have been requested to raise a fund for the establishment of a permanent memorial of the late Mr. George Nicholson, V.M.H., F.L.S. With this they most cordially agree. There are few, if any, men, to whom the present generation of gardeners owes a deeper obligation than to the author of "The Dictionary of Gardening," a work which "has done more towards the standardisation of plant names and developing an interest in horticulture than anything published since Loudon, 1829." Mr. Nicholson was for many years a most valued member of the Scientific Committee of our society. He also took a very active part and keen interest in the re-establishment of examinations by the society, and himself acted as one of the examiners. It is in view of this last point, and after carefully estimating the amount likely to be subscribed that the Council propose to establish a "Nicholson Prize," to be awarded annually after examination to the students at Wisley. Subscriptions should be sent addressed "The Nicholson Prize Fund, R.H.S. Office, Vincent Square, London," and cheques and postal orders made payable to "The Royal Horticultural Society," crossed London and County Bank.

Fungus Foray in Epping Forest.—On the 31st ult. the Essex Field Club made its annual excursion to Epping Forest for the study of the fungi growing therein. Fungi were less plentiful than in some previous seasons, and no species that are particularly rare were met with. In the evening a meeting was held at Morgan's Farm, Theydon Bois, and in the course of the proceedings Mr. George Massee, V.M.H., of Kew, made the collection the subject of an interesting demonstration. Mr. Massee referred to the importance of the study of mycology from an economic point of view. For coping with injurious fungi he advocated the employment of lecturers, who should make themselves acquainted with the needs of the places visited, so that they could tell their hearers what to look for and what steps to take. Much practical information might, he suggested, be conveyed by means of lantern demonstrations.

Orchid Nomenclature. — To those who may have an objection to what is being done on the initiation of the R.H.S. Orchid Committee, with a view to simplify the nomenclature of hybrid orchids by the inclusion of not more than two genera in any one compound name, we would commend sulphobenzylethylisobutylsilicyl, a name which the chemists have coined as descriptive of one of the compound substances with which they have to deal. This name is of interest as evidence of the possibilities in the coining of names and of rendering them unintelligible to all but a few who are especially well versed in technical terminology. We have not discovered this name as the result of diligent search in an abstruse scientific treatise, but had it brought under our notice by the agenda of the meeting of the Chemical Society on the evening of Thursday last (November 5), which included, among other subjects for discussion "The synthesis of di-sulphobenzylethylisobutylsilicyl oxide."

French National Chrysanthemum Society.—The 13th show and conference of this society was held at Tours on November 3, 4, and 5. The agenda comprised the following subjects: (1) Grafting Chrysanthemums. History and description of the Means Employed. (2) The publication of the society's Handbook for propagating a knowledge of chrysanthemum culture. (3) The Floral Committee; Its Aim, What it is, and What it Ought to be. (4) Trials of Manures for Outdoor Chrysanthemum Culture. (5) Insects and Diseases. (6) Best Means of Packing Plants and Cut Flowers. (7) Sports; How to Obtain and Fix Them. Other subjects supplementary to the above were on the subject of a pocket edition of the "Repertoiré des Couleurs," and on fertilisation. The first two days would be busy ones according to the programme, both at the show and at the conference. The third day was devoted to showing the members the sights of the town.

The Grange Orchids.—At the recent sale by Messrs. Protheroe and Morris of the collection of orchids formed by Mr. J. Bradshaw, The Grange, Southgate, the whole of the 840 lots were disposed of, the total sum realised being £5,078.

South - Eastern Agricultural College, Wye, Kent.—A meeting of the Governors of this college was held at Caxton House, Westminster, on Monday, under the chairmanship of the Right Hon. Lord Ashcombe. The Principal, Mr. M. J. R. Dunstan, reported an entry of 129 students for the session, of whom 124 were in residence, this being the largest number on record. A resolution was passed agreeing with the conclusions of the report of the Committee on Agricultural Education and Research. A special horticultural course has been instituted under the superintendence of a practical fruit grower and will commence next January. A fruit growers' conference will be held at the college on November 27, when insecticides, spraying, the packing and grading of fruit, etc., will be discussed.

Burnham Beeches.—There are about 2,000 pollard trees, chiefly beeches, at the famous Burnham Beeches, and many of these, after having been lopped for centuries, have now developed top growth out of proportion to the strength of the boles. The City of London Coal, Corn, and Finance Committee has to face the question of lightening this top growth, and also the serious and increasing attacks of Beech coccus. It is estimated that the removal of the limbs of trees will increase the annual expenditure by £150. At present a small income is derived from the sale of old limbs, and of beech-mast, but there does not appear to be any portion of the area of the Beeches that can be suitably set apart for the purpose of increasing the income. The number of timber trees is being increased; cricket-bat willow is being planted by the stream side, and the question of what is to take the place of the old beeches as they disappear, is to be discussed by the committee shortly.

Potato Experiments in Oxfordshire.—With a view to prove to the members of the East Oxfordshire Allotment Association the importance in the cultivation of potatoes of proceeding on scientific lines, one of the vice-presidents conducted during the current year a series of experiments in potato culture. The plot of ground selected for the experiments contained ten rods, and the soil was a heavy loam. The whole of the area received a dressing of dung manure, the quantity used being two tons. One-half the plot, in addition, received a dressing of artificials, consisting of 7lb. of sulphate of ammonia, 7lb. sulphate of potash, and 14lb. of superphosphate. The potatoes were planted on May [illegible], which appears to us rather late, and the varieties selected for the experiment were Duke of York, Duchess of Cornwall, and Epicure, and of the Duchess of Cornwall and Epicure, Scotch, Irish, Oxon, and Lincoln tubers were planted. Of the Duke of York the tubers were Scotch, Berks, Oxon, and Lincoln. The results of manuring were not sufficiently marked to necessitate reference being made to them. The yields from the several sets of tubers are as follows: Duke of York, Scotch seed, 248lb.; Berkshire seed, 127½lb.; Oxon seed, 144lb.; Lincoln seed 153lb. Epicure, Scotch, 147¾lb.; Irish, 143¼lb.; Oxon, 137½lb.; Lincoln, 146½lb. Duchess of Cornwall, Scotch, 167lb.; Irish 271lb.; Oxon, 250lb.; Lincoln, 272lb. In giving these figures it appears necessary to call attention to their somewhat inconclusive character.

CORDON APPLES.

Having recently seen some cordon apples carrying heavy crops of splendid fruit, I am prompted to make this mode of culture a subject of remark. No one, of course, who wants apples in large quantities, and has the convenience for growing large bushes or standards, would think of adopting the cordon for the purpose of securing them. This system, however, has, under some special, though comparatively limited circumstances, decided advantages. Amongst these there is the case of the amateur and cottage gardener, who may be desirous of growing many varieties in order to have a small, but lengthened supply of fruit from a small space, and of those also who plant with a view of reaping quick returns. In cases like these the advantages to be gained by growing cordon trees are considerable, though it must be admitted that trees with their growths restricted upon this principle, do not keep in a satisfactory state of health anything like the length of time that trees of larger proportions do.

The cordon tree adapts itself to various uses, such for example as that of clothing iron arches, placed over walks, iron trellises, fences, walls, or other similar erections that may be at command, and here it is grown upon the sides of an iron and galvanised netting structure that encloses bushes of other kinds of fruit. In any case cordons should be upon what is known as the English paradise stock, as on that stock the trees may be kept under satisfactory control with comparatively little trouble, and they commence to bear good crops of fruit while they are quite young, though even then, when planted as here upon heavy soil, attention may have to be given to root-lifting and root-pruning. If grafted or budded upon the crab stock, they may be expected to grow strong, and produce but few fruits, as is sometimes the case with bush trees unless they are skilfully managed, but no one is better acquainted with the raising of trees than are nurserymen, and that may be safely left in their hands.

For planting, trees of from 3ft. to 4ft. in height, with single stems, are the most useful for general purposes, and they may be either trained upright or in an oblique direction. Pruning is an important point in the management of apple trees in whatever form they may be grown, but cordons, owing to the restrictions to which their growth is subjected, require perhaps more pains taken with them than any other form of tree. It is well known, however, that cultivators differ in their practice of pruning, and yet each may be successful in procuring satisfactory crops. This can, in a measure, be accounted for from the varied effect that soils of extreme natures, say, light and heavy, have upon trees.

Until trees have filled their allotted space a leading growth must be laid in annually, and this should be stopped when it has reached eight or nine inches in length. A secondary growth from this should be allowed to extend, to be cut away late in the autumn. By this treatment even varieties that are unsuitable for cordons will be adequately furnished with spurs. Side growth should be shortened to about the sixth leaf at midsummer, and their secondary growths be stopped at two or three leaves, the original growths being pruned back to two or three leaves late in the autumn.

Some varieties, owing to their freedom of making spurs, such, for example, as Ribston Pippin, Cox's Orange Pippin, Sturmer Pippin, King of the Pippins, Claygate Pearmain, Frogmore Prolific, Dumelow's Seedling, Annie Elizabeth, Lane's Prince Albert, and Seaton House, are much better suited for this mode of culture than are stronger-growing kinds, of which Tyler's Kernel, Mère de Menage, Emperor Alexander, Peasgood's Nonsuch, Bramley's Seedling, and Striped Beaufin are types.

T. Coomber.

The Hendre Gardens.

PERGOLAS VERSUS HEDGES FOR ROSES.

The fashion for pergolas in gardens has become very pronounced. These structures have, owing to their effectiveness, increased very much during the last ten years, and as a distinct feature of the garden they have much to recommend them.

I am especially partial to pergolas, but, as the result of observation, I have come to the conclusion that they are not so suitable for roses as for other forms of support. Pergolas should be an attraction during the autumn, winter, and early spring months, as well as during the summer, when covered with blossoming roses in proportion, of course, to the difference in the seasons.

To effectively clothe pergolas in view of assuring their attractiveness during the periods named, I would cover them with honeysuckles and early-flowering clematis, such as C. montana, jasmines, clematis, wistarias, Pyrus japonica, Polygonum Baldschuanicum, and so on for summer. For an autumn and winter display I would employ vines, Clematis flammula, Bignonia radicans, ivies, etc.

My objection to the use of roses for pergolas is that when fully established on this structure the best of the rose blossoms are on the top of the pergola, and much difficulty is experienced in obtaining a full view of them from the ground. Therefore, the finest portion of the floral display is lost. This opinion, gained from experience of some years, has of late been strengthened by a request from the owner of a very fine rose-covered pergola to suggest a stairway with a platform on the top from which his friends and himself can enjoy the full beauty of the roses both on the top and at the sides.

My alternative suggestion for enjoying the full display produced by climbing roses is to form hedges in suitable sites and in such a way that they can be seen from all sides. A fence composed of larch poles, with the spurs left on, say, eight or twelve inches long, will provide capital support for the roses, and have a rustic appearance until covered. In this way the full beauty of the roses can be seen, and it is a convenient manner of attending to the plants themselves. The hedge should not be less than 12ft. high, a foot or two more would give a bolder effect, and provide increased variety in the garden at the same time.

Structures can be made also with stout wire, either stretched horizontally or upright. Stout oak poles or branches can be rustically built, or even light brick pillars can be arranged; in fact, the suggestion affords abundant scope for arrangement.

S. P.

RENOVATING VINES.

Vines which have for many years produced heavy crops of luscious grapes, and which now show signs of waning vigour, may usually be greatly improved and brought into a very satisfactory condition by having their roots lifted entirely and replanted in a sweet and suitable compost. Heavy top-dressing annually with good turf, bone-meal, wood ashes, etc., assists the formation of healthy roots near to the surface, and this, together with good nourishment at intervals, in a liquid state, keeps the vines in a satisfactory state for several years. But when these repeated top-dressings fail, then something more must be done, and if it is not desirable to destroy the old vines and plant healthy young canes, root lifting is the only remedy to adopt.

It is remarkable what may be done with the roots of aged vines, and how quickly they recover if the work is done at the right time. Some years ago I lifted a houseful of Muscats early in October, took up the roots entirely and fully renewed the border, and with excellent results. I have on several occasions renovated vines and brought them into a very satisfactory state of bearing by the same method. My modus operandi is probably quite in common with that of many other growers, but to the inexperienced, whose vines have been gradually declining, and whose crops are very unsatisfactory, the method may prove interesting.

In the first place soil sufficient to meet the requirements should be prepared in readiness. This should consist of sweet fibrous loam, taken, if possible, from a grass field which has been grazed by cattle or deer. Good turves six inches thick, or a little more if the soil is good in quality, should be carted to the nearest place to where it is required, and should be chopped up; of course, if enough soil has been already carted and stacked for a twelvemonth, so much the better. To every ten cartloads of this soil there should be added one load of wood ashes (including some charcoal), two of old plaster and lime rubbish, one of decayed manure, 3cwt. of crushed bones, one of bone-meal, and a moderate quantity of some approved artificial vine manure. If these are well mixed a couple of times, good grapes will be produced by it.

Keep the soil dry; then open out a trench right along the front of the border and clear away all the old soil, preserving the roots as much as possible as the work proceeds. Having removed all the old soil put the drainage right, and then commence to refill the border and relay the roots at various depths. All the damaged ends should be cut clean, and along the bare thongs incisions should be made so that fresh roots may strike out into the new soil. Having remade and planted the border, give a good soaking of water in a tepid state to settle the soil. In the case of outside borders give a mulch with strawy manure, and shutters or tarpaulins ought to be used to keep the soil from becoming saturated in wet weather and also to keep the roots warm.

The vines should be syringed in fine weather twice a day, and the house kept close for at least a fortnight, when air, more or less, should be admitted until the usual course of ventilation is adopted. After the leaves have fallen from the vines they should be pruned, and a few fresh rods trained in the following season of growth to encourage plenty of fresh roots. If the vines are lightly cropped for the first year after disturbance the berries should be large and of good quality. I often think when seeing vines in a rather bad state how much better the crops might be if the roots were thoroughly examined and put into better soil, instead of being allowed to remain and gradually get worse year by year.

If it is intended to lift vines where the crop is still hanging, the bunches might be cut and bottled in the usual way, so that the work can be taken in hand at once. A month earlier is probably the best time to lift the vines, but when carefully done (especially if the roots are in an inside border) at any time during October and in the early part of November, good results will follow.

Black Hamburgh, Madresfield Court, and Foster's Seedling are capital grapes for early use; and for late crops I am very satisfied with Appley Towers, and believe, when better known, more of this variety will be grown. I have it growing worked on the Black Hamburgh and on its own roots, and in both cases it crops very well and the berries are of good size and colour, but with us it does not keep so long as Lady Downes.

H. Markham.

Wrotham Park Gardens.

THE BAMBOO GARDEN.

As the value of the bamboos have been fully demonstrated, and are now regarded as fitting subjects for the embellishment of English gardens, a few notes concerning them may be of service both to garden makers and garden lovers.

The fact that in many ways we have introduced several aspects of Japanese gardening into our own gardens, should not preclude us from again copying them in the extensive use of bamboos, etc., for the garden beautiful. It is worthy of note that some forty species are hardy in this country, and forthwith the old idea that bamboos are but half-hardy must give way in the light of the experience of recent years.

They will withstand severe frost, but the great obstacles to success are the fierce, cutting winds which blow from north and east. Therefore the ideal position is one that is sheltered, and where consequently the bamboos can make free, healthy growth without being buffeted by cold winds.

Any good loamy soil to which some well-rotted manure has been added will suit the bamboos. They must have a good root-run, where they can gain the necessary strength to establish themselves, and once this is done they grow vigorously and present a charming appearance.

The uses of the bamboo are many. The natural grace and elegance which characterise them lend their aid in making a charming feature in gardens. Take, for instance, the scenic beauty which is evolved by the planting of bamboos by the waterside. The moist banks of streams and the margins of lakes may be turned into beauty spots by a judicious use of the different species.

For forming a screen to a sheltered lawn, and for covering the sloping, grassy banks, for grouping in the woodland and wild garden they are indispensable. Again, what lovely lawn groups one can form with them; indeed there are few spots in the sheltered garden where these useful subjects would not create a charming effect. The main points in the formation of a successful bamboo garden are to secure a suitable site, to make a good selection, and to arrange and plant the same in an artistic manner. Every garden or park has its own distinctive features, consequently no hard and fast rules can be laid down for the promulgation of a definite plan. Each newly-modelled garden of bamboos should be based upon the idea of harmonising the garden with the surrounding landscape. My favourite idea of bamboo scenery is in conjunction with water effects.

A running stream, which could be margined with Japanese irises, primulas, and other dainty waterside plants, widening at intervals for the formation of lily pools in which could be grown a series of the most beautiful nymphæas and other aquatics, will provide a pretty starting point for the formation of an exquisite bit of bamboo scenery.

Allowance should also be made for the necessary pathway to intersect the garden. We have seen grass paths utilised for this purpose, but as the bamboo garden is a source of interest at all seasons it is as well to make a gravel pathway in order that one might go dry-shod at all seasons. It will be well to construct a rustic bridge over the water and train a few rambling roses, clematis, or wistarias over it; and to provide a quaint tea-house of Japanese design in a quiet nook, and, if possible, a bit of rugged rock-work with small waterfall.

The planting of the bamboos in the most effective sites is a matter of primary importance. It is the "finis" of the dainty scene, and if carried out artistically will prove a source of delight for many years. The tall-growing species of arundinarias, bambusas, phyllostachys, etc., will naturally demand positions in which they can by their taller proportions dominate, and form a fitting background to either side of the garden, while the dwarfer forms, among which are some very dainty subjects, could come down to the very margin of the water itself. Dwarf species could also be used in filling up vacant spaces among the tall forms, while some of the very dwarf species could be utilised as carpeters in open spaces.

With reference to the tall bamboos some very good forms are to be found in each section. Such arundinarias as anceps, aristata, Falconeri, Hindsii, japonica, Hookeriana, macrosperma, nitida, nobilis, Nobilis, are of much value, as also are Bambusas Alphonse Karr, palmata and verticillata, Phyllostachys aurea, Boryana, Castillonis, flexuosa, Henonis, nigra, Quillioi, and viridiglaucescens can also be strongly recommended.

Of the dwarfer forms we may note Arundinarias auricoma, Fortunei, humilis, senanensis, etc.; Bambusas angustifolia, disticha, marmorea, pumila, pygmæa, and tessellata, while the dwarf phyllostachys furnish the pretty ruscifolia.

P. S.

Camellias. — These are at all times handsome, whether in flower or in leaf only, and there are no better subjects for the conservatory or greenhouse. They succeed in the smoky atmosphere of large towns better than anything else of the kind, flowering freely under the most unlikely conditions, and they suffer less from lack of light and sun than most other plants. Just now the flower buds are swelling up preparatory to expanding, and during this stage the soil must be kept in an evenly moist condition. Where the pots are filled with healthy roots they should have a dose of weak soot water or even a little guano or the like dissolved in the latter occasionally. Keep the glossy leaves free from dust and insects by means of sponging with tepid water, and on bright days spray the plants gently overhead with a fine-rosed syringe, especially where the atmosphere of the house is naturally dry. These plants must not be forced in any way at this season, or the result will be loss of buds.—T. B. Field.

NEW PLANTS, ETC.

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VANDA CÆRULEA CHARLESWORTHI.

This is a wonderful new orchid that resembles the well-known Vanda cærulea in everything but colour. Instead of beautiful blue colouring we have in V. c. Charlesworthi the purest whiteness. The flowers have not the least bit of colouring, so that this variety is one of the purest and most remarkable of albino orchids. F.C.C., R.H.S., October 27. Messrs. Charlesworth and Co., Haywards Heath.

BRASSO-CATTLEYA MADAME HYE SUPERBA.

A very beautiful form of the white, lilac-tinted hybrid from B. Digbyana and Cattleya Harrisoniæ. It is probably of better form than the type. A.M., R.H.S., October 27. Mr. H. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Tetbury, Gloucester.

BRASSO-CATTLEYA QUEEN ALEXANDRA GLENTHORNE VAR.

This very fine orchid differs little from the type; the white flowers are very large, and the fringed lip is especially attractive. A.M., R.H.S., October 27. Mr. Gurney Wilson, Glenthorne, Haywards Heath.

LÆLIO-CATTLEYA LUSTRE GIGANTEA.

A handsome orchid of dwarf habit, but producing large and substantial flowers. The sepals are whitish, and the broad, wavy petals are bright rose, with a little white showing through the colour. The elongated lip is very deep purple, with golden lines at the base and throat. A.M., R.H.S., October 27. Lieut.-Colonel G. L. Holford.

LÆLIO-CATTLEYA ORTRUDE SUPERBA.

This is one of the Lælia anceps crosses, the second parent being Cattleya Dowiana aurea. The present variety of this hybrid has creamy-white sepals and petals, shaded with rose, and large ruby-crimson lip lined with yellow. A.M., R.H.S., October 27. Lieut.-Colonel G. L. Holford.

DENDROBIUM CŒLOGYNE MAXIMA.

A large form of this very distinct, handsome, and rare dendrobium. The ground colouring is tawny-yellow, and over this are ample markings and shadings of red-purple. A.M., R.H.S., October 27. Messrs. Charlesworth and Co., Haywards Heath.

CHRYSANTHEMUMS.

Master David.—A very fine, large Japanese variety, with broad, rich crimson florets that have an old gold reverse. A splendid novelty. F.C.C., N.C.S., October 26; A.M., R.H.S., October 27. Mr. H. Perkins, Greenlands Gardens, Henley-on-Thames.

Sir Frank Crisp.—A bold Japanese variety of rich chestnut-red colouring. The florets are rather narrow, but they make up a fine bloom. F.C.C., N.C.S., October 26; A.M., R.H.S., October 27. Mr. H. Perkins.

H. W. Thorp.—This fine incurved chrysanthemum is sure of a welcome. It is of good type, large, and creamy-white in colour. A seedling from Buttercup. F.C.C., N.C.S., October 26; A.M., R.H.S., October 27. Mr. H. W. Thorp, Dunnington, Worthing.

Mrs. R. H. B. Marsham.—This large, high-built Japanese chrysanthemum is a fine addition. The colour is creamy-white, and the narrow florets are long and slightly curled. F.C.C., N.C.S., October 26; A.M., R.H.S., October 27. Mr. D. Fairweather, gardener to R. H. B. Marsham, Esq., Bifrons, Canterbury.

Exquisite.—An effective Japanese variety with long, drooping florets; bright chestnut-red, with golden reverse. F.C.C., N.C.S., October 26. Mr. G. Mileham, Emlyn House Gardens, Leatherhead.

J. Lock.—A deep and broad Japanese chrysanthemum, with long reflexing florets. It is bright yellow lightly splashed with red. F.C.C., N.C.S., October 26. Mr. G. Mileham.

Rose Pockett. A large Japanese variety with broad petals of a soft buff-yellow shade. A distinct and effective variety. F.C.C., N.C.S., October 26. Messrs. W. Wells and Co., Merstham.

Lady Crisp.—A beautiful reflexed Japanese chrysanthemum, with long drooping florets of a rich golden-yellow hue, with paler reverse. F.C.C., N.C.S., October 26. Mr. H. Perkins.

Lady Edward Letchworth.—A soft lemon-yellow Japanese variety, of loosely incurving form, and with paler reverse colour. F.C.C., N.C.S., October 26. Mr. G. Mileham.

W. J. Davis.—A rosy-red Japanese variety with golden reverse. The long florets curl at the tips in a very pretty manner. F.C.C., N.C.S., October 26. Mr. G. Mileham.

GENISTA GLABRESCENS.

A dwarf-growing broom, bearing a profusion of bright yellow flowers. Bot. Mag., t. 8,201.

CŒLOGYNE PERAKENSIS.

A Malayan species, with greenish-yellow flowers, but of little value horticulturally. Bot. Mag., t. 8,203.

OLEARIA RAMULOSA COMMUNIS.

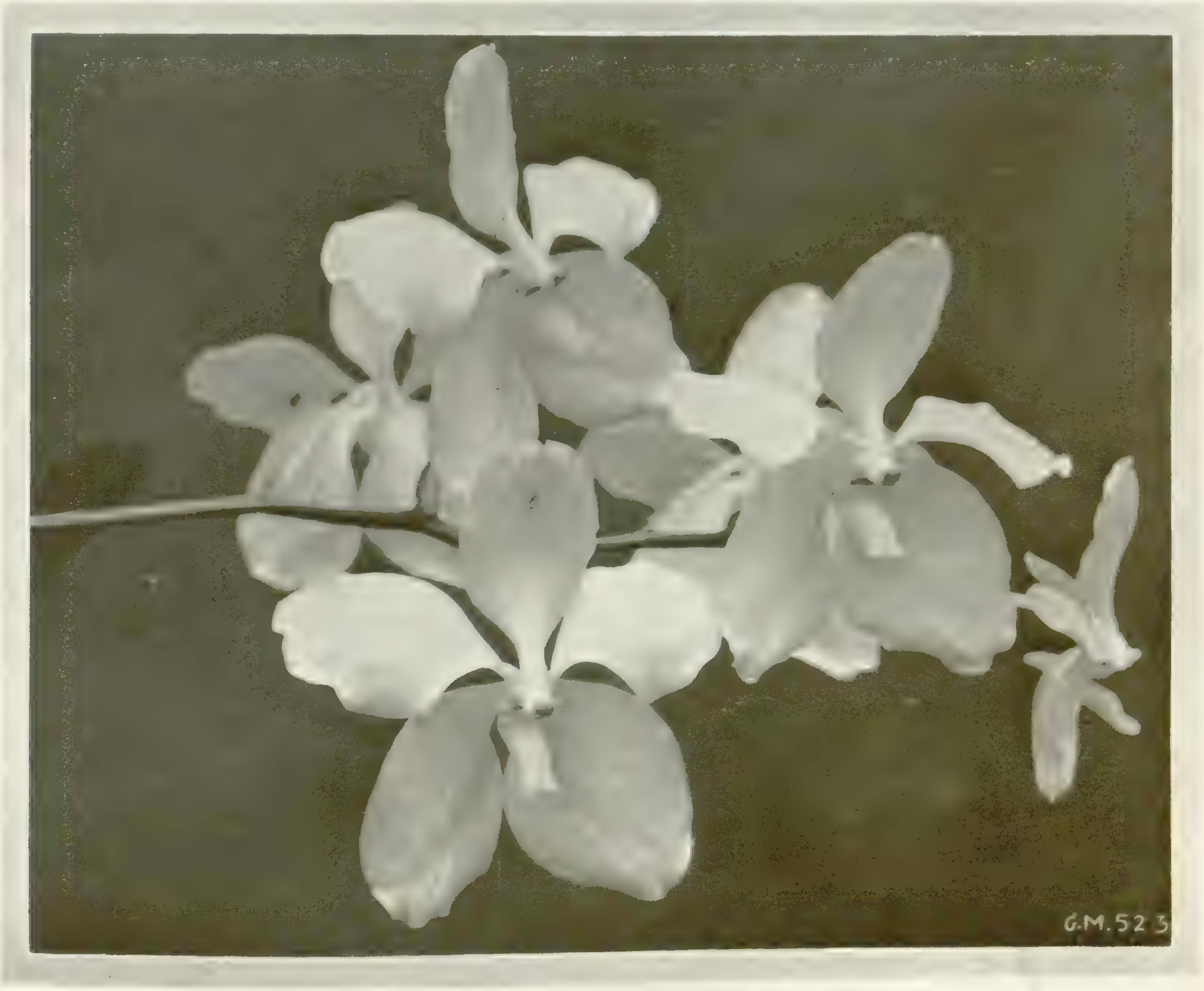
A graceful form, bearing white star-shaped flowers, and growing to a height of five or six feet. Bot. Mag., t. 8,205.

CHIRITA BARBATA.

An Indian species possessing considerable attractions, although not equal to some other chiritas in cultivation; flowers, pale blue. Bot. Mag., t. 8,200.

RHODODENDRON MARIESI.

An attractive species from Central China, bearing light pink flowers marked with purple spots on the upper segments. Bot. Mag., t. 8,206.

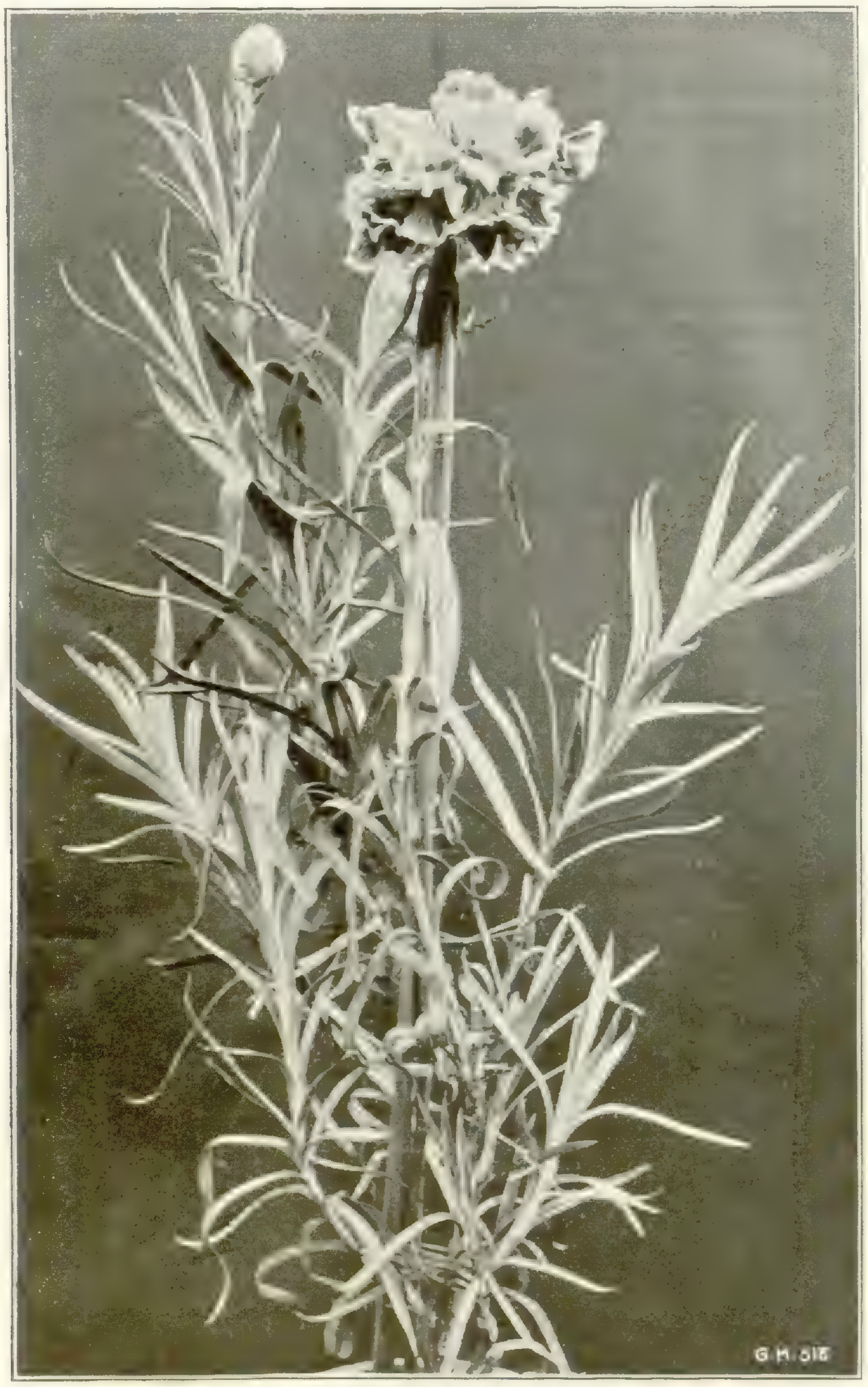


VANDA CÆRULEA CHARLESWORTHI.

F.C.C., R.H.S., Oct. 27. Messrs. Charlesworth and Co., Hayward's Heath. Flowers pure white.

GARDEN VARIETIES OF BOUVARDIAS.

At this season of the year the numerous varieties of bouvardia now in cultivation are particularly valuable for the embellishment of the greenhouse or conservatory, and also for cutting purposes. Of late, however, the demand for huge blossoms, such as the largest Malmaison carnations, for buttonholes, has led to bouvardias being less grown for this purpose than they formerly were. As pot plants, however, delightful little specimens, bristling with flowers, are brought into Covent Garden Market, and as an object-lesson on the possibilities of a pot only five inches in diameter, they are especially worthy of mention.



TREE CARNATION LADY AUDLEY NEELD.
Flowers large, colour bright scarlet-red, and pink.

Unfortunately, in the London district, bouvardias often suffer severely from the dense sulphur-laden fogs frequently experienced at this season, and whose area of destructiveness is continually enlarging. The more hairy the leaves the more quickly are they injured by fog. In looking through a collection of bouvardias one cannot fail to be struck with the fact that very few novelties occur amongst them, as they are nearly all old and well-tried kinds.

The long-time popular variety Hogarth was raised about fifty years ago by Mr. Parsons, a nurseryman, of Brighton. It has played a very important part in the production of new varieties, for about the year 1870 it produced in America two white-flowered sports, which were put into commerce under the names of Davisoni and Vreelandi. They were soon after sent across the Atlantic, and quickly became popular here. In the year 1880 a double-flowered variety of bouvardia was put into commerce by Messrs. Nanz and Neuner, of Kentucky, U.S.A. This, known as Alfred Neuner, originated as a sport from the before-mentioned Davisoni. It was in this country given a First Class Certificate by the Royal Horticultural Society in 1881, and from that time it rapidly became popular here. It still remains the best, or perhaps I should say, the only, double white that we have, and a pale pink form of it distributed a year later under the name of President Garfield is unsurpassed in its colour. Next we have another American variety Pride of Brooklyn, which has in some cases at least superseded the older Davisoni and Vreelandi. It is of good free growth, and the flowers, which are of the purest white, are borne in great profusion.

This by no means exhausts the varieties that have resulted directly or indirectly from the Brighton-raised Hogarth, for in 1885 it sported with Messrs. Jacob Makoy and Co., of Liège, into a double form, retaining the colour of the original Hogarth. Known as Hogarthi flore-plena, this is far and away the best of the double forms with red blossoms.

There yet remains another American variety whose origin I am unable to give, but which about twenty years ago created quite a furore by reason of the intense scarlet colour of the blossoms. This is President Cleveland, which is now largely grown and generally recognised as the best of that tint.

While most of the above have been sent here from the United States of America, the newer variety, King of Scarlets, had even a longer journey from the land of its birth, for it was raised in Sydney, New South Wales. It was given an Award of Merit on December 9, 1902. The flowers of King of the Scarlets are larger than those of most bouvardias, particularly in the width of the lobes, while the colour is a clear bright scarlet with the tubes almost white. It is perfectly distinct from President Cleveland, and flowers earlier than that does. W. T.

CARNATION LADY AUDLEY NEELD.

This new perpetual carnation, of Malmaison type, attracted a good deal of attention when it was exhibited by Messrs. Heath and Son, Cheltenham, at the Royal Horticultural Hall, Westminster, recently, because of the likeness of its flowers in form and colouring to the well-known Marmion. The new variety appears to differ from the older one, however, in its habit of growth and continuity of flowering, and these are differences that will appeal strongly to the grower who has not over much room to spare for carnations. The big blooms are pale pink and bright scarlet-red, a bold association of colours that is most effective.

A correspondent, who writes over the signature of "W. F. C.," sends us the following note:

"Having seen your report of the new carnation Hon. Lady Audley Neeld, in a recent issue, as shown by Messrs. Heath and Son, of Cheltenham, I should like to say that you are correct in your supposition, so far as my experience goes, in that, although similar to Marmion, it is a better grower. I have several plants of both, and find a marked difference in habit. I am told by Messrs. Heath and Son that they raised it by crossing the tree carnation Prosperity with a scarlet Malmaison, and that this was saved on account of its beautiful and unique colour, and it was not until later that they discovered it to be a true perpetual-flowering carnation in habit. My experience of it is that it flowers all the year round and branches all up the stem, whereas Marmion is very shy of branching, indeed, only throwing off shoots from the base after the stem has flowered; it is true that Marmion is perpetual in that it flowers practically at all times of the year, but it can hardly rank as a tree carnation. Lady Audley Neeld seems to me to mark an entirely new break in the race; Messrs. Heath and Son tell me they have raised several seedlings from it, some of which seem likely to be good things, especially a batch that has Enchantress as a parent."

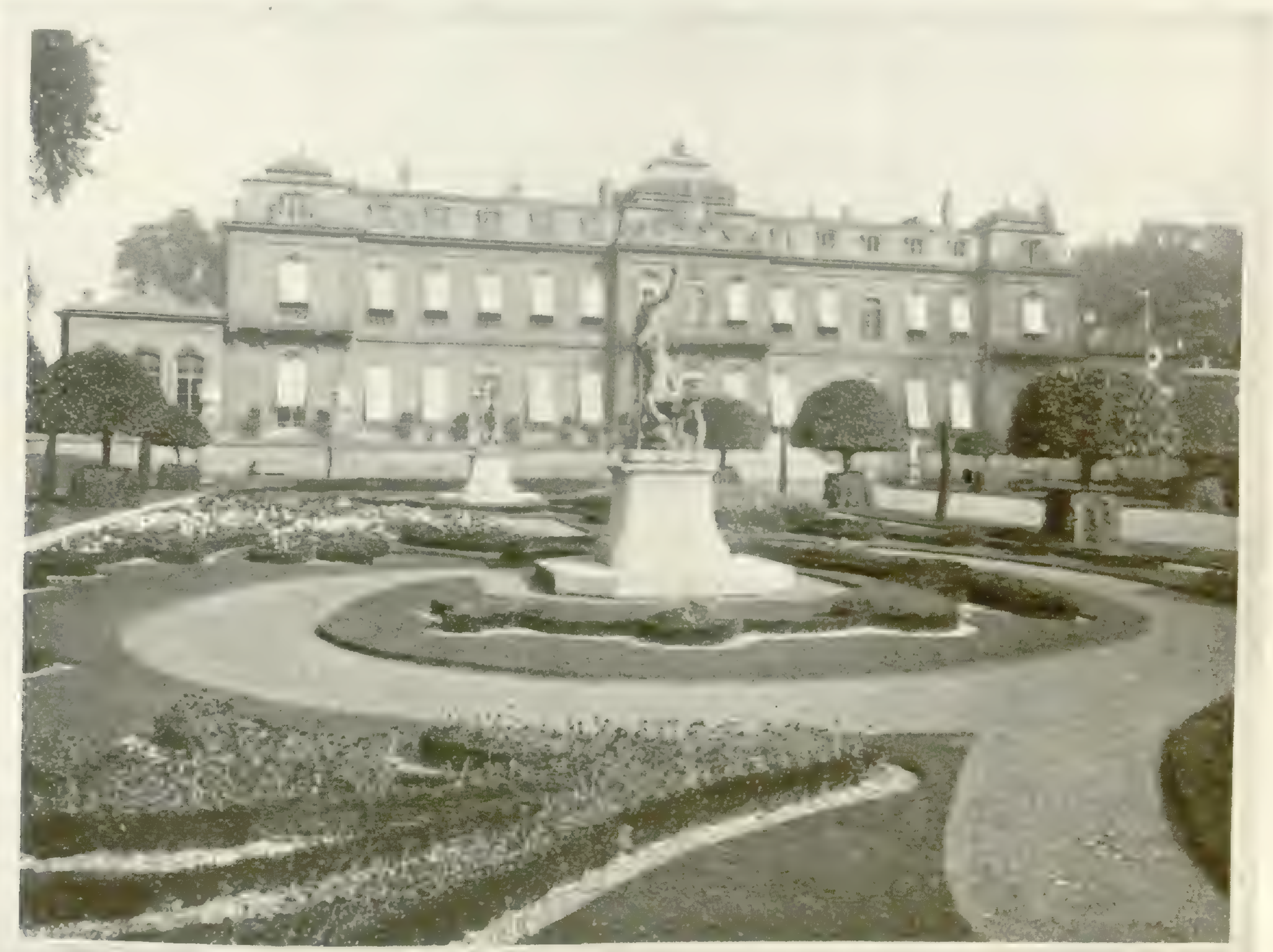
Medlars.—These ought to be gathered when perfectly dry. They are appreciated by some when they have been allowed to become quite soft. The fruits, apart from dessert, are used for jelly, cheese, and as a sauce for game. The trees will grow almost anywhere, but require artificial nourishment in some soils when bearing fruit.—H. Markham, Wrotham Park Gardens.

WREST PARK.

In the pleasant shire of Bedford, about four and a-half miles from quiet Ampthill, and the same distance from Flitwick Station on the Midland Railway, lies Wrest Park, the property of Lord Lucas, but for some time since the residence of His Excellency the Hon. Whitelaw Reid, the popular Ambassador from the United States of America.

The Mansion.

Wrest Park is to the eastward of Flitwick and a little to the south-east of Ampthill, and the stately mansion and ample gardens are set in a fine deer park. A broad, long, and straight double avenue of ancient elms and Spanish chestnuts, many of the former, alas, now showing too evident signs of great age, leads from the chief entrance to the north front of the mansion, and as one approaches the latter, passing the splendid walls that surround the gardens on this side, the fact is at once made evident that some one "builded finely."



[Photo: H. N. King.

WREST PARK; GARDEN FRONT OF THE MANSION.

The north front of the mansion is not nearly so fine as the garden front, and formerly there was nothing to relieve the immediate surroundings of the approach other than the grass and the big elms. But a considerable improvement has been effected since His Excellency came into residence, for now, on either side of the front entrance very large groups of ornamental flowering trees and shrubs, with a few that have beautiful foliage, have been planted. Choice rhododendrons and azaleas have been largely employed, together with a selection of the best double-flowering peaches and cherries, spiræas, berberis, and other suitable subjects. These two fine groups will be still finer in a year or two, when they have better filled out their alloted space, and when the golden elders and other quick growing plants have been removed to permit of tne full development of the permanent trees and shrubs.

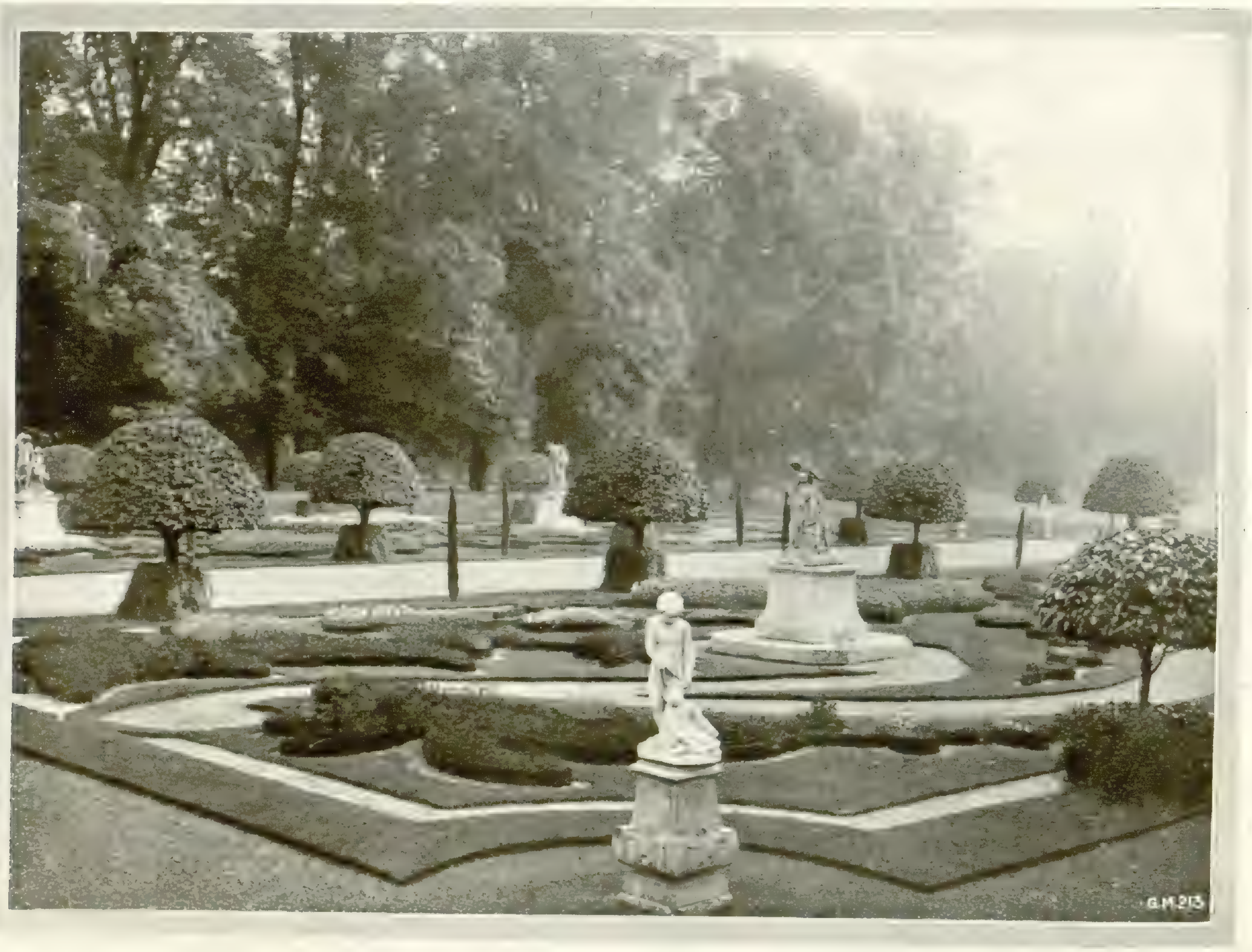
Although some parts of the gardens at Wrest Park, like many of the grand trees on the estate, are very old, the present mansion is less than a hundred years of age. There were at least two other houses previous to the present fine pile, which was built in 1836 by Earl de Grey, he being his own architect. On the garden side a paved terrace runs the whole length of the mansion. At one end, and quite a part of the building, is a large conservatory. This is kept well filled with foliage and flowering plants according to the season of the year, and as an Ambassador has necessarily to do a good deal of entertaining and everyone knows the Hon. Whitelaw Reid and Mrs. Reid have a splendid record for hospitality, Mr. Mackinlay, His Excellency's head gardener, finds his resources heavily drawn upon to keep mansion and conservatory amply supplied with plants and flowers. The conservatory is a splendid withdrawing room, but it is not an ideal plant house.

The Formal Garden.

Just below the terrace there is a large formal garden flanked on either side by large groups of huge old elms. If Nature avoids a straight line then art does not, and where there is ample space and consequently no need to design a garden so as to make it appear limitless, then straight lines are not out of place, indeed, they have a way of suggesting immense distance. From the terrace steps at Wrest Park there opens up a long straight vista. At one's feet the broad pathway divides the formal garden in half, passing for a long way between rows of fine standard Portugal laurels. Then comes a broad lawn, and beyond this is a straight piece of water with stately trees on either side, and at the end of the water is a very large and handsome pavilion, that, in the old days, ere motor-cars and express trains had brought London so near, was frequently used as a dining-room during the summer time.

Returning to the formal garden. This is in some measure a combination of Dutch, French, and Italian styles, but is, I believe, usually called the French Garden. Most of the beds are cut out in the grass, but the grass is intersected by narrow paths, and every bed is edged with clipped box. In some of the narrow spaces between the box-edging and the grass, clean spar is laid down, the remains of a very old style, now seldom seen. Zonal pelargoniums and French marigolds are the subjects most extensively used in these beds, and very large quantities are needed for this garden, for the smaller garden at the conservatory end of the house, and for the borders.

A moderate amount of statuary finds a place here, and as the garden is divided



[Photo: H. N. King.

FRENCH GARDEN AND PORTUGAL LAUREL AVENUE AT WREST PARK.

down the centre, it, naturally, has eight corners. Next the house these corners are marked by small, beautiful works in marble, representing Air, Water, Earth, and Fire—the four elements, while on the far side there are representations of the seasons—Spring, Summer, Autumn, and Winter. There are also large central groups bautifully modelled in leadwork and set on stone bases.

The Old Yew Hedge.

Yew hedges abound at Wrest Park, and so for that matter do laurel ones, the latter being very numerous and thick in what are known as the Bath Grounds. Here is the remains of an old Roman bath house, close to the rock fernery, and to the place where the water that supplies the streams and ponds rises. There is an abundance of water at Wrest Park, but unfortunately it is so heavily impregnated with lime and iron that it is not suitable for everything—orchids and the sphagnum moss used in their culture resent its use.

But in addition to the smaller yew hedges there are grand groups of splendid old yews that have been allowed to grow at will, and one piece of rising ground known as Oliver's Mount, is covered with big-trunked, ancient specimens still in splendid health.

The great yew hedge, however, is one of the features of Wrest Park, and deservedly so. It is supposed to be 350-380 years old, measures 26ft. through, and along its straight front is 121 yards long, while the end that curves round towards the Orangery is about another 60 yards long. It is one of the finest of yew hedges in the country, and one that has received the careful attention of many gardeners.

American Garden and Orangery.

Where the avenue of standard Portugal laurels ends, beyond the formal or French garden, a pathway runs crosswise, and along this are stood a number of very large standard orange trees, planted in stout slate tubs. This pathway leads to the Orangery, a very handsome building, wherein these giant oranges are wintered.

Across the lawns from this point is the American Garden, but the features usually associated with an American garden, i.e., azaleas, rhododendrons, andromedas, heaths, etc., are almost conspicuous by their absence. There are some rhododendrons, but Portugal laurels and yew are mostly in evidence. The whole is surrounded by dwarf closely-clipped yew hedges, and it provides a stretch of deep green foliage at a time when the surrounding limes, elms, and oaks are leafless.

Continuing the walk in this direction, passing the boat house, and through the yew-enclosed water-lily garden, one comes to a stream of water crossed by a high-pitched bridge. Here is a reproduction of the famous Willow-pattern picture so familiar on old plates and dishes. Here is the bridge, yonder the little temple, and here the willow tree and there the shell-like fountain basin. A little imagination quickly fills in the details and peoples the scene with an eloping couple and an irate father. Close by is a fine tulip tree, and in the park at this point are several large oaks.

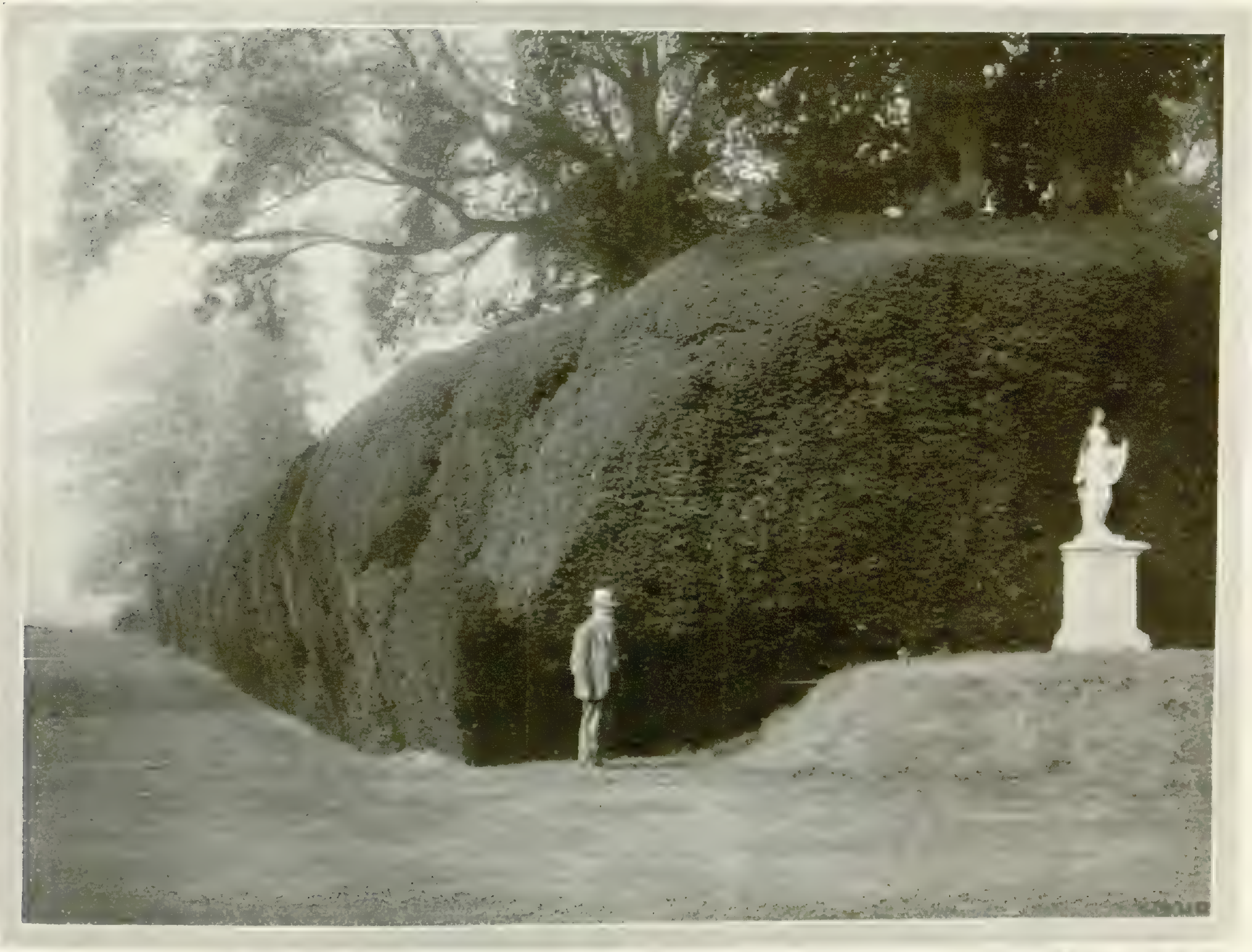
Kitchen Garden and Glass-Houses.

Mr. Mackinlay's house occupies a commanding and corner position in the garden, and here, close under his eyes, are the vegetable and fruit quarters and the glass-houses. It is impossible for Mr. Mackinlay to reach any other part of the garden without passing through the kitchen garden, unless he turns out into the park and makes a long circuit. It is as though the designer of the garden had in mind that utility should stand before mere beauty, and remembered that a supply of fruits, flowers, and vegetables was a matter of the first importance.

The kitchen garden, itself sub-divided and surrounded by finely-built walls, is of considerable extent. The soil is good, and the crops of all kinds testify to the skill of the gardener. A small plot just cleared of onions afforded a little surprise. Mr. Mackinlay asked me what would be a good crop from such a space, and my reply was half a ton or a little over. Another friend had ventured the remark that half a ton would be the limit, and yet when the produce was harvested the crop of onions weighed just over 22cwt. Celery and Brussels sprouts are very fine just now, and even in mid-October Mr. Mackinlay is supplying good dishes of Autocrat peas, thus continuing a supply that has not failed since last May.

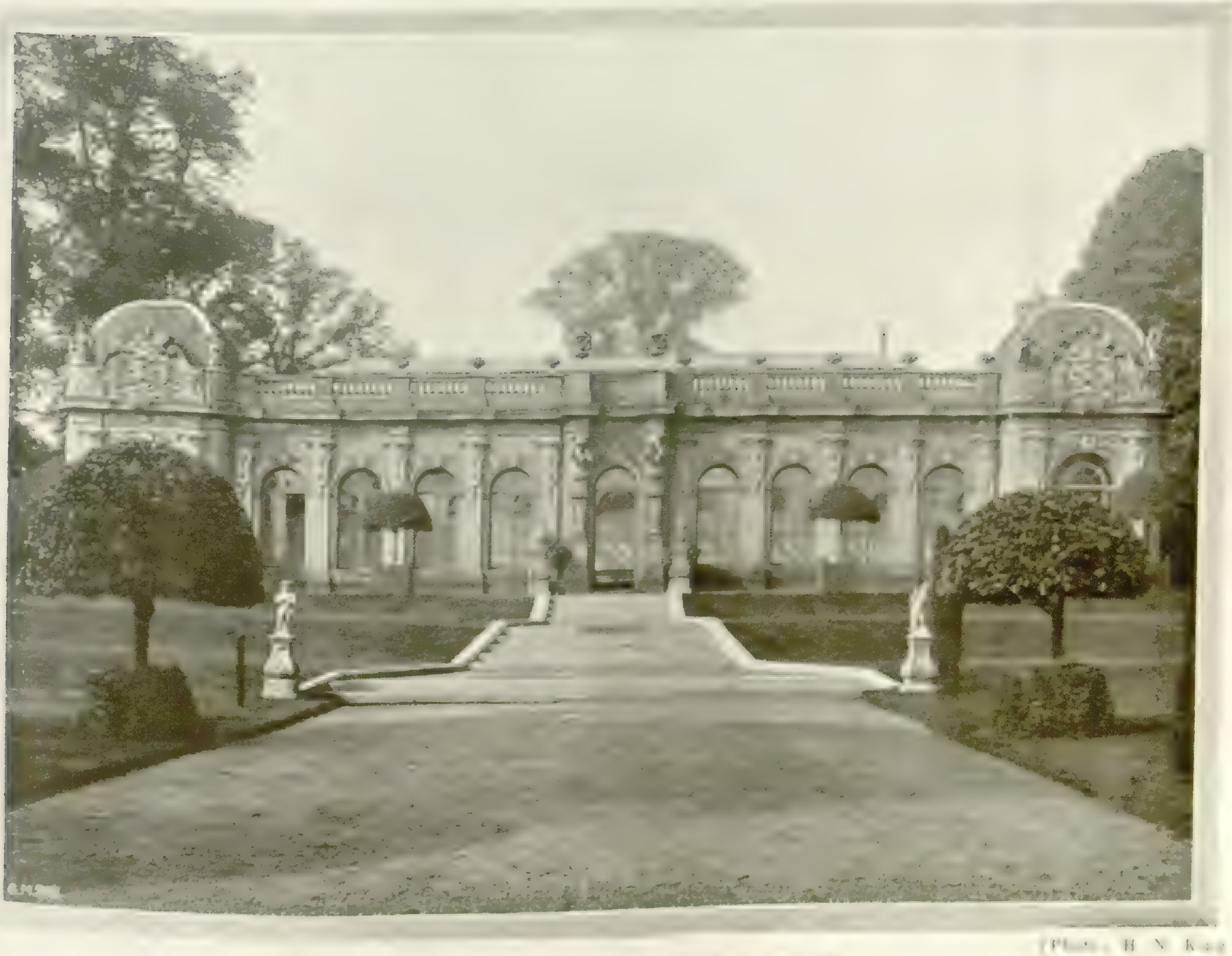
Salading is increasingly in demand in these days, and it is interesting to notice that Mr. Mackinlay follows a modification of the French system. He, like many other first-rate private gardeners, fully understands the value of cloches or bell-glasses; of sunny, sheltered borders, hand-lights, and frames. He has lettuces of various kinds and many sizes in every favourable position. He has also a fine crop of young Shorthorn carrots growing between rows of long-rooted turnips, the latter affording plenty of protection for the carrots, and also providing succulent roots from now onwards. These are, of course, on a very favourable site.

Strawberries do finely at Wrest Park, indeed, the Flitwick district is a fine one for strawberries and celery, a fact made evident to anyone passing through this part of the country, where market garden-



[Photo: H. N. King.

THE ANCIENT YEW HEDGE AT WREST PARK.

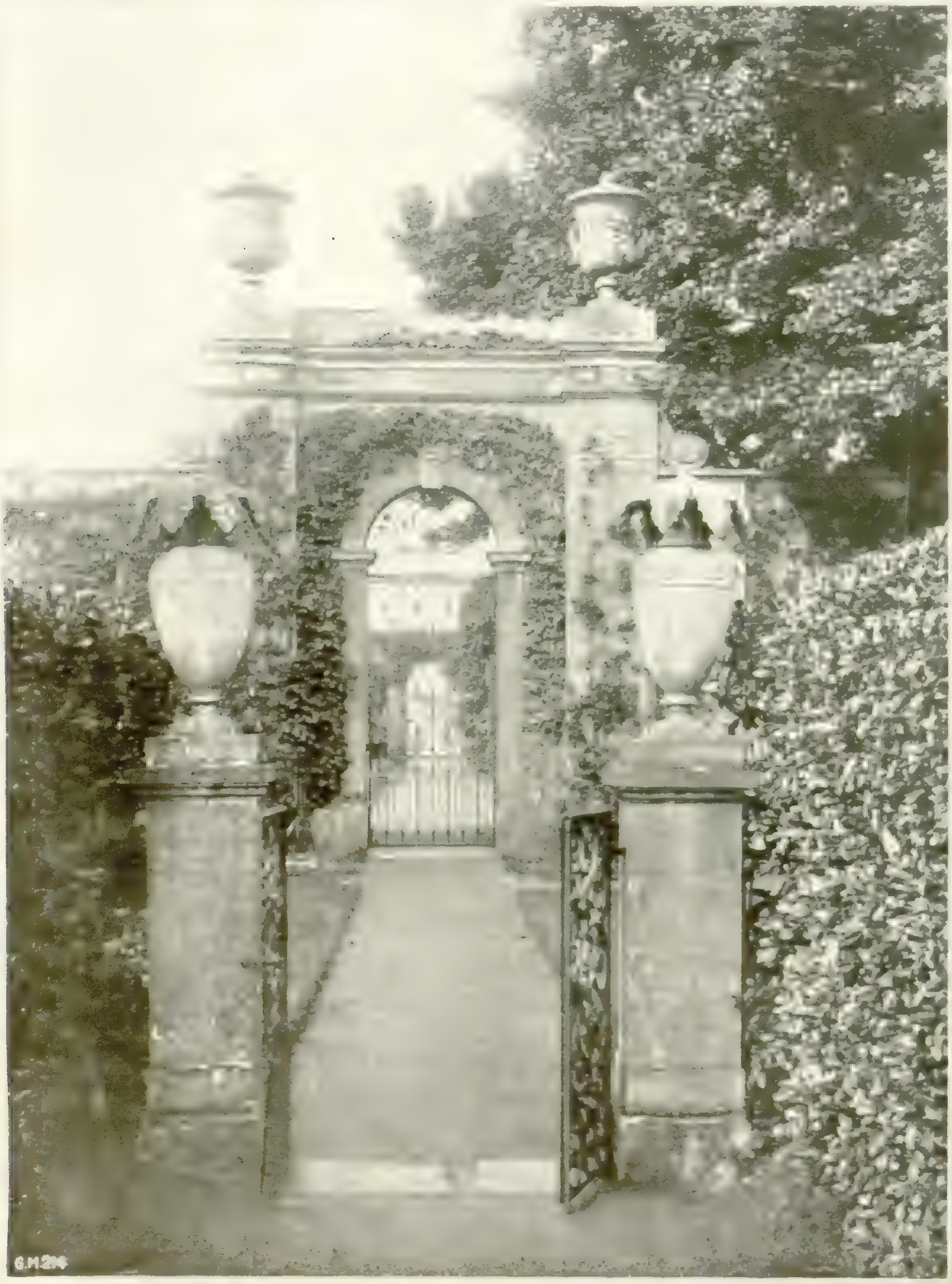


[Photo: H. N. King

THE ORANGERY AT WREST PARK.

ing allotments, and small holdings provide enormous quantities of fruits and vegetables for the people of Luton and Bedford, and not a little also for Covent Garden. At Wrest Park the "annual" method of strawberry culture, a method first advocated in these pages many years ago, is skilfully followed, and with the very best results.

The walls of this garden are amply clothed with peaches, nectarines, pears, apricots, plums, and cherries. Some of the old trees are now worn out, and, each season, a number of these are removed, and younger trees are substituted. The pear crop at Wrest Park has not been a full one this year, but apples have done particularly well, as an inspection of the long, low fruit-room quickly proves. Just inside the fruit rooms rows of fruits of every variety of apple grown here, and also of the same variety from different positions, are set out and labelled. This arrangement is specially useful, as a glance reveals how rapidly, or otherwise, the apples are maturing, and gives a key to condition of the crop in bulk.



[Photo: H. N. King.

GATEWAYS LEADING FROM THE KITCHEN GARDEN TO THE FLOWER GARDEN, AT WREST PARK.

Of the glass-houses little need be said. Some of them are in excellent condition, but others are very old, and still have the small panes of glass so well known to our grandfathers. Grapes and peaches are well managed, and, among plants, Begonia Gloire de Lorraine, pancratiums, chrysanthemums, primulas (Kewensis and sinensis forms), roses, and carnations are specially noteworthy. In one of the oldest houses, and one that is doomed to early demolition, the brilliant Bignonia venusta is very much at home, growing freely and providing a profusion of its clusters of vivid orange-coloured flowers.

I have already suggested that Wrest Park and its gardens were designed on bold and handsome lines, and it may be noted that Mr. Mackinlay's house and the entrances to and from the kitchen garden quarters are all finely built—there is nothing cheap or skimpy about them. The upper walk that leads in a straight line from the gardener's house to the conservatory, right through the kitchen garden and the smaller flower garden, is worthy of notice for its fine gates and for the choice flowering trees and shrubs that adorn the walls at the end of the walk near the mansion.

Outside these walls the deer are busy finding toothsome morsels in the fruits of sweet and horse chestnuts that strew the ground, and we, too, must pass outside, regretfully.

Chas. H. Curtis.

FORESTRY IN GERMANY.

Among the numerous valleys of the region of the Black Forest, the Murgthal is the most famous for natural beauty; and perhaps at no point along its entire course does Nature, combined with the simple, quiet, peasant life, form a more charming picture or a more restful retreat than in the little valley where the Red Murg and the Right Murg unite. Along the bottom of the narrow valleys, hemmed in on all sides by lofty ridges, hamlets lie scattered along the streams, while here and there a dwelling, hid partly by fruit trees, looks down from the sunny slopes of the hillside or projects its quaint gable from the dark background of the pines and firs.

The chief charm of this region lies in the forest, whose beauty is rivalled by its usefulness. It furnishes the inhabitants of the valleys their chief means of support, and its culture, care, and management constitute the best example of that thrift, industry, and economy in which the Germans excel.

Formal permission has to be obtained from the proper authorities before one can enter the royal forest.

The way grows fairly dark as one enters deeper into the forest, the pines and firs rising to majestic heights. Their shafts, standing in rows of uniform distances apart and supporting a dome of dark green foliage, give an appearance not unlike the interior of a great cathedral.

The Forest Nursery.

Here, at last, is the nursery (Pflanzschule). This is a small clearing of, perhaps, an acre of well-cultivated ground, usually an east or north-east slope of average forest-growing elevation, protected from the hot sun by the tall trees surrounding it. Here, in beds prepared with scrupulous care, the seeds of the future forest are sown in early spring. The pines and firs predominate, but in order to provide for every locality, other varieties of seeds are sown such as beech, maple, ash, walnut, birch, and even fruit trees. As soon as the tiny shoots unfold their leaves above the earth every precaution is taken to procure a vigorous seedling. After having attained the height of three or four inches, they are transplanted to more spacious beds where they are allowed to remain three or four years. They are now ready for the forest clearings from which a crop of timber has been removed. But these clearings are already, in part, supplied by self-propagation, and it may be necessary to supply a seedling only here and there to give the required average stand of three feet apart. In fact, recent forestry methods are taking into account the economic advantage of assisting Nature in the propagation of her species, and every effort is bent upon having a well-developed second growth when the veterans are cut down. This, of course, is not always possible, as the seeds do not readily germinate where the soil is dry or is covered with a thick layer of leaves. But occasionally one finds, in passing through a tall forest, a square spot from which the leaves have been raked and the earth laid bare to receive the seeds as they fall from the open cone.

The nursery is an expensive institution, and is now seldom relied upon to furnish the entire supply for a new forest. By skilful and careful management 85 per cent. of the required growth of a new forest may be supplied by natural reproduction.

But whatever means be employed to reproduce a forest area, when once the trees are removed the new growth requires constant care and attention, especially if the location be unfavourable.

The System of Felling Trees.

In removing mature trees, the so-called "strip system" is usually applied. This consists in cutting long, narrow openings of about a hundred yards in width extending from the main road, and at right angles to it, on up to the crest of the hill; and as the roads are always parallel to the streams the strips are also at right angles to the prevailing winds which sweep up and down the valley. The forest is thus protected from the destructive cyclones, and reproduction readily follows from the trees on both sides of the narrow openings. Another advantage of this method of cutting lies in the fact that the trees, when cut, may easily be skidded down the slopes to the road, from whence they are transhipped to the sawmills. When the trees are finally removed, the new clearing is given very careful attention; every vacancy is now filled from the nursery, so that a forest cover may be established as soon as possible. A permanent vacancy means, in the end, considerable loss; but in spite of care and watchfulness, in the course of ten or fifteen years the new forest has an occasional opening. To fill the vacancy by a tree of the same variety would mean a cripple for life, or a premature death. A hardy and more rapid-growing variety is therefore planted, which, in a few years rivals its companions and holds its own in the struggle for light and room. At the end of twenty years there is little danger of death.

The thinning process now begins; for if trees do not have enough space they will be too small in diameter. With the right growing space they grow both tall and of good diameter, and as the space requirements become greater with age, the number of trees in a given area must be gradually diminished. Not long after the proper forest cover is established, and natural pruning has stripped the sapling of its lower branches, the first cutting takes place, and the forest is thinned to an average stand of five feet apart. Twenty years later the same process is repeated by reducing the number to an approximate average of eight or nine feet, then again to [illegible] and finally to eighteen feet, when those remaining are allowed to develop to veterans, worth about six guineas [illegible]

They may finally be cut down when they have reached the age of four score years, but often not before they have attained the age of 150 years, the average forest cycle being 120 years.

Amount of Timber Removed.

One of the central ideas of forestry is that the average yearly cut shall be equal to the average yearly growth. This is determined by a forest survey, which is made every ten years. During the succeeding ten years only the amount added during the previous period may be removed, [illegible] of this amount being cut each [illegible] This rule applies not only to the royal forest, but also to the forests of a local community over which the State has general control. In thus limiting the amount of timber removed to the growth for a given period several points are gained: it preserves to the State and community a perpetual forest; it furnishes constant employment to a large and definite number of people; every phase of forestry becomes a science; and every individual from the chief official to the common woodsman becomes an expert, since his employment becomes a life occupation.

After the trees are cut down they are stripped of their bark, and are then ready to be classified according to species, size, and grade of lumber. The pines fall into five classes, the first-class having a length of at least sixty feet and a diameter of at least a foot at the smaller end, while the fifth grade must be at least twenty-five feet in length and two and three-quarter inches in diameter. The price of the first grade is usually about twenty-five shillings, and that of the fifth grade fifteen shillings per cubic yard. Hard wood is, of course, more valuable, the first grade selling as high as ninety shillings per cubic yard. The royal forest of the entire state of Wurtemburg approximates a net revenue of 3½ per cent., based upon forest valuation. Stated in other terms, this forest district which consists of, roughly, 20,000 acres, produces an annual yield of fifty shillings per acre, and furnishes constant employment to 500 men.

It would be difficult to find a better example of industrial economy than is here exhibited. Destructive lumbering is unknown. There is system from beginning to end, and that system has long since been reduced to a science which is being constantly perfected by the co-operation of the forestry schools throughout the empire.

The trees, planted by one generation, cared for by the next, and cut down by a third have then to be sawed into lumber and shipped to all parts of the world.

James F. White.

SCHIZANTHUSES IN BASKET.

The schizanthuses or "Butterfly flowers," are so popular at the present time that no garden worthy of the name is considered complete without them. Their numerous and attractive little flowers, their accommodating habits and easy culture, render them most useful for decorative purposes, winter and summer. The object of this note, however, is to call attention to the usefulness of schizanthuses for baskets. Readers who visited the Temple Show last spring probably observed the baskets of schizanthuses in the first tent. This, so far as I know, was the first time these plants have been exhibited successfully in baskets, and so attractive did they prove that they received much attention. Yet I see no reason why even amateur gardeners should not produce such baskets. Their culture is simple and easy, and they require very little heat.

For spring flowering seed should be sown in August, and the seedlings potted off singly, and grown on in pots in a cool house or frame till February, when they may be transferred to the baskets. Schizanthuses do not require a rich soil. A mixture of loam, leaf-soil, old manure, and sand, or a good old potting soil suits them admirably. The plants, which should by this time be good bushes, are arranged at the rate of about three to a twelve inch basket, and the growth allowed to hang over the sides.

The main shoots should then be pegged into the basket with layering pins, continuing this process as the plants grow, until the whole of the basket is evenly covered. From the commencement, both in pots and baskets, the points should be frequently pinched out until about a month before flowers are required. They enjoy a light position, a moderate temperature, and fresh atmosphere, also to be kept free from draughts or sudden changes, and if the above simple hints are followed the results will fully repay the attention given.

C. H. Middleton.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

CATTLEYAS.—There are many autumn-flowering cattleyas, which recently bloomed, that are at the present season rooting freely, and consequently any potting necessary should be attended to without delay. Other kinds which have recently completed their growths but do not produce their flowers until the spring will be at the rooting stage, when they are best suited for removal, and these should be attended to as soon as possible. I consider cattleyas and allied genera which require autumn potting are best attended to at the earliest possible moment, as this affords the best opportunity for the new roots to get hold of the compost before the colder weather sets in, thus avoiding the strain usually occasioned by the use of more or less excessive artificial heat.

CLEANING.—At the present season the insect pests become more troublesome among the inmates of the cattleya house, and constant care and observation are necessary to keep these in check. It is generally found that when the leaves of the trees are falling black thrips are more troublesome than at any other season of the year. These pests find their way, no doubt blown by the winds, to the roofs of the houses, and with the least shower of rain they are carried to the water tanks, from which they are naturally dipped when the water is used for damping or watering purposes, and so they find their way to the plants. One may destroy the pests by fumigation or spraying, but in the course of a day or two the plants may probably be infested again. A great deal of perseverance is necessary to prevent the thrips remaining sufficiently long to establish new generations. Scale insects, especially the small white kind, which has become so prominent since the advent of C. labiata in quantity, are perhaps the most annoying of all the cattleya pests at this season of the year, so close do they infest both leaf, pseudo-bulb, and rhizome that one wonders at what season of growth the pests increase, and how it is possible for them to have become secreted inside the growth and outer sheaths, for we frequently find them almost immediately the leaves appear and commence to expand.

SPONGING CATTLEYAS is an operation not to be lightly passed by, and should be only done by an experienced workman. The least scratch or even twist of the leaves, although perhaps not apparent at the time, will in a very short period show a permanent disfigurement to the plants. Care should also be taken to see that any insecticide used does not exceed the advised strength. I have on several occasions suffered from carelessness in this respect, and it is one of the greatest risks one has to contend against with inexperienced workmen. I think it far safer to use only rain water for sponging some of the kinds, such as, for instance, C. labiata and C. Mossiae, which frequently [illegible] when only sponged with clear water. It is a good plan to spray at regular intervals or as frequently as the case may demand, as this is the best means of checking the pests. Choose a day with favourable outside conditions for the purpose, and spray sufficiently early in the day to permit of the foliage becoming dry before the cool evening temperatures are reached.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

EUCHARIS AMAZONICA.—Plants that have been resting in the intermediate house for some time will now be throwing up their flower spikes, and may be removed to a temperature of [illegible] 70 degrees, and, where convenience permits, plunged up to the rim of the pot in tan bark or cocoanut-fibre refuse, and afterwards given a thorough watering with tepid water. If it is desired to prolong the flowering season they may be divided into batches and brought into the stove at intervals. As soon as flowering is over the plants will push new growth, and after the full development of these the resting and drying process should be repeated. Do not allow eucharis to suffer at any season for want of pot room, or a deterioration of bulbs will follow. When the plants are rooting freely they will be greatly benefitted by alternate applications of weak liquid farmyard manure and clear soot water.

BOUGAINVILLEA.—Specimens now thoroughly ripened up may be afforded greenhouse protection during winter. The cooler these are kept, so long as they are preserved from frost, the better will they commence their new season's growth.

GLOXINIAS. — Autumn-raised plants ought now to be afforded a position as near the glass as possible, and grown on steadily throughout the winter months in a temperature of 65 degrees (minimum). Careful attention must be given to watering. If the earliest ripened corms are selected from those which have been at rest the longest, and given a position in the stove, they will soon push up their growth, and will be found most serviceable for a display of bloom in the early spring. For this purpose I recommend the corms to be allowed to remain in the same pots undisturbed.

ALLAMANDAS.—These have now finished flowering and may be gradually dried off to assist the ripening up of the wood. Some of the weakest shoots may also be removed, and as soon as the leaves have fallen the plants may be wintered in a temperature of 50 to 55 degrees. It is advisable to examine the pots at intervals with a view to watering, for should the soil become too dry during the resting season, and the wood allowed to shrivel, the plants will not start freely into growth again.

VENTILATION.—Very little ventilation will be required for the remainder of the year, and the temperature of the stove may range from 65 to 70 degrees, which is consistent with the diminished light of the season.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

EARLY VINERY.—The vines should now be pruned, and it is a good plan to apply a little styptic; the wood may seem perfectly matured and hard, but with a rush of sap they will bleed—and nothing will stay this after it has started. Wash the house down thoroughly with soft soap and water, clean over the rods, and remove all loose bark, but do not scrape the rods. If the vines are found to be very dirty, wash them over frequently with a good strong solution of some approved insecticide. Remove the top soil carefully down to the roots, and if the vines are old, and carry good crops, they may be liberally top-dressed with good turfy loam, half-inch bones, and some vine manure, the latter put on before the top-dressing is applied. The soil should be rather dry so that it may be made firm. If the vines are sickly the drainage should be examined without disturbing much of the border; the drains that lead from the border sometimes become choked, especially when too much fall is allowed. For early vines the borders are best inside. If the vines are young, and the border is made up as required, the existing border should be well filled with roots before adding to it. When making up borders plenty of lime or mortar rubble should be used. The new part of the border should be made wider at the bottom than at the top, and some old iron gratings should be placed against this and shored up to make all firm. If ripe grapes are required at the end of May, the house may be left open till the last week in this month.

STRAWBERRIES. — These should be placed in frames and plunged in ashes to keep the pots from being broken by the frost and to keep the wet from the plants. The weather has been favourable to the ripening and plumping up of the crowns, so that good fruit may be looked for. The light should only be left on when heavy rains occur.

EARLY PEACHES AND NECTARINES.—If the growths were thinned out after the fruits were gathered there will be little to do in the way of pruning. Proceed to wash down the house, and if scale or other insects are on the trees wash them over with some soft soap and water, taking care not to rub the buds with the brush. Remove the old top soil, and top-dress with some good turfy loam and half-inch bones; the use of artificial manure must be governed by the state of the trees, as it is apt to cause too strong a growth. If the borders should be found dry, give them water, but not too much at once as this often causes bud dropping, especially if the soil has been very dry for too long a period. When tying in the shoots leave plenty of room for light, and for next season's wood to be laid in without crowding and covering up the fruits.

MIDSEASON AND LATE HOUSES.—On no account should the borders be allowed to become dry. If they have carried heavy crops, and the drainage is clear, water should be given freely or bud dropping will result. The trees that have given late crops should be at once thinned out and given every encouragement to ripen their wood, the borders well watered, and the trees well syringed, as the foliage is hanging on late this season. Keep the house wide open night and day.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

FORCING SEAKALE.—It is now quite time to think about placing a batch of crowns in the forcing pit. I always find that eight or nine good crowns packed into 10-in. pots, with other empty pots placed over the crowns to keep them dark, gives good results, and this method permits of more or less heat, at the cultivator's discretion. Seakale does very well like this for the earliest supply, but when the crowns are better matured, larger batches can be planted out in the mushroom house, or any other convenient place that can be kept dark, and where a temperature of 60 to 65 deg. is maintained. The soil for planting or potting up the crowns should consist of good sweet loam, with a little decayed manure. After the crowns have been planted a few days water them well, and do not let them suffer from want of moisture at any time. Keep up a moist heat by syringing the paths and walls every day, for by growing the seakale quickly the produce is the more tender.

RHUBARB AND CHICORY.—A few roots of each should now be put into the mushroom house, giving them the same treatment as advised for seakale. If the roots can be lifted and left outside for a few days, open to the weather, they will respond quicker when placed in the forcing house.

ASPARAGUS.—A good batch of this useful vegetable should now be lifted, and if a house or pit can be set apart for the roots so much the better. A hotbed prepared and a frame put on the top, with six or eight inches of soil put in, and the roots planted rather closely together, will soon give some good heads.

PERMANENT BEDS.—In most cases the asparagus growths are fully ripe and may be cut down. When this has been done clean the beds thoroughly from weeds, and apply a good top-dressing of manure. This will be washed down to the roots with the autumn rains, and prove most beneficial to next year's crop.

SOWING PEAS IN FRAMES.—Where pits and frames are available a few lights may be utilised for sowing some early peas in. Select a dwarf-growing variety, such as Little Marvel; sow the seeds in rows about 15in. apart, in fairly good soil, and when they have germinated keep them sturdy by giving them all the air possible, and by spring time they will have made a fine growth. Keep the plants well thinned out, and then with longer days, and a higher outside temperature they will come on apace.

HERBS.—Pot up three or four roots of tarragon, and place them in heat; also put a couple of boxes of mint in heat. If the stock of sage or thyme is running short, some cuttings should be put in at once, selecting nice shoots with a heel attached, and inserting them in lines; make the cuttings firm as the work proceeds.

VARIOUS.—A final clearing up for the season should now be made, pea and bean stakes should be pulled up, tied in neat bundles, and stored closely together. All weeds should be hoed or pulled up, the paths receiving the same attention as the plots. Give the paths a coating of fresh gravel if necessary, and fill up any unsightly gaps in the box edging so that the roots may become established before very frosty weather comes.—T. W. Birkinshaw, Hatley Park Gardens.

RED OR GRIZZLY GRAPES.

I do not see what beneficial end can be served by cultivating varieties of grapes that have only flavour to recommend them, as indicated in the plea put forth so eloquently by Mr. C. H. Curtis on p. 796. I think if growers would cultivate such varieties well as Muscat Hamburgh, Madresfield Court, Mrs. Pince, the newer Prince of Wales, and that deliciously flavoured variety, Lady Hastings, we should not require any red grape at all.

Surely it is not suggested that anyone of these grizzly coloured sorts is equal to Muscat Hamburgh, for instance, in flavour. Employers and gardeners, too, prefer to see well-coloured examples of grapes rather than those of an opposite character, because, for appearance alone, they are much superior, and seldom do we find a well-finished example of either of those I have named deficient in colour. As a rule, gardeners have no space at command to include varieties that have not the advantage of appearance as well as flavour.

At Sandringham at one time a house, or a portion of it, was devoted to the culture of what I call sentimental varieties of grapes, but it could not be said they were a success from any utilitarian point of view. Some few years ago many societies, especially the Caledonian Horticultural Association, at its exhibition held in September, in the Waverley Market, Edinburgh, offered prizes "for flavour only" in grapes. I have not known any of these grizzly varieties win a prize in competition at any show, which fact seems to me to prove their undesirableness.

No, no, Mr. Curtis, let us teach those who are not successful with the sorts I have named how to be successful, and I think there will not be a craving for varieties that have little to recommend them in appearance, and some peculiarity in flavour.

Swanmore Park. E. Molyneux.

Bulbs in Grass and Woodland.—However much of spring beauty we owe to bulbous plants in beds and borders, even in gardens of limited extent, there are endless positions where, for a small outlay expended upon the cheaper bulbs, added interest to the garden will be given in the coming year, and it will increase each succeeding season. Hardy cyclamen are not the cheapest, but they deserve a trial, as they are ideal subjects for a quiet corner in a half-shady spot, where, free from molestation, and planted in the natural humus which collects under trees and shrubs, they will naturalise themselves freely. There are also anemones, like blanda and apennina, to bejewel grassy banks and edges of woodland with their starry lavender flowers from February to May; both are votaries of sunshine and bright days, so that shaded positions must be avoided at planting. Equally good are chionodoxas, muscari, scillas, particularly the pink, white, and blue forms of Scilla nutans, or wild hyacinth, and with these, for its distinct golden flowers, I would include a good planting of our native Tulip sylvestris.—Thomas Smith.

BRADFORD CHRYSANTHEMUM SOCIETY.
The 22nd ANNUAL EXHIBITION will be held in ST. GEORGE'S HALL on FRIDAY and SATURDAY, November 13th and 14th, 1908.
£27 for 24 Blooms, Japanese (on Boards).
Prize Money and Classes again increased for Open Competition.
Entries Close November 7th.
Schedules, with Entry Form, post free from
H. SPENCER, Hon. Sec.,
Horton Park, Bradford.

THE BIRMINGHAM GREAT CHRYSANTHEMUM SHOW will be held in BINGLEY HALL, November 10th, 11th, and 12th. £500 in prizes.
ALFRED NOAKES, Secretary,
148, Bristol Street, Birmingham.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

Southampton, OCTOBER 28 and 29.

The annual autumn show was held in the Skating Rink, and was quite a success in every department.

PLANTS.

For the best collection of chrysanthemums grown in pots, quality and general effect only considered, Mr. C. Hosey, gardener to J. C. E. d'Estene, Esq., Elmfield, Southampton, was first with dwarf plants, clothed with large leaves, and carrying good blooms. Mr. H. C. Sivyour, gardener to C. H. Farnam, Esq., Rownhams House, Southampton, second. Plants suitable for conservatory decoration, in four varieties, were best shown by Mr. C. Dymott, The Nurseries, Freemantle, who presented well-flowered examples of free-flowering varieties; Mr. C. Hosey second. Mr. Dymott was again first with four bush plants.

In the amateurs' section for a group of chrysanthemums, Mr. F. Chandler, 75, Shirley Road, Southampton, won the premier prize (which also carries with it a silver challenge cup), for a charming exhibit. For a collection of miscellaneous plants, arranged for effect, in a space of 80 square feet, Mr. E. Wills, The Nurseries, Southampton, was first with desirable plants which were rather too closely arranged. Mr. E. Cook, gardener to A. F. Fynn, Esq., Red Lodge, Bassett, second.

CUT BLOOMS.

The leading class was for twelve varieties, Japanese, three of each arranged in vases, and obtained three entries. Mr. F. Bible, gardener to H.S.H. Prince Hatzfeldt, Dray[illegible] Park, Chippenham, was easily first with heavy fresh examples of Bessie Godfrey, Vis[illegible]te Venosta, President Viger, Mrs. F Pearce, Walter Jinks, A. Davis, Lady Talbot (extra fine), Lady Henderson, J. H Doyle, F. S. Vallis, J. H. Silsbury, and Mrs. [illegible] Davis. Mr. W. Iggulden, Lock's Hill Nursery, Frome, second with smaller blooms. For two varieties, white Japanese, three of each, Mr. B. Hollis, gardener to Major [illegible]ester, Embley Park, Romsey, with Edith Smith and Mrs. A. T. Miller, secured the premier award; Mr. W. Iggulden second; Mr. F. Bible third. In the class for six [illegible], any two varieties other than white, Mr. Bible was again the leading prizetaker with full solid blossoms of Algernon Davis and Bessie Godfrey; Mr. W. Iggulden second. In a class for gentlemen's gardeners and amateurs, for eighteen Japanese, in not more than three of any one variety, Mr. B. Hollis was first with desirable blooms of Mrs. Knox, Edith Smith, Norman Davis, and Mrs. A. T. Miller; Mr. H. Pearce, gardener to Mrs. Tragett, Awbridge Danes, Romsey, second. For twelve blooms, in four varieties, five competed. Mr. D. Edwards, gardener to W. Garton, Esq., Salisbury Court, Southampton, was distinctly ahead for the premier position; Mr. F. Chandler second. The last-named won for twelve blooms in not less than eight varieties, with desirable specimens; Mr. J. E. Robb, Inkerman Road, Woolston, Southampton, second. Single-flowered varieties were admirably staged, and formed a distinct feature. Five competed for six varieties in vases. Mr. B. Hollis first with typical blooms of Will Jordan, Annie Holden, Florence Robinson, and Mary Richardson as the best; Mr. H. Pearce second. For four vases of decorative sorts, undisbudded, eight competed, making a pleasing display. Mr. B. Peppler, Vernon Hill, Bishop's Waltham, was first with White Quintus, Soleil d'Octobre, Source d'Or, and La Triomphante; Mr. G. Baines, gardener to T. C. Wilson, Esq., The Thickets, Bishop's Waltham, second, also staging well.

For blooms staged on boards there was much encouragement and good competition. For twenty-four Japanese, in not less than sixteen distinct varieties, three competed. Mr. Bible was successful in obtaining first place with really good blooms of Lady Talbot, J. H. Silsbury, Mrs. W. Knox, President Viger, Marquise Venosta, Bessie Godfrey, F. S. Vallis, Mrs. Hooper Pearson, Jumbo, Valerie Greenham, and O. H. Broomhead; Mr. W. Iggulden second with smaller blooms.

Incurved varieties were few in number but good in quality. Mr. Bible was the only exhibitor for eighteen. He set up a desirable type of flower. Clara Wells, W. Biddle, Romance, and Buttercup were fine. In the class for twelve five staged, and here again Mr. Bible asserted his supremacy, winning quite easily with medium-sized neat blossoms, Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, coming second. In the amateurs' section Mr. Chandler won both in the incurved and Japanese classes with really good examples of well-known varieties.

FRUIT.

Fruit made a remarkable display, being plentiful and of high quality. For three bunches of grapes, distinct, there were five entrants. Mr. H. C. Dredge, gardener to J. Willis Fleming, Esq., Chilworth, Southampton, was first with exceedingly handsome bunches of Muscat of Alexandria, Mrs. Pince, and Gros Maroc; Mr. T. Hall, gardener to Lord Swaythling, South Stoneham House, Southampton, was a good second; Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, third. Four staged two bunches of Alicante, the best coming from Mr. J. Hughes, gardener to A. P. Ralli, Esq., Twyford Lodge, Winchester, with large examples of this grape. In the class for two bunches, any other black, seven staged, Mr. Hollis, with Mrs. Pince in desirable condition, won easily. Muscat of Alexandria, in prime order, won for Mr. Dredge the premier position for two bunches of any white grape.

Apples were indeed a feature, there were no fewer than sixteen entries for four dishes, dessert kinds. Mr. Ellwood won easily with Cox's Orange Pippin, Blenheim Pippin, Allington Pippin, and Ribston Pippin; Mr. Hall second. For a single dish of dessert apples, other than Cox's Orange, there were twenty-five entries. Mr. Ellwood won with an excellent dish of Blenheim Pippin. Ten competed in the class for four kitchen apples. Mr. Botting, Railway Hotel, Botley, won with huge fruits of Mère de Ménage, Peasgood's Nonsuch, Blenheim Pippin, and Lady Henniker.

Vegetables were, as they always are here, a fine display. Mr. G. Ellwood obtained premier place in the two classes for six kinds, in which Messrs. Sutton and Sons and Messrs. Toogood contributed the prizes, with very fine examples of Colossal leeks, Perfection tomatoes, pink celery, Up-to-Date potatoes, Ailsa Craig onions, and Triumph cauliflowers. Mr. C. Budd, gardener to H. L. Hansard, Esq., Romsey, was second in Messrs. Toogood's class, Mr. Pearce occupying a like place in Messrs. Sutton's class.

Herefordshire Fruit and Chrysanthemum Society.

This society's seventeenth annual show was held in the Shire Hall, Hereford, on October 28 and 29. There were forty-nine classes devoted to apples alone, and, as most of these were well filled with fruit of high quality, the display thus made was an excellent show in itself. The same remarks, however, could not be made about pears, which were but poorly represented, as compared with previous years.

APPLES.

The leading class was for a display on a space of 70 square feet, with decorations of foliage. Three collections were staged, the best by Mr. Whiting, of Credenhill, Hereford, who had a finely selected lot of beautifully finished fruit, embracing many excellent dishes of dessert varieties; the following were specially noted: James Grieve King's Acre Pippin (highly coloured), Allington Pippin, Lord Hindlip, Egremont Russet, Charles Ross, Rival, Tillington Seedling (very handsome), Cathley's Kernel, Cox's Orange Pippin, Court Pendu Plat, King of the Pippins, and Ribston Pippin; amongst kitchen varieties there were grand dishes of Tibbet's Pearmain, Mère de Ménage, Peasgood's Nonsuch, Hormead Pearmain, Tyler's Kernel, Newton Wonder, Byford Wonder, Bramley's Seedling, and Bismarck. Mr. Caddick, of Caradoc, Ross, was second, but he had a few dishes slightly spotted. Messrs. Pewtress Bros., Tillington, Hereford, third.

In the class for an exhibit on forty square feet, Mr. Tagtor, gardener to J. Riley, Esq., Putley Court, was the only exhibitor, and was awarded the first prize for clean, medium sized fruit.

For twelve dessert and twelve culinary varieties, Mr. Kelly, gardener to Messrs. Getting and Newton, Glewston Court, Ross, took chief honours amongst four exhibitors with an attractive set, comprising Gloria Mundi, Hollandbury, Lord Derby, Lane's Prince Albert, Egremont Russet, Allington Pippin, Rival, and American Mother; Mr. Nunn, gardener to Mrs. Woodhouse, Burghill Court, was a close second; and Mrs. Blashill, Bridge Sollars, third. Five good exhibits were staged in a class for twelve dishes of culinary apples, the best being brought by Mr. J. Lee, Higher Bebington, Cheshire, who had extra fine dishes of Belle de Pontoise, Mère de Ménage, Golden Spire, Gascoigne's Seedling, Emperor Alexander, Altriston, Byford Wonder, Newton Wonder, and Annie Elizabeth. Mr. Kelly was placed second, and Captain Cox, Ashe Leigh, Ross, third. Eight dishes of dessert kinds made a splendid class, and Mr. Kelly again took the lead with large, clean fruits of Washington, Cox's Orange Pippin, Allington Pippin, Wealthy, Ashmead's Kernel, Ribston Pippin, and American Mother; Mr. Currie, gardener to the Rev. G. H. Devonport, was a good second, and Mr. J. Lee a close third.

DECORATIVE COLLECTIONS OF FRUIT.

Three exhibitors staged meritorious collections of fresh or preserved fruit in fifty square feet. Messrs. Pewtress Bros. were placed first, staging a capital lot of apples and pears, arranged in baskets, dishes, or in market boxes, intermixed with decorative plants and foliage; the second place was deservedly taken by the Herefordshire Co-operative Fruit Company with similar fruits arranged in like manner; Mr. Caddick was a good third.

Prizes offered by the Agricultural Committee of the Herefordshire County Council for apples, eight dishes of dessert varieties, brought out four lots, Mr. Whiting, Credenhill, being first with a remarkably fine set of large, highly coloured fruits; Mr. Kelly was a good second, and Mr. S. Glazzard, gardener to J. Carless, Esq., Blackbury, third. Mr. Kelly was first for eight dishes of cooking market varieties, and Captain Cox second. In a class for eighteen dishes, six dessert and twelve culinary, Mr. Kelly was placed first amongst three exhibitors, and staged good dishes of leading kinds; Mr. Roberts, gardener to P. H. Foley, Esq.

Stoke Edith, was a good second; and Mrs. Blashill third.

PEARS.

A class was provided for pears, to be staged with foliage decorations, in a space of thirty-five square feet, but no entry was made. Mr. Kenott, gardener to A. W. Foster, Esq., Brockhampton Court, Ross, showed a creditable lot of fruit in a class of eight dishes, and staged Easter Beurre, Emile d'Heyst, Marie Louise, Marie Louise D'Uccle, Doyenne du Comice, Pitmaston Duchess, Beurre Alexander Lucas, and Marshall de la Cour; the Rev. Prebendary Brierley (gardener, Mr. Foster) was second; and Colonel Henry, Ledbury, third.

CHAMPION DISHES.

Mr. Whiting scored for dessert apples with highly coloured, large fruits of Allington Pippin; Mr. J. Lee for kitchen apples with splendid fruits of Mère de Ménage; and Mr. Currie, gardener to the Rev. G. H. Devonport, for pears, with fine fruits of Doyenne du Comice.

DESSERT FRUIT.

The class for six dishes of ripe fruit brought only one exhibitor, Colonel Henry, who staged a creditable lot of Gros Maroc and Muscat of Alexandria grapes, Sutton's Ringleader Melon, Cox's Orange Pippin apples, Coe's Golden Drop plums, and a dish of pears. For three bunches of Gros Maroc grapes, Colonel Henry was placed first with good bunches of large, finely coloured berries; Mr. Nunn was a close second, and Mr. Currie third. Mr. Kenott was first in a similar class for Gros Colmar, and Colonel Henry second, each staging large, well-finished bunches. For three bunches of Muscat of Alexandria, Mr. Roberts, gardener to P. H. Foley, Esq., Stoke Edith, took chief honours with beautifully finished large bunches; Colonel Henry made a creditable second.

FLOWERS.

There were six competitors in the class for dinner-table decorations, in which chrysanthemums and ornamental foliage only might be used. The successful exhibitors were Miss Bott, of Brienton; Mrs. H. Hammonds, Castle Street, Hereford; and Mrs. Blashill, Bridge Sollars, who took the first, second, and third prizes in the order named. Messrs. Young and Co., of Hatherly, Cheltenham, arranged a choice collection of tree carnations in vases.

Portsmouth.

OCTOBER 28 to 30.

In the Town Hall the twenty-second annual show was held, and was a success, if not quite such a full show as last year.

CUT BLOOMS.

Cut blooms were the leading feature. Five open classes were provided, and there were twelve classes restricted to local growers, amateurs, and cottagers. The leading class was that for thirty-six Japanese, in not less than eighteen varieties, and not more than two of any one variety. A silver cup value £20, a gold medal, and £5 was the leading prize. Four competed, and the collections made a good display. Mr. G. Hall, gardener to Lady Ashburton, Melchet Court, Romsey, was an easy first with full, solid blooms, quite fresh, of F. S. Vallis, J. H. Silsbury, Madame P. Radaelli, Miss E. Smith, W. A. Etherington, Reginald Vallis, Lady Talbot, Algernon Davis, P. Viger, Bessie Godfrey, Mdme. G. Rivol, Melchet Beauty, W. Watson, Mrs. W. Knox, Magnificent, Marquis of Northampton, W. Jinks, and Mrs. A. T. Miller. Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashtead Park, Epsom, a good second, with smaller blooms; Mr. L. Dawes, Hambledon, third. For twenty-four Japanese, in not less than sixteen varieties, and not more than two blooms of any one variety, four competed; Mr. G. Hall was again the most successful with massive, well-staged examples. Mr. L. Dawes, gardener to Mrs. Ogilvie, Rosecroft, Hambledon, second, with smaller, bright blooms.

Incurved varieties were not numerous, but of good quality. Mr. Hunt won for twenty-four with well-finished examples of popular varieties; Clara Wells, Buttercup, and Boccaccio were noteworthy.

For twelve sprays of pompons, three blooms to each, not less than eight varieties, Mr. H. Snook, 5, Fitzroy Street, Fratton, was first with even, medium sized blooms, nicely staged; Mr. J. Nance, 98, Hampshire Street, Southsea, second, with some much superior, but the remainder not so good.

Single-flowered varieties, in twelve bunches of three blooms to each, in not less than eight varieties, are usually a feature here, and this exhibition was not an exception. Mr. C. J. Park, South Hayling, was first with excellent blossoms of Elsie Neville, Bronze Pagram, Mrs. J. Horton, and Lilian; Mr. H. Snook was a close second.

For twelve blooms each of incurved and Japanese, in not less than eight of each, and not more than two of one variety, open to residents within twelve miles of Portsmouth, three competed. Mr. J. Lowe, Park Road, Cowes, won with good incurved and fairly good Japanese. Mr. W. G. Adams, The Strand, Southsea, second, with superior incurved but weaker Japanese. In the smaller classes there was a good competition. Mr. J. Love had the best set of twelve Japanese amongst four entrants, Mr. Adams occupying a similar position for twelve incurved. Anemone-flowered varieties were best shown by Mr. J. Nance.

PLANTS.

Groups of chrysanthemums in pots, arranged for quality and effect in a space of sixty square feet, are a notable feature here. Mr. Papworth, gardener to The Parks and Open Spaces Committee, won the premier place with well-grown plants neatly arranged; Mr. W. Abbott, Twyford Nurseries, was second; three competing. In the class for twelve specimens in not less than eight varieties, with not less than twelve blooms to a plant, Mr. G. Lambert, Bognor Road Nurseries, Chichester, was easily first with dwarf plants carrying good blooms and foliage; Mr. Papworth second. In the class for eight plants, these two exhibitors occupied similar places. Mr. Lambert, with Matthew Russell carrying fifty shapely blooms, won the premier award for a single specimen.

FRUIT.

Fruit was quite plentiful and good. For two bunches black grapes, Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, was easily first with Lady Downes, as also was he for two bunches white grapes with Muscat of Alexandria in prime condition. Ten staged six dishes of apples; Mr. Ellwood, with remarkably high-coloured examples, won first prize easily. Mr. G. Hoar, Havant, won for six dishes of pears, staging good fruit.

VEGETABLES.

Vegetables were a feature, so well were they staged. Mr. Ellwood won Messrs. Sutton's prize for six dishes, and was first in the class for nine dishes, amongst five competitors, with high quality produce.

Hertford.

OCTOBER 28.

The annual exhibition of the Hertford Horticultural Society was held in the Corn Exchange on the above date, and, from a horticultural point of view, was one of the most successful of the many autumn shows held at Hertford.

PLANTS.

The groups arranged for effect constituted as usual a highly attractive feature, and contributed in no small degree to the charm of the display produced in the large hall. In competition for the prizes for groups of chrysanthemums, Mr. J. Dance, gardener to H. A. Currell, Esq., The Chaplains, Hertford, was a splendid first, the plants having ample foliage and finely developed flowers, and the arrangement remarkably good; the second place was occupied by Mr. J. Parkes, gardener at Wallfields, Hertford, with a group of great excellence; and Mr. Harding, gardener to Mrs. Harris, Sele Lodge, Hertford, was third. The premier award in the class for a group of miscellaneous plants was made in favour of Mr. O. Catling, gardener to H. Clinton Baker, Esq., Bayfordbury, Hertford, who had a bright and tasteful arrangement; Mr. W. H. Beale, gardener to H. V. McConnell, Esq., Carnfield Place, Hatfield, and Mr. R. Smith, gardener to E. E. Pearson, Esq., Brickendonbury, Hertford, followed closely for second and third places. The most successful of the exhibitors of specimen chrysanthemums were Mr. J. Marsh, Mr. J. Turk, Mr. H. Bates, and Mr. E. H. Palmer. There were two classes for groups in which the competition was limited to amateurs who do not employ more than two gardeners, and in these the most successful of the exhibitors were Mr. H. Bates, Mr. H. Harding, Mr. J. G. Marsh, and Mr. J. Dance. Chinese primulas were admirably shown, and the prizes were awarded to Mr. J. Turk, Mr. O. Catling, and Mr. J. Howell, gardener to Morton Tomlin, Esq., Bengeo House, Hertford. Zonal pelargoniums made a bright display of colour, and the most successful exhibitors of these were Mr. W. Johns, Mr. J. Turk, and Mr. O. Catling.

CUT BLOOMS.

Cut blooms were staged in large numbers, and the quality was high for so early in the season. Mr. A. Haynes, gardener to Mrs. Browning, Bramfield House, Hertford, scored in the principal class, which was that for twenty-four Japanese; Mr. W. Phillips, gardener to J. H. Buxton, Esq., was second; and Mr. J. Turk, gardener to P. Bosanquet, Esq., Little Berkhamsted, third, both staging collections possessing much merit. In the class for four vases, which was a very attractive one, the prizewinners were Messrs. A. Haynes, W. Johns, and J. Turk. These exhibitors were also the most successful in the classes for six blooms of a Japanese chrysanthemum other than white, and for six blooms of any variety other than white. Single chrysanthemums were finely shown by Mr. F. Bradbrook, gardener to Miss Young, Mangrove Hall, Hertford; Mr. H. Bates, gardener to Miss Robertson, Sele Grange, Hertford; and Mr. W. Phillips. The best Japanese bloom in the show was Bessie Godfrey, exhibited by Mr. A. Haynes; and the best bloom of a single variety was Edith Pagram, exhibited by Mr. W. Phillips.

FRUIT.

Fruit was well represented, the apples being particularly good. In competition for the prizes for twenty-four dishes of apples grown in the County of Herts, Mr. R. Smith was successful in securing the premier award, which consisted of a silver challenge cup and a prize in cash; the fruits were of large size and finely coloured, the finest examples being those of Allington Pippin, Blenheim Pippin, Bramley's Seedling, Mère de Ménage, Fearn's Pippin, Peasgood's Nonsuch, and Rival; Mr. A. J. Willsher, gardener to the Rev. Martin Reed, The Vicarage, Ware, was second with a fine collection; and Mr. C. W. Hodges, gardener to A. S. Hay, Esq., Sacombe Park, Hertford, was third with fruit of high quality. The exhibitor last named occupied the premier position in the class for six dishes of pears, and the corresponding position in the classes for six dishes of dessert and six dishes of cooking apples was occupied by Mr. R. Smith. Mr. G. Langhurst had the best three dishes of pears, Mr. O. Catling the best three dishes of dessert apples, and Mr. J. Hornett the best three dishes of cooking apples.

VEGETABLES.

These, as in previous years, were largely shown, as evidenced by the fact that twenty-four collections were staged. The cup in the open class for a collection was won by Mr. H. Bates, while the winner of the cup in the amateurs' class for a collection was Mr. Douglas Garratt; and in the corresponding class for cottagers the cup was awarded to Mr. E. Day, New River Head, Hertford.

National Chrysanthemum Society.

The great annual exhibition of this society was held at the Crystal Palace, Sydenham, on November 4, 5, and 6, and it was one of the best displays seen in recent years. The show was spread down the length of the great building, and partly in the transept. Competition in many of the classes was very keen and the blooms were, on the whole, very good and clean. There was also a good display of table decorations, of apples, and of vegetables, while the trade displays were so numerous and fine that they constituted a real big flower show in themselves. We were specially glad to find an improvement in the show, and also to find a quite considerable number of new competitors coming forward.

GROUPS.

First prize for a large group of cut chrysanthemums, foliage, and foliage plants, was awarded to Mr. F. Brazier, Addison Road, Caterham, who had a bold exhibit, in which large blooms figured towards the margin, while the central features were big vases of single and decorative varieties associated with autumn foliage, etc.

In the trade-excluded class of similar character, Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham, was awarded the chief prize for a stately and bright exhibit. The centre consisted of a cone of big blooms and crotons, and round this were small mounds of decorative varieties with specimen crotons, etc., and a groundwork of ferns.

GREAT VASE CLASS.

In the great vase class, for a dozen vases of Japanese blooms, distinct, three blooms in each vase, Mr. G. Hall, Melchett Court Gardens, Romsey, won the coveted premier award with grand examples of Lady Talbot, Maud Jefferies, Magnificent — beautiful colour, Mrs. Knox, J. H. Silsbury, Mdme. Rivol, Edith Smith, W. E. Etherington, Marquis of Northampton, Reginald Vallis, Madame P. Radaelli, and F. S. Vallis—specially fine. There were four competitors, and second prize fell to Mr. J. Dymock, gardener to G. D. Faber, Esq., C.B., M.P., Rush Court, Wallington, whose best flowers were of F. S. Vallis, Reg. Vallis, Mrs. Norman Davis, Mrs. A. T. Miller, Bessie Godfrey, and Lady Talbot. Mr. W. Iggulden, Lock's Hill Nurseries, Frome, Somerset, secured the third prize.

HOLMES' CUP CLASSES.

There were four entries for the Holmes' Memorial Cup that is offered as first prize for thirty-six incurved blooms, distinct, and here Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Leatherhead, was once more the winner, and he set up a splendid lot of flowers, the finest being Buttercup, F. Trestian, Mrs. Judson, Souvenir de Wm. Clibran, Mr. J. Wynne, Romance, Daisy Southam, Embleme Poitevine, Pantia Ralli, Le Peyron, Mr. H. J. Jones, May Phillips, C. H. Curtis, G. F. Evans, Mrs. J. Hygate, Epsom, came second; and Mr. W. Mease, gardener to Pantia Ralli, Esq., Ashtead Park, Epsom, came second; and Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, was third.

There were six entries of four dozen Japanese blooms, distinct, and here the cup was won by Mr. G. Hall, gardener to Lady Ashburton, Melchett Court, Romsey, with a bright set of good blooms, his leading varieties being F. S. Vallis, Madame P. Radaelli, Mrs. Knox, Mrs. Norman Davis, Melchet Beauty, Mrs. G. Mileham, Bessie Godfrey, Marquis of Northampton, Algernon Davis, Magnificent, Eric Crossley, Edith Jameson, Lady Conyers, Valerie Greenham, Duchess of Sutherland, Madame Rivol, Maud Jefferies, and J. H. Doyle; Mr. W. Mease was second, and he had a fine set of flowers; Mr. W. Higgs secured third place, and Mr. W. Iggulden, Lock's Hill Nurseries, Frome, came fourth.

CUT BLOOMS.

Mr. W. Higgs won Mr. C. E. Shea's prize for a dozen vases of incurved blooms, distinct, three flowers in each vase, with first-rate examples of Embleme Poitevine, Miss C. Holding, Mr. W. Higgs, Duchess of Fife, Lady Isabel, Pantia Ralli, W. Pascoe, Frank Trestian, Boccace, Mrs. Barnard Hankey, and Buttercup; Mr. W. J. Hunt came second, and Mr. H. Parr, gardener to F. A. Bevan, Esq., Trent Park, Barnet, was third.

In a special class for two dozen Japanese blooms, distinct, varieties distributed during 1906-7-8, the prizes were provided by Mr. Norman Davis, Mr. W. J. Godfrey, Mr. H. J. Jones, and Messrs. Wells and Co. There were five entries, and here Mr. G. Hall, Melchet Court Gardens, Romsey, won first place with handsome examples of Mrs. N. Davis, Norman Davis, Mrs. J. Niel, British Empire, Mary Donellan, W. King, Mary Mason, Thos Stevenson, Mrs. H. Pearson, Edith Jameson, etc.; Mr. A. Jefferies, Moor Hall Gardens, was a good second; only two prizes were offered, but they were the substantial ones of £12 and £8.

The silver cup presented by Sir Albert Rollit, D.C.L., President of the Society, for the best twenty-four Japanese blooms, distinct, was won by Mr. J. Dymock, Rush Court Gardens, Wallingford, with a grand lot of flowers, the best being Bessie Godfrey, Mrs. Norman Davis, J. H. Silsbury, F. S. Vallis, Walter Jinks, Madame Nagelmakers, Mrs. Coster, Lady Talbot, Valerie Greenham, General Hutton, Reg. Vallis, Edith Smith, and Leigh Park Wonder; Mr. W. Holden, Ewell House Gardens, second; Mr. A. Chandler, Coton House Gardens, third; and Mr. G. Hall, Melchett Court Gardens, fourth; seven entries.

There was a very keen competition in the class for a dozen Japanese blooms, distinct, Mr. G. Hall coming to the front with beautiful examples of F. S. Vallis, J. H. Silsbury, Bessie Godfrey, Magnificent, Annie Hamilton, Reg. Vallis, Marquis of Northampton, W. A. Etherington, Mdme. P. Radaelli, Lady Talbot, Edith Smith, and Algernon Davis. There were ten entries; Mr. A. Chandler, gardener to A. James, Esq., Coton House, Rugby, came second, and Mr. W. Holden, gardener to R. B. Jacombe, Esq., Ewell House, Ewell, third.

In the class for a dozen incurved blooms, distinct, there were eight entries, and here Mr. Preece, gardener to Miss Willmott, V.M.H., Warley Place, Great Warley, Essex, won with round full flowers of Mrs. G. Denyers, Emblem Poitevine, Duchess of Fife, Buttercup, Triomphe de Montbrun, Daisy Southam, Mrs. F. Judson, Godfrey's Eclipse, Lady Isabel, W. Biddle, Mrs. H. J. Jones, and Clara Wells; Mr. W. Higgs had to be content with second place, and Mr. W. Mease was third prize winner. Mr. G. Mileham, gardener to A. T. Miller, Esq., Emlyn House, Leatherhead, scored for six incurved blooms, one variety, with Buttercup in fine form; Mr. A. Osmond, gardener to A. Kempt, Esq., Ross Road, South Norwood, second, with C. H. Curtis, and Mr. H. Parr, third with Buttercup.

Mr. Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden, scored for a vase of five white Japanese blooms with Mrs. A. T. Miller in superb form; Mr. G. Mileham second, with the same variety, and Mr. F. Brazier, Caterham, third, with Mrs. Norman Davis. For a vase of five yellow blooms, one variety, Mr. W. Iggulden led with F. S. Vallis, very fine; Mr. A. Jefferies, gardener to J. Balfour, Esq., Moor Hall, Harlow, second, and Mr. W. Higgs third with the same variety.

First prize for a dozen bunches of single varieties fell to Mr. H. Redden, gardener to G. W. Bird, Esq., Manor House, Wickham, who showed Frank Redden, Mrs. H. Redden, Edwin Nottell, Crown Jewel, Wickham Giant (new), Pink Beauty, Maud Matthews, Edith Matthews, etc., all fine varieties; Mr. C. J. Simpson, St. John's Nursery, Chelmsford, second, and Mr. W. Waterton, gardener to R. H. Comyns, Esq., Heath Farm House, Watford, third. The best six vases of anemone pompons came from Mr. F. Fitzwater, gardener to F. Braby, Esq., Bushey Lodge, Teddington, and this exhibitor was also an easy first prize winner in the class for six vases of pompones; Mr. J. A. Humphries, gardener to J. E. Burgess, Esq., Hill House, Maisey Hampton, coming second in the latter class.

Mr. A. C. Horton, gardener to J. L. Boyd, Esq., North Frith, Tonbridge, led for Japanese anemones, twelve blooms, with Le Chalonaise, Sabine, Madame Lawton, John Bunyan, W. W. Astor, etc.; Mr. A. Henderson, gardener to C. Douglas Clark, Esq., Eccleshill, Bromley, second, and Mr. J. A. Humphries, third. For large-flowered anemone varieties these competitors maintained the same positions.

Premier place for a collection of cut chrysanthemums, arranged on a table 12ft. by 6ft., was won by the Dulwich Chrysanthemum Society, with a fine lot of Japanese, incurved, decorative, and single varieties, all pleasingly disposed with fern fronds. This was the class for Affiliated Societies; second prize fell to the Reigate Chrysanthemum Society, which also showed well.

AMATEURS.

In the chief amateurs' division, Mr. W. Rigby, gardener to Rev. A. C. Cooper-Marsden, Wickham Road, Beckenham, had the best twelve Japanese blooms, Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Donnington, Laurie Park, Sydenham, second; and Mr. C. B. Gabriel, Easdale, Horsell, third. There was but one entry of twelve incurved blooms, and this, from Mr. A. Osmond, was awarded first place.

In another amateurs' class for twelve Japanese blooms, Mr. C. M. Collingwood, St. David's Hill, Exeter, scored easily with fine examples of F. S. Vallis, Algernon Davis, etc.; Mr. C. Fox, Richmond Lodge, Tunbridge Wells, second; and Mr. A. Williamson, East Street, Haslemere, third. In the corresponding class for twelve incurved blooms, Mr. James King, East View, Hendon, came first, and Mr. C. M. Collingwood second. Mr. Collingwood led for twelve vases of single chrysanthemums with pretty bunches of medium sized flowers.

In the amateurs' class for a vase of single blooms, Mr. E. Houlton scored a first, and was followed in order by Mr. G. Hagger, gardener to H. Kerr, Esq., South Woodford; and Mr. C. Bowyer, gardener to B. Dawson, Esq., Maybourne, Laurie Park, Sydenham.

In the smaller amateurs' classes, a few of the more important exhibitors and exhibits were: Mr. A. Osmond, six incurved; Mr. L. Gooch, gardener to T. Wickham Jones, Esq., Frocester Lodge, South Norwood, six Japanese, one variety, F. S. Vallis; Mr. W. Rigby, six Japanese, distinct, a fine set; Mr. W. J. Connell, gardener to J. H. Payne, Esq., Chatswood Road, West Norwood, three vases of pompones; Mr. A. Osmond, six incurved, one variety, Chas. H. Curtis; Mr. C. M. Collingwood, six Japanese, three varieties—Reg. Vallis, Algernon Davis, and Mrs. C. Beckett; Mr. Childman, St. Margaret's, Twickenham, six incurved, three varieties; Mr. C. Fox, Tunbridge Wells, three Japanese; Mr. W. Childs, Grays, Essex, six incurved; Mr. C. M. Collingwood, three vases of pompones.

FLORAL ARRANGEMENTS.

In the open class for table decorations, Mrs. A. Robinson, Park Hill, Carshalton, led with a pretty design in yellow and bronze varieties of the Source d'Or type; Mr. T. W. Stevens, Laurie Park, second; and Mr. A. W. Trossell, gardener to H. Attenborough, Esq., St. Helens, Beckenham, third. There were fifteen entries, and the tables were in two distinct groups, and one of these groups would appear to have been entirely overlooked.

For a table decoration of other than yellow or bronze flowers, Messrs. R. Felton and Sons, Hanover Square, W., gained first prize for a combination of pink, rose, and green flowers, but the design was too heavy for the size of the table, at least, so we thought; Mr. A. W. Trossell second, and Mr. H. Baker, gardener to T. Glass, Esq., Borrowdale, West Hill, Sydenham, third, the latter setting up red and white single flowers prettily.

Miss C. B. Cole led for a hand basket of chrysanthemums, and she was also first for a basket of autumn foliage and berries with a very handsome arrangement; Mrs. Brewster, St. Peter's, Canterbury, second, and Mrs. G. Knights, Border Crescent, Sydenham, third.

For a vase of Japanese blooms and foliage Mr. C. Fox, Tunbridge Wells, led with fine flowers of Beatrice May, arranged with grasses and berberis sprays; Mr. E. Dennis, gardener to A. Grove, Esq., Bollards Park, Chalfont St. Giles, second, and Mr. C. B. Gabriel third. The best vase of decorative chrysanthemums was adjudged to the one staged by Mr. C. B. Gabriel, and it was a fine one of yellow and crimson flowers; Mr. E. Houlton, gardener to J. Gardner, Esq., Croxted House, Dulwich, second, and Mr. Hugh Kerr, Ard Gowan, South Woodford, third; four entries.

Mr. J. W. Harrison, gardener to R. Girvin, Esq., Laurie Park Gardens, Sydenham, had the best vase of single chrysanthemums in the open class, and he was followed in order of merit by Mr. A. Robertson, gardener to F. G. Yarrow, Esq., Abbey Road, St. John's Wood, and Mr. R. Edwards, gardener to C. A. Morris, Esq., Beechy Lees, Sevenoaks; there were nine entries.

There were four entries in the class for a decorative display of flowers, on a table 8ft. by 6ft., and here Mrs. F. Brewster won first prize with single flowers and autumn foliage; Mrs. H. L. Sell, Kempton Villa, Luton, second, and Miss E. H. Ekins, Rushden, Lattimore Road, St. Albans, third.

VEGETABLES AND FRUITS.

Mr. E. Beckett, V.M.H., gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, was an easy first for a collection of eight kinds of vegetables, in a class provided by Messrs. Webb and Sons, Stourbridge; he had Masterpiece onions, Viceroy tomatoes, Champion Prize leeks, and Late Guardian cauliflowers in fine condition; Mr. W. Waterton, gardener to R. H. Comyns, Esq., Heath Farm House, Watford, second.

Mr. R. Sydenham, Birmingham, provided a number of special prizes for vegetables, and in the chief one, for a collection of eight kinds, Mr. Silas Cole, gardener to Earl Spencer, Althorp Park, Northampton, was a good first, among seven entrants; he had splendid Ailsa Craig onions, Autumn Giant cauliflowers, Hollow Crown parsnips, and Claythorp's Prize Pink celery; Mr. W. Folkes, Ampthill, Beds, second, and Mr. J. Kerr, Loudwater, Rickmansworth (gardener, Mr. T. Avery), third. Mr. A. Basile, gardener to Rev. J. McMurdie, Woburn Park, Weybridge, led for celery—Clayworth Prize Pink; Mr. Basile for potatoes—Royal Kidney and Windsor Castle; Mr. Ellis, gardener to V. Earle, Esq., Franks Hill, Farningham, for turnips; Mr. W. Folkes for beet—Pragnell's Exhibition; Mr. S. Cole for leeks—The Lyon; Mr. Basile for parsnips—Hollow Crown; Mr. Basile for onions—Ailsa Craig; Mr. Folkes for carrots—St. Valery; Mr. Folkes for Brussels sprouts—The Wroxton; Mr. Ellis for savoys—Drumhead; Mr. T. Avery for red cabbage; and Mr. Basile for cauliflowers, Autumn Giant.

Mr. W. Stowers, Harold Road, Sittingbourne, had the best set of six dishes of dessert apples, showing a very even lot of King of the Pippins, Cox's Orange Pippin, Chas. Ross, Rival, Fearn's Pippin, and Paroquet; Mr. E. Montague, gardener to Colonel Biddulph, Grey Court, Ham, second, and Mr. R. Edwards, gardener to C. A. Morris-Field, Esq., Beechy Lees, Sevenoaks, third.

Mr. Stowers led for culinary apples, six dishes, with heavy fruits of Emperor Alexander, Bramley's Seedling, Mère de Ménage, Lane's Prince Albert, Peasgood's Nonsuch, and Bismarck; Mr. H. Ellis, gardener to V. Earle, Esq., Franks Hill, Farningham, second, and Mr. H. Parr, Trent Park Gardens, third. Mr. Horton was first and Mr. R. Edwards second for six dishes of pears, and both showed well.

In the grape classes premier place for three black bunches was won by Mr. T. W. Hill, gardener to S. J. Wigg, Esq., Rockshaw, Merstham, with Alicante; Mr. W. Lintott, gardener to Sir Walpole Greenwell, Bart., Marden Park, Caterham, second, and Mr. W. Howe, third. For white grapes Mr. W. Lintott was first, and Mr. H. Parr second, both showing Muscat of Alexandria.

NON-COMPETITIVE.

Messrs. R. Felton and Sons, Hanover Square, W., showed a few beautiful floral designs, that included a cross of white chrysanthemums, with violets, dendrobiums, and cattleyas grouped lightly around the base; a chaplet of white and pink chrysanthemums, and cattleyas; and a harp of golden chrysanthemums and Odontoglossum grande, with violets making a striking and beautiful contrast to the golden base. Messrs. W. Wells and Co., Merstham, had a fine bank of chrysanthemums, that, we were glad to see, consisted largely of plants, so that there was ample evidence of the capabilities of the market, decorative, and single varieties. Of course, there were big blooms, notably of Mrs. W. H. Lewis, Rose Pockett, F. S. Vallis, the new Wm. Mease, Mrs. W. Wells, Bessie Godfrey, etc. Among market varieties we noticed Freda Bedford, the new golden-yellow R. E. Felton, and the deep crimson-red Foxhunter. Among singles the new Sylvia Slade, deep rose-red with white ring round the eye; Grace, Bronze Pagram, Jessie Curtis, and Metta were very fine. This was a most interesting group. Messrs. J. Peed and Son, West Norwood, contributed a very attractive circular display of chrysanthemums, tastefully disposed. Mr. T. Williams, Ealing, had some pretty table decorations.

Mr. W. J. Godfrey, of Exmouth, contributed a bank of blooms, consisting chiefly of large flowers set amid ferns and asparagus; conspicuously good were Mr. Frank Pearce, Melchet Beauty, Mrs. Norman Davis, Lady Talbot, Miss Lily Baker, Mrs. W. Wells, and Dorothy Goldsmith. Single varieties set up in large vases of a variety, and incurved varieties similarly treated, went to make up this attractive group. Messrs. Hobbies, Dereham, showed the value of roses for autumn decoration, and their group of these fragrant flowers attracted a good deal of attention. The same firm had a display of single chrysanthemums in vases, and here Gaiety, Edith Pagram, Bronze Pagram, Miss Irene Cragg, Alice Crate, and Nellie Richardson were very good. Mr. H. W. Thorp, Durrington, Worthing, showed a small group of chrysanthemums that included the new incurved H. W. Thorp, and a good selection of singles.

Messrs. J. Peed and Son, West Norwood, contributed an attractive exhibit of clean apples, that included all the leading varieties. Messrs. G. Bunyard and Co., Maidstone, had a wonderfully fine exhibit of fruit, the apples being especially clean and bright, and the pears of fine size. The display was also an artistic one: Chas. Ross, Ribston Pippin, Cox's Orange Pippin, Wealthy, American Mother, Mère de Ménage, King of Tomkin's County, Newton Wonder, Gascoigne's Scarlet, and Peasgood's Nonsuch were a few of the two hundred and twenty varieties that were specially attractive in this exhibit. Messrs. H. Cannell and Sons, Swanley, had a very fine group of apples and pears, and here the apples were particularly well-coloured and the fruits fine in size; King of the Pippins, Cox's Orange Pippin, Wealthy, Blenheim Pippin, Yorkshire Beauty, Cox's Pomona, Cellini, and Emperor Alexander were notably fine dishes. The fruit display made by the Agent-General of British Columbia, Salisbury House, London Wall, was also a great attraction, most of the fruits being staged in boxes as packed; of Golden Russet, Spitzenberg, Cox's Orange Pippin, Hubbardston Nonsuch, Hyslop Crab (fine for jelly making), Rome Beauty, Grimes' Golden Pippin, and Jonathan, there were splendid samples.

Mr. P. Ladds, Swanley Junction, put up a large display of market chrysanthemums associated pleasingly with heaths, palms, the newer nephrolepises, forced spiræas, dracænas, etc. Messrs. H. Scott and Sons, Woodside, S.E., had a big display of summer-houses, rustic arches, pergolas, etc. Mr. G. W. Riley, Herne Hill, also showed pergolas, rustic arches, summer-houses, and two large plant-houses of good design.

Mr. Norman Davis, Framfield, Sussex, had a particularly large and fine exhibit. Close up to a background of palms he had tall stands of fine flowers of True Gold, Mrs. F. G. Coster, Formality—a fine white, Mdlle. J. de la Crouée, Marquis of Northampton, Mrs. C. Penford, North Pole, and the crimson Joseph Stoney, all Japanese varieties. In the central foreground was a group of the lovely pure white Mrs. Norman Davis, splendid blooms, and on either side of this group were vases of fine singles, such as White Pagram, Nellie Richardson, Virgo, Leo, etc. Mr. Davis is naming his new singles after stars—a good method. We may add that Algernon Davis, G. Mileham, W. J. Davis, W. Beadle, Splendour, Clara Wells, and C. J. Champion were show varieties grandly represented, and Mr. Davis had also several fine new seedlings.

A large, bold, and very beautiful group of chrysanthemums was staged right in the centre of the show by Mr. H. J. Jones, Ryecroft Nursery, Lewisham. This display was a fine effort; it was of oval shape, with tall stands of a variety rising well above a groundwork of blooms and foliage. Mr. Jones is a fine decorator, and no one knows better than he how to display big blooms. Over the central mass of white flowers there rose a bold stand of yellow and bronze bloom, while set well out from this, in tall stands, were fine bouquet-like groups of Buttercup, H. J. Jones, Mrs. T. Tagg, etc. Smaller or lower stands were of Moneymaker, F. M. Lever, Reg. Vallis, Crimson King, C. E. Harrison, and other fine varieties. Among the many specimen flowers set out in the groundwork we noted Master David, Master James, Lady Crisp, Sir Frank Crisp, Rev. R. D. Eves, Melba, F. S. Vallis, and other good things, but there were also decorative and single varieties in great profusion. This group won the special Witty medal as the best miscellaneous display.

Miss R. Davis, Upper Norwood, contributed floral designs. Messrs. W. Cutbush and Son, Highgate, sent up several new seedling chrysanthemums, including the recently certificated single variety Hilda Lawrence.

MEDALS.

Large Gold.—Mr. Norman Davis, Framfield, Sussex; Mr. H. J. Jones, Ryecroft Nursery, Lewisham.

Gold.—Messrs. W. Wells and Co., Merstham; Messrs. H. Cannell and Sons, Swanley; Messrs. J. Peed and Son, West Norwood; Messrs. G. Bunyard and Co., Maidstone; Mr. P. Ladds, Swanley Junction.

Silver-gilt.—Messrs. R. E. Felton and Son, Hanover Square, W.; Mr. W. J. Godfrey, Exmouth; Agent-General of British Columbia.

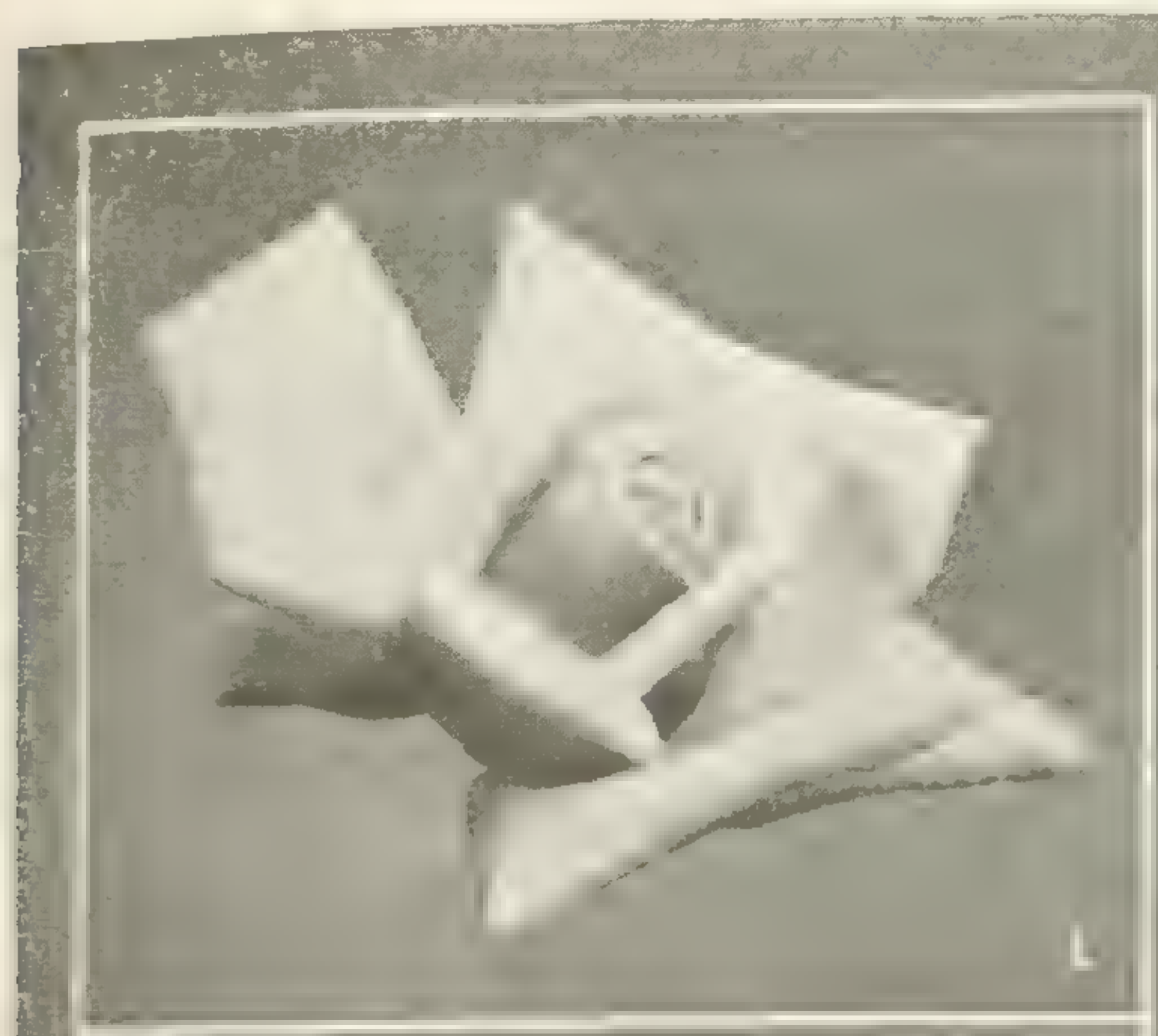
Large Silver.—Mr. G. W. Riley, Herne Hill; Messrs. H. Scott and Sons, Woodside, S.E.; Messrs. Hobbies, Lim., Dereham; Mr. C. J. Simpson, Chelmsford.

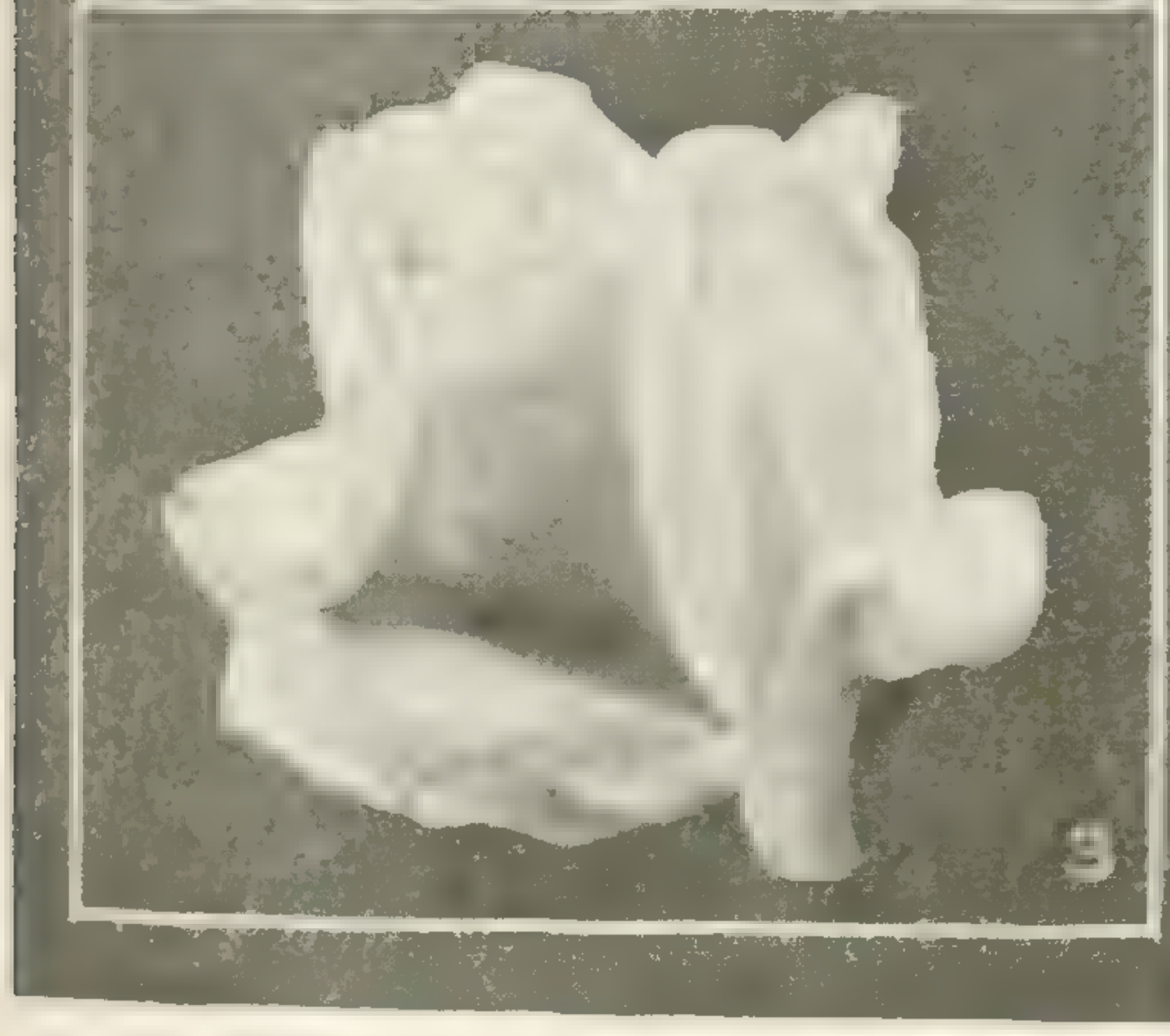
Silver.—Messrs. Duncan Tucker, Tottenham; Messrs. J. Laing and Sons, Forest Hill; Miss R. Davis, Upper Norwood; Mr. F. Brazier, Caterham; Mr. T. Williams, Oxford Road, Ealing; Mr. H. W. Thorp, Durrington, Worthing.

The Leamington Onion Show.

A very large competition was brought out on Saturday, October 24, in connection with Messrs. Rogers' valuable prizes for a single specimen of Leamington Giant Onion. No fewer than seventeen hundred bulbs were staged, and the first prize of £100 was secured by Mr. A. R. Searle, Castle Ashby Gardens, Northampton, who had a most perfect specimen of over three pounds in weight. Mr. S. J. Baker, Weir House Gardens, Exeter, who also had an exceedingly fine onion, was second; Mr. W. Turnham, Culham Court Gardens, Henley-on-Thames, third; and Mr. A. G. Gentle, Little Gaddesden, Berkhamsted, fourth. In addition to the first prize, sixty other prizes were awarded, and the majority of the bulbs showed excellent culture, being shapely and well finished.

The first prize of £100 for the single onion was handed to the winner on the afternoon of the show, and we understand that Messrs. Rogers propose to offer some equally valuable prizes next year. Mr. E. Beckett was the onion judge.





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Royal Horticultural Society.

SCIENTIFIC COMMITTEE, October 27, 1908.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair), Messrs. W. Hales, E. W. Holmes, G. Massee, G. Gordon, H. T. Güssow, J. T. Bennett-Poë, W. Cuthbertson, J. Douglas, W. C. Worsdell, L. Crawshay, G. S. Saunders, J. Fraser, and F. J. Chittenden (secretary).

ROSE LEAVES DISEASED.—Mr. Saunders showed rose leaves having white patches upon them, and evidently affected by a fungus, which Mr. Massee took for further investigation.

FASCIATION IN BEANS.—Mr. Worsdell remarked that though the cause of this well-known phenomenon was so far unknown, in many cases it appeared possibly due to an excess of nourishment directed to a given spot, but it was also partly constitutional. He showed numerous specimens of bean seedlings (Phaseolus multiflorus) in which he had, by removing the central shoot as soon as it made its appearance out-side the seed, induced fasciation in the shoots which arose in the axils of the cotyledons. A majority of the plants treated had behaved in this way, but not all. In P. vulgaris, in which the cotyledons are raised above the surface, he had failed to induce fasciation, as the long hypocotyl apparently took all the surplus nourishment from the cotyledons. Fasciated roots appear to be rarely met with in Nature, but he had been able to induce the formation of such in one case of Phaseolus vulgaris. After removing the radicle, an adventitious root had sprung from the hypocotyl, and this had become fasciated.

Mr. Chittenden, on behalf of a correspondent, showed a fasciated stem of Calystegia pubescens.

ADVENTITIOUS SHOOTS ON LEAVES OF CARDAMINE PRATENSIS. — Mr. Holmes showed leaves of Cardamine pratensis fl.-pl. bearing well-developed shoots arising from the tips and surface. The same phenomenon is frequent in the single form as well as in the double.

VIVIPAROUS GRASS.—Mr. Holmes also showed a specimen of Aira cæspitosa with numerous small branches springing from the nodes. Such growths are very common in some grass species, and are often found in the inflorescence, particularly after a period of wet weather. They normally occur in some species, as in Festuca ovina, in moist mountainous regions.

AERIAL TUBERS IN ACHIMENES GRANDIFLORA.—Mr. Hales showed specimens of this plant bearing numbers of greenish tubers in the leaf axils. These tubers easily fell away, and were produced by plants which had been grown on after they had finished flowering.

CROCUS CORMS DISEASED.—Mr. Massee showed corms of crocus which had been killed by the bacterium, Pseudomonas hyacinthi, which is the cause of the well-known disease of hyacinths. He wished to draw attention to this disease, for which there is no cure, and to warn against planting diseased corms. When cut the corms show the same yellow gummy exudation typical of the disease in hyacinths.

NEW CERTIFICATE. — Mr. Bowles announced that the Council had had under their consideration a new certificate which, it was suggested, should be designated Certificate of Appreciation, to be awarded for worthy exhibits of objects demonstrating the results of experimental cultures in gardens, with the object of encouraging individual effort in this direction. The Council suggested that this committee should undertake to consider such exhibits, a suggestion which the committee cordially agreed to carry out.

CURIOUS NARCISSUS BULB.—From the Rev. J. Jacob came a curious bulb of narcissus in which the axis of a lateral offset had elongated and produced at its apex a small bulb quite normal in structure, about 2in. above the other bulb.

POPPIES WITH BRACTS, ETC.—From a correspondent at Lincoln, who previously sent Shirley poppies with numerous bracts just below the flowers, came further specimens. In the accompanying communication he stated that these plants were undoubtedly hybrids, though unfortunately it was not known what the pollen parent had been, though the seed parent was the Shirley poppy. Little seed was produced this year. From the same correspondent came specimens of polyanthus having an enlarged calyx and no flower, and others with a rather less enlarged calyx and a small flower.

APPLES SHOWING "GLASSINESS." — Two specimens of the apple Lane's Prince Albert were sent, one from Harpenden, the other from Ross, both showing the peculiar greenish semi-transparency known as "glassiness." The appearance is due to the transfusion of the cell sap into the intercellular spaces, and it was suggested that this was due, perhaps, either to the very hot weather experienced during the beginning of October, or to the abundant rain following a period of drought. In the former case it was reported that every year from one tree some apples showing the same appearance were gathered, and that the affected spots rotted after a time, and in the case from Ross, twenty-four apples showed the trouble, the remainder of those upon the tree being quite normal.

METEOROLOGICAL OBSERVATIONS.

TAKEN BY THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. October 25 to October 31.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Oct. 25 - Sunday	4 20	37	35	51	31
„ 26 - Monday	—	51	50	51	37
„ 27—Tuesday ...	0 55	46	45	57	42
„ 28 - Wednesday.	0 20	57	56	61	38
„ 29—Thursday ...	6 25	57	54	68	51
„ 30—Friday	8 10	53	51	65	45
„ 31—Saturday ...	1 10	55	54	62	53
Means	3 0	51	49	59	42

Date. 1908. October 25 to October 31.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Oct. 25—Sunday	0·07	46	51	55	26
„ 26—Monday	0·12	48	51	54	38
„ 27—Tuesday ...	0·20	48	51	54	38
„ 28—Wednesday.	—	48	50	53	32
„ 29—Thursday ...	—	50	51	53	44
„ 30—Friday	—	50	52	53	38
„ 31—Saturday ...	—	52	52	53	46
Means ...	(total) 0·39	49	51	54	37

FORTHCOMING ENGAGEMENTS.

TUESDAY, November 10. — Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. on "British Wild Flowers in the Garden," by Mr. John W. Odell; Scientific Committee at 4 o'clock
Devizes Chrysanthemum Show.
Birmingham Chrysanthemum Show; two days.
Ipswich Chrysanthemum Show; two days.
Belfast Chrysanthemum Show; two days.
Plymouth Chrysanthemum Show.
WEDNESDAY, November 11.—York Florists' Chrysanthemum Show; three days.
Cuckfield Chrysanthemum Society; two days.
Tonbridge Chrysanthemum Show; two days.
Chester Paxton Chrysanthemum Show; two days.
South Shields Chrysanthemum Show; two days.
Cambridge Chrysanthemum Show; two days.
Buxton Chrysanthemum Show.
Corn Exchange Chrysanthemum Show.
Reading Chrysanthemum Show.
Manchester Chrysanthemum Show.
THURSDAY, November 12.—Hitchin Chrysanthemum Show.
FRIDAY, November 13.—Leeds Chrysanthemum Show; two days.
Huddersfield Chrysanthemum Show; two days.
Bradford Chrysanthemum Show; two days.
Sheffield Chrysanthemum Show; two days.
Nottingham Chrysanthemum Show; two days.

ANSWERS TO CORRESPONDENTS.

DISEASED CHRYSANTHEMUMS.—S. H., Chippenham: There are considerable traces of the Rust fungus upon the shoots and leaves sent, but there is a further trouble that is largely answerable for the shrivelled leaves and general collapse of the plant. This may be caused by some cultural error that has seriously affected the leaves, or it may be due to bacterial or fungus attacks. We are having the matter investigated.

WINTERING CALADIUM CORMS.—R. J., Norfolk: The best way of keeping caladium corms during the winter is to leave them in the soil in which they were grown during the past season, and to lay the pots on their sides under the stages of the plant stove. The pots should not be placed near the hot water pipes, because in that position the soil would be made too warm and dry. The corms may be shaken out, put loosely in pots, and be covered with silver sand, but there is a risk of their being destroyed by dry rot.

WINTER SPRAYING OF FRUIT TREES.—H. G., Suffolk: The winter spraying of fruit trees should not be commenced until the whole of the leaves have fallen, and, speaking in a general way, this work should be done during December, January, and February, as the trees are then dormant. Mr. Spencer Pickering, F.R.S., the director of the Woburn Experimental Fruit Farm, recommends as the result of his experiments a wash prepared as follows for use during the winter. "The ingredients for ten gallons are:

Iron sulphate	½lb.
Lime	¼lb.
Caustic soda	2lb.
Paraffin	5 pints.
Water to make	10 gallons.

Dissolve the iron sulphate in about nine gallons of water, slake the lime with a little water, and then add a little more water to make it into a milk; run this into the iron sulphate solution through a piece of sacking, so as to remove any gross particles which might clog the spraying machine. The paraffin is then churned into the mixture, and the caustic soda added; it is not necessary to dissolve this separately in water before adding it, especially if in the powdered condition."

HEAVY v. LIGHT SOILS.—J. S. B., Morecambe: The point you raise is an interesting one, but it is thoroughly understood by every well-trained gardener. A heavy soil is heavy not because of its weight, but because of the heavy work entailed in cultivating it; likewise, a light soil is light not necessarily because it is of less weight per cubic foot than the "heavy" soil, but because it is more easily worked. Pure sand is the "lightest," and pure clay the "heaviest" of soils, from an agricultural or horticultural point of view, and yet a cubic foot of dry sand weighs considerably more than a cubic foot of dry clay.

THE STRAWBERRY-RASPBERRY. — P. W., Wrexham: You have been wrongly informed. A half-hearted attempt was made to persuade the general public that the strawberry-raspberry was a hybrid fruit, but it failed, in spite of the efforts of sensational daily journals. The so-called strawberry-raspberry is a variety of Rubus rosæfolius, and is not, as is often stated, Rubus palmatus, as the latter is a climber, whereas Rubus rosæfolius coronarius is a comparatively dwarf shrub.

SCIONS FOR GRAFTING.—C. B., Hinckley: It is an excellent plan, now that the leaves have fallen, to select suitable scions for grafting next spring. Growths produced this season, about a foot long, well ripened, i.e., firm, and amply provided with wood buds, should be selected, tied up in bundles, correctly labelled, and buried two-thirds of their length in the soil on a north border. In the event of very severe weather place an armful of dried bracken over the scions, removing it when the frost disappears. The scions will keep splendidly if thus treated.

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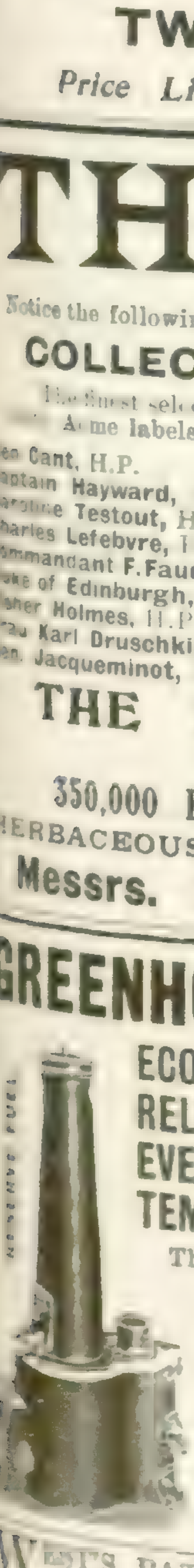

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BLACKENED CHRYSANTHEMUM LEAVES.—J. R., North Wales: We are not satisfied as to the real cause of the trouble, and would be obliged by your sending us a whole plant, simply washing the soil from the roots and sending it in a stout brown paper parcel to the Editor, Endsleigh, Priory Park, Kew, Surrey.

SCARLET SEEDED IRIS.—S. G., Romney: The scarlet-seeded iris is Iris fœtidissima, sometimes known as the Stinking Gladwyn. It is an easy plant to manage, because if planted in a moist spot not too much overgrown, it will take good care of itself. The foliage is pretty, and for this reason alone the iris should be grown where plants may be naturalised. The flowers are unattractive, but in the autumn, when the seed capsule opens and discloses three rows of brilliant scarlet berry-like seeds that do not at once fall out, and also retain their beauty for a long time, then the gladwyn is very attractive. Further, the cut stems, carrying the opened seed pods, are fine for associating with dried grasses, or with autumn-coloured foliage, for home decoration.

NAMES OF PLANTS.

A. S., Carmarthen.—Cratægus orientalis.

R. K. S., Woburn.—1, Jasminum nudiflorum; 2, Cypripedium Charlesworthi.

N. L., St. Albans.—1, Cryptomeria elegans; 2, Thuia Lobbi; 3, Chimonanthus fragrans.

M. T. S., Oxford.—1, Ligustrum ovalifolium; 2, L. vulgare; 3, Bignonia venusta; 4, Cypripedium Charlesworthi.

D. J. W., Orpington. 1, Saxifraga oppositifolia; 2, Meniscium simplex; 3, Abutilon megapotamicum; 4, Vanda Kimballiana; 5, Dendrobium formosum giganteum.

E. S., Beckenham.—We much regret being unable to name the specimens sent. The two tiny orchid flowers were smashed beyond identification in a wad of sphagnum moss, and the small maranta leaf sent is not in character.

J. O., Wicklow.—The labels were not attached to the specimens, hence there may be some confusion. The large blue flower is Pleroma macrantha; the yellow flower is Cæsalpinia sepiaria (japonica); the small spray of fine leaves represents Kochia scoparia; the variegated leaf is probably a Hoffmania; but the green leaf we do not recognise.

NAMES OF FRUITS.

F. E. F., Dunstable.—Ribston Pippin.

L. R. H., Chelmsford.—1, Ross Nonpareil; 2, Blenheim Pippin.

E. U. C., Bristol.—1, Uvedale's St. Germain; 2, Marie Louise; 3, Ribston Pippin.

H. E., Sandy.—1, Beurre Diel; 2, fruit rotten; 3, Beurre Superfin; 4, Beurre Baltet Pére.

T. P., Derby.—1, Yorkshire Beauty; 2, Golden Spire; 3, Waltham Abbey Seedling; 4, Peasgood's Nonsuch.

G. M. A., Harpenden.—1, Lord Derby; 2, Annie Elizabeth; 3, not recognised; 4, Mère de Ménage; 5, Court Pendu Plat.

V. L. J., St. Ives.—1, Lane's Prince Albert; 2, Round Winter Nonsuch; 3, not recognised, a poor specimen; 4, Yellow Ingestre; 5, Claygate Pearmain.

CATALOGUES RECEIVED.

R. HARKNESS AND CO., HITCHIN, HERTS.—A good rose catalogue, containing selections of varieties for certain purposes, and cultural hints.

DEVAES FRERES, WETTEREN, BELGIUM.—A general catalogue of fruit trees, shrubs, hardy plants, aquatics, and bulbs. Printed in French.

FISHER, SON, AND SIBRAY, LIM., HANDSWORTH, SHEFFIELD.—A very full catalogue of bulbs, sundries, etc.

R. SILBERRAD AND SON, SAVAGE GARDENS, CRUTCHED FRIARS, E.C.—A select list of French roses and clematis ready for delivery in November.

M. DRAPS, 30, CHAUSSEE DE FOREST, BRUSSELS.—A very comprehensive and useful catalogue of stove and greenhouse plants, orchids, and ferns.

J. PERNET-DUCHER, VENISSIEUX-LES-LYON, FRANCE.—A very useful rose catalogue, indexed, in English, and containing a coloured plate of a red H.T. rose named Chateau de Clos Vougeot.

W. ATLEE BURPEE AND CO., PHILADELPHIA, U.S.A.—List of three new sweet peas—King Edward Spencer, Mrs. Routzahn, and Queen Victoria Spencer.

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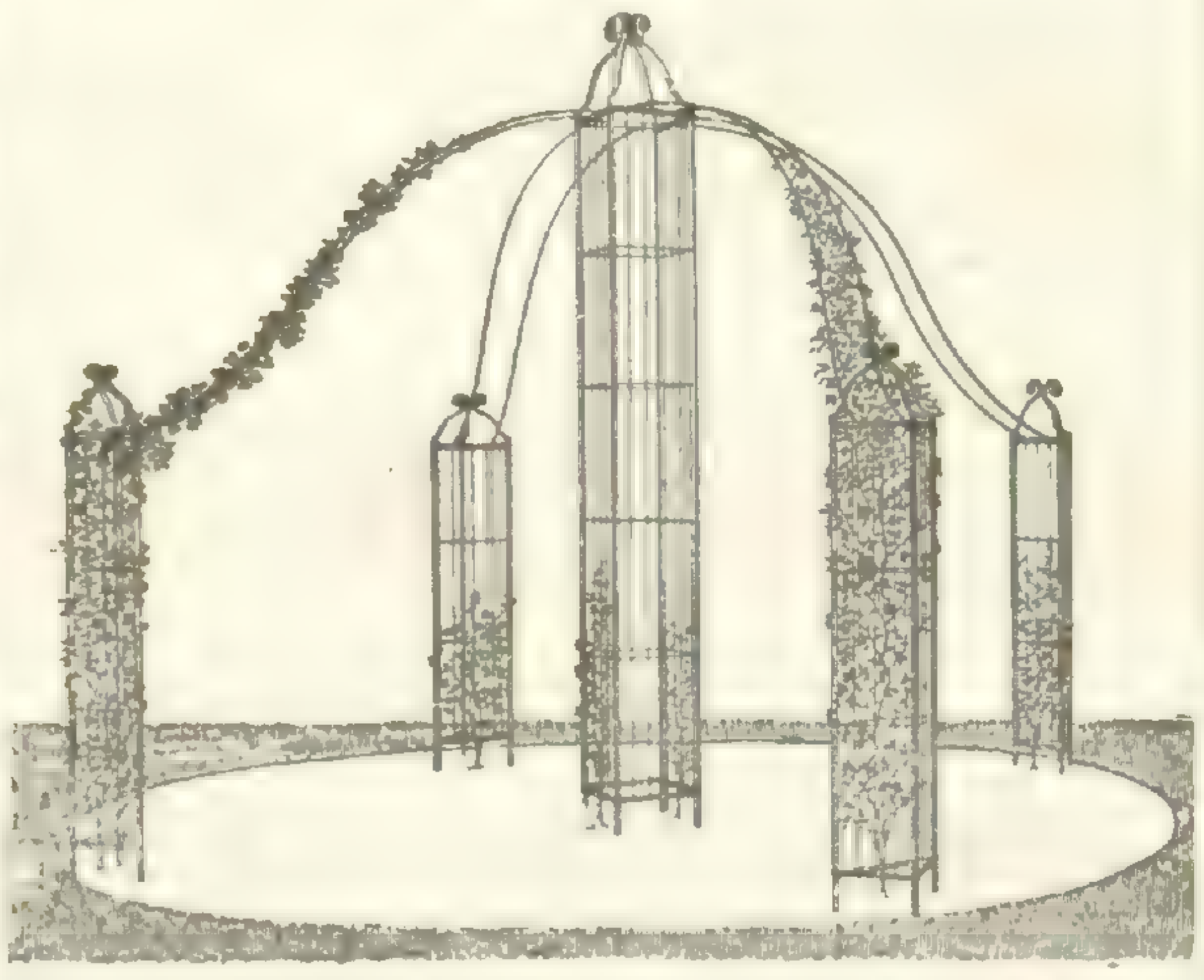

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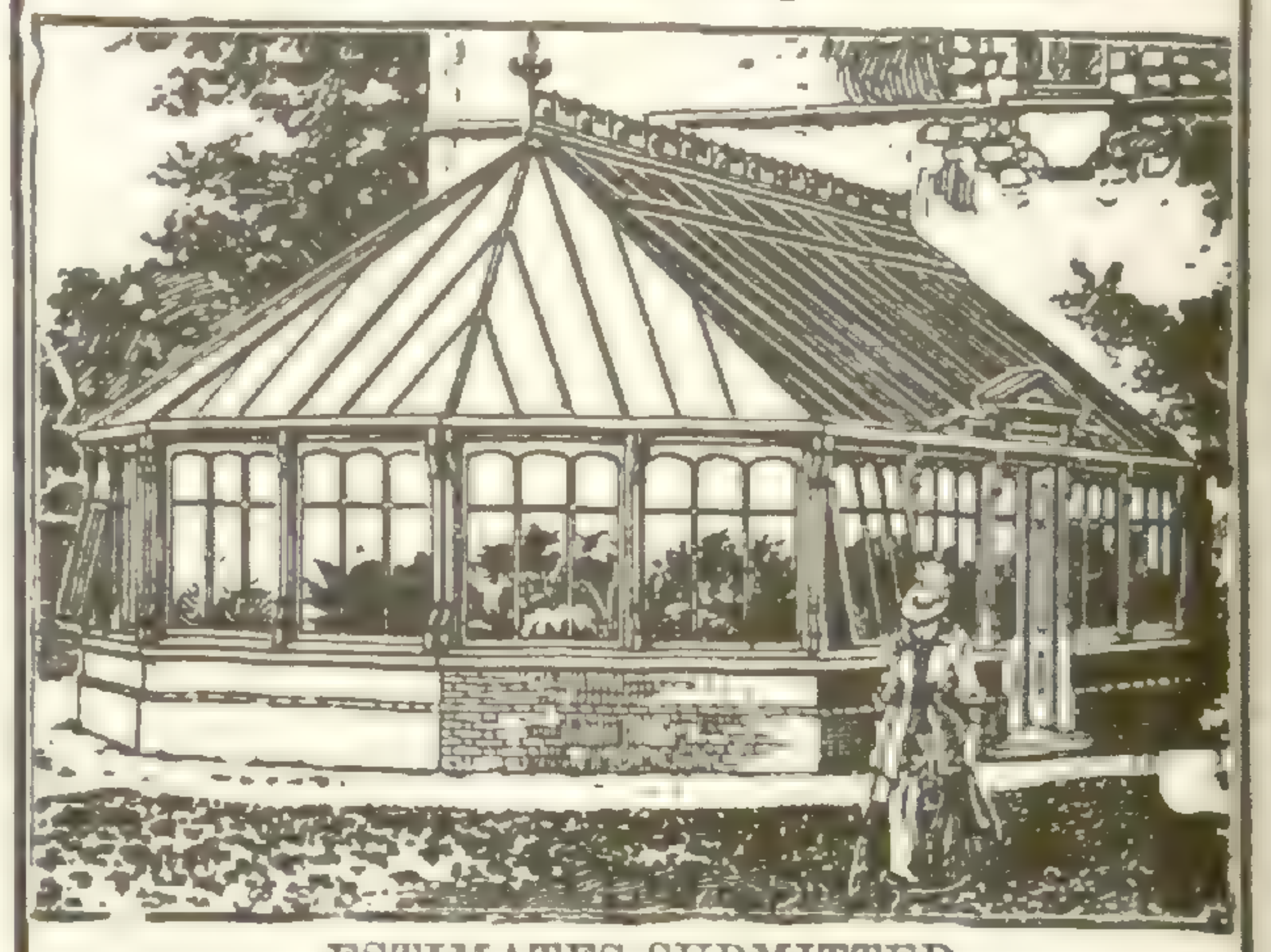
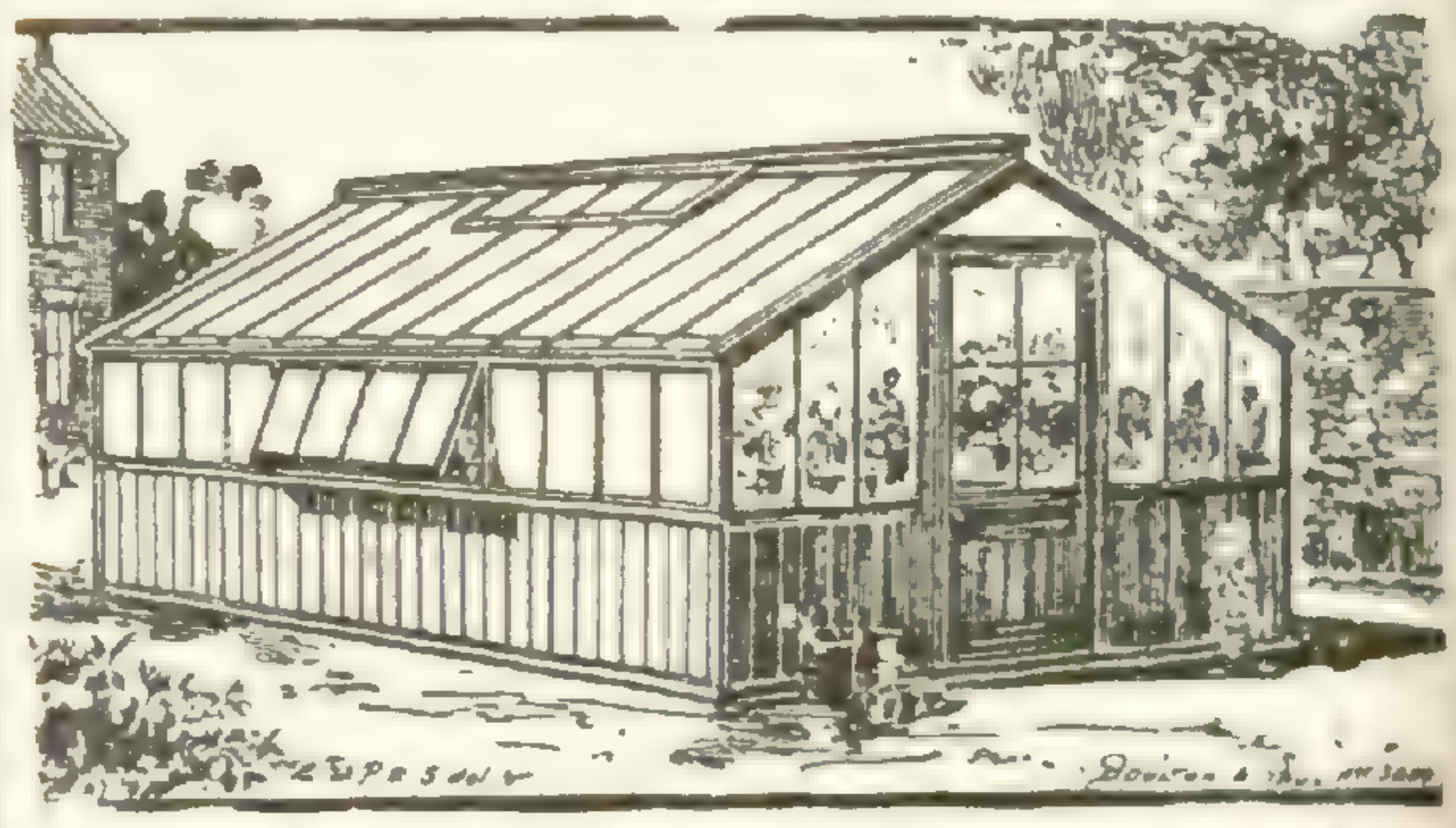


ESTIMATES SUBMITTED.

No. 49A.—**SPAN-ROOF GREENHOUSE.**



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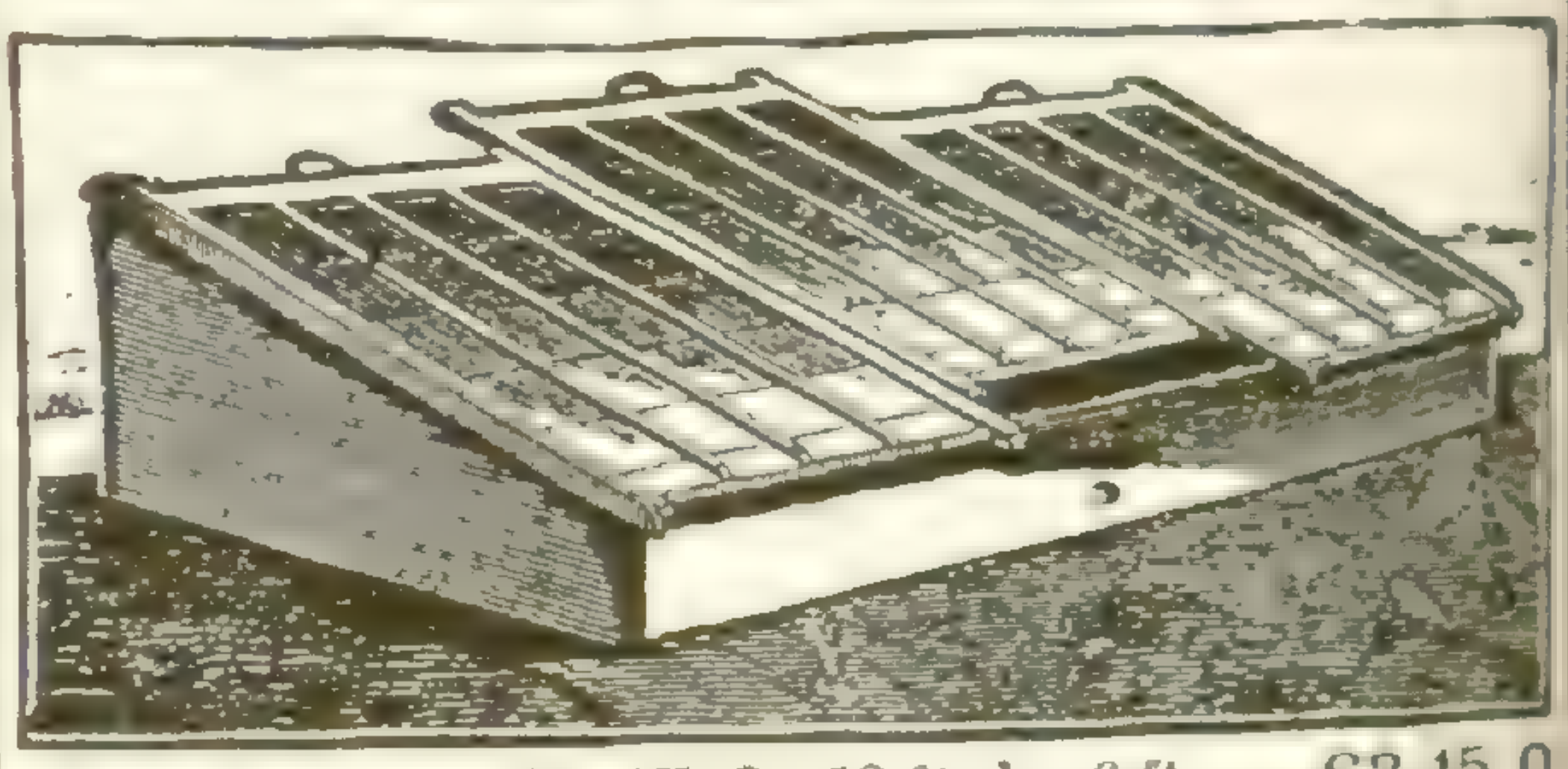

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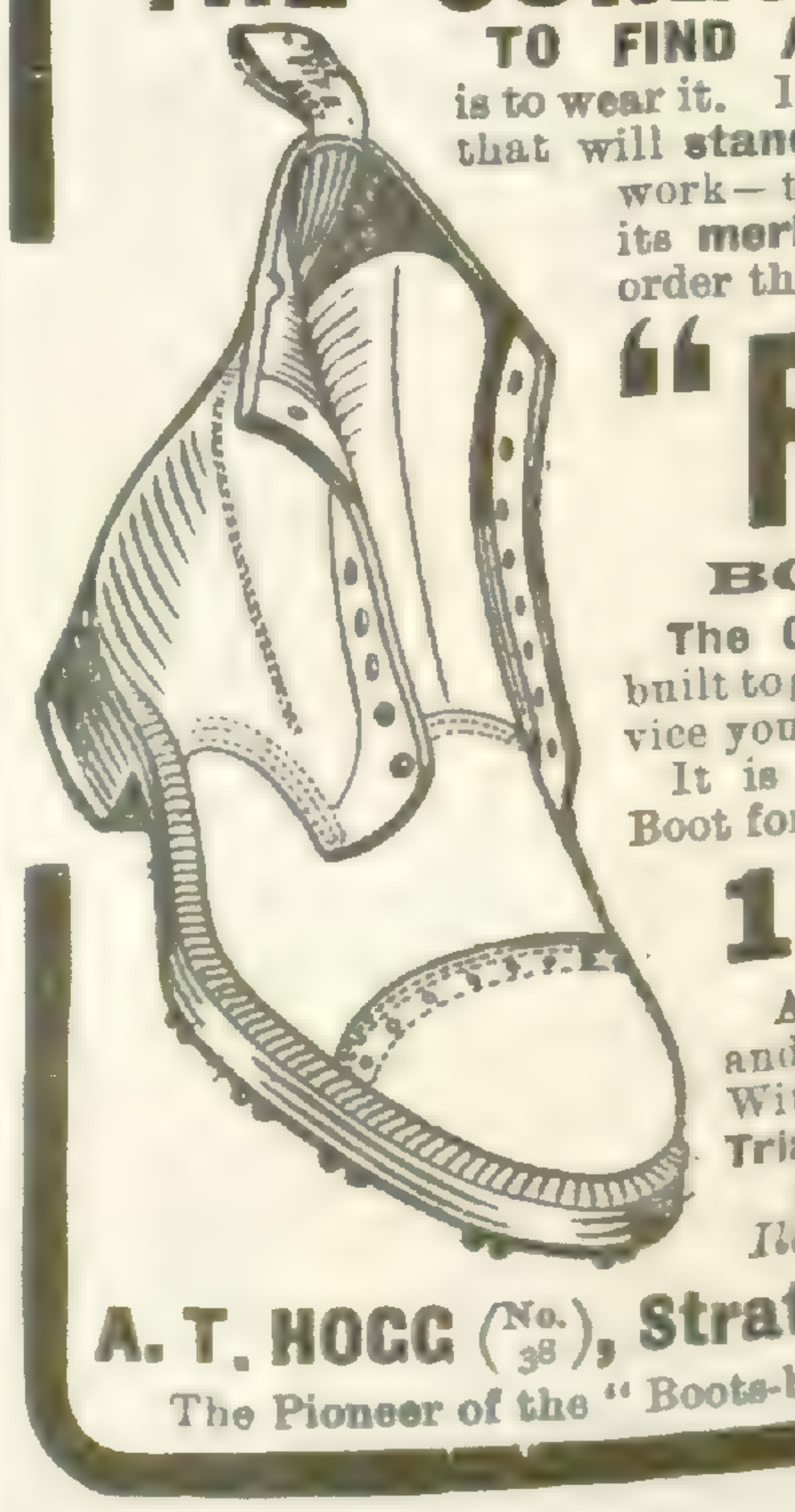

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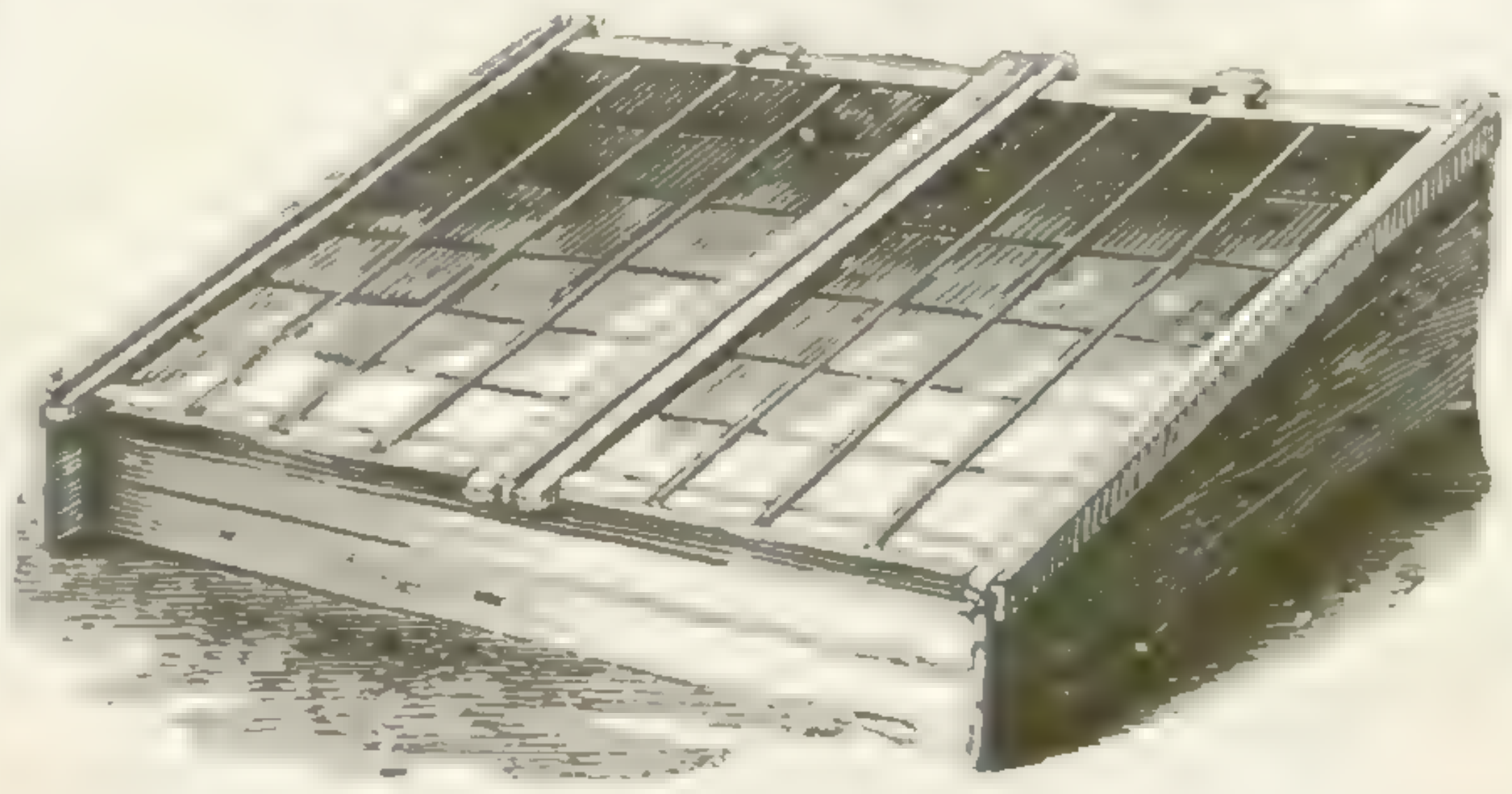

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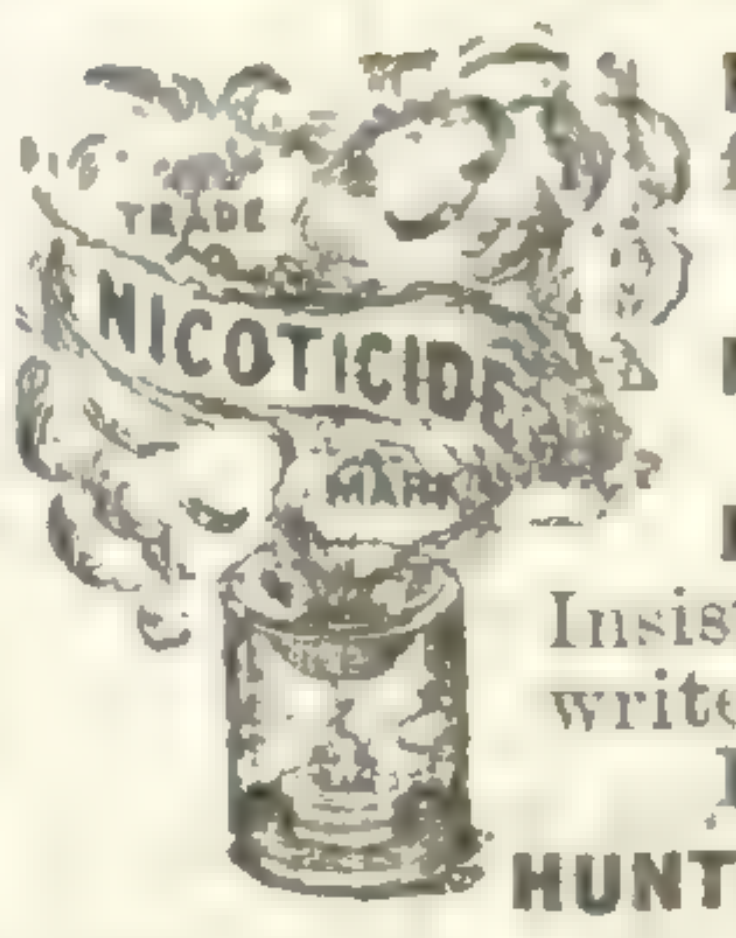

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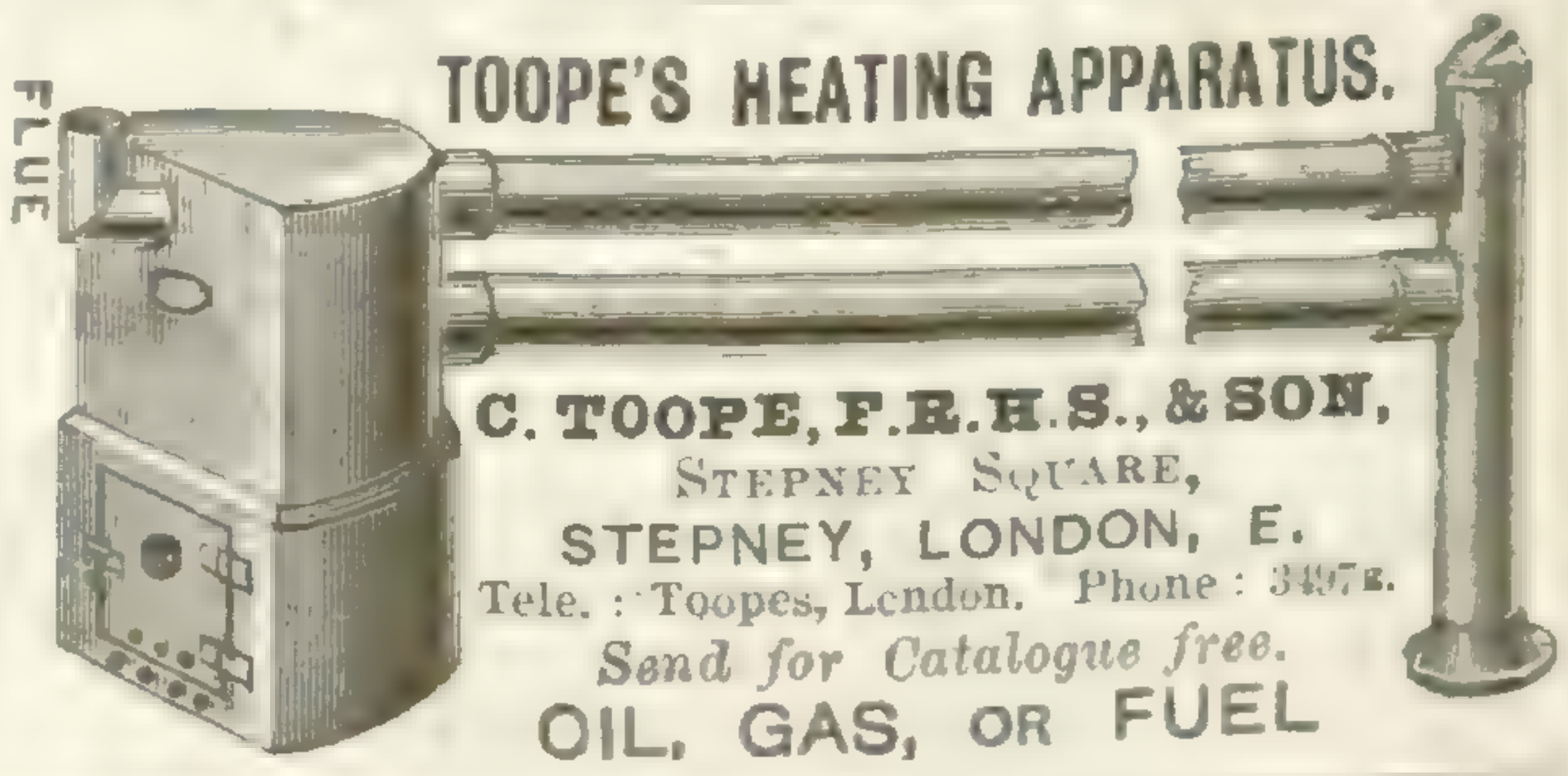

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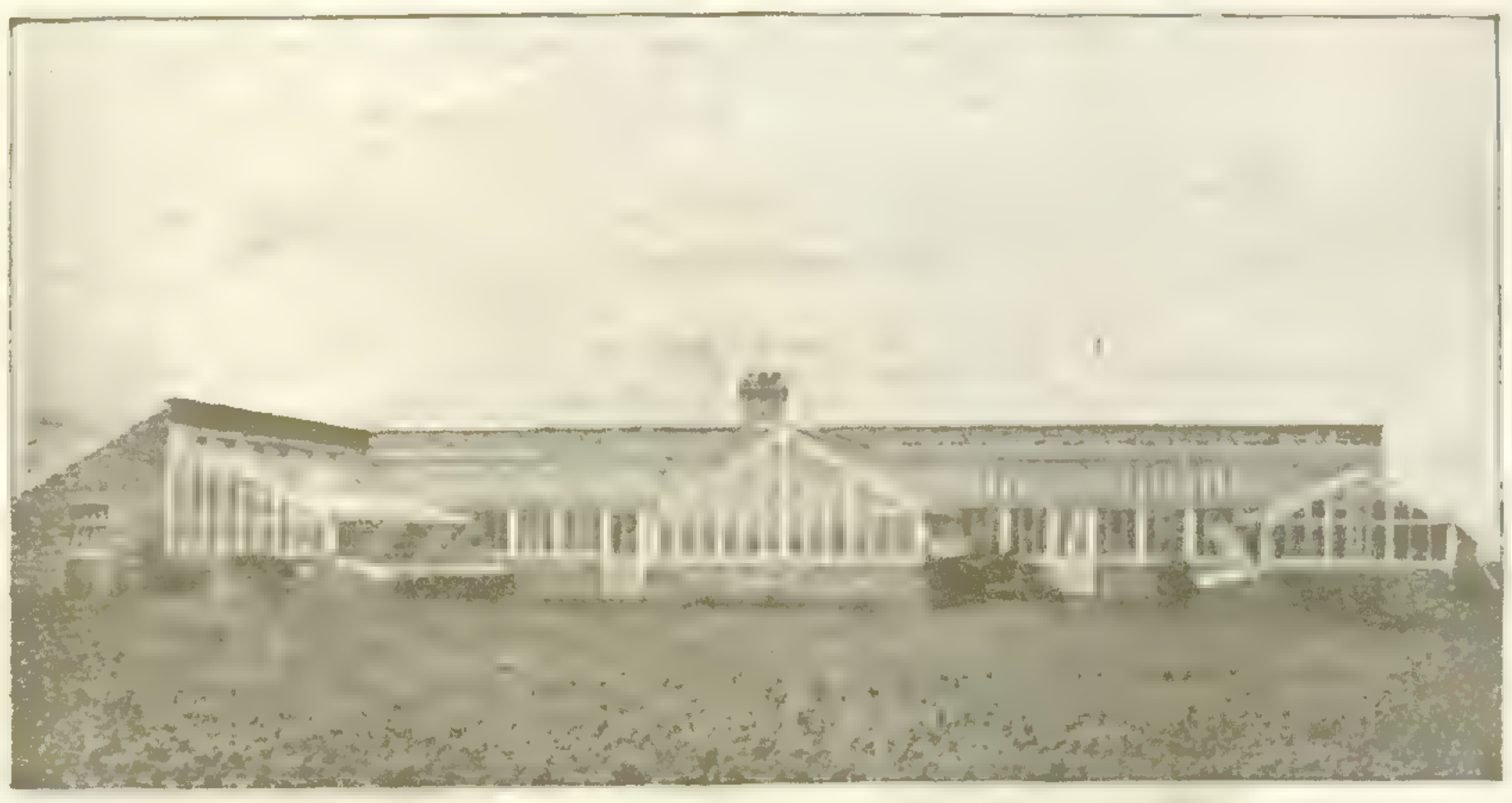

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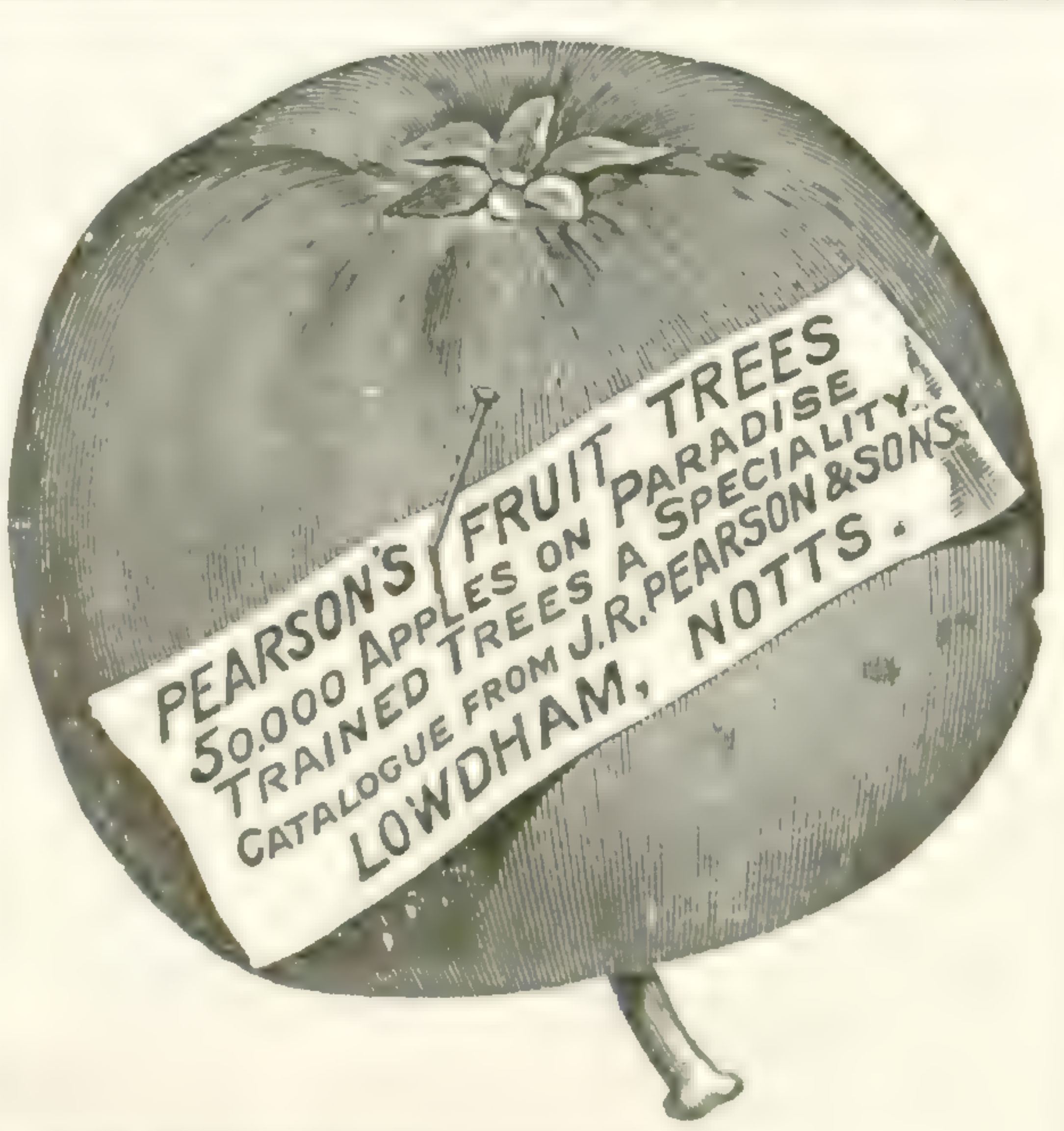
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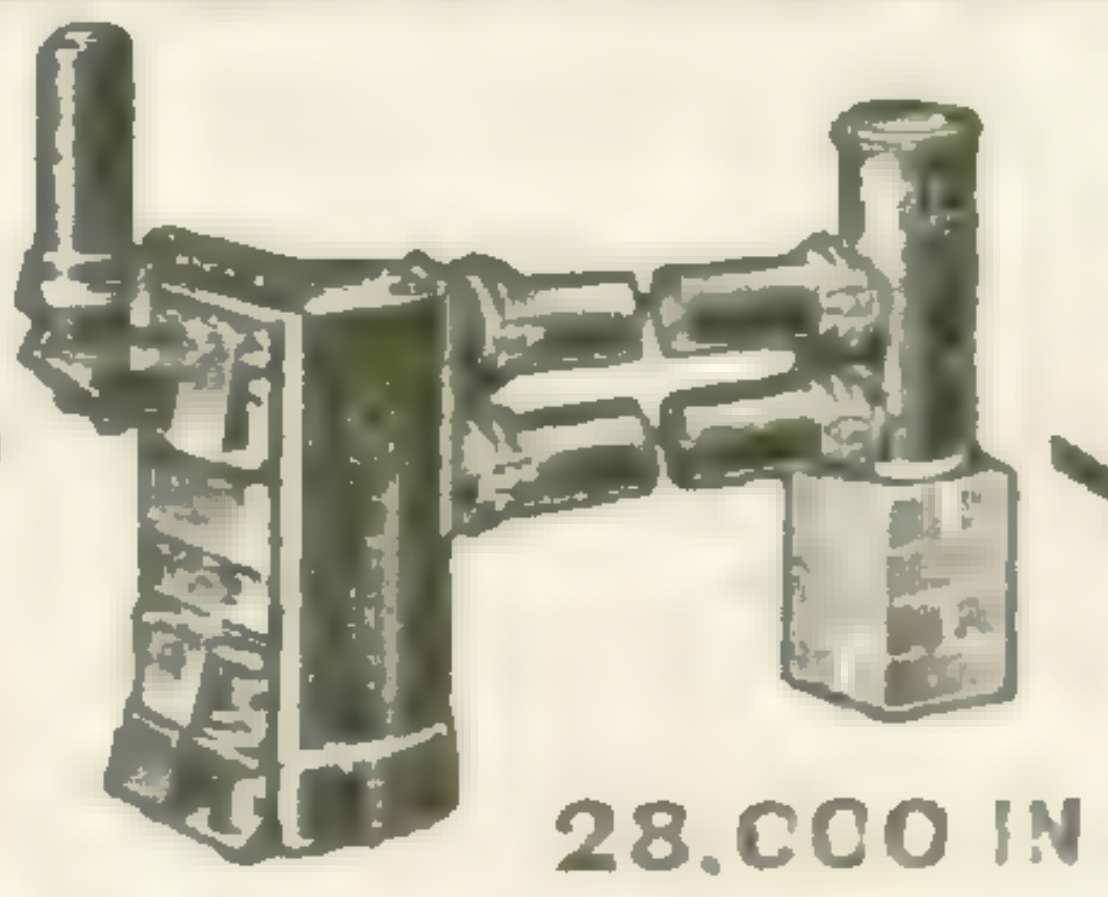

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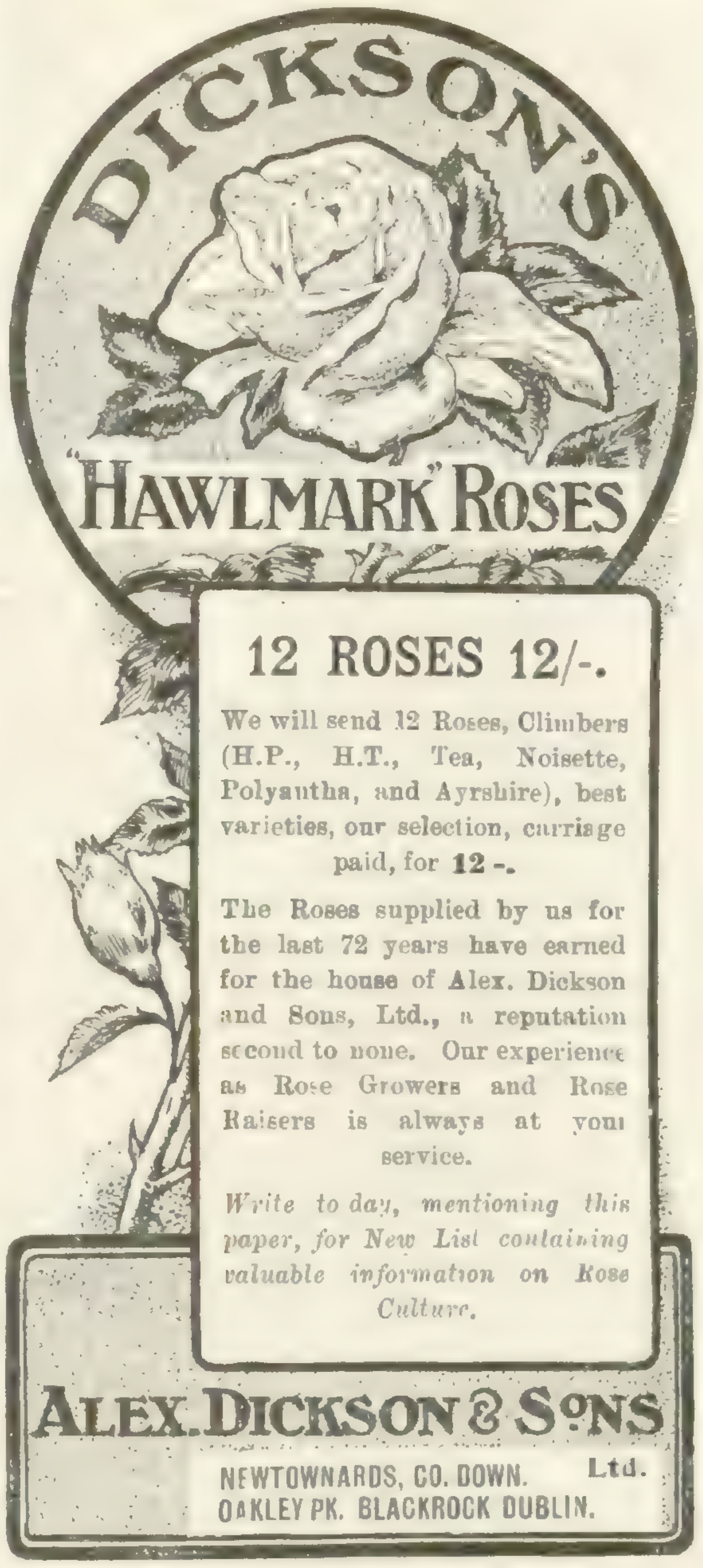

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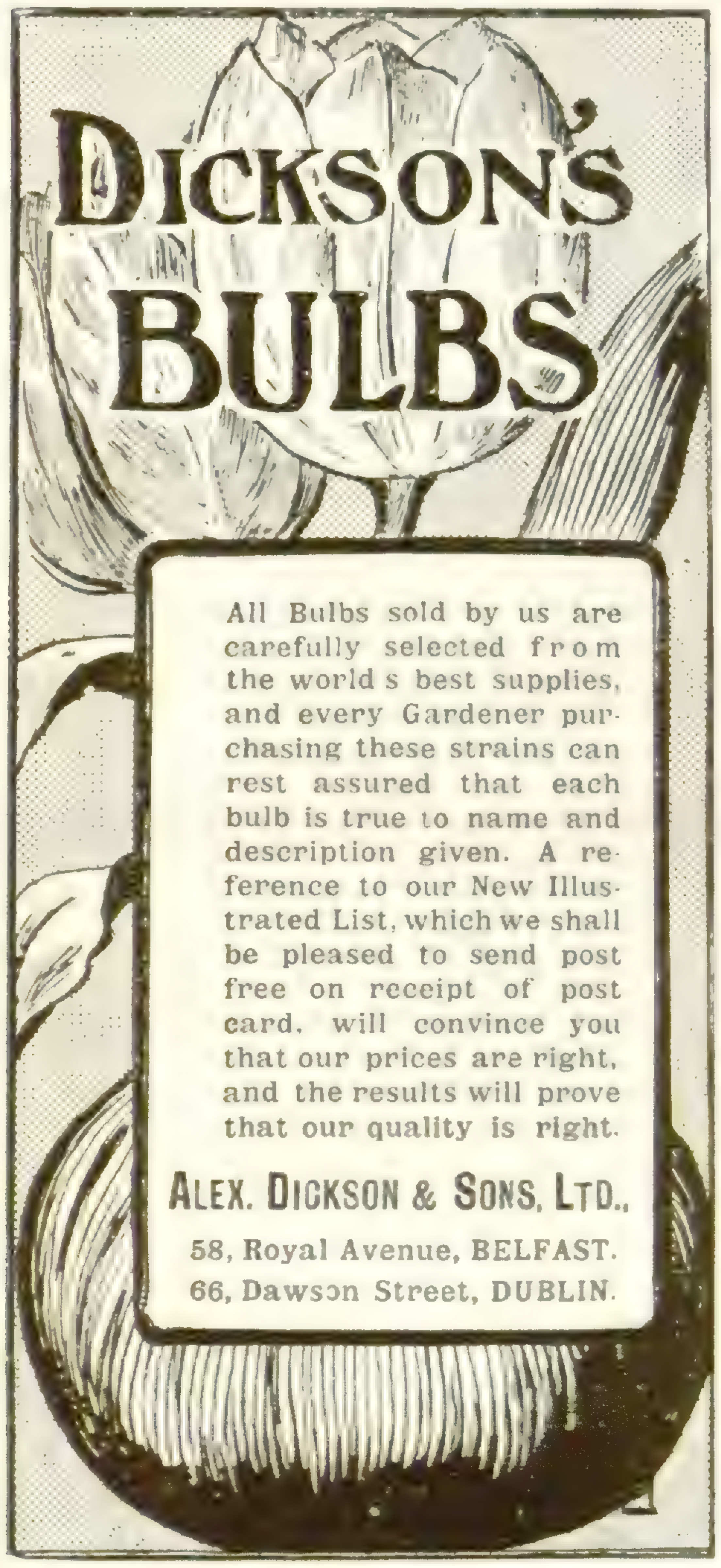

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VOL. LI.—No. 2,872. SATURDAY, NOVEMBER 14, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Vernation and Venation.

As these two very similar terms appear pretty frequently in conjunction where plant descriptions are concerned, it may not be out of place to explain the difference. Vernation implies the mode of growth of the foliage within the bud, which eventually determines the form and arrangement of the leaf and its parts, and the word is derived from ver, Latin for spring. This differs greatly according to the plant concerned, but is determined by regular laws in each case. Thus the future leaves may be packed one over the other like tiles or the scales of a fir cone, they may be folded up fan fashion, or in many other ways, while in ferns they are almost without exception rolled up in a spiral coil or into many coils, according to the extent of division of the future frond. When the bud of a tree or shrub bursts, the leaves emerge in perfect form, and attain full development by expansion of the cellular growth already duly arranged; but the fern frond can hardly be said to present as a bud proper, since it has no sheath, but commences as a terminal growing point on the embryo stalk, and this gradually builds up the coil, or coils, aforesaid by constant growth at the tip or tips, until, at the proper season, the main stalk lengthens, and lifts the still-growing coil to the proper height, when the minor stalks, if the fern frond be a divided one, also lengthen, and eventually the coils loosen and expand until the characteristic frond form is perfected. In ferns which grow shuttlecock fashion, i.e., with the fronds in a ring round a central crown, the fronds are really formed a long time before they rise, and can be seen tightly packed together in the centre the previous season. It is thus perhaps that they may best be regarded as approaching buds in their nature, especially as the protective sheathing common to most tree buds is then represented by more or less dense, but loose, overlapping scales. Their internal arrangement or vernation is, however, as we have seen, on quite peculiar lines. Venation, on the other hand, is quite distinct from this, as it refers to the arrangement of the veins in the leaves or fronds, that is, those harder parts which intersect the cellular structure, and form those skeletons with which we are familiar when the softer parts have rotted away and only the veins are left. These veins are mostly of a more or less woody nature, and their arrangement varies greatly in different plants. In most trees and shrubs they form networks of very beautiful design, and on examining these it will be seen that they graduate in size from main ones nearly as thick as the leaf stalks to very fine ones near the leaf edges, and that every projection on these edges or division of the leaf will have a vein reaching to the margin or tip, no great expanse of the green structure being left without its vein or veins. This is due to the fact that the veins perform two functions, they are, in fact, both veins and bones, so to speak, the bony or woody part forming a supporting framework for the tender cellular tissues, while the associated sap channels or veins are contrived to convey supplies to the growing cells from the roots, and to carry back to the general structure the formative materials elaborated in the cells to that end. In the embryo leaf, as the cells multiply to build it up, the vein system is constructed by them as they proceed, so that there is always a sap source in the immediate vicinity upon which the pioneer cells can draw according to their requirements. To a certain extent living cells can pass on nutriment from one to another by absorption through their walls, and in some of the lower orders of plants, especially water plants, they thus manage to fulfil their functions without any veins proper at all. There is not doubt, therefore, that in the process of evolution from simple plant life to more complex conditions, the system of venation was evolved to permit of more extended growth, and on more massive lines suitable to land conditions. Seaweeds, for instance, manage to do without a vein system, they are supported by the water, and are subjected to no drain by transpiration, and hence do not require, as a tree does, both strong supports for its foliage, and a liberal supply of water from the roots to the possibly far-distant leaves. Under dry conditions it is obvious that a vein system is an absolute essential to all vegetation of a higher grade than fungi or other low orders.

MR. HARRY J. VEITCH, V.M.H.

Chevalier of the Order of Leopold, Chairman and Treasurer of the Gardeners' Royal Benevolent Institution.

Mr. Harry J. Veitch, V.M.H.—Honours are so sparingly bestowed upon horticulturists in this country that it gives us pleasure of a quite exceptional character to announce that the King of the Belgians has conferred upon Mr. H. J. Veitch, V.M.H., the distinction of a Chevalier of the Order of Leopold, and that King Edward VII. has been pleased to grant by Royal license permission for Mr. Veitch to accept and wear the insignia thereof. We are quite sure our readers will share with us in the pleasure we have in making this announcement, for Mr. Veitch has not only contributed to the beauty and interest of our gardens large numbers of tender and hardy plants and of trees and shrubs of the most varied character, but has rendered splendid service in the cause of the gardening charities. We need not recount the successes which have been achieved by the firm of which Mr. Veitch has long been the head, in the introduction of orchids, of stove and greenhouse plants, or of trees and shrubs; or of the splendid results obtained in hybridisation and cross fertilisation. They are known to all who have taken a close interest in gardening. It is also known to a very large section of the horticultural community that while engaged in a business that must have imposed a heavy tax upon his time and attention, Mr. Veitch has constantly kept in mind the needs of the gardener and those who are dependent upon him. For nearly a quarter of a century Mr. Veitch has been the chairman and treasurer of the Gardeners' Royal Benevolent Institution, and it is fully acknowledged by those who have been associated with him in the management of that valuable charity that much of the remarkable success achieved by that institution is due to his occupying a leading position on the governing body. Mr. Veitch has given freely of his money as well as his time to the institution, and the high subscription lists on the two occasions on which he presided at the anniversary festivals, testified in no uncertain manner to the respect in which he is held by all who are interested in horticulture. Mr. Veitch has not been less generous in his support of the Royal Gardeners' Orphan Fund, in which he has taken a warm interest from its foundation twenty-one years since. For a long period Mr. Veitch has been a member of the Council of the Royal Horticultural Society, and it was owing to that fact his name was not included among the sixty horticulturists who received the Victoria Medal of Honour in Horticulture on its foundation in 1897. Subsequently, the rule to the effect that the medal could not be awarded to a member of the Council was very properly abolished, and in 1906 the medal was awarded to Mr. Veitch.

Birthday Honours.—The honours conferred on the occasion of the King's birthday included a knighthood conferred upon Mr. E. D. Walker, the head of the firm of Messrs. J. Burrell and Co., Cambridge. Sir Edward D. Walker is also senior partner in the wholesale newspaper firm of Mesrs. Walker and Wilson, and has been three times Mayor of Darlington. The Victorian Order of Merit was conferred upon Dr. Alfred Russel Wallace, the eminent naturalist, who has this year been awarded the Darwin medal by the Royal Society.

Stamping Out "Black Scab" of Potatoes.—Writing with reference to "black scab" in Ireland, Mr. Salmon, of Wye College, urges the Government to take drastic measures for the purpose of stamping out this enemy of the potato crop. He says: "In England and Scotland the Board of Agriculture should now be engaged in the pressing work of destroying the pest. The Board have procrastinated for seven years; any further delay is most dangerous, if not actually fatal. In infectious plant diseases such as the present half-measures are of no use. To save the potato crop in Great Britain from being gradually infected by this new and highly-destructive pest, the destruction of all diseased tubers is absolutely necessary. As a matter of equity this destruction could not be insisted upon without the giving of some compensation. This principle was, as a matter of fact, admitted in respect of the same crop in 'The Destructive Insects Act, 1877,' (now revoked). Under this Act the Colorado potato beetle was stamped out by the destruction of all diseased plants, compensation being actually paid by the Treasury. The Board have just announced that 244 outbreaks of 'black scab' have now occurred. In 1901 when the Board were first informed of the disease only a few cases were known; it was neglect of duty on the Board's part not to have dealt with the matter then. As a matter of fact those cases were not even investigated. But although now some thousands of pounds would be required for compensation, it would be for the protection of a crop worth several millions of pounds annually."

New Open Space at Birkenhead.—An additional area of twenty acres of land at Bidston Hill, Birkenhead, has been purchased and conveyed to the Birkenhead Corporation. The cost of the land was £10,500, of which £6,125 was provided by the Corporation. This addition increases the area of the public land on Bidston Hill and Thermopylæ to about ninety acres, and places the Corporation in possession of one of the most beautiful open spaces in the country.

Foliage of Violas.—Healthy leafage contributes so liberally to the charm and usefulness of flowering plants used in garden decoration that we are greatly interested in the specimens which Mr. William Cuthbertson has sent illustrative of the growth of certain of the violas, with notes on the finer varieties. It will be remembered that during the current year Mr. Cuthbertson has conducted a trial of violas on Messrs. Dobbie and Co.'s seed farms at Marks Tey, and that in the course of the summer we published a report of the trial. The trial was carried out with a view to determine the relative merits of the large number of varieties in cultivation for the production of colour effects in the flower garden. Special attention was throughout paid to freedom and continuity of flowering, and to the habit of growth. Freedom of flowering is an important point, but it is not less essential there should be a continuous display of bloom, and this can only be obtained when the varieties have a good constitution and the power of producing a succession of new growths from the base. This trial has brought into prominence the diversity in the habit of the varieties, and consequently in their value in the garden, and thereby rendered valuable service to the general body of cultivators. The specimens Mr. Cuthbertson has sent us show that a very considerable number of varieties have so good a constitution as to produce an abundance of new growths throughout the season, and to be as leafy in the late autumn as is usually the case during the summer.

A Conference of Fruit-Growers will be held at the South-Eastern Agricultural College, Wye, on Friday, November 27. Chairman, C. W. Radcliffe Cooke, Esq. (president English Cider Manufacturers' Association). The conference will commence at eleven a.m., there will be lunch at one o'clock, and the conference will be resumed at two o'clock. The subjects to be dealt with are "Insecticides," by S. Pickering, Esq., F.R.S.; "Spraying and Spraying Machinery," by E. S. Salmon, Esq.; "Grading and Packing Methods in British Columbia"; "The State and the Fruit Grower," by G. L. Courthope, Esq., M.P.

Sir Daniel Morris, K.C.M.G., V.M.H., etc.—The President and Council of the Royal Horticultural Society have unanimously appointed Sir Daniel Morris to be an Honorary Life Fellow of the Society in recognition of his valuable services to horticulture in various parts of the empire.

The Imports of Flowers for October were valued at £4,504, as against £3,180 in October, 1907, and £4,481 in October, 1906. The total value of the fresh flowers imported during the ten months now ended, is £187,625, or £421 more than the total for the corresponding period of 1907, and £10,124 less than the value for a similar period in 1906.

Fruit Imports During October.—The total value of fresh fruits, including nuts, imported into this country in October, was £1,222,320, or £73,083 more than in October, 1907, and £10,945 less than in the corresponding month of 1906. Apples formed the chief item, but quantity and value were alike lower than in October, 1907, and were respectively 582,863 bushels and £317,223. Bananas show an increase of 59,802 bunches for the month, and an advance of £12,441 on the total of £141,451 of the previous year. Grapes have been imported more freely than in 1906 or 1907, and the amount and value for the month were 340,916cwts., and £357,555, as against 288,306cwt. and £278,816 in October, 1907. Plums show a remarkable decrease in quantity and value; in October, 1906, we paid £57,231 for 91,799cwt.; in 1907, £3,765 for 5,374cwt.; and in 1908, £1,354 for 2,203cwts. Pears cost us £72,409 for 83,000cwts., and these figures indicate a steady decrease of imports and values. No cherries, currants, gooseberries, or strawberries were imported during the month, but apricots and peaches were much more largely imported than in the two previous years, the figures being 2cwt., valued at £4, in October, 1906; 295cwt., valued at £533, in 1907, and 1,006cwt., valued at £1,724, during the month just ended. Lemons cost us £31,737 for 64,393cwt., and oranges £28,915, for 55,801cwts., the former showing a decrease and the latter a comparatively small increase. For nuts we paid £227,534 for 151,568cwts.; there appears to be a steadily increasing importation of nuts, and the total value of the imports for the ten months now ended was £910,175, as compared with £883,670 in the same period of 1907, and £795,786 in 1906. Unenumerated fruits amounted to 29,277cwts., valued at £29,972, and here the figures are lower than in the preceding two years. During the month of October we paid £97,210 for 750,702 bushels of onions, rather less than last year. Tomatoes cost us £63,501 for 75,722cwts., as against £74,078 for 67,860cwts. in October, 1907. For potatoes we paid £19,120 for 117,333cwts., and these figures show a tremendous fall from those of £113,882 paid for 615,776cwts. in October, 1907. During the ten months ending with October we have imported £1,939,797 worth of potatoes, as compared with the £2,028,721 paid in a similar period of 1907.

Encyclopædia of Gardening.—A new edition of the "Encyclopædia of Gardening," by Mr. T. W. Sanders, is announced for publication on Monday next by Messrs. W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London. Useful as former editions of this popular work were, the present one will be found still more so, since, in addition to bringing the main cultural details up-to-date, adding new genera and supplementary facts, the names of species are now supplied with their times of flowering, colours of their flowers, heights and native countries. The facts are also presented in a more attractive way than in former editions, so that the reader can see at a glance the details he requires. Although the amount of information has been materially increased there will be no advance in price, which remains at 3s. 6d. net, from booksellers, or by post from the publishers 3s. 10d.

Presentation to Mr. J. Andrews.—An interesting little function occurred recently in connection with the Southend Chrysanthemum Show. For several years Mr. J. Andrews (well-known as hon. secretary, and now show superintendent to the Woodbridge Horticultural Society), has acted as judge in a honorary capacity at the Southend Chrysanthemum Show, and the committee took advantage of his presence on November 3 to present him with a beautifully engraved silver cigar case, and silver match box, as an expression of their appreciation of the services he had rendered. Mr. Andrews was completely taken by surprise when Dr. Jones, on behalf of the committee, made the presentation at the luncheon table.

Sprouting Seed Potatoes.—The practice has considerably increased in Ireland within the past few years of sprouting seed potatoes previous to planting. The results have proved satisfactory, and the Irish Department of Agriculture is endeavouring to induce growers generally to adopt it. A summary of the results obtained from carefully conducted experiments is given in the Department's monthly journal, and these fully support the views of those who regard sprouting as an essential part of potato culture. During the five years 1903-7 two hundred and seventy-one tests were made, and the average gain in yield due to sprouting was two tons three hundredweights per acre.

Fruits and Vegetables from the Canaries.—The returns relating to the exports of fruits and vegetables from the Canary Islands to this country are of much interest as evidence of the large supplies of these products we receive from these favoured isles. Eight years ago the exports of potatoes from Las Palmas to London were 34,039 cases, each case containing from 70lb. to 75lb. In 1905 the exports had increased to 173,108 cases, in 1906 they were 175,192 cases, and last year they were 244,931 cases. The shipments from Teneriffe have increased from 76,023 cases in 1900 to 212,742 cases last year, the most rapid increase during this period being within the past two years. The shipments of tomatoes from Las Palmas to this country increased from 138,309 bundles of 60lb. in 1906 to 409,467 bundles last year. Within this period there were considerable fluctuations in the supplies, there being, for instance, a drop of upwards of 50,000 bundles in the exports of 1906, as compared with the year previous. Bananas are grown in such enormous quantities that it is not surprising to learn from the returns that last year the shipments from Las Palmas to this country amounted to 1,271,459 crates, and from Teneriffe to [illegible]. In 1900 the shipments were [illegible] crates and 257,701 crates respectively. The shipments from Las Palmas reached the total of 1,814,123 crates, but in the next two years there was a material decrease, while from Teneriffe there has been a continuous increase in the shipments from 1900.

British Gardeners' Association at Haslemere.—On Saturday, November 14, a public meeting of professional gardeners will be held at the new hall of the Co-operative Society, Clay Hill, Haslemere, Surrey, when an address on "The Aims and Objects of the British Gardeners' Association" will be given by Mr. J. Weathers, the secretary of the association, who will be supported by Mr. E. F. Hawes, chairman of the association, and others. The meeting will commence at 7.30 p.m., and all professional gardeners in the district are invited to attend.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 10.

The hall on this occasion was not so well filled as usual, though the groups of ferns, chrysanthemums, begonias, and carnations, with other subjects, made up a good show. The effect of the severe frost during the night was all too apparent on many of the tender plants, and no doubt kept several exhibitors away.

Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton, occupied the entire end of the hall with a collection of specimen ferns, which contained one hundred and fifty species and varieties. Some of the specimens were huge, and, needless to add, all were beautifully grown. A few of the most prominent were Angiopteris evecta, Polypodium giganteum, Alsophila Moorei, Polypodium quercitolium, Platycerium Hilli, Nephrolepis Amerpohli, Davallia polyantha, Nephrolepis exaltata superba, and Davallia fijiensis robusta. The whole exhibit reminded one of the July displays rather than the month of November. The same firm also staged a fine plant of Nephrolepis amabilis, figured in this issue, which was awarded a First Class Certificate.

NEPHROLEPIS AMABILIS.
F.C.C., R.H.S., November 10, Messrs. J. Hill and Son, Barrowfield Nurseries, Edmonton.

From Messrs. James Veitch and Sons, Ltd., Chelsea, came an exceedingly bright exhibit of begonias, which occupied an entire table. The plants were blocked in separate colours. The varieties were Julius, Ensign, Mrs. Heal, a bright rosy red, and Agatha. The whole were in fine condition, and well displayed with palms and ferns.

Mr. W. H. Page, Tangley Nurseries, Hampton, sent a small exhibit of winter-flowering carnations, which were chiefly new varieties, the best being Sarah Hill, a very promising white form; also well-developed plants of Spiræas Queen Alexandra and Peach Blossom.

Messrs. H. B. May and Sons, Upper Edmonton, presented a fine display of nephrolepis in large variety, which were effectively arranged on a large space. The most striking forms were N. exaltata superba, N. todeaoides, N. rufescens Mayi, a superb plant; N. Whitmani, N. exaltata Scotti, N. superbissima, and N. Amerpohli. The same firm also sent carnations in pots, a nice collection of veronicas, and some well-grown plants of winter-flowering begonias, with a few well-berried solanums.

A large exhibit of single-flowered chrysanthemums came from Mr. C. J. Simpson, St. John's Nursery, Chelmsford. The flowers were arranged in large vases without any greenery. A few of the best were Edith D. Harling, Miss Jacky Bird, Exquisite, Elsie Neville, Annie Farrant, Mr. W. Jordan, and Mr. J. Carlisle, with several of the well-known forms. A few suitable decorative plants would have greatly enhanced the value of the exhibit.

A fine exhibit of cyclamens came from Mr. A. Shambrook, gardener to the Rev. H. Buckston, Sutton Hall, Elwall, Derby. The plants were in six-inch pots, and were undoubtedly well grown, the white, salmon, and red varieties being especially well done, while the development of the whole exhibited great cultural skill and care. The Misses Hopkins, Mere Gardens, Shepperton-on-Thames, displayed a collection of rock and alpine plants arranged naturally.

A fine exhibit of carnations came from Messrs. W. Cutbush and Son, Highgate. The flowers were particularly bright for the season. The arrangement consisted of tall vases and baskets, with a display of smaller vases as a groundwork. The most prominent were Britannia, Mrs. Burnett, Crimson Glow, Victory, The President, Winona, and Robert Craig. The same firm also arranged a display of retarded flowering plants, which included Lilium longiflorum, L. auratum, L. lancifolium, and L. rubrum, spiræas, Azalea mollis, and lily of the valley, surrounded with groups of well-berried pernettyas, Ardisia crenulata, and oranges.

From Messrs. H. Cannell and Sons, Swanley, came a gorgeous exhibit of zonal pelargoniums. The trusses were large throughout, while the individual pips were very fine, and some were truly wonderful. A few of the most notable were Cymric, Campania, Bombay, New York, and Paris; there were others equally beautiful, with clear bright colours.

Messrs. W. Wells and Co., Ltd., Merstham, staged a large display of chrysanthemums, which embraced specimen Japanese blooms on boards, singles, and decorative varieties. The large specimen blooms included W. Howe, Pockett's Crimson, Mary Donnellan, C. H. Totty, Leslie Morrison, and

Mr. W. Wells. The best decorative varieties were Foxhunter, Clara Vernum, and Freda Bedford. The singles comprised a good and varied collection; evidently this section is becoming very popular.

Mr. W. P. Horton, Cravenhurst, Seaford, Sussex, sent a group of chrysanthemums, with foliage plants in front, also a display of rock and alpine plants. A fine group of berried shrubs came from Mr. L. R. Russell, Richmond.

Messrs. J. Peed and Son, West Norwood, arranged a large display of chrysanthemums on the floor of the hall. The background was composed of tall kentias, while Japanese and single varieties were grouped in mounds and single vases, the whole being displayed with ferns and grasses. The single forms arrested attention at once, the most prominent being William Guix, Roupell Beauty, Felicity, Mrs. W. Buckingham, Crown Jewel, and Elsie Matthews.

A beautifully light group of plants came from Mr. P. Purnell, Woodlands, Streatham Hill. The chief features were well-flowered plants of Begonias Mrs. L. Rothschild and Turnford Hall, while primulas of the obconica type were good. Palms, dracænas, and other foliage plants were used to good effect. Mr. Smith, gardener to Mr. G. Fergusson, The Hollies, Weybridge, staged an interesting exhibit of single chrysanthemums with a central group of Japanese varieties; a setting of autumnal foliage and smilax was also used. The specimen blooms were large, fresh, and bright.

Mr. R. Bedford, gardener to Mr. E. H. Brown, Highwood, Roehampton, had a fine table of begonias and foliage plants. The former were well developed examples of the Gloire de Lorraine type, interspersed with decorative palms, ferns, crotons, and aralias, the whole being lightly displayed. Messrs. H. Low and Co., Bush Hall Park, arranged an exhibit of winter-flowering carnations in pots and vases. The colours were very bright for the season. Britannia, Fair Maid, Rose Pink Enchantress, and Victory were especially good.

A large number of floral studies came from Miss Grace Layton, Pirbright, Bournemouth. These were all of wild flowers executed in a natural way. Mr. E. Potten, Camden Nurseries, Cranbrook, Kent, exhibited a double form of the well-known bedding zonal pelargonium Paul Crampel, which did not appear so bright in colour as the single form. Mr. F. Lilley, St. Peter's, Guernsey, sent nine seedling single chrysanthemums in pots; the varieties Exclusive and Cinnamon appeared the most promising in the exhibit.

FRUIT AND VEGETABLE COMMITTEE.

A fine collection of fruit came from the Duke of Rutland, gardener, Mr. W. H. Divers, Belvoir Castle, Grantham. The chief portion was composed of dishes of apples and pears, but good examples of Black Alicante, Muscat of Alexandria, and Gros Colmar grapes were effectively staged in the background, while well-coloured crabs, with ampelopsis foliage and smilax formed the decorative features. The apples included well-coloured dishes of Bramley's Seedling, Peasgood's Nonsuch, Warner's King, Bismarck, and The Queen. The best dishes of pears were Glou Morceau, Beurre Rance, Beurre Diel, Pitmaston Duchess, and well-coloured Beurre Clairgeau. Messrs. H. Low and Co., Bush Hill Park, exhibited a collection of apples in baskets and dishes, with a few well-fruited plants of decorative oranges. The fruits were large and well-coloured, especially Cellini, Tyler's Kernel, King of Tomkins County, Charles Ross, and Cox's Orange Pippin.

ORCHID COMMITTEE.

Mr. H. A. Tracy, Twickenham, presented a small group of orchids, in which the cypripediums were prominent; odontoglossums were also numerous, but as they were not labelled it was out of the question to name them. A capital display came from Messrs. James Cypher and Son, Cheltenham, who had a nice group of cypripediums, and an attractive display of Dendrobium phalænopsis Schrœderiana, which were very varied in colouring. The cypripediums included fine examples of C. insigne Harefield Hall var., C. Fairieanum, C. Mons. de Curt, C. Niobe superbum, C. i. Sanderæ, and C. Leeanum giganteum.

A smaller group came from Messrs. H. Low and Co., Bush Hill Park, N, which included a fine plant of Cycnoches chlorochilum carrying three fully developed flowers; two fine examples of Dendrobium formosum giganteum, carrying plenty of blooms; Cattleya labiata Queen Maud, a beautiful pale form, white with a slight tinge of heliotrope in the lip; C. l. var Reedleyensis, whiter in the petals and sepals, but with similar colouring in the lip; also a few choice cypripediums. Mr. W. P. Horton, Cravenhurst, Seaford, staged a few cypripediums and oncidiums.

Messrs. Charlesworth and Co., Haywards Heath, sent a table of choice varieties, in which were noted Lælio-cattleya Cappei, Cattleya Vulcan marginata, a beautiful deep form; Brasso-lælia Iona Digbyana, a variety with a deep purple fringe to the lip. Oncidium prætextum was splendidly flowered, while a few choice odontoglossums were displayed.

Lieut.-Col. Holford sent a few choice specimens, notably Brasso-cattleya Mrs. J. Leeman Westonbirt var., a pale yellow form with a tinge of rose in the lip; L.-c. Golden Beauty, a deep orange variety, with a distinct purple blotch on the lip; also Lælio-cattleya Clive, var. Keswick. Sir Trevor Lawrence also sent a few interesting specimens, chiefly of a botanical character.

CERTIFICATES AND AWARDS.

First Class Certificate.—To Nephrolepis amabilis, from Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton; Sophrocattleya Doris, from Mr. J. Gurney Fowler, South Woodford.

Award of Merit.—To Cypripedium magnificum, Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester; Cattleya Clarkia intensa, from Mr. Leopold de Rothschild, Gunnersbury, Acton; Cattleya Cooksonæ, from Mr. N. C. Cookson, Wylam-on-Tyne; Nephrolepis rufescens Mayi, variety ornata, from Messrs. H. B. May and Sons, Upper Edmonton.

MEDALS.

Gold.—Messrs. J. Hill and Son, Lower Edmonton.

Silver-gilt Flora.—Messrs. H. B. May and Sons, Upper Edmonton.

Silver-gilt Banksian.—Mr. E. Brown, Highwood, Roehampton; the Rev. H. Buckston, Sutton Hall, Elwall, Derby.

Silver-gilt Knightian.—The Duke of Rutland.

Silver Flora.—Messrs. Charlesworth and Co., Haywards Heath; Messrs. J. Cypher and Sons, Cheltenham; Mr. H. A. Tracy, Twickenham; Miss Grace Layton, Bournemouth; Messrs. W. Wells and Co., Merstham.

Silver Banksian.—Messrs. H. Cannell and Sons, Swanley; Messrs. W. Cutbush and Son, Highgate; Messrs. J. Peed and Son, West Norwood; Messrs. James Veitch and Sons, Chelsea; Messrs. H. Low and Co., Bush Hill Park.

Bronze Banksian.—Mr. P. Purnell, Streatham Hill; Mr. C. J. Simpson, Chelmsford.

Grape, Prince of Wales.—This new grape is well figured on p. 816, and, what surprises me most, is the long time it has taken to become at all popular. I first saw it well shown in the Drill Hall, Westminster, by Messrs. J. Veitch and Sons, and at that time was much impressed with its many points of excellence. Since then the best examples I have seen were growing in the gardens at Stanmore, when Mr. J. Ellis was gardener there. The advantages it possesses over Mrs. Pince include size of bunch and berry, and, what is the most important of all, it is so easy to colour as compared with its parent. In the near future we shall no doubt see many good examples, especially after those so well shown from Wisley and Marden Park.—E. M.

THE YELLOW MUSK HYACINTH.

There are many who take pleasure in the muscaris or grape hyacinths, who would like to have some variety in the colour of the flowers in their gardens. To some of these the idea of a yellow grape hyacinth (Muscari moschatum var. flavum) appeals with some degree of force, and I know a few who have been induced by this desire to purchase bulbs of the pleasing variety of the musk hyacinth called flavum, but often known as Muscari macrocarpum. One cannot, however, call it a good yellow, and the most which can be said of it in this respect is that it is "yellowish," the colour definition given by good judges in the question of the hues of flowers. The teeth of the flowers are of a purple tint.

The blooms are in a rather loose raceme, about an inch and a-half in length, varying according to the strength of the plant. As a garden flower it cannot be said to compare favourably with the beautiful Muscari botryoides, and still less with the fine grape hyacinth known as "Heavenly Blue."

But the demerits of the yellow musk hyacinth do not lie in its colour weakness alone, but also in the fact that it is difficult in most gardens to persuade it to flower frequently, and in some places it does not stand severe winters. Imported bulbs usually flower the first year after their importation, but they generally do little good afterwards, so that this musk hyacinth cannot be recommended as a satisfactory plant.

One does not like to speak depreciatingly of any distinct flower, but all the same, it is well that readers should have the defects of plants which are offered for sale brought before their notice. S. Arnott.

A NOTEWORTHY MONTBRETIA.

Among the wealth of newer montbretias I have specially noted an exceptionally finely coloured variety in the Continental Maison Doré. A trial patch of this variety has given good results, and the general summary of its qualities goes far toward assuring a good future for it. One meets so many "novelties," which are little, if any, advance upon forms in general cultivation, that one must see such "novelties" in growth and blossom in order to pass an unbiassed opinion upon them. With reference to the variety under notice, I am justified in recommending it to the reader's notice as a sterling plant for garden adornment.

It is a notable, telling variety, with good stout stems of average height. The blossoms, which are freely produced, are well formed, and expand well, showing the colouring to advantage. They range about two and a-half inches in diameter, and the effect, at a distance, is of a warm touch of golden orange colouring. The buds and the reverse of the open petals present a glowing orange hue, while in the open flower there is a crimson eye relieved by a clear yellow centre. The larger portion of each petal is coloured orange, which deepens to a crimson shade at its conjunction with the clear yellow centre, and, taken altogether, one can only describe it as a most pleasing blend of colouring. Maison Doré should certainly receive attention, especially for grouping in the herbaceous border, for, though it may be eclipsed by larger varieties, yet its glow of colour and open, well-proportioned blossoms will contribute a pleasing addition to the garden beautiful.

P. S. Hayward.

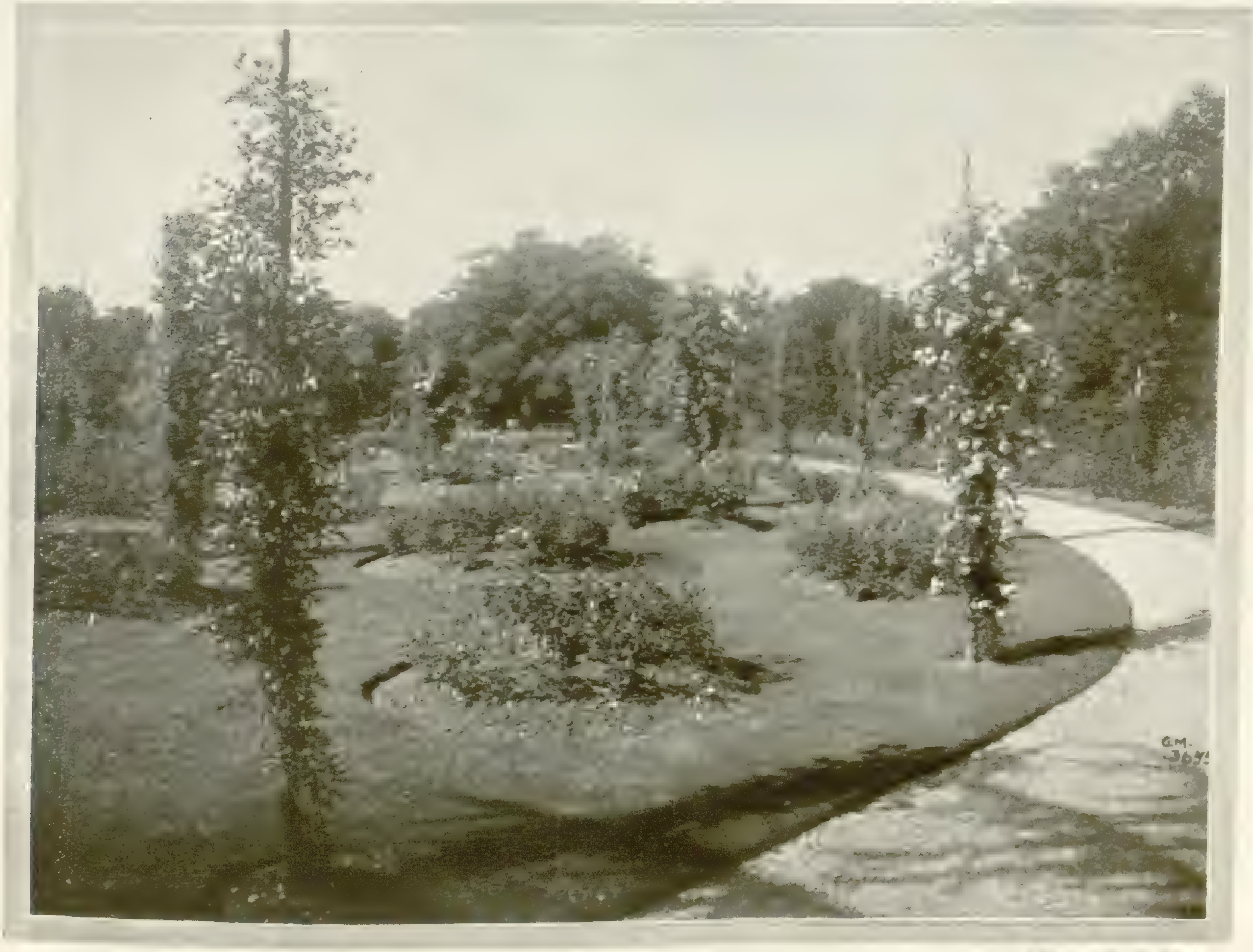
ROSE GARDEN AT EASTON LODGE.

The enjoyment of the rose garden does not depend so much upon its design, provided it is in accordance with the canons of good taste, as it does upon the selection of varieties in which are combined freedom and continuity of flowering with high quality and attractive colouring, and good cultivation. The design may be more or less ornate, and include provisions for the display of the distinctive charms of all the sections, or it may be of the simplest description. Pleasure and interest may be derived from both ornate and simple rose gardens, but from what one sees in visiting gardens devoted to roses, it would appear that it is possible to derive the largest measure of satisfaction from those of which the design possesses breadth and simplicity. Why this should be so is not difficult of explanation.

The full enjoyment of roses depends upon a relatively vigorous development of branch and leaf, and a profusion of flowers, and harmonious contrast of colour, and nowhere is it possible to maintain roses in a robust state of health or to produce such charming contrasts of colour as where the design is free from an excess of detail. If we turn to the illustration given herewith of the admirably planned rose garden at Easton Lodge, the Essex seat of the Earl and Countess of Warwick, we shall at once see the importance of breadth, both as regards the health of the occupants and the colour effects. A few broad arches spanning the walk, and an intersecting pergola would probably have helped to make, photographically, a prettier picture, but they would not have done anything to enhance the great beauty of the scene during the season of roses, which, it may be added, is a long one. This garden is enclosed by a belt of shrubs, which serve the purpose of separating it from the other part of the grounds, and of sheltering the tender growth from the easterly winds that hereabouts sweep across the country with considerable force during the spring months. Beyond these belts there is nothing to interfere with the free circulation of air among the roses, and nothing to deprive them of a ray of light, and we need hardly say that air and sunshine are essential to the health of roses.

In a garden arranged on the lines of that at Easton Lodge each bed can be devoted to one variety, or be filled with a small selection of varieties that differ but little in habit, and produce flowers that harmonise in colour. Another point of importance is the facility with which the beds can be remade and replanted when a change of soil or varieties becomes necessary. The charms of the rambling and other climbing roses are not overlooked, numerous pillars are, as will be seen, provided for their support in the rose garden, and in another part of the grounds not far distant therefrom there is one of the finest rose pergolas in the United Kingdom. Roses are prominent in other parts of the garden, and the collection, which comprises over 7,000 plants, is managed with consummate skill by Mr. Lister, the head gardener, and forms one of the most attractive of the many fine features of the Easton Lodge gardens.

G.



[Photo: H. N. King.

ROSE GARDEN AT EASTON LODGE.
The Essex Seat of the Earl and Countess of Warwick.

AUTUMN ROSES.

Formerly we had few late-flowering roses with the exception of Souv. de la Malmaison, Gloire de Dijon, Homer, and a small number of teas and noisettes. Now the names of such as are deserving to be called autumnal roses are legion. As a matter of fact, almost all the varieties of the great classes of teas and noisettes and hybrid teas afford us as good a display in the autumn as during the early summer months. If anything, more so. As a rule, too, we obtain a larger number of blooms upon the same plant. There is more growth to produce them, for almost every new shoot carries flowers. True, we lose greatly among the extra strong growers, and seldom obtain more than an occasional late flower from those upon walls, arches, or pergolas. The favourite Crimson Rambler, Dorothy Perkins, and others of like characteristics, throw their entire strength into one display, and that of gorgeous beauty.

Some few of these extra strong growers, notably Ards Rover, Aimée Vibert scandens, Mme. Alfred Carrière, Mme. Jules Gravereaux, William Allen Richardson, Wichuraiana Type (white), Gruss an Teplitz, and, of course, Gloire de Dijon, do not fail us from first to last; but we find the greater proportion of our autumn roses among the medium or free-growing varieties. The following have struck me as particularly good now, and are likely to keep so up to mid-October in ordinary seasons.

Mme. Abel Chatenay, with its deep salmon and carmine, always in good form, whether in bud or fully expanded, flowers upon every side growth, is one of the sweetest-scented roses grown, and has not a bad fault. I would say more in favour of this grand rose if I could think of it. It is par excellence one of the very best, and many so-called improvements have not ousted it yet.

Lady Battersea is always good late in the season. It is also one of the first to open. A very long and pointed bud, carried nice and stiff, flowering from every growth, good foliage, and, like Mme. A. Chatenay, a grand decorative rose when expanded. This is another very fragrant rose, and supplies one of the best deep cherry-crimson coat flowers for autumn.

Mme. Antoine Mari flowers till after the first frost. Very pretty in foliage, almost proof against mildew—one of our worst diseases in the autumn—and giving an enormous number of buds that are fit for any vase or coat. Flesh-white, with a distinct tinge of carmine on the edges, almost amounting to crimson during a late sunny autumn.

Etoile de France is usually better late than early, and this year is no exception. It is about our best dark hybrid tea for late blooms, and livens up a bed or bunch very much.

Fisher Holmes and Victor Hugo are still our best darks in the hybrid perpetual section, and two of the most reliable for autumn. These two are exceptionally free from red rust, a pest that affects their class very much at this season.

Frau Karl Druschki is unsurpassable in the autumn. It matters not what the weather may be, this grand and purest white rose we have remains unaffected. Last year, and the season previously, I cut really good blossoms after ice had formed in the petals, and for long after we were experiencing frosts. Hard buds that looked of no service whatever would expand into quite respectable flowers if cut and placed in the greenhouse for a time. It glories in a steady rain, and puts up with a storm better than any other rose I know. I wish we could get the same characteristics in some of the darks and pinks. Its foliage is invariably good, flowers are in large trusses, and carried as if they knew they deserved attention.

Conrad Ferdinand Meyer gives its heaviest crop early in the summer, but we also have a quite nice number of flowers now and later. This is a grand foliaged rose, especially sweet-scented, large and of good form; a silvery-pink, much deeper towards the centre. There is a so-called white sport of this named Nova Zembla. It is very good, but not to be compared to Frau Karl Druschki. It is no whiter than Margaret Dickson, but it possesses the sweetness of Conrad F. Meyer. This rose is free from mildew and red rust.

Lady Roberts is another that produces good late flowers, especially useful in the bud stage; and I fancy we obtain a greater proportion of the deep apricot and rosy-salmon flowers late than early. It is a very variable rose; good in whatever shade from yellow to copper, and lasts well.

Perle von Godesberg is a slight improvement upon Kaiserin Augusta Victoria, and a good one where lemon and creamy-white is wanted. I have seen some really good flowers lately, and think it more dependable than Duchess of Portland. It grows a little the better with us also.

Corallina is one mass of colour again, and will probably produce another good display after this; at all events, it is certain to give many blooms of its deep rosy-crimson buds. A very free-growing rose this, and if Warrior is much deeper in colour, longer in the bud, and a trifle the larger flower, it is not so free here as Corallina, and has more of Papa Gontier growth.

Mrs. B. R. Cant is one of my chief favourites for late displays. Handsome foliage and plenty of it; flowers upon almost every lateral, only stopped by decided frost, and as nearly evergreen as any rose we have. The colour is deep rose, inner petals a little lighter, and a touch of buff at the base.

Gustave Regis is one of the most reliable nankeen yellows. The buds are long and pointed, get lighter as they open, and are very effective for the coat.

Rhea Reid is a new rose, and most promising. Already it is really good in the open, although the plants were only brought over from America last April, and were lifted from the open ground then. It is a good red, much after the style of Richmond, very sweet-scented, and is undoubtedly a good grower and perpetual. It is claimed to be a better forcer than Richmond or Liberty, but it is too early to decide yet. At present I like it immensely.

Peace, a sport from G. Nabonnand, improves towards the autumn. The flowers last longer, and come fuller, probably because of more time to develop, as, like G. Nabonnand and some other comparatively few-petaled roses, a hot sun causes it to fly open before it is ready. The foliage of this is a deep bronze, the shoots upright, and the blooms carried in large spreading trusses, each flower having sufficient length of stalk to make it serviceable, independent of the whole truss. It is a lemon or primrose yellow, and fragrant.

G. Nabonnand is its counterpart in all but colour, which is a salmon-rose, shaded yellow. This variety does not carry quite such spreading trusses as Peace.

Grand Duc A. de Luxembourg is very showy in a large bed to itself. Rosy red, with the reverse of the petals bright lake. A very distinct rose this, and sweet.

Augustine Guinoisseau, of La France habit, but not quite so large a flower, is a good creamy flesh and white, while, of course,

La France is always good.

Mrs. Theodore Roosevelt is another flesh-white of great excellence. A beautiful rose this; bold in habit and size of bloom. Some really grand blooms have been out this week.

Betty is rather new, but has proved itself good both last year and this. The petals are large and of good substance, making up a grand flower, never better than when cooler weather allows the inner petals time to develop before those on the outside have faded. Clear bronzy-salmon.

Caroline Testout will not be denied, let the weather or time of season be ever so trying. Some of our plants have produced three distinct crops of bloom, and promise more yet. In colour it resembles a very deep La France, with globular instead of slightly reflexed petals.

Killarney, growing by its side, is also very pretty still. This rose stands the weather well, and, not being very double, opens better in the autumn than many. Flesh-white, suffused with pale pink, very large petals, making a good decorative display as they open.

Le Progrès also does well late, and produces a great number of flowers. A large flower, deep golden yellow, quite distinct, and, like the next one on my list, is exceptionally fragrant.

Madame Ravary flowers as freely as the last-named, has handsome bronzy foliage when young, and is a much freer grower, of a deep orange-yellow colour.

Mrs. R. G. Sharman-Crawford is one of our best late hybrid perpetuals, and equal to Mrs. John Laing in its colour. Both of these are conspicuous now, stand well against weather, and are good all the season.

Viscountess Folkestone must not be omitted, for it is one of the sweetest perfumed of all. A good grower, and a mass of creamy-white, shaded with salmon-pink.

Tom Wood is one of our earliest and also one of the latest in the hybrid perpetual class. A very strong and hardy rose, coming much brighter in the autumn, in which respect it resembles Ulrich Brunner. Both have foliage that is seldom affected with mildew.

There are very many more good roses in bloom besides the few I have named. Indeed, I seem to have merely touched the fringe of them, but those named can be depended on, and have, with the exception of the two new varieties, proved themselves so for several years.

We must not omit the dwarf polyantha or fairy roses, which are always good. At present there are White Pet, Gloire des Polyanthas, Leonie and Eugenie Lamesch, Mme. E. A. Nolte, and Georges Pernet, very showy. Mme. Norbert Levavasseur, Baby Dorothy, and Mrs. W. Cutbush are a mass of flower, almost as full as begonias and zonal pelargoniums. A. Piper.

RETARDING AND FORCING VEGETABLES.

By the middle of the month of November most of the tender vegetable crops will have been cut off by frost, or will have been used by the cook. From now the outside climatic conditions will not be suitable for their production. Consequently, for their further supply artificial means will have to be resorted to in forcing or retarding them out of their natural season. This part of the gardener's duty appears to be more exacting each year, as so much more is looked for in these days of luxury, and the season in which a crop can be naturally produced is not taken into consideration. Probably what has brought this about is the rapidity and ease with which produce of this kind can be brought into this country from abroad in a good condition. The better facilities of to-day, with lighter and more effectively heated glass structures, as compared with what could be done with dismally dark, small-paned and inadequately heated houses by brick flues, have also exercised considerable influence. Even with the aid of the greatly improved appliances, the demand for out-of-season vegetables by a large household during the winter months entails considerable anxiety. The preparation has practically to go on the whole year round to ensure having the quantities at command as they are needed.

The retarding system that has been developed of late years is of great advantage in the case of those vegetables that lend themselves to this process in maintaining an unbroken supply. Seakale is specially amenable to the system of retardation. For the first batches, say, from the beginning of November to the middle of January, the most satisfactory produce is obtained from last year's crowns that were properly matured and have been retarded. If placed in the mushroom house with a temperature of 60 degrees they will start into active growth more quickly than those just matured direct from the open garden. As time goes on it is quite probable that this system will be more generally adopted with the crowns of asparagus for early forcing, and so carry a supply over a longer period than is usual at present. This vegetable is much appreciated by most people, but unfortunately the time it takes to grow crowns for forcing makes it necessarily an expensive dish.

The method of retarding old potatoes in a cool position, and removing the growth that is made until September or later, and then starting them in boxes filled with a light compost has much to recommend it. If the tubers are placed in the mushroom house, or any structure with a temperature of about 50 to 60 degrees, they will give useful dishes of new potatoes. This process cannot be recommended for commercial purposes, but to supply the table to a limited extent.

Another system, and perhaps more reliable in giving better returns, is to lift a quantity of new potatoes from the open, before their skins are firmly set, and then placing them in boxes that can be made airtight. The boxes may be covered over with soil, each box upon the other or sunk in the soil of the garden till they are required. If this is done without bruising the tubers and care taken to prevent an undue amount of wet reaching them, it is almost impossible to detect these from the forced tubers produced in pits. Whatever may be said for or against these methods of dealing with vegetables, they form a means to an end, and are helpful in producing a substitute during the dormant and scarce part of the season till the spring months arrive with more light and sun when they can be naturally produced. Moreover, it is not often that we are asked how these are obtained so long as they are at hand when required, and they are in every way satisfactory.

Earnest endeavour should be made from now in having everything in readiness, such as the storing of manure and leaves, and all repairs to the pits and frames completed, so that the work may be efficiently and expeditiously carried out when they are required for the early forcing of crops.

C. Flack.

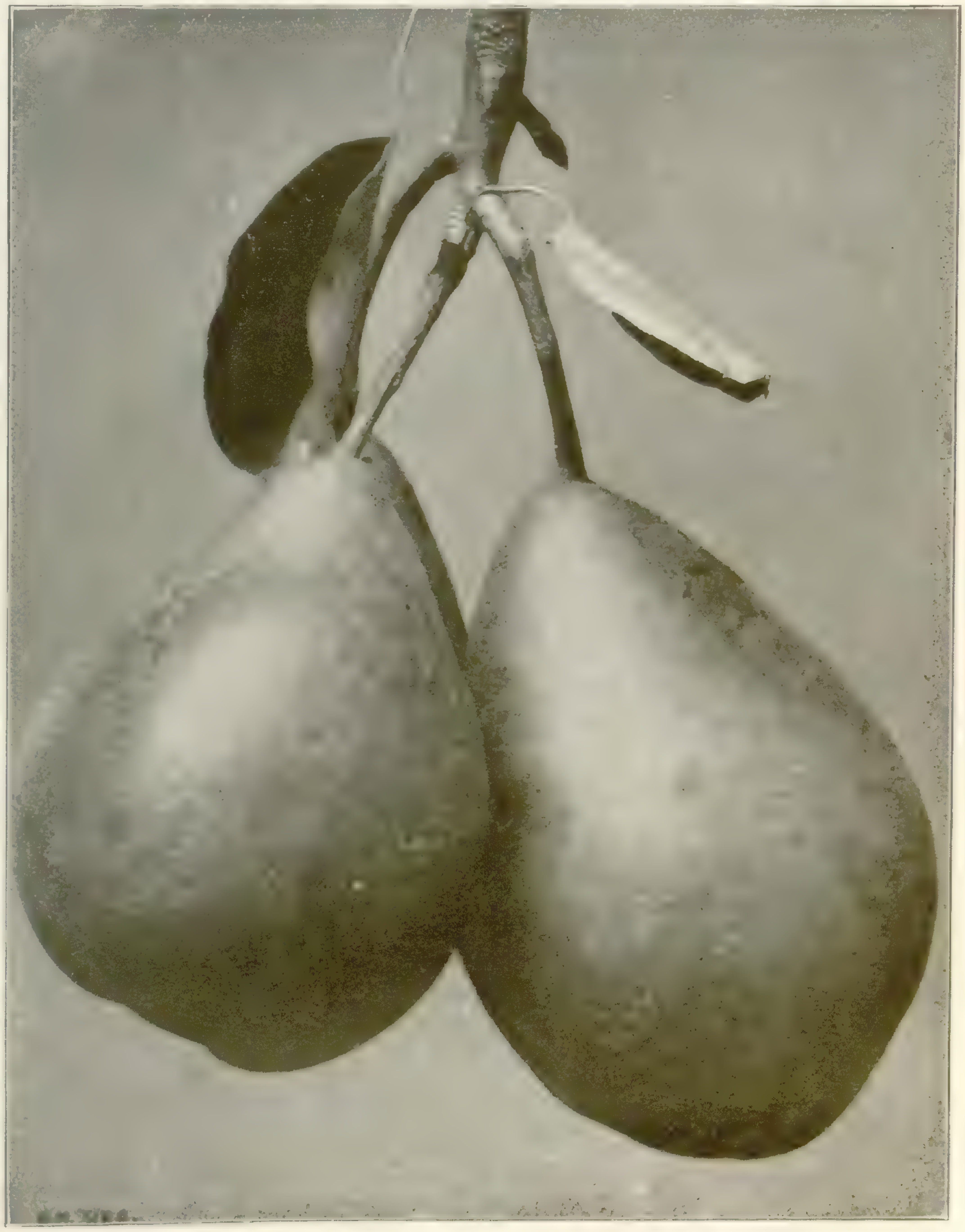
PEAR GENERAL TODLEBEN.

This useful pear, like so many others, is of Continental origin, and its title commemorates a famous soldier who was the defender of Sebastopol. Where it succeeds, and that is in most places where pears will grow at all, General Todleben is a very free-fruiting variety, and as it is of moderate growth it has much to commend it to owners of small gardens. The seed from which this pear sprung was sown in 1839, and the tree first fruited in 1855, after a lapse of sixteen years, when it was named General Todleben by Mons. Fontaine, of Gheling, in Belgium. Of pyriform shape, its thickness at the widest part often almost equalling its length, this pear usually has a stout stalk of fair length. The white flesh has a pink tinge, and is melting and juicy, sweet, and slightly scented. The skin turns yellow as the fruits ripen, but is always marked with patches of russet. In some seasons, notably in a long warm one, General Todleben is of finer flavour than in others. It is a good cordon pear for walls, and its fruits are ripe during December and January.

A Prolific Potato.—There are so many varieties of potatoes, and such very wonderful things happen with them that I am always very chary in writing on this subject. But I cannot refrain from making a note of the prolific qualities of a variety Messrs. Sutton and Sons have introduced named Superlative. Grown side by side with the well-known Satisfaction, itself an immense cropper, the yield was more than double that of the latter variety. The quality of Superlative is good and the quantity is really wonderful. I may say the seed or sets were large ones when planted.—W. M.

RAMONDIAS.

These much-admired rock plants are not grown so widely as their merits deserve, and yet they are of comparatively easy culture, given a right position. That in which they thrive the best is one on the north side of perpendicular rocks, in the fissures, and when planted in such position, where they receive scarcely any sun, they will thrive. They should be planted in a sharp, gritty mixture of peat, leaf-soil, and good maiden loam, and should be put in when rather small, as this permits them to develop at their own sweet will. The soil must be made quite firm, so that heavy rains do not wash it out, or even loosen it. In the summer, when the sun is at its greatest strength, it is well to shade ramondias a little by means of some evergreen branches stuck in at the top of the rocks.



PEAR GENERAL TODLEBEN.
A free-bearing useful mid-winter variety.

When once a stock of ramondias is established it is an easy matter to keep it going, as the plants seed very freely. The seeds should be collected from the largest and brightest flowers, and sown as soon as ripe in pans, which should be well drained and filled with a fine sandy mixture of peat and loam. Shade the pans until the little seedlings are up. A good method of shading is that of placing a thin layer of moss over the soil. The seedlings should be pricked off into other pans as soon as large enough to handle, taking care not to expose them to sunshine.

Ramondia pyrenaica produces bright purple flowers with an orange centre. R. p. alba is more rare, but is a gem, bearing pure white flowers on slender stems about five to eight inches high. R. Heldreichi has rosettes of silvery leaves with lilac flowers. R. Nataliæ, a Carpathian species, with very pretty foliage, produces large heads of bright purple flowers with orange stamens. R. Serbica has rosettes of very hairy foliage and violet flowers, but is only about four inches in height. All the ramondias require the same treatment.

Ramondias must not receive too much moisture, as an excess will cause them to decay, hence the need for planting them in a vertical position; when placing rocks or large stones in position for them, some good soil should be put down for the roots to reach through the fissures. It is quite surprising how large a plant will grow if it has plenty of soil for its roots to run in.

W. A. Cook.

Leonardslee Gardens.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe. Fifth Edition, revised to January, 1908, and including the new varieties.—Full details on timing and stopping for Northern, Southern, and Midland growers, selections of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London

NEW JAPANESE CHRYSANTHEMUMS.

Varieties of chrysanthemums, especially in the Japanese section, are so short-lived nowadays, owing to express culture, that new desirable varieties are always welcome. Indeed, it is the introduction of new varieties annually that keeps up the interest in large chrysanthemums. For the benefit of those readers of the Gardeners' Magazine who have not the opportunity of seeing the blooms at the various shows, I give a selection of those varieties that have come under my notice, and appear really good additions. In describing the colours it is at times difficult to make these correspond with the descriptions published by the vendors, as shades of colour vary under cultural differences and localities.

First on the list I place J. W. Molyneux, as it is so remarkable in colour, and quite the type in request, as we have had such a paucity of varieties of late years of this shade of colour. This variety was raised by Mr. N. Molyneux, of Rookesbury Park Gardens, and named after his elder brother, who has long been a keen amateur chrysanthemum lover. Full-sized blooms measure nine inches in diameter, and seven inches deep, fully built up in the centre, with half-inch-wide flat reflexing florets, which display the remarkable colour to the utmost. In this way it is superior to many varieties which incurve and show the under-colour, which often detracts from the full beauty of a flower. The colour is blood-red crimson, with an overlay of velvet. The habit of growth is dwarf.

The Hon. Mrs. Lopes (Silsbury) is one of the finest yellow varieties ever raised, and will eclipse the popular F. S. Vallis as it becomes better known. Full-sized blooms measure ten inches in diameter, and quite $8\frac{1}{2}$ inches deep. The reflexing florets are of medium width, gracefully twisting and curling at the points, and building up a full flower without an atom of coarseness. The colour is of that rich orange-yellow, comparable to the old Jardin des Plantes shade.

Marquis of Northampton is a sport from W. A. Etherington, and was raised at Castle Ashby by Mr. Searle, and named after his employer. It is very desirable, as its colour—buff yellow base, overlaid with bronze, is quite new among chrysanthemums. In size it is desirable, nine inches broad by seven inches deep, high in the centre, and with broad, gracefully reflexing florets.

NEW SINGLE CHRYSANTHEMUM HILDA LAWRENCE. (See New Plants).
Flowers large, colour rich rose with yellow disk.

Mrs. W. Iggulden is said to be a sport from Madame G. Rivol, but this is open to doubt, as in the new variety the florets naturally reflex, forming a full, handsome flower of a good type, while in the suggested parent there is seldom any tendency to do aught but incurve loosely. I cannot call to mind an instance of a sport having a different style of floret from its parent, when grown under similar conditions. Be this as it may, the newcomer is sure of a welcome to the rich yellow-flowered class, and it bears a worthy name

Mrs. G. F. Coster (Silsbury) grows fully nine inches in diameter, and seven inches deep. The broad, even florets reflex naturally, making a full-centred bloom. The ground colour is golden, mottled and lined with purple.

G. Mileham, 1908, is a good variety of the incurving type of Japanese, full and bold in its form. In colour it is a soft yellow.

Edith Jameson is not exactly new, but it is unique in colour, and deserves to be better known and more cultivated. The florets are long, drooping gracefully, yet not sufficient to spoil the centre of the bloom, which is fully built up. The colour varies with the bud development. At times it is pale pink, at other times it is a deep rosy-pink. In any shade it is distinct and desirable.

Mrs. D. Fairweather has broad florets, the tips of which incurve slightly, showing the golden reverse. In its surface colour it is yellow, with a rich red flush, making it quite a new type.

J. Lock has very broad, flat florets, which curl slightly at the tip. In colour it is chrome yellow, tinted at the base of the petals with chestnut.

Mrs. Arthur Lee (N. Molyneux) is a medium-sized flower, of graceful build and remarkable colour—rich crimson, with golden reverse, the latter being little displayed by the incurving tips of the petals. The florets are of medium width.

Master David (Perkins) is the nearest approach to Edwin Molyneux in colour yet raised, and therefore most desirable. It is a full-sized, well-built flower, with medium-sized florets, which reflex thoroughly, making a full-centred bloom of sterling merit.

Lady Crisp (Perkins) belongs to the yellow-flowered group. The broad florets reflex, and are slightly pointed; on the surface the yellow has a slight bronze suffusion; the reverse is paler. A desirable variety of easy production.

Master James (Perkins) is chestnut-red in colour, with a suffusion of rose on its flat, drooping florets; it is quite distinct from any other variety.

Mrs. Charles Penford is rich yellow, with long drooping florets, and full centre. It is large, and in every way worthy of attention, as its colour is always welcome, even from a decorative point of view.

Edwin Molyneux.

Swanmore Park.

Lilium auratum with Fasciated Stem.—Lilium auratum is apt to send up a fasciated stem, which, as a rule, is a great drawback to its beauty and elegance, but the subject of the enclosed photographs is about the worst offender in this way that I ever met with. It is one of several grown in pots by my cousin, Col. Hammond, near Ripon; they nearly all threw up stems more or less fasciated. There were altogether 54 flowers and buds on this particular one, and the extraordinary growth of the stem induced my wife to take two photographs of it, front and back view, so to speak.—S. G. Reid, Yalding, Kent.

Lily of the Valley.—Now is a good time to lift lily of the valley for forcing and for making new beds. If flowering crowns are wanted they must be picked out separately, and the weaker ones can then be replanted. This plant likes a light, porous soil, liberally dressed with well-decayed manure, or leaf-soil, but new or rank manure must not be used. Plant the crowns or clumps just beneath the surface. Various sites may be used to ensure a prolonged supply of blooms; put some at the front of a south wall, some in open borders or beds, and others behind a north wall, as they do equally well here in either position, and give a supply of flower for several weeks. Fortin's Giant is a very large and noble variety, well worth the extra price charged for it. Crowns for forcing can now be obtained at so reasonable a price that home cultivation for forcing purposes is not worth troubling about.—E. F. Hazelton, Knowsley Gardens.

NOTES FROM KEW.

Mussænda erythrophylla.

Most of the species of Mussænda are remarkable more for the beauty of their large, brightly-coloured floral leaves or bracts than for their flowers. One of them in particular, known as M. frondosa has been long grown in gardens; and that at the head of this note—M. erythrophylla—was distributed by the late Mr. William Bull, of Chelsea, just twenty years ago. It was described as bearing large scarlet bracts, and promised to be a good garden plant, but unfortunately it proved in this country at least to be very shy blooming, in fact, the specimen now flowering in the T range at Kew is the first that I have ever seen in bloom. It forms an upright-growing plant, furnished with oppositely arranged roundish ovate leaves, clothed, as indeed are the other parts of the plant, with a silky pubescence. The small and by no means showy blossoms are disposed in a terminal head, and surrounded by large floral bracts. These bracts are leaf-like, about four inches long, and half as much in width, while the colour is a kind of bright cinnabar-red. When distributed these bracts were described as of a dazzling scarlet colour, which can scarcely be said of the specimen in bloom at Kew, but the difference between the West Coast of Africa and England in the month of November will be quite sufficient to account for the variability in colour. This mussænda is of easy propagation and culture, but, as above stated, it does not flower freely.

Solandra grandiflora.

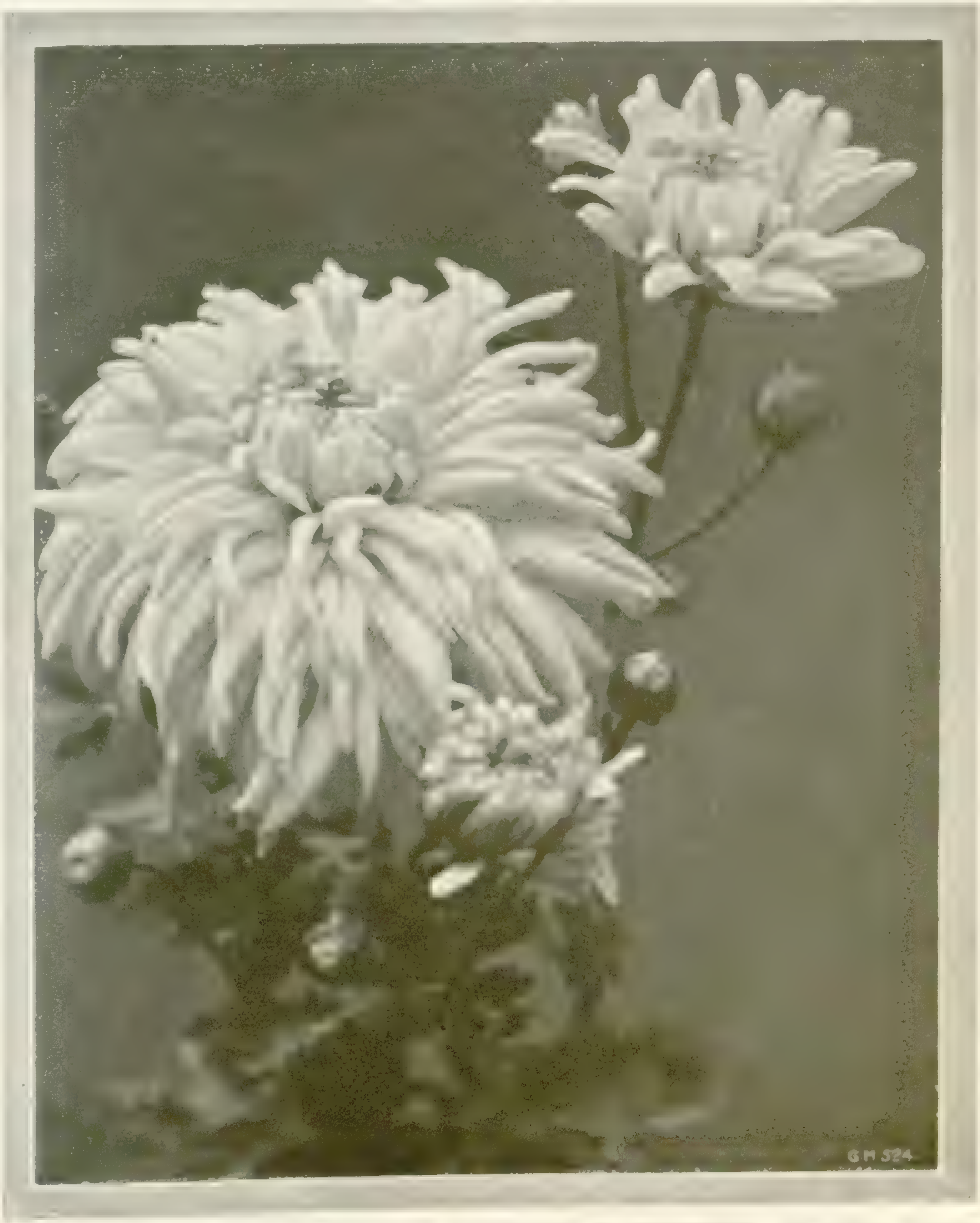
This exceedingly vigorous climbing plant is now, and has been for some time, flowering in the succulent house at Kew. It is trained to the roof, and covers a considerable space. This solandra, as suggested by its generic name, is a member of the potato family, and is therefore nearly related to the daturas, to the flowers of which those of the solandra bear a considerable resemblance. They are about nine inches long and five inches across the expanded mouth, and in colour ivory-white suffused with greenish yellow. The interior has a purplish tinge. Though, as above stated, the name of solandra suggests an affinity to the solanum, it really commemorates the name of Dr. Solander, the fellow traveller of Captain Cook and Sir Joseph Banks. In order to ensure a display of flowers the specimens need to be fully exposed to sunshine, and at the same time a dry atmosphere is essential. Root room, too, should be restricted, and it must be kept quite dry throughout the winter months. In the case of a large plant it should be spurred back when dormant in much the same way as vines are treated. A native of Jamaica, Solandra grandiflora was introduced as long ago as 1781.

Pinguicula caudata.

This showy member of the Butter Wort family has been long known as above, but at Kew it is called Pinguicula cordata. A group of flowering plants in the orchid house forms just now an exceedingly attractive feature, doubly welcome at this dull season of the year. This pinguicula forms a rosette of bright green fleshy leaves, and from its centre the flower spikes are pushed up. They are erect, and reach a height of eight or nine inches, being terminated by a single flower about a couple of inches across, and of a bright carmine rose colour. A singular fact in connection with this species is that it was given a first-class certificate by the Royal Horticultural Society in 1881 as P. Bakeriana, and a year later a similar award was bestowed upon it under the name of P. caudata. Now with the Kew name of P. cordata, one is puzzled to know which of the three names to use in referring to the plant.

Lilium sulphureum.

This charming Burmese lily shows well its value for greenhouse decoration during the autumn months, for in No. 4 it is well represented. At this season it stands almost alone except in the case of retarded bulbs, for Lilium neilgherrense, which also flowers now, though at one time readily obtainable, is very scarce. The long trumpets of L. sulphureum are in colour creamy white, with usually a ruddy tinge on the exterior, while the inside is suffused with rich yellow. This species is a native of Northern Burmah, and when first introduced, now about twenty years ago, was known as L. Wallichianum superbum. It has proved to be the most amenable to cultivation of all the beautiful lilies from that region.



NEW MARKET CHRYSANTHEMUM FELTON'S FAVOURITE. (See New Plants).
Blooms of medium size: creamy-white.

Montanoa mollissima.

Just about a year ago one species of Montanoa, viz., M. bipinnatifida was shown in good condition at a meeting of the Royal Horticultural Society. A second species—M. mollissima is now flowering freely in the greenhouse No. 4, and very pretty it is. It forms an upright, freely-branched specimen, six feet or so in height. The ovate-lanceolate leaves are rough in texture and whitish underneath. The flowers, which are freely borne, have a yellow disk, while the ray florets are white. They are a couple of inches or so in diameter. This montanoa is of easy culture, and may be given much the same treatment as chrysanthemums.

Ipomæa ternata.

This climbing species of ipomæa was first distributed under the name of I. Horsfalliæ alba, and was afterwards known as I. Thomsoniana. The name of I. Horsfalliæ alba well expresses its general appearance, for, though differing in many respects from I. Horsfalliæ, the effect is that of a white form of I. Horsfalliæ itself. It is now flowering freely in the T range.

Cytisus filipes.

This exceedingly graceful member of the Broom family is flowering freely in the Temperate House, and very pretty it is. When old it forms a rather tall specimen, from the upper portion of which the long bright green threadlike shoots hang down for a considerable distance. They are studded for the greater part of their length with small white pea-shaped blossoms, of which a succession is kept up for some time, and that, too, during the dull season. Cytisus filipes is a native of Teneriffe, and was introduced therefrom in 1838.

K.

CARE OF HOUSE PLANTS.

Of all the questions asked by the purchasing public, the one most frequently hurled at the unprotected plant seller is, says "The Weekly Florists' Review," "How often should I water this plant?" or, "How many times a day does it need water?" or, "Should I set it in a dish filled with water?"

This query is not more sensible than a question asking a doctor, "When should a person sleep?" or, "When should he eat?" If the reference in either case were to a plant that needed particular treatment or a person whose health was not up to the mark, it would be justifiable; but when it is attached to everything sold, it ceases to have any meaning.

If the purchasers used judgment in watering, they would know that practically all plants sold for indoor decoration are well established, and, if the conditions are at all favourable, they should be watered whenever they need it. This is the proper answer to give to all such queries, and whether the soil dries out once a day or once a week makes no difference if the plant is not allowed to get too dry.

The situation in which the plant is kept has the greatest influence on the moisture required. Draughty rooms, proximity to glass windows or doors, absence of light, quantity of gas burned, heat radiation from steam or other methods of heating, glazed plant-jars, and many other conditions, have much more effect on the health of the plant than the simple watering. Yet it is rare that anyone asks about any of these things, and it is only when the disgruntled customer drags the poor, suffering plant back to whence it came, or comes in to scold the plantsman for selling a palm that was "sick" when delivered, that a few of these salient points are brought out. The customer usually prefaces the remarks by saying, "I took care of the plant just the way you told me to. I watered it once a day, and it kept getting worse and worse all the time, until I have brought it back for you to see it. I guess it was sick when you sold it to me."

When the poor florist timidly inquires about the conditions in the lady's home, he always brings forth the information that the plant had been put into a fancy jardiniere, kept in a room in which gas had been burned every night, and in a dark corner or a draughty hallway, and he is really surprised that the misused specimen kept as long as it did.

The public should be made to understand, if possible, that plants are anxious to live as long as they can, and, if given just a fighting chance, will do their best to keep themselves as pretty as their surroundings. But, when the effort is too much, the plants will sadly droop their leaves, in a feeble protest against too great odds to be overcome, and, strange to relate, it is always the fault of the florist for having sold a "sick" plant.

Michaelmas Daisy Climax.—Good though the illustration is of this new aster, on p. 798, it really does not do justice to the variety. Of course, I do not expect to see its colour pourtrayed in the engraving. Looking at the picture one might easily say, "Well, what is the difference between Climax and Finchley White?" I saw this new aster growing last year at Aldenham, and again this year, and say that for decoration it is the finest variety Mr. Beckett has yet raised. In height it grows six feet, has round, bold looking leaves, quite unlike any other variety that I am acquainted with. The vigorous habit just fits it for the back of the herbaceous border or among shrubs, where, arranged next to a pure white variety, or Mrs. F. Rayner, for example, the effect it produces is quite pleasing. The blooms are fully two inches in diameter, each being well placed, showing itself fully and producing a striking effect. In colour it is soft blue, which, under artificial light, changes to a delicate pink. For cutting this variety has a great future before it, and certainly deserves the name which it bears.—E. MOLYNEUX, Swanmore Park.

RASPBERRIES.

There is no doubt that this fruit may be grown to advantage in almost any kind of soil, provided ample moisture is afforded in hot weather. Where grown largely for market the mode of cultivation differs somewhat from that adopted in private establishments, for, as a rule, no supports to the canes are given, but it should be borne in mind that the soil in gardens, as a rule, is far more fertile, therefore the canes grow much more rampant, in some places attaining a height of from seven to eight feet, and unless supports of some kind were afforded them they would be broken down in rough weather and much of the fruit spoiled.

When making new plantations select some of the strongest suckers and plant them a foot apart in the rows. If the canes are good ones they should be about four feet long and possess one or two good plump growths at their base. Such canes, when planted, should be cut back to within a foot of the ground so as to throw all the strength possible into the young growths springing up from their base. If liberally treated in the way of mulching after planting, and well supplied with water during the summer, not only will the young canes attain a fair size, but those cut back will break from the upper buds and give a supply of fine fruit a week or two later than those that had been planted a year or two previous.

At one time raspberries were planted in clumps about four or five feet apart, and four or five canes were tied to a stake at each, the old stools remaining in the same place for years, until they refused to send up canes. A more rational way is to plant a row or two each year, allowing a distance of about six feet between them. In the course of four or five years, according to how the ground is treated, the soil will have become fairly exhausted, so that the rows that have been the longest in existence can be destroyed, the young ones taking their place. By this method there will be an abundant supply of fine fruit. By planting in rows and allowing six feet between them, and thinning out the canes to a foot apart, they will have ample light and air to ensure strong growth. Canes of this class will break at nearly every bud, and produce a large quantity of fine fruit. As soon as this is ripe all the old and superfluous canes should be cut away that those left may have the full benefit of the light and air to ripen them.

It is a mistake to shorten the canes until early in the spring, for in mild winters the sap becomes active quite early, and if it is allowed to flow into the top buds these will swell and are often destroyed by late spring frosts. When pruning is deferred until spring it can then be ascertained if any of the upper buds are injured, and should this be so, the canes may be shortened to the top live one. In very severe winters I have known the canes killed down close to the ground, most of them having to be cut away, but, fortunately, this does not occur very often.

Varieties of raspberries are not numerous, but half a dozen is ample for a private establishment. Of red kinds Superlative and Baumforth's Seedling are amongst the best; and of the yellows, Queen of England and Yellow Superlative are the most desirable. The autumn-bearing varieties differ somewhat from the others, as they fruit on the young canes, but there is no difference in the mode of cultivation, with this exception, that one fruits on the canes made the previous year, the other on those made the same summer. Belle de Fontenay is one of the best. There are two or three new varieties said to be very good, but these I have not tested, therefore cannot speak from experience.

H. C. PRINSEP.

Buxted Park Gardens.

NEW PLANTS, ETC.

CHRYSANTHEMUMS.

Felton's Favourite.—A market variety of great promise; the blooms are of reflexing Japanese form, of fair size, and creamy-white in colour. A.M., R.H.S., October 27. Mr. Phillip Ladds, Swanley Junction.

Hilda Lawrence.—A large-flowered and free-blooming single chrysanthemum that grows about 3½ feet high. The colour is bright rose, with yellow centre. F.C.C., N.C.S., October 26; A.M., R.H.S., October 27. Mr. Lawrence, gardener to Mrs. Gregory, Shoreham.

J. W. Molyneux. — A large and brilliant crimson Japanese variety that has great beauty of form and colour to commend it. F.C.C., N.C.S., November 4. Mr. N. Molyneux, Rooksbury Park Gardens, Fareham.

Hon. Mrs. Lopes. — A shapely Japanese variety of clear canary-yellow colour; a useful addition. F.C.C., N.C.S., November 4. Mr. M. Silsbury, Shanklin, Isle of Wight.

Mrs. W. Iggulden.—This is another fine new yellow Japanese variety that promises to become popular. F.C.C., N.C.S., November 3. Mr. W. Iggulden, Lock's Hill Nurseries, Frome.

R. F. Felton. — A very fine new market variety of good shape and wonderful substance. It belongs to the reflexing Japanese section and its colour, deep and bright orange-yellow, makes most other yellow flowers look rather pale or dingy. F.C.C., N.C.S., November 4. Messrs. W. Wells and Co., Merstham.

White Pagram. — A splendid new single variety that is the counterpart of Edith Pagram in form, but is pure white. F.C.C., N.C.S., November 4. Mr. Norman Davis, Framfield.

Reginald. — A rich lemon-yellow single variety of considerable beauty; it is very elegant and fine for decoration. F.C.C., N.C.S., November 4. Mr. W. J. Godfrey, Exmouth

Mr. W. Buckingham. — A free-flowering single variety that produces elegant and useful sprays of bright pink blooms. F.C.C., N.C.S., November 4. Mr. Bullimore, Grove House, Roehampton.

Robt. Thorp.—Another very free-flowering single variety, giving useful sprays of white blooms. F.C.C., N.C.S., November 4. Mr. H. W. Thorp, Durrington Nursery, Worthing.

Mrs. W. Parker. — A pretty blush-tinted single variety. F.C.C., N.C.S., November 4. Mr. H. Redden, Manor House Gardens, West Wickham.

Miss Cora Stoop. — A shapely incurved variety of distinct silvery-pink colour. F.C.C., N.C.S., November 4. Mr. G. Carpenter, West Hall Gardens, Byfleet.

Freesias.—The chief point with useful winter and spring flowering bulbs, in order to secure a strong growth, is to bring them on very gradually at first, as if hurried in the least failure is sure to follow, flower stems not appearing, or, if they d being weak and puny. I find it a g plan to place the bulbs in a quite cool greenhouse as soon as potted, keeping them tolerably dry until growth commences, and then to remove them to an intermediate house. Freesias are generally potted up early, growers thinking that the bulbs are for late work, but if they are kept in a perfectly cool store they may be potted as late as March, with good results.—T. B. F

MORELLO CHERRIES.

When the leaves have fallen pruning and gulating the branches and shoots should be mmenced. I always like to push ahead th this work during mild weather; in fact, far as possible, all trees that occupy north d east aspects are dealt with before the y cold weather sets in. The work is done icker thus early, as those engaged in it e not benumbed with cold. In training shoots of the Morello cherry care should n to keep them straight, and the main evenly balanced, in much the same r as the peach trees. The young wood slender, and frequently every bud, ex- the terminal one, being flowering buds, uld not be shortened back. If the e large and have been somewhat neg- d, every branch ought to be unfastened washed with some approved insecticide, ecially the main branches; remove any can be spared, and then spread out ly those required to form a well-balanced d. Then proceed to fill in with the shoots, allowing ample space in the nd do not overcrowd. Keep the bot- the trees well furnished with young take the places of those becoming worn out. Much depends on this ng the trees in a fruitful condition. ng growths in a great many instances ied over the older wood with strips ng. Be careful when driving in not to bruise the bark with the because of the risk of important gumming, and, it may be, dying the trees have been well cared for, good condition, it may not be to unfasten the whole of the each year, but the ties and shreds thoroughly examined, and if found any way pinching the bark they removed and fresh ones substi- After the trees have been pruned syringe them a few times in fine with a solution of quassia, soft soap, lphur, or soapsuds, at a moderate th. This will destroy the insects with sometimes these trees are attacked.

H. MARKHAM.

ST. BRIGID ANEMONES.

In the moister parts of the kingdom the crown anemones, whether of the St. Brigid or Aldeburgh groups, are a great success almost all through the season, provided successive plantings are made. But in or close to large towns, where the atmosphere is dry, these charming flowers do not grow so freely. This fact, however, need not prevent the use of anemones altogether, for, fortunately, the curiously-shaped tubers are very cheap, and no great loss is experienced even if they are thrown away after they flower. For town and suburbs the spring display is the one to be relied upon, because the condition of the weather favours the plants. A capital method of using these anemones is that of planting them as a carpeting to hyacinths or daffodils, these bulbs being somewhat thinly planted. As a rule, the anemones will provide a carpeting of elegant leafage for the other subjects, and then follow on with their own display of flowers, thus, in the case of a bed, producing a continuous display over a fairly long period. This method has been adopted in some of the larger public parks and gardens, and the accompanying illustration of a bed in the Hampton Court Palace gardens, seen last spring, serves to show what a good effect can be produced with these bright and attractive flowers following after hyacinths. The colours may be mixed, or kept distinct, and there are pure white, bright and soft blue, purple, scarlet, scarlet and white, and pink shades to select from, so that there need be no difficulty in making a suitable selection. The tubers may be planted at the same time as the bulbs, but a method occasionally adopted is that of placing the tubers in boxes of soil, in a cold frame, and putting out the plants at the end of March or in April. Spring planting has much to recommend it where the soil of the garden is heavy and retentive of moisture.

K.

A BED OF ST. BRIGID ANEMONES AT HAMPTON COURT PALACE GARDENS.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

EAST INDIAN HOUSE.—The various species of vandas will by now have completed their growth, and as the points of the roots become sealed over they should be placed under strictly resting conditions, by affording only sufficient root and atmospheric moisture to keep the leaves plump. It is a very difficult matter to draw hard and fast lines as to the amount of moisture required, or desirable to be retained in the atmosphere. Under certain conditions it may be desirable to make two slight dampings down daily, instead of a single heavy one early in the day. The outside conditions must be taken into consideration, as well as the situations in which the plants are grown. The construction of the houses and facilities for retaining moisture in them are found to vary to such an extent that only those who have the growing of the plants and a proper interest in their work can have any idea of their own particular needs. The matter must, therefore, be left to those in a position best able to judge. Personally, I endeavour to reduce the atmospheric moisture in the houses according to the prevailing conditions outside, endeavouring, as far as possible, to have the moisture reduced to its minimum by the time the cool evening temperature is reached. A great deal depends on the treatment of vandas, ærides, and their allied genera at this season of the year, for if the plants are permitted to become shrivelled the possibilities are there will be a considerable loss of lower leaves during the winter and spring months. I find that during a prolonged period of cold weather it is well to keep the temperature near the minimum degree, and only use as much artificial heat as is necessary. Excessive ventilation should also be avoided at this season, and when air is given use the ventilators on the leeward side of the house.

THE FLESHY - LEAVED SACCOLABIUMS, which have any great depth of potting material, and the atmospheric surroundings are not of the best, will be benefited by having the bulk of the potting compost removed from about their roots, although the plants may then require a little more attention, especially where grown in baskets. But there will not be the danger of damp and spotting that there would be with any great bulk of potting compost about the plants. I have for some time been convinced that a good deal of the spot on the foliage of orchids is caused by having too much moisture-retaining material in the potting compost. I think it very possible that as we learn more of the requirements of certain plants we shall be induced to depart from certain orthodox methods, and be able to provide suitable compost substitutes which will be to the benefit of our plants.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

IVY-LEAVED PELARGONIUMS.—These beautiful plants have lately been conspicuous in the flower garden by reason of their blooming more freely late in the season than during the summer, when the ordinary zonals were aglow with colour. There are now so many beautiful ivy-leaved varieties that it is well nigh impossible to particularise the best. I do not think any of the newer varieties can surpass the old, well-tried Madame Crousse and Souvenir de C. Turner. For hanging baskets few plants can equal these two varieties. If cut flowers are in request I do not think anything is so useful at this time of the year as the back wall of the greenhouse covered with a mixture of ivy-leaved pelargoniums, for, having good long flower stalks, and forming such large trusses of bloom, they are just the thing for bouquets or filling vases. I find they flower most freely when planted in boxes or pots, with only a limited root run, than when grown in deep, rich borders. It is surprising what large specimens may be grown, and kept healthy for years, in pots of a comparatively small size, if only a little artificial manure is given with the water during summer.

SHRUBBY VERONICAS.—These are just now very bright and cheerful. As such they are very useful, and during the autumn and early winter, when little else but chrysanthemums are to be met with, a few neat bushes of veronicas afford a pleasing variety. The fact that they will keep in health and continue to bloom in a structure from which the frost is just excluded, is another point in their favour, for neither the blossoms nor leaves are liable to damp during the dull days of winter.

POT ROSES.—If Dorothy Perkins and other roses of this class are required to bloom about Easter some plants should now be procured in pots, or ground plants potted up would do, but they will need different treatment to those established. Newly-potted roses may be gently forced after the plants have made new roots, but these latter will not form in a very low temperature, so that if the plants are required by the time named they should be removed to a temperature of 45 degrees at night after they have been outdoors a week or two and are settled in their pots. Now is a good time to procure established roses in pots. Such plants may be pruned, and forced immediately, their pots being already full of roots.

CHRYSANTHEMUMS.—I doubt if any chrysanthemums are more useful or more appreciated than those grown expressly for mid-winter, as they are invaluable both for the conservatory as pot plants, and for all kinds of cut flower work. Plants still being retarded outside should now be taken into a cool orchard house and allowed to develop their blooms, which they will do at Christmas. These require a lot of feeding, as the pots are well filled with roots, and each plant carrying a large number of flowers. Black aphis is particularly fond of the succulent growth, and the plants will require fumigating about once a week to keep this in check.

CYCLAMENS.—For a succession of these plants another sowing should be made now. Keep the seedlings near the glass, and never allow them to suffer from want of water. Vaporise as a preventive rather than a remedy against aphis. The earliest of last year's seedlings are now in the height of their beauty, and as the pots are full of roots the plants will take almost unlimited supplies of water.—T. B. Field, Ashwellthorpe, Norwich.

THE FLOWER GARDEN.

LAWNS.—The prolonged mild weather has caused grass to make vigorous late growth, so that many lawns require another mowing, and where such is the case they should be at once attended to, and verges clipped, making all neat and tidy for the winter. Machines should afterwards be thoroughly dried, cleaned, and oiled all over before being stored away; this is one of the many jobs that may be done when weather does not permit of work being done outside.

HERBACEOUS BORDERS.—These have continued attractive later than usual, and no time should be lost in cleaning them over, and regulating or replanting, according to the conditions. Something requires to be done every year if the border is to be kept in good condition, and if planting is done now the plants will become established at once. Where a border has been planted long enough to become at all crowded, and the clumps are large, with bare centres, everything should be entirely lifted, the soil heavily dressed with well-decayed manure, and trenched, or very deeply dug. Should trees or large shrubs be near, many of their roots will doubtless be found in the border, and these should be cut off, unless the tree or shrub is a choice and very special one; such conditions, however, are not good for the occupants of the border. Divide or reduce large clumps or tufts, and replant them as soon as possible, only using the outsides of large clumps. Bulbs in herbaceous borders have a very pleasing effect in spring, but the inconvenience of them when working a border and replanting, largely outweighs their beauty, and their number should be strictly limited. Due care must be given to arrangement and blending of colours in herbaceous borders, and also to whether the display is to be general all through the season or at any given time of year, and selections must be made accordingly.

FOR GENERAL EFFECT early, midseason, and late-flowering kinds should be used, not necessarily as single plants, but in groups of one variety only in each. The latter kinds should be towards the back, not always in straight rows, but somewhat irregularly set out, with an occasional plant towards the front. The stately eremurus are specially suitable for use in this way, as dot plants, or in groups, but extra care should be taken in removing these, as their roots are spreading and brittle. If tree lupins are used, place these where plenty of room can be given or their growth in the second year will be largely spoiled. A late-flowering variety should be planted near the early ones, so that one may succeed the other.

FOR AN AUTUMN DISPLAY use doronicums, aquilegias, inulas, pæonies, lupins, incarvilleas, trollius, pyrethrums, campanulas, Chrysanthemum maximum, etc. The early phloxes should be quite omitted, and late phloxes in variety, helianthus, rudbeckias, solidagos, hollyhocks, lobelia (cardinalis type), Michaelmas daisies, heleniums, kniphofias, senecios, Eupatorium purpureum, Astilbe Davidi, Caryopteris mastacantha, and many others used instead. When planting in fresh, deeply-dug ground, always allow for settlement, and the more deeply dug the more allowance must be made, or oftentimes the crowns of plants will be too high above ground, and liable to be damaged. — E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

YOUNG TREES.—When planting young trees let the drainage be thorough. Use a layer quite nine inches in thickness of old broken bricks, tile, or other suitable materials. The compost should consist of sweet loam, lime rubble, a little chalk, and wood ashes, with a moderate sprinkling of bone-meal. These should be well mixed, and made rather firm before planting the trees. Spread out the roots at various angles, previously cutting away any damaged ends. Shake amongst the roots a little fine soil, gently raise the tree once or twice, and then fill in, treading the soil as the work proceeds more or less according to its state and character. No pruning need be done till February, by which time the soil will have become consolidated.

GOOSEBERRIES.—The pruning of these may now be proceeded with. Some, however, prefer leaving this work till spring owing to birds, etc. Where the number of trees is large advantage should be taken of fine weather, and the work pushed forward. When pruning gooseberry bushes keep the heads well open, and endeavour, as far as possible, to give a nice even appearance to the bushes. All inside shoots may be spurred back to within a couple of buds from the stems, leaving some their full length at intervals where required to fill up spaces. Leading shoots may be shortened a little more or less according to the length of growth. A good and fruitful bush ought to contain plenty of new wood, for on this the best fruits are usually produced. Remove all suckers, and when the pruning is finished clear up the prunings, selecting a quantity and heeling them in for making into cuttings. Remove from under the bushes the upper portion of the soil. If the caterpillars of the magpie moth, etc., have been troublesome give a thorough dusting with lime and soot, and top-dress with a little fresh loam, etc. In making new plantations let the land, if possible, be well trenched and manured according to the richness of the soil; set the young bushes out at five feet apart, always keeping the varieties intended for dessert on one side, so that they can be better preserved from birds. The gooseberry is admirably adapted for cordons, both against walls and on wire trellises. Trees on the latter usually suffer less from red spider than those grown on walls.

RED CURRANTS.—These should be spurred well back after they have reached a suitable size, but young bushes may be allowed at each pruning from nine to twelve inches of young wood, as with the gooseberry, the heads are all the better if not allowed to become overcrowded. When grown on east or west walls the fruit will, if protected from birds, keep for several weeks.

BLACK CURRANTS.—As these fruit on the young wood the endeavour should be made to keep the bushes well supplied with shoots of the previous year, removing at each season's pruning whole pieces, or branches, to allow of the young wood springing up from the base. In cases where the bushes are old they may be cut down almost to the ground level, and in a couple of seasons they will produce good crops of fruit. In all gardens or fruit plantations a certain quantity of young healthy bushes should be coming along to take the place of those which show signs of weakness through old age. Black currants delight in deep, cool soil, and should be liberally fed on lighter land.—H. Markham, Wrotham Park Gardens.

Strawberries.—These should now be placed in frames to keep them from heavy rains, the lights being removed every fine morning. Frosts are very beneficial to these before forcing, and the best crop of strawberries that came under my notice was from plants laid on their sides, stacked up to about five feet high in ridges; the frost made great havoc among the pots, and the plants had to be taken down and thawed before they could be placed on the shelves. The crowns get thoroughly ripened by exposure, hence the good returns given. Equally good results may be had from plunging them in the open in a bed of ashes to keep the frost from the pots.—A. B. W.

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EXHIBITIONS AND MEETINGS.

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Birmingham.

The Birmingham Society held its exhibition in the Bingley Hall, on November 10, 11, and 12. It was a big display, but there was a distinct falling off in the cut flower classes, though fruit classes were well filled with splendid produce. Plant classes were good, and the groups, notably Mr. Cryer's, were a distinct feature, while the trade displays and the vegetables were sufficient in themselves to make good exhibitions.

GROUPS AND PLANTS.

One of the finest groups of chrysanthemums arranged with foliage plants was the one to which first prize was awarded in the class for a display on a space of 20ft. by 12ft. The exhibitor was Mr. A. Cryer, who surpassed himself on this occasion. He had a high pyramidal background with lower mounds at the corner, and a quite low group in front, the intervening parts being carefully filled in with good blooms, bright crotons, and graceful palms, ferns, dracænas, etc. The William Butler Memorial Silver Cup, presented by W. Waters Butler, Esq., in memory of his father, was given in this class, in addition to the premier award; it was won in 1907 by Messrs. Sanford and Co., of Birmingham.

The best of three groups of chrysanthemums, arranged on a space of 14ft. by 10ft., was adjudged to be the one staged by Mr. R. Bullock, gardener to T. W. Piggott, Esq., Park Hill, Moseley, who had a bold sloping bank, with single varieties at the corners, and palms as a background; Mr. A. J. Davis, gardener to F. Mantle, Esq., Holly Lawn, Beech Lane, secured second place, but his group was much too flat; Mr. S. Gibbs, gardener to Mrs. H. Normansell, Bristol Road, Edgbaston, third.

Mr. C. H. Herbert, the Nurseries, Acock's Green, was first prize winner in the class for a group of decorative chrysanthemums, and he made an excellent display with very useful material, singles, and decorative varieties of the Source d'Or type figuring largely; Messrs. James Simpson and Son, Harborne Nurseries, Harborne, came second.

In the plant classes the competition was [illegible]ly good. For six large-flowering chrysanthemums, distinct, Japanese excluded, Mr. O. Brazier, gardener to E. Martineau, Esq., West Hill, Birmingham, was a good first with very fine examples of Fred Palmer, Mme. Ferlat, Buttercup, and Mrs. J. Brice; Mr. A. Cryer, gardener to J. A. Kenrick, Esq., Edgbaston, was second with fairly good specimens. First prize for six specimens of Japanese varieties was won by Mr. A. Cryer, who had Mrs. Knox, Lady Henderson, Col. W. B. Smith, and Marquis Venosta; Mr. O. Brazier came a close second, and he had Mrs. W. Knox (not yet at its best), Colonel W. B. Smith, Marquis V. Venosta, and the old favourite Viviand Morel.

The best three trained Japanese varieties were freely flowered, clean specimens of Col. W. B. Smith, and Mr. G. Mileham, shown by Mr. A. Cryer; Mr. O. Brazier came second with Mrs. H. Emmerton, Chas. Longley, and Chas. Davis, but the flowers were not yet fully expanded. Mr. Cryer led for one specimen, incurved, with Mdme. Ferlat, and Mr. Brazier followed closely with the same variety, Mr. Rowland coming third. For one specimen, Japanese, Mr. Brazier scored with a good Lady Hanham, with several flowers yet unexpanded; Mr. Cryer second, and Mr. Rowland third. Mr. Brazier's three specimens of single varieties were fine examples of the beauty and usefulness of these charming flowers, and he easily won first place with Metta, Constance Summers, and Mrs. H. J. Hampson; Mr. Cryer was second, but he was a long way behind.

CUT BLOOMS.

Six vases of Japanese chrysanthemums, three blooms in each, distinct varieties, formed a good class, and there were five competitors for the substantial prizes offered. Chief honours fell to Mr. H. Blakeway, gardener to Sir Albert Muntz, M.P., Rugby, whose leading varieties were H. Perkins, Mrs J. Dunn, Bessie Godfrey, Mrs. Eric Crossley, F. S. Vallis, J. H. Silsbury, Mary Inglis, and Miss E. Fulton; Mr. W. Iggulden, Lock's Hill Nurseries, Frome, second, but some distance behind the first set; and Mr. J. Deacon, gardener to the Rt. Hon. J. Chamberlain, M.P., Highbury, third. Six competitors entered in the class for four vases of Japanese blooms, in four varieties, and here Mr. W. Iggulden scored with massive flowers of F. S. Vallis, Mdme. G. Rivol, Mdme. P. Radaelli, and J. H. Silsbury; Mr. H. Blakeway second with J. H. Silsbury, F. S. Vallis, Reg. Vallis, and Mrs. E. Crossley in good form; Mr. J. Deacon third, and Mr. T. Grant, gardener to the Marquis of Exeter, Burghley House, Stamford, fourth.

First prize for a vase of pink Japanese chrysanthemums was won by Mr. W. Iggulden with Mdme. P. Radaelli, in fine condition; Mr. T. Grant second with W. A. Etherington, and Mr. Deacon third with Valerie Greenham. For a vase of a crimson variety Mr. Iggulden led with Magnificent; Mr. Deacon second with H. Perkins, and Mr. Grant third with J. H. Silsbury. The best vase of a white Japanese variety was Mr. Deacon's Mrs. A. T. Miller, big blooms; Mr. T. Grant second, and Mr. Iggulden third, each with the same variety. There were eight vases of a yellow Japanese variety, and here Mr. Iggulden scored with massive blooms of F. S. Vallis; Mr. H. Blakeway second with F. S. Vallis; and Mr. S. Cole, gardener to Earl Spencer, K.G., Althorp Park, Northampton, third with fine blooms of Lady Talbot.

Singles were fairly good, but the competition in the class for four vases was not so keen as it should have been. Mr. A. H. Hickman, Cookley, was placed first with good specimens of Edith Pagram, Bronze Pagram, Grace, and Metta; Mr. T. Parry, gardener to A. Hughes, Esq., Knowle, second, and Mr. Thos. Grant, third; six entries. For six vases of decorative varieties, Mr. T. Parry scored with fresh sprays of Lizzie Adcock, Mdme. Lucie Faure, Source d'Or, J. C. Lager, Market Red, and Viviand Morel; Mr. W. Newton, gardener to Major Everett, J.P., Knowle Hall, second, and Mr. A. H. Hickman third.

There were five contestants in the class for four vases of incurved blooms, distinct varieties, and here Mr. Silas Cole led, and his best flowers were of C. H. Curtis, Buttercup, Mrs. J. P. Bryce, Lady Isabel, and W. Pascoe; Mr. H. S. Foster, gardener to F. E. Muntz, Esq., Umberslade, second; and Mr. J. Deacon, third.

For four vases of incurved blooms, four varieties, three blooms of each, Mr. J. Deacon was a good first with full flowers of Buttercup, G. Hill, M. G. Denyer, and Godfrey's Eclipse; Mr. R. Bullock second; and Mr. O. Brasier third; this was a local class. The best two bunches of incurved blooms came from Mr. J. Deacon, who showed Mrs. G. Denyer and Buttercup; Mr. R. Bullock second, and Mr. O. Brasier third. In the local class for four vases of Japanese blooms, four varieties, Mr. Deacon scored with Algernon Davis, F. S. Vallis, Mrs. A. T. Miller, and H. Perkins; Mr. A. W. Young, gardener to R. Peyton, Esq., Edgbaston, second; and Mr. R. Bullock, third. For a pair of vases of Japanese blooms, Mr. Deacon was again first with Lady Talbot and Mrs. A. T. Miller; Mr. A. W. Young second, and Mr. T. W. Davis, gardener to H. F. Keep, Esq., Edgbaston, third. Mr. Rudge, gardener to G. Littlewood, Esq., Moseley; Mr. Corbett, gardener to Hume C. Pensent, Esq., Harborne; Mr. Payne, gardener to James Shuter, Esq., Pretoria Road; Mr. J. A. Ball, Erdington; Mr. W. J. Wakefield, Harborne; and Mr. W. J. Wild, Park Road, Harborne, were other successful competitors in the several local classes.

Mr. J. Deacon led in the class for twelve blooms of Japanese varieties, arranged in vases over a groundwork of foliage plants; he had good blooms of Algernon Davis, F. S. Vallis, Lady Talbot, Leigh Park Wonder, etc., and some pretty crotons; Mr. H. S. Foster second; Mr. O. Brasier third; and Mr. W. Teal, gardener to Mrs. Mellodew, Coventry, fourth.

There were twenty competitors in the class for a table decoration of chrysanthemums, and here the awards were made in favour of Mr. G. Winter, gardener to E. A. Palmer, Esq., Handsworth, who had cream and pink single varieties; Mrs. E. Winchester, Northfield, second; Miss G. White, Acocks Green, third; and Mrs. E. Pitt, Acocks Green, fourth.

A remarkably fine new single-flowered chrysanthemum was shown by Mr. H. Tribe, gardener to F. W. G. Greswold Williams, Esq., Bredenbury Court, Bromyard, Worcester. It was named J. H. Greswold Williams, is a large, shapely, broad-petalled flower of a clear yellow colour, and a seedling from Edith Pagram. A new yellow Japanese sport from Madame Oberthur, named Helena Williams, was staged by Messrs. Geo. Williams and Sons, Manor House Nurseries, Canton, Cardiff.

The fine class for a group of cut chrysanthemums arranged on a floor space of 30ft. by 8ft., and which was such a success in 1907, proved a tame affair on this occasion, and the first prize and challenge shield were withheld. The only exhibitors were Mr. W. Woolman, Shirley, Birmingham; and Mr. G. Hancox, West Bromwich, and these gained second and third prizes.

FRUIT.

Fruit was a strong feature of the show, and the leading class was for a collection of British-grown fruit arranged on a space of 40 sq. feet. Prizes of £7, £5, £3, and £2 were offered, but there were only two competitors. The premier award fell to Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, for a very handsome set of well-grown produce that included some very fine bunches of Muscat of Alexandria, Alicante, Madresfield Court, and Gros Colmar grapes, Conseiller de la Cour, Beurre Diel, Beurre Bosc, Doyenne du Comice, and Pitmaston Duchess pears, and Newton Wonder, Bramley's Seedling, Blenheim Pippin, Cox's Orange Pippin, Peasgood's Nonsuch, Cox's Pomona, Annie Elizabeth, American Mother, and Gascoigne's Scarlet apples, with figs and quinces; Mr. H. Cotton, gardener to Lord Biddulph, Ledbury, was awarded second prize for a collection of fine fruit, that included good Mrs. Pince and Gros Maroc grapes, and a good dish of Beurre Bachelier pears, etc.

An interesting class was the one for a collection of hardy British-grown fruits, arranged on a table 12ft. by 8ft., decorated with plants and foliage. Councillor H. S. Bevins, of Hall Green, offered a silver challenge cup to accompany the first prize of £5, and this was won for the second year in succession by Mr. C. W. Powell, Warham, who had splendidly coloured and finely grown specimens of Peasgood's Nonsuch, Cats Head, Charles Ross, Warner's King, Mere de Ménage, Bramley's Seedling, Annie Elizabeth, Cox's Pomona, Lady Henniker, Queen, Alfriston, Cox's Orange Pippin, Coronation, Blenheim Pippin, and Worcester Pearmain apples, as well as numerous dishes of good pears, medlars, and nuts. Second prize fell to Messrs. Pewtress Brothers, Hereford, who had finely coloured apples; Mr. G. R. Morris, gardener to Mrs. W. Hearne, Hanbury Hall Gardens, came third.

Mr. J. H. Goodacre led for six bunches of grapes with Muscat of Alexandria, Alicante, and Gros Maroc; Mr. H. Cotton, gardener to Lord Biddulph, Ledbury, second; and Mr. T. Bannerman, gardener to Lord Bagot, Rugeley, third. The latter was first for three bunches of black grapes, with Gros Colman, well coloured; Mr. F. Jones, gardener to Mrs. F. Need, Great Malvern, second, with large-berried bunches of Gros Colman; Mr. T. Parry third with Alicante. Mr. Goodacre was an easy first for three bunches of white grapes with fine clusters of Muscat of Alexandria; Mr. C. Harding, gardener to the Marquis of Hertford, Ragley Hall, second; and Mr. Thomas Sheppard, gardener to Charles Winn, Esq., Selly Hill, third. Mr. F. Jones, Great Malvern, led in the class for any other white grapes, and Mr. A. Ganderton, gardener to A. G. Buller, Esq., J.P., King's Heath, led in the local class for black grapes, while Mr. T. Sheppard scored in the local class for white grapes.

Apples were very well shown, and the premier award for six dishes of culinary varieties was won by Mr. C. W. Powell with handsome heavy fruits of Gascoigne's Scarlet, Peasgood's Nonsuch, Bramley's Seedling, Newton Wonder, Lord Derby, and Annie Elizabeth; Mr. H. Cotton second, and Mr. G. R. Morris, third; five entries. Mr. C. W. Powell had the best six dishes of dessert apples, and his varieties were Cox's Orange Pippin, Allington Pippin, Ribston Pippin, James Grieve, Wealthy, and Blenheim Pippin; Mr. H. Cotton a good second, and Mr. T. Grant third; seven entries.

Mr. Goodacre led for eight dishes of pears with clean, even examples of popular varieties. Mr. Cotton scored for four dishes of pears with heavy fruits of Pitmaston Duchess, Doyenne du Comice, Emile d'Heyst, and Beurre Diel; Mr. Goodacre second, and Mr. G. Haynes, gardener to Miss F. P. Mole, Edgbaston, third.

In the local fruit classes Mr. C. Kelland, gardener to E. Vaughton, Esq., Handsworth, had the best two dishes of culinary apples, and Mr. T. Sheppard was second. Mr. Kelland and Mr. Sheppard also held similar positions in the dessert class, while Mr. Haynes and Mr. Ganderton were first and second respectively for dessert pears.

VEGETABLES.

Vegetables were again a fine feature of this Midland show. In the class provided by Messrs. Sutton and Sons the premier award fell to Mr. Edwin Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, for splendid Ailsa Craig onions, Perfection tomatoes, New Red Intermediate carrots, Autumn Mammoth cauliflowers, Windsor Castle potatoes, Dwarf Gem Brussels sprouts, Tender and True parsnips, Solid White celery, and Prizetaker leeks; Mr. C. Haynes, gardener to W. C. Alston, Esq., Elmdon Hall, second; and Mr. G. Neal, Bampton, Oxon, third; Mr. E. Winchester, Northfield, fourth. In other classes provided by the Reading firm, premier awards fell to Mr. E. Beckett for carrots; Mr. G. Neal for parsnips; Mr. E. Beckett for onions; Mr. G. Neal for beet; Mr. E. Beckett for potatoes, celery, and cauliflowers; Mr. C. Haynes for turnips; Mr. T. Grant for tomatoes; and Mr. Beckett for kidney potatoes—Snowdrop.

There was a strong competition for Messrs. Webb and Son's prizes for a collection of eight dishes of vegetables, and here Mr. Silas Cole led with Ailsa Craig onions, Marrowfat parsnips, Pink Perfection celery, Autumn White cauliflowers, Sensation tomatoes, Empire potatoes, Prizewinner carrots, and Champion prize leeks; there were eight competitors; Mr. H. Folkes, gardener to the Right Hon. J. F. Halsey, Hemel Hempstead, second; Mr. J. Hudson, Leicester, third; and Mr. F. Barrett, Ellesmere, Salop, fourth. Messrs. Folkes, Barrett, Cole, J. Hudson, and H. S. Batson were winners in other classes provided by Messrs. Webb and Sons.

Mr. Edward Deakin, Hay Mills, led in the class for a collection of vegetables, provided by Mr. R. Sydenham, Birmingham; Mr. A. Cryer, second. In smaller classes provided by Mr. Sydenham Mr. Deakin scored for potatoes, turnips, onions, beet, parsnips, carrots, and for red cabbage; Mr. G. H. Johnstone for Brussels sprouts; Mr. C. L. Branson, gardener to Mrs. J. D. Wingfield Digby, Colehill, for celery; and Mr. Thomas Jones for cauliflowers. In another vegetable class provided by Mr. R. Sydenham Mr. W. Folkes, Ampthill, was the leading winner; Mr. T. Avery, gardener to J. Kerr, Esq., Loudwater, second; and Mr. Thomas Jones, Bryn Penylan, Ruabon, third.

NON-COMPETITIVE.

Non-competitive displays, chiefly from the trade, occupied a considerable amount of space, and not only added much to the attractiveness of the exhibition, but were a source of interest and educational value both to horticulturists and the local visitors.

One of the most attractive exhibits in this section was the fine table of vegetables and fruit put up by Messrs. Sutton and Sons, Reading. Onions, tomatoes, beetroot, carrots, all perfect, were displayed in admirable style, and on tall stands were placed many fine melons, the whole display being nicely decorated with flowers and foliage. A table of apples was shown by Mr. E. Burden, St. Agnes Nursery, King's Heath, which, we were told, were all grown within four miles of the centre of Birmingham. Residents in the Birmingham district should, therefore, be convinced that they may grow good apples. Messrs. Laxton Brothers, Bedford, put up a very fine lot of apples, the fruits being of good size, and richly coloured. The King's Acre Nurseries, Lim., Hereford, showed fruit in their usual good style. Messrs. Pewtress Brothers, Hereford, showed apples packed in boxes for transit; the fruit was good, and packing excellent.

A bold group of ornamental trees and shrubs from Messrs. John Waterer and Sons, Lim., Bagshot, Surrey, attracted much attention. Hollies were very fine, both variegated varieties and the red and yellow berried sorts. Several varieties of abies, yews, and retinosporas helped to make up the group. Mr. W. J. Robertson, Cowleigh Road, Malvern, had a nice group of shrubs, including brightly coloured eleagnus, euonymus, and ivies, with cedars, hollies, etc., in the background. Shrubs were also shown by Mr. Frederick A. Godfrey, Stourbridge, who also showed some fine young trees of the red-twigged lime. A fine group of shrubs was set up by Messrs. Bakers, Wolverhampton. Messrs. James Simpson and Son, Harborne Nurseries, Harborne, showed evergreen shrubs in variety, as also did Messrs. Hewitt and Co., Solihull.

Messrs. Gunn and Sons, Olton, Birmingham, arranged a grand exhibit in the form of a rock and water garden. Bold masses of rock were built up in a masterly manner, and alpine plants, dwarf shrubs, and elegant grasses were used with much taste. A cave with a dripping well was situated at the back of a lily pond, round the margins of which hardy ferns were planted. We congratulate Messrs. Gunn on this very fine piece of work. The Messrs. Gunn also showed a fine lot of artistic floral designs.

Mr. W. J. Godfrey, Exmouth, Devon, put up a bold display of cut chrysanthemums. Japanese and single-flowered varieties were alike superb. Some good zonal pelargoniums were also staged by Mr. Godfrey. The exhibit of fruit from British Columbia was very fine. The colouring of the apples was very rich, and the packed cases demonstrated the skill of our distant cousins in this important detail. Messrs. Richard Smith and Co., Lim., Worcester, had a remarkably good group of tall pyramid hollies, yews, cedars, and other trees and shrubs. The exhibit was arranged to good effect, and every plant was clean, and well grown.

Chrysanthemums were well staged by Messrs. W. Wells and Co., Lim., Merstham, Surrey. Large blooms of Japanese varieties on boards occupied the centre of the stand, with vases of single-flowered varieties at either end. Messrs. Young and Co., Hatherley, Cheltenham, had a fine lot of American perpetual-flowering carnations. Messrs. Clibrans, Altrincham, showed chrysanthemums. The incurved variety, Daisy Southam, and the single Renown were specially good; both are clear yellows. Messrs. Robt. Sydenham, Lim., Birmingham, staged a collection of vegetables, including well-grown leeks, onions, cauliflowers, etc., etc. The produce was of excellent quality. The same firm showed single chrysanthemums elegantly arranged in rustic table decorations.

Messrs. Webb and Sons, Wordsley, Stourbridge, staged a large assortment of vegetables, arranged in flat baskets, and interspersed with flowers and foliage. In the centre of the stand was a tall epergne, on which were displayed some fine melons. E. A. Wilson, Esq., Rockingham, Edgbaston Park Road, Birmingham, exhibited a capital selection of cactaceous and succulent plants. A grand piece of the Turk's Cap cactus, Mammillaria turbinata, was conspicuous. Mr. Vincent Slade, Staplegrove Nursery, Taunton, showed a collection of zonal pelargoniums in his usual first-class style. Cacti and succulents were well shown by Miss S. S. Thompson, Alfred Road, Handsworth.

A very attractive exhibit was the improvised rockery, furnished with a collection of alpine and kindred plants by Messrs. Bick Bros., Bicknell Park Nurseries, Olton, Birmingham. A fine patch of the Killarney fern, in robust health, was prominent in the centre of the rockery, and the many varieties of saxifragas and other favourite alpines were well arranged. Potatoes in many of the leading and newer varieties were well staged by Mr. R. W. Green, Wisbech. Messrs. Yates and Sons, Old Square, Birmingham, put up a large collection of well-grown vegetables.

The GARDENERS' MAGAZINE had a stand, upon which was shown a series of plates of flowers, demonstrating the process of reproduction in colours, together with books on horticultural subjects. Garden tools and sundries were shown by Mr. G. H. Richards, 234, Borough High Street, London. Chemical manures were exhibited by Messrs. Barnes and Son, Wyche, Malvern. Mr. H. N. Ellison, West Bromwich, put up a very nice lot of greenhouse ferns.

Messrs. Thomson and Co., Lim., Spark Hill Nurseries, Birmingham, arranged an effective display of well-grown chrysanthemums in the cut state. Good blooms of many varieties were put up en masse, backed up by lighter arrangements in bamboo stands. Messrs. W. H. Simpson and Sons, Birmingham, put up a collection of vegetables in good varieties, leeks and celery being well-grown examples.

MEDALS AND AWARDS.

Gold.—Messrs. John Waterer and Sons, Lim., Bagshot; Messrs. Richard Smith and Sons, Lim., Worcester; Messrs. Yates and Sons, Old Square, Birmingham; King's Acre Nurseries, Lim., Hereford; Messrs. Webb and Sons, Stourbridge; Mr. W. J. Godfrey, Exmouth; Messrs. Gunn and Sons, Olton (2); the Agent-General for British Columbia; Messrs. Sutton and Sons, Reading.

Small Gold.—Mr. R. W. Green, Wisbech.

Silver-gilt.—Messrs. Bakers, Wolverhampton; Messrs. Hewitt and Co., Solihull; Messrs. Laxton Brothers, Bedford.

Silver.—Messrs. J. Randall and Sons, Shirley; Miss Thompson, Chorlton Villa, Handsworth; Mrs. Thompson, Birmingham; Messrs. Pewtress Brothers, Hereford; Messrs. W. Wells and Co., Merstham; Mr. Burden, King's Heath, Birmingham; Messrs. W. H. Simpson and Son, Monument Road, Birmingham; Messrs. Bick Brothers, Olton.

Bronze.—Mr. W. J. Robertson, Malvern; Messrs. J. Simpson and Co., Court Oak Road, Harborne; Mr. F. A. Godfrey, 117, High Street, Stourbridge; Mr. Vincent Slade, Taunton; Messrs. Clibrans, Altrincham; Messrs. Young and Co., Hatherley, Cheltenham.

Certificate of Merit.—Mr. H. N. Ellison, West Bromwich.

Windsor, NOVEMBER 6.

The seventeenth autumn show was held in the Albert Institute, and was much the best of the series. The space at command is too limited to enable the committee to display the exhibits properly; three small rooms are requisitioned, in addition to the large hall, therefore the effect is spoiled. To this society belongs the credit of having the finest exhibit of Japanese blooms seen this season so far. Nothing at the N.C.S. show equalled the first prize set that won the King's cup here, and that is saying much. The arrangements, as usual, were perfect, under the able guidance of Mr. Keer, the hon. secretary, aided by an efficient committee, of which Mr. Arthur Turner is chairman.

Cut blooms demand a first notice. For six vases, five blooms of one variety in each vase, there were four competitors for the King's Challenge Cup and a cash prize, the cup to be won three times before becoming the property of the winner. In 1906 Mr. T. Stevenson, gardener to E. G. Mocatta, Esq., Addlestone, Surrey, was the winner; last year he lost the coveted prize to Mr. F. Bible, gardener to Prince Hatzfeldt, Draycot Park, Chippenham. The present year's winner was again Mr. Stevenson, with quite the best exhibit seen this season so far. The blooms were large, intensely coloured, and arranged most perfectly. The varieties were Duchess of Sutherland, Walter Jinks, F. S. Vallis (9½ inches wide by 9 inches deep), Reginald Vallis (9 by 9 inches), Lady Talbot, of perfect form and colour (9½ by 9 inches), and Leigh Park Wonder, intensely brilliant. Mr. J. Dymock, gardener to G. D. Faber, Esq., C.B., M.P., Rush Court, Wallingford, was a good second with exceedingly fine examples of J. H. Silsbury, F. S. Vallis, Mrs. Vallis, Bessie Godfrey, and Mrs. Norman Davis. Mr. Bible was third with much smaller flowers.

An interesting class was that for eighteen Japanese blooms, arranged in a space five feet by three feet, with the addition of any foliage plants or foliage. Five competed, making an imposing display. Mr. Stevenson was easily first with full, solid blooms of popular varieties, arranged lightly in undulating mounds interspersed with sprays of Spiræa Thunbergi, golden privet, bamboos, etc. Mr. Dymock was a good second. For twelve incurved, and the same number of Japanese, distinct, a silver challenge cup was added to the cash prize. Four competed, making a good display. Mr. C. Page, gardener to G. B. Fortescue, Esq., Dropmore, was the first prize winner, with full-sized Japanese, and especially neat incurved specimens. The varieties were: Incurved.—Buttercup, Sport, G. F. Evans, Mrs. J. P. Bryce, Nellie Southam, Mrs. G. Denyer, Pantia Ralli, Emblem Poitevine, Lady Isabel, Madame Vremkey, F. Palmer, and Godfrey's Eclipse. Japanese.—F. S. Vallis, Edith Smith, Splendour, W. A. Etherington, Mr. R. Felton, S. A. Marconi Bey, R. Vallis, Mrs. Eric Crossley, W. Jinks, Lady Talbot, Mrs. N. Davis, and Mrs. W. Knox. Mr. F. Bible was a close second.

For six incurved, any one variety, there were four competitors, Mr. C. Page, with Buttercup in good condition, won the premier place; Mr. Bible, with Frank Trestian, second. Six competed for six Japanese, any one variety, and Mr. Stevenson, with Lady Talbot in almost faultless condition, was first; Mr. Page, with F. S. Vallis, second. In the class for a basket or vase of twelve blooms, arranged with any natural foliage, five staged, making a pretty display. Mr. Page, with good Japanese and richly-coloured sprays of guelder rose, was first; Mr. H. Hearn, gardener to Mrs. Goodlake, second. Single-flowered chrysanthemums are always well shown here. For six varieties, five sprays of each, Mr. Page was the premier prizetaker, with such varieties as Mary Richards, Miss E. Roberts, and Eva as the best.

There was but one group of chrysanthemums and foliage plants, but Mr. W. Cole, gardener to Mrs. E. B. Foster, who arranged an effective group of well-grown plants carrying good blooms, was worthily awarded the leading prize. An interesting class was that for a group of decorative chrysanthemums, not disbudded. Mr. E. West, gardener to F. Ricardo, Esq., was an easy winner, with single-flowered varieties profusely flowered and effectively arranged; Mr. J. Barnes, gardener to Lady Dalton Fitzgerald, was second. In the class for a group of miscellaneous plants arranged for effect there were three competitors, and Mr. F. H. Beney, gardener to Lady Mary Currie, was first with an effective display of Oncidium varicosum Rogersi, cattleyas, cypripediums, foliage plants, etc.; Mr. J. Minty, gardener to Mrs. Moss Cocker, second. Gloire de Lorraine begonias are always a feature here, and for six plants Mr. G. West was an easy winner with charming examples of this showy subject.

Fruit and vegetables were distinct features of the show. Mr. Titt, florist, Windsor, had a pleasing exhibit of floral designs, including a wonderful lady's muff of real flowers. Messrs. W. Wells and Co., Merstham, had an interesting exhibit of new chrysanthemums, such as W. Mease, Pockett's Crimson, Clara Wells, Rose Pockett, C. H. Totty, Foxhunter, and the new single-flowered variety Sylvia Slade.

Brighton, NOVEMBER 2.

A bright, clear day marked the opening of the seventeenth annual exhibition of chrysanthemums, held in the Dome and Corn Exchange, by the Brighton and Sussex Horticultural Society. There was, however, a marked falling off in the competitive classes for chrysanthemums, and judging in several cases proved quite an easy task. Notwithstanding this, there was an excellent show, as may be gathered from the fact that 322 exhibits were staged.

CUT BLOOMS.

In the open class for thirty-six Japanese, not less than twenty-four varieties, the premier prize was secured by Mr. C. J. Dicker, gardener to the Exors. of the late Hon. Louisa Canning, Frant Court, Sussex, who staged some excellent blooms of Miss O. Miller, J. Roberts, Reginald Vallis, Splendour, Lady Conyers, Mr. C. Penford, John Peed, Mrs. Hooper Pearson, Leigh Park Wonder, C. J. Champion, Mrs. W. Knox, Bessie Godfrey, Walter Jinks, Mrs. N. Davis, and F. S. Vallis. In addition to the cash prize this exhibit was also awarded the president's challenge bowl and the society's medal, which Mr. Dicker has won for the second time. The second prize was secured by Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashtead Park, Epsom, with an even set of blooms. Mr. J. Harris, gardener to Colonel C. P. Henty, Avisford, Arundel, was third. The competition in this class was much below the average, only three collections being staged.

In the class for six incurved blooms, one variety, there were three entries, the first prize being secured by Mr. G. Hunt with good flowers of Buttercup; Mr. J. Harris followed as a good second with Emblem Poitevine, and Mr. Tourle, gardener to Captain J. R. Smiley, Horsted Place, Uckfield, obtained third. For six incurved blooms, distinct, Mr. J. Harris was first with well-finished blooms of Pantia Ralli, Godfrey's Eclipse, Mrs. Judson, Buttercup, Souvenir de Wm. Clibran, and Mrs. B. Hankey. Mr. W. Hill, gardener to G. W. Ryder, Esq., Broadhill, Keymour, second; and Mr. Tourle third. Mr. G. Hunt was first also for twelve incurved, distinct, and Mr. Tourle was second, only two entries being made. In the class for six Japanese blooms, one variety, any colour, Mr. G. Hunt was placed first with well-finished blooms of F. S. Vallis. For six Japanese blooms, distinct, Mr. Charles Earl, gardener to O. E. D'Avigdor Goldsmid, Esq., Somerhill Gardens, Tonbridge, took first honours, and was closely followed for second place by Mr. W. Furlong, gardener to A. Neall, Esq., Leyland's Park, Burgess Hill.

In the class for twelve Japanese, distinct, Mr. E. Jones had the only stand, and was awarded the first prize for an even set of flowers. For twenty-five Japanese blooms, as cut from the plant, not less than eighteen varieties, in five vases, Messrs. J. Stredwick and Sons, Silverhill Park, St. Leonards, secured the premier award, and in addition the society's silver medal. The blooms were good, and included some new seedlings; Mr. C. J. Dicker came second, and Mr. J. E. Hickson, gardener to the Rev. F. S. Sclater, Newick Park, Lewes, third. For three vases of pompons, any varieties, the first prize was awarded to Mr. G. H. Bennett.

The prizes for single varieties, arranged in three vases, were more keenly contested; the premier award was made in favour of Mr. G. Funnell, 22, Mount Sion Place, Brighton; he was closely followed by Mr. J. Davis, gardener to Major Thurlow, Buckham Hill, Uckfield, for second; and Mr. G. H. Bennett was third.

PLANTS.

In the class for a group of chrysanthemums, arranged with ferns or other green foliage plants, the first prize was awarded to Mr. E. Jones for a very pretty and effective exhibit. In the class for a similar group, open to amateurs and gentlemen's gardeners only, Mr. G. H. Bennett secured first place. For twelve bush plants of chrysanthemums, in pots not to exceed nine inches, a handsome silver cup, silver medal, and first prize was offered, and was worthily won by Mr. G. Lambert, 17, Bognor Road, Chichester, with some well-grown specimens. Mr. G. H. Bennett, second.

FLORAL ARRANGEMENTS.

The decorative classes are always a special feature at Brighton. The first honours in a keen competition, open to ladies only, was obtained by Miss Mabel Howell, Tower Lodge, Queen's Park, with a very prettily arranged table of yellow chrysanthemums and suitable green foliage. First award for mantelpiece decoration (open) was secured by Messrs. George Miles and Son, Victoria Nursery, Dyke Road, with a pretty display of chrysanthemums and foliage.

NON-COMPETITIVE DISPLAYS.

Prominent among these was the large group of miscellaneous plants arranged by Messrs. William Balchin and Son, of Hassocks Nursery. Messrs. W. Miles and Co. staged fruit, flowers, and foliage plants in variety. Messrs. Sutton and Sons, Reading, contributed a collection of fruit and vegetables. Mr. Hickson staged over sixty varieties of apples. Messrs. J. Cheal and Sons, Crawley, staged a collection of fruit. The Barnham Nurseries, Lim., contributed fruit, and Mr. Wollard chrysanthemums.

Southend.

A very pretty chrysanthemum show was held at the popular seaside resort of Southend on Tuesday and Wednesday, November 3 and 4. The show was held in the Winter Garden and adjoining rooms at the Palace Hotel. The competition was very keen in most of the classes, and fruits, especially apples, were shown largely and well. The Mayor performed the opening ceremony, and there was a good attendance at this function.

CUT BLOOMS.

In the class for two dozen blooms, Japanese, the silver medal and first prize fell to Mr. J. Burles, gardener to J. Tabor, Esq., J.P., Southend, who had a fine set of blooms, his best being Mr. F. S. Vallis, Lady Talbot, F. Penford, Bessie Godfrey, W. Gee, and Reginald Vallis. Mr. A. Epps, gardener to Mrs. Miller, Leigh-on-Sea, second, and Mr. R. May, Rochford, third. For twelve blooms, Mr. J. Burles was again first, and was followed in order by Mr. R. May and Mr. A. Epps. Mr. Burles was also first for six Japanese blooms, distinct, Mr. Steer coming second, and Mr. R. May third.

Mr. R. May scored for a dozen incurved blooms, and he had Lady Isabel, C. H. Curtis, and Buttercup in good form; Mr. J. B. Steer, gardener to J. S. Foster, Esq., 10, London Road, second; one entrant was disqualified as he had ten instead of the eight varieties required. For six incurved blooms the prizes fell to Mr. J. B. Steer, Mr. Epps, and Mr. May in order of mention.

The class for six Japanese blooms of one variety was a good one, and the first prize was won by Mr. J. Whiffen, gardener at the Queen's Hotel, Southend, with six good flowers of Mr. F. S. Vallis; the best bloom in the show was also in this stand, and the exhibit was regarded as the best one staged by a person who had not previously won a special prize; Mr. J. Burles second, and Mr. Epps third, the latter showing Mrs. A T. Miller.

Single varieties, six vases, made a good class, and here Mr. R. May led with clean, good blooms of Mary Anderson, Anna Farina, Mary Richardson, Mrs. Symms, Mrs. Ferguson, and Eureka; Mr. J. Burles second, and Mr. H. Blakely, Wimborne Road, Southend, third. For six vases of Japanese blooms, in as many varieties, three blooms of each, Mr. J. Burles scored easily with Mr. F. S. Vallis, W. Gee, Lady Talbot, F. Penford, Mrs. A. Miller, and W. A. Etherington; Mr. R. May second, and Mr. Epps third.

There was a very keen competition in the class for one vase of six Japanese blooms, one or more varieties, and here Mr. G. Wiseman, 65, Milton Road, Westcliff, led with lovely flowers of Bessie Godfrey; Mr. H. E. Campkin, 92, Boscombe Road, second with mixed varieties; and Mr. J. Oliphant, 30, Boscombe Road, Southend, third. In the class for eight vases of Japanese varieties Mr. Campkin was again first, and he had Mr. F. S. Vallis, Reginald Vallis, and Lady Talbot in excellent condition.

Leading winners in the smaller amateurs' classes were Mr. F. S. Belcher, Stanford-le-Hope, for twelve Japanese; Mr. H. E. Campkin, for six Japanese—fine flowers of F. S. Vallis, Mrs. A. T. Miller, Bessie Godfrey, Reg. Vallis, Mrs. Knox, and Pres. Viger; Mr. G. W. Heaton Armstrong, Vincent Road, Westcliff, for twelve Japanese blooms, distinct; and Mr. H. E. Campkin in another twelve bloom class, wherein he won the N.C.S. certificate and silver medal for the best amateur's exhibit.

FLORAL DESIGNS.

There was a famous competition in the decorative classes. Out of eleven entries, Mrs. H. E. Campkin led for a basket of chrysanthemums and autumn foliage, a fine design in large blooms; Mrs. H. Blakely second, and Miss H. Campkin third, the latter showing single varieties.

A very interesting and attractive class was the one for local florists and nurserymen, for a table of floral designs, to consist of a wreath, a cross, a bouquet, lady's spray, and three gentlemen's buttonholes. The premier award and silver medal was won by Mr. W. G. Harold, Prittlewell Nurseries, Southend, who had splendid designs worked in chrysanthemums and richardias, with cattleyas and violets to give colour to the bouquet and wreath; Mr. A. M. Barstow, Broadway Corner, Southend, was second, and his finest work was a wreath in bronze chrysanthemums, cypripediums, and croton leaves; Mr. W. Longman, Hamlet Court Road, Westcliff, third.

Eight dinner-table decorations were staged, but there was nothing of special merit among them. Miss M. Green, Great Wakering, was placed first for a pleasing design in small yellow flowers; Mrs. H. Blakely second with large single flowers; and Mrs. F. H. Barnes, Hornchurch, third, with small singles.

In the class for a group of chrysanthemums, Mr. J. Burles was the leader, and he was followed by Mr. J. Whiffen and Mr. Davey, Broadway, Leigh. The two former had conical groups of big blooms, while the last named had decorative plants that, had a little more time and skill been expended on them, might have occupied a higher position. Mr. Davey scored for a group of miscellaneous plants, and was followed in order by the Rev. P. Stuart King and Mr. Epps.

FRUIT.

Apples were grandly staged, and the competition was very keen. For six dishes of dessert varieties, Mr. H. B. Herbert, Eastwood, lead with Gascoigne's Scarlet, Duke of Devonshire, King of the Pippins, Red Reinette, Cox's Orange Pippin, and Allington Pippin; Mr. G. Marrell, Barking, a close second; and Mr. A. Epps third. For three dishes of dessert varieties, Mr. E. J. Elford, Seacombe Lodge, Old Leigh Road, Westcliff, scored with Chas. Ross, Cox's Orange Pippin, and Cellini; Mr. W. A. Voss, Rayleigh, Essex, a close second, showing a grand dish of Court Pendu Plat; Rev. P. Stuart King, Leigh-on-Sea, third.

For six dishes of culinary apples, Mr. G. Murrell, Barking, led with heavy, clean fruits of Wealthy, Peasgood's Nonsuch, Bismarck, Lane's Prince Albert, Warner's King, and Lord Derby; Mr. H. B. Herbert, Eastwood, second; and Mr. R. May third. For three dishes of culinary varieties, Mr. A. Green, Great Wakering, led with Peasgood's Nonsuch, Newton Wonder, and The Queen; Mr. W. A. Voss, a close second; and Mr. Elford third.

Miss J. C. Tutt, Cossington Road, Westcliff, showed the best single dish of apples—Emperor Alexander. Mrs. E. B. Francis, High Street, Rayleigh, had the finest single dish of pears—Pitmaston Duchess, very fine. Rev. T. O. Reay, Prittlewell Vicarage, Southend, scored for six dishes of pears, with Beurre Diel, Uvedale's St. Germain, Beurre Superfin, Marie Louise, General Todleben, and Winter Nelis; Mr. Epps second. Mr. R. Puling, gardener to Mrs. Baldwin, Victoria Avenue, Southend, led for three dishes of pears, Mr. Herbert second, and Mr. J. A. Brown third.

Exhibits of vegetables were not specially meritorious, and there is need for considerable improvement in the selection and arrangement of specimens. The leading prizewinners were Mr. W. T. Mukins, Little Wakering; Mr. Murrell, and Mr. J. Matthews, of Little Wakering.

Tours.

On November 3, in conjunction with the Horticultural Society of Tours, the French National Chrysanthemum Society held its thirteenth annual conference and exhibition. The show was held in a huge tent fixed up in the Place de la Gare, and for a provincial one was in every respect admirably arranged. Mr. Harman Payne was appointed honorary president of the jury, with Mr. Geo. Bruant, of Poitiers, as vice-president. There was a good schedule, and a very large number of entries, and the show was well attended both by members of the society from a distance and the townspeople. New seedlings were largely shown, Mr. Ernest Calvat having a fine group, five blooms of each, tastefully arranged with maidenhair ferns, etc. Other seedlings were shown by the Marquis de Pins, M. Alfd. Chantrier, M. J. Heraud, and M. Dolbois.

Cut blooms and pot plants were arranged in large beds on the ground level. We cannot in the space at our command do other than just briefly mention a few of the most important. M. Pinon had a capital collection of trained specimen plants of all shapes and sizes. There were numerous pyramids, fan-trained, and other quaint designs. M. Page showed trained plants which were excellent. M. Parrot staged some tall pyramids. M. Buret-Reverdy had a large group, mostly French varieties, and among them we noticed Madame Abel Chatenay, Paris 1900, Luzerta, Henry Second, Satin Rose, Belle L'Isloise, Tokio, and others. Another lot came from M. Leclerc. Messrs. Vilmorin, Andrieux, and Co. had two very fine groups, comprising plants well flowered and in good form; Algeceras, C. Schwartz, Hy. Weeks, W. Wells, Excelda, W. Duckham, R. H. Pearson, and Miss Alice Byron, were some of the best. Other exhibits of chrysanthemums came from Messrs. Lionville, Dupont, Firdefried, Allery-Aubert, Dallière, Queneau-Poirier, Morè Testu, Montigny (novelties of 1908), Barillet, Bernier-Meunier, and others.

There was an immense display of other flowers, such as begonias, heaths, cyclamen, dahlias, etc., a centre oval bed being filled with some fine lots, in addition to many others round the sides of the show. M. Aubert-Maille showed a white Anthemis Perfection in quantity, begonias, etc. Many other local exhibitors staged similar lots, viz., Messrs. Buret-Reverdy, Travouillon, Jutant, Parrot, and others. M. Guillerius showed Begonia Viadi in large pots, the plants 6 feet high. M. Dallière had Begonia Allery, a large group of fine plants. General de Benoist had Begonia semperflorens elegans. Dahlias were staged by M. Hauteville and by M. Bouchaud.

Vegetables were largely shown in big collections, and in great variety, and especially meritorious was the lot from Messrs. Vilmorin, Andrieux, and Co. Messrs. Berger, Sussier, the Syndicat Horticole de Touraine, Bouchaud, Robert, Boncord, Dupont, and Firdefried also staged good lots.

There was a large quantity of fruit, chiefly apples and pears, also trained fruit trees, the latter occupying the promenade leading to and around one side of the show. M. Pinguet-Guindon, for an immense collection of conifers, ornamental shrubs, fruit trees, and fruit was awarded the grand prix d'honneur offered by the President of the French Republic. M. Ploquin showed trained fruit trees, as also did M. Jouanneau.

Along the outside end of the show was a choice collection of pansies from M. Bouchaud.

The conference was held in the Hotel de Ville, a handsome building close at hand. M. George Bruant presided. Various matters were submitted for discussion, and in the evening an official banquet was given to the jury and members of the Congress. Among those present were the Mayor, the Prefect, the representative of the Minister of Agriculture, Messrs. Pinguet-Guindon, Bruant, Calvat, Harman Payne, Ph. Rivoire, Chantrier, Liger, Barbier, Choulet, Charvet, and many more. Several decorations were distributed, and the proceedings were of the greatest interest, and enjoyed by all.

In the afternoon of the following day a motor car excursion to see the various chateaux in the neighbourhood, the valley cf the Cher, and of the Loire, and other places in the environs was made.

Chelmsford and District Gardeners' Association.

On Friday, October 30, the president, E. H. Christy, Esq., F.R.H.S., taking the chair, Mr. Chas. T. Druery, V.M.H., F.L.S., gave a lecture to a very full audience of the members of this association on "The Wonderland of Ferns," illustrated by a large number of most interesting lantern slides. The lecturer dealt first of all with the immense debt owed by mankind to the ferns and their allies of the long distant Coal age, when they built up those wonderful stores of future fuel which practically formed the foundation of all our industries and comfort of the present day. He pointed out, too, that it was from the same source that all the flowering plants were evolved by slow gradations and modification of some of the members of the family, though, strange to say, the ferns of that period, which did not so diverge from the beaten track, are only differentiated in a minor degree from those of the present day, so that an inconceivably long period of evolution must have antedated coal formation to permit of the evolution of such highly developed types. The peculiarities of fern reproduction as distinct from that of flowering plants were then described and illustrated, and their wonderful capacity for "sporting"—the lecturer's special study—was exemplified by a number of slides showing some of his own discoveries, and a series of the finest forms extant. Selective culture as applied to these wild "finds" was then treated of, and examples of sudden and wonderfully marked advances in type so obtained were thrown on the screen, the pedigree slides on which the several steps of advance were shown side by side being particularly interesting. In conclusion, the lecturer strongly advocated the cultivation of these far more beautiful and yet equally hardy varieties in gardens and conservatories in preference to the common or "weed" forms usually grown; and, as evidence of their value as decorative plants, a view of his former British fernery at Forest Gate was shown, and acknowledged by a burst of applause as abundantly proving his case. A very hearty vote of thanks concluded the meeting.

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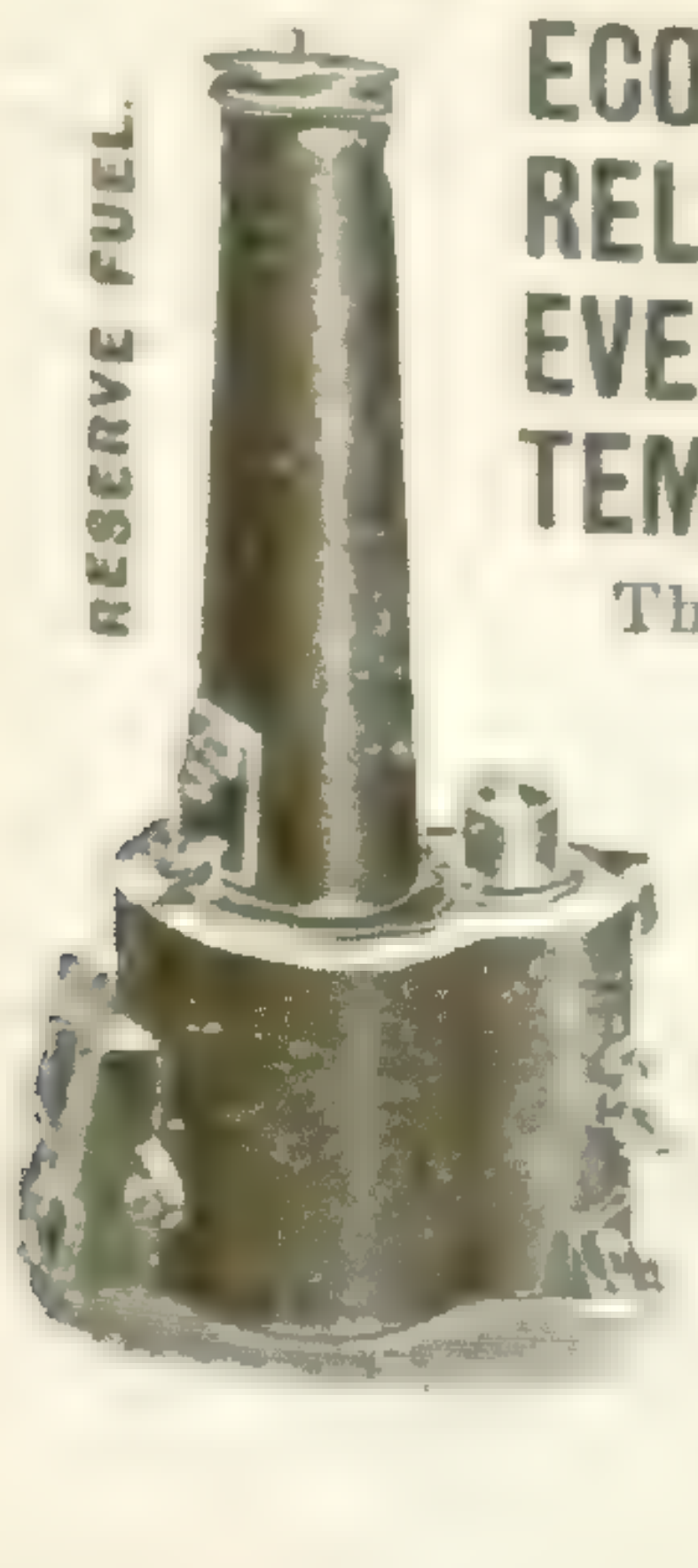
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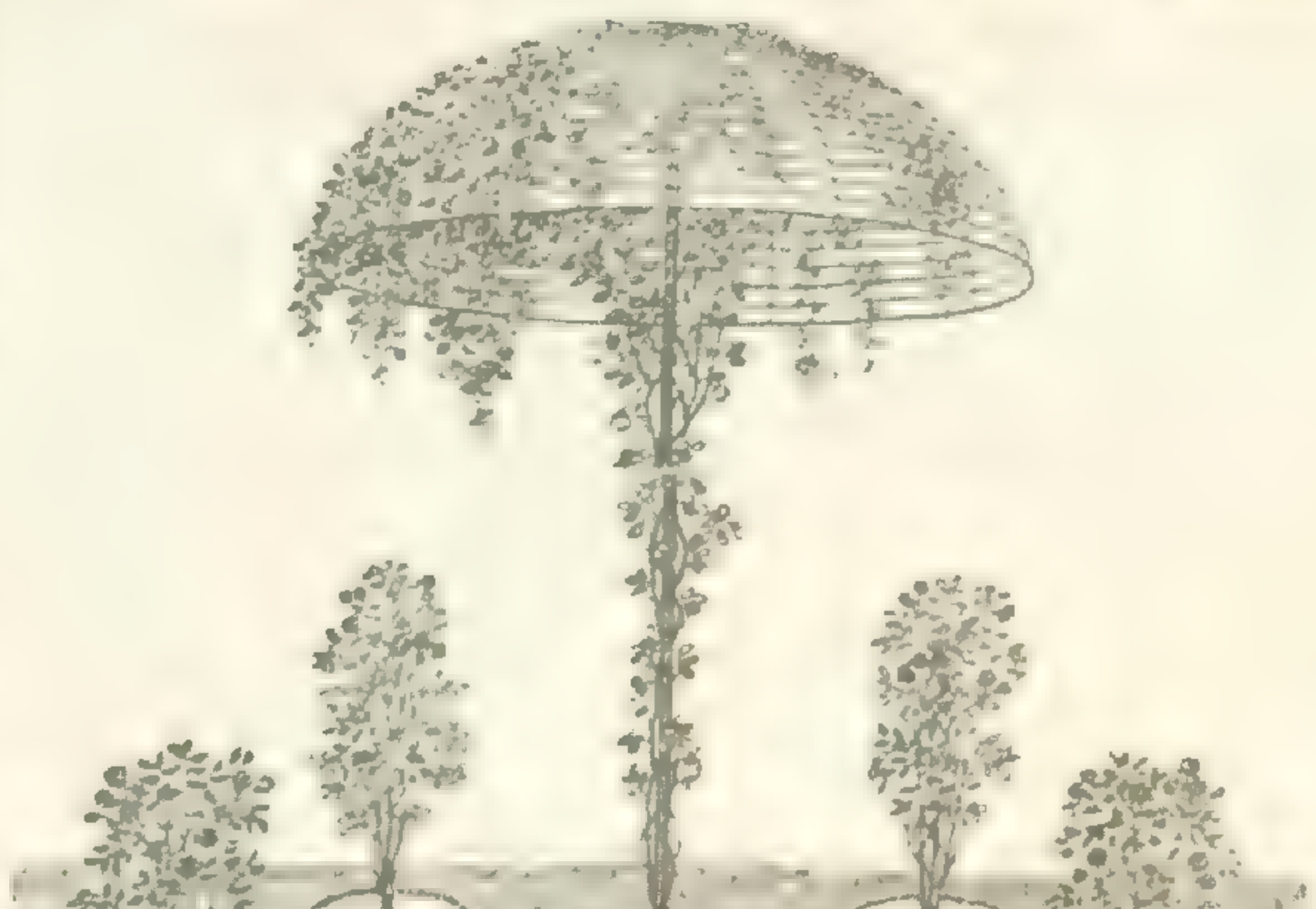

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Liverpool.

NOVEMBER 4, 5, and 6.

The twenty-ninth exhibition of this society was held in St. George's Hall. The show hardly maintained its high prestige, either in quality or quantity, although many of the classes were highly satisfactory. The fruit display was never finer, the apples being splendid, and the ninety bunches of grapes staged were of excellent quality. The trained chrysanthemums were admirable, and the cyclamens were good, while begonias and salvias were in strong force.

CUT FLOWERS.

Only two sets were staged for the handsome silver challenge vase and prizes, and here the last year's winner, Mr. G. Haigh, gardener to Sir W. H. Tate, Bart., Woolton, was again well to the fore, his Japanese blooms being his strong section, and he had fine flowers of Leigh Hall Wonder, Mary Inglis, Mrs. W. Knox, W. A. Etherington, Mdme. P. Radaelli, E. J. Brooks, Miss Elsie Fulton, Dorothy Goldsmith, and Mrs. F. W. Cole; his best incurved were Boccace, Mrs. G. Denyer, Lady Isabel, Muelenare, Triomphe de Montbrun, Buttercup, Pantia Ralli, Romance, Chrys. Bruant, and Amber Beauty. Mr. C. Goves, gardener to Sir Gilbert Greenhall, Bart., Warrington, was second, his Japanese being his strongest section. For eighteen incurved, distinct, Mr. J. Young took the lead, having good blooms of Mrs. J. P. Bryce, Lady Isabel, Godfrey's Eclipse, etc. For twelve incurved, Mr. J. Clarke, gardener to Thos. Clarke, Esq., Allerton, took the lead, and for eighteen Japanese, distinct, Mr. W. Wainwright, gardener to R. Hobson, Esq., Bromborough, led with a strong set. For twelve Japanese, distinct, Mr. C. Taylor, gardener to R. D. Holt, Esq., M.P., was the winner. The best six vases, distinct varieties, three flowers each, came from Mr. P. Jakeman, gardener to Sir W. B. Forwood, Bart., Bromborough, who sent good blooms. For six vases of single varieties Mr. J. Rothwell led with pleasing blooms. The most tastefully arranged dinner table was one set out by Mrs. T. A. Vasto.

CHRYSANTHEMUMS IN POTS.

For four large-flowering trained plants, Mr. W. Wilson, gardener to W. Cunningham, Esq., won with beautiful examples of Mrs. Dixon and Mrs. E. Beckett. Mr. J. Pilkington, gardener to A. A. Paton, Esq., had the best single specimen. For three singles, trained, Mr. T. Hitchman, gardener to A. Earle, Esq., scored with fine plants. The best trained pompone, shown by Mr. W. Wilson, was a model Mrs. Westlake. For six staked plants Mr. E. Wharton, gardener to John Findlay, Esq., secured the chief award, and Mr. E. R. Finch, gardener to W. J. Lockett, Esq., led for three plants.

MISCELLANEOUS PLANTS.

Begonia Gloire de Lorraine was best shown by Mr. R. T. Bushell, gardener to L. Noblett, Esq. For four stove or greenhouse ferns, Mr. G. Eaton, gardener to W. Tod, Esq., was well to the fore with Davallia fijiensis plumosus, Nephrolepis Pearsonsi, Dicksonia antarctica,and Davallia Mooreana. For three orchids distinct, Mr. P. Jakeman led with Oncidium varicosum Rogersi, Cattleya labiata, and Odontoglossum grande, while for a single plant, the same exhibitor scored with a good Cattleya labiata, securing the award for one cypripedium with C. insigne. The best three palms or cycads came from Mr. G. Osborne, gardener to Dr. J. A. Cook. The chief awards in both classes for six cyclamen went to Mr. L. Noblett.

FRUIT.

In the class for six dishes of fruit, Mr. E. F. Hazelton, gardener to the Earl of Derby, Knowsley, secured the premier award with Muscat of Alexandria and Alicante grapes, Pitmaston Duchess pears, Royalty melon, and Mother and Cox's Orange Pippin apples; Mr. J. Skitt, gardener to Mrs. Bright, second. For two bunches of grapes, Alicante, Mr. J. Skitt led with fine bunches, and in the any other black class Mr. W. Evans, gardener to Mrs. Jerome Smith, led with Gros Colman. For White Muscats Mr. W. Wilson scored, and for two bunches of any other white, Mr. Skitt led with Golden Queen. For four bunches in two varieties, the same exhibitor scored with Muscat of Alexandria and Alicante.

Mr. E. F. Hazelton led for six dishes of dessert pears with fine fruits of Beurre Diel, Pitmaston Duchess, Durondeau, Marie Louise, and Beurre Clairgeau. Mr. W. Mackerall, scored for four dishes, and Mr. E. F. Hazelton had the best stewing pears.

In the classes for dessert apples Mr. J. Lee led for six dishes, Mr. W. Mackerall for three dishes, and Mr. A. A. Evans for a single dish. Mr. J. Lee scored for eight dishes of culinary apples with grand Peasgood's Nonsuch, Lord Derby, Mère de Ménage, Bismarck, Bramley's Seedling, Emperor Alexander, etc. For four dishes Mr. A. A. Evans led, and for a single dish Mr. J. Lee led with Peasgood's Nonsuch.

NON-COMPETITIVE.

The non-competitive exhibitors included Messrs. R. P. Ker and Sons, cyclamen; the Liverpool Orchid Company, orchids; Mr. W. Rowlands, carnations; Messrs. T. Davies and Co., liliums, begonias, and lily of the valley; Messrs. Dickson's, apples; Messrs. Clibrans, begonias; and Messrs. Moore and Co., orchids.

National Chrysanthemum Society.

At the luncheon held at the Crystal Palace on the first day of the recent show, Sir Albert Rollit, D.C.L., LL.D., president of the society, occupied the chair, and there was a large muster of judges, exhibitors, officers, and other members of the society. Considerable enthusiasm was aroused by the receipt of a telegram from the president of the French Chrysanthemum Society at Tours sending cordial greetings to their English brethren, and a reply was sent later reciprocating the good wishes of the French chrysanthemists.

The President proposed the joint toast of "The Judges and Exhibitors," and in doing so called attention to the educational work which the society was undertaking by encouraging the culture of the chrysanthemum. The toast was coupled with the names of Messrs. W. Wells and J. W. Moorman (for the judges), and Messrs. H. J. Jones and R. Cannell (for the exhibitors). The toast of "The Crystal Palace Company" was proposed by Mr. E. F. Hawes, and replied to on behalf of the company by Mr. C. O. Starr, the general manager.

Mr. T. Bevan proposed the toast of "The President," which was enthusiastically received with musical honours. In acknowledging the toast Sir Albert Rollit said that he felt a great personal interest in the National Chrysanthemum Society; he had already been successful in obtaining a number of new members, and he hoped to be able to introduce more. He had had pleasure in presenting special prizes in connection with the show which was being held, and he would indicate his interest in the same practical way again.

United Horticultural Benefit and Provident Society.

The monthly meeting of this society was held on Monday evening, November 9, at the Horticultural Hall, Vincent Square, Westminster, Mr. Thomas Winter in the chair. Eight new members were elected, making a total of 71 this year to date. The deaths of two members were reported, and the amounts standing to the credit of the late members were paid to the widows, being £25 7s. 4d. and £16 5s. 5d. respectively. Sick pay for the month was £36 4s. The trustees were requested to invest £300 in Corporation stock. The annual dinner, held on October 15 last, at the Waldorf Hotel, was a very successful function.

ANSWERS TO CORRESPONDENTS.

SUGAR BEETS.—W. A. J., Basingstoke: The three varieties of sugar beet that have given the best results in this country, i.e., at Essex, Hunts, and Cambridge, are Cooper's Selected, Vilmorin's Improved, and Kleinwanzleben.

PROTECTING FIG TREES.—H. B., Derby: It will be quite early enough to protect fig trees when the leaves have all fallen. Then loosen the branches from the wall or trellis, and loosely tie them up into bundles. Bracken is the best material for wrapping round these bundles of branches. After putting this protecting material into position, tie the bundles firmly to a support, and in such a manner that, should very severe weather be experienced, the further protection of a mat or mats may be readily provided.

BLOTCHED SYCAMORE LEAVES.—A. E., Tetbury: The black blotches on the fallen leaves are evidence of an attack of the sycamore leaf blotch (Phytisma acerinum). This fungus attack is usually first noticed in June or July, when the blotches and patches are yellow, but they soon turn black and have a wrinkled surface. The chief cause of infection is from the ascospores that are liberated in spring from these black portions, hence it is a matter of the greatest importance that all fallen leaves of sycamores, maples, and planes should be collected in late autumn and at once burned, so that infection the following spring may be reduced materially and, possibly, be entirely prevented.

NAMES AND SYNONYMS OF TREES.—C. R., Loughton: Betula corylifolia is a Japanese tree not yet, so far as we are aware, grown by the trade. Quercus heterophylla is catalogued, and its horticultural synonym is Q. aquatica nana. Sassafras officinale has many synonyms, of which the chief are S. albidum, Laurus sassafras, L. albida,and L. diversifolium, Persea Sassafras, and Tetranthera albida. Quercus imbricaria is sometimes known as Q. Castanea, Q. laurifolia, and Q. Phellos imbricaria. Pyrus Tschonoskii is from Japan, and we know of no synonym. Pyrus cratægifolia is variously known as Cornus florentina, Cratægus florentina, Malus cratægifolia, Mespilus florentina, and Sorbus florentina. Prunus (not Pyrus) Besseyi, is the Sand Cherry of the North-Western United States, and its one synonym is P. pumila Besseyi. Pyrus arbutifolia, and Sorbus arbutifolia. Berberis as Aronia pirifolia, A. arbutifolia, Azarolus arbutifolia, and Sorbus arbutifolia. Berberis polyantha and B. Yunnanensis we do not know, and they are not in the most recent Kew Hand List. Rubus Millspanghi is probably a comparatively recent introduction. Aronia floribunda is probably an Amelanchier or a Pyrus, as Aronias are largely merged into these two genera. Cratægus monogyna foliis aureis is correct, but C. mongyna is regarded as a sub species of C. Oxyacantha, the Common Hawthorn, and dozens of varieties are included under it. Ulmus campestris variegata nova and U. campestris latifolia variegata are good names of well-marked varieties of the common elm. Rubus thyrsoideus is a good name for a European plant, but we do not find it catalogued. Philadelphus Lewisi is from Western North America, and its horticultural synonyms are P. thyrsiflorus and P. sanguineus; it is seldom catalogued. As you are interested in these matters, we suggest you purchase the Hand List of Trees and Shrubs grown in the Kew Arboretum; you can obtain a bound copy for 1s. 7d., on application to the Curator, Royal Gardens, Kew, and you will find it very useful in determining the synonymy of trees and shrubs, and the correct spelling of names.

CHRYSANTHEMUMS.—For full instructions on the Culture of Early-flowering Chrysanthemums in beds or borders for garden or greenhouse decoration, read CHRYSANTHEMUMS FOR GARDEN AND GREENHOUSE, by D. B. Crane, price 2s. 6d. net; or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149 Aldersgate Street, London.

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FROM THE OLD EDITION.

Strawberry-plant (*Fragaria vesca*)—see Fragaria.

Fragaria (Common Strawberry, Chili Strawberry, Hautbois' Strawberry, Alpine Strawberry, India Strawberry).—*Ord.* Rosaceæ. Hardy or half hardy perennial fruit bearing & orn. trailing plants. *Nat.* Britain, Europe, S. & N. America, India, Japan. *Int.* (foreign species) 1629. *Ht.* 6 in. to 1 ft. *Species* cultivated, about 6; varieties numerous. *Culture of Trailing species (F. indica): Compost*, two parts loam, one part leaf mould & sand. *Position*, pots in hanging baskets in cool greenhouse or window, or on sunny well drained rockery. *Pot or Plant*, Mar. *Water* moderately. *Apply* liquid manure occasionally in sum. *Culture of Strawberry: Soil*, deep rich sandy loam; clay unsuitable. *Position*, open plots or borders, trenched 2 ft. deep, alpine kind under shade of trees or on banks. *Plant*, Aug., Sept., or Mar. 18 in. apart in rows 2½ ft. asunder; alpines 6 in. apart. *Mulch* annually with manure in Mar., & a thin layer of straw in May. *Water* frequently during June. *Apply* liquid manure as soon as fruit changes colour. *Remove* runners when they appear. *No digging* between rows necessary. *Renew* beds every three or four years. *Pot culture: Compost*, two thirds calcareous loam, one third decayed manure, little bone dust. *Position*, on bed of cinder ashes outdoors Aug. to Oct.; frames Oct. to Jan.; greenhouses or vineries after Jan. *Pot* singly in 6 in. pots in Aug. *Water* moderately till Oct., very little till Jan., freely afterwards. *Fertilize* blossoms by means of camel hair brush. *Thin* fruit when set to a few on each plant. *Plant* out in garden after fruiting. *Temp. for forcing*: Jan. to Mar. 45° to 55°; Mar. to ripening period, 65° to 75°. *Propagate* by seeds sown 1/16 in. deep in light soil outdoors, or in boxes in greenhouse in Mar. or Ap.; by runners pegged on surface of soil in 3 in. pots in June or July, or by removing rooted runners in Aug. Runners rooted into pots best for pot culture.

FROM THE NEW EDITION.

Strawberry.—See Fragaria.

Fragaria (Strawberry).—Ord. Rosaceæ. Hardy & half-hardy perennial fruit-bearing & orn. trailing plants. Virginian Strawberry first introduced 1629.

CULTURE OF ORNAMENTAL SPECIES (F. indica): Compost, two parts loam, one part leaf-mould & sand. Position, pots in hanging baskets in cool greenhouse or window, or on sunny well-drained rockery. Pot or plant, March. Water moderately. Apply liquid manure occasionally in summer.

CULTURE OF STRAWBERRY: Soil, deep rich sandy loam; clay unsuitable. Position, open plots or borders, trenched 2 ft. deep, alpine kind under shade of trees or on banks. Plant, Aug., Sept., or March 18 in. apart in rows 2½ ft. asunder, alpines 6 in. apart. Mulch annually with manure in March, & a thin layer of straw in May. Suitable artificial manure, 1 oz. sulphate of potash, 2 oz. superphosphate applied in autumn, & 1 oz. of nitrate of soda per square yard, applied when fruit has set. Remove runners when they appear. No digging between rows necessary. Renew beds every three or four years.

POT CULTURE: Compost, two-thirds calcareous loam, one-third decayed manure, little bone dust. Position, on bed of cinder ashes outdoors Aug. to Oct.; frames Oct. to Jan.; greenhouses or vineries after Jan. Pot singly in 6 in. pots in Aug. Water moderately till Oct., very little till Jan., freely afterwards. Fertilize blossoms by means of camel-hair brush. Thin fruit when set to a few on each plant. Feed with liquid manure after fruit has set until it begins to ripen. Plant out in garden after fruiting. Temp. for forcing: Jan. to March 45° to 55°; March to ripening period, 65° to 75°. Propagate by seeds sown 1-16 in. deep in light soil outdoors, or in boxes in greenhouse in March or April; by runners on plants that fruit freely. Pegged on surface of soil in 3 in. pots in June or July, or by removing rooted runners in Aug. Runners rooted into pots best for pot culture.

MARKET CULTURE: Soil, loam overlying chalk or gravel. Position, open, not too dry or moist. Plant, Aug. to Nov., 18 in. apart in rows 2 ft. 6 in. asunder. Number of plants per acre, 11,000. Average cost per acre: Plants, £3; preparing land, £7; manure, £5; planting, 10s.; trimming, 15s.; gathering fruit, £8; annual manuring, £5; yield, 2 tons; gross returns, £42; net returns, £25. Manures: Farmyard dung, 20 tons; bonemeal, 5 cwt.; and kainit, [illegible] cwt. per acre, applied in winter; soot, 40 bushels per acre applied in spring.

SPECIES CULTIVATED: F. chiloensis (Chili Strawberry), white, May, 1 ft. [illegible] (Hautbois Strawberry), white, summer, [illegible] (Indian Strawberry), yellow, June, trailing, [illegible] suited for rockeries or hanging baskets; virginiana (Scarlet Strawberry), white, May, fruit scarlet, edible, United States, parent of the many forms of garden strawberries.

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SCAB ON APPLES.—J. R., North Wales: The dreaded apple scab is one of the most destructive of diseases that attack apples and pears, and, as in the specimen sent, when it becomes prevalent, the fruits are worthless. Thorough winter washing with the caustic soda wash, collecting and burning all fallen leaves, and good cultivation, will materially help to rid the trees of this fungus pest. When leafless the trees should be carefully examined, and as growths are attacked as well as the fruits, the former, where diseased, should be cut out and promptly burned. But this will not entirely dispose of the trouble when the disease has become so widespread, and the winter cleaning and pruning must be followed by spraying the trees liable to attack three times with Bordeaux mixture, the first when the buds are beginning to open, the second when the petals of the flowers are falling, and the third when the fruits are of the size of small gooseberries. The Bordeaux mixture must be used in a dilute form because of the risk of injury to the tender foliage.

SPOTTED CABBAGE LEAVES.—J. R., North Wales: The leaves sent give ample evidence of a very severe attack of cabbage leaf spot at an earlier date. Spraying the young plants with a solution of sulphide of potassium or weak Bordeaux mixture would probably act as a preventive; but if the crop is all attacked as badly as the specimen sent, the plants are so badly infected that nothing can be done to save them, and the sooner they are pulled up and burned the better. You seem to have a great deal of trouble from plant diseases; let us know something about your garden and its surroundings, so that we may help you.

WOOD-BORING CATERPILLAR.—J. T., Henley: The caterpillar in the piece of apple wood sent is the larva of the Goat Moth (Cossus ligniperda). This is a pest on some occasions, and in some districts, as it penetrates almost any kind of wood, living or dead. The female moth deposits her eggs in the crevices of the bark, and when the grubs are hatched they at once set to work to eat their way through the bark into the wood, and right into the heart of the tree. The caterpillars take about two years to become full fed, and they then make a strong cocoon, assume the chrysalis state, and about June or July emerge as the perfect moth. A sharp look-out should be kept for the moths during June and July. Badly infested trees should be cut down and split up, and the caterpillars be found and killed. In other cases the holes should be found, and they can usually be discovered by the sawdust that works out of them, and strong wire should be forced into these holes so as to pierce and kill the grubs. It is probable that cyanide of potassium placed in the hole would kill the grub by means of its deadly fumes, but we have not seen this tried for the purpose, and the cyanide fumes are so deadly that we hardly like to suggest its use.

NAMES OF PLANTS.

S. R., Loughton.—Achimenes longiflora.

M. C. E., Bangor.—1, Abies nobilis; 2, A. Nordmanniana.

J. W., Handsworth.—1, Cryptomeria elegans; 2, Sequoia sempervirens.

F. B. G., Wellingborough.—1, Leycesteria formosa; 2, Cupressus Lawsoniana Allumi; 3, C. L. glauca.

S. N. B., Dorking.—1, Gautheria Shallon; 2, Viburnum Tinus; 3, Cotoneaster Simmonsi; 4, C. horizontalis.

F. B., Lynn.—1, Lygodium scandens; 2, Oncidium varicosum Rogersi; 3, Linum trigynum; 4, Jasminum nudiflorum.

E. H., Biggleswade. — 1, Mimulus glutinosus; 2, Maranta zebrina; 3, Asplenium Nidus-Avis; 4, a head of Gomprehna globosa.

NAMES OF FRUITS.

We are compelled to hold over numerous replies under this heading.

F. F. E., Ilkley.—1, Beurre Clairgeau; 2, Catillac.

S. T. C., Hertford.—1, Tyler's Kernel; 2, Court of Wick.

P. H., Saxmundham.—1, Mère de Ménage; 2, Lord Derby; 3, King of the Pippins.

K. J. W., Chester.—1, Court Pendu Plat; 2, Braddick's Nonpariel; 3, Ribston Pippin.

M. B., Rochester.—1, Gloria Mundi; 2, Dumelow's Seedling; 3, Adam's Pearmain.

C. H., Edgbaston.—1, Twenty-ounce; 2, not recognised; 3, Bellisime d'Hiver; 4, Beurre Diel; 5, probably a local seedling; 6, Lane's Prince Albert.

MARKETS.

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		s. d.		s. d.
Adiantum cuneatum	per doz. bun	5 0	to	9 0
Arums	per doz.	2 0		4 0
Asparagus	per doz. bun.	1 6		6 0
Azaleas	per doz. bun.	4 0		6 0
Bouvardias	per doz. bun.	6 0		8 0
Camellias	per doz.	1 6		2 6
Carnations	per doz. blms.	1 0		4 0
,,	per doz. bun.	8 0		12 0
Cattleyas	per doz.	8 0		10 6
Chrysanthemums	per doz. bun.	5 0		10 0
,,	per doz. blms.	2 0		3 0
Croton leaves	per bun.	1 0		1 6
Cypripediums	per doz. blms.	2 0		3 0
Eucharis	per doz.	2 0		3 6
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	1 6		2 6
Gypsophila	per doz. bun.	2 0		3 0
Lapagerias	per doz.	1 6		2 0
Lilac (French)	per bun.	4 0		5 0
Lilium auratum	per bun.	2 0		3 0
,, candidum	per bun.	1 0		2 6
,, speciosum	per bun.	1 6		3 0
,, longiflorum	per bun.	2 0		4 0
Lily of the Valley	per doz.	8 0		15 0
Marguerites, white	per doz. bun.	2 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 0		4 0
Narcissus, Paper White	per doz. bun.	2 0		3 6
Odontoglossums	per doz. blms.	2 6		3 6

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Snowdrop	per ton	80 0		85 0
Maincrop	per ton	65 0		70 0
Puritan	per ton	65 0		70 0
Up-to-Date	per ton	60 0		70 0

FORTHCOMING ENGAGEMENTS.

SATURDAY, November 14.—British Gardeners' Association, meeting at Haslemere, 7.30 p.m.

TUESDAY, November 17.—Winchester Chrysanthemum Society; two days.

WEDNESDAY, November 18.—Bristol Chrysanthemum Show; two days.
Royal Society of Arts.
Hayward's Heath Gardeners' Society.

THURSDAY, November 19.—Scottish Horticultural Association; three days.
Norwich Chrysanthemum Show; three days.
Brighton Horticultural Society Meeting.

FRIDAY, November 20.—Bolton Chrysanthemum Show; two days.
Dunfermline Chrysanthemum Show; two days.

METEOROLOGICAL OBSERVATIONS.

TAKEN BY THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. November 1 November 7.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 1 - Sunday	0 55	52	52	61	47
,, 2 - Monday	4 40	48	48	57	43
,, 3—Tuesday	5 0	45	45	56	44
,, 4 - Wednesday	2 30	46	46	54	39
,, 5—Thursday	—	42	42	50	37
,, 6—Friday	1 35	39	39	50	36
,, 7—Saturday	4 5	37	35	45	33
Means	2 40	44	44	53	40

Date. 1908. November 1 to November 7.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Nov. 1—Sunday	—	52	52	53	43
,, 2—Monday	—	52	51	53	40
,, 3—Tuesday	—	51	53	53	42
,, 4—Wednesday	—	50	52	53	36
,, 5—Thursday	—	49	52	53	34
,, 6—Friday	—	48	51	53	30
,, 7—Saturday	—	47	51	53	28
Means	(total) —	50	52	53	36

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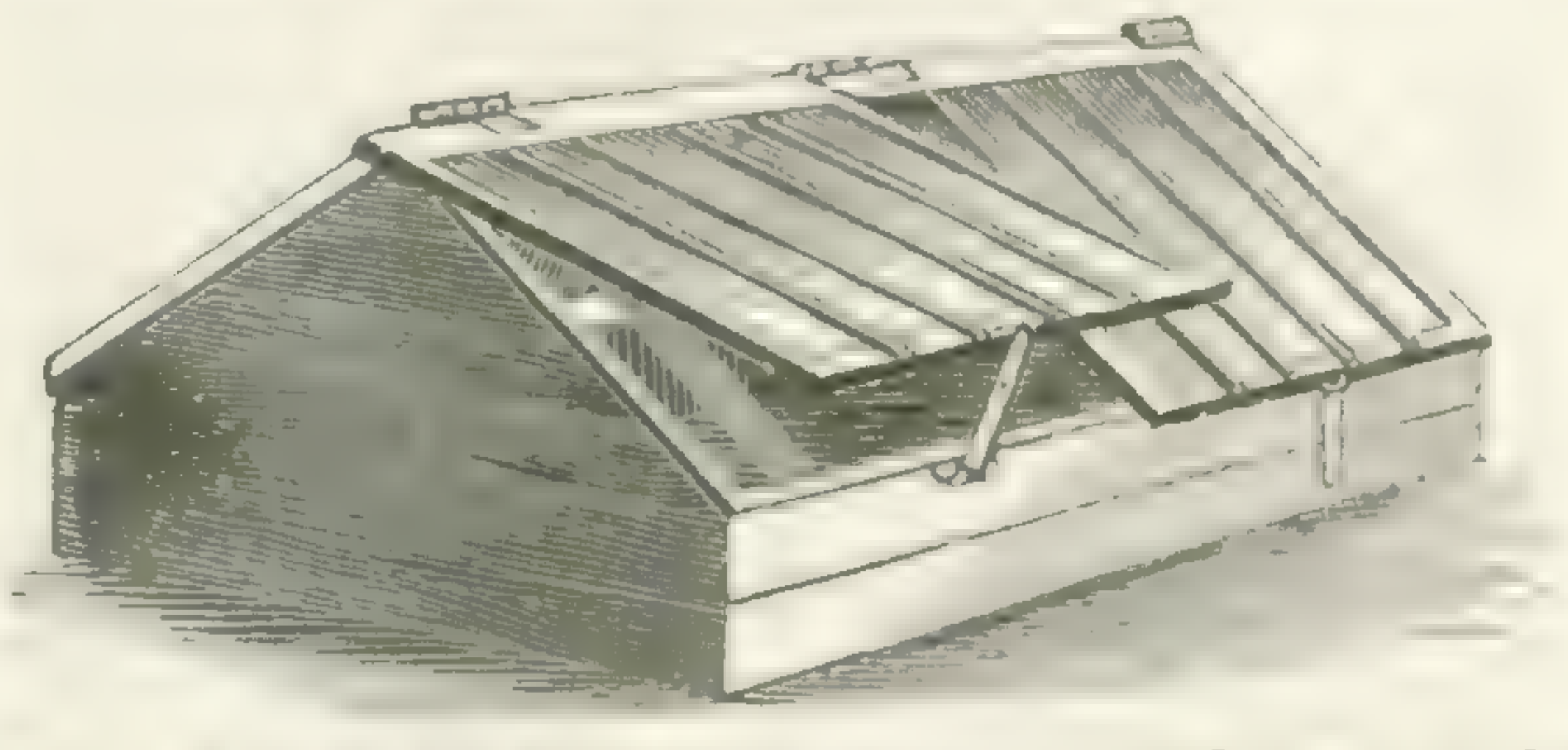

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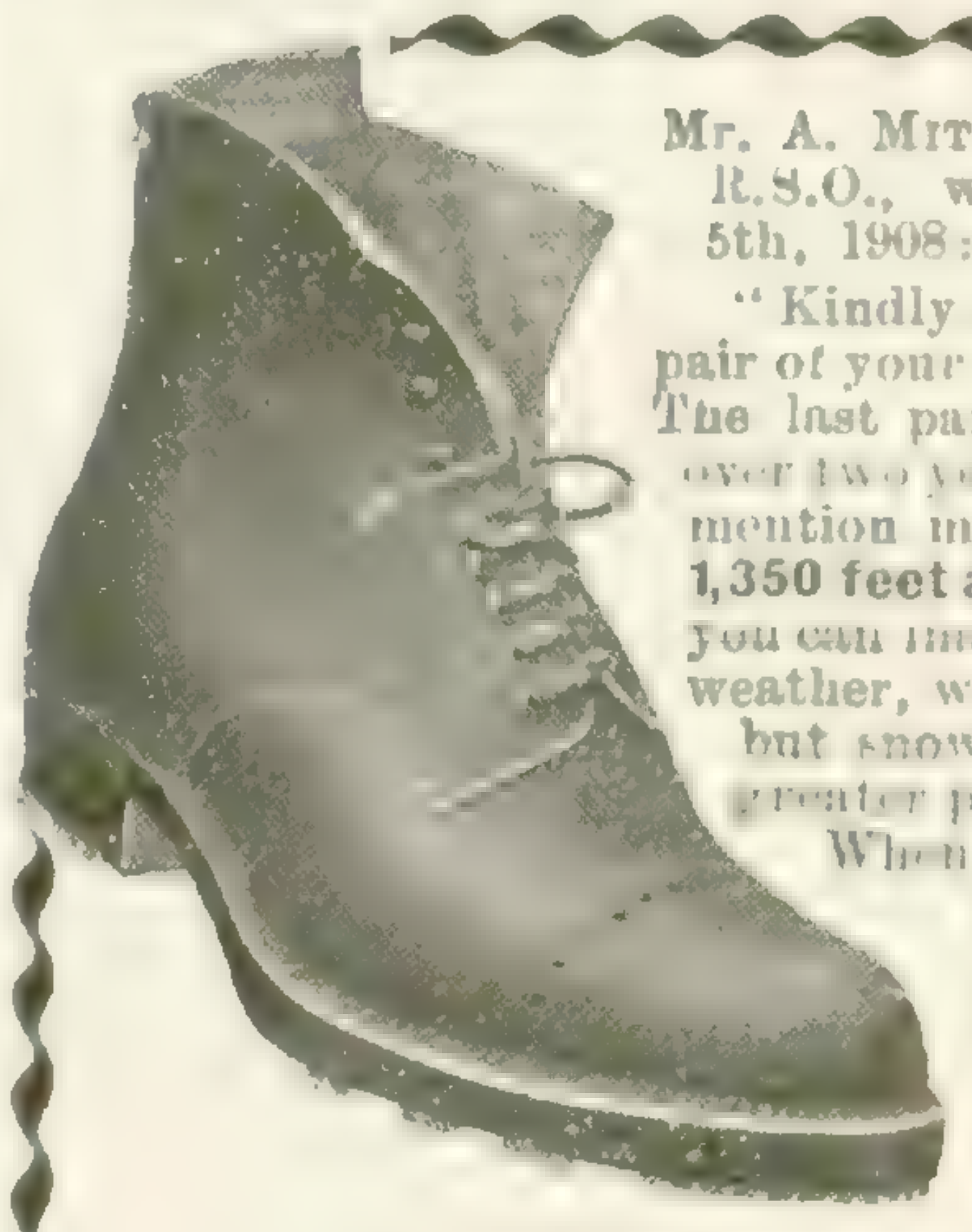

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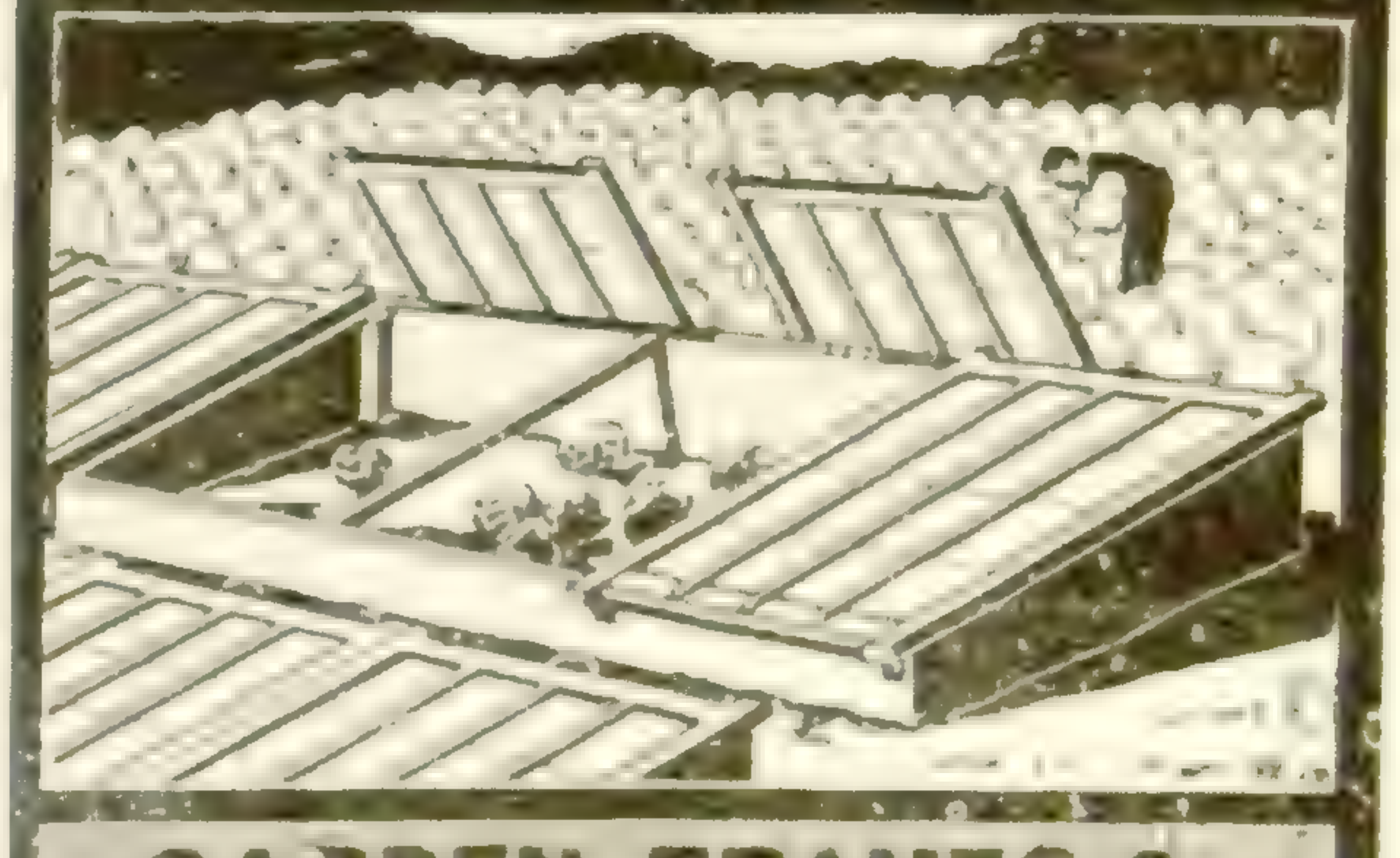

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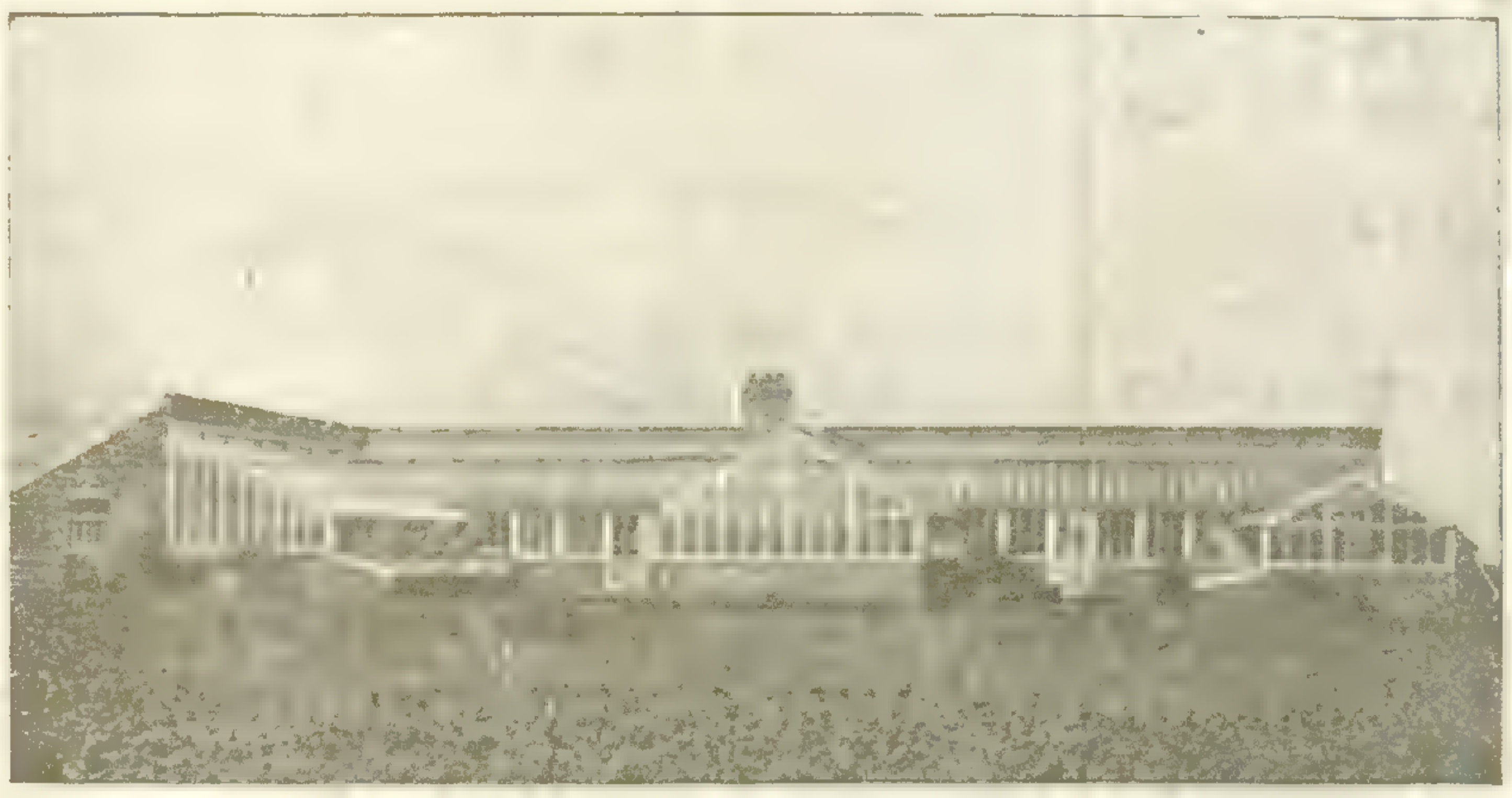

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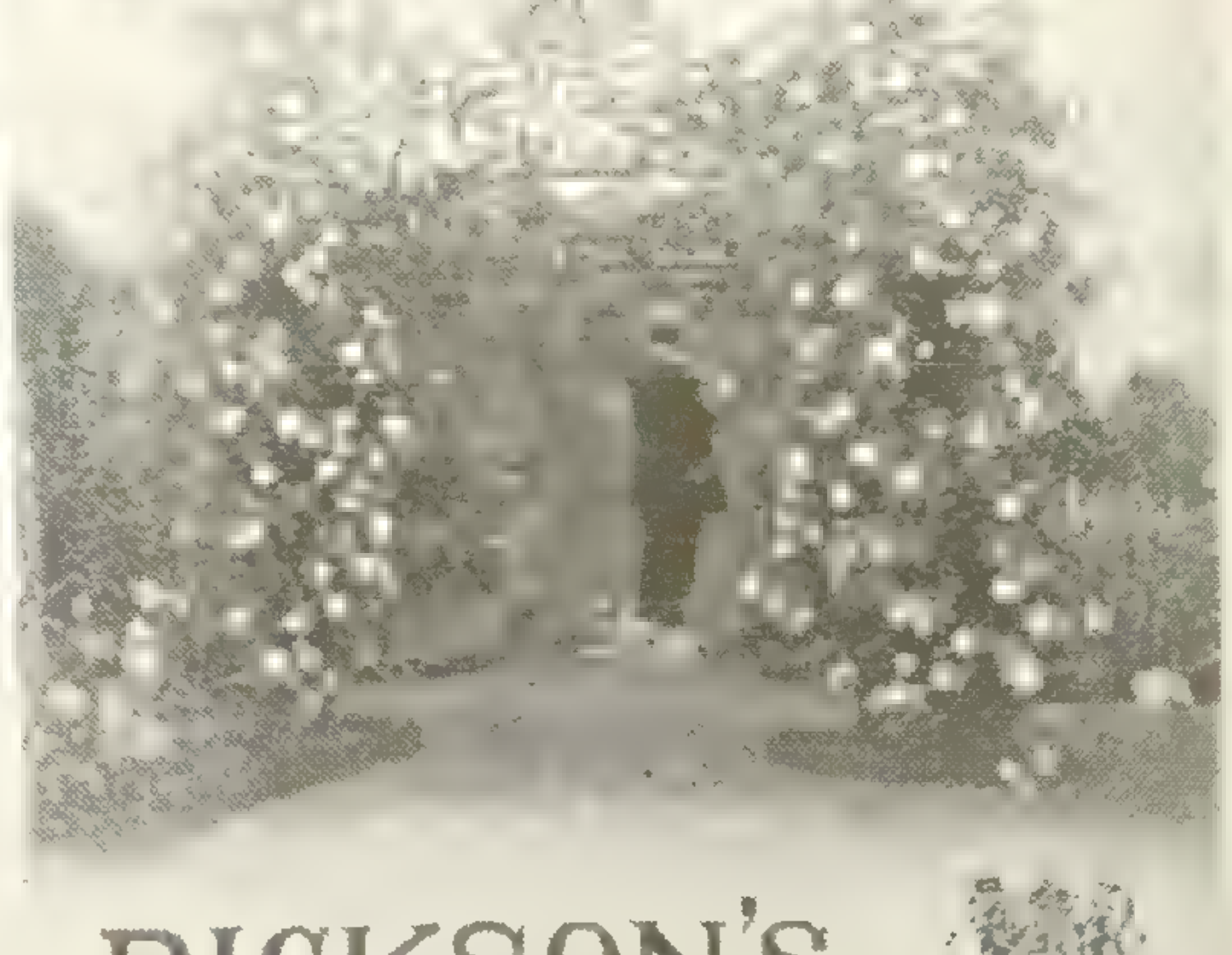

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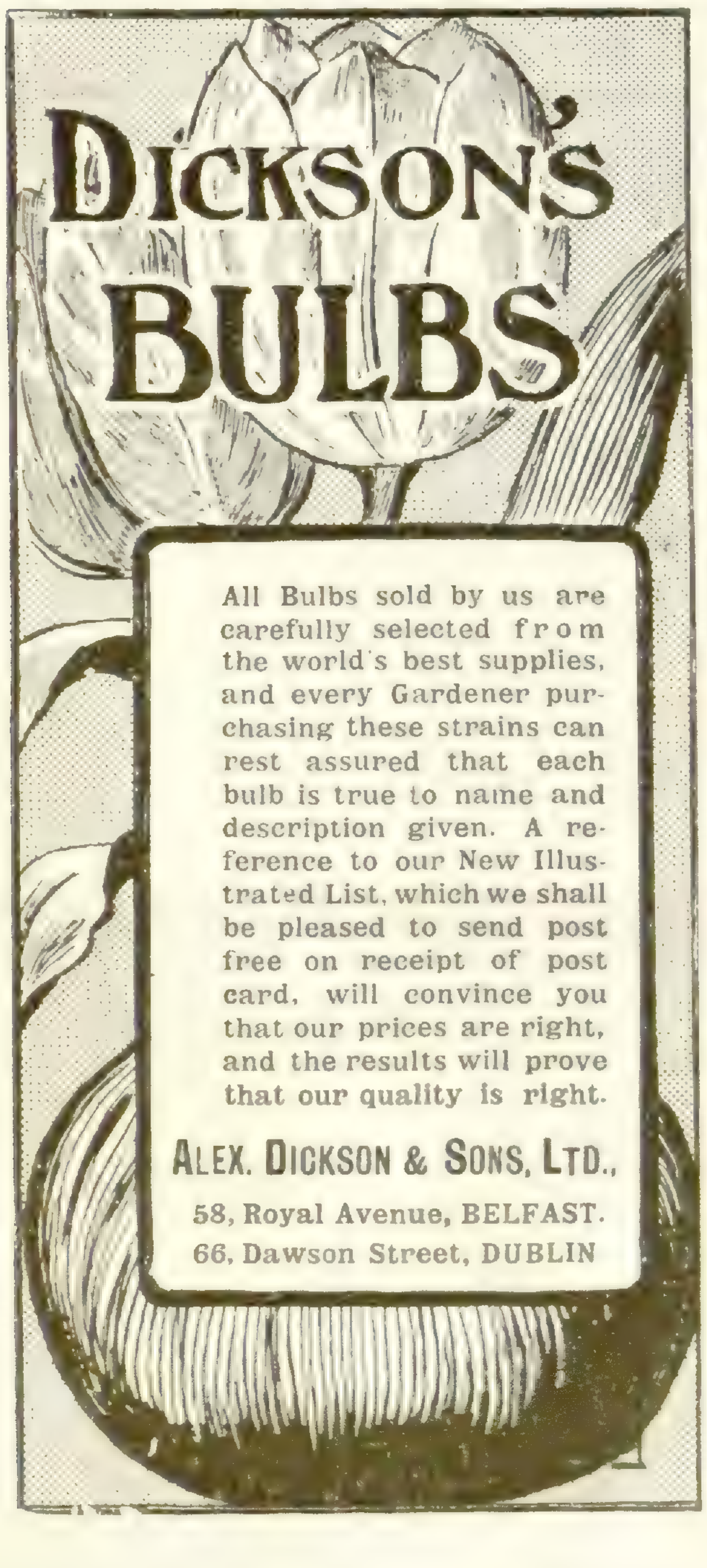

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VOL. LI.—No. 2,873. SATURDAY, NOVEMBER 21, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

"French Gardening."

We have placed the heading to this note within inverted commas because it has reference, not to the many and varied aspects of horticulture in France, but to a branch of the market gardening industry around Paris, which some writers and speakers have of late been so freely describing as French gardening. In making this reference we have two objects in view. One, to again bring into prominence the advantage that would be derived from following as closely as may be practicable the methods that obtain around Paris in the production of winter and spring salads, and certain other vegetables that are in request early in the year. The other, to warn those of our readers who may have been influenced by the statements as to the enormous profits derived from this branch of market gardening against investing their capital in market gardens formed in accordance with the French system until they have had some practical experience thereof. The desirability of having liberal supplies of tender lettuces, crisp radishes, delicately flavoured cauliflowers, and succulent carrots and turnips of home growth from midwinter onwards will be readily conceded. It would be well were these vegetables to be had in abundance in the private household, and they should certainly be supplied to the home markets in liberal quantities, without having to depend almost wholly upon the French market gardens for such things. We have on more than one occasion directed attention to the immense value of glass in the production of winter salads and early spring vegetables, and have urged upon our readers the importance of private gardens being well furnished with frames, either unheated or provided with sufficient hot-water piping to maintain a genial warmth during periods of severe frost and wet, damp weather. The value of glass, without artificial heat, in the protection of tender vegetation, is so great that it would be difficult to overestimate it. This is known to practical men with some experience; but few owners of gardens are able to appreciate it, or they would make a more liberal provision of frames than is usually the case. To demonstrate the value of protection in the maintenance of a supply of lettuces during winter and spring one has only to put a few handlights or bell glasses over lettuces that have been planted in open beds to stand the winter. With but little attention those provided with shelter will, at the end of the winter, be of a size suitable for the salad bowl, and tender and delicate in flavour, and present a very different appearance to those which have been subjected to the unfavourable conditions characteristic of our winters. We might also follow the example, as far as circumstances will permit, that the French growers have set us in the use of shallow hot-beds and rich soil in the cultivation of salads and early vegetables. Unfortunately, the private gardens are not numerous wherein stable manure, otherwise than in comparatively small quantities, can be obtained. With regard to the production of winter salads and early vegetables for market, we have on several occasions suggested that there was no good reason why a large proportion of these products should not be grown at home, instead of being imported as for so many years has been the case. We have also expressed the opinion that market growers, whose land was favourably situated, and within a convenient distance of a town whence suitable manure could be obtained, would derive a good profit from the crops. Nothing has occurred that would justify a change in our opinion upon this point. But, and this word has much significance at this juncture, we have been careful to avoid suggesting that the profit, while large, would be greatly beyond what a skilful cultivator with advanced ideas would have a right to expect. It would have been well had a very large proportion of those who have been discussing the so-called French gardening in the newspapers shown a similar degree of moderation. One could hardly expect that, as moderation comes only from a knowledge of the subject under discussion. However that may be, those who are acquainted with the branch of market gardening under consideration cannot avoid a feeling of regret that some reserve has not been shown by certain writers in their estimate of the profits. One regrets this, because, after reading that many hundreds of pounds may be annually obtained from an acre or so of land cultivated in accordance with French methods, there is a danger of people utterly unfitted to the work taking up land, furnishing it with frames and cloches, and losing the greater part, if not the whole of their capital. In this view of the case we are fully supported by what was said by Mr. McKay, in the course of his address before the Horticultural Club the other evening. Mr. McKay has, during the past two or three years, devoted much attention to the introduction of the French methods into the market gardens in this country, and he conducted a party of

MR. T. H. SLADE.

market growers from the Evesham district through the principal market gardens in the vicinity of Paris. He was careful to explain that he was in no way responsible for the extravagant statements that had been made with regard to profits, and that there was a risk of those who had no experience of growing for market losing their money if they engaged in the industry. He pointed out that not only did the market gardener work, but that the wife, and every member of the family that was old enough and strong enough, helped him. Further, he stated, and of this we were well aware, that the work in summer is commenced with the dawn, and ended with the twilight, and in winter work is commenced long before the first streak of daylight is visible above the horizon. Notwithstanding this long and strenuous effort, market growers around Paris do not appear to do more than earn a comfortable living. There are other points upon which we should like to touch, but as we have said sufficient to show the great risk incurred in entering into French gardening, so called, without first having obtained experience, we need not pursue the subject further. There is no occasion to warn gardeners of the great danger incidental thereto, but we strongly advise those who contemplate leaving the workshop, the counter, or the counting-house for the purpose of embarking in this form of market gardening, to dismiss the matter from their mind, and thus avoid the loss that such a step would entail.

Mr. T. H. Slade, who for thirteen years has been head gardener at Poltimore Park, near Exeter, is one of the best-known of gardeners in the South-western counties, while his fame as an exhibitor, especially of hardy fruits, has extended throughout the country. Our readers also know Mr. Slade through his contributions to these pages, his notes on hardy fruits, winter-flowering carnations, and roses invariably finding appreciation. Mr. Slade has had a wide experience, and he was for many years at Cardiff Castle, where, under the late Mr. Pettigrew he helped to plant the famous Castle Coch vineyard. Mr. Slade was employed in Kent, Surrey, Sussex, and in the North of England before going to Poltimore, where, under his direction, many and important improvements have been made in the extensive gardens and pleasure grounds of Lord Poltimore's fine Devonshire seat. We may add that Mr. Slade has had considerable experience as a lecturer on horticulture for the Devon County Council, and he is much in request as a lecturer and judge.

National Horticultural Society of France.—This society, presided over by M. Viger, has of late years made very marked progress, owing largely to the fine position in which it has been able to hold its spring and autumn shows. It was founded in 1855, and has a fine hall and offices at 84, Rue de Grenelle. The annual subscription is 20 francs, and anyone interested in horticulture can join. A journal, published monthly, is supplied free to members. The library of the society is unequalled by any other society in Europe for the number and rarity of horticultural and botanical works it possesses. Altogether they amount to upwards of 15,000 volumes, and Mr. George Gibault, the librarian, has prepared and published a very useful classified catalogue of this unique and magnificent collection. The roll of membership, including affiliated societies, is now 4,203.

The Best Rose at the Bagatelle Gardens.—In the trials of roses held in the Bagatelle Gardens, Paris, and which have been judged, not once, but throughout the season, the new rose Rhea Reid, from Messrs. E. J. Hill and Co., Richmond, Ind., U.S.A., received the grand prize of a gold medal as the best variety out of eighty-four submitted by growers from all parts of the world. At the first judging the Lyon rose scored the highest, but Rhea Reid did well, and at the autumn judging the latter variety outdistanced its competitors, and gained the premier award.

Seedling Chrysanthemums are becoming increasingly popular, and it is a matter of some interest that they receive special attention at the exhibitions of the Reading Chrysanthemum Society. To the Reading show, held the other day, Messrs. Sutton and Sons contributed a large and beautiful display of flowers raised from seed sown at the end of January last. While noteworthy for its attractiveness, the display was of much interest as evidence of the high quality of flowers of seedlings when raised from seed obtained from first-class flowers. The large silver medal was awarded the firm for their exhibit.

Conservatory Flowers at Kew.—An inspection of the flowers arranged in the No. 4 house at Kew always proves interesting and instructive, but especially so in the dull season of the year. At present the Japanese, single, and decorative chrysanthemums continue to provide the bulk of the display, but besides these there are begonias of many kinds, including the Gloire de Lorraine and Veitchian types, primulas, cinerarias, heaths and epacrises, acacias, camellias, carnations, darwinias, correas, narcissi, Sparmannia africana, Aristia corymbosa, solanums, Calceolaria Burbidgei, fuchsias, Lycosis aurea, Cuphea micropetala, Lilium sulphureum, lily of the valley, zonal and ivy-leaved pelargoniums, eupatoriums, Perestrophe speciosa, ardisias, Jacobinea chrysostephana, Leonotus leonurus, arums, heliotropes, Cosmos bipinnatifolia, Chironia linoides, Plumbago capensis, and P. rosea, Phyllica capensis, Salvia splendens, Pleroma macrantha, Buddleia asiatica, cyclamens, Daedalacanthus nervosus, abutilons, etc., etc.

Italian Gardens will form the subject of a lecture to be given by Mr. Joseph Cheal, at the meeting of the Royal Horticultural Society on Tuesday next. The chair will, as usual, be taken at 3 p.m.

Potato Disease in Ireland.—In reply to a question in the House of Commons Mr. T. W. Russell stated that it was quite true that the disease of potatoes known as "black scab," had made its appearance in Ireland. He had received information that this particular disease had been reported from two centres in county Down. The inspector had visited the district and declared the disease in both cases to be "black scab." In one case the potatoes had been dug, and the inspector had ordered the immediate destruction of a portion of the crop, and his order had been complied with. In the other case the crop was still in the ground and notice had been served that the potatoes were to be left in the ground pending further instructions. He did not think that the department could be armed with greater authority than it possessed under their Acts of Parliament to deal with a calamity of this kind. Recognising it to be a calamity to Ireland, the department would leave nothing undone to stop the progress of the disease. Replying to further questions, Mr. Russell said that there was nothing whatever to prove that the disease originated from imported seed potatoes, and he had a great objection to issuing an order to stop their importation and thus raise the price of potatoes all over Ireland.

Trials of Fruit Tree Spraying Machines.—The Royal Agricultural Society of England intends offering prizes for spraying machines at its show to be held at Gloucester on June 22-26, 1909. In Class II., for the best machine worked by hand power, for use in commercial plantations, the prizes are £10 and £5; in Class III., for a movable plant for spraying large plantations, and to be worked by steam, petrol, or mechanical power, the prizes are £20 and £10. Entries must be sent to the secretary of the society, 16, Bedford Square, W.C., by March 20 next. The chief points to which the judges' attention will be directed are: Class II., For the best machine worked by hand—Efficiency in work and adaptability to different kinds of trees or bushes, and capability of throwing different kinds of sprays; portability, regard being had to different systems of planting; power and number of men required for working; durability; capability of withstanding chemical action of washes; prime cost. Class III., For the best movable plant, to be worked by steam, petrol, or mechanical power.—Efficiency in work and adaptability to different kinds of trees or bushes, and capability of throwing different kinds of sprays; adaptability to different classes of plantations; capability of withstanding chemical action of washes; economy of working; durability; prime cost.

An Encouraging Letter.—The staff of the Gardeners' Magazine, whether in editorial, publishing, or printing departments, consists of essentially human beings, and, therefore, an encouraging letter, and a recommendation of our work to others, comes as a very pleasant item in the daily rush of duty. We have many such pleasing letters and recommendations, and the following from a Midland friend is an example: "I take this opportunity of stating how very much I like the new and improved form in which the Gardeners' Magazine now appears. I have been a regular reader of the paper for nearly twenty years, and find it, now, as always, the most reliable and up-to-date of all gardening papers published."

"Le Jardin" Chrysanthemum Number.—On the occasion of the twenty-fifth annual chrysanthemum show in Paris, our French contemporary, "Le Jardin," blossomed forth into a special chrysanthemum number, inspired no doubt by the example of the Gardeners' Magazine some years ago. The number contains articles by most of the well-known French growers, viz., Messrs. Cordonnier, Nonin, Calvat, Baltet, Dubuisson-Foubert, Chantrier, Bruant, Rivoire, Cavron, Momméja, Vilmorin, Dolbois, besides others interested from a literary point of view. The number is profusely illustrated with portraits, some of which are reproductions of the originals in the Gardeners' Magazine Special Chrysanthemum Number of October 26, 1889. There is also a coloured illustration, half natural size, of the Japanese chrysanthemum F. S. Vallis, and some curious Japanese illustrations from the collection of M. Momméja, a well-known collector and amateur grower. It may be interesting to record that the portrait gallery consists of pictures of Capt. Blancard, Capt. Bernet, Pertusès, Joseph Sabiné, Robert Fortune, Nonin, De Reydellet, Simon Delaux, Louis Lacroix, Cordonnier. Calvat, Chantrier, Bruant, Rivoire, Cavron, Ph. de Vilmorin, Momméja, and Debrie-Lachaume.

Tobacco Culture in Ireland has so far proved successful that those engaged in the conduct of the experiments in connection therewith have obtained the sanction of the Government to continue them until the year 1913. Commencing in 1898 on a small scale the experiments steadily increased, and in 1903 the then Chancellor of the Exchequer gave permission for the area of cultivation to be increased to 100 acres, and this limit has now been reached. At the present stage of the experimental work the following historical sketch of tobacco growing, given by the "Times" in a comprehensive article on the subject is of much interest: The present experiments may, observes the correspondent of our contemporary, be said to date from 1898, when the plant was cultivated on Irish soil for the first time since its proscription in 1831. The earlier history of the industry had been lengthy but interrupted. According to a not improbable tradition, the "Indian weed" was cultivated by Sir Walter Raleigh at Youghal, when he first introduced it from the New World. It was certainly grown in Ireland, as also in England, in considerable quantities during part of the seventeenth century. Its cultivation was then prohibited by two Acts of Charles II.'s reign, passed for the express purpose of fostering the same industry in the American colonies. For the same reason, the cultivation of the plant which had been largely carried on round Cheltenham and Winchcombe, in Gloucestershire, had already been forbidden under the Protectorate. This prohibition lasted in the case of Ireland until 1799, when tobacco-growing was again permitted as one result of the rebellion of the previous year. Its continuance, moreover, was specially guaranteed by the Act of Union. Not much advantage seems to have been taken of the permission, however, until about 1820, when the industry was revived by the help of labour trained in the American plantations. By 1829, 500 acres were once more under cultivation in six counties, the chief centre being in Wexford and Waterford. The coarse variety grown at this time has perpetuated itself in Wexford as a casual weed until the present day. Two years later tobacco growing was again proscribed, this time apparently in deference to the convenience of the Excise department, which found it easier to concentrate this whole branch of its business at the seaports than to keep an eye on the various inland centres of the industry.

Richthofenia is the name of a new genus of the unique order Rafflesiaceæ discovered in Siam. The plants of this order, as "Nature" observes, are parasitic herbs, consisting of a vegetative structure reduced to a network of cellular threads ramifying in a host plant, and of flowers subtended by a few scale leaves. The new genus, Richthofenia, falls into the tribe Rafflesieæ, together with the genera Rafflesia, Sapria, and Brugmansia. It is similar to Rafflesia in the possession of a plurilocular ovary, but agrees with Sapria as regards its bilocular anthers. It thus forms a connecting link between the two genera. Its habitat, too, lies between the Malayan home of Rafflesia and the Himalayan locality of Sapria.

PARIS AUTUMN SHOW.

The annual autumn show of the National Horticultural Society of France was held on November 6 to 15, inclusive, in the large greenhouses on the Cours la Reine, Paris. It was the last of a series of very successful shows held there, as the authorities have decided to pull down these imposing glass structures, originally erected for the Universal International Exhibition of 1900. The fruit, flowers, especially chrysanthemums, and vegetables were shown in enormous quantities, and everyone seemed bent on doing their best towards making the show one of the best the society has ever held.

After passing through the entrance near the Alexander III. Bridge, and proceeding along the spacious promenade leading up to the show, we noticed many important exhibits of trained fruit trees, right and left, the chief exhibitors being Messrs. Croux and Sons, Nomblot-Bruneau, Moser and Sons, Lecointe A. Martin, George Boucher, A. Lievre, and Brochet. Some tastefully arranged groups of conifers and other ornamental shrubs lined the route, and came from Messrs. Alfd. Monnier, Lecointe, Brochet, Paul Lecolier, and others. Immense numbers of exhibits in the horticultural arts and industries were also staged in this part of the show ground.

Directly the visitor penetrated the first of these greenhouses he found, on his right and left, two rooms specially devoted to the orchids and stove plants. One of these was filled by Messrs. A. Truffant and Sons with a large and artistically arranged collection of azaleas, begonias, orchids, anthuriums, dracænas, and other plants in great variety. In the opposite room were many choice collections of orchids from well-known growers, such as Messrs. Beranek, Regnier, Lesueur, Maron, and others.

Passing from this room into the body of the greenhouse we noticed a fine display of chrysanthemums by Messrs. Vilmorin Andrieux, and Co. There were several ornamental shaped borders filled with dwarf pot plants in great variety. A few steps further brought us to a large sunken garden, with sloping grass sides, upon which were placed some gigantic trained specimen plants bearing large blooms. Loisseau-Rousseau, Papa Bie, Nivôse, Femina, and Polyphème were some of the finest.

On the right-hand side a well-known exhibitor, M. Leon Cavron, made a grand display of grafted and standard plants; we noted among them Chrysanthémiste Leroux, Swanley Giant, Surprise, Amateur, Rozières, and many others, principally popular French kinds. There was also a nice collection from M. Govignon, of dwarf pot plants, Phœbus, Oceana, Mrs. Barkley, Le Peyron, W. Tricker, Mrs. Ed. Roger, Pride of Exmouth, being only a few of the most attractive. Messrs. Cordonnier had four good beds filled with large cut blooms. Messrs. Leveque had several others, noteworthy for their dwarf plants in pots. M. Pinon had a huge border filled with all kinds of trained specimens in a multitude of forms. M. Lachaussée showed a long group of plants carrying three or four blooms on each, a good display. From M. Opoix, gardener at the Luxembourg Palace, came more chrysanthemums, prettily staged with a border of ferns, single chrysanthemums, and the decorative variety Baronne de Vinols. Other good lots of the popular autumn flower close at hand came from the Asile de Ville Evrard, M. Lecointe, M. Giblin, and others.

New seedlings came from many well-known growers, and a large number of prizes and certificates were awarded by the jury and the Floral Committee. We specially noted a grand lot from M. E. Calvat, who was awarded a grand prix d'honneur. Others from Messrs. Vilmorin and Co., M. Nonin, the Marquis de Pins, M. Chantrier, M. Heraud, and several less well known raisers.

In the corridor were more chrysanthemums. M Montigny showed four groups, chiefly novelties of the past two or three years. M. A. Nonin had several groups in the second greenhouse, choice exhibition and decorative kinds. We noted Tout Paris, W. Duckham, Duchesse d'Orleans, E. J. Brooks, Paul Randet, Sapho, Naples, etc. A good lot also came from M. E. Rosette, an old grower. M. Victor Gautier had also some excellent pot plants. Other exhibitors of chrysanthemums included Messrs. Pechou, Robillard, Masselin, Martin Durand, Guinle, Sourion, Feron, and the newly-formed Amateur Chrysanthemum Society, which had two groups of a high order of merit grown by members.

Other flowers were numerous. M. Aubert Maille sent cyclamens in quantity, and white Anthemis Perfection. M. Adnet staged in a corner a charming collection of hybrid gerberas. Messrs. Vilmorin, Primula obconica; M. Desiré Ramelet, hydrangeas. M. Ferard had several lots of cyclamen, Primula, obconica, nægelias, etc. Begonias were brilliantly staged in the usual Paris style by Messrs. Vallerand and Billard.

A grand floral trophy was set up by M. George Truffaut. It was arranged in splendid style, and consisted of a hugh pyramid of white lilac and foliage, standing on a circular bed. Around the base were many clumps of lily of the valley, and the whole design produced the most striking effect.

The grape classes were well filled, and here again were many competitors, one class alone, i.e., for Chasselas Doré de Fontainebleau, having twenty-one exhibitors. Among the grape exhibitors we noted specially fine lots from Messrs. Thibault Zeimet and Sons, Olida, Salomon and Sons, Mercier Depresle, Grapperie de Somain, Hamel Pigache, Sadron, Bergeron, Whir, Verrier, Paln, Gerbout, Chevillot, etc.

Vegetables always make a grand show at the Paris Exhibition. Messrs. Vilmorin and Co. had a fine collection on the flight of steps leading down to the promenade along the Seine. For variety and extent it was unsurpassed. M. Rigault had potatoes. M. Ferard, potatoes and tomatoes; Messrs. Angel et Fils, potatoes and carrots. In a border 27 yards long, the Ecole St. Nicolas had a wonderfully fine display of everything in season. M. Compoint had a grand exhibit of asparagus. The Establishment a la Pensée showed a collection 50 yards in length of every conceivable kind of vegetable grown in the French gardens, a really wonderful lot.

A literary section, and an art gallery also formed a part of the show, as usual. One of the most interesting portions of the exhibition was that devoted to the retrospective exhibition. Conspicuous on the wall was the original portrait of Captain Blancard, the introducer of the chrysanthemum into France in 1789, kindly lent by the family. In front of this, immediately on the arrival of M. Fallières, President of the French Republic, to make his official visit, a great granddaughter of Blancard presented to the President a handsome bouquet of chrysanthemums and made a little speech. Around the walls were pictures and engravings of old varieties, notably the original, the old purple chrysanthemum, which hung beneath Blancard's portrait. In glass cases running for some distance round this corner of the show were many curiosities—Japanese pottery, drawings, designs, engravings, photographs, rare books, and pamphlets, old catalogues, and every conceivable literary and artistic subject relating to the chrysanthemum. The chief exhibitors were M. Momméja, an enthusiastic French collector; and our correspondent, Mr. Harman Payne, an equally enthusiastic English collector, whose two collections far surpassed all the others put together. Exhibits also came from Messrs. Nonin, Lecollier, Rosette, Loizeau, Vilmorin, Baltet, and the Library of the National Horticultural Society of France.

High above the walls were panels containing the names, Blancard, 1789; Bernet, 1826; Fortune, 1846-1863; Calvat, 1891, with a brief record of their work in connection with the golden flower. It is only fair to add that the organisation of this very interesting retrospective exhibition was mainly due to our old friend, M. Geo. Gibault, the librarian of the society, and we offer him our hearty congratulations on the result.

THE BROAD BUCKLER FERN.

Amongst our beautiful hardy native ferns the Broad Buckler Fern (Lastrea dilatata) is particularly worthy of more extensive culture than it ordinarily obtains, both as a garden ornament and as a handsome pot plant in cool or cold conservatories. Its culture is of the simplest, good ordinary garden soil suiting it admirably, though a little peat may be added with advantage. In its natural habitats it affects moist situations, and in many places grows to a large size, with fronds a yard or more long, in large clumps on woodland slopes, under the moderate shade of trees. It crops up, indeed, almost anywhere where ferny conditions prevail.

In the form of its fronds it differs markedly from its related Buckler Ferns, or lastreas, the Male Fern, Lemon-scented fern, and L. rigida, or the Limestone Buckler Fern, by having its lower divisions long and re-divided, so that the whole frond is triangular instead of lance-shaped. In colour it is of a dark lucent green, with dark-coloured stalks and midribs, covered in the young stage with deep brown, almost black scales. It cannot, therefore, be confounded with any other fern, its nearest imitator, the charming L. æmula, or Hay-scented Fern being smaller, and having the sub-divisions prettily crimped and crisped, while those of L. dilatata are flat.

There are several sub-species associated with this one, named L. uliginosa, spinulosa, and cristata, which vary in the form of frond and small details, the last-named approaching nearest to the other lastreas by having somewhat lance-shaped fronds and no basal expanded ones. For the purpose of our note, however, we need not treat of these as they are more of botanical interest than horticultural.

Beautiful as the Broad Buckler Fern is in its normal form, it has, like most of our native ferns, sported into others of very distinct types, and it is certainly these which we would recommend for adoption, whether in the garden, rockery, or under glass, as they give no more trouble than the common form, and are certainly far and away more interesting. First of all we may mention L. d. lepidota, in which all the divisions are very much more slender, and more numerous, rendering the fern very distinct and pretty. There is also a variety of this which bears graceful tassels at all the tips. L. d. Howardi, found in Ireland, is a curio, but handsome; in this all the side divisions are long and narrow, and the sub-divisions form dense crosses or bunches, imparting a bead-like appearance. L. d. grandiceps Barnes has immense crests, and is the handsomest of the tasselled section. L. d. ramoso-cristatum is also very handsome; in this the fronds branch some distance from the soil, and finish up with dense vivid green balls of cresting, as do also the side divisions. L. d. cristata Oscroft also bears terminal tassels, but has the foliage prettily crisped. L. d. cristata Druery is a robust grower, with small tassels, found by the writer at Clovelly, while another form found by him at Campsie, in Scotland, L. d. stipitato laciniatum, has all the divisions on distinct stalks, and prettily cut. There are numerous other varieties of L. dilatata, but the above may be regarded as the choicest of our native varieties.

For those who have a little warmth in their conservatories during the winter there are two very handsome varieties of the same species, but of foreign origin, being found in the Azores; these are L. d. folioso-cristata and L. d. f. digitata, which, under warm conservatory treatment, make grand specimens, but cannot, like our native varieties, stand frost with impunity.

Here then we have ten distinct forms of L. dilatata, which we can highly recommend to anyone who grows hardy ferns at all. Nothing is viewed with more regret by the British fern connoisseur than the thousands of British ferns which figure in suburban gardens, one and all of the common weed type, and, as a rule, of only two or three species, when he knows what a grand variety of diversely beautiful things could be displayed in their stead, and grown with the same absence of trouble, throwing up their fronds year after year, and incurring no expense save the few shillings which the first acquisition involves. Fortunately, the British public is becoming wiser in this respect, but the knowledge spreads but slowly.

Chas. T. Druery, V.M.H., F.L.S.

FERTILISERS FOR GARDEN VEGETABLES.

(Concluded from page 794.)

On soils containing a fair quantity of lime, the cheapest form of phosphate manure to use is superphosphate. On light soils bone-meal may be preferred, especially if the dunging has not been too liberal. On soils poor in lime, basic slag may be used or superphosphate mixed with slaked lime. The quantity of phosphatic fertiliser to be sown with the vegetable crops previously mentioned must vary according to climate. In the South of England where superphosphate is used, about 3 or 4 cwts. per acre are usually found sufficient. As we go North the dressings in vogue become larger and larger. In the Midlands we find 5 or 6 cwt. per acre used; further north 8 to 10 cwt. per acre, while in Scotland we find 10 to 12 cwt. per acre, and even sometimes more.

If basic slag is employed to replace superphosphate for vegetable crops, at least one-quarter as much again by weight should be used, and bone-meal from 3 to 4 cwt. per acre may be employed.

Manure versus Artificials.

It is now known that nitrogen in the organic matter of the soil, which we term humus, or the organic matter of farmyard manure, is slowly converted into the nitrate form by the growth and action of a minute organism. The micro-organism cannot grow and propagate if the soil is too cold, or too wet, or too dry, or in the absence of available lime or potash. As a general rule there is in most fertile soils a sufficiency of lime for the needs of the organisms, but potash may be lacking. The other conditions necessary for the conversion of the organic nitrogen into the nitrate form are warm weather and a moist soil in good physical condition.

When the organic nitrogen is thus slowly converted into soluble nitrate during warm weather the plants take it up and grow rapidly.

It is found, however, that 200lbs. of nitrate of soda will furnish more soluble nitrogen to the young vegetable crops early in the spring months than the gardener can get from 20 to 25 tons of well-rotted farmyard manure. The stable manure may furnish soluble nitrate for the late crops, because the action of the bright sunshine during the summer months has an invigorating effect on the nitrate-forming organisms, but for early crops or crops grown out of their regular season, the gardener who fails to use some kind of nitrogenous artificial manure does not take full advantage of his opportunities.

Potato Crops.

The potato yielding capability of a soil, according to Dr. Bernard Dyer, depends more on its mechanical condition than on anything else, except, of course, climate. A point is easily reached, apparently on every soil, beyond which manuring for potatoes is of no use.

On some soils a very moderate manuring is enough, on others three or four times as much will pay. This does not seem to have to do so much with the richness of the soil as with its warmth, good drainage, and soft, crumbly texture.

It is probably a mistake to use too much manure for potatoes. Too much manure produces an over-luxuriance of growth, which in some way seems to make the crop more subject to attacks of disease; and no crop of the garden is more liable to be affected by disease than this one.

The general advice, therefore, is to manure but moderately and rather for the sake of maintaining the warm, moisture-holding properties of the soil than for the sake of merely feeding the plant, which can better be done by the aid of artificial fertilisers.

Nevertheless, in some years, the advantage, even from an economical point of view, has been decidedly with a heavy dressing of manure for early potatoes; and as the value of this crop very often depends upon its earliness, as in Jersey, for example, this seems to be a case in which the extravagance of heavy dunging is, on the whole, probably justified.

When, however, we come to the late or main crop potatoes, no advantage seems to lie with a too heavy dressing of dung; none certainly on such stiff or heavy soil as in the experimental gardens at Hadlow, or in the fields at Rothamsted.

The average crop of potatoes produced at Hadlow by 25 tons of manure per acre over eight years is no greater than that produced at a considerably less cost by a light dressing of manure (12½ tons), in conjunction with a dressing of kainit, superphosphate, and 2 cwt. of nitrate of soda per acre. The addition of 2 cwt. more of nitrate of soda per acre, making 4 cwt. in all, still further increased the average yield of potatoes, and has increased in considerably greater ratio than the extra cost of manure.

Potash has throughout increased the crop, but the increase due to it on the dunged plots has been much less in the case of early potatoes than in the case of late or main-crop varieties; in fact, the application of potash for the early varieties has not paid when a dressing of manure has been used. In the case of the late or main-crop varieties, the good effect of potash has been very great. The well-known need of potatoes for potash is strikingly brought out in both early and late varieties on those areas to which no dung has been used.

In a recent experiment it was found that the addition of nitrate of soda at the rate of 200lb. per acre, in combination with superphosphate and potash, made an increase of 80 bushels of large potatoes per acre over an unmanured plot. It is also worthy of note that the chemical fertilisers produced 43 bushels of large potatoes more per acre than 20 tons of farmyard manure. On another area the addition of 200lb. of nitrate of soda produced 103 bushels per acre more potatoes than superphosphate and potash alone, proving the fact that potatoes must have nitrogen, and that in greater quantities than can be supplied by manure alone if maximum crops are to be obtained.

J. J. Willis.

Harpenden.

THE FOLIAGE OF VIOLAS.

About a year ago I planted a large collection of violas in our grounds and allowed them to stand exposed to all weathers last winter. On June 13 a party of horticultural pressmen visited Marks Tey and inspected the collection when in full bloom. A detailed report of this inspection appeared in your columns on June 20. I decided to allow the plants to grow on undisturbed to discover which of the varieties had more of a perennial habit than others. Now, in November, it has occurred to me, after several careful inspections of the plants, that it would be interesting to report as to the condition and appearance of the foliage of some of the sorts. We are apt to lose sight of this view of our favourite plants. Flowers may be very fine in summer, yet the foliage may be very miserable in the off-season. This is not so with some varieties of violas, but on the other hand many which give charming flowers mostly of the exhibition standard in early summer either die outright when winter comes, or appear discreditable. The following varieties at present are beautiful clumps, the colour of the flower in brackets follows the name:

Christiana (white with yellow centre), dwarf, dark green foliage, medium-sized clumps.

Duchess of York (white, XXX. in June), healthy, dwarf, dark green foliage.

Pencaitland (white with yellow centre, XXX. in June), perfectly matted tufts of dark green foliage.

Snowflake (XXX., best rayless white in June), rather tall, but perfectly healthy foliage, still carrying a number of flowers.

Virgin White (white), rather tall, but perfectly healthy foliage.

Redbraes White (white), upright, medium height, medium green colour, still a few good flowers.

Sylvia (cream, XXX. in June), spreading, tufted, dark green, a few flowers.

White Beauty (white), very dwarf and compact, dark green.

Kingcup (yellow, XXX. in June), spreading medium dark green.

Klondyke (yellow), medium, compact and upright, medium green colour.

Primrose Dame (primrose, XXX. in June), tall, upright, healthy, medium green colour.

Bullion (yellow, XXX. in June), moderate, rather light green foliage, in bloom.

Sulphurea (primrose, XXX. in June), dwarf, upright, compact, medium green colour

Ardwell Gem (primrose, XXX. in June), perfect mat of spreading dark green foliage.

Redbraes Yellow (best rayless yellow in June), compact and upright, dark green.

Lilacina (bedding pansy, light blue, flushed), dwarf, spreading, dark green, and a few flowers.

Ariel (lavender), dwarf, spreading, pale green.

Royal Scot (dark blue, XXX. in June), medium upright, dark green, showing a few blooms.

Blue Cloud (fancy, XXX. in June), medium, compact, dark green.

Blue Duchess (light blue, XXX. in June), dwarf, spreading, dark green.

White Duchess (fancy), dwarf, spreading, dark green.

William Neil (rose, XXX. in June), dwarf, upright, dark green

[illegible] (dark blue, XXX. in June), dwarf, upright, dark green.

I have only noted those whose foliage is in excellent condition. I have always observed that varieties which are prone to "set seed" are naturally less perennial in character than e.g., those like Ardwell Gem and White Duchess, which rarely ever produce a pod of seed. I send small bunches of the foliage of each of the varieties enumerated for your inspection. It may be interesting to report again as to their condition, say about February.

Wm. Cuthbertson.

Dobbie's Seed Farm,
Marks Tey, Essex.

THE HORSE CHESTNUT AND ITS VARIETIES.

Among large growing trees which are hardy in the British Isles the horse chestnut (Æsculus Hippocastanum) occupies the unique position of being the only one that can be called really ornamental when in full flower, and would be cultivated largely for the sake of its flowers alone. True, there are other hardy trees to which a certain amount of praise is due; for instance, certain of the acers are conspicuous when in flower, the tulip-tree is interesting, and the catalpas are first rate. Neither of these, however, can be considered in the same category as the horse chestnut, for the blossoms of the acers are conspicuous only on account of their profusion, individual flowers being inconspicuous; the flowers of the tulip-tree are more curious than ornamental, and, although the inflorescences of the best of the catalpas are, if anything, more beautiful than those of the chestnut, the trees, except under very favourable conditions, attain no great height, and they can only be successfully grown in some parts of the country. The chestnut on the other hand can be grown all over the coun-

A MAGNIFICENT SPECIMEN OF THE HORSE CHESTNUT, BUSHEY PARK

Tree Carnations.—The general stock should be housed at once. Although our plants have been in frames, we prefer placing them in the houses in good time. This might not be altogether necessary in some districts, but it is desirable where the atmosphere is moisture-laden, buds just bursting are quickly spoilt if moisture hangs about them long, and any variety subject to "rust" should be given well-ventilated quarters. Tree varieties planted in the open borders should be looked over every afternoon, and those blooms fully open should be cut because of the risk of their being damaged by frost or wet. Many a good flower is spoilt if left to be cut in the morning.—T. H. Slade.

try except where tree life is rendered uncertain on account of an impure atmosphere, and it rarely fails to provide a rich display of its large, upright panicles of white, yellow, and pink blotched flowers during April and May.

Introduction and History.

Although the tree is now such a general favourite for ornamental planting, it was unknown to our earliest horticulturists, and was a great rarity in the days of Cole, Parkinson, and Gerard. For many years it was considered to be a native of Persia, the Himalaya, Thibet, and other parts of Asia, and it is only within comparatively recent times that its natural habitat has been accurately located. This is the wild, mountainous regions of Greece, and the tree is stated to grow at high elevations in crevices on inaccessible precipices. It appears to have been introduced into Western Europe from Constantinople, where it has always been widely grown.

THE HIGHEST POINT IN THE NEW ALPINE GARDEN, GENEVA.

Clusius is stated to have been the first person to obtain a living example away from eastern Europe and W. Asia, and he had a small tree at Vienna in 1576, which was raised from seeds imported from Constantinople. He published a description of the tree in 1601 in "Rariorum Plantarum." hist., lib., 1, p. 8, and described it as a vegetable curiosity. Early in the seventeenth century trees were raised in France from seeds received from Constantinople, and it is probable that seeds were received in England about the same time. In 1636 Gerard (Johnstone's edition) records it as growing in Mr. Tradescant's garden at South Lambeth, whilst with his description a rather curious illustration of a flowering shoot appears which he attributes to Clusius.

When first described it was considered to be a species of castanea, and appeared as Castanea equina. Parkinson, in "Theatrum Botanicum," ix., p. 1401, published in 1640, describes it under this name, whilst Cole in 1657, "Paradise of Plants," says: "There are four especial sorts of chestnuts, 1. The ordinary chestnut; 2. The horse chestnut; 3. The dwarf chestnut; 4. The chestnut of America." In his description of the second he says, "the second groweth naturally in Turkey, and is entertained in divers of our gardens that pretend to rarities, and, indeed, it is a stately plant."

Several explanations have been advanced as to the origin of the common name. One which obtains much credence in the North of England is that during the progress of Christ's triumphal entry into Jerusalem, the ass on which he rode struck a chestnut tree with its hoof and left the marks of the shoe and the impress of the nails, a mark which has been perpetuated in the cicatrice left on the bark by the fallen leaves, and from this the name of horse-hoof chestnut arose. Other people in other countries have ascribed the name to the marks resembling a horse's hoof which appear on the bark. The true reason, however, is that the fruits were used extensively in eastern countries as a medicine for horses suffering from coughs and broken wind.

In "Trees of Great Britain and Ireland," Messrs. Elwes and Henry, give much interesting information about the horse chestnut, and incidentally mention a number of very fine examples, some of which are as follows: Trees growing at Colesborne in a high, sheltered place, on cold, damp soil, 105 feet high in 1902. Tree at Dynevor Castle probably the largest in Great Britain, 109 feet high and 17 feet 9 inches in girth. The largest in the famous avenue in Bushey Park, in 1906, was 100 feet high and 16 feet 5 inches in girth. One recorded by Mr. Farquharson, of Invercauld, growing at an elevation of 1,110 feet, was, in 1864, said to be 177 years old, and was 8 feet 7 inches in girth. The largest tree in Norway is stated to be in the botanic garden at Christiana. In 1903 this was 28 metres high and 3 metres in girth.

The accompanying illustration is a reproduction of a photograph of one of the fine trees in Bushey Park.

Cultivation and Uses.

The horse chestnut is easily raised from seeds, which may be sown out-of-doors as soon as ripe. It grows rapidly in both light and heavy soil, and is an excellent subject for planting in places where a quick effect is desired. Its value may be said to be purely decorative, and it is useful for planting in small groups, as isolated specimens, or to form avenues. For plantation work there are many more useful trees, for when the trees are cut down the timber is not of much value. When felling is done during autumn and winter the wood is very clean and white, if, however, the trees are cut down whilst the sap is rising, the wood is yellowish and dirty. The timber is soft and of very little use commercially. In some countries the nuts are used for cattle and sheep food. As previously stated, the nuts were at one time used as a medicine for horses, and Cole avers that the powdered nuts mixed with wine or water formed a useful medicine for coughs and spitting of blood. He also goes on to say: "The powder of the nut kernels being dryed and applied with barley meal and vinegar doth cure unnatural blastings and swelling of the breasts, and being damped with honey and salt, and applied to the biting of a mad dog, it freeth it from doing harm and healeth it."

The general appearance of the tree is so well known as to need no description; appended, however, are short descriptions of the varieties. These varieties are increased by budding them on to stocks of the type, the less prominent buds being used for the purpose.

Æ. H. crispum.—A variety of rather dwarf habit with crisped, rather unhealthy looking leaves. It is not worthy of general cultivation.

Æ. H. flore pleno.—This is a counterpart of the type in every respect, except that the flowers are double.

Æ. H. foliis aureis variegatis.—Some of the leaves of this variety are variegated with yellow. The variegation is not, however, constant, and the variety is not recommended.

Æ. H. laciniata. This differs from the type by having the margins of the leaflets deeply cut.

Æ. H. Memmingeri.—A strong growing variety with softer leaves than the type which frequently have a yellowish hue.

Æ. H. pyramidalis.—This is one of the most distinct varieties of all. Its chief peculiarity lies in the fact that its branches assume a stiff, upright character, whilst those of the type usually assume a more or less pendulous habit with age. It is worthy of cultivation for its distinct appearance.

W. Dallimore.

Royal Gardens, Kew.

THE GENEVA BOTANICAL GARDENS.

Photographs, taken in the early spring, of the new alpine garden at Ariana just outside of Geneva, may be interesting to the readers of the Gardeners' Magazine, for it must be remembered that Geneva was not only the place where Calvin lived and where Rousseau and several other celebrities were born, but the town will ever be associated with the two names, famous in the botanical world, of De Candolle and Boissier; while in the lake-side city there are other botanists fast ascending the ladder of fame who bid fair to carry down to posterity their own names in continuation of the great work accomplished by their celebrated forerunners.

The Conservatoire Botanique at Geneva, situated opposite the Botanical Gardens, and being also under the directorship of Dr. John Briquet, is important, for last winter the magnificent European herbarium of Mons. Burnat, of Vevey, was incorporated therein. Now, the herbarium in the Conservatoire Botanique comprises what are probably the finest collections of European plants in the world; but, as is often the case in the great public Continental Herbaria, British plants are not well represented, a fact which might perhaps be remembered by some generous collector of dried plants in the British Isles.

The Conservatoire Botanique is a large rectangular building of three floors and basement, splendidly arranged for the purpose and kept in fine order, but it must be confessed that it is not an elegant building any more than the two factory-like erections which contain the Herbarium at Kew are. However, at Geneva, the head gardener's house adjoining adds somewhat to the picturesqueness of the scene.

The Botanical Gardens occupy about 16 acres of land overlooking the beautiful Lake Leman, and with glorious views of Mont Blanc 50 miles to the south-east. Visitors to Geneva in autumn and early winter should not fail to take a tram to the pretty village of Chambézy and walk home, first noting the house and park where Edmond Boissier lived, now occupied by his daughter and her husband, Mons. and Mdme. Barbey-Boissier; then passing the picturesque house called Les Jordils, where the famous l'Herbier Boissier and library is installed, and then, before reaching the Botanical Gardens belonging to the town, the visitor in the late afternoon will enjoy one of the finest views of a distant snow-clad range lit up in golden light that it is possible to see in the Alps.

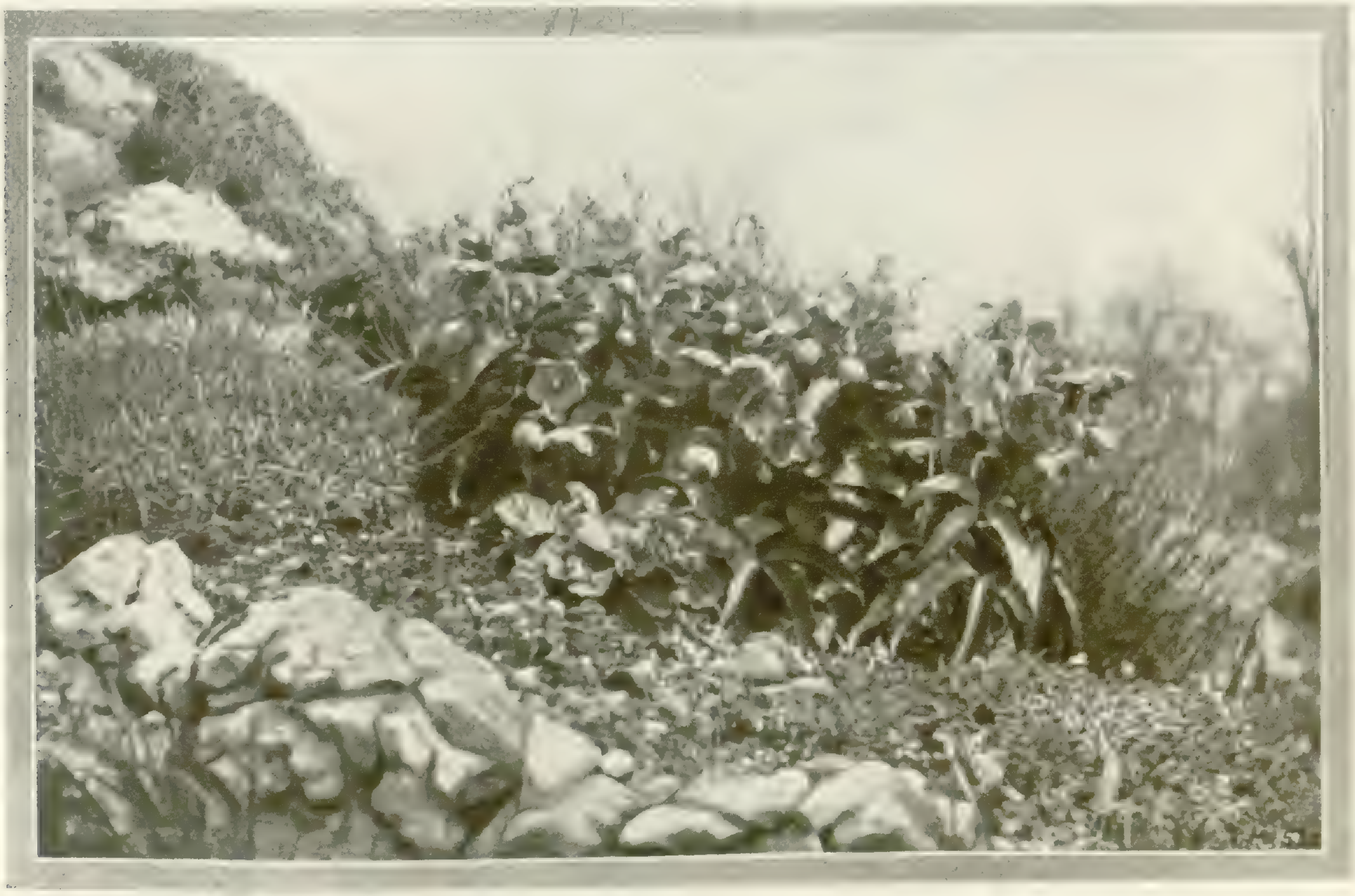
The chief characteristic of the Alpine Garden is its clever arrangement into geographical divisions, and we know no garden where this is carried out so thoroughly. The highest rocks, herewith illustrated, are those of the Swiss Alps, three groups being devoted to a limestone flora and two are of granite. The Western Alps of Savoy, Piedmont, and Dauphiny have several rockeries devoted to their treasures. The Maritime Alps and the Pyrenees have each a good rockery, and they both contain some plants peculiar to those mountain ranges, including several endemic saxifrages. Then come the Spanish Peninsula with its immensely rich alpine flora, the Atlas Mountains, the Eastern Alps, Carpathians, and Balkans. From the Caucasus we photographed the handsome Helleborus caucasicus with its large prickly leaves. Other groups are those of the Orient, Himalaya, Altai, and Siberia, Thibet and China, and Japan. The pretty Primula sibirica was in bloom the first week in April, and so was the yellow Siberian Adonis amurensis. A splendid collection of plants figures from the Jura, including Anemones pulsatilla and Halleri, Potentilla macrantha, etc. Less important groups are those of the Central Plateau of France, the Vosges, Cevennes, the Apennines, and Sicily, Corsica, and Sardinia.

Students of geographical botany have a good chance of pursuing their favourite study at Geneva; and the designer of the Alpine Garden has shown great skill not only in the conception of the garden but in the arrangement and disposition of the rocks, so that the result is both natural and pleasing, and in a few years when the present crudeness has been rubbed off the gardens will look better.

It is arranged that a stream of water shall emerge from a grotto in the highest rocks, which continues in a sinuous course and forms a small lake, where various aquatic plants are grown.

With the exception of some of the modern alpine gardens such as those at Bourg St. Pierre and the Rocher de Naye, laid out under the able guidance of Monsieur Correvon, it is not often on the Continent that the rocks are arranged with any attempt either at ornamental landscape gardening or with due respect to the natural stratification of the rocks themselves; too often the stones are dumped down anyhow, as we find them in a London suburban garden, with a root of Lastrea filix-mas between each stone; but it is obvious that some geological knowledge and foresight were shown in the planning of the Geneva garden, and the same applies to the older but much smaller alpine garden at Zurich.

H. Stuart Thompson.



THE CAUCASIAN HELLEBORE (HELLEBORUS CAUCASICA) IN THE NEW ALPINE GARDEN, GENEVA.

BULBS FOR BOLD EFFECT.

It is only by the lavish use of bulbs that large gardens can be made at once sufficiently gay and sufficiently diversified in spring, but, fortunately, owners of fine estates do not grudge some outlay upon the creation of beautiful colour effects that can be renewed year after year without further expenditure. The beloved charm of our English woodlands, palest gold in primrose season and later blue with nodding scillas, the glory of commons that are each

> "a world of heather,
> Purple of foxglove, yellow of broom."

are due to the superabundance of blossom rather than to the loveliness of individual flowers, and it is when we humbly imitate Nature's lessons, though not as servile coypists, that we gardeners achieve our best successes. Any noble glade or opening in a tree-shaded portion of the grounds should be so planted with daffodils that the eye cannot see the end of the masses of spear-like gray-green leaves and golden trumpets; any shrubbery glade, not actually tree-overhung, may be coloured a wondrous rose by congregating there by hundreds such a hardy tulip as Gesneriana rosea; banksides can flush mauve, violet, or amber with crocuses, and shadowed stretches of grass may be snowed over by myriads of alliums; even then we have but hinted at a few of the colour triumphs possible, for are there not Cottage and Darwin tulips of scarlet, carmine, lemon, orange, white, cherry, claret, cream, and salmon; hardy narcissi of such dazzling white that the sight almost tires of gazing, and have we not pale and deeper pink, also white bluebells, and a yellow allium that thrives anywhere?

It is often by growing too vast an assortment of bulbous plants that we err; undoubtedly collections of different varieties and species are valuable and interesting in special borders, but the decorative use of the plants should be most considered in other places where a general effect is more desirable than a series of minor ones. There are also ways in which a variety of flowers can be chosen to give a self effect, and this is a point not often regarded; the gold of the crocus can be matched both in narcissi and tulips, so that a sunny bankside or woodland opening may boast of tall as well as dwarf bulbous plants, and yet present the appearance of a sheet of one gorgeous hue: purple crocuses and purple tulips may not match as exactly, but will combine with perfect results, and, as for white bulbous flowers, those can be obtained of an infinite variety of heights, shapes, and sizes.

It is not necessary to keep slavishly to flowers of one hue in a given spot; there will be no loss of effect, for instance, if two or three groups of white Poet's narcissus rise up out of the yellow vista formed by tulips and crocuses, or a clump of white tall tulips breaks the flat expanse of pink hyacinths.

Perhaps hyacinths are not more handsomely employed in large gardens because they involve the after work of removal, but it should be realised that these flowers give us peculiarly vivid shades to work with in the blues and pinks, just as tulips are unique providers of vermilion. There is scarcely any blossom more gay than that of Hyacinth Robert Steiger, a rose-carmine of fine spike, and the same kind of hue is obtainable in cheaper varieties, though not, perhaps, in such richness. Banksides absolutely covered by hyacinths arouse the greatest enthusiasm among observers, and this method of using them is highly advisable in exposed gardens.

Rock gardens of great extent may well be chosen as localities for the yearly display of bulbous flowers of those species the bulbs of which are lifted; directly the floral show is over the plants can be removed, for they will take no harm if put into earth elsewhere to continue their development, and in this way the summer alpine occupants of the rockery are uninjured by the companions of the earlier season. There are very few bulbs that will not thrive upon sunny rockeries, and the exceptions, such as fritillaries of the lesser kinds, and Dog's Tooth violets, can be saved for shaded rock gardens.

The Crown Imperial is a majestic bulbous plant, of which insufficient use is made; to keep it for centre-pieces in lawn beds is not according it the place it deserves in garden landscapes. Bold borders filled with it, against a background of ivied walls or fences, groups on lawn edges, plantations on sloping ground overlooking water, and glades formed between shrubberies of evergreen, will well repay the gardener by their unrivalled beauty. Lilium croceum, the old-fashioned Orange Lily of the cottage garden, can be used in the same spots, if wished, so as to repeat in July and August something of the colour show that was provided in spring.

A satisfactory method of making room for generous bulb-planting is the cutting of a border all round a lawn, a foot or so from the edge, as wide as space can permit, and shaped, of course, just as the turf is shaped. This never looks as well on a stiffly outlined lawn, of course, as on one of elegant rounds and curves; upon one of the latter type the wonderful colour line of the bulbous flowers will appear like a shaded ribbon wound gracefully about the green of the grass. Mixed bulbous plants should be employed in such a border, the taller subjects in groups at irregular intervals, the earth entirely covered by a carpet of

> "The broderie rare of starlike forms
> And myriad hues."

M. H.

NEW WINTER-FLOWERING BEGONIA CLIBRAN'S PINK.
Received A.M., R.H.S., November 10. Flowers freely-produced; colour, rich rose-pink.

Plants in Tubs.—Should tub specimens of summer-flowering plants still be out, place them at once in their winter quarters; a moderately light shed will do for a number of them. Hydrangeas, aloysias, agapanthus, and fuchsias may be further protected in case of severe frost by light protecting material, straw, hay, or bracken being packed between and over them. Sweet bays may be put in the same place and their tops protected with mats or other wrappings, though a moderate amount of frost will not damage these. Tubs of aquatics that may have been used about the grounds should also be placed where frosts cannot reach the roots. Pelargoniums and other bedding plants should be placed in winter quarters where a suitable temperature can be maintained; if they are sufficiently rooted, and time and space permit, they may with advantage now be potted off singly into small pots, but do not give sufficient heat to start them into active growth.—E. F. Hazelton, Knowsley Gardens.

WHITE ROSES.

There are a great number of white roses, and even to name the best of them would take up considerable space. Recently I requested several rose-growing friends to name their choice of one from each class or section, and the result is that the majority selected the following:

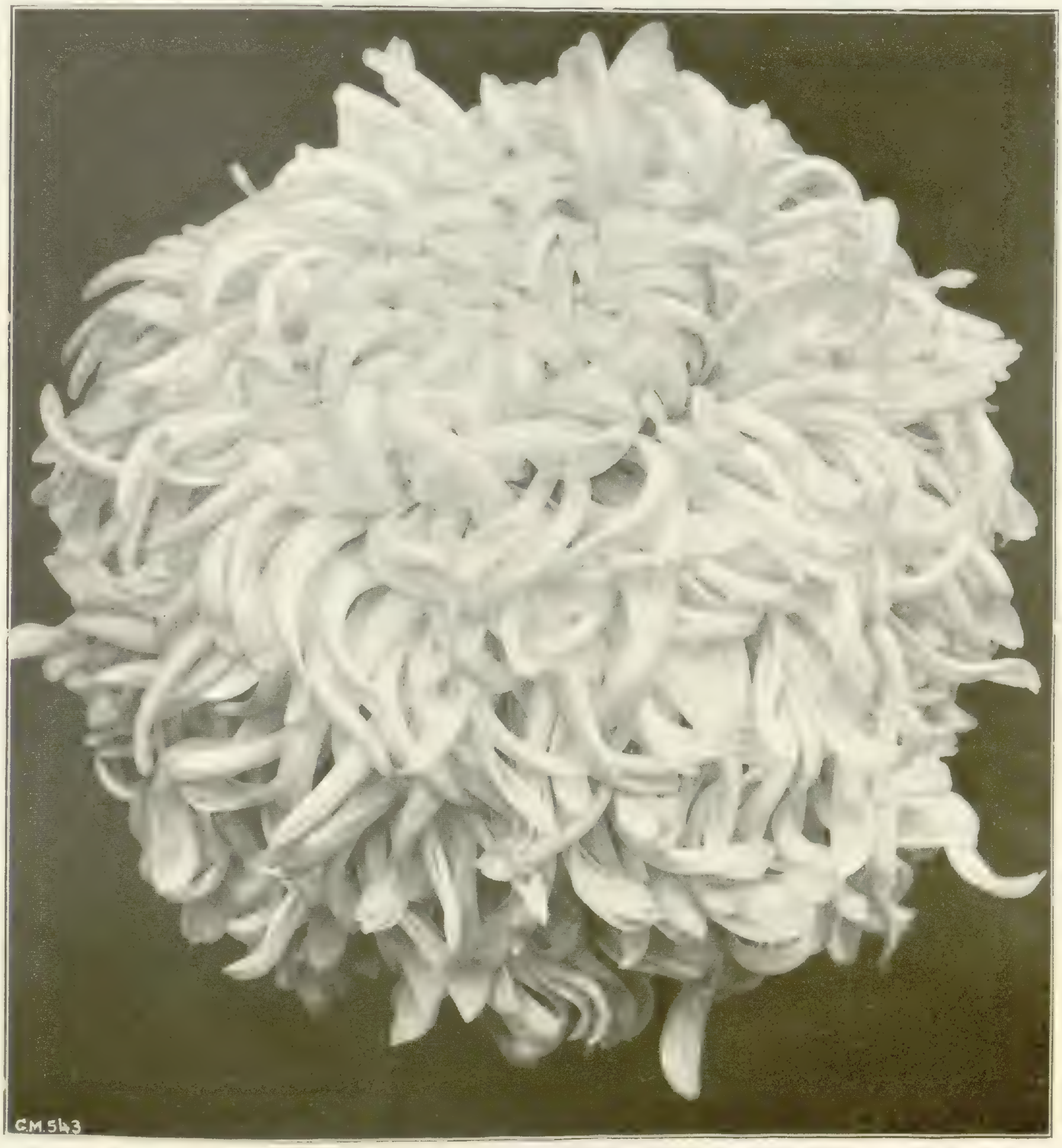
Among hybrid perpetuals, Frau Karl Druschki, a rose brought out in 1901, was unanimously placed first. This is not at all surprising, for it is the purest white from any class. A good grower, suitable for almost any purpose, unaffected by weather—a great point this among white flowers—and one of the most perpetual bloomers we have. Size, form, and substance of petal are good; but it has one fault, there is no scent. Niphetos was the one selected from the tea-scented section. A grand old rose this, and one that has been first for sixty-five years; a very great honour when we consider the number of new roses brought out year by year. But perhaps the most useful place for Niphetos is under glass, where it is unrivalled. It is only in a very favourable season that we find it presentable in the open, and this is just where Frau Karl Druschki beats it in every way. Niphetos is a poor grower and tender; it is the reverse with Frau Karl Druschki.

Boule de Neige, another old rose (1865), was selected from among the hybrid Noisettes. Sometimes this is classed as a hybrid perpetual. A good habited rose, deep green foliage, seldom touched with mildew or red rust. The flowers last well, and the reverse of the petals is slightly touched with soft rosy pink on the outside before opening, but become a pure white when fully expanded. Aimèe Vibert was an easy first among the Noisettes (1828); a rose that has given us pleasure for eighty years, and still the selected one of its class! There is a climbing form of this known as A. Vibert scandens, and this is perhaps our best white climber. Almost always in bloom, large trusses, last well, and retains clean foliage up till the end of the season.

Coming to the mosses we find an even older variety taking the lead. This is White Bath (1817). A beautifully crested or mossed rose, and a pure paper white in petal; never seen better than when half expanded. Free in growth and flowering; one is bound to acknowledge this as being the best white in its section. White Pet was first among the dwarf polyanthas, and deservedly so. Immense trusses, perfectly rosette-shaped flowers, scarcely resting a week during the whole rose season but what it is a mass of blossom, and only then because the succeeding trusses have not had time to open. They are there, and eager to occupy the space as soon as they can find it. Monsieur Joseph Combet is apparently the best white Hybrid Tea. I looked for a better one in this growing and extensive class, but cannot improve upon the variety selected by my friends. There are many creamy whites, but that was not my point. This is a good and erect grower; free in bloom, especially when established; it lasts well and is sweet scented. A sport from Souvenir de la Malmaison, named Kronprinzessen Victoria is an easy first in the Bourbon class. I think it considerably more free in blooming than its parent, but with me there is a distinct tinge of lemon at the base of petals; otherwise it has the same habit and characteristics as our old favourite of 1843.

Of course, there are many other good white roses, but the above were those selected from each class, and truth compels me to say I cannot improve upon it.

A. Piper.



NEW JAPANESE CHRYSANTHEMUM PURITY.
Received A.M., R.H.S., November 10. Flowers, pure white; reduced in size.

NEW PLANTS, ETC.

NEPHROLEPIS RUFESCENS MAYI VAR. ORNATA.

A new form of Mayi, the fronds being equally erect, but more plumose and tripinnate than in that fine variety. Should prove of much value for decorative purposes generally. A.M., R.H.S., November 10. Messrs. H. B. May and Sons, Upper Edmonton.

CATTLEYA FABIA COOKSONIÆ.

A beautiful variety with large, finely-formed flowers; the sepals and petals pure white, the lip rosy-purple, with a gold-lined throat. A.M., R.H.S., November 10. Norman C. Cookson, Esq., Wylam-on-Tyne.

CYPRIPEDIUM DANTE MAGNIFICUM.

A fine variety of the handsome hybrid obtained from a cross between C. Euryades and C. Charlesworthi. A very fine variety, the dorsal sepal pure white, heavily marked with chocolate. The petals and lip yellow, curiously shaded with dull brown. A.M., R.H.S., November 10. Lieut.-Colonel Holford, Westonbirt, Tetbury.

SOPHRO-CATTLEYA DORIS.

A beautiful hybrid between Sophronitis grandiflora and Cattleya Dowiana aurea. A very distinct form, crimson red, the lip veined with gold. The flowers are about three inches in diameter. F.C.C., R.H.S., November 10. Mr. J. Gurney Fowler, Glebelands, South Woodford.

CATTLEYA CLARKIA INTENSA.

A charming hybrid obtained from a cross between C. bicolor and C. labiata; the sepals are pale rosy-lilac, with a rich purple lip. The plant was carrying six finely-developed flowers. A.M., R.H.S., November 10. Leopold de Rothschild, Esq., Gunnersbury House, Acton.

NEW JAPANESE CHRYSANTHEMUM, R. F. FELTON.
Received A.M., R.H.S., November 10. Flowers large, valuable for decorative purposes; colour golden-yellow.

NEPHROLEPIS AMABILIS.

An exquisitely beautiful and valuable addition to the already numerous varieties of nephrolepis, so popular for decorative purposes. It has a loose, free character of growth that gives it a graceful appearance. The pinnæ are crested and frilled, making it more compact than N. exaltata superba. It is quite distinct from the many beautiful nephrolepis introduced of late, as will have been seen from the illustration published in our issue of the 14th inst. F.C.C., R.H.S., November 10. Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton.

BEGONIA CLIBRAN'S PINK.

A fine addition to the winter-flowering class. The flowers are large, deep rosy-pink, with petals nearly an inch across. The foliage is large and bold, while the habit of the plant is good. A.M., R.H.S., November 10. Messrs. Clibran and Sons, Altrincham.

CHRYSANTHEMUMS.

Sylvia Slade.—Already described. A.M., R.H.S., November 10. Messrs. W. Wells and Co., Merstham.

Purity. — A pure white Japanese variety with blooms of the largest size, and superb in form and finish. The flowers are broad and deep, while the florets are long and curling at the tips. A.M., R.H.S., November 10. Mr. Martin Silsbury, Shanklin, Isle of Wight.

Hetty Wells. — A bronzy-buff decorative variety, exhibited as disbudded flowers, reflexed in form; will make a good market variety. A.M., R.H.S., November 10. Messrs. W. Wells and Co., Merstham.

R. F. Felton.—A fine Japanese decorative variety with large golden-yellow flowers. A.M., R.H.S., November 10. Messrs. W. Wells and Co.

Hon. Mrs. Lopes.—A Japanese variety of the largest size and superb form. The flowers are deep yellow, well built, with long, deep florets. Should prove a valuable addition to the exhibition varieties. This was staged at the N.C.S., under the name of Glory, but was altered owing to there being a decorative variety of that name. A.M., R.H.S., November 10. Mr. Martin Silsbury.

BEGONIA CATHAYANA.

A handsome stove species, attaining a height of about eighteen inches. The leaves cordate, green on the upper surface, marked with red nerves, the under surface and stems clothed with crimson hairs; flowers pink. Bot. Mag., t. 8,202.

COLCHICUM SPECIOSUM ALBUM.

Our native Meadow Saffron, Colchicum autumnale, is prized by many, largely for the beauty of its double varieties, which are more lasting and more beautiful in the garden than the single varieties. These double varieties, C. autumnale fl.-pl. and C. autumnale fl.-pl. alba, have no competitors among the forms of other species but the singles are far eclipsed by these, especially by such fine things as Colchicum Bornmuelleri and the varieties of Colchicum speciosum.

The noble Colchicum speciosum, which is variable in colouring, is one of the most beautiful of all, its large tulip-like blooms being delightful indeed, when fully expanded in the autumn sunshine. It is, as indicated, variable in its colouring, and some of the best coloured forms are really superb in their hues. What is generally known as the type has ruby cups, of a yellowish ivory towards the base, and with the long tube of the same colour. C. speciosum rubrum is finer still, the base of the flower and the tube being suffused with a deep ruby. There is, however, a still finer form, called by some C. speciosum superbum, or maximum, which has its blooms of a wonderfully deep, yet vivid ruby, and which, when well cultivated in good soil, is superb indeed both in size and colour.

But one of the most beautiful of all, and one which has commanded universal admiration since its first appearance before the public, is the white variety, Colchicum speciosum album, three flowers of which are portrayed in the accompanying illustration. This noble and delightful flower was introduced by Messrs. James Backhouse and Sons, Lim., of the York Nurseries, and was first sent out at the high price of £5 per corm, or "bulb." Its constitution is, however, so good that it is now plentiful, and the present price brings it within the reach of the modest purse of the amateur not too well endowed with this world's goods; and for a few shillings it is brought to his garden to give annual pleasure and beauty. It is equal in size to the coloured forms, but the flowers are of a most beautiful ivory-white, and are so sturdy and of such substance that they stand bad weather much better than those of the ordinary meadow saffron. It can confidently be recommended to all lovers of bulbous flowers, and the writer's experience of it is so favourable that he can unhesitatingly commend it to them. Like other meadow saffrons, the white variety of C. speciosum prefers a good, rather heavy soil, especially one inclined to be moist in its character, but it will do quite well on one of a lighter nature, and in such it may be planted rather deeper than on the heavier medium. Planting may be effected in autumn at a depth of from three to six inches from the surface to the top of the corm, but it will be found that a depth of six inches will give finer flowers. Such a fine autumn-flowering bulbous plant is worth the notice of all who desire autumn flowers of its class.

S. ARNOTT

LOCAL APPLES.

I wonder how many varieties of apples there are in cultivation? The named sorts offered in nurserymen's catalogues run into hundreds, and a visit to the autumn fruit show of the Royal Horticultural Society conveys some idea of the extent of the apple family. But when we have done with the apples which claim the distinction of being recognised, there are others, some of which are known by local and peculiar names, and yet others which never possessed a name at all, but they all help to swell the number of varieties grown. Among the local apples which are to be found principally in old orchards, some are good, others are moderate, and others again are as poor and valueless as they well could be, and yet for some reason or other they are allowed to remain.

Let us consider briefly the two extremes among local varieties of apples—the bad and the good, taking the former first. I do not think there need be any fear of too many really first-class varieties, but I believe it would be a veritable blessing if by one great sweep the whole of the small, scrubby, and inferior apples could be done away with, particularly if they could be replaced by something better, because experience teaches that in seasons of good crops the price of the best is adversely influenced by the preponderance of rubbish which floods the market. There is little probability of this happening, however, because there is a peculiar sentiment which protects an apple tree that bears fruit, even if the latter is of little value. In short, it takes more courage than the average human being possesses to cut down an apple tree that bears; and while some will go so far as to take the heads of the unprofitable specimens and graft them with better varieties, others leave them in peace to bring forth their second or third-rate fruit as long as they live.

The weeding out of worthless apples is a task that time alone will accomplish. Fortunately there are few of them propagated, because the old-time method of raising trees from seed is obsolete, and anyone who plants an apple to-day takes care to get a recognised variety of some merit. But Nature's process of eradicating worthless varieties is slow, these local seedlings have long lives, and some, like Tennyson's brook, seem as if they would "go on for ever."

But while we deplore the presence of so many poor local apples, and regret that growers are so reluctant to replace them, we must not forget that the method which produced these also gave us some of the best apples in cultivation. No man was responsible for the raising of Bramley's Seedling, Newton Wonder, Blenheim Pippin, and many another high-class apple, but Dame Nature herself, and these varieties were merely discovered and then distributed. Growing to-day in many a secluded garden and out of the way orchard are apples which are infinitely superior to many that are in commerce, and yet their merits are unknown outside the district in which they are grown. In short, these good local apples have not been discovered, as it were, and the fruit-growing public knows them not. In most cases they are seedlings, and are usually associated by name with the men who raised them, though the latter may have been gathered to their fathers years and years ago. It is no loss when a tree of an inferior local variety is blown down, or dies through sheer old age, but unfortunately the good ones often share the same fate. They are unknown to commerce, and nobody locally cares to propagate them, which is a pity, because when an old tree of a really good local apple dies the variety passes away as well, and is lost for ever. Strange though it may seem, I know instances of good local apples growing in orchards, and though the owners prize them as favourites, when they want a young tree they go to a nursery for it, and get a catalogued variety. They admit preference for the local apple, but they rarely take the trouble to perpetuate it by means of buds or grafts, and when the veteran at last drops out they mourn it as they would an old friend, for once gone it is gone for ever.

COLCHICUM SPECIOSUM ALBUM.
Flowers reduced in size: ivory white.

It may be urged that there is no need to trouble about the loss of the good local varieties, as there are plenty of apples in commerce to choose from; but I do not agree with this view, as we do not wish to lose anything that is really good, and it may be observed that local varieties often flourish in the district where they were raised better than others that are imported. Perhaps in the far away future, when—(when?)—horticulture has a Government department of its own instead of being tacked on to the Board of Agriculture and Fisheries, and pomology receives the attention from the state that it deserves, some scheme will be devised for hunting up these good old local apples, and propagating them on experimental stations supported by the State to test their real worth under other conditions, and prevent the best of them from dropping out of cultivation. I say this may be done, that is to say, if all the old trees which would supply the buds or grafts have not dropped out of cultivation under the hand of Father Time before a department or sub-department is formed in the interests of horticulture, with the power and means of doing something. Be that as it may, there are plenty of local apples in the country that we can ill afford to lose.

G. H. H.

Everyone interested in a garden should obtain a copy of the ALPHABET OF GARDENING, by T. W. Sanders. Thoroughly practical information is given as to soils, manures, seed sowing, planting, potting, budding, pruning, grafting, forcing, hybridising, etc., with explanatory diagrams. Price 1s. 6d. net, by post 1s. 9d.; cloth, 2s., by post 2s. 3d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

GENERAL WORK in the orchid houses will, for the next few weeks, be particularly directed to cleaning the plants from insect pests and dirt deposits. At this season the majority of orchids have either entered upon or are reaching the dormant stage, and the best opportunity is thus offered for cleansing them, and such opportunities should not be neglected. Scale insects are the worst pests to be contended with. After a season like the present, when the outside conditions have been so favourable to black thrips, these have found their way into our houses, and if not observed for a short space of time will have laid their eggs, generally on the undersides of the leaves of the plants, and it is no easy matter then to remove them. When cleaning the plants it is well to have all the pots washed, and if the glass is carefully wiped down with a clean cloth any obstruction to light is thus easily removed.

WASHING DOWN the outside glass, even in districts where there is little or no fog, will be necessary at least once or twice during the winter months. It is a good plan to remove any obstruction to light that may be caused without delay, for it is advisable that the plants should have the full benefit of all available light to enable them to mature developing growth and properly ripen growths that are developed. In the neighbourhood of large towns, where the fog deposit is so great, washing the roof is frequently necessary. When situated in the neighbourhood of London, I used to find it necessary to wash down weekly during the four winter months, and there can be no doubt a considerable advantage was obtained for the plants by keeping the glass clean.

SECURING LEAVES.—Where leaves are used in the potting compost the present is a favourable time for securing any quantity that is necessary to supply the year's demand. We gather large quantities of oak and beech leaves as they fall from the trees, selecting the spots for getting them where they may be swept or raked up free from other vegetable matter, such as grass, etc., taking care to harvest them as dry as possible. We put them in a covered shed where ample air can reach them, as they are thus kept in a crisp, whole state. The leaves are thus within reach when required; but before using we place them in bags and dip them in a copper of boiling water to destroy insect life; they are then again dried before use.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

ALOCASIAS.—These have now completed their growth, and should be kept somewhat drier at the roots until the whole of the foliage has died away, when little further attention need be given them if they are stored in a dry position, where the temperature does not fall below 65 degrees. A. Sanderana succeeds best if the foliage is retained and the plants kept steadily growing throughout the winter.

ANTHURIUM SCHERZERIANUM, when cultivated expressly as a winter-flowering subject, is valuable, the intense scarlet spathes commanding appreciation throughout the winter. For this purpose plants raised from seed sown in the autumn, or early spring propagated, are kept steadily growing throughout the year, and the undeveloped spathes are removed until September. During the flowering period the atmosphere is kept somewhat drier, with sufficient ventilation to keep the blooms always dry. When the spathes are used for house or table decoration, they are found most useful, as they last from two to three weeks in water. The ornamental foliaged species must now have a season of rest, and this should be brought about by a reduction of water and temperature, but I do not consider it advisable to subject them to a lower temperature than 60 degrees.

EUPHORBIA JACQUINÆFLORA.—These are now developing their blooms freely, and the bright scarlet flowers command attention. As soon as the first batch of flowers is over the plants may be removed to a warm house, and be allowed to push up more shoots, which will develop a display of bloom early in the New Year.

POINSETTIAS.—The bracts of these beautiful winter-flowering plants are now developing, and more care will be needed in watering than previously. At this stage, should too much water be applied, the foliage will drop, in which case the beauty of the plants is lost. As soon as their flowering season is over the stems may be shortened back a little, and water gradually withheld from the roots until the foliage has thoroughly ripened off, when they may be removed to a dry position, where the temperature does not fall below 55 degrees.

REARRANGEMENT of the plants in the stove from time to time is generally greatly appreciated, but in carrying out this work care and tasteful effect must be considered; any unsightly plants should be removed to the propagating house.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

POT VINES.—As previously advised, the heat derived from fermenting material placed in the pit or house will be sufficient at the commencement. If the heat is very brisk the pots should be plunged to one-half their depth, or placed on the surface till it has declined. Tie the rods down in a horizontal direction to ensure the buds breaking regularly throughout their length. Very little water will be required at the roots for some time, syringe the rods and also the walls and other parts of the house twice a day, or according to the weather. The house should be ventilated every day, if only for an hour or two, for the purpose of maintaining the atmosphere in a pure state. When this course is followed the vines will grow away freely, and the leaves will be firm and in a condition favourable to their performing their functions satisfactorily. Black Hamburgh and Foster's Seedling are still the best grapes for early forcing.

LATE GRAPES.—Temperature should be reduced at night to 45 degrees, or even less will suffice, provided the berries do not damp. The bunches must be looked over every week, and berries showing signs of decay be removed. If the vinery is required for plants the bunches should be cut and placed in the grape-room with the end of the stalks in bottles filled with water. White glass bottles are preferable, as the water can then be seen. The room should be fairly dry. Give the house a good syringing, and if the border is dry give a moderate watering. If any of the vines require lifting the work should be done at once.

CUCUMBERS.—If these are still required a steady temperature of 75 degrees by day and from 65 to 70 degrees at night must be maintained. The growth made should be kept well to the light; the shoots must not be stopped much as the stopping only tends to make the succeeding growth weak. Allow only one or two fruits to a joint; a little sheep manure may be given occasionally. The syringing should be done early in the afternoon, and with dull weather it must be of the lightest.

EARLY PEACHES AND NECTARINES.—If grown in pots for early supplies these may now be brought into the house, but no fire heat should be given, and the house kept aired for some weeks to bring them on gradually. Only those severely root pruned should be started. If the height of the house will allow the pots should be stood on the border or slates till they are set or swelling. For early supplies the trees are perhaps best without plunging, as watering can then be done more carefully. Syringe moderately, regulating the amount by the weather.

EARLY FIGS IN POTS.—The pit or house to be devoted to these will be in readiness to receive them; the oak or beech leaves will have been placed in the pit to stimulate the roots into activity. An artificial bottom heat will be required when the heat in the leaves declines to the proper temperature. The young fruits now to be seen should not be rubbed in any way with sponge or brush, and only trees that are healthy and well-rooted should be used for early forcing. Syringe them on bright days, and at other times according to conditions of the house.

EARLY VINERY.—The vines may now be pruned, cleaned, and the border top-dressed. Much scraping of the rods should not be done, but if insects abound they should be frequently washed. If the border has not been made out to the required width, this should now be done, provided, of course, the roots have not properly filled the soil. It is better to encourage the roots to near the surface of the border than to add too much fresh soil in bulk.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

HORSERADISH.—This crop should now be lifted, and all the thick, straight pieces should be selected and laid in a trench, covering them over with soil. The smaller thongs being kept separately and planted again on trenched ground, using a bar for making the holes. Some prefer to plant in the spring, but, as there is always such a rush of work then, it is much the best plan to plant at once.

CELERIAC.—Lift the crop as soon as possible, and store the roots in a fairly dry place in readiness for immediate use. Frost would soon spoil these roots.

LATE CAULIFLOWERS. — If there are any more "heads" fit for use they should be cut immediately, and those that are not so forward should be lifted and transplanted in cold frames. They do not suffer such a check now as they would do during hot summer weather. Young seedlings pricked off in frames should have abundance of air daily, so that the plants may be kept sturdy and strong.

WINTER CUCUMBERS.—To maintain a supply during the next three months taxes the grower to the utmost, for the short, dull, sunless days are not at all favourable to the production of fruits. Apply frequent top-dressings of nice rich soil, so as to encourage root action as much as possible. The compost must be warmed through before use. Keep the young shoots thinly trained. If the roof glass can be covered outside on frosty nights with mats or roller blinds, the temperature may be kept up to 68 deg. without overheating the pipes. It is advisable to keep a few young plants in pots, so that if one or more of the permanent plants fail they can easily be replaced.

BROCCOLI.—This crop seems to be in a forward condition, owing, no doubt, to the very warm weather we had in October. So it will be wise to lay the plants down with their head to the north, as a protection from severe weather. The stems should be covered well with soil, as it is generally the part nearest to the heads which mostly suffers first. The early broccolis should be watched daily, for they soon spoil.

TURNIPS.—Where these are still on the ground it will be the safest plan to get them off as quick as possible, and put them into a pit, making them secure from frost, and keeping each sort separate.

CARROTS.—The crop sown late in July has made nice little roots which can be lifted now and stored, as recommended for turnips. They will prove useful later on.

EARLY POTATOES. — Where these are forced early the "sets" should now be placed in shallow boxes and put on a shelf in a light house in a temperature of 50 deg. When the tubers have sprouted the growths should be thinned out, leaving about two of the most promising and strongest. Where frames are not plentiful potatoes can be successfully grown in pots, and brought on in an early vinery or peach house that has been started. In fact, my best early potatoes were from pots last season.—T. W. Birkinshaw, Hatley Park Gardens.

NATIONAL CHRYSANTHEMUM SOCIETY.
EARLY WINTER EXHIBITION
at the
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EXHIBITIONS AND MEETINGS.

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Sheffield.

The Sheffield Society's exhibition, held on November 13 and 14, once more made the big Corn Exchange look bright and warm. There was a capital show, and the entries were about sixty more than in 1907. In some classes the competition was not very keen, but in the local and amateurs' and cottagers' classes for cut blooms the entries were very numerous. The group classes were not a success, and some means should be taken to increase the competition and improve the displays. Pot chrysanthemums were not of a high standard, but the cut blooms were good, especially in the leading classes.

CUT FLOWERS: OPEN CLASSES.

In the Lord Mayor's vase class for eight vases of Japanese blooms, eight varieties, three blooms of each, there was three competitors, and the premier £10 prize was well won by Mr. G. Hall, gardener to the executors of Lady Ashburton, Melchett Court, Romsey, with grand specimens of Lady Talbot, Magnificent, Madame G. Rivol, J. H. Silsbury, F. S. Vallis, Edith Smith, Marquis of Northampton, and Madame P. Radaelli, all large, fresh, and bright. Mr. G. W. Drake, Cardiff, second, his set including Bessie Godfrey, Pres. Viger, and Valerie Greenham in fine condition. Third prize fell to Mr. W. Iggulden, Locks Hill Nurseries, Frome, Somerset.

The best twenty-four incurved blooms, not less than eighteen varieties, came from Mr. G. W. Drake, Cardiff, whose best examples were of Lady Isabel, May Phillips, Duchess of Fife, Boccace, Mrs. G. Denyer, and G. W. Matthews; Mr. C. Jennings, gardener to F. W. Jameson, Esq., Aston Hall, second, with a stand that contained a preponderance of yellow and buff varieties; Mr. J. Harrison, third. Six competitors entered in the class for two dozen Japanese blooms, not fewer than eighteen varieties, and the competition was very keen, and here Mr. G. Hall was again first, winning with large bright blooms of F. S. Vallis, Bessie Godfrey, Maud Jefferies, Thomas Stevenson, Madame P. Radaelli, Lady Talbot, Annie Hamilton, and J. H. Silsbury; second prize fell to Mr. G. W. Drake, Cardiff,; third to Mr. C. Jones, gardener to Sir Edward Evans, Bromborough; fourth to Mr. W. Iggulden.

Mr. Hall was also first for a dozen blooms, distinct, and here he had magnificent F. S. Vallis, Madame G. Rivol, Edith Smith, and Madame P. Radaelli in fine form; Mr. W. Iggulden second. The only exhibitor of twelve incurved blooms was Mr. G. W. Drake, who was awarded first prize for a heavy, but rather rough set.

DISTRICT CLASSES.

In the district vase class for four vases of Japanese blooms there were four moderately good entries, and here premier place fell to Mr. W. Fletcher, sen., for F. S. Vallis, Mrs. Knox, Mrs. A. T. Miller, and J. H. Silsbury; Mr. J. Harrison second; and Mr. C. Fletcher, Stannington, third. Mr. W. Spencer, gardener to Miss Roberts, led for two vases of three blooms each, and Mr. J. Harrison was second, with Mr. W. Redmill, gardener to S. Milner, Esq., third.

Mr. J. Harrison led for a dozen incurved, distinct, but his blooms were rather rough; Mr. W. Fletcher, sen., second. Mr. Harrison also scored for six incurved, and was followed in order by Mr. C. Fletcher and Mr. W. Redmill, in order of mention. Mr. W. Fletcher, sen., scored for six Japanese blooms, on boards, with a very nice but unlabelled set that included a capital Algernon Davis; Mr. C. Fletcher second, and Mr. J. Harrison third. The latter led for six incurved, and he had Mrs. J. Hygate, Mrs. G. Denyer, Chrys. Bruant, C. H. Curtis, Romance, and Madame Ferlat, all very good; Mr. C. Fletcher second, and Mr. W. Fletcher third.

There was an interesting class for twelve Japanese blooms, arranged on a space of 3½ft. by 3ft., with a decoration of plants in pots. Mr. S. Redmill was first, Mr. W. Fletcher, sen., second, and Mr. W. Spencer third, but in neither case did the competitors rise to the occasion and make this a really fine class.

There was a splendid competition in the class for six vases of single chrysanthemums, and here first place was won by Mr. D. Lewis, gardener to W. A. Milner, Esq., who showed seedlings of his own raising, i.e., White Chief, Seagull, white; Peveril, red-bronze; Totley Yellow, golden; White Swallow, and Totley Pink—a fine set of good flowers; Mr. W. Topham second, and Mr. Agar, third. Mr. Topham scored for six vases of pompones, with Rosenante, Angelique, White Cedo Nulli, Lilac Cedo Nulli, Brown Cedo Nulli, and Sœur Melaine; Mr. Agar second, and Mr. J. W. Pitt, third.

The class for two blooms each of Mr. G. Glenny, Mrs. G. Rundle, and Mrs. Dixon, incurved varieties, is always an attractive one, because these varieties are rarely seen elsewhere; there were ten competitors, Mr. W. Fenwick leading, and Mr. E. Crawshaw coming second, and Mr. J. W. Pitt third.

In the affiliated societies' class the Nether Hallam Society won the chief award for six Japanese and six incurved blooms.

In the cottagers' classes there were some very fine exhibits, and the competition in the cut bloom section was very keen. In some classes as many as eight prizes are given, and this notwithstanding, many competitors have to go prizeless. Mr. W. Green, Mr. C. Hopkinson, Mr. C. Gibson, Mr. J. Sellars, Mr. W. Fletcher, sen., and Mr. C. Fletcher were the leading prizewinners.

Mr. W. Donaldson had the best table decoration of chrysanthemums, using white single varieties, and Mrs. Blake, Mylnhurst, scored for a table of other flowers than chrysanthemums, with Begonia Gloire de Lorraine and Cypripedium insigne. The best pair of vases of chrysanthemums were those shown by Mr. Agar. Mr. J. W. Pitt led for a vase of single blooms, and Mr. W. J. Carnall had far the best single vase of chrysanthemums and foliage, a handsome display; Mr. J. Sellars second, and Mr. J. W. Pitt, third.

GROUPS AND PLANTS.

The silver challenge cup presented by S. Roberts, Esq., M.P., for the best group of miscellaneous plants, including chrysanthemums, arranged on a space not exceeding 100sq. feet, was won by Mr. R. C. Baker, gardener to Alderman George Senior, who set up a bold and pleasing display, in which single chrysanthemums and crotons figured well; Mr. W. Packard was second with a rather dull group. In the amateurs' class for a group of chrysanthemums and foliage plants Mr. G. Fellowes led with an arrangement of decorative material; Mr. H. Freeman second. Mr. W. Spencer had the best specimen single-flowering variety, scoring with a very fair Altrincham Yellow. Mr. Agar led for three specimen plants of Japanese varieties, but neither here nor in the other specimen chrysanthemum classes were the plants of a very high standard.

Mr. Topham, gardener to S. R. Flowerday, Esq., had the best six specimen ferns, winning with a big asplenium, Adiantum formosum, nephrolepis, lomaria, and pteris; Mr. R. Agar, gardener to S. Roberts, Esq., a good second. Mr. R. C. Baker, gardener to Alderman George Senior, had the best pair of large palms,and Mr. Topham scored for six table plants.

VEGETABLES.

In the open class for a collection of ten kinds of vegetables the only exhibitor was Mr. Edwin Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, who was awarded first prize for a fine exhibit, in which Ailsa Craig onions, Perfection tomatoes, Prizetaker leeks, Sutton's Black beet, Tender and True parsnips, Autumn Mammoth cauliflowers, Dwarf Gem Brussels sprouts, and Superlative potatoes were the varieties shown. In the local classes Mr. J. T. Hardwick and Mr. J. Shaw were the leading prizewinners.

NON-COMPETITIVE.

Messrs. Fisher, Son, and Sibray contributed an interesting collection of ornamental evergreen shrubs, the variegated eleagnuses and ivies showing up well among the conifers. The latter included Abies Engelmanni glauca, Cupressus Lawsoniana lutea, Cedrus atlantica glauca, Abies canadensis, Cephalotaxus Fortunei, etc. Mr. R. Upstone, Rotherham, put up a large collection of vegetables and fruits. Messrs. W. Artindale and Son, Sheffield, filled one corner of the Exchange with tasteful floral arrangements finely set up. The vases of Chatenay roses, and Mrs. Burnett carnations,the screen of roses, a fine cross, and some very beautiful chaplets, wreaths, and crescents, all gave evidence of fine skill and taste.

Messrs. W. Wells and Co., Merstham, showed a selection of single and decorative chrysanthemums set up in vases, the former attracting a good deal of attention; there were also a dozen or two of big Japanese blooms of Rose Pockett, J. H. Silsbury, Magnificent, W. Mease, Mrs. H. Perkins, etc. Begonia Gloire de Lorraine, in small 48-sized pots, were capitally shown by Messrs. Brook, Bray, and Sons, Greystones Nurseries, Sheffield; the plants were splendidly flowered, and in the pink of condition. Messrs. Fisher, Son, and Sibray also had an exhibit of apples that included good samples of Belle de Boskoop, Sandringham, Bismarck, Gascoigne's Scarlet, Bramley's Seedling, Paroquet, Allington Pippin, Chelmsford Wonder, Charles Ross, and Christmas Pearmain.

Messrs. Seagrave and Co., Market Hall, Sheffield, had a wonderfully attractive exhibit, filling a big corner with tall elegant pyramids of Japanese, incurved, and decorative blooms, pleasingly associated with suitable foliage. The foreground of the display was filled in with specimen crotons, fine hydrangea heads, forced spiræas, cyclamens, Primula obconica, Azalea mollis, and Lilium longiflorum. The same exhibitor set up a smaller group of floral designs that gave evidence of considerable taste in colour combination. Mr. W. Howarth, Pitsmoor, showed a group of cut flowers, cyclamens, heaths, etc.

Hitchin, NOVEMBER 12.

The best autumn show ever held in this Hertfordshire town was the one that filled the Town Hall and Gymnasium on the above date. The group and plant classes were good, and the cut flowers were especially attractive, notably the vase classes for big blooms and for decorative and single flowers, while the quality was excellent. Fruit was also a splendid display, and, though vegetables were good, we think they have been better on previous occasions. Table decorations were a really fine feature and attraction.

Four groups of miscellaneous plants were arranged along the front of the stage, and here premier position was won by Mr. W. Munt, gardener to W. Bailey Hawkins, Esq., Stagenhoe Park, Welwyn, who had a bright exhibit, in which were Cattleya labiata, C. Bowringiana, calanthes, tuberoses, and bouvardias. Mr. A. Titmus, gardener to W. T. Lucas, Esq., Foxholes, Hitchin, second; Messrs. Abbiss Brother, Hitchin, third, and Mr. Chas. Green, Hitchin, fourth.

In the large group class for chrysanthemums, only Mr. E. Orsman, gardener to S. Lucas, Esq., Hitchin, scored with a very pleasing, but rather formal arrangement of good blooms. Mr. W. G. P. Clark, 4, York Road, Hitchin, second. In the amateurs' class Mr. W. G. Willmott, Chiltern Road, Hitchin, led with a group, over which great pains had been taken; Mr. S. C. Taylor, Silehouse Street, Hitchin, second; and Mr. F. A. Wheeler, gardener to Dr. Foster, Hitchin, third.

There were three entries in the class for three specimen plants, and in each case a good set was brought forward. Premier place fell to Mr. W. Robinson, who had grand examples; Mr. A. Titmus second, and Mr. E. Orsman third.

In the plant classes Mr. Crockford led for one orchid with a bright Cypripedium insigne; several plants were shown by other growers, but all had some defect in flower or growth. Mr. Hartless was a fine first for six cyclamens, leading with specially good examples in a keen competition; Mr. Munt was second, and Mr. Crockford third. Mr. Hartless was also first for six table plants, with a neat, bright set. Mr. Crockford was a capital first for three specimen begonias of the Gloire de Lorraine type, Mr. Hartless and Mr. Munt following with plants a little past their best. Some large, freely-flowered and very bright zonal pelargoniums were shown, and the awards for three specimens were made in favour of Mr. Munt, Mr. Pateman, and Mr. Crockford, in the order given.

CUT FLOWERS.

There were two competitors in the class for eight vases of Japanese blooms, three blooms of one variety in each class; Mr. T. J. Hartles, gardener to T. Fenwick Harrison, Esq., King's Walden Bury, Hitchin, led with excellent bright blooms of Mr. Norman Davis, Magnificent, F. S. Vallis, Valerie Greenham, Mdme. Paolo Radaelli, W. R. Church, Mdme. G. Rivol, and Sapho; Mr. T. Pateman, gardener to Montague Price, Esq., The Node, Welwyn, second. Four competitors entered in the class for four vases of Japanese varieties, three blooms of a variety in each vase. Here the premier award was won by Mr. T. C. Sadler, gardener to Mrs. Cotlow-Browne, Walkern Hall, Stevenage, who had Mrs. W. Knox, Reginald Vallis, F. S. Vallis, and Magnificent; Mr. R. H. Crockford, gardener to C. Poynter Stewert, Esq., Chesfield, Stevenage, second; and Mr. A. E. Creswell, gardener to the Rt. Hon. the Earl of Lytton, Knebworth House, Herts, third.

The best dozen Japanese blooms, distinct, came from Mr. T. J. Hartless, who had even specimens of Reg. Vallis, Bessie Godfrey, J. H. Silsbury, Florence Penford, Viola, Miss D. Oliver, Sapho, Mrs. Eric Crossley, Lady Hopetoun, Splendour, Mdme. Paolo Radaelli, and Duchess of Sutherland; Mr. T. Pateman, second; and Mr. W. Munt, third. The best six Japanese, distinct, were shown by Mr. R. N. Crockford, who was followed in order by Mr. T. C. Sadler and Mr. Orsman.

There were two classes for incurved blooms on boards, and in the one for six blooms of one variety Mr. Munt led with very neat examples of C. H. Curtis; Mr. Sadler, second, with large specimens of Mrs. G. Denver, and Mr. Hartless third with Buttercup. For six incurved distinct, honours fell to Mr. Hartless, Mr. Sadler, and Mr. W. C. Modral, gardener to Colonel Shuttleworth.

Three vases of decorative chrysanthemums formed a splendid class, and the competition was again very keen, and here Mr. Chas. Green was first, Mr. Munt second, and Mr. Wilson third. The competition was very keen in the class for three vases of single chrysanthemums, and here Mr. F. C. Sadler was first with fine sprays of Rose Pink, Bronze Pagram, and Roupell Beauty; Mr. Munt second, and Mr. Robinson, gardener to F. Romaine, Esq., The Chilterns, third. For three vases of pompones, six sprays in each vase, Mr. Titmus led with very fresh flowers, and he was followed in order by Mr. Munt and Mr. Sadler.

Table decorations were first-rate, and almost filled the gymnasium. There were two classes, each for ladies only, and one was for a chrysanthemum decoration, and in the other any flowers, except chrysanthemums, could be used. In the former class there were nine competitors, and the chief award was won by Miss Armstrong with a charming design in yellow and bronze single varieties; Miss Cooper, Sun Street, Hitchin, came second with yellow flowers, and Mrs. Orsman was third. Miss Minnie Harkness, Hitchin, secured the chief award for a table decoration of other flowers than chrysanthemums, with a beautiful design in Mdme. Abel Chatenay roses; Mrs. Dan Hall, Offley, Hitchin, second with pink and blush carnations, and Sister Ernestine, Warrenhoe, third, with pink carnations, a trifle formally arranged.

FRUIT AND VEGETABLES.

Mr. Pateman was a good first for black grapes, with Alicante; Mr. Haskenouth, gardener to J. Flack, Esq., The Paddock, Stevenage, second, and Mr. Millard, Fairfield, third. For white grapes Mr. Pateman was again first, with handsome bunches of Muscat of Alexandria, and he was followed in order by Mr. Hartless and Mr. Munt. In the class for nine dishes of apples, six culinary and three dessert varieties, Mr. Pateman led with excellent Cox's Orange Pippin, Gascoigne's Scarlet, Ribston Pippin, Sandringham, etc.; Mr. R. Smith, gardener to E. E. Pearson, Esq., Buckendenbury, second, and Mr. J. Booth, Baldock, third. For three dishes of dessert pears Mr. Pateman was to the fore with Chas. Ernest, Doyenne du Comice, and Beurre Alexander Lucas; Mr. J. Creasey, gardener to L. Thompson, Esq., second, and Mr. Parker, gardener to Captain Low, Frogmore Hall, Hertford, third. Mr. R. Parker had the best three dishes of culinary pears.

In Messrs. J. Carter and Co.'s special class for a collection of vegetables, Mr. H. Bates, gardener to Miss C. Robertson, Sele Grange, Hertford, was a good first, Mr. Munt and Mr Hartless taking second and third places respectively. In the society's class for nine kinds of vegetables, Mr. Hartless was first prize-winner, and Mr. Munt second. Messrs. Sutton and Sons also provided a class for a collection of vegetables, and here the awards fell, in order, to Mr. Crockford, Mr. Munt, and Mr. Hartless.

Manchester.

NOVEMBER 12, 13, and 14.

This Manchester exhibition was held in the White City; the entries were satisfactory, and were generally of high merit. Manchester has been long noted for the production of staked plants carrying fine blooms, and this show was no exception to the rule. Mr. Smith, gardener to James Brown, Esq., Heaton Mersey, sustained his high reputation by winning all along the line, his nine large-flowering plants and his six Japanese being marvels of cultural skill, nearly four feet in diameter, and with nearly three dozen fine blooms on each plant. His three pompones were well grown, and carried plenty of bloom. Mr. J. Royle, Sale, was second in the large-flowering class, and Mr. A. K. Kelly, Fallowfield, for pompones.

In the class for the group arranged for effect, Mr. J. Brown was the only competitor, and he set up a fine combination, his palms, ferns, crotons, grasses, etc., adding a finish to his chrysanthemums.

For forty-eight blooms, distinct varieties, Japanese and incurved, Mr. Hunt, gardener to Pantia Ralli, Esq., Leatherhead, occupied the premier position, his finest blooms being Incurved — Buttercup, William Biddle, Duchess of Fife, Embléme Poitevine, Amber Beauty, Mrs. B. Hankey, Mdlle. L. Faure, Mrs. J. Judson, and G. F. Evans. Japanese —F. S. Vallis, Valerie Greenham, Duchess of Sutherland, Magnificent, Bessie Godfrey, Marquis of Northampton, Pockett's Crimson, Thomas Stevenson, Lady Talbot, Rose Pockett, George Mileman, and Mdme. P. Radaelli. The remaining prize-takers were Messrs. E. Ellis, Heswell, and G. Haigh, gardener to Sir W. H. Tate, Bart., Woolton.

For twenty-four incurved, not less than twelve varieties, Mr. G. W. Drake, Cardiff, led the way with a strong stand, followed by Mr. Hunt, and Mr. E. Ellis. For twelve incurved, distinct, the prizes went to Mr. Hunt and Mr. J. Stoney, gardener to Lieut.-Colonel J. B. Gaskell, Woolton. For thirty-six Japanese, not less than eighteen varieties, Mr. Hall, gardener to the Exors. of Lady Ashburton, Melchett Court, Romsey, held the premier place, having strong blooms of F. S. Vallis, Duchess of Sutherland, J. H. Silsbury, Marquis of Northampton, Algernon Davis, Maud Jefferies, Mdme. P. Radaelli, and Mrs. J. F. Coster; Mr. G. W. Drake and Mr. W. Iggulden took the remaining awards. For eighteen Japanese the prize men were Mr. Hall, Mr. W. Iggulden, and Mr. J. Stoney. Prizes for twelve Japanese, distinct, fell to Mr. Hall, Mr. E. Ellis, and Mr. G. Haigh, and for thirty-six miscellaneous blooms the prizes went to Messrs. J. Stoney, G. Haigh, and J. Faulkner, Cheadle Hulme.

The best dozens of incurved, distinct, came from Mr. J. Brown, Sir Gilbert Greenall, Warrington, and Lady Pollitt, Altrincham, and for a like number of Japanese in another section, the prizes went to Sir G. Greenall, Messrs. J. Brown, and J. Royle. For twenty-four Japanese, incurved blooms, Mr. J. Stoney secured leading honours, and for six vases Mr. J. Brown led with moderate-sized blooms.

Corn Exchange Show, Mark Lane, NOVEMBER 11.

The Corn Exchange exhibition, consisting chiefly of chrysanthemums, was held on the above date, and the result was a pretty display. At the close of the exhibition the whole of the exhibits were sold on behalf of the Corn Exchange Benevolent Society.

The class for twelve Japanese blooms, distinct, was of considerable importance, for two challenge cups were allotted it, in addition to the cash prizes. The premier position was occupied by Mr. T. Stevenson, gardener to E. Mocatta, Esq., Woburn Place, Addlestone, with a very strong stand of blooms in good condition. Mr. F. King, gardener to W. R. Clarke, Esq., Debden Hall, Loughton, secured the second prize, which included a challenge cup.

For six Japanese, distinct, and shown on boards, Mr. C. B. Gabriel, Eardale, Horsell, obtained first, and was closely followed by Mr. F. King. The keenest competition was in the class for six Japanese to be shown in a vase. Some good blooms of F. S. Vallis secured the first place for Mr. C. B. Gabriel, who was closely followed by Mr. Wickham Jones, Norwood, and Mr. T. Stevenson for second and third places. For a vase of single chrysanthemums, Mr. T. Stevenson was awarded first; Mr. B. F. Smith second; Mr. J. Sismur, gardener to G. M. Edwards, Esq., The Cedars, Addlestone, coming third.

Mr. T. Stevenson secured first prize for four dishes of apples. For a basket of apples, Mr. Alfred Bovill, Bigod's Hall, Dunmow, obtained first, and for three bunches of black grapes, Mr. H. Haskell, gardener to F. W. Smith, Esq., Duneevan, Oatlands Park, occupied the premier position.

Sandhurst Gardeners' Association.

At the meeting held on Tuesday, November 3, Mr. M. Goddard presided, and Mr. J. Crook, The Avenue, Camberley, gave a lecture, entitled "Jottings about Apples." The lecturer was fully master of his subject, which was presented in a very pleasing and interesting manner. In the discussion the Rev. F. G. Coleridge, Messrs. Evans, Townend, and C. W. Goddard took part, and, on the proposition of the Chairman, a hearty vote of thanks was accorded Mr. Crook for his paper.

A feature of the meeting was the fine exhibit staged by Mr. Townsend, of Sandhurst Lodge Gardens, which comprised forty dishes of apples and six dishes of pears, and some fine cattleyas. The apples were remarkably good samples, and well coloured, and compared very favourably with those seen at the recent British Fruit Show of the Royal Horticultural Society. Mr. Rendrey, Yateley, staged several varieties of apples and pears, and Mr. Dupond, Crowthorne Nurseries, sent chrysanthemums in pots. The thanks of the meeting was passed to the exhibitors.

York, NOVEMBER 11 and 12.

In the Exhibition Building the twenty-ninth annual autumn show was held, and was a distinct success. The entries were fully equal to those in past years, and the general quality of the exhibits was up to the usual high standard seen in the ancient city. The building, being high and spacious, is well adapted for the production of bold features, such as are here formed by the groups arranged for effect. With these York worthily maintains the Yorkshire reputation of having some of the finest groups of chrysanthemums associated with foliage plants that are now to be seen in competition.

Plants are here an important feature. The leading class is that for a group of chrysanthemums interspersed with foliage plants, arranged for effect, on a space of 100 square feet. The leading prize is ten guineas, for which four competed. Mr. L. Hanchant, gardener to the Fredericks Hotel Company, Harrogate, was distinctly first with an almost faultless arrangement of well-grown chrysanthemums, palms, and other foliage plants. They were not too stiffly arranged, as is too common an occurrence in such groups. The chrysanthemums in the groups were at least 12ft. high at the back, over which towered an exceedingly fine specimen of Kentia Fosteriana, the group from that point graduating down to the front in an irregular mound edged on the front with ferns, etc. Mr. J. G. Pettinger, gardener to S. Spencer, Esq., Granby Croft, Harrogate, was second, with a rather too flat arrangement of good chrysanthemums and suitable foliage plants. Messrs. R. Simpson and Sons, Selby, were third.

In the class for a group of chrysanthemums occupying a space of 80 square feet, with a margin of ferns, there were six competitors, and an exceedingly fine display they made. The premier award went to Mr. J. W. Fields, Acomb, York, who is by occupation a railway signalman, for one of the finest exhibits seen this year. The plants ranged from 2ft. to 7ft. high, and carried very fine exhibition blooms of such varieties as F. S. Vallis, J. H. Silsbury, Mdme. G. Rivol, Mrs. Mileham, and Bessie Godfrey. The arrangement was, perhaps, a trifle too flat. Mr. W. Barnes, gardener to W. Talbot Agar, Esq., Brookfield Hall, York, was a close second with a better arrangement of slightly inferior blooms; Mr. Hanchant third.

For a pillar group 17ft. high, with a width here of 6ft., of decorative chrysanthemums, interspersed with green foliage plants, there were five competitors, making a very fine display down one side of the building. Messrs. Theakstone, The Nurseries, Hull Road, were distinctly ahead with a bright arrangement of single-flowered and the ordinary decorative varieties, like Source d'Or, and La Triomphante, just a little too flat near the base, perhaps. Mr. G. Cottam, Alma Gardens, Cottingham, Hull, second with an attractive exhibit, not quite so well finished off at the base; Mr. J. Key, Clifton Nurseries, York, third.

Specimen plants were not numerous, but the leading collections were of good quality. For three incurved varieties, Mr. H. Wheatley, gardener to J. Hopkins, Esq., Leak House, Malton, was first with Charles [illegible], Topaze Orientale, and Mrs. J. P. Bryce. The second prize trio had no name. Mr. Wheatley also led with three Japanese, distinct, showing in good order Nellie Pockett, F. S. Vallis, and President Nonin. For the same number of single-flowered varieties the name of the winner was not obtainable. The plants were of excellent quality, freely-flowered, the colours bright and attractive. The varieties were Mrs. R. N. Parkinson, Mrs. M. Bird, and Miss Beattie Rowley.

Cut blooms were numerous and good. The leading class was for thirty-six Japanese in not less than twenty-four varieties, and the first prize was ten guineas. Four competed, and the best set, consisting of medium-sized even blooms of good quality and rich colour, came from Mr. A. R. Searle, gardener to the Marquis of Northampton, Castle Ashby, Northampton. The leading varieties were Mdme. G. Rivol, Edith Smith, May Inglis, Maud Jefferies, Lady Henderson, J. H. Silsbury, Algernon Davis, Leigh Park Wonder, Viola, Reginald Vallis, Magnificent, General Hutton, W. Jinks, Beatrice May, and Mrs. W. Duckham; Mr. W. Iggulden, Frome, was second with less even flowers, the best being the new Mrs. W. Iggulden, F. S. Vallis, Mrs. T. Dalton, Mdme. G. Rivol, and Rose Pockett; Mr. Musk, gardener to Captain Laycock, Wiseton Hall, Nottingham, third with smaller flowers.

In the class for eighteen Japanese there were four entries, the best stand, comprising an even, richly-coloured set, came from Mr. D. Williams, gardener to the Earl of Feversham, Duncombe Park, Helmsley. Mrs. A. T. Miller, Bessie Godfrey, Edith Smith, J. H. Silsbury, W. Beadle, Lady Talbot, Mrs. Barkley, O. H. Broomhead, and Mrs. G. Mileham, were the most noteworthy. Mr. Searle was second; Mr. Iggulden third. Mr. Williams also won for twelve Japanese with a bright heavy set of blooms, including a handsome specimen of Mrs. A. T. Miller, to which was awarded the prize for the premier bloom in the show; Messrs. Iggulden and Musk were second and third in the order here given.

In the class for six blooms any one white variety, Mr. Williams, won with Mrs. A. T. Miller in exceptionally fine condition.

Mr. Iggulden, with F. S. Vallis in prime condition, was first for six any one yellow variety; Mr. C. Jennings, gardener to F. W. Jameson, Esq., Aston Hall, North Ferriby, Hull, second with deeply-coloured blossoms of Duchess of Sutherland. For six, any one variety, except white and yellow, Mr. Musk won with richly-coloured examples of Mrs. W. Knox, showing the rosy-bronze hues distinctly. Mr. Williams came next with J. H. Silsbury in good order.

Incurved varieties were not numerous, but they were of fair average quality. For eighteen, in not less than twelve sorts, Mr. Searle had neatly-finished medium-sized blossoms of Mrs. Judson, Triomphe de Montbrun, Mrs. Hankey, C. H. Curtis, Frank Trestian, Mrs. Crooks, W. Pascoe, Ialene, Godfrey's Eclipse, Romance, Pantia Ralli, and Devonshire Hero, as the best. Mr. Folkard, gardener to Mrs. Symonds, Sand Hutton Hall, York, was second with larger, irregular, somewhat rough blooms. Mr. Searle also won first for six incurved, with neat examples of popular varieties.

Single-flowered varieties were numerous, as they invariably are here. For six vases, three sprays of each variety, Mr. Alderman, gardener to the Hon. H. W. Fitzwilliam, Wigganthorpe, Malton, was first with a charming exhibit of shapely bright-coloured varieties, as Mrs. B. Parkinson, Netta, Edith and Bronze Pagram, Stella, and Albatross. Mr. Everard, gardener to Mrs. Gutch, Holgate Lodge, York, second, also staging attractive varieties. For twelve decorative varieties, three sprays of each, in vases, Messrs. Theakstone won the premier award for the fourteenth year in succession, with a distinctly interesting collection of such sorts as Soleil d'Octobre, Moneymaker, Tokio, La Pactole, Source d'Or, and Market Red, Mr. Alderman a close second. For a table group of any section of chrysanthemum blooms, arranged for effect in a space of 6ft. by 4ft., with any kind of foliage, there were nine competitors. Messrs. Theakstone won with an effective arrangement of small-flowered varieties, arranged in bamboo stands and vases, Mr. J. M. Petch, St. John Street, Bridlington, second. Baskets of chrysanthemums are always a feature here, Mr. C. E. Simpson, 21, Spurriergate, York, was first with a mass of Mary Richardson, single, and the green Mdme. E. Roger, neatly blended. Messrs. Theakstone second, Mr. Folkard third. Ten competed in the class for one vase of chrysanthemums and any foliage tastefully arranged, suitable for a drawing room table. Mr. Alderman was first with yellow Source d'Or, tamarisk shoots and sprays of Ampelopsis Veitchi.

For the best floral arrangement of a dessert table, laid for six persons, with fruit, etc., Miss Whitehead, Deighton Grove, York, was first with a mass of pale yellow single-flowered variety, all too crowded; Mrs. Rowson, 8, Blossom Street, York, second with a table showing the same fault.

Fruit and vegetables were plentiful and good. A gold medal was awarded to Messrs. Kent and Brydon, Darlington, for a handsome exhibit of apples and pears. To Messrs. J. Backhouse and Son, The Nurseries, York, a silver-gilt medal was given for flowering plants, tastefully arranged. A silver medal was awarded to Messrs. Clibran and Son for chrysanthemums, and to Messrs. Batchelor for a group of Nephrolepis Amerpohli.

Chelmsford, NOVEMBER 2 and 3.

The annual exhibition of the Chelmsford Chrysanthemum Society, which was, as usual, held in the Corn Exchange, was in every way a great success. Chrysanthemums in a cut state were largely shown, and the blooms were on the whole of good quality, but many of the stands were less effective than they might have been owing to their containing but few, if any, highly-coloured blooms. Fruit was well represented, and there was a brisk competition in the classes for vegetables.

The most successful of the large number of exhibitors in the chrysanthemum classes were Mr. T. Brazier, Mr. A. Edwards, Mr. W. Reed, Mr. A. Edwards, Mr. W. D. Felton, Mr. W. A. Hurst, Mr. J. R. Magness, Mr. P. Linn, and Mr. P. E. Wiseman. Mr. T. Brazier was successful in winning the silver cup offered by the President in the class for a group of chrysanthemums, and Mr. P. Linn won Mr. Cook's Cup, offered in the amateurs' division. The certificate of the National Chrysanthemum Society, offered for the best stand of blooms in the open classes, was awarded to Mr. Edwards, and in the classes limited to amateurs a similar certificate was awarded to Mr. P. E. Wiseman. The prize for the best Japanese bloom in the show was awarded to Mr. Edwards for a fine example of Mrs. A. T. Miller, and the best bloom of an incurved variety was C. H. Curtis, shown by Mr. J. A. Bull.

Fruit was well shown by Mr. C. E. Searles, Mr. J. G. Bond, Mr. Grant, and the majority of the exhibitors mentioned as having been successful in the chrysanthemum classes. The principal prizewinners in the vegetable classes were Messrs. C. E. Searles, F. G. Freeman, G. Diggons, P. Linn, D. Felton, C. J. Linn, and A. Edwards.

Birmingham Gardeners' Association.

The third meeting of the session, November 2, was presided over by Mr. Thos. Humphreys, curator of the Botanical Gardens, Edgbaston. The evening was devoted to the reading of essays on "Hardy Perennials Suitable for Villa Gardens," by under gardeners only. The competitors were Mr. Albert Wright, of the Botanical Gardens, Mr. Percy Catt, Berrow Court Gardens, and Mr. Frank Harvey, of the former establishment. The prizes were offered in book form, subject to the selection of the winners. The essays were, considering the limited practical experience of the contestants, highly creditable, especially taking into consideration the all too limited time allowed for the reading of each paper, i.e., only a quarter of an hour, this precluding lengthened details of culture.

Mr. W. Spinks (one of the censors) was previously delegated to read the essays, and in the discussion that ensued, it was opined by more than one or two of the discussionists that, from an educational point of view, it would have been more appropriate had each essayist read his own paper. At the conclusion of these proceedings the Chairman led off with a pertinent résumé, and gave instructive advice regarding the preparation of essays, which was endorsed by Messrs. W. Spinks, A. D. Christie, Wm. Gardiner, and Geo. Gibbs, the latter also suggesting the desirability of encouraging young gardeners to improve themselves by writing descriptive notes of public and private gardens, exhibitions, etc.

Oxford, NOVEMBER 10.

The Oxford Society held its forty-sixth annual show in the Town Hall, and, favoured with fine though severely cold weather, was well attended. Entries were fewer than last year, exhibitors complaining that many of their finest blooms had "damped" off. There were four groups and two dozen specimen plants, a few double and single primulas, and a grand display of winter-flowering begonias. Cut blooms were represented by 540 specimens, not including the pompons, baskets, epergnes, and other classes in competition.

The principal exhibitors of plants were Messrs. J. Holton, gardener to Rev. the Provost of Worcester College, who led in the classes for a 60ft. group, and six specimen Japanese plants, the second awards in these classes falling to Mr. S. Mold (foreman cooper), Buckingham Street, who was premier for one specimen and nine Japanese blooms.

Great interest centred in the class for nine varieties of Japanese, three of each, in vases, the premier cash prize and silver challenge bowl going to Mr. D. L. Macfarlane, gardener to Harvey du Cros, Esq., Howbery Park, Wallingford, who set up magnificent flowers of F. S. Vallis, Leigh Park Wonder, Mary Inglis, President Viger, Mdme. R. Obertheim, W. R. Church, Mrs. W. Knox, Miss Miriam Hanky, and Algernon Davis. The class for six blooms of one variety is always attractive, and well contested. For six incurved, Mr. E. Lazenby, gardener to W. H. Fox, Esq., Bradwell Grove, Burford, led with Mrs. J. P. Bryce; Mr. J. L. Burgess, Maisey Hampton, Fairford, second with high-coloured examples of Pantia Ralli; Mr. Macfarlane, third with Mrs. Clibran. For six Japanese, white, Mr. Macfarlane led with Mdme. R. Obertheim; Mr. Lazenby second with Mrs. A. P. Miller; Mr. G. H. Bonner, gardener to Z. Merten, Esq., Wallington Park, third with excellent forms of Miss E. Felton. For yellow Japanese F. S. Vallis proved first and third, being staged by Messrs. Lazenby and Macfarlane, the second prize card resting on a very level six of Algernon Davis, staged by Mr. Bonner. For six of any colour (other than white or yellow), Mr. Bonner led with A. H. Bromham; Mr. Lazenby second with Mdme. P. Radaelli; the third prize going to Mr. Macfarlane for Australia. Mr. Geo. Phillips, gardener to Vernon J. Watney, Esq., Cornbury Park, secured premier prizes for a dozen incurved, and a like number of Japanese; he was likewise premier in the classes for a table of fruit and flowers and black grapes. Pompons are beautifully grown in the district, the principal prizes going to Mr. Holton for twelve and nine triplets, Mr. Burgess taking the second cards.

Mr. W. T. Mattock, Barton End Nursery, Headington, led in the classes for a group of autumn-flowering and foliage plants, epergne, and basket of chrysanthemums; Mr. D. Curtis, Iffley Road Nursery, Oxford, being awarded second in each case. Primulas (double) are generally better than the single forms; Mr. R. Wadham, gardener to Mrs. Bradshaw, Steeple Aston, led for the former, Mr. Mattock taking the high card for six singles. Begonias made a fine show, the two dozen specimens forming a line between the boxes of blooms, the six Gloire de Lorraine, from Mr. J. S. Chidlow, gardener to Mrs. Herbert Monell, Headington Hill Hall, being equal to anything seen in the county.

Fruit comprised some 1,700 specimen apples and 340 pears; of the latter, Pitmaston Duchess was largely staged, the competition in this section being very keen. Some twenty classes are provided for sets of dessert, twelve, nine, six, three, and single dishes of apples, and six, three, and single dishes of pears.

Non-competitive exhibits included an assortment of plants and cut chrysanthemums from Headington Hill Hall Gardens, which secured an Award of Merit, a gold medal being accorded to the remarkably fine display of floral devices set up by Messrs. Field and Jacob, The Market, Oxford, who had a background of neat palms and Bermuda and speciosum lilies. Specially noticeable was a large mirror braided with rich autumn leafage, and set with sprays of Oncidium Rogersi. A very handsome harp, five feet high, had a framework of small white chrysanthemums relieved by blooms of Cattleya Harrisoni, variegated bamboo, and asparagus plumosus foliage, the strings of narrow mauve ribbon producing a pretty effect.

The show, which was formally opened by Mrs. Harvey du Cros, is the fortieth exhibition arranged by the secretary, Mr. W. Greenaway.

Leeds.

The twentieth annual chrysanthemum show of the Leeds Paxton Society was held on November 13 and 14 in the Albert Hall, Leeds. This building is by no means suitable for a show, as many of the exhibits are in a basement room, and the display is therefore not effective. There were some good groups and tables of plants, but their value was small, simply because of lack of proper room. Cut blooms were fairly good as a whole, while the single varieties were excellent. Cannot the Paxton Society secure better accommodation for its show?

GROUPS AND PLANTS.

In the leading class for a miscellaneous group of plants, arranged for effect, Mr. J. Donoghue, gardener to T. Pickersgill, Esq., Bardon Hill, Leeds, was easily first prize winner with a charming design in which some splendid crotons were a fine feature. The flowering plants were chiefly Oncidium varicosum Rogersi, odontoglossums, cyclamen, and Begonia Gloire de Lorraine. Everything was good and well arranged. Mr. J. Harrison, gardener to F. H. Fulford, Esq., Heddingley Castle, Heddingley, was placed second. Mr. J. Marshall, gardener to H. A. Watson, Esq., Ashwood, Heddingley, led for a table of plants in the local class with an elegant arrangement of oncidiums, odontoglossums, calanthes, and Roman hyacinths; Mr. J. Donoghue second, with oncidiums, crotons, etc., prettily arranged.

Chief award for a big group of chrysanthemums was won b y Mr. A. Lupton, gardener to E. O. Simpson, Esq., Oaklea, Adel, with a broad, sloping bank of good blooms arranged up under the gallery; Mr. J. Donoghue was second with a rather better arrangement, but scarcely such weight of blooms. There was a pretty class for a table group of chrysanthemums, arranged on a space 6ft. by 3ft., any foliage allowed. First prize fell to Mr. D. H. Aldridge, for some good flowers pleasingly arranged; Mr. Coates was second.

Mr. T. Preece, gardener to the Hon. E. C. Kitson, Weetwood, led for a table of Begonia Gloire de Lorraine, cut chrysanthemums, and foliage plants, and he had well-grown begonias, but only about four sprays of single chrysanthemums, and two big blooms of Mrs. A. T. Miller; Mr. Donoghue came second with a much lighter arrangement, and Mr. A. Lupton third. In the plant classes Mr. G. Gregory had the best orchid, an odontoglossum; Mr. Norman led for Roman hyacinths; Mr. C. Shaw had the best six Begonia Gloire de Lorraine; Mr. J. Donoghue the best cyclamens; and Mr. Crossfield the best six primulas.

CUT BLOOMS.

Mr. A. Chandler, gardener to A. James, Esq., Coton House, Rugby, won the cup outright in the class for eighteen blooms, distinct, of both Japanese and incurved varieties. The best of his Japanese were Valerie Greenham, F. S. Vallis, Algernon Davis, Lady Talbot, Ethel Fitzroy, Dorothy Goldsmith, Bessie Godfrey, and Duchess of Sutherland, and his best incurved were W. Biddle, W. Pascoe, Le Peyron, Buttercup, Souv. de la Wm. Clibran, Fred Palmer, and C. H. Curtis. Mr. C. Shaw, gardener to J. Boyle, Esq., Asket Hill, Roundhay, Leeds, came second. In the local cup class for twelve Japanese and twelve incurved, distinct, the chief award fell to Mr. C. Shaw, with Reginald Vallis, G. Mileham, Lady Talbot, F. S. Vallis, J. H. Silsbury, Duchess of Sutherland, Mr. B. Hankey, Buttercup, Frank Trestian, Margery Shields, W. Pascoe, and J. Agate. Mr. J. Donoghue was a good second, and he had Ethel Fitzroy, President Viger, F. S. Vallis, Mrs. A. T. Miller,Madame Ferlat, Duchess of Fife, and Frank Trestian as his best.

Mr. Coates, gardener to S. C. Haldane, Esq., Colton Street, Hull, led for a dozen vases of single varieties with a grand lot of Bertie, Bronze Pagram, Metta, Mrs. Parkinson, Altrincham Yellow, Doris, and Miss Roberts; second place fell to Mr. W. H. Aldridge, gardener to Mrs. Constable, Otley. There was only one exhibitor in the class for a table of eight vases of Japanese varieties, three blooms per vase, and this was Mr. W. H. Aldridge, who had F. S. Vallis, Mrs. Knox, Mrs. A. T. Miller, and Magnificent in fine form, and associated these with useful table plants.

Mr. Preece led for six vases of decorative chrysanthemums, and he was followed by Mr. Norman. In the local class for half-a-dozen vases of single varieties Mr. R. B. Gilchrist, gardener to W. Mathieson, Esq., was the first prize winner, and Mr. T. Preece was second, with Mr. Talbot, gardener to J. Nicholson, Esq., Heddingley, third. Mr. C. Shaw had the best six vases of stove or greenhouse flowers, and here he had Anthurium Andreanum, eucharis, camellias, white azaleas, Cattleya labiata, and Dendrobium chrysanthum.

FRUITS AND VEGETABLES.

Mr. F. Norman, gardener to A. Teynett Walker, Esq., The Elms, Weetwood, led for two bunches of white grapes in the local class, and he was also first for black grapes with finely berried Gros Colman. In the open classes for grapes Mr. A. Blakey, gardener to C. H. Shaw, Esq., Howden, led for white grapes with fine Muscat of Alexandria, and he was also first for black grapes with Gros Colman. Mr. Blakey had the best six dishes of baking apples, the best six dessert pears—Pitmaston Duchess; and Mr. W. N. Hague, gardener to W. D. Cliffe, Esq., Meanwood Towers, Leeds, had the best six dishes of cooking apples in the local class.

Mr. J. Groundwell and Mr. A. Blakey led in the vegetable class for Messrs. Sutton and Sons' prizes, and Mr. W. M. Hague, Mr. F. Norman, and Mr. J. Talbot were placed in the order of mention for Messrs. Webb and Sons' prizes.

Chester, NOVEMBER 11 and 12.

The Paxton Society had a brave show of fruit, arranged in a pleasing manner in the Town Hall. The advantage to the visitor at this exhibition is that he has the means of judging the effect of stock and soil, as these particulars are noted on each exhibitor's card.

The names of the first prize-winners can only be given in section A, although fruit of good quality was staged in section B. Dessert apples: Ribston Pippin, Mrs. P. Campbell; Cox's Orange Pippin, Mr. G. Fritz Hugh; King of the Pippins, Mrs. Rolt; Allington Pippin, Mr. P. Yorke; Gascoigne's Scarlet, Rev. Canon Garnet; Blenheim Pippin, Mr. F. B. Summers; American Mother, Mrs. P. Campbell; Dutch Mignonne, Mr. B. C. Roberts; James Grieve, Mrs. Rathbone; any other variety, Rev. Canon Garnet, with Adam's Pearmain; any new variety, Mr. C. Sprackling with Charles Ross. Dessert pears: Marie Louise and Pitmaston Duchess, Rev. Canon Garnet; Doyenne du Comice, Mr. J. Thompson; Glou Morceau, Mr. E. P. Jones; Beurre Diel, Miss Nowell; Winter Nelis, Mrs. P. Campbell; Easter Beurre, Mr. P. Yorke; any other ripe variety, Mr. J. Thompson; any other late variety, Rev. Canon Garnet. Kitchen Pears: Mr. W. Pilgrim with Catillac.

Kitchen apples: Peasgood's Nonsuch, Mr. W. Pilgrim; Newton Wonder, Rev. Canon Garnet; Mère de Ménage, Mrs. P. Campbell; Lane's Prince Albert, Colonel T. Gee; Dumelow's Seedling, Mrs. Parker; Warner's King, Mr. J. Stuart Goole; Bramley's Seedling, Colonel T. Gee; Alfriston, Mr. B. C. Roberts; Lord Derby, Colonel T. Gee; any other variety, Mr. T. B. Summers with Heavy; any other late-keeping variety, Mr. J. S. Goold.

For six dishes of dessert apples, Mr. J. Sanderson led with bright fruits. For twenty-four dishes, eighteen of kitchen and six of dessert apples, Mr. J. Weaver scored with good examples. The best twelve kitchen varieties came from Messrs. L. Ledsham and Sons; the best six varieties from Mr. J. S. Goold, and the best six dishes of dessert pears, distinct, from Mr. T. Gibbons Frost. For a group of chrysanthemums, both Japanese and incurved varieties, Mr. E. Staples, gardener to F. B. Summer, Esq., scored, and also led for the group of single varieties with a pleasing array of colour. For a group of naturally-grown plants, Mr. T. G. Frost scored.

In the cut bloom section, Colonel T. Gee led for eighteen blooms; for twelve varieties in two vases, Mr. G. Aitken scored; for five Japanese, distinct, and for three Japanese, distinct, Mr. J. Thompson led; for five incurved, distinct, Mr. P. Greene was the winner, and for twelve Japanese, not less than nine varieties, on a board, Mr. T. Herbert won first place.

Contributions, not for competition, were staged by Messrs. Dicksons, chrysanthemums; Mr. F. W. Dutton, cut flowers; Mr. R. Moss, oncidiums, cypripediums, and odontoglossums; Messrs. Clibrans, chrysanthemums; Mr. W. Hayes, Begonia Gloire de Lorraine; Messrs. W. Owen and Co., Cypripedium insigne montanum.

Reading, NOVEMBER 11.

The Reading Chrysanthemum Society held its 25th show in the Town Hall on the above date, and this was of a high standard of merit. Primarily of interest were the groups arranged on an area of 60 square feet, and the challenge cup and £5 were awarded to Mr. F. Johnson, gardener to S. B. Joel, Esq., Maiden Erleigh, who won by the weight of bloom, the most tasteful arrangement was that of Mr. A. Galt, gardener to C. E. Keyser, Esq., Aldermaston Court, who was second. Mr. Galt led in the class for three specimen plants.

Seedling chrysanthemums were largely staged. Messrs. Sutton and Sons had a charming display, and were awarded a silver medal. In the competitive class Mr. H. Perkins, gardener to W. F. D. Smith, Esq., M.P., Greenlands, Henley, was first with plants raised from seed sown in March.

Cut blooms generally were magnificent examples of cultural skill. For two dozen Japanese the contest was keen, and Mr. T. [illegible], gardener to A. C. Hammersley, Esq., [illegible] End, was first, and Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead; and Mr. T. Coote, gardener to [illegible] Taylor, Esq., The Rocks, Marshfield, Chippenham, second and third. In the class for twelve varieties there was a strong competition, and awards were made in favour of Mr. [illegible] Wilson, gardener to Miss Christie, [illegible], Windlesham; Mr. C. Page, gardener to [illegible] Fortescue, Esq., Dropmore; and Mr. [illegible] Sherlock, gardener to G. W. Tyser, Esq., Oakfield, Mortimer. Extra prizes were awarded to Mr. Galt and Mr. F. Ashman, gardener to C. T. D. Crewe, Esq., Billingbear [illegible]. For twenty-four blooms, distinct, of incurved varieties, Messrs. Wilson, Mease, and [illegible] secured the awards; and for twelve Mr. [illegible]an led; Mr. J. W. Euston, gardener to [illegible] Heydeman, Stanlake Park, Twyford, [illegible]; and Mr. Galt third. For six vases, Mr. [illegible] Waller headed the list, and Mr. J. Gard[illegible], gardener to Col. H. Walpole, Heckfield Place, Winchfield, secured the only other award. For a dozen vases of singles, Mr. A. G. Nichols, gardener to the Duke of Wellington, Strathfieldsaye, was a good first, followed by Mr. Sherlock and Mr. Page. Half-[illegible] Japanese, one variety, made a show [illegible], each contributor putting up F. S. Vallis, the prizes falling to Messrs. Sherlock, Waller, and Page.

There were good exhibits of cyclamen and [illegible] begonias, some half-dozen specimens [illegible] Maiden Erleigh gracing the orchestra.

Carnations also formed a good feature, the Messrs. B. and V. Haig, Castle Hill Nurseries, Maidenhead, being strong with three vases of two dozen blooms each, the firm also contributing a display as an extra. Epergnes and baskets were pretty; the best table-centre was arranged by Miss K. Ratcliffe, Westfield, Reading; the premier basket hailing from Maiden Erleigh.

Fruit had two dozen classes provided, and Mr. A. G. Nichols, Strathfieldsaye, figured largely in the list of awards, he also being the winner of Messrs. Sutton and Sons' prize for a collection of vegetables.

Stirling.

In seasonable autumn weather the nineteenth annual show of the above society was held in the Albert Hall, Stirling, on November 12 and 13, when a good all-round display was forward. The entries exceeded those of last year by eighty. The opinion was freely expressed that better blooms and pot plants would not be seen at Edinburgh. Competition was keen, the classes being well filled. Some new competitors came forward, Messrs. Stewart (winner of the Hon. President's Cup) and Waddell, who gained first place for the dinner-table decoration, being notable instances.

CUT BLOOMS.

These made a meritorious display. In the premier class, which was one for eighteen blooms, six varieties, three of each, six exhibitors staged, Mr. Stewart, Dunkeld, beating last year's winner, Mr. Morton, Cullen House, Banff; while Mr. D. Carmichael was third with good examples. Mr. Stewart's blooms were: Eric Crossley, Reg. Vallis, Miss O. Miller, Mrs. Geo. Mileham, Mrs. J. C. Neville, and Bessie Godfrey. Mr. Jenkins, Aberdeen, was first for twelve on the board; this competitor gained a like position in the amateurs' classes for twelve blooms, shown in vases. In addition to some of the above-named varieties, he also showed capital blooms of Lady Talbot, and Victoria and Albert. Mr. McKenzie, Kippenross, was first for six whites, also for six yellows, Mr. Stewart securing premier place for six distinct.

POT PLANTS.

These were a great show, being accommodated around three sides of the hall, while the lesser hall was requisitioned for the amateurs' classes.

Mr. R. Jenner, Newhouse, won the Corporation Cup for four bushes, his varieties being John Shrimpton, Lady Conyers, President Nonin, and Soleil d'Octobre. This competitor led in all the amateur classes. In the other open classes Mr. Henry Gray was the most successful competitor, showing clean, healthy, well-developed specimens. In the supplementary pot plant classes Mr. D. Carmichael was most successful, having fine primulas, his P. Kermesina being very fine; this variety will oust P. obconica without a doubt. Mr. C. Palmer, Alloa, had good table plants, his Dracæna Princess May, and crotons Aigburth Gem and Prince of Wales being specially fine. R. McDonald, The Elms, showed well-conditioned palms.

FRUIT AND VEGETABLES.

Here Mr. Ritchie, Polmaise, had four firsts and a third. Mr. Trotter was first for four bunches of grapes; Messrs. Morton, Blacklock, and Ritchie being first respectively for dessert apples, kitchen apples, and pears. The dessert apples were King of the Pippins, James Grieve, Worcester Pearmain, and Charles Ross (good examples).

Vegetables were a large and meritorious class, strong competition prevailing. Mr John Ogilvie, Larbert, was first for a collection of ten varieties. Other leading competitors were, Messrs. Birrell, Braco, Wood, Dunmore; Russell, West Plean; G. McIsaac, Stirling. Messrs. Carrighan and Jenner shared the leading places in the amateurs' section.

BOUQUETS AND TABLE DECORATIONS.

Seven entered in the table decoration class, this producing a great amount of enthusiasm and interest amongst competitors and visitors alike. Mr. Waddell, Bishopriggs, was first, followed by Mr. Wood, Dunmore; Mr. Russell coming next; Mr. Trotter, Carbrook, being placed fourth. In the bouquet classes, etc., Messrs. Palmer, Wood, and Trotter secured leading positions.

HONORARY EXHIBITS.

These came from Messrs. Drummond, Stirling, who had sixty named varieties of apples; Mr. John Craig, table flowering and foliage plants, also floral decorations; Mr. Rodger, decorative plants; Mrs. Tasker, Stirling, forty varieties of early-flowering chrysanthemums, all grown outside; Mr. R. Jenner, huge specimen plant of single-flowered chrysanthemum (Ladysmith).

The Horticultural Club.

On Tuesday, the 10th inst., after the monthly dinner of this club at the Hotel Windsor, Mr. G. Monro taking the chair, a very interesting paper on "French Gardening" was read by Mr. C. D. McKay, and subsequently discussed by the members. The lecturer at the outset declined to accept any responsibility for the very glowing descriptions of French methods and results which had appeared in the daily press, as if inspired by him. There is little doubt that these have led many people to start the French system without the requisite experience, the inevitable result being failure and consequent discouragement of enterprise, which, properly conducted, would be beneficial, not merely to the grower and the consumer, but to the country generally, by involving the better utilisation of the land. The lecturer explained that he had been induced to advocate the introduction of these methods into England after visiting France, and also Belgium, and seeing what could be done there under conditions of climate and soil which are in no way superior to those obtaining in England. The usual daily importation of French salad produce into this country is 4,000 to 5,000 crates of lettuce, 500 crates of early carrots, 100 of asparagus, 100 of French turnips, and 50 of celeriac, the whole of which, he contended, could be profitably grown on this side of the Channel, with the contingent advantages of saving of freight and greater freshness when delivered to the consumer, to say nothing of the increased employment of labour on the land involved. It, however, by no means follows that any market grower could adopt the French system of cloches and frames and manuring by merely reading directions.

The French system is the outcome of long experience, and one very material point is that the eight-hour labour system, or any approach to it, is unknown in France in this connection, and the grower, assisted probably by his wife, devotes his whole time to culture, and is prepared at any hour to do what is needful. He has, moreover, acquired the knack of rearing successional crops of different things on the same area so as to keep his land always profitably occupied. It is to be feared that this plodding "intensive" culture of both the French and Belgian growers is hardly likely to find favour in the eyes of the British labourer; a very material point in the problem.

In the subsequent discussion, participated in by Messrs. T. W. Sanders, A. Pearson, G. Gordon, C. Foster, and G. Monro, some statements in the lecturer's book on the subject were challenged, and the difficulties involved and standing in the way of the large prospective profits shown were fully discussed, but it was generally conceded that, despite all the possible drawbacks, the thanks of the public were due to the lecturer for ventilating the matter, and Mr. G. Monro, in his summing up, pointed out that with tomatoes, cucumbers, and beans, which at one time were mainly imported from abroad, our growers here, by adopting better cultural methods, have entirely turned the scale, not merely fully supplying our own needs, but actually exporting immense quantities to the Continent. This fact, he considered, spoke volumes in favour of success with the salad vegetables mainly concerned, and proved that with intelligent methods of culture our climate presents no such adverse conditions as compared with France, as has hitherto been assumed. A very hearty vote of thanks to Mr. McKay concluded the meeting.

National Chrysanthemum Society.

The Floral Committee met on Monday, November 16, at Essex Hall, Strand, when there was a very interesting set of exhibits.

Messrs. W. Wells and Co., Merstham, again showed some very fine single varieties, and these included the beautiful large-flowering Merstham Jewel, a charming bronzy-red single variety, with yellow zone round the disc and with some yellow colouring shining through at the tips and bases of the florets; Merstham Tints, yellowish; Marguerite Pink, pinkish yellow; Doris Stevens, brilliant crimson-scarlet; and Peter Pan, a wonderful light fawn-yellow variety that opens flowers in long raceme-like sprays. Besides these Messrs. Wells and Co. showed several useful decorative or market varieties of Japanese type, and the best of these were Olive Muriel Smith, old rose; Noreen Jay, vivid crimson-scarlet, rather loose; and November Gold, a fine golden-yellow form.

Mr. J. Wynn, Ledgewood Hall Gardens, King's Lynn, sent a loose blush-tinted, incurved variety, named J. Wynn. Mr. George West, The Friary Gardens, Old Windsor, showed a group of new single varieties, among which Sunrise, bronze, red, and yellow was the prettiest. Mr. G. Carpenter, West Hall, Byfleet, sent a large Japanese single variety, named Naomi, and a broad-petalled white Japanese named Mrs. Godsalm Ward.

A general committee meeting was held at Carr's Restaurant, Strand, in the evening, Mr. Thos. Bevan in the chair.

On the year's working, so far, there is a balance of £115 8s. 3d. on the right side, the receipts amounting to £408 16s. 10d., and the expenditure to £293 8s. 7d. Of course, no prize money has yet been paid, and this will not be paid until all the shows for the season have been held. The Chairman urged the members to do their best to make the annual dinner to be held at the Holborn Restaurant on November 26, a great success. It was decided to hold the Floral Committee dinner at Carr's on December 7. Six judges were elected to make the awards at the December show, viz., Messrs. Prickett, Wells, Howe, Witty, Felton, and H. J. Jones. Thirteen new members were elected, being one at 21s., one at 10s. 6d., and eleven at 5s. subscription.

Ascot, NOVEMBER 3 and 4.

The twenty-third annual exhibition was held in the Grand Stand, and groups were the chief feature of this show.

The president, Sir Edward Durning-Lawrence, Bart., was awarded first prize in three of the group classes, and also firsts in the three vegetable classes. The hon. secretary, Sydney H. Clement, Esq., who manages this show so well, took first prize for six pots of violets; the best exhibit of its kind seen at this show. The weather was fine, and the attendance good, and there were sixty more entries than last year. This show is gaining favour, but there should be more exhibits from the larger gardens of the neighbourhood. The secretary and president are both very popular at Ascot.

In the open class for twenty-four Japanese, distinct, Sir Charles Swinfen Eady, Oaklands, Lodge, Weybridge (gardener, Mr. J. Lock), put up a very even lot of F. S. Vallis, H. Perkins, Duchess of Sutherland, Arthur Mileham, Mrs. A. T. Miller, Reginald Vallis, Mrs. W. Knox, W. E. Beadle, Mrs. G. Mileham, Mrs. F. W. Leaver, W. King, George Mileham, C. Becket, and Lady Talbot; Mrs. Christie, Ribsden, Windlesham (gardener, Mr. W. Wilson), second; C. Arthur Pearson, Esq., The Place, Farnham (gardener, Mr. C. Moore), third; and Miss Langworthy, Holyport (gardener, Mr. F. J. Broom), fourth. For eighteen incurved and eighteen Japanese, distinct, Mr. W. Wilson was first with a very grand lot. For eighteen incurved Mr. W. Wilson was very fine again, his being the only entry. For twelve Japanese, distinct (single-handed gardeners), C. H. Austen, Esq., Englefield Green (gardener, H. C. Worsfied), was first with heavy flowers; Mrs. J. Lillington, Rosewood, Ascot (gardener, Mr. W. G. Haines), second; and T. B. Rendle, Esq., Torwood, Ascot (gardener, Mr. G. W. Pearce), third. Mr. J. Lock led for a dozen Japanese, distinct.

For six vases, three blooms in each, Mr. W. Wilson led with grand blooms; A. F. Walters, Esq., Bearwood, Wokingham (gardener, Mr. W. Barnes), second; and Mr. F. J. Broom third. For six blooms of one variety Mr. Wilson led with beautiful specimens of Embleme Poitevine, and the best incurved in the show was selected from this stand. Mr. C. Moore had the best Japanese bloom with Mrs. A. T. Miller.

For a circular group of 8ft. diameter, chrysanthemums and foliage, Mr. W. Lane won first with a nice arrangement; Sir A. C. Lucas, Bart., Harewood, Ascot (gardener, Mr. J. Sargent), second. For a group of chrysanthemums Mr. W. Lane, gardener to Sir Edward Durning-Lawrence, Bart., King's Ride, was first; Mr. F. Capp, gardener to E. Iveson, Esq., The Charters, Sunninghill, second. For undisbudded plants in a group Mr. F. Capp was first with plants packed much too closely together; Mr. W. Neat, gardener to Miss Thacker, Ascot, second, with a splendidly arranged group. For a group of miscellaneous plants Mr. W. Lane put up a very pretty arrangement, and gained first prize.

Mr. E. Young, gardener to Mrs. F. Morrison, Farm Wood, Ascot, was first for six pots of cyclamens; Mr. Sargent first for Begonia Gloire de Lorraine; Mr. W. Lane first for table plants; Mr. J. Lock first for two bunches of black grapes; Mr. Lane first for Muscats; Mr. W. Barnes first for dessert apples and for culinary apples; Mr. W. Lane first for nine dishes of vegetables, and also for Messrs. Sutton and Sons' and Messrs. Webb and Sons' prizes.

Eccles and Pendleton.

NOVEMBER 6 and 7.

The twenty-second annual exhibition was held in the Town Hall, and proved a decided advance on previous functions, especially in the plant section. Cut blooms were present in great quantity, and up to average quality.

In the class for a semi-circular group, arranged for effect, Mr. J. Ashley, gardener to Lady Annette de Trafford, held the leading position with moderate blooms, but staged much too flatly; Mr. J. Beswick, gardener to the Misses Heywood, using single varieties chiefly, came second. For six plants, three incurved and three Japanese, Mr. J. W. Smith, gardener to James Brown, Esq., won with grand plants; Mrs. Bryce, Cheltoni, and Viviand Morel carrying fine blooms of good colour; Mr. Ashley followed. For three plants, single varieties, Mr. Smith was again to the fore with Emily Clibran and Emily Hills in splendid form, and the same exhibitor took the lead for three plants, not disbudded, which included a fine Ladysmith and Source d'Or. For six dinner table plants Mr. G. Haigh led in a strong competition; Mr. Ashley had the best Roman hyacinths, and Mr. W. Foster, gardener to S. Petrocochina, Esq., won for primulas and for begonia Gloire de Lorraine.

For twelve incurved and twelve Japanese cut blooms, not less than eight varieties of each, Mr. G. Haigh, gardener to Sir W. H. Tate, Bart., won the coveted position, thus winning outright the silver challenge cup presented by the late F. H. Gossage, Esq. The flowers were even and fresh throughout, the best blooms being F. S. Vallis, Miss Elsie Fulton, Leigh Park Wonder, Mdme. P. Radaelli (which gained the N.C.S. certificate as the best bloom), Magnificent, W. King, Mrs. W. Knox, Godfrey's Eclipse, Marjory Shields, Buttercup, Lady Isabel, Mrs. G. Denyer, Mrs. B. Hankey, J. E. Bryce, Muelenare, Boccace, and Pantia Rilli; Mr. J. George, gardener to T. Henshaw, Esq., was second with good blooms. Mr. G. Haigh also led for twelve incurved, dissimilar; twelve Japanese, dissimilar; six incurved and six Japanese, dissimilar; six incurved, six Japanese, six reflexed, and six anemones.

For eighteen large blooms in six varieties, three in each vase, Mr. W. Holmes, gardener to W. Scott Forbes, Esq., led the way, and he also won for eighteen sprays in six vases, and for six Japanese and six incurved, dissimilar, and for three Japanese and three incurved, dissimilar, staging well throughout.

For three bouquets Mr. A. Adshead led with designs in oncidiums, chrysanthemums, cattleyas, and odontoglossums. Mr. G. Haigh had the best bouquet, and also the best six sprays. Mr. A. Porter had the best epergne, Miss Lightburn the best basket, and Mr. Adshead the best buttonholes. The amateur classes were well filled. Mr. J. H. Counsel winning the silver challenge cup for eighteen blooms. Mr. Woodhams was successful in four classes, gaining the N.C.S. certificate for the best bloom in the section. Mr. J. B. Wroe took three firsts in section two, and in section three Mr. J. B. Wroe secured the silver challenge cup, and Mr. Woollams gained the silver medal for the best bloom with Bessie Godfrey. Other first prizemen were Mr. J. J. W. Holton, Mr. J. W. Counsel, Mr. S. Parkinson, Mr. J. Beswick, Mr. D. Slater, and Mr. J. E. Hamblett.

British Gardeners' Association.

LONDON BRANCH.

On Thursday last, the 12th ult., the third monthly meeting of the session was held at Carr's Restaurant, Strand, Mr. E. F. Hawes presiding over a large gathering. It was unanimously decided by the general meeting that all members of the London branch should contribute one shilling yearly to the journal fund, to assist in the expenses of publication, which have been very considerable owing to its free distribution to members.

Mr. J. Harrison Dick gave a lantern lecture on "Famous Old-time Gardeners." The subject was well illustrated by portraits of several of the most famous gardeners of the past, and their work was briefly explained in a clear and lucid manner. The evening proved a most instructive and elevating one, and, perhaps, may be the means of inducing others to take a greater interest in the work. A cordial vote of thanks was proposed by Messrs. Barnes and J. Wood, and carried with acclamation.

OBITUARY.

MR. MARTIN R. SMITH.

Horticulturists generally, and carnation-lovers in particular, will learn with regret of the death, on November 8, of Mr. Martin R. Smith, of Warren House, Hayes. Mr. Martin R. Smith, whose portrait we gave on p. 205 of our issue of March 30, 1907, was a great carnation enthusiast, and a clever raiser of seedlings. He practically made the yellow-ground picotee group, and he increased the usefulness of border carnations in a most remarkable manner. He also raised many splendid new Malmaison carnations, and had, latterly, been devoting attention to raising a new race of flowers of the old flake and bizarre types. For many years Mr. Martin Smith was president of the National Carnation and Picotee Society, and he contributed liberally to its funds, and exhibited largely at its exhibitions. A member of a well-known banking firm, Mr. Martin Smith found plenty of recreation in his garden, and took such a keen interest in the flower that most appealed to him, that his name will long continue to be associated with the improvement of carnations. Mr. Martin Smith's death causes a vacancy in the roll of the Victoria Medal of Honour in Horticulture.

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ANSWERS TO CORRESPONDENTS.

MARECHAL NIEL ROSE. — A. A. B., Morden: Provided your little house has a sunny aspect, you have no need to worry about the behaviour of your Marechal Niel rose; indeed, the rose appears to have grown splendidly. Afford plenty of ventilation, just keeping frost out of the structure, and then, in the spring, slightly shorten back the extremities of growth, remove some of the secondary growths, if they appear to be too numerous, and the rose will break from the eyes all along the canes, and flower freely. Of course, warmer conditions must be provided at that season.

AUTUMN-TINTED FOLIAGE.—T. A. G., Norwich: There are numerous trees and shrubs that present a fine appearance in the autumn when their leaves assume varied and beautiful hues. The common beech and lime must not be forgotten, and Acers provide several fine subjects, notably A. palmatum, A. p. atropurpureum, A. p. sanguineum, A. rubrum, A. saccharinum, A. platanoides Schwedleri, A. Colchicum rubrum, and A. circinata. Others are Amelanchier canadensis, Amydalus persica purpurea, Andromenda arboret. Azalea mollis, Berberis Thunbergi, B. aquifolia, B. vulgaris,and B. v. atropurpurea, Betula purpurea, Cerasus Avium, Cotoneaster Simonsi, Cratægus prunifolia, Euonymus europæus, E. e. augustifolius, and E. latifolius, Kolreuteria paniculata, Liquidambar styraciflua, Parrotia persica, Rhus cotinus, R. glabra and R. g. laciniata, R. typhina, Ribes missouriense, Stephanandra flexuosa, Vaccinium pennsylvanicum, Viburnum Opulus, Quercus american coccinea, Q. americana rubra, and Q. palustris.

EXPORTATION OF POTATOES TO IRELAND.—J. J., Wisbech: In view of the fact that Black Scab on potatoes has not yet been found in Ireland, the Irish Department of Agriculture has issued an order making it compulsory on every person having potatoes affected with disease to notify the fact to the Department. It also prohibits, under heavy penalty, the landing in Ireland of diseased tubers. In connection with this order, the Irish Department suggests that seed potatoes should not be purchased from Great Britain unless the vendors are prepared to give a guarantee that Black Scab was not known to exist on the farm on which the potatoes were grown.

[Since the foregoing was put into type we have been informed that Black Scab has been found in Ireland.—Ed. "G.M."]

CATTLEYA DOWIANA AUREA. — D. B. W., Cattleya Dowiana aurea flowers more freely than the type, and there is rather more yellow in the lip of the flower. This orchid thrives in the cattleya house, and, as it loves abundance of light, it should be suspended near the roof glass, but not so near that it will suffer harm from cold during the winter, either from frost or cold winds. The careful encouragement of early growth, and plenty of light and sunshine to ripen up such growth, are the points to remember, because the flowering season is late summer or early autumn, hence the need of ripening the growths early in the season. In and near towns it is almost impossible to properly manage Cattleya Dowiana aurea, but out in the country, where there is plenty of good light during winter and spring, there should be no real difficulty in flowering this handsome plant. During the bright hot days of summer only a very thin shading is needed for this cattleya.

CONTINENTAL ROSES FOR FORCING. —T. S., Bristol: We are glad to have been of service to you, and deeply regret that any Continental nurseryman should act so unscrupulously. We should be glad to learn from you, not for publication, the name of the firm that supplied newly-lifted plants for such a purpose.

VIOLETS IN FRAMES. — D. C., Craven Arms: We have been expecting specimens of the leaves showing the spotting you refer to. It is probable that late planting, followed by a close atmosphere produced by keeping the frames close so as to establish the plants as quickly as possible, is the cause of the trouble. During cold nights the frames should be shut down closely and covered with mats to keep the frost out. Give plenty of air on all favourable occasions, pulling the lights right off on bright mild days. Soot should be sparingly used, but a very light dusting of old soot, gently stirred into the surface soil, will help to deepen the colour of leaves and flowers. The spraying is correct. Remove all badly-damaged leaves, and burn them promptly.

NAMES OF PLANTS.

C. G., Bideford.—Epigæa repens.

T. P., Norwood.—Ligustrum Quihuoi.

G. R. E., Epsom. — 1, Abies grandis; 2, Picea pungens; 3, Veronica decumbens; 4, V. arborea; 5, Ligustrum lucidum.

F. G. H., Rotherham. — 1, Hedera Helix conglomerata; 2, Acer campestre; 3, Juniperus communis; 4, Thuia orientalis.

NAMES OF FRUITS.

T. B. P., Enfield.—1, Catillac; 2, not recognised.

J. A., Diss.—1, Northern Greening; 2, Lemon Pippin.

M. R., Wareham.—1, Waltham Abbey Seedling; 2, Cellini; 3, Peasgood's Nonsuch; 4, Gloria Mundi; 5, Chas. Ross; 6, Beurre Diel.

W. C., Bridgewater.—1, Lady Henniker; 2, Waltham Abbey Seedling; 3, Cellini; 4, Rosemary Russet; 5, not recognised; 6, King of the Pippins.

H. R., Scratby. — 1, resembles Yorkshire Beauty, but may be a local form; 2, Northern Greening; 3, Peasgood's Nonsuch; 4, Golden Reinette; 5, Flemish Beauty.

G. W., Stoke.—1, not recognised, probably a local variety; 2, Emperor Alexander; 3, Ringer; 4, Braddick's Nonpareil; 5, Bedfordshire Foundling; 6, Stirling Castle.

L. Q., Sussex.—1, not recognised; 2, Swedish Reinette; 3, Bismarck; 4, not recognised; 5, Malster; 6, Hubbard's Russet Pearmain; 7, not sent; 8, Yorkshire Beauty; 9, not recognised.

F. D., Kettering.—The apple is a pleasant one, but we think it is not of sufficient merit to put on the market as distinct. It very much resembles American Mother in appearance, but not in flavour, and we should like to see well-grown fruits from a young tree growing in a good position. Graft one or two trees next year, and see what the apple is capable of. It is certainly attractive in colouring, but too small to become popular, as at present grown.

METEOROLOGICAL OBSERVATIONS.

TAKEN BY THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. November 8 November 14.	Sunshine.	Temperature of the Air.			
		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 8 -Sunday	6 5	35	32	46	29
,, 9 -Monday	5 25	27	27	45	25
,, 10—Tuesday ...	5 55	24	23	51	20
,, 11 - Wednesday.	0 5	51	51	56	24
,, 12 -Thursday ...	5 55	52	51	59	51
,, 13—Friday	5 10	53	52	58	51
,, 14—Saturday ...	0 55	50	48	52	49
Means	4 15	42	41	52	36

Date. 1908. November 8 to November 14.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Nov. 8—Sunday	—	44	49	52	22
,, 9—Monday	—	42	48	52	23
,, 10—Tuesday ...	0·01	41	42	51	17
,, 11—Wednesday.	0·09	42	46	51	25
,, 12—Thursday ..	0·08	46	47	50	45
,, 13—Friday	0·03	48	48	50	42
,, 14—Saturday ...	0·02	48	49	50	41
Means ...	(total) 0·23	44	47	51	31

FORTHCOMING ENGAGEMENTS.

TUESDAY, November 24. — Royal Horticultural Society; Committees meet at 12 o'clock; lecture at 3 p.m. on "Italian Gardens," by Mr. Joseph Cheal; Scientific Committee at 4 o'clock.

WEDNESDAY, November 25.—Royal Society of Arts.

THURSDAY, November 26.—Colonial Fruit Show at the Royal Horticultural Hall; two days.

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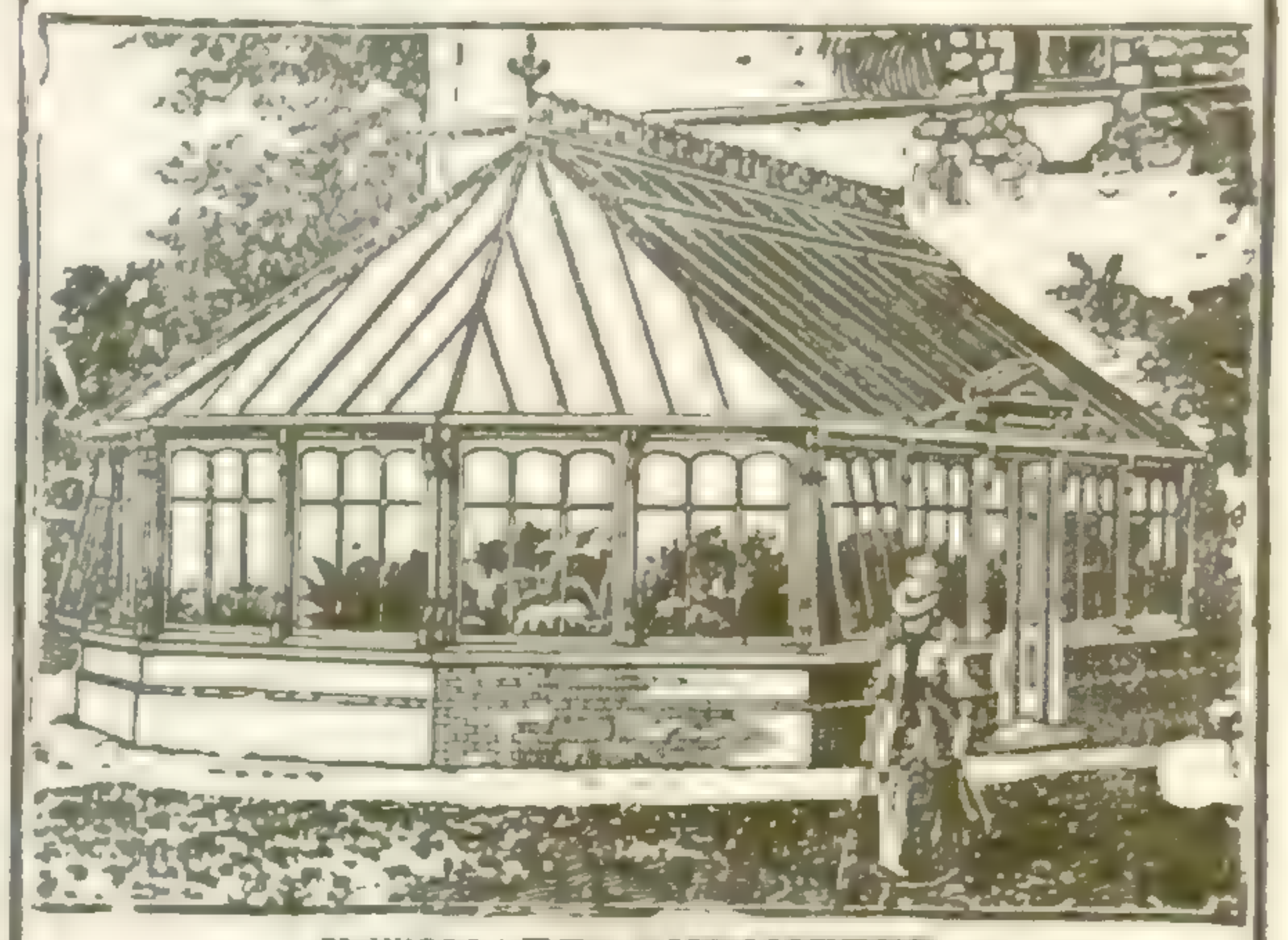

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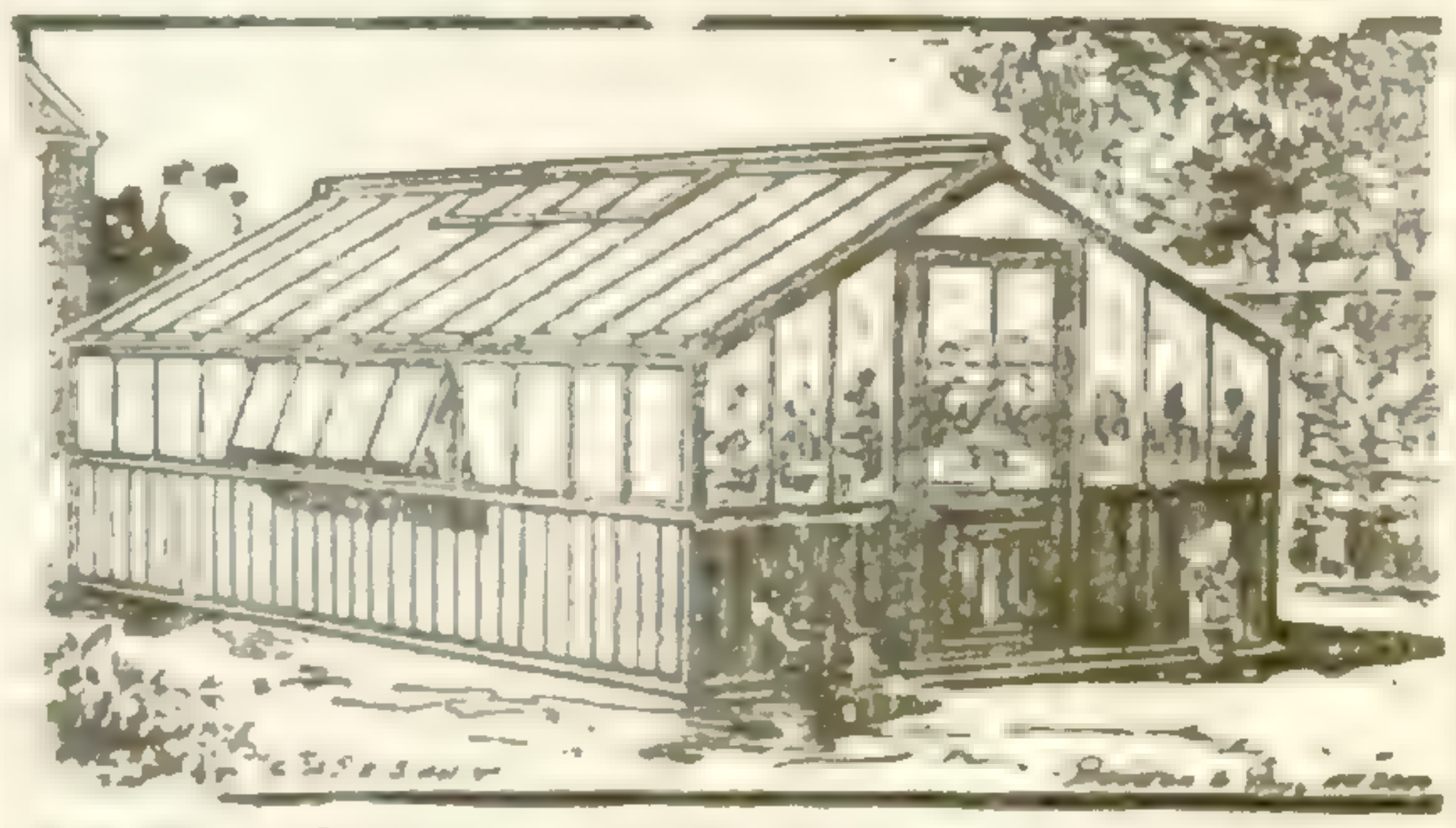

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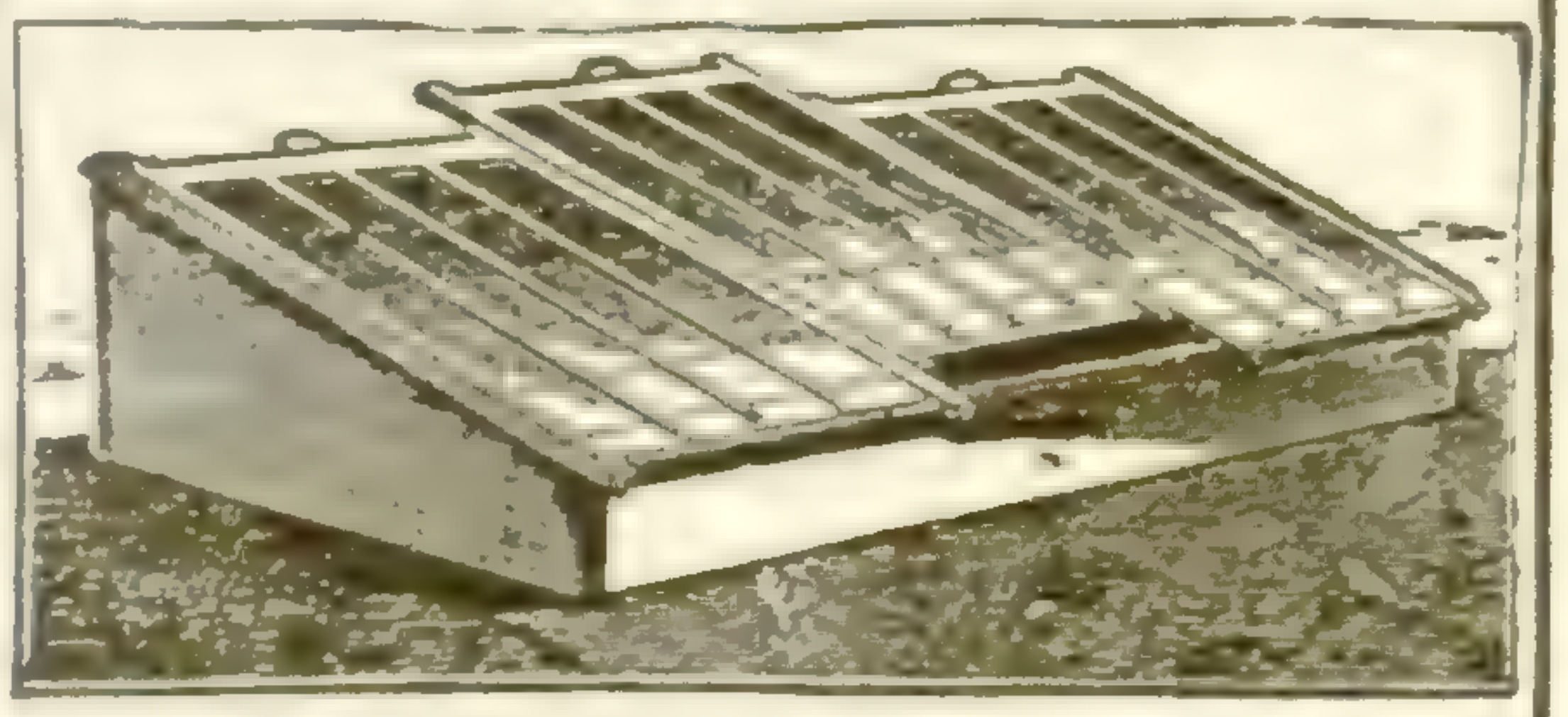

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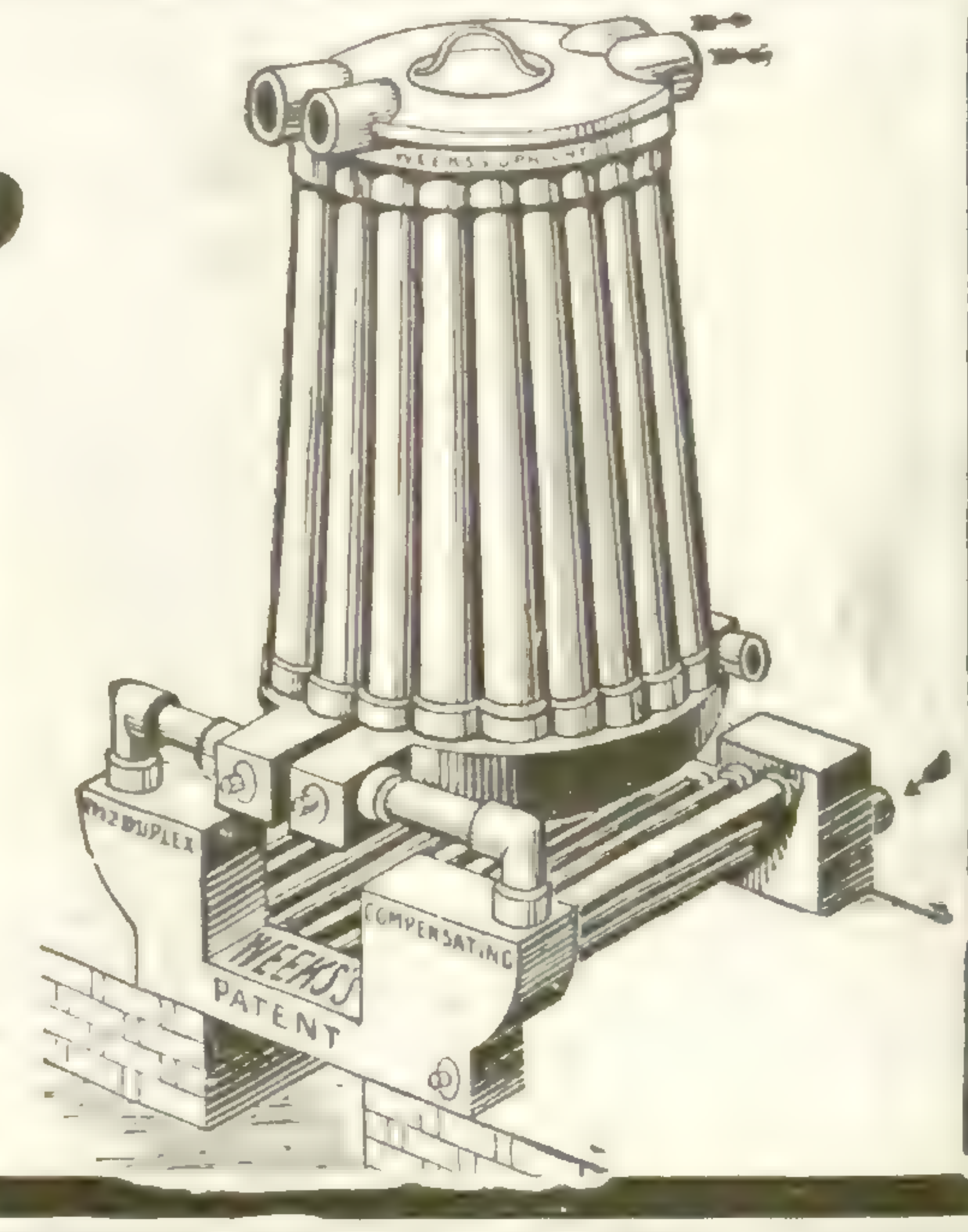

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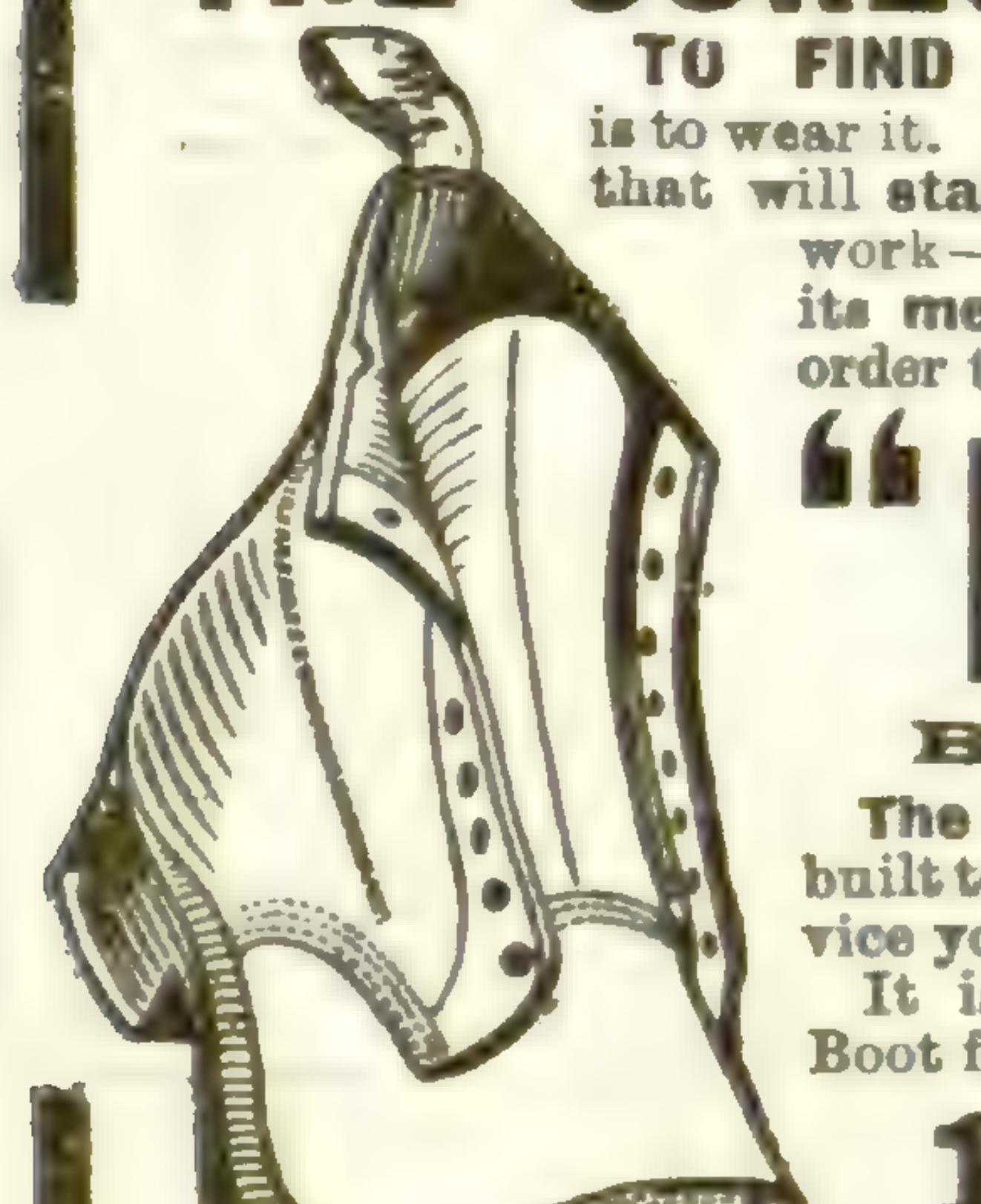

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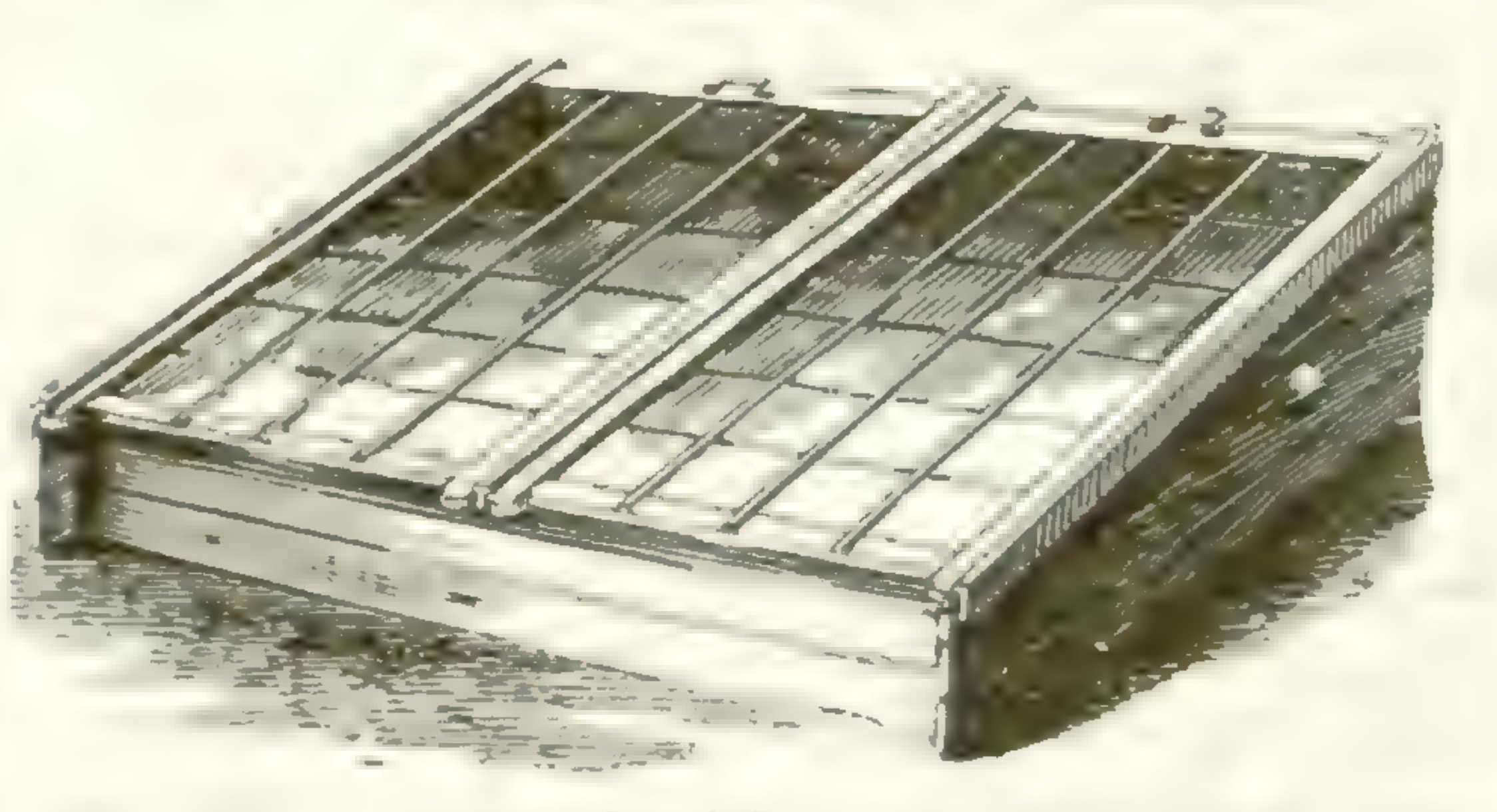

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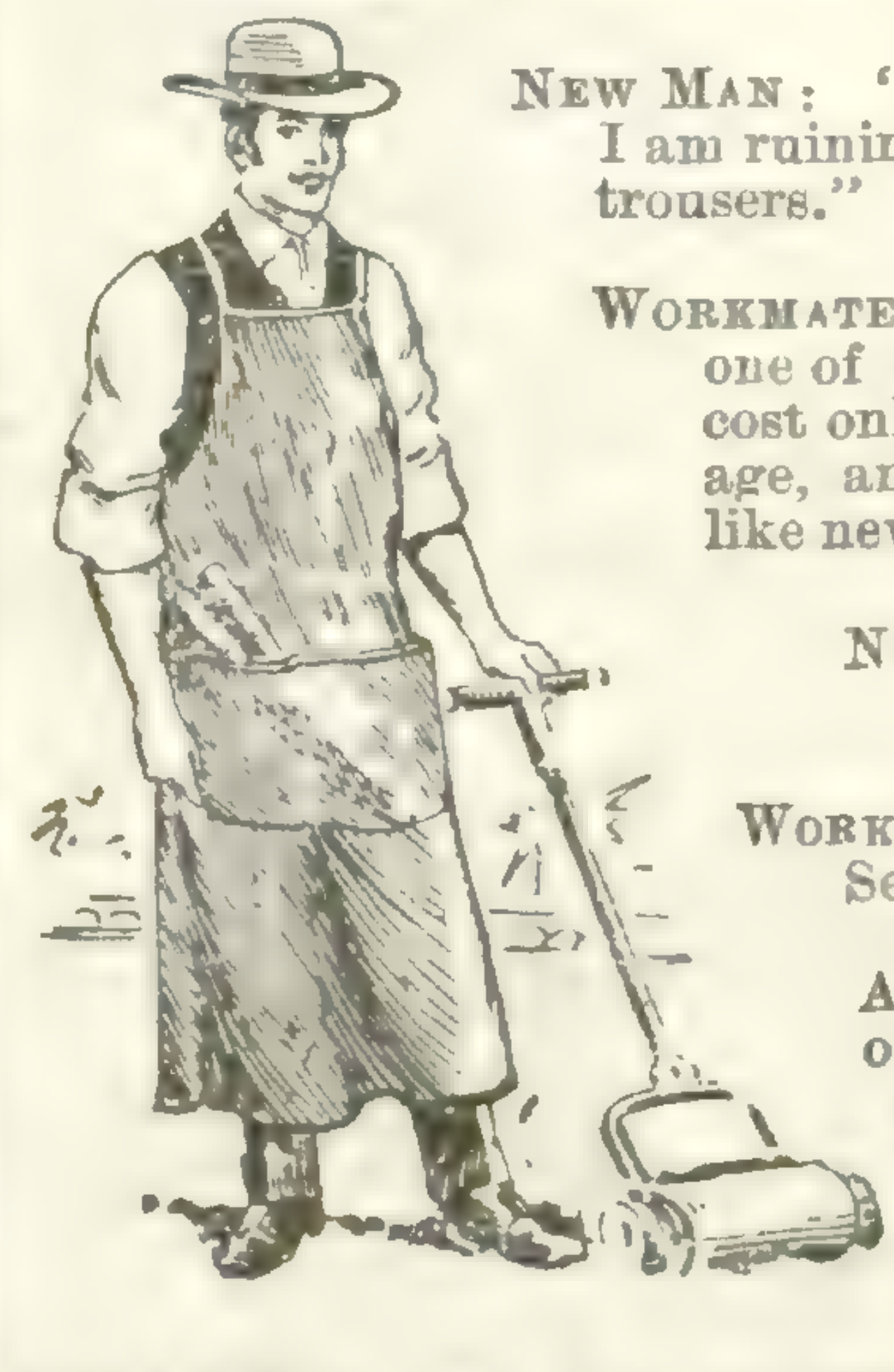

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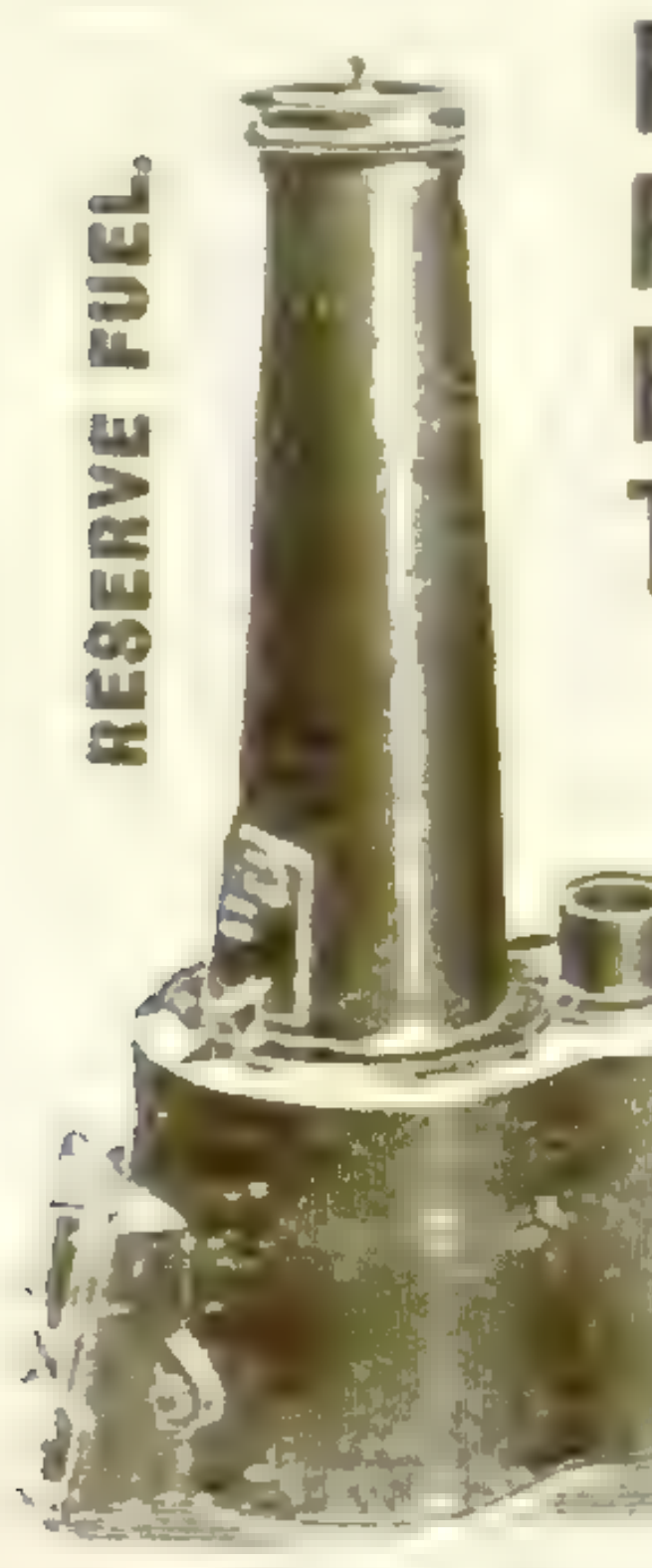
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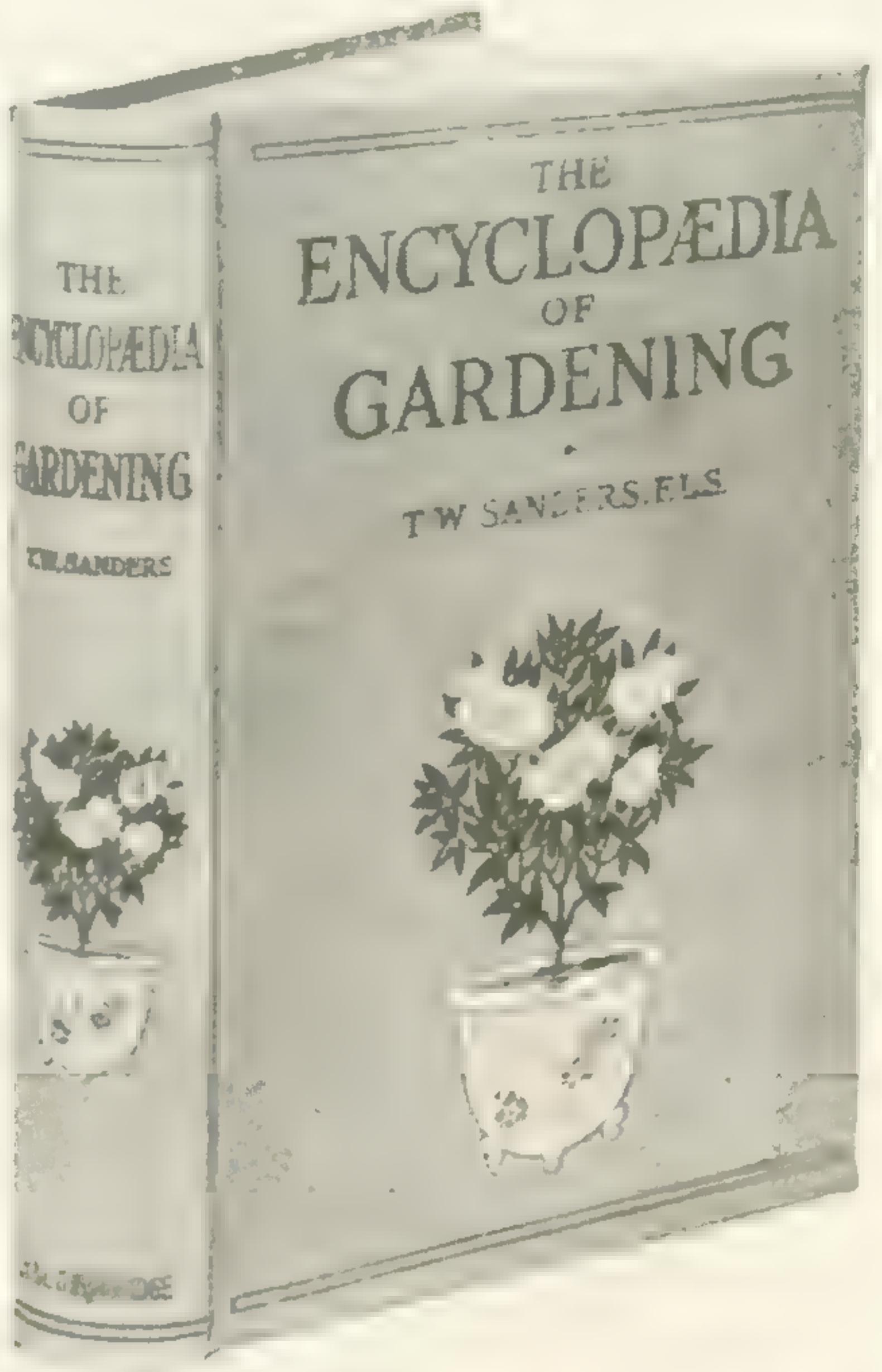

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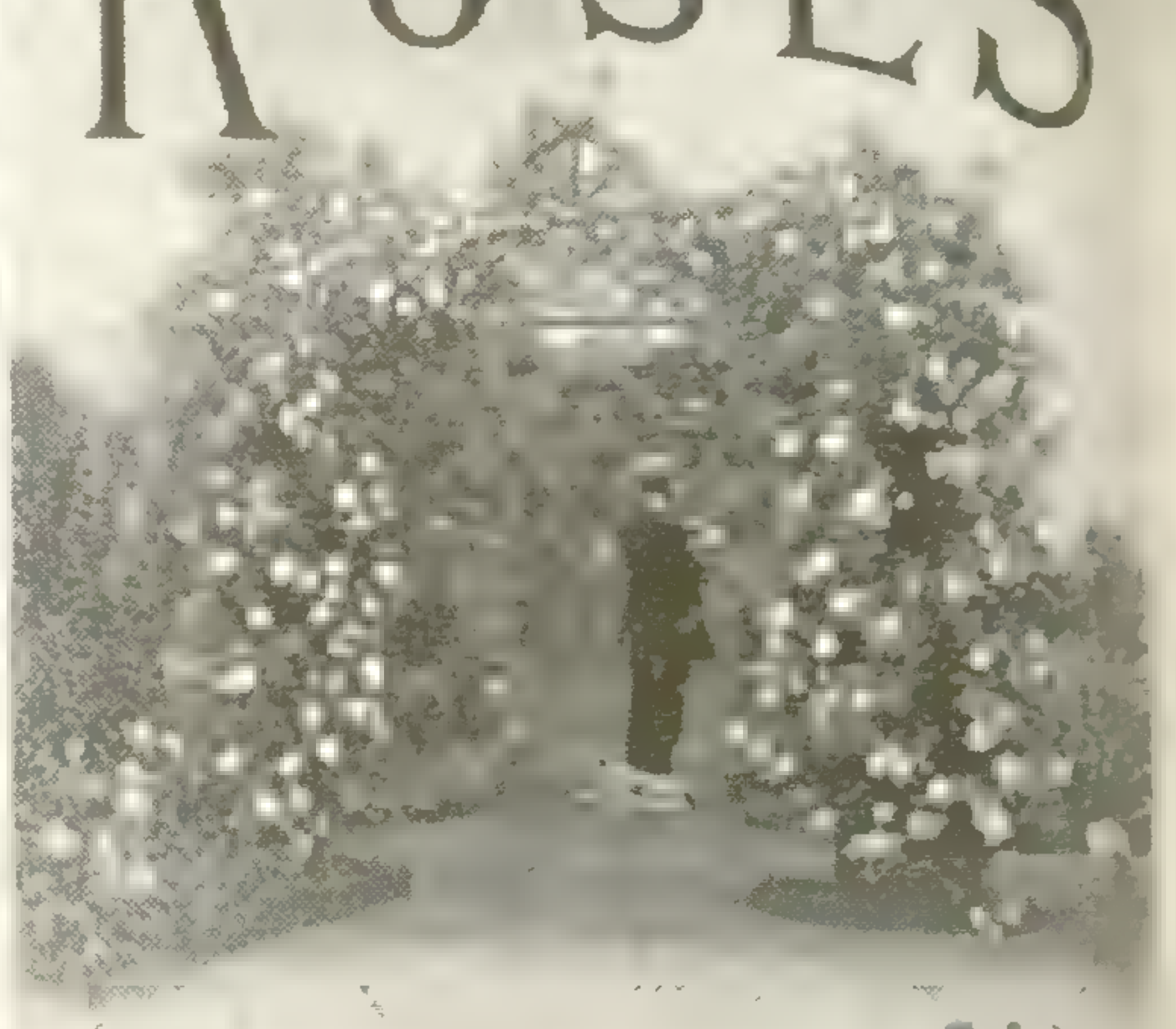

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VOL. LI.—No. 2,874. SATURDAY, NOVEMBER 28, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Jack Frost.

Although it is with a pang of regret that we see our tender garden plants, dahlias and others, cut down ruthlessly in full bloom by the first keen frost of the season, there is a vast deal to be said on the other side to make up for it. Mild winters are by no means without their drawbacks. Plants are like human beings, in the fact that without a good rest from time to time they become worn out, weakly, and may even perish outright. Without Jack Frosts's drastic narcotic many plants seem unable to stop growth so long as any stimulus of warmth persists, and since, sooner or later, a sharp snap is bound to come, not only are their efforts wasted and their unseasonable growths destroyed, but they suffer for it the following season in a marked degree. The normally latest efforts of many plants is to fashion and ripen buds for the following year, and if these are induced to grow prematurely, they are in all probability killed. Frost, too, is a potent agent in breaking up and aerating the soil. The hardest and toughest clods in the very act of freezing are broken up into minute fractions, and though the ice for the time being may cement these into rock-like masses, they fall asunder when the thaw comes like a house of cards. Doubtless, too, a hard frost kills many grubs and other insect pests which would otherwise escape the winter, to resume their ravages in the spring, and multiply their kind ad libitum. Frost, too, brings the snow, which though by no means a blessing to the town dweller, and in excess plays havoc with such shrubs and trees as have not had the wisdom to imitate their deciduous brethren, and so retain their foliage at the wrong time, is a good friend to many plants, which, under its protecting blanket, are saved from the rigour of the winter blasts or the destructive alternations of warm sun, hard frosts, drying winds, or drenching rains, which are so fatal to many of our alpine gems when exposed to lowland conditions, and are thus deprived of their natural shelter. The changes of the seasons, indeed, have been material factors in the process of plant evolution, and the inevitable result is that the healthiest conditions for plant existence are those in which the seasons are seasonable, when winter is really winter, and not a compromise in the shape of long spells of mild, or even warm weather, interspersed with spasmodic attempts to be what it ought to be. Of late years this has appeared to be the rule rather than the exception. Just as the English summer has been calumniously defined as three bright days and a thunderstorm, so our winters have been too frequently a series of three white frosts and a period of mugginess. The Christmas card of deep snow-laden landscapes, with a scarlet-breasted robin inserted as a necessary bit of colour, has become almost an anachronism, for we get such anomalies as the keenest frost of the winter in early October, and all the snowfall proper to the winter season in April. Jack Frost, too, in recent years has been but a fickle friend to winter sports, tantalising the skater with just sufficient ice to tempt a purchase of the needful footwear, and then retiring to make room for southerly zephyrs and a general thaw. In winter time, indeed, happy are those who, gifted with robust constitutions and sufficient cash, can visit those regions where true winter conditions prevail, and Jack Frost reigns supreme from autumn to spring. It is practically only such who know the true beauty of the season where the snow is deep and spotless, the hoar frost builds up its wonderful arabesques on the windows, not superficially, as here, but in accumulating masses of feathery scrolls, like glorified selaginellas piled one upon the other, while in the open it builds up, night after night, upon the snowy layers deep beds of lucent ice-moss of inconceivable delicacy, like diamantine plumage. With the thermometer at zero, or even far below it, a brilliant sky above, and these wonders at one's feet, one learns at any rate what winter can be when Jack Frost does his duty.

MR. C. HARMAN PAYNE.
Hon. Foreign Secretary of the National Chrysanthemum Society.

Mr. C. Harman Payne is well known at home and on the Continent as a keen lover of florists' flowers and an enthusiastic chrysanthemist. His knowledge of the history of the Golden Flower is probably unique, and his fine library of florists' works tells at once how earnestly he has sought for, and found that knowledge. It is just about five and twenty years ago that Mr. C. Harman Payne contributed his first article to the GARDENERS' MAGAZINE, and this appeared in our issue of December 22, 1883; from then until now, not a single season has passed without Mr. Harman Payne's signature appearing below chrysanthemum notes from his pen. For twenty-one years our friend has been Foreign Corresponding Secretary of the National Chrysanthemum Society, and he has taken a prominent part in the production of the literature published at various times by that body. In 1896 Mr. Harman Payne received from the French Government the decoration of Chevalier du Mérite Agricôle, given for his journalistic work upon chrysanthemums and his regular references to the new varieties raised by the various members of the chrysanthemum industry in France. In 1902 the higher honour of

Officer of the same order was conferred upon him. Mr. Harman Payne is a persona grata at Continental flower shows, and has been invited to act at almost all the leading exhibitions since the Ghent Chrysanthemum Show of 1889. He is also a corresponding member of the National Horticultural Society of France, and London correspondent for several foreign horticultural papers. Quite recently Mr. Harman Payne secured the blessing of every horticultural journalist by publishing a "Bibliography of Florists' Flowers," a work long needed, and one that he was specially fitted to compile.

The Gardens Around Bristol are numerous, interesting, and variedly beautiful, and our readers will remember we have published illustrated accounts of one group of these western gardens. We now propose to publish, on Dec. 12 and 19, descriptions of such well-known establishments as Tyntesfield, The Holmes, Clifton Zoological Gardens, Henbury Hill, Henbury Hill House, and Blaise Castle. Numerous illustrations representing beautiful scenes and distinctive features will accompany the text.

Chrysanthemum Souvenir de Scalarandis, of which we give an illustration in this issue, has strong claims upon the general body of cultivators, for with large, finely formed blooms are combined an excellent habit and abundant flower production. The form of the blooms, which are necessarily much reduced below the natural size, is admirably shown in the illustration, and it will suffice to say that they are rich golden yellow. Mr. Ladds, of Swanley, to whom we are indebted for the blooms figured, regards it as of much value for market culture, and we consider it likely to become highly popular for decorative purposes generally.

Potato Crop in Great Britain. A preliminary statement has been issued by the Board of Agriculture showing the estimated produce and yield per acre of the potato and root crops in Great Britain in the current year in comparison with last year. According to this statement the area under potatoes this year was 391,083 acres in England, against 381,891 acres last year; 143,692 acres in Scotland against 138,888 acres; and 27,330 acres in Wales against 28,141 acres. The area for Great Britain was 562,105 acres, as compared with 548,920 acres. The estimated total produce was 2,719,539 tons, or an average yield of 6.95 tons per acre in England; 1,048,559 tons, or an average yield of 7.30 tons per acre in Scotland, and 151,700 tons, or an average yield of 5.55 tons per acre in Wales. The total produce for Great Britain is estimated at 3,919,798 tons or an average yield of 6.97 tons per acre, as compared with 2,977,485 tons, or an average yield of 5.42 tons per acre last year. The average yield for the ten years 1898-07 was 5.78 tons per acre. It will thus be seen that the crop of potatoes harvested this year has been an exceptionally good one.

Co-operative Afforestation.—At the meeting of the Royal Commission on Coast Erosion on Tuesday, Lord Lovat suggested a national scheme of co-operative afforestation between landowners and the State. His lordship said the State should find the money, at a low rate of interest, and the landowner should find the land at its unimproved rate of value at the same rate of interest. The work of tree planting should be done locally, subject to State supervision. The landowner should not exercise sporting rights to the detriment of the woods. At any period the landowner should be able to buy out the State, repaying the capital sum spent, with compound interest, subject to the condition that he should replant to keep up the supply of timber. If a landowner did not buy, the profits on the State forest should be divided between him and the State pro rata. He was opposed to any thing in the nature of compulsory acquirement of land because of the opposition it would raise. What they feared in Scotland was a scheme of compulsion which would enable a man to take the eyes out of a farm.

R.H.S. Colonial Fruit Show.—The exhibition of Colonial grown fruits and bottled fruits, which was opened by Lord Strathcona and Mount Royal on Thursday last, is extensive and of a most interesting character. The British Columbia Government is evidently making strenuous efforts to capture the apple trade, and the fine display of apples from British Columbia indicates the possibilities of the colony in fruit production.

Chrysanthemum Tokio, one of the oldest of the Japanese section, and a variety introduced by Salter at a period when Japanese chrysanthemums were beginning to take the popular fancy, is still one of the very best for conservatory decoration. From an exhibitor's point of view, and judged for size of bloom, Tokio is beneath contempt, but grown in bush form, undisbudded, it is a splendid plant, producing large sprays of rather small but brilliant crimson scarlet flowers that provide a warm touch of colour so pleasing and necessary during November. Now that decorative and single chrysanthemums promise to take their rightful place in gardens, Tokio ought to become popular. At Kew it is grown each year in some quantity, and it is very bright at present in the No. 4 house.

The New Aquatic Tanks at Kew, in course of erection, promise, as we have already indicated, to become a handsome and distinct new feature in the coming year. The site, just outside the old museum, is a good one. A large oval, sunken pool will occupy the central position, and it is proposed to heat the water slightly so that sub-tropical water lilies, nelumbiums, etc., may be cultivated successfully in it. The four corner tanks are raised well above the surrounding level, and these are of triangular shape. Two other tanks will probably be built, one on either side of the big central one, but these will be much smaller. Flights of steps at either end of this Aquatic Garden lead to or from the walk around the central pool.

A Lancashire Willow Farm.—In the current issue of the "Kew Bulletin." Mr. W. Dallimore, arboretum foreman at Kew, gives a very interesting account of a willow farm at Mawdesley, a village about midway between Liverpool and Preston. It appears that the cultivation of various willows for basket making is the chief industry of Mawdesley, and has been for upwards of half a century. There are several willow farms, and Mr. Dallimore describes Mr. Cowley's, the largest, consisting at first of $23\frac{1}{4}$ acres, and developing into about 500 acres. Selected forms of Salix purpurea, S. viminalis, S. rubra, and S. Smithiana are the kinds of willows mostly grown. The willow industry at Mawdesley had its origin through the chance visit of a basket maker to the neighbourhood. He noticed a patch of willows growing in an out-of-the-way corner of a field and offered the farmer a price for them that seemed more than the land was worth. This led to the first idea for a willow farm.

The School of Forestry in the Forest of Dean has progressed satisfactorily during the year 1907-8. It is worthy of notice that of the nineteen passed students, four are now Crown woodmen, one each in Dean Forest, New Forest, Windsor, and Tintern, one is assistant inspector of poles, Postal Department, five are employed as foresters or woodmen on private estates, one is working in a large public nursery, eight are employed as Crown workmen in Dean Forest; thus no such student is out of employment. An additional area of four acres has been planted up in the experimental plots at Abbotswood. The museum has been improved by the addition of a collection of twenty-six species of injurious insects, showing their life histories and the damage they do to the forest trees, and by a collection of the seeds of 250 species of trees and shrubs.

Fertilisation of Tomatoes.—Within the past fifteen years or so, much attention has been devoted at the experimental stations in the United States to the fertilisation of tomatoes. Attention was first given to this matter at the Cornell station, where it was found that the amount of pollen used had an important influence on the form and size of the fruit. Much the same results have recently been obtained at the Michigan station. In carrying out the experiment four plants of each of six varieties were used to determine the effect of using varying amounts of pollen. All the flowers on one plant of each variety were emasculated and fertilised on one side of the stigma only. These invariably produced lop-sided and small fruits. All the flowers of one plant of each variety were fertilised with from one to five pollen grains. These produced very small solid fruits, with an average weight of about 1oz., and having no seeds or but one or two. All the flowers on one plant of each variety were fertilised with a large amount of pollen, spread all over the stigma. These produced fruits that were smoother and heavier than those produced from flowers that received but a small amount of pollen. The conclusions deduced from these experiments are that when pollen falls on one side of the stigma only, a one-sided tomato always results, and the larger the stigma the greater the irregularity. The amount of pollen applied determines to a great extent the size and smoothness of the tomato, but after applying a certain amount no further increase can be obtained. The small, irregular tomatoes grown under glass are caused largely by insufficient fertilisation. In the course of the experiment conducted with a view to determine the relative value of cross and self fertilisation in crop production, it was found that there was no appreciable difference in the number of fruits, but there was a slight gain in weight.

Single Chrysanthemums.—It is curious, considering the popularity of the single chrysanthemum in England, that our neighbours on the other side of the Channel should, in spite of their artistic sense in matters floricultural, be practically unacquainted with it. Of late years great advance has been made by some of our English raisers, and every season sees new additions to the already lengthy list. Among those met with in Paris in good form recently, Nellie Riding, golden-chestnut; Alice Crate, rose; Annie Stevens, rose; Mrs. H. J. Empson, yellow; Kitty Bourne, yellow; Narcissus, pure golden-yellow; Doreen, yellow; Mrs. E. Roberts, pale lilac-mauve; Pyrethrum, reddish-crimson; Miss Gunn, blush-pink; Perfecta, rosy-purple; and Yellow Ring, pure yellow, were attractive examples of this type.

Sports in Papaver Rhæas.—W. G. Smith, Esq., of Dunstable, wrote to the R.H.S. Scientific Committee in reference to the Shirley poppies with bracts at the base of the flowers and otherwise varying from the normal, saying that he had noticed similar forms at Dunstable in Papaver Rhæas, and he found that these came true from seed, at any rate for several years. He had also noticed forms with several flowers growing from just below the flower in its normal position, reminding one of the "hen and chicken" daisy, where inflorescences behave in a similar manner.

Certificates for Chrysanthemums at Paris. Certificates are always freely awarded by the Floral Committee at the Paris Autumn Show, and at the one recently held there was no exception to the general rule. Sixty-eight First Class Certificates were awarded to the following exhibitors of new seedling chrysanthemums: M. Calvat, eighteen; Vilmorin Andrieux, and Co., eight; M. Nonin, eight; Marquis de Pins, seven; M. Chantrier, five; M. Heraud, five; M. Traisnel, five; M. Durand, four; M. Montigny, three; M. Martin, two; M. Perret, two; and M. Maurice Martin, one.

Phylloxera vastatrix.- In an interesting communication to the "Daily Telegraph," on aphids, Sir Ray Lankester, K.C.B., writes as follows with reference to the phylloxera, which was introduced to Europe from Colorado about the year 1864, and did much damage in the Continental vineyards, and some injury to grape vines in this country: The introduction of this deadly parasite to Europe was a mere chance part of the blind mixing-up of the freely-adjusted products of all parts of the earth which civilised man is always bringing about with disastrous and terrifying results. In twenty years France lost 400 million pounds in consequence; three million acres of vineyards were destroyed. Other countries Germany, Italy, and the Cape also suffered. All sorts of remedies were suggested and tried, such as the application of poisons to the roots and the sinking of the vineyards under water. Gradually the only effective method of dealing with the case has been established. The old European vine stocks or standards have been grubbed up in all but the very choicest vineyards, and American vines have been planted in their place. On to these have been grafted cuttings of the local French vines, and they have taken kindly to their new conditions. The produce of the French vineyards is now greater than it has ever been. It had fallen from an annual yield of 1,300,000,000 gallons to [illegible] but in 1900 it had risen again to a yield of more than 1,400,000,000 gallons. This history is a striking instance of the vast importance to civilised communities of a knowledge and control of even such minute living things as the plant lice, and of the extraordinarily large results which obscure living things may produce. It must tend to convince reasonable men of the importance of accurate knowledge as to living things, and the necessity of expending public money in constantly improving and extending that knowledge.

Macrobiotic Seeds are those that maintain their vitality for a lengthy period. Leguminous seeds, and those of the mallow and myrtle orders, are especially long-lived. One reason for this longevity is found in the impermeable coat the seeds possess. Dr. A. J. Ewart has made numerous tests in relation to the germination of macrobiotic seeds, and he finds that the best method of inducing germination is that of steeping the seeds in sulphuric acid for a few hours.

RETROSPECTIVE CHRYSANTHEMUM SHOW IN PARIS.

Under the above title one of the most remarkable and instructive exhibitions connected with a flower show was held in conjunction with the recent Paris Chrysanthemum Show. It is due to Monsieur George Gibault, the librarian of the National Horticultural Society of France, to say that the idea originated with him, and that all the arrangements were left in his hands. The result was all that could be desired, for exhibitors, visitors, and officials were alike pleased with the show.

A large portion of the corridor connecting the two large greenhouses on the Cours la Reine was set apart for the Retrospective Show. There was ample wall space provided for hanging framed prints and pictures on, besides tables on which were arranged closed glass cases containing literary and artistic treasures too valuable to lie about without some such precaution. The French are too keenly appreciative of the help they may get by taking care of the exhibits than to allow them to lie about, as has been the case in this country.

On approaching the show the first sight that met us was a series of panels high up on the walls, containing the names of the most important men in the history of the flower, with a brief mention of their achievements. The panels, arranged in order of date, were as follows, the names being written in large capitals, and thus easily seen at a long distance from the actual spot, viz.,

Blancard, 1789.—Introduction of the chrysanthemum from China to France, followed by the introduction of various other varieties.

Bernet, 1826.—First seedlings raised in France.

Fortune, 1846.—Introduction of the pompon section.

Fortune, 1863.—Introduction from Japan of seven large-flowering varieties.

Calvat, 1891.—Raiser of the very large varieties.

In the middle of the central wall was an original oil painting, kindly lent by the family, a portrait of the introducer of the first large-flowering chrysanthemum into Europe in 1789. It was that of Captain Blancard. Underneath it was a coloured plate from the "Botanical Magazine" of the flower itself, which was known here in England as the Old Purple. In front of this portrait a great granddaughter of Blancard, in the presence of several members of the family, made a presentation of flowers to M. Fallierès, the President of the French Republic, when he paid his official visit to the show on the opening morning.

Around this picture were others in oil and water colours depicting many varieties of old chrysanthemums long since discarded by growers. There was a portrait of Louis Pelé, a name well known in the history of the flower, staged by M. Lemaire. There was also a series of photographs of old-time growers and raisers, and other objects of interest.

A handsome collection of bibliographical and art treasures came from M. Mommeja, a well-known French enthusiast. His contribution was exhibited in a large glass case running nearly half-way round the show, and comprised many illustrated Japanese books containing some very fine coloured figures of chrysanthemums, and Japanese engravings of specimen flowers of great artistic merit, besides some views of Japanese chrysanthemum gardens and exhibitions. Curious silks, brocades, also several Chinese coloured drawings on the wall bearing chrysanthemums on them, and Japanese lacquer ware and porcelain of the seventeenth and eighteenth centuries, all decorated with the same flower, formed an important part of the display. The same exhibitor had a large collection in another large glass case, of books and pamphlets and other rarities of literary interest.

On the walls were a large number of coloured engravings of old incurved flowers shown by Mr. Harman Payne, who also sent his album of coloured engravings, in which are contained some hundreds of pictures of old varieties, dating back for over a century. Literary curiosities, in the way of old Salter's and Forsyth's catalogues, pamphlets, etc., were also included. Another glass case of ample dimensions contained a series of large photographs of old chrysanthemums and other rare catalogues, some old portraits, a ticket of invitation to the chrysanthemum fête annually held in the gardens of the Emperor of Japan, etc.

From the Library of the National Horticultural Society of France there came quite a number of old French books containing early references to the flower and some rare pamphlets, unknown to us, by Moreau, Chevalier Soulange-Bodin, Desbordes, and others. M. Charles Baltet had an effective exhibit of several pictures of Japanese flowers, and engravings of some curious views in Japanese chrysanthemum gardens. There was also a good display from other sources of literary exhibits of great rarity and interest. We noted the two special Chrysanthemum Double Numbers of the Gardeners' Magazine, 1889-90, and other books, pamphlets, and old catalogues from the exhibits of Messrs. Vilmorin, A. Nonin, Loizeau, Rosette, Lecollier, etc.

ROSES AS STANDARDS.

Given a healthy stock and a wise selection of varieties, few subjects please more than standard roses. Indeed, there are a considerable number of roses that never show themselves to so good advantage in any other form of culture. It is necessary they should be strong, or at least exceptionally free in habit, otherwise their life is too short, and they soon dwindle away. A clean stock, neither old nor young when worked, and with the suckers at the roots carefully eliminated, will often be pleasing for many years. Always stake the stems. This need not be unsightly, and the only object is to keep them from swaying in the wind. A good-headed standard receives a lot of wind, and is by no means so secure as the same growth would be when close to the ground. Therefore, never plant standards in exposed positions.

As single plants upon the lawn, or in the centre of small beds, standards have a good effect. They are very showy when planted in shrubbery borders, and the protection thus afforded is what they need. A good plant in this connection gives double the furnishing effect of a dwarf. When they can be had upon extra tall stocks nothing can surpass the beauty of our weeping roses, such as the Wichuraianas, ramblers, and extra-strong varieties from other classes. One of the chief charms of standards is their clean flowers, free from dirt splashes; each bloom or truss showing to the best advantage. Not a few of our most beautiful varieties are never better than when on short standard stems Maman Cochet and its white counterpart, Mrs. Edward Mawley, The Bride, Viscountess Folkestone, Grace Darling, and many more that have a tendency to droop as their flowers become heavy, are extra pleasing when cultivated in this form. As a rule we find more perfectly developed blooms upon short standards. The plants, apparently, being capable of taking more stimulants without the tendency to coarseness often found in dwarfs when highly fed.

As for the most suitable varieties, these are now so numerous that one can have any colour or size. They may be compact, free, or of weeping character. The only point is to select sorts full of vitality and of good constitution, bearing in mind for what object you are planting, and choose accordingly from any good list.

A. Piper.

CIDER ORCHARDS.

(Concluded from page 812.)

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Method of Selecting Varieties.

Coming now to the varieties themselves, it follows from what has been said above that at least nine different sorts of types are required, viz., a "sharp," "sweet," and "bitter-sweet" for early, mid-season, and late orchards, To these might be added those varieties which yield a good cider without blending; but since they can be also included either among the "sweets" or the "medium sharps," it is hardly necessary to deal with them separately here.

Necessary characteristics.—In making a selection of the best varieties of each type, not only must the usual characters of growth, cropping qualities, resistance to disease, and so on, be taken into consideration, but there are also special characters of vintage importance to be estimated. One of the chief of these is the characteristic flavour of the variety, a factor which is frequently sufficiently pronounced materially to affect the value of a cider. Two kinds of apples may have approximately the same chemical composition, and may yield the same type of cider, and yet the values of the two ciders may be widely different, owing solely to the difference in flavour of the two sorts. This feature is usually much more strongly marked in the case of sharp varieties than with other kinds.

Another most important factor is the rate of fermentation of the juice. Owing to a number of causes this differs to some extent even with the same variety, but, generally speaking, the whole of the available evidence points to the conclusion that under normal conditions some varieties yield slowly-fermenting juices, others give juice fermenting at a moderate rate, and others again produce juices capable of rapid fermentation. The general experience of cider-makers goes to show that members of the latter class are undesirable, since a dry cider only can be obtained from them by natural means. The flavour also is usually coarse. The other two classes are useful, the slowly-fermenting juices being naturally adapted for the production of sweet ciders, and those fermenting at a moderate rate being suitable for the preparation of dry, medium, or moderately sweet ciders.

Varieties which yield juices subject to an excessively slow fermentation should not be planted too extensively, since the ciders made from them are particularly liable to certain disorders, as, for example, cider sickness. If, however, a supply of more rapidly-fermenting juice is available for blending, such varieties may be utilised with safety.

Other important points in connection with the selection of varieties are: (a) The yield of juice, which frequently varies by as much as 10 to 15 per cent. of the weight of the fruit in the case of different varieties; and (b), the degree of firmness of the flesh, hard-fleshed varieties being less easily bruised in gathering and handling than soft-fleshed kinds, and therefore less liable to decay and to the consequent taint in flavour, while they are more suited for storage when that is necessary.

Grouping Varieties in a Series of Orchards.

In cases where it is proposed to plant a series of orchards, the idea of grouping the varieties, not only by their ripening periods, but also by their relative rates of fermentation, would be worth consideration. Thus there might be orchards, the produce of which would yield either a sweet or a dry cider, whether consisting of early, mid-season, or late varieties. Some arrangement of this nature would certainly tend to simplify matters for the cider maker, and would probably add to the value of the orchards from the growers' point of view, since a definite idea of the quality of the produce of such orchards for cider making purposes could be formed, and better prices for the fruit would be obtainable, just as at the present time better prices can be obtained for fruit of known value than for mixed fruit about which little is known.

Useful Varieties.

Concerning individual varieties which can be recommended for propagation, any list which is given must be regarded as provisional only. The experimental work at the National Fruit and Cider Institute on the vintage qualities of different varieties of repute has shown that many kinds have been rated hitherto above their real value, and that there are in existence several comparatively or absolutely unknown sorts which appear to be of superior quality, so far as can be judged from the limited experience of them which it has been possible to gain since the commencement of the work three years ago. A very large number of varieties have been tested, and the most promising kinds are being propagated at the institute. Conclusive results cannot be arrived at for several years, but meanwhile growers may be glad to have some guide as to the most suitable varieties to plant. The following list has therefore been drawn up, and contains representatives of each class required. All of the varieties named are not necessarily the best of the kind which are to be found, but every variety mentioned has been tested at the National Fruit and Cider Institute, and is decidedly above the average of its class in quality. Superior varieties will no doubt be found after further research:

Varieties Recommended for Propagation.

—	Sharp Varieties.	Sweet Varieties.	Bitter-sweet Varieties.
Early	Backwell Red.	Belle Norman. Horners. White Jersey. (All mild bitter-sweets.)	Cherry Norman. Major Knotted Kernel.
Mid-season	Cap of Liberty. Dufflin. Foxwhelp. Frederick. Kingston Black.	Sweet Alford. Woodbine.	Masters Jersey. Strawberry Norman.
Late	Lambrook Pippin. Red Soldier. Yellow Styre.	Bell.	Chisel Jersey. Dabinet. Royal Jersey.

Many of these kinds are not at present obtainable from nurserymen; but all are being propagated at the institute, and, in due course, the trees will be available for distribution. The best plan for those who wish to grow them at once will be to graft such sorts on the heads of young standard trees of other varieties; and it is probable that this method should be regularly adopted for weakly-growing varieties, such as Kingston Black, a strong-growing variety being selected for the standard.

Replanting Old Orchards.

The question of replanting old orchards needs careful consideration. It is customary in many districts to fill up gaps in old orchards by planting young trees in the place of the old ones which have died off. In some instances, when an old orchard is worn out, the trees are grubbed up and their places filled with young standards. This plan cannot be recommended. In the first place, the young trees rarely, if ever, make such good growth as they would if planted in new land, even although all the old trees have been removed. Striking examples of this may be seen where two adjoining orchards of young trees have been planted at the same time, the one on new land and the other on the site of an old orchard. After a few years' growth the development of the trees in the latter case cannot be compared with that in the former. If this is so, where the old trees have been entirely removed, how much greater must be the prejudicial influence on growth in those instances where a young tree is planted among old ones to fill a gap caused by the death of one of the latter. It is to be expected that the soil during the life of an orchard would become impoverished of the elements of food which are needed for the growth of apple trees, and that a second orchard planted on the same site would suffer accordingly. There is also a possibility of the soil becoming "apple-sick."

A second, and most important, reason against the replanting of old orchards is the risk of infection of the young trees by insect and fungoid pests. Most old orchards are hot-beds of pests of various descriptions, and although all old trees may be removed, the soil will certainly remain laden with the pests. Particularly dangerous are root fungi, such as Tree Root Rot, Armillaria mellea, also known as Agaricus melleus, This fungus spreads in the soil, and there appears to be no adequate means of eradicating it. In most old orchards one can find trees attacked by it, and although it may be unable to attack healthy unwounded roots, it can, sooner or later, find an entry into the tree through a damaged root, and eventually cause its death.

The whole question of the extension of orchard planting is thus reduced in the end to one of finding fresh land available for the purpose. The matter is one in which both landlord and tenant are concerned, and without entering here into a discussion of the points involved, the hope may be expressed that, in future, no obstacle to a satisfactory arrangement may arise, as it has done in the past, owing to inattention and want of care of the young trees after planting.

NEW PLANTS, ETC.

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CHRYSANTHEMUMS.

Hetty Wells.—A good decorative Japanese variety, with fine long stems and stout petals. The blooms are graceful and of a pleasing orange-buff shade. F.C.C., N.C.S., November 16. Messrs. W. Wells and Co., Merstham.

Frank Payne.—A beautiful and refined Japanese variety of very pleasing light blush-pink colour. The florets are of moderate width, and they curl lightly and prettily. F.C.C., N.C.S., November 16. Messrs. Wells and Co., Merstham.

Noreen Jay. — A Japanese decorative or market variety with broad-petalled, rather loose flowers of a very brilliant crimson-scarlet hue with bronzy reverse. F.C.C., N.C.S., November 16. Messrs. W. Wells and Co., Merstham.

November Gold.—A beautiful rich golden-yellow Japanese decorative or market variety. The blooms are deep, substantial, borne on long stems, and of fine substance. F.C.C., N.C.S., November 16. Messrs. W. Wells and Co., Merstham.

Merstham Jewel.—A very beautiful single variety, large-flowered, and of good form. The colour is bright reddish-bronze with a yellow zone round the disc. F.C.C., N.C.S., November 16. Messrs. W. Wells and Co., Merstham.

Peter Pan.—A very distinct single variety, rather small-flowered, and with the flowers opening in long sprays. The colour is bright yellowish-fawn. F.C.C., N.C.S., November 16. Messrs. W. Wells and Co., Merstham.

Albert Williams.—A solid yellow incurved variety in the way of C. H. Curtis, but with rather broader florets. It closely incurves, and, apparently, keeps well. F.C.C., N.C.S., November 16. Mr. H. W. Thorp, Darrington, Worthing.

Roses may be grown to perfection by following the instructions given in Roses and Their Cultivation, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

GERBERA NOTES.

How seldom it is that one comes across a really first-rate group of gerberas in this country! It would assuredly be worth while for those who grow them (particularly G. Jamesoni) to make themselves a little better acquainted with their requirements.

The ordinary type of Gerbera Jamesoni has probably entered an enormous number of private gardens, and it would have been well for the future of the showy South African if a greater success had attended its culture. As it is, the cult of the gerbera seems already on the decline, and it would be a thousand pities if it were allowed to dwindle in public favour, and finally be lost to English gardens. It is interesting to note that G. Jamesoni, or the Barberton daisy, is only to be found in a wild state at the De Kaap Valley, near Barberton.

CHRYSANTHEMUM SOUV. DE SCALARANDIS.
A fine market variety with golden-yellow flowers.

It was undoubtedly the vivid orange-scarlet colouring which first aroused interest in this gerbera, and it is this form which has made its way into our gardens. But in addition to the scarlet, which may be taken as the type, there are many varieties found in a similar wild state in the De Kaap Valley. These include the white (which is known amongst the Colonists as the silver daisy), the yellow, and the pink forms, and there are several intermediate shades, which are doubtless the result of natural crosses. Of these latter collectors have definitely defined salmon, terra-cotta, maroon, buff, white with rosy suffusion, and blush varieties. The fact that there is such a potential wealth of colour in the race should do much to bring them once more before the public.

Possibly the half-hardy character of G. Jamesoni has been against it, and the habitat and the special character of the Barberton daisy have not been taken into consideration. Granted that the daisy is a true perennial, and that the rhizomatous rootstock guarantees the display of the next flowering season, it will be realised that a resting season is necessary, and also that the rhizomes be fairly well ripened to undergo the period of rest. Now, in order to secure this, the gerberas must be grown in a warm, sunny, and well-drained position, where they can have, as nearly as possible, the conditions that prevail in the Barberton district. The rocky, well-drained soil, which is baked during the hot, sunny periods, conduces to the necessary ripening and keeping of the plants, which, with the advent of the early rains break into new life, and rapidly put forth foliage and blossoms, the latter of which create quite a long successional display.

In making a suggestion for gerbera culture in this country, I may be justified in following natural conditions as far as possible. The warm, sunlit, well-drained positions in the rock garden should be chosen for planting spots. Well-hardened plants should be selected, and should be put out in sandy loam (to which has been added some decayed manure), in April. One will have the season's blossom outside, and the summer sun will be assisting in the display, and preparing the rootstocks for the colder season. But during the autumn rains shelter must be given, and I would suggest the use of a sheet of glass, wedged into position, to throw off the rainfall from each group. When rigorous winter weather sets in it is my idea that further protection should be afforded, and to ensure this, I consider that a little rough dried hay or leaves, or similar material, should be pressed in firmly between the glass cover and the plants. This will protect from biting wind and gripping frost. With the spring, glass and covering could come away, and the spring showers be allowed to permeate the soil, which should still be fairly dry.

I have endeavoured to generalise in these notes, and doubtless many south-country growers will find a glass covering almost sufficient in an ordinary winter, but this is a matter for individual trial. In the colder districts I should fancy that the Japanese species, G. Anandria, would prove more suitable for outside culture, as it is much more hardy. It has bright red flowers, so would provide the touch of brilliancy desired. Where one desires the Barberton daisy, and yet fails altogether to keep it out of doors during winter, I would advocate growing it in pots in a frame, thus giving winter protection, and then plunge, or plant it out in late spring. For this purpose one could, if necessary, raise a batch of seedlings every year.

It would be interesting to learn whether the varieties raised at the Cambridge Botanic Garden by Mr. R. Irwin Lynch, are in any degree hardier than natural varieties, which furnish the seed in South Africa for our gardens. But perhaps the plants raised have not been subjected to any such trial. It is just possible, however, that if one obtained seed from plants which had been successfully wintered out of doors in England, these might produce plants more fitted for our climate than the South African.

There are other species of gerbera in cultivation, including some Himalayan forms, but as these are little known, and of no great value, they are really outside the scope of these notes. P. S. HAYWARD.

GLAUCOUS CONIFERS.

When seen at their best the various glaucous leaved conifers present a very attractive group of trees and shrubs, and each particular example forms an excellent subject for a specimen lawn plant. Unfortunately, people whose gardens are situated in the neighbourhood of large cities or towns, are often unable to cultivate these subjects well, as they are very impatient of an impure atmosphere, and it is impossible to get the best from them when the air is laden with soot or chemical fumes. In more salubrious localities, however, especially where the atmosphere is humid and the ground naturally damp, but not water-logged, these conifers often thrive amazingly and form very beautiful specimens.

BLUE ATLANTIC CEDAR AT EAST BURNHAM PARK.

The accompanying illustration represents a glaucous or "blue" cedar, Cedrus atlantica glauca at East Burnham Park, the residence of Mr. H. J. Veitch, V.M.H. It is a fast-growing tree, and has a rich bluish tint. It is often grafted on to the type, but a certain number may usually be selected from a batch of seedlings. There is also a glaucous form of the deodar, Cedrus Deodara, the former, however, is the best for general planting.

Amongst the spruces there are two or three with glaucous foliage. The best is Picea pungens glauca. P. pungens is a North American spruce of vigorous habit with strong, sharp needles or leaves. The variety is quite as strong growing as the type, and the leaves are of a lovely glaucous hue. It is known under the common name of "Blue Spruce." Another variety of the same species with glaucous leaves is called Kosteriana. Picea Engelmanni is another North American spruce of which a glaucous variety is known. It resembles the above-mentioned plant to some extent.

Among the firs or abies we find several with bluish or glaucous leaves. The best coloured of all is Abies nobilis glauca. This, under favourable conditions, forms a large tree, and is of an extremely ornamental character. Unfortunately, however, it is not often seen at its best, for it is frequently attacked by a disease which causes curious gouty swellings all over the branches which often result in the death of the trees. A magnifica is closely allied to A. nobilis, and both it and A. amabilis have greyish leaves. A. concolor and A. Lowiana have a somewhat bluish appearance, whilst of the former there is a pretty variety with silvery foliage called argentea Wallezi. The Douglas fir offers a glaucous variety, whilst there is also a glaucous-leaved form with pendulous branches. The Hemlock spruces or Tsugas are all ornamental conifers, and one or two of the best have glaucous foliage. Possibly the most showy of all is T. Pattoniana glauca. T. Pattoniana is a native of California, where it inhabits the mountainous regions. Unfortunately it is not particularly hardy, and can only be grown successfully in the milder parts of the country. Several pines exhibit a more or less greyish appearance, which is due more to silvery lines on the leaves than to glaucousness. There are, however, several species which are very glaucous in a young state. One of the best is P. canariensis. This, during the first year of its life, forms excellent little table plants when grown in small pots. It is not, however, a hardy species.

Cupressus Lawsoniana includes a number of glaucous forms amongst its varieties. Some of the best are glauca, Silver Queen and glauca pendula. The yellow cypress, Cupressus nootkatensis, gives us a glaucous variety, as also does C. thyoides. The tender Cupressus funebris or C. Cashmiriana, as it is sometimes called, gives us one of the most beautiful tender conifers we possess in the variety glauca. This is of particularly graceful outline, the leading shoot being erect and the main branches more or less horizontal; the secondary branches, however, are pendulous and hang down to a depth of several feet. The junipers offer several glaucous varieties; chinensis, virginiana, and communis all having bluish-leaved forms. Though these represent the best of the glaucous leaved conifers they do not exhaust the list, but they are sufficient to show what a wide selection we have of this particular group of trees and shrubs.

W. Dallimore.

Royal Gardens, Kew.

SHRUBS WITH ORNAMENTAL LEAVES.

It is surprising how rich and varied are the tones of colour which prevail among trees and shrubs, and although these are discernible to the questioning eye at every season of the year, they become in the autumn months conspicuous even to the most careless. Particularly is this the case with those whose leaves are deciduous, as in nearly every instance they change from the normal green of summer, so that in autumn they become robed with colours which are especially effective in the landscape, and, in some instances, the results are more refined than we produce with flowers.

Apart from their glowing autumn colours, there lie untold possibilities in the skilful grouping of the various ornamental-leaved shrubs; the diverse character of the leaves are rarely shown to the best advantage unless one type of foliage is brought in to contrast with another. To illustrate this,a large bed of shrubs having compound leaves like Rhus typhina, Rhus sinica, or Rhus glabra lacinata, is not easily excelled if we employ them one at a time, yet how speedily is the individual character of each destroyed by grouping them together, or in company with acacia, gleditschia, koelreuteria, sophora, and taxodium. All have compound leaves, each is beautiful in outline and delicate in colour, and when seen as specimens or in groups of a kind cannot fail to evoke admiration. When we employ them in mixed shrubberies we must necessarily group with them shrubs whose leaves have different characteristics, such, for example, as those having small entire leaves, like Berberis Knighti or B. Thunbergi.

The same treatment accorded to catalpas, cercis, or paulownias, renders them doubly effective, as it rarely expresses the highest form of planting to employ extreme types in juxtaposition. It is much better that the transition be a gradual one, through which every delicate curve of leafage, and branch, and symmetry of form may stand revealed, and that every group or individual may unfold to us its character, and, as it were, speak through these glowing colours in language all may understand.

This system of grouping might be extended indefinitely; much of its success depends upon the planter's acquaintance with the various trees and shrubs, both in relation to the form and colour of their leaves, and also to their ultimate development. Happily, there is a wealth of deciduous shrubs which can be employed in masses of a kind; these include Aronia floribunda and A. erythrocarpa, Euonymus alatus and E. atropurpurea, Colutea bullata—a dwarf form, with interesting crisped and curled compound leaves; Cornus florida rubra and C. macrophylla, Ononis rotundifolia, Rhamnus alpina, and Sambucus plumosa tenuifolia; then we have also deutzias, philadelphuses, and spiræas, etc., every one of which gains by grouping in their own kinds, and form a distinct contrast and change to the sparse planting so frequently seen. Two extremely beautiful shrubs with compound leaves are Cæsalpinia japonica and Xanthoceras sorbifolia; neither are too well known in gardens, although the latter has a growing reputation as a forcing shrub, for the pretty horse chestnut-like flowers are easily forwarded by gentle forcing in heat. Cæsalpinia has cream-coloured pea-like flowers, but the plant is not too hardy in some gardens, except the soil be well drained and the exposure a sunny one.

With plants which ultimately develop into trees there is less difficulty in supplying undergrowth or foreground subjects. Those with distinct leafage, like the tulip tree and maidenhair tree, should be accompanied by shrubs whose foliage is less interesting, so that the eye may naturally be led to seek out and dwell upon their merits. Trees whose foliage is conspicuous at all seasons, like Prunus Pissardi and spinosa purpurea, or Pyrus Malus Niedwetzkiana, stand out with striking effect upon elevated positions, or as background for every tone of green comes into relief against their strong and ruddy purples. One final word upon the grey tones, whose mission is always to prevent discord. Atriplex halimus belongs to this class, and though the grey is not of the best, it has at least the advantage of being cheap to plant. The sea buckthorn yields as good a grey as can be found among deciduous shrubs, yet the lithe wands of Tamarix gallica can scarcely be surpassed in effectiveness when planted in a great mass. There are grey tones among evergreens, which no hardy deciduous tree or shrub can rival: we have it in part among olearias and again in old-world favourites like rosemary, lavender, santolina, and rue; but the softest tones occur among conifers, as we have it in the filament-like growths of the grey forms of chamæcyparis, juniper, and again in the cedars: the young growths of Abies concolor exhibit this tone in a striking degree: Picea pungens argentea carries it on until the full cadence is expressed in those lustrous blue-grey tones, which characterise the foliage of Picea pungens glauca.

THOMAS SMITH.

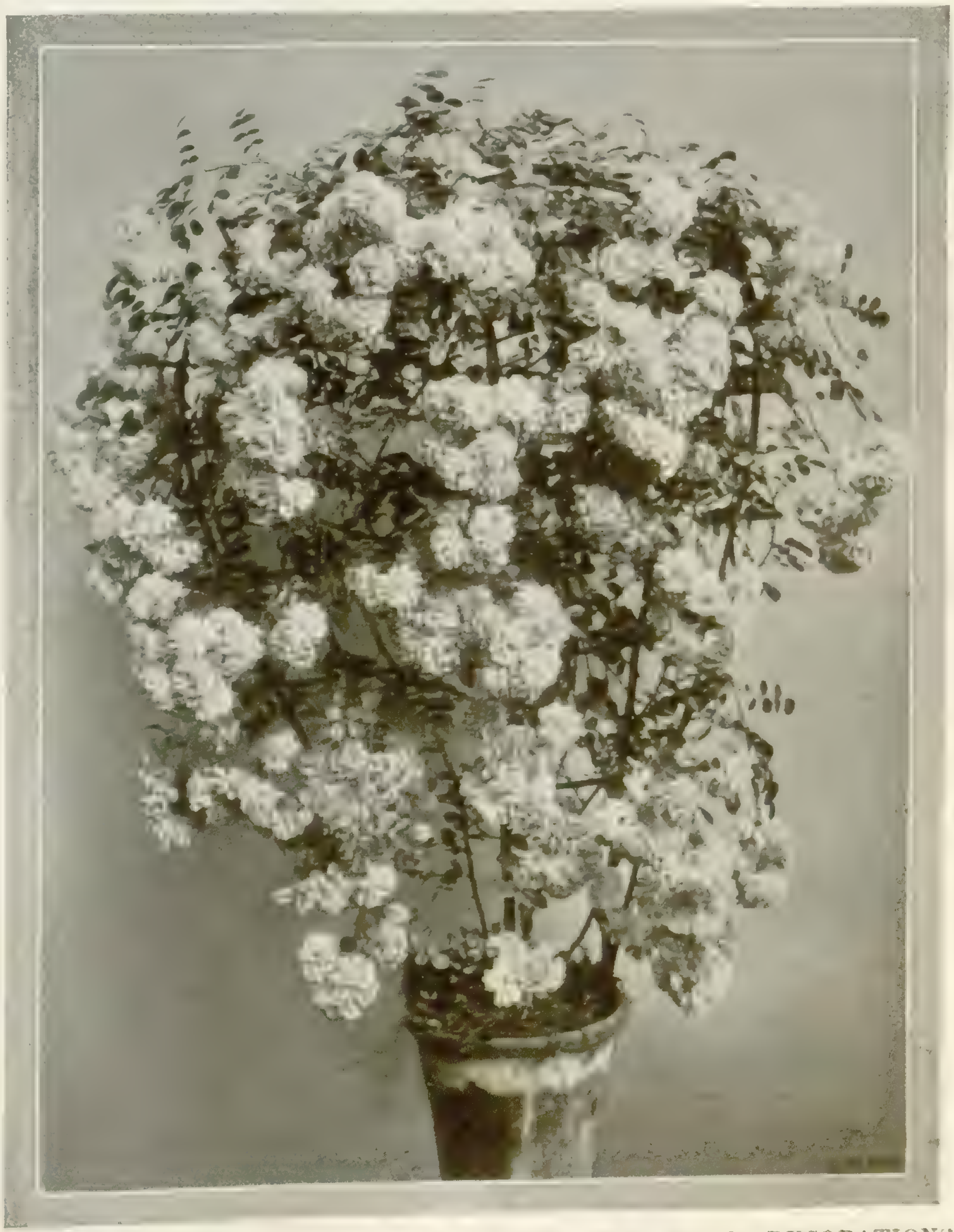
Walmsgate Gardens.

BULB CULTURE.—A practical treatise on the culture of hardy, hothouse and greenhouse bulbous and tuberous rooted plants is "BULBS AND THEIR CULTIVATION," by T. W. Sanders, price 2s. 6d. net, or by post 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

RAMBLING ROSES FOR DECORATIONS.

Within recent years we have on several occasions called attention to the usefulness of certain of the rambling roses for the embellishment of the conservatory and indoor decoration, and we have illustrated some of the varieties best suited to these purposes. Grown as pillars and standards on rather tall stems, they can be used to great advantage in the formation of groups in corridors, ball-rooms, and other spacious apartments, and they present a pleasing appearance when placed singly in suitable positions. In the conservatory, well-flowered examples, whether in pillar or standard form, can without difficulty be so associated with both tall and dwarf-flowering and foliage plants as to produce the most charming effects. The utility of pillars and standards, and also of formally trained cylindrical specimens, is now fully recognised by the leading floral decorators in London, and as a consequence their cultivation has assumed considerable proportions in some of the principal market growing establishments within a convenient distance of the Metropolitan markets.

There is yet another form in which rambling roses can be used with success in the embellishment of indoor apartments, and with the aid of the illustration of the finely flowered example given herewith there should be no difficulty in persuading our readers that it is well deserving of attention. In this form the plants are trained somewhat in the form of a shield, are flat or nearly so on either side, and so manipulated as to produce the flowers on one side. Trained in this manner the plants occupy very little space measured from back to front, and are consequently useful for placing in positions where the space would not be sufficient for pillars with somewhat spreading branches or standards with large round heads. These shield trained plants can be placed quite close to the wall, and are, therefore, most useful for narrow corridors either placed on the floor, or on pedestals, or brackets, as may be preferred. They are also admirably adapted for placing on the landings of the principal staircase; and it is not difficult to understand that placed on strong brackets round the walls of a ball-room finely flowered specimens would produce a distinct and beautiful effect.



RAMBLING ROSE LADY GAY, AS GROWN FOR WALL DECORATIONS.
Colour of flowers, rich rose pink.

The specimen we have the pleasure of illustrating is one of a large number grown by Messrs. H. Cannell and Sons, of the Swanley Nurseries, who, it will be remembered, included several splendidly flowered shield-trained examples in their fine group at the Temple Show in May last. The most suitable varieties for this method of training are those like Lady Gay and Dorothy Perkins which have a drooping habit and bear flowers of a colour that appears to advantage under the influence of artificial light.

G.

SIMPLE ROCK GARDENS.

There are many to whom the elaborate and imposing rock garden is a forbidden luxury, either because of its cost or on account of the position it has to occupy being such that one of any height would be unacceptable to its owner and his friends. There are many to whom the expense of a large rockery is an insuperable obstacle, and who must content themselves with one of less ambitious character.

[Photo: C. Godfrey Bennett.

ROCK GARDEN, COOMBE WOOD, CROYDON, THE RESIDENCE OF A. LLOYD, ESQ.

These need not, however, despair of the successful cultivation of the greater number of the best alpines, seeing that these can often be cultivated as successfully or even better on the low and cheaply built rockery than on the one which is of an effective character in itself, because lofty and imposing in its dimensions.

The two illustrations which accompany this show how much can be done at a moderate cost, and with what freedom many alpines will grow and bloom when only a little above the ordinary soil level. These two views, at Coombe Wood and Coombe House, Croydon, will do more than pages of print to illustrate the truth of my proposition, and give an admirable object-lesson to those who wish to construct such simple rockeries.

The two rockeries in the illustrations are examples of the best work of the kind, the paths winding in and out among the little mounds which form the basis rockery, and which have fittingly placed about them the blocks of stone which are of such benefit to the flowers, and which harmonise with their character.

In constructing rockeries of this class the mounds of soil which form the basis of the rock garden should be of good quality, loam, leaf-soil, sharp sand, and grit being freely used. The stones should be of one kind, and so arranged as to present a natural appearance, either of an outcrop of rock or giving the idea of a natural fall of stones from some higher ground. These stones ought to be well embedded in the soil, so that they will not be readily overthrown by the frost, and firm enough to stand under the feet of the worker among the flowers. In one or two places a little rockwork pool will often come in admirably; and where a streamlet, or even a trickle of water into the pool from a small rocky channel can be added, the effect will be all the more pleasing.

It is almost impossible to limit the selection of plants which can be happily accommodated on such a rockery. The margins may be fringed and the higher parts crowned by arabises, aubrietias, sedums, saxifrages, iberises, arenarias, cerastiums, and such free-growing subjects. A moist stone may be clad with Arenaria balearica, whose tiny white stars will spangle the carpet of green so beautifully, even in a shady spot. In the crevices, sempervivums, encrusted or silvery saxifrages, androsaces, and many other choice things will flourish, and a greater appearance of height may be given where desired by the introduction of a few of the dwarf conifers, rhododendrons, and other beautiful shrubs so plentiful nowadays.

The little rocky pool in full sun may be made delightful by its occupation by a water lily or two, while in another the fragrant flowers of Aponogeton distachyon will delight the passer-by. The rocky steps, should such be necessary, may have between the stones some of the dwarfer campanulas of the type of cæspitosa, garganica, or Portenschlagiana, while these and others will fill many a crevice between the stones which constitute the higher, as well as the lower parts of the rockery. Such a simple rockery will thus afford an endless source of pleasure, especially if its attractions are heightened by the inclusion of some good dwarf bulbs to add to the general air of brightness so easily secured.

S. Arnott.

NEW DECORATIVE CHRYSANTHEMUMS.

Decorative chrysanthemums are those not large enough to be classed as show varieties owing to their want of size, but which by their pleasing form and distinctness of colour are desirable. Such varieties, if not encouraged from a decorative point of view, would stand but a poor chance of remaining long in existence. The following are new, or nearly so, and deserve attention, even from those with but limited means.

Freda Bedford (Wells).—Bronzy-orange, with an apricot shading; most pleasing.

Foxhunter (Wells).—A late-flowering reflexed variety; scarlet-chestnut, with a golden reverse, and with stiff stems.

Mrs. Wakefield (Jones).—This belongs to the reflexed section, and produces as many as sixteen good blooms on a plant. Red or bright terra-cotta.

Moneymaker.—Although not strictly new this is a variety that should be better known by those who require pure white flowers in quantity; well-grown plants produce as many as twelve full-sized blooms of perfect form.

Clara Vernum.—Crimson-chestnut in colour; an excellent variety.

R. F. Felton.—Rich yellow, very striking in its appearance, as so well shown in the excellent illustration that was given in the Gardeners Magazine of the 21st inst.

Formality (Davis).—Classed as a large-flowered Japanese, but as I have seen blooms of it it reminded me of a small-flowered Madame Carnot, and just the variety for decoration: pure white.

True Gold (Davis).—Of the richest shade of yellow, quite a pleasing tint; the flowers are produced on stiff stems at the end of November and well into December, therefore the more valuable.

Miss Faith Moore (N. Molyneux).—Of dwarf growth, therefore valuable for grouping, and, being pure white, it is very desirable.

E. Molyneux.

Swanmore Park.

THREE GOOD GOOSEBERRIES

It is not necessary to grow many varieties of gooseberries, as there is not so much difference in the quality, season, and purpose for which they are adapted, as with most other fruits. Some recommend growing several of the old-fashioned small-fruiting varieties, like Red Champagne, Early Green Hairy, Ironmonger, and others—solely for dessert, but this is quite unnecessary, as there are larger varieties of almost, if not quite, as good flavour, and berries of larger size are much preferable for eating, while if the berries of the small varieties are thinned at all so as to get them as large as the variety permits, the thinnings are much too small to be really acceptable in the kitchen. I have grown a fair number of sorts, and have come to the conclusion that, taking all things into consideration, the three I am going to speak about—if the editor permits me—cannot well be improved upon.

Whitesmith.

The first is Whitesmith, a large green smooth variety of strong upright growth, an immense cropper, and one which, by reason of the early expanding of the leaves relatively to the blossom, does not suffer so much from frost as many do. It needs, and pays for, a liberal thinning, and as it is one of the first to attain a good size, it is very useful for the kitchen, while those left, if thinning has been done pretty rigorously, leaving the berries an inch apart or more, attain a large size, and if allowed to hang sufficiently long, instead of being gathered as soon as they are soft, are of surprising richness. They ripen very unevenly, so that one may keep picking from the same tree for at least a month if it is protected from the birds. Being of upright growth, it is one of the best for a wall, the strong young shoots lending themselves very easily to nailing in to replace old wood. I have a large tree on a wall which has been yielding heavy crops annually for twenty years or more. I also grow it in single cordon form, and find it well adapted for the purpose. It is called Whitesmith because when fully ripened it almost loses its greenness and becomes of a very pale colour.

Whinham's Industry.

Next I would mention Whinham's Industry, a gooseberry of comparatively recent introduction, which attained popularity very quickly as a market fruit by reason of its tremendous cropping qualities, and the quickness with which it grows into a good-sized tree. It is a large dark red, slightly hairy variety, and it has been condemned by some because of its thick skin, and though this may be an objection for preserving—though I have avoided using it for the purpose because I have heard it spoken of unfavourably in that connection—yet I have not noticed it of any disadvantage for cooking in a green state. When ripe, a thickness of skin is of no consequence as one does not eat the skin, and besides, when fully ripe, the skin of this variety becomes as thin as that of most others. It is a very strong upright grower, and the fruit, when properly thinned, becomes so large as to be classed among the Lancashire large-fruiting varieties. It is one of the earliest to come into use in a green state, and I have often begun using it from a wall the second week in May, and that in Essex. Three-year-old trees will grow to the top of a six-feet wall the second year after planting and I have trees on a wall which have not failed to produce a heavy crop for fifteen years. As a cordon, too, it is very successful. The flavour of the fruit when well thinned and thoroughly ripened I consider quite first class. It is not so handsome as some by reason of the somewhat mealy appearance of its skin, though this is really in the nature of bloom.

Red Warrington.

The third I shall mention is Red Warrington, which is of a quite different character to the two already mentioned, being of drooping growth, of medium size, and rather hairy. It is a late variety, lasting a long time in season, for though I began to use it in a ripe state the third week in July last summer, I did not finish picking it till the middle of September, these later pickings being from a north wall. On account of the drooping character of its growth it is not so good a variety as some for walls, though it is often grown on north walls for a late supply, and when planting bushes in the open they should be obtained with a good clear length of stem, so that the fruit may be well above the ground. It needs special pruning to counteract this drooping tendency, and this consists largely in leaving all strong, upright-growing shoots wherever possible, and pruning all others to a bud pointing upwards, while the bush should be kept well open because of the prickly nature of the wood. The fruit is of medium size in a green state, but when well thinned it swells up a good deal in ripening. When bright red there is a briskness in its flavour which is almost peculiar to this variety, but as the colour becomes deep crimson after hanging another week or so, it attains a richness and sweetness, combined with briskness, which renders it, in my opinion, second to none. I have always set apart this variety for preserving—as far as the household needs for this purpose extended—still adhering to the tradition that, for preserving, a hairy gooseberry is preferable, though whether there is anything in it or not I do not know. One does not want too sweet a fruit

[Photo: C. Godfrey Bennett.

ROCK GARDEN, COOMBE HOUSE, CROYDON, THE RESIDENCE OF F. C. LLOYD, ESQ.

for preserving, and the Red Warrington, if picked in the scarlet state, makes very fine ripe gooseberry jam, combining the briskness and richness of the fresh fruit. Dr. Hogg, in his "Fruit Manual," says it is a first-rate late variety, highly esteemed for preserving. It makes excellent gooseberry jelly, having, in addition to its excellent flavour, a clear bright crimson colour not unlike that of red currant jelly. This variety has a very thin skin when fully ripe, and I suppose it is on that account that the flies are sometimes troublesome. Its season may be prolonged two or three weeks by having trees in a shady position, or on a north wall.

The above varieties will keep up a succession of ripe fruit for at least two months, say, from early in July till the beginning of September—long enough perhaps for one kind of fruit—but if it is desired to prolong it a fortnight by beginning earlier, it can be done by planting Early Green Hairy or Golden Drop (syn. Early Sulphur), and if one of these is planted on a south or south-west wall—both varieties are upright growers—ripe gooseberries may be had in some seasons by the middle of June. Still, I have not included either of these among the "three good gooseberries," as I consider both of them inferior for general purposes to the three mentioned and mainly desirable because of their earliness, though it must be admitted that Early Green Hairy is of very fine flavour.

Alger Petts.

MANURING AND TRENCHING.

There has been much written about this important subject in connection with kitchen gardening that there appears to remain very little to add, but as this is the season when the garden offers the best facilities for these operations, the quarters being relieved of their summer crops and leaving them bare, it may be fitting to again remind cultivators of the need of them, where the best results are expected from the soil.

Every gardener of experience knows that upon working the land in this way hangs to a very great extent the key of success, so my remarks more especially apply to beginners who have not yet had the opportunity of testing its true value. To these I would recommend this work through the winter months for next year's crops, carrying it out to the full extent that the strength of the staff will permit without seriously affecting other current work that has to be seen to.

The usual method of procedure in trenching, and decidedly the most practical for general kitchen garden cropping, is to take out a trench from two to three feet wide and two spades deep, and wheel it to the opposite end of the site that is to be operated upon. If the soil is light or short of humus a layer of manure is placed at the bottom of the trench. The second trench measured exactly the same as the first one, and the top spit of soil is placed over the manure in the first one; upon this is placed another dressing of manure, and over that the bottom spit of soil is put, and left as rough as possible for the winter to act upon and sweeten and purify it before the spring arrives for sowing or planting. With the exception of soils that are of a light, hungry character, one good dressing of manure laid between the two spits of soil is sufficient for general cultivation, but this matter must be determined by the condition of the soil and the nature of crop that it is intended to plant.

Where fresh land is being broken up, and it is of a strong retentive clay, the earlier in the autumn or winter the work is done the better the results. Unless the expense of removing and replacing the subsoil (should it be sour), with good turf or other soil is allowed, I prefer to bring only a limited quantity to the top at one time, and so ameliorate it by degrees. Deeply-stirred, strong land, that is sweet and well-drained, is, as a rule, the most profitable and desirable for heavy cropping, being more holding, and plants invariably stand better on it through periods of drought. The chief drawback is the difficulty to planting, and obtaining proper seed beds during a wet spring, hence the reason for laying up this kind of land to exposure early.

In old kitchen gardens, where the soil has frequently been deeply dug and manured, and is not naturally charged with lime, a surface dressing after trenching will be found advantageous, but it is not advisable to allow it to come into direct contact with fresh manure that may be dug in at the time. Constant impoverishment of the land from close cropping, especially with the Brassica family, demands liberal treatment in digging and manuring. No hard and fast rule can be laid down for the management of the kitchen garden soil, as we have all to be controlled by circumstances. Too many gardeners suffer from insufficient labour to do the work in a thorough manner, but where it can be managed it is an excellent plan to divide the quarters into three sections, that is to say, arrange the cropping, so far as convenient, that a third of the garden is trenched each year, including the celery quarter, which is already well treated.

C. Flack.

Cholmondeley Castle Gardens.

WHAT CONSTITUTES AN AMATEUR?

I cannot agree with the remarks on p. 792, as to what constitutes an amateur. It is there stated that "all who take an interest in gardening and do not regularly sell the produce of their gardens are amateurs." While this definition may be literally correct, when we put it into practice we find obstacles. The R.H.S. recognises gardeners to lords, dukes, and squires as amateurs, and permits them at their shows to compete against what I venture to say is a true amateur, viz., a person who attends to a garden for the pure love of the occupation and not as a profession in the same way that a gardener obtains his living.

The main and right reason why amateurs should be correctly defined is that the amateur (as I describe him or her) should not be so severely handicapped in competition with gardeners owing to the knowledge and means at command of the leading cultivators in various phases at the present time, as for example, Mr. Beckett in vegetables, Mr. Goodacre in fruit, or Mr. Alexander in orchids. There is no more enthusiastic person in horticulture than the true amateur, but how can such a person compete on anything like equal terms with a professional gardener, who has considerable encouragement from his employer, who supplies the means—without limit in many instances—to procure all that is requisite to achieve an object.

In many societies there exists a rule that the professional grower shall not compete with his less favoured rival in many classes, but the amateur can compete in open classes. To give the amateur an opportunity to compete on an equality he is defined very often thus—"An amateur is a person who cultivates plants, etc., purely for love, and who does not regularly employ a gardener."

E. Molyneux.

[Mr. Molyneux is evidently under the same misapprehension as that which has given rise to so much discussion and difficulty with regard to the position of amateurs in competitions at horticultural exhibitions. In other words, he assumes that the produce exhibited by gardeners is their own, instead of it being, as is the case, the property of their employers. He is certainly mistaken in supposing the Royal Horticultural Society recognises gardeners to lords, dukes, and squires as amateurs. They do not do that, but they allow "lords, dukes, and squires" to exhibit the products of their gardens, and, as a matter of course, permit their gardeners, as their agents, to make all the arrangements necessary for submitting the products to the judges. The society does not differentiate at its exhibitions between amateurs who employ a score or more of gardeners and those who do the greater part, if not the whole, of the work themselves. Whether the society should do so or not is open to discussion, but the question in no way affects the status of the amateur. We are in full agreement with Mr. Molyneux as to the desirability of arrangements being made at flower shows by which amateurs who do all, or nearly all, the work of their gardens would not have to compete with those whose gardens are managed by a gardener with a staff of men under him. If those who are responsible for the management of horticultural exhibitions would recognise the fact that all owners of gardens who do not grow for profit are amateurs, and then divide them into two sections, those who regularly employ gardeners and those who do not, and arrange the classes accordingly, the second of the two classes would then have opportunities for competing on equal terms, and all cause for complaint removed.—Ed.]

Pentstemons raised from cuttings give more than double the flowers that seedlings produce, further, they come into bloom much earlier, and as they continue flowering right on till frost comes, it follows that they are invaluable for autumn displays. Rich light soil in cold frames is preferable to boxes for striking the cuttings.—Thomas Smith. Walmsgate Gardens.

Salvia azurea grandiflora.—In the early 'eighties this salvia was sent here from the United States under the name of Salvia Pitcheri, and as such it is still occasionally to be met with in gardens. It differs from most of the salvias in its manner of growth, the slender wand-like branches being clothed with narrow greyish green leaves, while the flowers, borne for a considerable distance along the shoots, are of a charming shade of blue. This salvia needs to be freely stopped during its early stages in order to lay the foundation of a bushy plant, and once this is done there will be no further trouble in this respect. The slender branches have an upward tendency, but at the same time are totally devoid of any stiffness or formality. Clean grown specimens are admirably adapted for associating with chrysanthemums, as they supply a totally distinct and much admired shade of colour. This species of sage and its scarlet relative Salvia splendens, are of great service in the greenhouse during the autumn months. The cultivation of Salvia azurea grandiflora is an easy matter, as the plants may be treated much as chrysanthemums, that is to say, left outside till they are nearly ready to flower; in fact given a fine autumn it is often very attractive out of doors. Salvia azurea grandiflora is a native of Texas.—W. T.

AN ANTIDOTE FOR WIREWORMS.

In many gardens the wireworms, or grubs of the Click Beetle, are so numerous that it is next to impossible to produce certain crops in a clean, presentable condition. Carrots seem to be their tit-bit, for if there is a wireworm in the garden it will find out the carrot quarter.

Some years ago I was very much troubled with this pest, and thought if I encouraged a rapid growth the bad effects of the wireworms would be overcome. Knowing that carrots require a liberal supply of sodium in the soil in which they are growing, I determined to see what results would be obtained from several light dressings of nitrates. The first application (1½oz. to the square yard of ground) was given when the crop was thinned, and similar dressings at intervals of about three weeks. In showery weather the rain carried the one dressing into the soil before the other was applied, and during a dry spell I had the ground watered. I did not expect these dressings of nitrate of soda to do more than foster rapid growth, but I was agreeably surprised when I came to use the roots to find them not only of unusual size, but entirely free from any trace of wireworms.

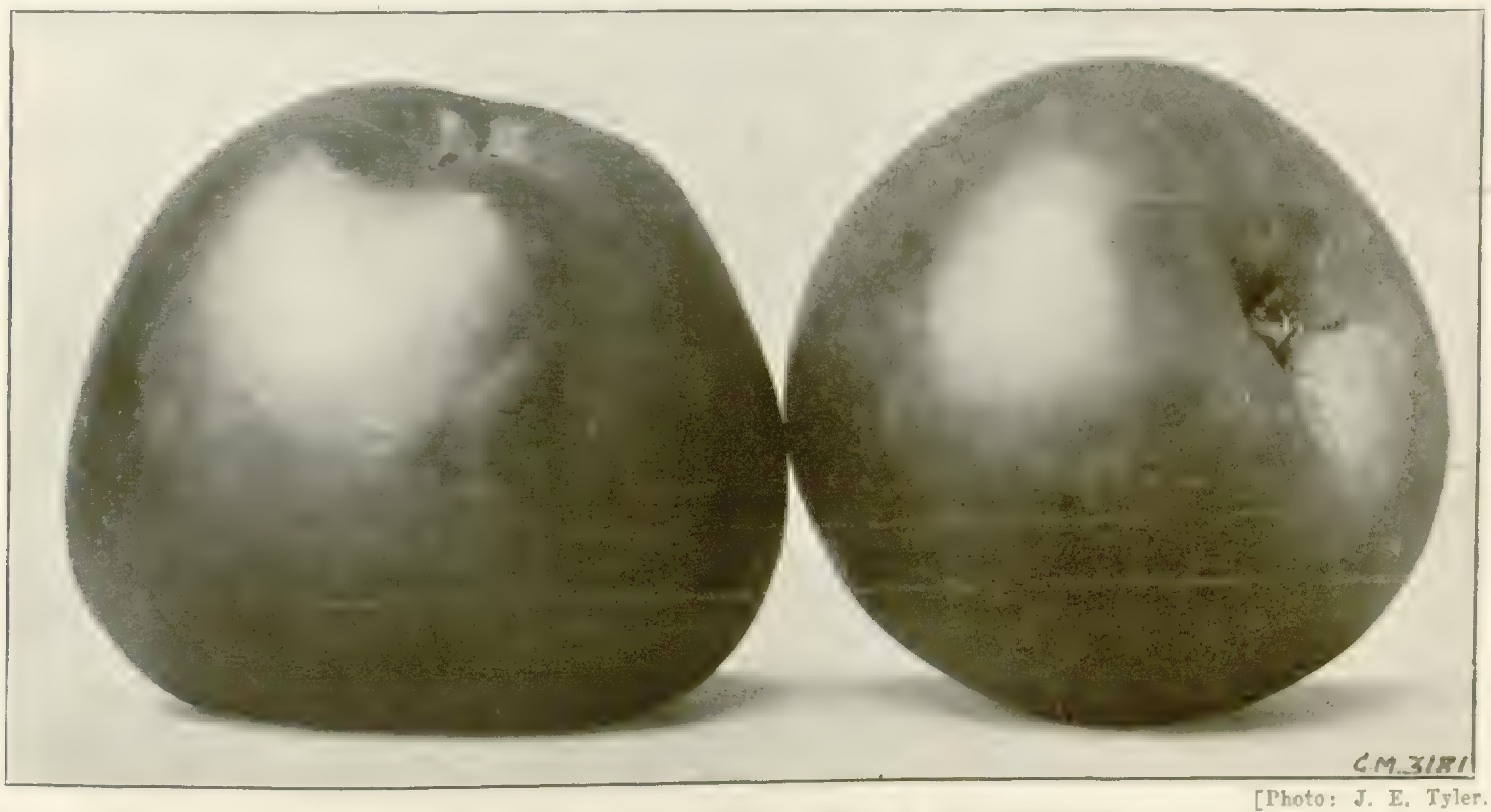
A few days ago I had occasion to visit a garden, and, after looking round, the gardener remarked that I must see his carrots before I went. He took me to the portion of the garden where they were growing, and dug up some of the finest examples of good cultivation I have ever seen. I complimented him on his success, and asked what means he had employed to secure such exceptional results. His reply was that he had never been able to grow carrots in his garden till this year, because wireworms always ruined his crop. This summer he had a quantity of nitrate of soda on hand, and, as an experiment, used it freely on his carrot bed. I asked if he could give me any reason why the nitrate had the effect of keeping the wireworms away from the crop, but this he could not do, only remarking that he supposed they did not like it.

Now, as two of us obtained similar results from the use of nitrate of soda on carrots, and on different kinds of soil (mine was sandy and his heavy), we have come to the conclusion that it is an antidote for wireworms, so far as carrot cultivation is concerned. Anyone interested in the production of fine, clean, large roots of this vegetable should give nitrate of soda a trial if he is in any way troubled with wireworms in his soil. Apart, however, from wireworms, it is evident that nitrate of soda is one of the chemical manures specially suited to the growth of carrots, and should be used for this purpose. It can be employed in quantities not exceeding 1½oz. to the square yard for a single dressing, or ½oz. to the gallon of water when it is desired to use it in solution.

PEDESTRIAN.

APPLE THE SANDRINGHAM.

This is a very fine culinary apple, and one that is now becoming better known and appreciated than was the case a few years ago. It is not exactly a new variety because it received a First-Class Certificate as far back as 1883, when it was exhibited before the Royal Horticultural Society by the late Mr. Charles Penny, then gardener to the Prince of Wales, now our King, at Sandringham. The variety had been recommended for a certificate at the Apple Congress, and the certificate was ratified by the Fruit Committee on November 13, 1883. In not a few of the gardens we have visited this season we have found Sandringham doing well, and have heard it spoken highly of as an apple of fine quality, a very free and regular bearer, and a good keeper. Its season is from January to March, and towards the end of its season it becomes a very passable dessert fruit. Firm and juicy, with solid greenish white flesh, and a pleasantly aromatic flavour, there is small wonder Sandringham is gaining in popularity. The fruits are roundly conical in shape and the smaller fruits are the most conical. The colour is dull yellow, flecked with crimson over the dull red-brown cheek. The tree is of good habit, upright, and excellent alike on the paradise stock for the garden, or the crab stock for the orchard. The Sandringham apple is also one of the most beautiful when in flower, as the blooms are of a lovely pink shade, and almost red on the outer side of the petals.



[Photo: J. E. Tyler.

A FINE CULINARY APPLE, THE SANDRINGHAM.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

COOL HOUSE ORCHIDS. — The winter treatment of the cool house orchids differs very considerably now from that which was in general practice a few years ago. I think many failures to grow odontoglossums successfully might very easily be traced to the winter treatment, perhaps more than to any other cause, and there can be no question but that since more liberal treatment has been given the results have been better. It appears to me only reasonable to give plants the greater encouragement at the season of the year when they are at the height of their growth, and it is during the winter months that we find the bulk of the odontoglossums are in their most active state, and consequently in need of every encouragement that will conduce to their proper development. If a low temperature is given to any class of plants at the season of full growth, there is naturally a tendency to the production of stunted leaves, such as were generally to be found when the night temperature for odontoglossums was 45 degrees in winter. A temperature of about 55 deg. is desirable, and we have a night standard of from 53 to 55 deg. With such a temperature as this we are enabled to give the necessary encouragement when it appears to be the most necessary.

WARMTH AND AIR.—Where the plants are treated thus liberally there are always better opportunities for ventilation and the prevention of a stagnant atmosphere. The warmer conditions which have been put into practice during the winter months here now for several years has been to the advantage, not alone of the odontoglossums, but to practically the whole of the cool house section of orchids. The small-growing masdevallias especially rarely show any signs of damp spotting.

DAMPING.—Discretion should be used in damping, and the amount of damping down required must be governed by the prevailing outside conditions, remembering that the situation in which the plants have to be grown materially affects the hygrometric state of the air in the houses. It will generally be understood that where there is an obstruction to light there is less drying taking place. All these particulars must have careful consideration, but there is a rule that, I think, may generally be applied to damping the houses, i.e., it should be done sufficiently early in the day to permit the excess of moisture evaporating before the low evening temperature is reached. In excessively cold weather, and when a low temperature is unavoidable, it is well to reduce the atmospheric moisture in accordance with the fall of the temperature. Plants rarely take harm in low temperatures, providing that both the atmospheric moisture is reduced to its minimum and the plants are kept in a dry state at the roots until such conditions are again favourable.—H. J. CHAPMAN, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

ZONAL PELARGONIUMS. — Plants that were rooted in the summer and are now in three-inch pots may be put into their flowering pots. Always avoid overpotting, as pelargoniums bloom most satisfactorily if allowed to become somewhat root-bound and liberally fed with liquid manure. Good fibrous loam and dried manure, with a free admixture of wood ashes and silver sand, make the best compost. It is most essential that the soil should be rammed fairly firm in potting, or the growth will be sappy. Afford good drainage, and water with care during winter. Keep the plants near the glass in a light airy pit, with a rather dry atmosphere. To encourage a sturdy growth, the plants should be stopped occasionally, and all flower buds be pinched out.

SHOW, DECORATIVE, AND FANCY PELARGONIUMS require somewhat similar treatment. Due attention must be given to the training and tying of the growths of the earliest batches; later plants should be kept pinched, and a sharp look-out be kept for greenfly, and immediate measures taken to eradicate this pest. I find vaporising to be the best remedy.

HYACINTHS. — For the early supply of flowers the single varieties, as the buds show, should be transferred to the forcing house, according to the requirements of the season. Keep the plants near the light, and employ as little fire-heat as possible. A high temperature will cause weak growths and poor colour. Tulips will stand a higher temperature better than the hyacinth. In any case the temperature of the forcing house should not be allowed to exceed 65deg. A succession of narcissi and jonquils should be brought on at intervals.

CHINESE PRIMULAS. — The earliest batch will now require more room, as the flowers are showing colour, and although not so useful for cutting as many subjects which could be named, these are easily produced, have a charm distinctly their own, and are warmly appreciated in many of the humbler greenhouses one often visits. A light top-dressing should be given, as the foliage renders liquid feeding somewhat difficult. Should it be desired to postpone the flowering period, then the flower spikes should be removed. The old double white is still a favourite in many gardens, and all care should be taken that the best possible plants are produced, as these will come in flower at a season when they are justly appreciated.

EARLY ARUMS. — Arum lilies that were planted out in the open garden during summer, and lifted and potted in October are somewhat slow in throwing up blooms till after Christmas, if placed in a cool house. I find it a good plan to select a few of the best-furnished plants and stand them on a bed in the cucumber house, giving a temperature of about 60 deg. at night, and keeping the atmosphere tolerably moist, assisting them also with a little farmyard liquid. The result is dense plants, carrying several fine blooms by Christmas, which are then most acceptable.—T. B. FIELD, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

PROTECTION. — No further time should be lost in affording protection to everything likely to benefit thereby. No hard and fast rule can be given, for what may pass through the winter unharmed in one position or district, might in another be quite killed. Bracken may be used, especially with semi-hardy climbing plants on walls, and this may be placed between and over growths, and loosely bound in or held in position by old netting, securing it so that strong winds or birds cannot dislodge it. The disadvantage of fixed protection is that beneficial light is shut out, and if an early spell of warm weather comes, buds are apt to start into growth in the dark, producing bleached and weakly shoots, which, when exposed, are very susceptible to any chill or slight frost. Tea and H.T. roses are safest with protection, especially if freshly planted, and this may be given in the way of a liberal dressing of half-rotten manure all over the bed, and thinly covered with soil for appearance sake, and to prevent birds scratching it out. Lobelia cardinalis is best lifted, boxed up, and wintered in a cold frame. Pampas grass, arundos, kniphofias, eremuri, gunneras, and others may be protected by placing leaves around them, and covering with soil or ashes, though in warm localities or sites it is unnecessary to protect these.

PRUNING.—Now that leaves are all off deciduous climbers, these may at once be attended to. It is not advisable to prune closely until the new year is well advanced, but loose hanging growths should be shortened back moderately close to where growth is secure; this applies to clematis, ampelopsis, jasminum, lonicera, roses, and several other vigorous or free-growing climbers; straggling or loose growths of ivy and other evergreen climbers should be treated in the same way.

VACANT FLOWER BEDS OR BORDERS should be dug and carefully levelled to give them a neat appearance during winter. Do not hesitate to remove some plants where these are overcrowded; this is often overlooked, or resolve not firmly made and carried out, so that overcrowding results and greater disappointment ultimately follows than if judicious thinning had been practised. If shrubs are removed as they begin to encroach upon each other, they can generally be used in some other parts of the grounds; failing this, it is better to sacrifice the surplus than spoil the whole lot. Growths of the golden elder may be shortened somewhat, but not cut quite back. The beauty of the golden privet is now more fully realised than when other colours predominate, and a liberal use of this for winter effect should always be made, but insure it being well protected from hares and rabbits, which are specially fond of it. Standard golden privet, grafted upon the common stock, must be examined, and any growth from stocks must be removed.

STORAGE. — Begonias may be stored in dry sand, leaf-soil, or moss, preferably in a temperature of about 45 deg. Gladioli, galtonias, etc., do well in a cooler temperature, if dry; cannas and dahlias may also be put in a cool dry place, where frost cannot penetrate. Liliums are best not dried off, but as soon as old stems have ripened the bulbs should be repotted or boxed up; if potted, insure ample clean drainage, and put the bulbs well down in the pots to allow for liberal top-dressing as growth proceeds. Where L. auratum has become well-established and grows satisfactorily, it is best not to remove the bulbs, but should growth show any signs of becoming enfeebled, they should be lifted and inspected to see whether anything is wrong with them; if no damage is apparent, they may be either replanted in the same position in fresh soil, or given a fresh position in a well-prepared site.—E. F. HAZELTON, Knowsley Gardens.

HARDY FRUITS.

ORCHARD TREES.—These should be examined annually, and the heads moderately pruned so that both air and light may reach the interior. Seldom have trees anywhere, if left entirely to themselves, produced for any length of time good crops of clean fruits profitable to the proprietor. Remove all cross and interlacing branches, and if the trees are in a bad condition do not be too severe at one year's pruning, but gradually thin out the wood until they have been brought into a reasonable shape and fruiting condition. After the pruning and thinning is finished, scrape the trunks and main branches, if overgrown with moss and lichen, with a piece of hoop-iron, and then give them a good washing with soap suds, and finally whitewash them, using lime and soot. A couple of sprayings with caustic alkali, according to directions given, will remove all kinds of moss, and most pests with which the trees are liable to be attacked. Top-dressing with fresh soil and manure, etc., first removing a portion of the top soil, will greatly assist the trees, and on light land good soakings of liquid manure from the farm-yard tank will prove highly beneficial.

YOUNG TREES, until they have attained a fair size, and the heads have been properly formed, ought to be pruned more or less annually. When shortening the leaders, always cut just above an eye pointing in the direction the next season's growth is required; side growths may be spurred back to within a couple of eyes of the main branches selected to form the future heads. Until the heads have been properly formed, and the branches are fairly strong, I usually shorten the leaders back to within fifteen inches of the older wood, more or less, according to the nature and strength of growth. All stakes and ties must be thoroughly examined yearly and made good. Do not overlook this important work, otherwise much harm may be done by wind.

FIGS.—These trees in the colder districts may require a little protection in severe weather. Bracken makes a capital protection. In some localities, the whole of the branches are removed from the walls and bundled up, and a covering of straw is tied over them. In this way they may be secured to the walls until the danger of frost is over.

STRAWBERRIES. — Remove weeds, and give a good mulching with well-decayed manure, packing this neatly around the plants. I am a great believer in mulching strawberry plants, more especially if the land is light, at this season. Short manure is best, and the beds may be littered down with a more strawy material in spring.

CUTTINGS of gooseberries, red currants, and black currants can be made in bad weather. These should be about 15 inches in length, all the lower eyes removed, and the wood of medium growth. Set them in trenches with the butt ends resting firmly on the bottom, and make the soil firm about them. Correctly name all the different varieties, and only grow those most suitable and profitable for the different purposes. — H. MARKHAM, Wrotham Park Gardens.

Character in Spring Beds.—An excellent plan to relieve the flatness so characteristic of spring bedding arrangements is to employ composite beds planted with evergreen and deciduous shrubs, which have been specially grown for this purpose, and are, therefore, best plunged in pots or boxes. The decorative effect of this system throughout winter is particularly good, as it goes a long way to relieve the nakedness of the beds; much more so where large areas are planted entirely with bulbs; then, when these and the other spring plants break into flower, it will often be seen that carefully-planted shrub beds exercise a healthy restraint, and in those spring gardens which otherwise would resemble so much high-coloured mosaic work, under this influence become increasingly interesting. Perhaps this is most evident when we employ shrubs distinct in form and of other colour values, such, for example, are the grey and blue-grey tones found in retinosporas, junipers, and cupressus; light and dark greens of various thuias; gold, as in euonymus, aucuba, and holly; then Cytisus praecox and the early double forms of peach and cherry among deciduous shrubs, and rhododendrons among evergreens, are all of great beauty, both by reason of their flowers and the character of their foliage.—THOMAS SMITH.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

On November 24 there was a good display at the Royal Horticultural Hall, but there were several vacant spaces, and the attendance was not large. We very much regret the admission of other than horticultural exhibits, but on this occasion one part of the hall suggested a Christmas bazaar, or toy shop, and the goods displayed, excellent as they are in their way, were not in accordance with the traditions of the Tuesday meetings, and in keeping with the dignity of the society.

FLORAL COMMITTEE.

Messrs. W. Cutbush and Son, Highgate, were large exhibitors on this occasion, almost filling one whole table. One side was filled up with clean plants of such useful subjects as Daphne indica rubra, Aralia elegantissima, Dracæna Victoria, the graceful Phœnix Roebelini, Otaheite oranges, Dracæna Doucetti, etc., etc. On the other side of the table they had a very bright and beautiful exhibit of choice perpetual carnations, set up in vases of varying size. Of Enchantress, Victory, Winona, Robert Cray, White Perfection, Mrs. T. W. Lawson, Aristocrat, and Mikado there were fine sets of flowers, and there were, in addition, numerous seedlings. Primula obconica, and a selection of saxifragas and sedums were sent by Messrs. J. Peed and Son, West Norwood.

A beautiful lot of zonal pelargonium blooms, arranged in glass vases, in their usual imposing style, was set up by Messrs. H. Cannell and Sons, Swanley, a fine half-dozen out of about three dozen varieties were Naples, vivid scarlet; New York, brilliant orange-scarlet; London, rosy-red, with a purple tint; Paris, bright pink; Sydney, very deep rich pink; and Dublin, rosy-salmon—all these are fine new ones of this year. The Messrs. Cannell also set up an interesting exhibit of single, thread-petalled, pompon, and decorative chrysanthemums. The Misses Hopkins, Shepperton, contributed alpine plants. Messrs. H. B. May and Son, Edmonton, had a most interesting little exhibit of the exquisite filmy ferns, showing Trichomanes radicans, Todea superba, Hymenophyllum chiloensis, Asplenium heterocarpum, and other lovely things. This firm also exhibited a selection of frilled and tasselled hartstongues, Polypodium Schneideri, and other beautiful hardy polypodies, and a goodly set of autumn-flowering veronicas, both standards and little bushes.

A very bright bank of useful winter-flowering plants was well set up by Messrs. James Veitch and Sons, Chelsea. The begonias were the chief attraction, and Julius, Ritter, Mrs. J. Heal, John Heal, Winter Perfection, Winter Cheer, Agatha, Ensign, and Success were the varieties so well represented. Some hybrid greenhouse rhododendrons, and batches of Luculia gratissima, and the sweet-scented, woodruff-like Stevia serrata. Mr. L. R. Russell, Richmond, set up groups of bamboos, pernettyas, heaths, [illegible], berried aucubas, etc., on either side of the entrance door, just inside the hall. Messrs. Paul and Son, Cheshunt, showed good spikes of Souv. de Jean Crosy, R. Wallace, and Fra Johanna Wilshaw, [illegible] and well-grown plants of Begonia Gloire de Lorraine and its white form were staged by Mr. A. T. Paskett, gardener to J. Johnston, Esq., Burrs Wood, Groombridge, Kent. Messrs. Heath and Son, Cheltenham, showed their new carnation, Lady Audley Neild, and a buff-coloured variety named Golden Glory. Groups of fine white, red, and salmon-coloured cyclamens, Cheiranthus Kewense—the winter-flowering wallflower; Leonotus Leonurus, and carnations made up a fairly large exhibit from Messrs. Hugh Low and Co., Enfield.

Messrs. Bees, Lim., Wapping, Liverpool, arranged a bank of freely-flowered plants of the beautiful little Primula malacoides (A.M.); this was a charming and dainty exhibit of a delightful plant that is something like P. Forbesi in general appearance, and also suggestive of P. Veitchi. It is said to come from an elevation of 9,000ft. in China, and to be quite hardy in this country. Some well-grown and specially brilliant-coloured and large-flowered examples of Primula obconica were shown by Mr. J. Dickson, gardener to the Duchess of Bedford, Chenies, Rickmansworth, and these were greatly admired. Messrs. Barr and Sons, Covent Garden, submitted a small collection of nerines, notably N. flexuosa alba and N. Monselli, and there was also the yellow Freesia Chapmani. Mr. A. Young, Oxted, Surrey, showed a group of Begonia The Queen, a bright pink variety of the Gloire de Lorraine type.

A very fine display of beautiful chrysanthemums, was made by Mr. Norman Davis, Framfield, Sussex, opposite the entrance, and it was a well-arranged exhibit of excellent material. The feature of the group was the tall stands of flowers of one variety, notably of the lovely Edith Jameson, Mr. J. Hygate, True Gold, Miss Gertie Court, Polyphéme, Bessie Evans, Algernon Davis, Mrs. J. and C. Neil. Among single varieties, Pollux, Vesta, Perseus, Juno, Arcturus (crimson-scarlet), Canopus, and Pictor were conspicuously good. The whole exhibit was one of the finest Mr. Davis has set up. The flowers were of excellent quality, and well arranged over a pleasing groundwork of ferns, and in association with bamboos, palms, and crotons. Messrs. G. Williams and Sons, Canton, Cardiff, showed a number of striking single chrysanthemums, one named Caledonia, bright rose, with white ring round the eye, gaining an A.M., and attracting a great deal of attention by reason of its very large size and good form; the blooms were nearly six inches across. Mr. Williams also sent Helena Williams, the new yellow sport from Madame Oberthur.

A glorious exhibit of chrysanthemums was arranged by Mr. H. J. Jones, Ryecroft Nursery, Lewisham, across the end of the hall. Mr. Jones had a green background, and in front of this he set up in his usual bold style large vases, stands, and baskets of big blooms, and some of single and decorative varieties. The groundwork consisted of low bowls of flowers, large specimen blooms, and ferns and foliage plants. A few of the varieties that were especially attractive were Jean G. Day, Kitty Gulliver, Lord Brooke, Mrs. Wynne, J. L. Burgess, the beautiful Mrs. Wakefield, Mrs. R. Oberthur, White Barkley, True Gold, Yellow Brooke, F. S. Vallis, and Moneymaker. This was a big effort, and a fine decorative display, showing how well big blooms may be used in vases, etc.

Messrs. Thos. S. Ware, Lim., Feltham, contributed a selection of alpine plants of various kinds, and also a few useful evergreen shrubs. Messrs. W. Wells and Co., Merstham, filled the side of one table with chrysanthemums, his interesting display consisting largely of single and decorative varieties. There were, however, some good big flowers of Frank Payne, Mrs. J. C. Neal, Mary Inglis, Algernon Davis, Mrs. A. G. Price, Miss Muriel Smith, etc. We also noticed the large starry-white single Dorothy Fortescue in this stand, and also the new and beautiful single variety, named Merstham Jewel (A.M.).

ORCHID COMMITTEE.

Messrs. Sander and Co., St. Albans, set up a large variety of cypripediums of the insigne and Leeanum types, and these included C. Dreadnought (F.C.C.), a very large-flowered hybrid from C. [illegible] and C. insigne Harefield Hall, but the great attraction of the group was Vanda cærulea var. R. Chollet (F.C.C.), a wonderful and beautiful form, with a big spike of fifteen very large blooms of the brightest blue shade, probably the finest form of this species yet seen. From Messrs. Hugh Low and Co., Bush Hill Park, Enfield, came several flowering plants of the curious Cycnoches chlorochilon, Cypripedium Maudiæ, Cymbidium giganteum, C. Winnianum, Cycnoches maculatum, Dendrobium formosum giganteum, and the pretty Masdevallia tovarensis. Messrs. Heath and Son, Cheltenham, brought up a collection of cypripediums that included C. Spicerianum, C. Lathomianum giganteum, C. Leeanum magnificum, and C. insigne vars.

Some fine flowers of Dendrobium formosum giganteum, from plants grown for the last seven years, were sent by Mr. Mackellar, Royal Gardens, Windsor. Mr. J. Float, gardener to Mrs. Talbot Clifton, Lytham Hall, Lytham, sent a very big spike of Odontoglossum Halli, but the variety was a poor one. Mr. Maurice Mertens, Mont St. Amand, Ghent, showed a small group of very choice odontoglossums, notably a lovely O. Vuylstekiæ, a good O. Vuylstekei, O. Ardentissimum, and O. crispum seedling. Messrs. Armstrong and Brown, Tunbridge Wells, showed flower heads of Neobenthamia gracilis, Bulbophyllum Careyanum, Cattleya labiata Amesiana, and a strong plant, with long branching spike of Odontoglossum Groganæ (A.M.), the result of crossing O. Uro-Skinneri with O. Edwardi; it has crimson-purple flowers. Messrs. J. Veitch and Sons, Chelsea, submitted Cypripedium San-Actæus Etoniense (A.M.), derived from C. i. Harefield Hall, and C. Actæus Langleyense.

A group of beautiful orchids, sent by Messrs. Charlesworth and Co., Hayward's Heath, Sussex, that contained Odontoglossum Uro-Skinneri magnificum, O. ardentissimum, Cycnoches chlorochilon, Odontioda Bohnhofiæ, Lycaste Skinneri alba, the brilliant Lælio-cattleya Sunray, calanthes, Saccolabium giganteum with two fine racemes, and Cymbidium Mastersi. Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester, exhibited Cypripedium Arethusa (Sallieri x Milo), which gained an A.M.

A grand plant of the old Cœlogyne barbata, carrying nine large and beautiful spikes of white, brown-lipped flowers, was shown by Mr. E. Bristowe, gardener to Mrs. Temple, Leyswood, Groombridge; this was a splendid example of good culture (Cultural Commendation). Mr. J. Davis, gardener to J. Gurney Fowler, Esq., Glebelands, South Woodford, brought up a spike of the yellowish Cymbidium Maggie Fowler.

Messrs. Cypher and Sons, Cheltenham, were responsible for a small group of cypripediums, all well grown plants, and of C. Fairrieanum, C. insigne Sanderæ, C. Lathomianum, C. Alcibiades, etc.

FRUIT AND VEGETABLE COMMITTEE.

Some very fine apples were shown by Mr. F. G. Gerrish, gardener to J. G. Williams, Esq., Pendley Manor, Tring, Herts, and the collection included splendid examples of The Queen, Chas. Ross, Newton Wonder, Blenheim Pippin, Peasgood's Nonsuch, Mère de Ménage, Bramley's Seedling, Ribston Pippin, King of the Pippins, etc.; a fine exhibit. Mr. W. A. Cook, gardener to Sir Edmund Loder, Bart., Leonardslee, Horsham, showed about four dozen dishes of apples and pears, setting up fruits of Sturmer Pippin, Newton Wonder, Allington Pippin, Adam's Pearmain, Sandringham, Peasgood's Nonsuch, Catillac, Chas. Ross, Doyenne du Comice, Beurre Baltet Pere, Le Lectier, etc., in excellent style.

Messrs. G. Massey and Sons, Spalding, contributed a selection of potatoes, that included Northern Star, Duke of York, Ringleader, Dalmeny Red, and other good things, as well as a large and interesting collection of tubers from seedling plants. This exhibit was in two parts, and proved to be of great interest. A large exhibit of bottled fruits was set up by Miss C. E. Martin, Willowbrook, Auburn, New York.

CERTIFICATES AND AWARDS.

First Class Certificates.—To Vanda cærulea, var. J. Chollet, from Messrs. Sander and Sons, St. Albans; to Cypripedium Dreadnought, from Messrs. Sander and Sons, St. Albans; to Polystichum aculeata gracillimum Drueryi, from Mr. Charles T. Druery, Shaa Road, Acton.

Award of Merit.—Pear Dana's Honey, from Messrs. James Veitch and Sons, Chelsea; Chrysanthemum Merstham Jewel (single), from Messrs. W. Wells and Co., Merstham; Primula malacoides, from Messrs Bees, Lim., Wapping, Liverpool; single Chrysanthemum Caledonia, from Messrs. G. Williams and Sons, Canton, Cardiff; Cypripedium San-Actæus Etoniense, from Messrs. J. Veitch and Sons; Cypripedium Arethusa, from Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester; and Odontioda Groganæ, from Messrs. Armstrong and Brown, Tunbridge Wells.

MEDALS.

Silver-gilt Flora.—Mr. Norman Davis, Framfield, Sussex; Mr. H. J. Jones, Ryecroft Nursery, Lewisham.

Silver-gilt Knightian.—Mr. J. G. Williams, Tring.

Silver-gilt Banksian.—Messrs. W. Cutbush and Son, Highgate, N.; Messrs. H. B. May and Sons, Edmonton; Messrs. James Veitch and Sons, Chelsea.

Silver Flora.—Messrs. Sander and Sons, St. Albans; Messrs. Charlesworth and Co., Hayward's Heath.

Silver Banksian.—Messrs. Heath and Son, Cheltenham; Messrs. Hugh Low and Co., Enfield; Messrs. Cypher and Sons, Cheltenham; Mr. Dickson, gardener to the Duchess of Bedford, Chenies, Rickmansworth; Messrs. H. Cannell and Sons, Swanley; Mr. L. R. Russell, Richmond; Messrs. T. S. Ware, Lim., Feltham; Messrs. W. Wells and Co., Merstham; Mr. Cook, gardener to Sir Edmund Loder, Bart., Horsham; Messrs. G. Massey and Sons, Spalding.

Bronze Flora.—Mr. E. J. Johnstone, Groombridge; and Messrs. H. Low and Co., Enfield (cyclamens, etc.).

SCIENTIFIC COMMITTEE, November 14.

Present: Mr. E. A. Bowles, M.A., F.L.S., F.E.S. (in the chair); Messrs. J. Fraser, W. Cuthbertson, L. Crawshay, A. E. Rolfe, J. T. Bennett-Poë, W. Fawcett, W. C. Worsdell, G. S. Saunders, R. Curtis, and F. J. Chittenden (secretary).

GREASE BANDS.—Mr. W. Voss showed a grease band from a plum tree from a fruit garden at Enfield Highway. The grease band was about 6in. wide, and upon it were a few specimens of the female winter moth, C. brumata. The band had been on the tree a month, but not till now had any winter moths been caught. The insects were near the bottom of the band. Mr. Voss promised to send up a band from the same garden to each meeting.

FASCIATION IN MUSHROOM. — Mr. Worsdell showed a fasciated specimen of the common mushroom, Agaricus campestris. Fasciation is apparently very uncommon in fungi.

ABNORMALITY IN RUBUS. — Mr. J. Fraser showed a specimen of Rubus rhamnifolius, Weihe and Nees, with foliaceous sepals and adventitious roots at the base of the fruiting panicles, which are mostly flowerless. The internodes of the fruiting panicles (or what should have been such) are very little developed on the whole of last year's stems. Barren stems and leaves of this year are normal.

Numerous diseased plants were received and dealt with.

Cambridge Horticultural Society.

This admirably-managed society, which was founded eighty-four years ago, worthily maintained its traditions on the occasion of its autumn exhibition by holding one of the best shows of the season. The spacious Corn Exchange was, as usual, filled to overflowing, and chrysanthemums, fruit, vegetables, and miscellaneous subjects were not less remarkable for their high quality than for their numbers.

The most important of the classes for cut blooms of chrysanthemums was that for thirty-six Japanese, distinct, as the liberal prizes brought out a strong competition and blooms that evinced cultural skill of a high order. Mr. G. Barker, gardener to Miss Gibson, Saffron Walden, occupied the premier position with a remarkably fine collection, in which Mrs. Knox, Mrs. W. Wells, Lady Henderson, Madame G. Rivol, Duchess of Sutherland, Magnificent, an effective crimson variety, when, as in this case, fully developed, and Lady Talbot, were conspicuous. Mr. J. Vert, gardener to Lord Howard de Walden, Audley End, Saffron Walden, followed closely for second place with an excellent stand, the examples of F. S. Vallis and Algernon Davis standing out prominently. Mr. J. Heath, who was third, also had finely-developed blooms. In the competition for the prizes for twenty-four Japanese, distinct, Mr. R. Smith, gardener to E. B. Foster, Esq., Tumpington, secured premier honours with a grand lot of blooms, and in the class for twelve Japanese Mr. W. Hall, gardener to J. J. Briscoe, Esq., Bourn Hall, Cambridge, was first, and Mr. R. Smith second, both staging well. Mr. W. Hall was also first for six Japanese, closely followed by Mr. T. W. Birkinshaw.

Incurved varieties were admirably shown, and the finely-formed and highly-finished blooms formed a very pleasing contrast to the loosely arranged, and brilliantly-coloured Japanese. Both for twenty-four and twelve blooms Mr. J. H. Walker, Stirtloe House Gardens, Buckden, obtained premier honours, and his blooms reminded one of the splendid examples that were seen at exhibitions twenty years or so ago. In the larger of the two collections, we noticed especially good examples of W. Pascoe, Duchess of Fife, Major Bonaffon, Louisa Giles, and Mrs. Wynn, a white variety with medium-sized blooms of superb form. Mr. T. Todd, gardener to W. A. Briscoe, Esq., Longstow Hall, Cambridge, also exhibited incurved remarkably well.

The contributions to the classes for chrysanthemums exhibited in vases formed, as usual, a large and attractive feature. For six vases of Japanese, three blooms in each, Mr. G. Barker was first with finely-developed examples of well-known varieties, and Mr. J. Heath was a good second. Not less satisfactory were the vases of incurved, and it is of interest to mention that, while the varieties belonging to the section are not usually regarded as of much value for decorative purposes, they received on this occasion a full share of attention, and were much admired by the general body of visitors. Mr. G. Barker, Mr. J. H. Walker, and Mr. T. Todd were the prizetakers in the order of their names. Especially attractive were the vases of flowers grown without disbudding, and of the six or more competitors Mr. A. Lelliott, Colebrook, Fulbourne, was first with fresh, finely-coloured flowers. Mr. J. H. Walker showed well for second place. Single varieties in three vases were splendidly shown, and the vases staged by W. Dobbs, Esq., Middleton Cottage, Newnham, Cambridge, are deserving of the warmest praise. Mr. J. H. Walker also showed well in the class. Pompons were also well shown in vases.

Groups arranged for effect were of a high degree of excellence, and at the head of the several competitors was Mr. J. Wright, gardener to A. Matthew, Esq., the hon. secretary of the society, Cambridge, whose group was remarkable for the high quality of the blooms and the taste evinced in the arrangement. Mr. F. J. Cook, gardener to the Hon. Mrs. Thornton, and Mr. Hutchinson, who were second and third, also had meritorious arrangements. The finest of the specimen plants came from Mr. G. Willers, who was first in five classes, Mr. Hutchinson and Mr. J. Wright being second and third. For collections of salvias, Mr. J. Wright obtained premier honours, and Messrs. Allen and Son were second. Mr. J. Wright was awarded a special certificate for a group of finely-flowered examples of Begonia Gloire de Lorraine.

Fruit was splendidly shown, and the several hundred dishes of apples produced a bright effect. Mr. J. H. Ridgwell, Histon, Cambridge, was especially strong in the apple classes, as proved by the fact that he was first for twelve and for six varieties, and in several of the minor classes. Each of the two collections comprised an equal number of dessert and cooking varieties, and of special merit were the dishes of Peasgood's Nonsuch, Golden Noble, Charles Ross, King of Tompkins County, American Mother, Cox's Orange Pippin. In the smaller class Mère de Ménage, Lord Derby, Golden Noble, Cox's Orange Pippin, and King of the Pippins were seen at their best. Mr. Todd, Mr. T. W. Birkinshaw, gardener to Sir C. E. Hamilton, Hatley Park, Mr. A. Lelliott, Mr. J. Vert, Mr. S. French, and Mr. J. Hall also exhibited with much success in the classes for apples. Mr. T. Todd obtained premier honours for six dishes of pears with finely-finished examples of well-known varieties. W. Dobbs, Esq., was first for three dishes with fruit of much merit, and in the class for two dishes Mr. W. P. Hollis obtained premier honours. Mr. T. Todd had the best dish of Pitmaston Duchess. Mr. T. W. Birkinshaw the best dish of Doyenne du Comice, and Messrs. Jones and Son were first in the class for any other dessert variety. Mr. J. Kirkpatrick, gardener to P. L. Hudson, Esq., Pampisford, Cambridge, first for a dish of Catillac, and for a dish of Uvedale's St. Germain. The most successful of the exhibitors in the grape classes were Mr. T. W. Birkinshaw, Mr. Kirkpatrick, Mr. J. Vert, Mr. J. Heath, and Mr. R. Smith. Gros Colmar was especially well coloured, and highly finished.

Vegetables constituted a feature of much interest, and in the class for a collection of ten kinds, Mr. A. Pepper, gardener to A. Hurrell, Esq., Harston, was first with splendidly-grown specimens. Mr. F. J. Cook and Mr. Kirkland, gardener to A. H. Paget, Esq., Brandon, were second and third. Mr. J. H. Ridgwell and Mr. Kirkland were first and second in the class for potatoes with well-finished tubers.

Stratford.

The annual show of the Forest Gate and Stratford Chrysanthemum Society was held at the Town Hall, Stratford, and was a phenomenal success, both as regards the number of visitors and the quality of the exhibits. This society, although covering one of the poorest districts in suburban London, bids fair before long to become one of the most popular within the Metropolitan area.

The principal attraction was the Marlborough Challenge Cup for a group, and for which there were eight entries. The winner was Mr. W. J. Rowell, of Gordon Road, Wanstead, whose group contained fine blooms of Valerie Greenham, Henry Perkins, Reginald Vallis, Walter Jinks, Bessie Godfrey, and F. S. Vallis; Mr. W. J. Smith was second, and Mr. C. Ennis third, and Mr. W. J. Stride fourth.

The classed for cut blooms were well filled, the principal class being for eighteen Japanese on a board, where Mr. W. J. Smith was closely followed by Mr. W. J. Stride. For twelve Japanese, on a board, Mr. W. J. Rowell was first, Mr. F. Clements second, and Mr. A. Willett third. For six Japanese, on a board, Mr. A. Willett, Mr. W. J. Stride, and Mr. W. Rowell won in the order of mention. For twelve, incurved, Mr. W. J. Stride, Mr. A. Willett, and Mr. J. Tyler were the winners. For six vases of Japanese blooms, Mr. J. D. Smith, Mr. W. J. Smith, and Mr. F. Clements scored. For three vases of Japanese blooms, Mr. A. Willett, Mr. J. A. Ward, and Mr. F. Clements won as placed.

The decorative classes showed excellent judgment and skill on the part of the exhibitors, the principal item being a table decoration, 6ft. by 3ft. The winning table by Miss Port was, perhaps, a trifle heavy, but nevertheless, a beautiful effort. The classes for singles also produced some very fine blooms, and the popularity of these useful specimens was amply proven; the winners in these classes were Mr. C. J. Froud and Mr. J. D. Smith.

Edinburgh,

NOVEMBER 19, 20, and 21.

The annual show was held, as usual, in the Waverley Market, and was quite the best display yet produced by this society, although many remarkable shows have been held by it. Perhaps some slightly better blooms have been seen in the Japanese section, but, taking the show as a whole, never has there been a finer display.

In the open classes over one thousand blooms were shown, then there were the various amateur classes, in which there were numerous entries, all arranged in vases. This is one of the few societies that have wholly dispensed with the show boards. In the purely decorative section there was a most remarkable display, not only in point of numbers, but in the quality of the exhibits, and never have single-flowered varieties been shown so finely as they were on this occasion. Dinner table decorations, too, were numerous and good, and miscellaneous plants were a distinct feature. Add to this a very fine array of vegetables, nurserymen's exhibits, and the charm of listening to the full band of the Grenadier Guards, and it can easily be imagined what an interesting exhibition is provided for the many thousands of visitors that annually flock to this show.

Cut blooms formed the chief item in the schedule, and no fewer than twelve vase classes were provided for Japanese blooms, with cash prizes of the value of £120, in addition to valuable cups. The leading class was for fifteen varieties, three blooms of each, in separate vases. The City of Edinburgh Cup and £20 in cash was the premier prize. £15 for the second, and £10 for the third. Six competed, making a good display. At this show the prizes were awarded in the three leading classes by points, which are published on cards with each exhibit as an educational lesson. Where the entries are numerous the labour devolving on the judges by this method is enormous. Mr. E. Molyneux, on this occasion, adjudicated single-handed. To show the merits of the blooms we publish the list of points obtained by each variety in the winning stands. The maximum number of points allowed for each bloom being twelve. As on several previous occasions the winner was Mr. T. Lunt, gardener to Captain Stirling, Keir, Dunblane, with an even set of fresh, richly-coloured specimens of R. Vallis, 11; Bessie Godfrey, 11; F. S. Vallis, 11; Melchet Beauty, 11; Victoria and Albert, 10; Edith Jameson, 10; Mrs. F. W. Vallis, 9; Marquis V. Venosta, 9; Mrs. C. Penford, 9; J. H. Silsbury, 9; Lady Conyers, 9; Mrs. G. Mileham, 8; O. H. Broomhead, 7; Mrs. A. G. Pirie, 7; Miss R. Stoop, 6; total, 137 points. Mr. D. Nicoll, gardener to J. F. Bell, Esq., Rossie, Forgandenny, was second with 123 points, his best blooms being Mrs. C. Penford, Mrs. F. W. Vallis, Splendour, F. S. Vallis, and J. H. Silsbury. Mr. F. J. Moir, gardener to J. D. Fletcher, Esq., Rosehaugh, Ross-shire, was third, with 118½ points, in which Elsie Fulton and Florence Penford were conspicuous. Mr. G. Stewart, gardener to Sir James Sivewright, Bart., Tulliallan Castle, Kincardine-on-Forth, fourth, with 112 points.

For eight varieties, three of each, for which the Scottish Cup and £10 was the leading prize, nine entered, the premier award going to Mr. A. Hutton, gardener to C. G. Keith, Esq., Usan House, Montrose, for a remarkable exhibit of high-class blooms of Lady Talbot, 12; F. S. Vallis, 11½; Reginald Vallis, 11; Mrs. G. Mileham, 11; Victoria and Albert, 10; President Viger, 10; Mrs. A. T. Miller, 9½; and J. H. Silsbury, 9½; total, 84½. Mr. R. Addison, gardener to Sir W. Dalrymple, Bart., North Berwick, was second, with 82½ points; Mr. J. Tinnie, gardener to A. R. Brown, Esq., Summerhill, Brandon, third.

Class three was confined to gardeners and amateurs, and was for six varieties, three of each, and £5 was the leading prize. Eleven competed. Mr. A. Morton, gardener to Countess Seafield, Cullen House, was first with exceedingly fine blooms of Victoria and Albert, Lady Talbot, J. H. Silsbury, Reginald Vallis, and Algernon Davis. Mr. Stewart, Dunkeld, second; Mr. D. Mackay, gardener to C. Dickson, Esq., Viewbank, Lasswade, third. For twelve, distinct, Japanese varieties, in four vases, there were seven entrants, Mr. Morton leading with medium-sized blooms of good quality; Mr. Hutton second, with Mr. Lunt occupying third place. In the class for six blooms of any one variety seven entered, and Mr. Hutton led with F. S. Vallis in fine order, followed by Mr. Moir with Florence Penford.

Single-flowered varieties were some of the best exhibits ever seen. For six varieties, arranged in 8in. vases, Mr. A. E. Todd, Stoneybank, Musselburgh, was distinctly a winner with as many as five dozen high-class blooms deftly arranged in each vase. The varieties were Edith, White and Bronze Pagram, Mary Richardson, Crown Jewel, and Kitty Bourne; Mr. W. G. Pirie, Dalhousie Castle, second; and Mr. W. P. Bell, Bothwell Castle, third. Mr. Todd also won for three varieties. For three vases of decorative varieties, arranged with any foliage, as many as thirteen competed. Mr. W. Galloway, gardener to Earl Wemyss, Gosford House, was distinctly first with La Triomphante, and its gold and yellow sports effectively arranged with golden privet, vine leaves, and green box. Mr. A. Hogg, Luffness, second. Nine competed in the class for one vase of large blooms, arranged for effect, with any foliage, and Mr. G. Scott, gardener to A. Sinclair Henderson, Esq., was awarded premier place for blooms of F. S. Vallis and J. H. Silsbury, arranged with vine shoots and dead leaves of Cycas revoluta; Mr. D. Kidd, Carberry Towers, second, with thirty blooms of J. H. Silsbury, arranged with Prunus Pissardi, which, in our opinion, should have been placed first. Very fine was the class for six varieties, three single and three double, as grown for market. Six entered, and here again Mr. Todd was invincible with Romance, Moneymaker, Market Red, E. Pagram, Kitty Bourne, and White Pagram; Mr. J. Bruce, Davidson's Mains, second; and Messrs. Craig and Son, Davidson's Mains, third.

The association's silver medal was awarded to Japanese Helena Williams, a pale yellow sport of charming appearance from Madame Oberthur, as the best new variety not in commerce. It was staged by Messrs. G. Williams and Sons, Manor House Nurseries, Cardiff. The bronze medal for the second went to Messrs. Wells and Co., Merstham, Surrey, for R. F. Felton, a rich yellow decorative variety. The premier bloom in the show was Lady Talbot, shown by Mr. Hutton, in the Scottish Cup class.

FLORAL DESIGNS.

For one bride and two bridesmaids' bouquets Miss Todd, Stoney Bank, Musselburgh, was first with some of the finest bouquets we have seen, especially the two made with Madame A. Chatenay roses and lily of the valley; Mr. A. Campbell, gardener to Colonel R. E. Aitken, Lansdowne Park, Helensburgh, second. No fewer than thirteen entered for a bouquet of chrysanthemums, and Mr. A. M. Crabbe, 22, Hope Terrace, Edinburgh, secured the premier award with an effective combination of Source d'Or and its yellow sport. Miss Todd, with Enchantress, secured the first prize for a bouquet of carnations from seven other competitors, as also did she for one bouquet of any other flowers with orchids, in which Vanda cærulea figured prominently.

For a basket of chrysanthemums eight competed, and Mr. Beats, gardener to L. Boase, Esq., Binrock, Dundee, won with a pretty combination of yellow and bronze. Miss Todd won for a basket of any other flowers with orchids delightfully arranged. Messrs. Laird and Sinclair had the best floral wreath, while Miss Todd had the premier award for a floral design with a cross elegantly draped with choice orchids. No fewer than twenty-five entered in the class for three sprays of chrysanthemums, and Mr. J. McHardy, gardener to J. S. Dixon, Esq., Fairleigh, Bothwell, was first with an exhibit that left little to be desired.

Dinner tables, 10ft. by 5ft., decorated with chrysanthemums and any foliage, made a brave show, as many as eleven taking part. Mr. W. P. Bell, gardener to the Earl of Home, Bothwell Castle, was easily first with a yellow single-flowered variety, relieved with the reddish-salmon of Mary Richardson, and suitable greenery. Unfortunately, all employed rustic stands, thus making a sameness in the whole of the exhibits.

PLANTS.

Plants were finer than usual. For six specimens £6 was offered as the premier award. Mr. F. Pulman, gardener to D. R. F. Hine, Esq., Hollywood, Colinton, was first with freely flowered examples of Souvenir de Petite Ami, Swanley Giant, and Nellie Pockett. For four Japanese, distinct, Mr. Pulman was again successful. Mr. W. Michie, gardener to Lady Steel, Boroughfield, Colinton Road, won for two specimens with Mary Anderson and Rosinante, 4ft. in diameter, and smothered with flowers.

For six Japanese, in 7in. pots, Mr. Pulman won with plants carrying, on an average, a dozen good blooms each. £6 is offered for a group of chrysanthemums and foliage plants, arranged for effect, in a space of 15ft. by 10ft., yet the results were distinctly poor, not one single exhibit could be considered good.

FRUITS AND VEGETABLES.

Ten guineas were offered for twenty-four dishes of fruit, in not less than twelve distinct kinds, on a table space of 10ft. by 5ft., decorated with plants or cut flowers. Two entered, Mr. Barnes, gardener to the Duke of Westminster, Eaton Hall, Chester, being easily first with good grapes, apples, and pears, and a decoration of orchids, chrysanthemums, etc. Mr. D. Kidd, second. For eight dishes, Mr. Galloway was first with good grapes, pears, and apples. Mr. H. E. Hughes, gardener to Sir Duncan E. Hay, Kingsmeadows, Peebles, was first for four bunches of grapes, distinct, with Mrs. Pearson, Muscat of Alexandria, Melton Constable, and Alicante; Mr. Barnes second. Mr. Lunt won for two bunches of black and white grapes with Muscat of Alexandria, very fine, and Gros Guillaume. Mr. Pirie had the best Muscats. Apples and pears were fairly good and numerous.

Vegetables were a strong feature. For a collection of twelve distinct kinds six entered for the first prize of six guineas. Mr. J. Gibson, gardener to the Duke of Portland, Welbeck Abbey, Worksop, was first, with one of his fine efforts.

NON-COMPETITIVE.

Non-competitive exhibits were numerous and interesting. Gold medals were awarded to Messrs. Moore and Co., Rawdon, Leeds, for orchids; to Messrs. W. Wells and Co., Merstham, Surrey, for chrysanthemums in variety; Messrs. W. Cutbush and Son, Highgate, N., for carnations; and Messrs. Brown and Co., Queen's Ferry Street, Edinburgh, for floral designs.

Silver-gilt medals were awarded to Messrs. Laxton and Sons, Bedford, for apples. The Agent-General for British Columbia for apples. To Messrs. G. Williams and Sons, Cardiff, a silver medal was awarded for chrysanthemums, in which the new single-flowered variety, Caledonia, figured prominently.

Bolton.

The twenty-second exhibition was held in the Albert Hall on November 20 and 21, and proved highly successful.

In the circular group class there was an excellent competition, Mr. W. Burgess, gardener to John Harwood, Esq., securing the silver cup presented by the president, Alderman J. P. Haslam, and the premier prize, with a charming combination. The groundwork was composed of ferns, crotons, caladiums, oncidiums, and bertolonias, and the pyramid in the centre was surmounted by a well-grown palm, but this lacked brightness at the base; Mr. H. Shone, gardener to J. W. Makant, Esq., was an excellent second, but would have done better with a somewhat larger palm for the centre. For a semi-circular group of naturally-grown chrysanthemums, Mr. Burgess was again to the fore, but a little more colour in his display would have proved an acquisition; Mr. H. Wainwright, gardener to Charles Taylor, Esq., had also an effective display. First prize for a group of large-flowering chrysanthemums arranged in a half-circle, with foliage plants, went to Mr. W. Drinkwater, gardener to H. T. Parke, Esq.

The best table of orchids, 6ft. by 4ft., came from Mr. W. Holmes, gardener to J. McCartney, Esq., who had odontoglossums, vandas, oncidiums, cattleyas, cypripediums, etc.; Herbert Arthur, Esq., was second with an excellent selection.

For twenty-four cut blooms, twelve incurved and twelve Japanese, dissimilar, Mr. G. W. Drake, Cardiff, led; and Mr. A. Chandler, gardener to A. James, Esq., Rugby, was a good second. For thirty-six Japanese, not less than twenty-four varieties, Mr. A. Chandler held the coveted position with a strong lot, including F. S. Vallis (immense), Pres. Viger, Duchess of Sutherland, Reginald Vallis, Algernon Davis, Splendour, etc.; Mr. J. Jones, gardener to Sir E. Evans, second; and Mr. W. Iggulden, Frome, third. For six vases of singles, undisbudded, Mr. James Lee, gardener to George Rhodes, Esq., led with bright examples, and for the six vases of decorative varieties Mr. J. P. Holt, gardener to Sir John Mark, was to the fore.

For two bunches of black grapes Mr. R. Jones, gardener to James Amplett, Esq., won with large bunches, and for two bunches of white grapes the same exhibitor was to the fore with Muscat of Alexandria. For three dishes of dessert apples, Mr. L. Bailey, gardener to Lady Hindlip, won with good fruits of Lord Hindlip, Cox's Orange, and Blenheim Orange Pippins. For three dishes of culinary apples Mr. R. Jones led with Peasgood's Nonsuch, Warner's King, etc.

For the collection of vegetables, eight varieties, Mr. C. Weaver won with a strong set, onions and carrots being excellent.

For the classes confined to a radius of twelve miles Mr. J. Wainwright won the gold medal and first prize for twelve incurved and twelve Japanese blooms, and he also led for six vases of large-flowering chrysanthemums and one vase of incurved; Messrs. H. Shone, J. Parkinson, and C. Weaver were first prizemen. Mr. H. Wainwright, gardener to Mrs. C. Taylor, had the leading grapes, and Mr. W. Echersley the best two plants of Japanese chrysanthemums.

Newcastle.

The fourth annual exhibition was held in the Town Hall, Newcastle, on November 18 and 19, and some remarkably fine exhibits were displayed, and the competition was keen in all classes.

In the open class for twelve vases of blooms, not less than twelve varieties, for which a challenge cup and money prizes were offered, Mr. W. Rome, gardener to James Knott, Esq., Close House, Wylam, was first with well-finished blooms of J. H. Silsbury, Mrs. A. T. Miller, Reg. Vallis, Algernon Davis, Mrs. G. Mileham, T. Miller, Mrs. W. Knox, and Bessie Godfrey; Mr. Musk, gardener to Captain Laycock, Weston, Notts, second with General Hutton and the Vallis section in very fine form; Mr. A. W. Appleton, gardener to C. Lacy Thompson, Esq., Farlam Hall, Brampton, third. For six vases of Japanese blooms, Mr. Appleton was first with R. Vallis, F. S. Vallis, Mdme. P. Radaelli, Mrs. W. Knox, Mrs. Mileham, and Mrs. A. T. Miller; Mr. G. W. Musk second, and Mr. J. Kerr, gardener to J. B. Simpson, Esq., Bradley Hall, Wylam, third. For four vases of Japanese, Mr. Musk was first, and Mr. Appleton second. In the class for three white Japanese, Mr. Appleton was first with Mrs. A. T. Miller; Mr. Rome second. For Japanese blooms Mr. Musk led with F. S. Vallis. For twelve incurved chrysanthemums Mr. J. Elliot, jun., Jesmond Dene, was first; Mr. A. Woods, gardener to S. D. Shaftoe, Esq., Beamish Park, second.

In the section confined to growers in Northumberland and Durham, Mr. Rome was an easy first in the class for four varieties, Japanese, three blooms, and won the cup with J. H. Silsbury, Mrs. A. T. Miller, Algernon Davis, and F. S. Vallis; Mr. Kerr second, and Mr. F. Eldon, gardener to H. F. Balman, Esq., third. In the class for four vases, not less than four varieties, Mr. J. Hale, gardener to Mr. Hunter, Wickham Grange, was first; Mr. W. Atkin, gardener to Rev. W. D. Heclas, second.

For a group of chrysanthemums and other flowering and foliage plants, arranged for effect, Mr. T. Bell, gardener to A. E. Bambridge, Esq., led with a finely-arranged group, in which the background of chrysanthemums was in striking contrast to the orchids, foliage and flowering plants in the foreground; Mr. G. Davidson, gardener to J. P. Lindsay, Esq., Gosforth, second; Messrs. Carnegie and Co., Newcastle, third. Five very fine groups were shown in this competition.

The vegetable classes were, as usual, well filled, the pitmen showing their fine examples of good cultivation in all the classes.

The specimen plants of chrysanthemums were marvellous examples of good culture, and in all classes the competition was very keen indeed. The table decoration class brought out five competitors, and here Mr. Lovatt, gardener to E. B. Collingwood, Esq., was first; and Mr. J. Kerr second. The cut flower and bouquet classes were also well represented, and in the fruit classes for two bunches of black grapes, Mr. Musk scored. For two bunches of white grapes Mr. Bell was first; for two dishes pears Mr. Musk led; for two dishes of apples Mr. Musk was again first, and Mr. C. English, Sherfield, Botley, Hunts, second.

Among the numerous trade exhibits, Mr. W. Lawrinson, of Yarm and Newcastle, had a fine display of ornamental trees in tubs. Finely-flowered heaths, chrysanthemums, Primula obconica (a remarkable strain), and winter-flowering begonias, the whole being filled in with winter-flowering carnations, and a small group of orchids. Messrs. Clibrans, Manchester, had a large group of chrysanthemums in varied forms, and their large-flowered strain of winter-flowering begonias. Mr. W. R. Armstrong, florist, Newcastle, had a fine exhibit of retarded lily of the valley, etc., intermixed with Cypripedium insigne. The Tyneside Seed Stores, Newcastle, showed retarded lily of the valley, and a collection of bulbs and vegetable roots. Mr. W. E. Welsh, Sunderland, had a fine display of cyclamens in variety. Messrs. Finneys, Newcastle, showed a collection of well-grown vegetables and apples in variety. Messrs. Hugh Low and Co., Enfield, had a most interesting group of well-grown winter-flowering cypripediums and other orchids in variety.

Beckenham Horticultural Society.

On Friday week, with Mr. H. W. Tyler, F.R.G.S., in the chair, Mr. E. Lovitt, of Croydon, lectured on "Flowers of the Snow Mountains," illustrated with lantern slides. There was a capital attendance, and the lecture proved exceedingly interesting and instructive, as all the mountain scenes put on the screen were from the lecturer's own photographs, and a great part of the pictures of plants represented those of Mr. Lovitt's own collecting, but growing in his own garden at Croydon. It was pointed out that the rock garden should be in a fully exposed position, but it was desirable to have differing aspects to suit various plants, and also that dead leaves should not be allowed to accumulate and decay about the plants, as valuable ones may be lost thereby. Hearty thanks were accorded both lecturer and chairman. The society's Certificate of Merit was awarded Mr. A. Henderson, Eccleshill, Hayes Lane, Bromley; and to Mr. Langford, Cedar Lawn, Beckenham, for exhibits of large anemone and single-flowered chrysanthemums.

Bradford.

One of the prettiest of chrysanthemum shows in the northern counties was the one held recently at Bradford, in the St. George's Hall. A fine effect is produced by arranging groups below the stage, plants and bouquets behind them, and the specimen flowering plants, tier above tier, upon the orchestra seats, right up to the organ. Room is left for the band, but there is no room or opportunity for anyone to reach these elevated plants, either to find their names or those of their owners. Cut flowers were very fine, and some of the best blooms seen were to be found here. The show was not a large one, but it was a most excellent one.

In the chief open class, for two dozen Japanese blooms, Mr. Thomas Stevenson, gardener to E. Mocatta, Esq., Woburn Place, Addleston, led with magnificent flowers of F. S. Vallis (2), Mrs. F. W. Vallis, Lady Talbot (2), Miss M. Hankey, Edith Smith, Mrs. S. Fox, Leigh Park Wonder (2), Duchess of Sutherland, O. H. Broomhead, Mrs. J. C. Neill, Reginald Vallis, Madame G. Rivol, Maud Jefferies (2), Splendour, Miss M. Hankey (2), Valerie Greenham, Mrs. A. T. Bott, Edith Jameson, and J. H. Silsbury. All these were remarkably fine blooms, clean, and of great substance and size. Second prize fell to Mr. W. Chandler, gardener to A. James, Esq., Coton House, Rugby, who also showed splendidly, and had F. S. Vallis, Algernon Davis, and Lady Talbot in fine condition. Mr. Chandler led for twelve Japanese, distinct, and here he had F. S. Vallis, Mary Mason, Duchess of Sutherland, Valerie Greenham, Mrs. F. W. Vallis, Ethel Fitzroy, Mrs. N. Davis, Mdlle. A. Bertrand, Bessie Godfrey, Marquise Venosta, Pres. Viger, and Algernon Davis; Mr. Stevenson must have been a very close second, and Mr. W. Iggulden came third.

There was a splendid array of incurved blooms, probably the best in the county. For twenty-four, in not fewer than eighteen varieties, Mr. G. W. Drake, Cathay's Terrace, Cardiff, was first, and he had big firm flowers of May Phillips (2), Montbrun (2), Mrs. G. Denyer (2), Pantia Ralli, C. H. Curtis, G. F. Evans (2), Mrs. Judson, Ialene (2), Lady Isabel (2), W. Biddle, Duchess of Fife, Madame Vrembly, Boccace, O. J. Muelenare, Doris Rayner (2), Embleme Poitevine, and Nellie Threlfall; Mr. E. Ellis, River View, Heswall, Cheshire, second; and Mr. Chandler third. The best twelve incurved blooms, distinct, also came from Mr. G. W. Drake, who had similar varieties to those staged in his twenty-four stand; Mr. Chandler was second, and Mr. Ellis third.

The class for twelve bunches of singles, brought out a grand display, and here Mr. J. Thornton, Lumb Hall Nurseries, Drighlington, led with Stella, Queen Alexandra, Miss Bird, Mrs. W. Jordan, Annie Holden, Richard Borton, Edith Pagram, etc.; Mr. T. Stevenson, second; and Mr. L. Shearman, Undercliffe Cemetery, Bradford, third. For eighteen Japanese, in six varieties, in vases, Mr. Stevenson led with Maud Jefferies, F. S. Vallis, Madame G. Rivol, J. H. Silsbury, Lady Talbot, and Reginald Vallis; Mr. Chandler, second; and Mr. W. Iggulden, Lock's Hill Nurseries, Frome, third.

Mr. Stevenson led for six vases of carnations; Mr. J. Brooke, Market Hall, Bradford, scored for a bride's bouquet, for a hand bouquet, and for a carnation bouquet; Mr. M. Brooke, North Parade, Bradford, was also successful in the floral design classes, and Mr. E. Midgley, gardener to R. J. Foster, Esq., Harrowins, Queensbury, was also successful. Mr. T. Dawson, 68, Leeds Road, Otley, scored for a table decoration of chrysanthemums, using Source d'Or. The best exhibit of cut flowers and flowering and foliage plants, arranged on a space of 16ft. by 4ft., came from Mr. M. Brooke, whose floral designs were novel and pleasing; Mr. J. Brooke second.

In the fruit classes Mr. F. Howland, gardener to T. Aston, Esq., Micklefield House, Rawdon, and Mr. H. Foster, gardener to W. Ferrand, Esq., J.P., St. Ives, Bingley, were the most successful competitors.

In the local class for eighteen Japanese, in not less than twelve varieties, the silver cup presented with the first prize by the Lord Mayor was won by Mr. J. Thornton, Lumb Hall Nurseries, Darlington, with a very even set, in which Mrs. F. W. Vallis, Lady Talbot, and Mary Inglis were the best flowers. Mr. Foster; Mr. P. Gudgeon, gardener to J. Whittingham, Esq., J.P., Fern Bank, Heaton; Mr. A. Brown, gardener to C. Beverley, Esq., J.P., West Royd, Farsley; Mr. Attenborough, gardener to J. A. Godwin, Esq., J.P., Clock House, Manningham; Mr. R. Eichel, Eldwick, Bingley; and Mr. A. Robinson, gardener to C. B. Shaw, Esq., J.P., The Grange, Shipley, were the leading prizewinners in other local classes.

There were several non-competitive exhibits. Messrs. Conway and Sons, Bull Green, Halifax, contributed a display of carnations, lily of the valley, begonias, and heaths. Messrs. E. J. Batchelor and Sons, Harrogate, contributed a fine lot of the new nephrolepises, notably N. todeaoides, N. Whitmani, and N. elegantissima; Messrs. Dicksons, Chester, showed a very pretty table of capital apples and numerous tall vases of the best winter-flowering carnations rising above the fruits. Mr. F. C. Edwards, Leeds, contributed a good bank of winter-flowering carnation blooms, chrysanthemums, and ferns. Messrs. Moore, Lim., put up a fine bank of orchids, and in their display we noticed excellent odontoglossums, the quaint Cynoches peruviana, oncidiums, Cypripedium insigne Sanderæ, hybrid cypripediums, and lælio-cattleyas in variety. The Agent-General of British Columbia set up a very attractive exhibit of packed apples. Messrs. Clibrans, Lim., Altrincham, had a pretty exhibit of chrysanthemums, that included a charming lot of single varieties, such as Mr. W. Jordan, Mrs. N. F. Barnes, Earl of Durham, Miss M. Bird, Mrs. F. J. Kitson, Metta, J. Stevenson, Mr. H. G. Little, and Mrs. W. L. Hepton.

Winchester, NOVEMBER 17 and 18.

The twenty-sixth annual autumn show was held in the Guildhall, and well sustained the reputation of the society. Cut blooms were numerous and good. It is not too much to say that the incurved were some of the finest seen this season. Nowhere can such handsome chrysanthemum plants be seen as here in the classes set apart for what are termed for conservatory decoration. In the ladies' department, too, there was a bright display of decorated subjects. Fruit and vegetables were plentiful and good, especially the apples, which were highly coloured. The management was of the best under the careful guidance of Mr. Chaloner Shenton, hon. secretary.

For the prizes for the best collection of chrysanthemums, arranged in a space of 8ft. by 7ft., two competed, and Mr. Henderson, gardener to the Earl of Northbrook, Stratton Park, Winchester, was easily first with plants carrying good blooms, but rather too tall for the purpose. Mr. W. Pearce, gardener to Herbert Johnson, Esq., Northgate House, Winchester, second. In the class for nine plants, distinct, each plant to carry not less than five blooms, four entered, the best coming from Mr. G. Cousins, gardener to J. A. Fort, Esq., 69, Kingsgate Street, Winchester; they were dwarf, well furnished with high-class blooms, and amply clothed with foliage. Such varieties as J. H. Silsbury, F. S. Vallis, and Mrs. Judson were conspicuous. Mr. G. Adams, gardener to Colonel F. A. Dickens, Edge Hall, Winchester, was a close second. For nine white or yellow varieties Mr. C. White, gardener to C. Mitchell, Esq., was first with exceedingly fine examples of F. S. Vallis, C. H. Curtis, and Nellie Pockett; Mr. G. Cousins second, who had F. S. Vallis remarkably fine.

Mr. F Stone, gardener to the Rev. A. G. Baker, Sunnyside, Compton Road, Winchester, was first for six plants carrying not less than eight blooms, with a really good set; Mr. F. Smith, gardener to the Rev. Canon Valpy, Winchester, second.

Groups of miscellaneous plants, arranged for effect, were numerous. Four competed in the class, and the best arrangement was that from Mr. J. Hughes, gardener to A. P. Ralli, Esq., Twyford Lodge, Winchester. The flowering plants were mainly orchids, such as Oncidium varicosum Rogersi and cattleyas, and with these were interspersed palms, crotons, etc. Mr. E. Long, gardener to F. C. Birch, Esq., Christchurch Road, Winchester, a close second, wanting a little more finish in detail. Table plants, primulas, and begonias were well shown.

In the class for thirty-six blooms of Japanese, in not less than twenty-four varieties, there were five competitors. Mr. G. H. Hunt, gardener to P. Ralli, Esq., Ashtead Park, Epsom, was distinctly first with large, even, highly-coloured examples of F. S. Vallis, Miss M. Hankey, Lady Talbot, Algernon Davis, Mrs. H. Barnes, Rose Pockett, Mrs. F. W. Vallis, John Peed, Marquis of Northampton, Magnificent, Charles Jones, Bessie Godfrey, Madame P. Radaelli, Edith Smith, Duchess of Sutherland, Thomas Stevenson, and Marquis V. Venosta. Mr. C. E. Garrett, gardener to Lord Ashburton, The Grange, Alresford, was second with rather irregular blooms; Mr. B. Hollis, gardener to Major Chichester, Embley Park, Romsey, third. Mr. C. Moore, gardener to A. Pearson, Esq., Frensham Place, Ascot, had the best exhibit of twenty-four Japanese; Mr. A. J. Marsh, gardener to M. Hodgson, Esq., Morton House, Kingsworthy, Winchester, second, with an even and attractive exhibit. Seven competed in the class for twelve distinct, and Mr. D. Edwards, gardener to W. Garton, Esq., Lansbury Court, Southampton, was the premier prizetaker; Mr. A. Mackey, gardener to R. G. Schwerdt, Esq., Old Alresford House, second.

For six varieties, three blooms of each, arranged in vases, Mr. C. Moore was first with fine blooms of F. S. Vallis, Bessie Godfrey, Madame G. Rivol, and John Peed, and other well-known varieties; Mr. B. Hollis second with a good set. Mr. G. Adams staged Edith Smith in the class for five blooms, any white-flowered variety; Mr. B. Hollis second with Ben Wells.

Incurved were very fine. For thirty-six, in not less than twenty-four varieties, or more than two blooms of any one variety, Mr. G. Hunt obtained premier honours with large, even, beautifully finished examples of May Phillips, Duchess of Fife, Mrs. B. Hankey, Mrs. R. C. Kingston, Mdlle. Lucie Faure, Godfrey's Reliance, Triomphe de Montbrun, Clara Wells, Embleme Poitevine, Doris Rayner, Calypso, Madame Vrembley, C. H. Curtis, Mrs. Judson, Godfrey's Eclipse, W. Matthews, Frank Hammond, Lady Isabel, and Amber Beauty; Mr. J. Hughes second with good blooms, a trifle smaller, but neatly finished. Mr. Marsh secured the leading place for eighteen, in not less than twelve varieties, with a fine exhibit of popular varieties; Mr. W. Gill, St. Mark's, Southsea, second.

Single-flowered varieties were numerous and good. For six bunches, in vases, distinct, Mr. G. Ellwood, gardener to W. H. Myers, Esq., Swanmore Park, Bishop's Waltham, was distinctly ahead for the premier position with a set of bright varieties; Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, second. Decorative varieties in vases are always a strong feature here, the entries are numerous and the exhibits good. For six distinct Mr. E. Long was first with bunches of typical varieties.

Fruit was an interesting display, especially the apples, which were richly coloured. Mr. W. West, gardener to Mrs. Knox, Holt Hatch, Alton, had the best dessert varieties. Mr. Hall, gardener to Lord Swaythling, South Stoneham House, Southampton, the best kitchen sorts. The latter won for white grapes, and Mr. Hollis for black, with desirable exhibits.

Vegetables were of high excellence, Mr. G. Ellwood winning for the two collections of six varieties with high-class produce.

Not for competition displays added to the attractiveness of the show. Mr. Ellwood had an effective group of apples, in piles, richly coloured, with which were associated twigs of coloured trees and shrubs, flowers, etc. Messrs. E. Hillier and Son, Winchester, had apples, pears, and flowering plants—an effective exhibit, across one end of the hall. Mr. C. Fay, Totton, Southampton, had a really fine exhibit of carnations; and Mr. Ladhams, Shirley, hardy flowers.

Huddersfield.

The seventeenth annual exhibition of the Huddersfield Society was held in the Town Hall. In 1907 there were no open classes, as the result of an objection on the part of subscribers to prizes being taken out of the town, but this year the committee returned to previous methods, and provided open classes, as last season's results were by no means good. The recent show was a fine one, and the attendance was good. The Deputy Mayor, Alderman Balmforth, opened the show, and he was supported by the Mayor and Mayoress, and other influential local friends of the society.

In the open class for two dozen Japanese blooms Mr. Chandler, gardener to A. James, Esq., Coton House, Rugby, secured the chief award, and was followed by Mr. F. W. Jameson, Aston Hall, North Ferriby, and Sir Edward Evans, Spital Old Hall, Bramborough. Mr. Jameson was first for two dozen incurved, followed in order by Mr. G. Bardon, Oxton, Birkenhead, and Mr. Chandler.

There were three group classes, and in the one for chrysanthemums only the prizetakers were Mr. T. H. Ramsden, Oakwell, Golcar; and Mr. J. Cook, Oaklands, Birkby. For a large group of miscellaneous plants, arranged on a space of 65 square feet, Mr. H. Broadbent, Edgerton Grove; Mr. T. H. Ramsden, and Mr. J. Lumb, Rose Hill, Birkby, secured the awards as placed. In the smaller group class Mr. Ramsden, Mr. Lumb, and Mr. J. S. Sharp, Valley Nurseries, Almondbury, gained the prizes. Mr. F. Eastwood, Buckden Mount, Edgerton, scored for three specimen plants, large flowering, and also led for three specimens of single varieties. Messrs. Lumb and Eastwood were very successful in other plant classes.

In the district class for eighteen Japanese blooms, Mr. T. J. Hirst, Meltham Hall, and Mr. J. E. Shaw, Brooklands, Stainland, were placed equal first. Mr. Hirst led for eighteen incurved, and was followed by Mr. G. H. Fleming, Greetland. Mr. Hirst had the best dozen Japanese blooms, and Mr. F. Eastwood the best dozen incurved, in vases. Mr. Hirst scored both for six Japanese and for six Japanese, and Mr. Eastwood led for pompones.

Cardiff Chrysanthemum Show.

The twenty-second annual show took place at the Park Hall. The weather was glorious, and the show was well supported by a large number of enthusiasts. The entries were, owing to the unfavourable season, a little below the average, but the exhibitors were well worthy of the praise bestowed upon them by the judges, who considered the blooms were of a high standard, and would compare favourably with those at other leading shows.

In the open class for eight vases of specimen blooms, Japanese, distinct, three blooms of one variety, Mr. G. Drake secured first honours with good blooms of J. H. Silsbury, Bessie Godfrey, A. T. Miller, Mrs. Barkley, Reg. Vallis, Mdme. G. Rivol, F. S. Vallis, and Mdme. P. Radaelli; Mr. H. R. Farmer, gardener to the Marquis of Bute, second with fine flowers of Miss M. Hankey, Ben Wells, President Viger, J. H. Silsbury, W. A. Ethrington, F. S. Vallis, Mdme. G. Rivol, Bessie Godfrey, and Mdme. P. Radaelli; Mr. Joy, Cwrtyalla, Cardiff, third. For twelve Japanese, Mr. Farmer led, and Mr. Joy was second. For twenty-four blooms, incurved not less than twelve varieties, Mr. G. Drake led, and Mr. Farmer was second. Both exhibitors showing grand blooms of Mrs. G. Wynn, Lady Isabel, Godfrey's Eclipse, G. F. Evans, W. Pascal, Ialene, Mrs. F. Judson, Bernard Hankey, Emblem Poitevine, Doris Raynor, Mrs. G. Denyers, Pantia Ralli, and C. Curtis.

In the amateurs' division, Mr. A. F. Hill was first, and Mr. H. Edwards second for twenty-four Japanese. For twelve Japanese, Mr. A. F. Hill and Mr. F. Primavessé secured the awards. For twelve blooms of Japanese, not less than four varieties, Mr. F. E. Atkins and Mr. H. A. Allen were the most successful. In the class for six white Japanese, Mr. G. Drake, Mr. W. J. Coles, and Mr. H. A. Joy secured the awards.

Chief prize in the open group class for single and large-flowering chrysanthemums was won by Mr. G. Williams, Manor House, Cardiff (gardener, Mr. J. Howe), and the National Chrysanthemum Society's Certificate of Merit was awarded to Mr. Williams for chrysanthemum H. Williams, a beautiful yellow Japanese variety.

Gold medals were awarded to Mr. J. Basham, Bassaleg, for a grand collection of fruit; Mr. William Treseder for floral displays; Messrs. Cypher and Sons, and J. J. Neale, Esq., for orchids; and to Messrs. Clibrans for winter-flowering begonias and single chrysanthemums. Silver medals went to Messrs. Young and Co., Cheltenham; Mr. Hodge, Albany Road, Cardiff; and Messrs. P. Thomas and Co., Albany Road, Cardiff, to the former for winter-flowering carnations, and the latter two for floral displays.

Reading Gardeners' Association.

A highly successful meeting of this flourishing society was held on Monday, November 16, in the Abbey Hall. The President (Mr. Alderman Parfitt, J.P.), presiding over a large audience, which included the Vice-President (Mr. L. G. Sutton), Mr. T. Tunbridge (chairman), Mr. G. Hinton (vice-chairman), etc.

After the usual business of the meeting had been disposed of, the President called on the lecturer for the evening, Mr. F. Phillips, representative from the Redhill and Reigate Association, to introduce his subject, "Plants for Exhibition."

By his robust, and at the same time, lucid style, Mr. Phillips at once won the attention of his audience, and the many amusing anecdotes which he introduced to emphasise his remarks frequently provoked hearty laughter. In a brief notice such as this, it is, of course, impossible to deal with such a subject as that so ably handled by the lecturer.

After a few remarks on what he considered the best form of houses in which to bring forward plants for exhibition, Mr. Phillips proceeded to advise those among his hearers who thought of propagating dracænas and crotons, to start immediately; delays are dangerous, he remarked. Then with regard to soil he urged the necessity of thoroughly mixing the different ingredients, introducing to illustrate the necessity of this an amusing story as to what might be expected were the cook to fail in the proper admixture of a pudding. The dangers of over-watering, improper ventilation, overcrowding, insect pests, and many other matters were dealt with in a manner which proved Mr. Phillips to be a thorough master of his subject.

The lecturer then named some of his particular favourites among dracænas, crotons, palms, lilies, aralias, as among the subjects he largely relied on as a successful exhibitor, expressing, too, his admiration for Begonia Gloire de Lorraine. He also mentioned that for the floral embellishment of his exhibits he largely used seedling begonias, gloxinias, schizanthuses, francoas, as well as gloxinias from roots, and, of course, orchids.

In conclusion, the lecturer admonished his audience to break away from formality and endeavour to be original in grouping. On resuming his seat, Mr. Phillips was loudly applauded. In the discussion which followed many questions were put to Mr. Phillips, and readily replied to by him. Among others taking part in the debate were Messrs. Neve, Judd, Exler, Durward, Foster, Alexander, Goodger, Turnham, Carter, etc. On the proposal of the Vice-President, seconded by Mr. Tunbridge, a hearty vote of thanks to the lecturer was carried with acclamation, and Mr. Phillips suitably responded.

Mr. Wilson staged a most excellent collection of fruit (not for a certificate), for which he was accorded a hearty vote of thanks. Mr. F. Townsend, gardener to the vice-president (Mr. L. G. Sutton), exhibited a beautiful group of Primula obconica set with Cyperus alternifolius, for which he was awarded a certificate.

Two new members were elected, and a vote of thanks to the president concluded the meeting.

Royal Horticultural Society of Aberdeen.

The annual general meeting of this society was held in the Music Hall Buildings, Aberdeen, on Saturday evening. There was a good attendance, and the chair was occupied by Bailie Milne, vice-chairman of the society. The annual report by the directors was submitted, which showed that, from a horticultural point of view, the show held in August last was an exceedingly good one, the exhibits being above the ordinary both in number and quality; but the financial result was not satisfactory owing to the breakdown in the weather on the last day of the show. The income for the year amounted to £416 13s. 8d., and the expenditure to £477 2s. 11d., showing a deficit for the season of £60 9s. 3d., the balance at the credit of the society to be carried forward to next year being £31 16s. 1d. Attention was also called to the fact that the membership was decreasing, and members were earnestly urged to do all they could to remedy this defect.

The Chairman moved the adoption of the report. Mr. Alexander Marr, Aberdeen, seconded, and the motion was agreed to. Mr. Robson, of Messrs. William Smith and Son, Aberdeen, and Mr. John Leith emphasised the remarks in the report with reference to the desirability of increasing the membership.

On the motion of the Chairman, Lord Provost Alexander Wilson was unanimously elected as honorary president. Mr. Burnett, of Powis, was re-elected chairman, Mr. Robson stating that he thought they could have no one better qualified to fill the post. All the vice-presidents were re-elected, with the name of Sir Alexander Lyon, who was president during his Provostship, included in the list of honorary vice-presidents. Directors were appointed as follows: Messrs. James McDonald, W. A. Dustan, William Anderson, J. M. Simpson, Alexander Marr, Alex. Burns, jun., Alexander Mortimer, A. M. Cocker, R. Harvey, A. Douglas, John Leith, A. Giles, W. Adam, William Walker, James Duncan, William Pirie, and John Taylor. Mr. William Reid and Mr. William Wyllie were re-elected auditors, and Mr. J. B. Rennett, Aberdeen, reappointed secretary and treasurer.

Aylesbury.

This Mid. Bucks society held its thirtieth show on November 19, and this was a floricultural and horticultural success, being much more numerously attended than the shows held for some seasons past. The Town Hall was utilised for plants and blooms, the adjoining Meat Market accommodating the extensive vegetable competition and fruit.

The exhibition, though held somewhat late, was up to a full average standard of excellence. In the competition Mr. Brandon, gardener to Mrs. Gurney, led for nine and one Japanese, six and one large-flowering, and three pompons, specimens; Mr. W. Tipler, gardener to Colonel D. Lee, Hartwell Park, securing the premier award for a mixed group; and Mr. Hygate, gardener to J. C. E. Bridge, Esq., led for a 56ft. arrangement.

Cut blooms were mostly in vases, in triplets, the premier ten, from Mr. Tipler, being generally fresh, well-developed trios of Duchess of Sutherland, F. S. Vallis, Madame R. Oberthur, Valerie Greenham, The Lyon, Algernon Davis, Leigh Park Wonder, M. Montigny, Mrs. F. W. Vallis, and Annie Hamilton. The class for eight vases proved a good one, Mr. Partridge securing the chief award with a noble set, comprising triplets of Mrs. W. Knox, Mrs. B. Hankey, Miss E. Fulton, Madame Ferlat, H. Ellis, Louise Giles, Madame M. de Mons, and Mildred Lynne. For six incurved, one variety, the awards went to Countess of Warwick, first; Triomphe de Montbrie, second; and C. H. Curtis, third; and in the corresponding class for Japanese F. S. Vallis was placed first, and Madame R. Oberthur second.

The display of fruit was good; pears were not numerous, but the best varieties of apples were well represented, some Cox's Orange Pippin being very fine. In this section Alicante grapes, from Mr. Tipler, secured the premier award, he also staging a fine collection of apples, including varieties Dumelow's Seedling, Tom Putt, Gloria Mundi, Mère de Ménage, Blenheim Pippin (a fine sample), Lane's Prince Albert, Adam's Pearmain, Cox's Orange, King and Ribston Pippins, Lord Burghley, and Barnack Beauty.

The vegetables (very largely allotment produce) made up a fine show, the carrots (intermediate and horn) being splendid for colour and shape, and every garden variety was represented in bulk, there being fully 100 dishes of potatoes of twelve tubers each in the competition, one cottager, Mr. Joseph Deering, winning a silver teapot for a collection of twelve dishes. Other classes were for eight, six, and four varieties. The potatoes were very bright and shapely, the following varieties being repeated again and again, viz., Up-to-Date, Purple Perfection, Windsor Castle, The Nobleman, Russet Queen, Great Central, Dunbar, Mr. Bresee, Red Dalmeny, King Edward VII., Charles Fidler, Sharpe's Empress, Satisfaction, Reading Russet, Reading Giant, Sir J. Llewelyn, Bright Eyes, and The Dean.

Non-competitive exhibits included a 60ft. group of plants from Mr. H. Warren, gardener to Miss Rothschild, Aston Clinton, in which the cream and pink Lorraine begonias figured largely.

South Shields.

This well-known society in the North of England scored another success at its annual exhibition held in the fine Assembly Hall, being packed with most meritorious productions. The Japanese blooms were good and very fresh, while the incurved were splendid examples and well finished, showing a great improvement in this section. The specimen plants exhibited in the basement of the hall were enormous, some of the Japanese and singles measuring quite 6ft. across. For many years this exhibition has been noted for the display of bridal and other bouquets, epergnes in variety, and table decorations, but this year it surpassed itself.

The president, Mr. James Readhead, Westoe Hall, gives very great financial and other support to the society, and it is gratifying to note his success in the plant classes, and also in the cut blooms. Mr. J. E. Stout exhibited some very fine specimen plants of single varieties, the best that have been shown here. The certificates of the National Chrysanthemum Society were awarded in the plant classes, one to Mr. Readhead for Japanese, and one to Mr. Stout for singles.

In the principal class for thirty-six Japanese, eighteen varieties, for which the President's Silver Cup and valuable money prizes were offered, the first prize was won by Mr. Albert Chandler, gardener to Arthur James, Esq., Coton House, Rugby, with a splendid exhibit of well-developed fresh blooms of the leading varieties. The F. S. Vallis in this stand was selected as the premier bloom. Mr. Chas. Jennings, gardener to F. W. Jameson, Esq., North Ferriby, second; Mr. H. Smith, gardener to R. D. Marshall, Esq., Keswick, third; and Mr. G. E. Thomas, gardener to the Marquis of Ripon, Studley Royal, fourth. For eighteen Japanese, Mr. H. Smith was first; Mr. T. Reay, gardener to James Readhead, Esq., second. In the class for twelve Japanese, Mr. Chandler, Mr. Smith, and Mr. Fixter were successful, in this order.

For twenty-four incurved, duplicates allowed, Mr. John Readhead gives a silver cup, valued five guineas, in addition to money prizes, and Mr. C. Jennings was first with a fine lot, followed closely by Mr. Chandler, Mr. G. E. Thomas, and Mr. Fixter. The same exhibitors were successful in the class for twelve blooms, and in the same order. Mr. T. Reay, gardener to the President; Mr. Baser, gardener to Alex. Purvis, Esq.; Mr. J. Cooper, Mr. Stout, and Mr. J. T. Smith were the principal exhibitors in the plant classes.

Mr. James Summers, Sunderland, as usual carried off the principal prizes in the bouquet section, securing Mr. Graham's five-guinea cup and £3 in cash for a bridal bouquet; he was also first for a hand bouquet, first for a table laid out with fruit and flowers, and first for an epergne as a centre-piece for a table. The flowers used were of the choicest description, orchids playing a prominent part. Mr. George Hillier, Darlington; Mr. George Knight, Middlesbrough; Miss Dora Summers, Sunderland; and Mr. G. Webster, Sunderland, were also very successful in securing prizes in this section, all showing well.

Mr. William B. Readhead offers a seven-guinea cup for a miscellaneous group of chrysanthemum and other plants, and the class brought out three exhibits, the first prize being won by Mr. Hetherington, gardener to C. T. Rendall, Esq., North Shields, who had an excellent front arrangement, but a weak background; Mr. Thos. Bell, Jesmond, was second, with Mr. George Knight third.

Mr. Alex. Purvis makes an excellent chairman of committee of this well-managed society, and his son, Mr. Allen Purvis, is a worthy successor to the late Mr. Bernard Cowan as hon. secretary. Mr. J. Athey is the staging superintendent, and much credit is due to him and others for the tasteful arrangement of the show.

Norwich, NOVEMBER 19 and 20.

The Norfolk and Norwich Horticultural Society is especially favoured in many respects. It has a remarkably strong committee, an exceedingly able and courteous hon. secretary in Mr. W. Smith, and it includes among its members some of the most successful cultivators of chrysanthemums, fruits, and vegetables in the United Kingdom. This year, so far as the autumn show was concerned, it was not particularly favoured by the weather, and in consequence of the high temperature that was experienced during the greater part of October, and the damp, foggy weather by which it was followed, much difficulty was found in keeping the blooms in first-class condition. As the result, some of the leading growers in the county were not able to take part in the competition in the chrysanthemum classes, and the display was not quite so large as usual. Notwithstanding this fact, there was a big display, and an abundance of superbly developed blooms. Of orchids and miscellaneous plants the numbers were larger than usual, and fruits and vegetables were staged in enormous quantities, and in a condition that did credit to the large body of exhibitors.

CUT BLOOMS.

The premier class in the section devoted to blooms of chrysanthemums was that for forty-eight Japanese, and in this the principal award was made in favour of Mr. C. Nicholls, gardener to T. A. Rising, Esq., Manor House, Ormesby, who had fine examples of Mrs. A. T. Miller, F. S. Vallis, Madame G. Rivol, Madame P. Radaelli, Florence Penford, Duchess of Sutherland, and Mrs. W. Weeks. There was a spirited competition in the class for thirty-six Japanese, and Mr. Goude, gardener to E. Reeve, Esq., The Grange, Old Catton, Norwich, occupied the post of honour with large, fresh, and brightly coloured blooms of Princesse Alice de Monaco, Mrs. C. F. Boosey, Madame P. Radaelli, J. H. Silsbury, Mrs. W. Knox, and other varieties that stand high in the estimation of cultivators. Mr. E. Leech, gardener to W. H. Palmer, Esq., Ormesby, was a capital second with an excellent stand of blooms, and Mr. J. Wynn, gardener to H. Ingleby, Esq., Sedgeford Hall, Lynn, was third, with good blooms. Not less satisfactory was the competition in the class for twenty-four Japanese, and the premier award was taken by Mr. W. L. Brooke, of Attleburgh, who may well be described as one of the most successful amateur cultivators of chrysanthemums at the present time. Every bloom was of the largest size, and finely finished. Mr. A. Gibson, gardener to Sir E. Mann, Thelveton Hall, was a capital second. Mr. H. Rogers, gardener to Lord Rendlesham, Rendlesham Hall, had the best twelve blooms, and Mr. R. Cooper, gardener to the Rev. R. F. Taylor, Hedenham Rectory, was a good second. Mr. W. Laws, gardener to E. G. White, Esq., Eaton House, Norwich, was first for six Japanese, and his stand was remarkable for the magnificent bloom of Florence Molyneux that it contained. It is now some years since we have seen so finely developed a bloom. Mr. A. Gibson and Mr. G. Tweley, gardener to A. Reece, Esq., Riverside, Thorpe, were first and second for six blooms of any one white Japanese variety, with Madame Carnot, so closely matched that there was hardly half a point between them. Mr. Rogers and Mr. C. Nicholls were first and second respectively for six blooms of any variety other than white, and both staged F. S. Vallis at its best. In the amateurs' division Mr. Brooke was first for twelve Japanese, with magnificent blooms, and Mr. Prentice was first for six with fine examples. The blooms of incurved were not equal to the high average that has so long obtained at Norwich, but this was due to the unfavourable climatic conditions that had obtained in the district of which the city is the centre. Mr. J. Wynn obtained premier honours in the class for twenty-four varieties with a good stand in which several seedlings possessing much merit were represented. Mr. Cooper was first for six incurved, and Mr. W. Turner was a capital second. For six blooms of any one incurved variety Mr. E. Leach and Mr. R. Cooper were first and second with C. H. Curtis in capital order.

The contributions to the vase classes and to those for pompons, pompon anemones, and decorative varieties formed a very pleasing feature, and brought into strong relief the value of these classes for giving variety to an exhibition. Very attractive was the class for twelve vases of naturally-grown flowers, i.e., without disbudding, and in this Mr. W. Turner, gardener to Dr. Andrews, Great Yarmouth, was at the head of the numerous competitors with an effective collection. Mr. P. Wright, gardener to W. J. Birkbeck, Esq., Stratton Strawless Hall, Norwich, was an uncomfortably close second. Single chrysanthemums were finely shown in vases by Mr. Evans, gardener to Mrs. Mills, Brook House, Norwich, Mr. F. Matthews, Aylsham, Mr. Turner, Mr. Breese, gardener to F. Matthews, Esq., Wroxham. Very beautiful were the collections of anemone pompons from Mr. W. Turner and Mr. C. J. Harrison, who were first and second in the class, and other exhibitors. Pompons were also plentiful and of a high order of merit, and in the class for twelve bunches Mr. A. Woodham, gardener to Sir H. Cozens-Hardy, Letheringsett Hall, Norwich, and Mr. W. Turner, were first and second respectively. Mr. R. Woodhouse staged a fine collection for third place.

The premier bloom in the classes for Japanese varieties was a grand example of F. S. Vallis, and the premier incurved was an unnamed seedling in Mr. Wynn's first prize twenty-four.

PLANTS.

Groups were, as usual, of a high degree of excellence, and arranged down the centre of the hall, produced a fine effect. Mr. Palmer was first with admirably-grown plants, bearing superbly-developed blooms, but the white sticks used in supporting them were a little too much in evidence. Mr. C. Burtenshaw, gardener to H. Skelton, Esq., St. Helen's House, Norwich, was a close second, and Mr. Rush Thorpe was third with a good arrangement. Naturally grown plants were well shown in sixes and threes, the specimens being large and finely-flowered. Mr. W. Laws' collection of six specimens must be mentioned for their splendid development. Begonias of the Gloire de Lorraine type were staged in large numbers, and in capital order, and produced a rich display of colour. The prize-takers for six were Mr. H. Goude, Mr. R. Woodhouse, and Mr. W. Palmer.

Orchids were more largely shown than in any previous year, and the numerous collections constituted an attractive feature. Prominent among the winning exhibitors were Mr. W. Mason, gardener to H. Rider Haggard, Esq., Ditchingham House; Mr. Cheetleburgh, gardener to Colonel Rous, Worstead House, Norwich; Mr. A. V. Coombs, each of whom obtained several prizes, and staged specimens of much merit. Primulas, zonal pelargoniums, and cyclamen were all well represented, but space will not permit of their being referred to in detail.

FRUIT AND VEGETABLES.

There was an immense display of fruit and vegetables, and the vast Blackfriars Hall was not sufficient to accommodate the whole of the products. The class for a collection of fruit, arranged with suitable plants, was an attractive one, and here Mr. W. Allan, gardener to the Hon. Colonel Harbord, Gunton Park, Norwich, was first with fruit remarkable for its high quality and tasteful arrangement. There was a keen competition in most of the classes for grapes, but the quality in the classes for white varieties was rather below the average. Mr. A. V. Coombs scored with Alicante, staging finely-finished clusters, and Mr. Goude was a good second; the exhibitor last-named staged excellent Gros Colmar. Mr. Allan was first for three varieties of grapes, with Alicante, Gros Colmar, and Gros Maroc.

Apples were exceptionally good, both in size and finish. In competition for the prizes for nine dishes of dessert, Mr. F. Hanson, gardener to Sir F. Crossley, Bart., Somerleyton Hall, was at the head of the several exhibitors with fine examples of Charles Ross, King of the Pippins, Cox's Orange Pippin, and other good varieties; Mr. Allan second. Mr. H. Woollerton, gardener to Sir F. D. Chute, Multon Rectory, was a splendid first for six dishes of dessert apples, and Mr. W. Cheetleburgh exhibited well for second place. Mr. Youngman was successful in taking premier position for one dish of dessert apples with some of the finest fruit of Ribston Pippin yet placed upon the exhibition stage. Mr. W. Mason second, with Blenheim Pippin as near perfection as we can hope to see it. Mr. G. D. Davison, gardener to Major Petre, Westwick Hall, Norwich, was at the head of the numerous competitors in the class for nine dishes of kitchen apples, with magnificent examples of the several varieties represented, and in the class for six varieties Mr. T. Jones, Honing Hall, was first. Mr. Hanson was successful in obtaining premier honours for six dishes of pears with good fruit of Charles Ernest, Glou Morceau, Beurre Diel, Doyenne du Comice, and Marie Benoist. Mr. G. D. Davison was a close second with Marie Louise as his best dish. Mr. H. Goude and Mr. F. Matthews were first and second for three dishes of dessert pears. Mr. Rogers had a fine dish of Doyenne du Comice in the class for that variety. There were about fifty classes for vegetables, and as they were all well filled, in some the entries being a score or more, they formed an important part of this great gathering. Both in the collections and single dishes the quality was very high, and in the numerous potato classes the tubers were especially noteworthy for their fine finish.

Miscellaneous contributions included a large display of chrysanthemums from Messrs. Hobbies, Ltd., and collection of fruits, flowers, etc., from Messrs. Daniels Brothers, and splendidly-flowered specimens of winter-flowering begonias of the John Heal type, those of Ideala being especially noteworthy from Mr. A. V. Coombs.

East Anglian Horticultural Club.

Plenty of splendid exhibits and a large gathering of members to see them was the case at the November meeting of this club, which was held at the Royal Hotel, Norwich. It is surprising what good feeling and comradeship these clubs seem to encourage. A hand-shake here and there, and a talk over how this or that is doing seems to stimulate one. This club is, perhaps, more favoured than some, as so many members are able to get together. At this meeting alterations to rules and schedules were handed in for consideration. A paper on "Onion Culture" was read by Mr. F. Carrington, who has proved by his wins at local shows to be one of the best amateur "onionists" in the district. His remarks were attentively followed by the meeting, and gave rise to a remarkably good discussion. Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, won outright the Girling Silver Challenge Cup. Mr. H. Goude, gardener to E. Reeve, Esq., The Grange, Catton, brought up some of his superb Begonia Gloire de Lorraine plants, which won for him a special prize, given by Mr. J. F. Betts. Mr. F. Williams, gardener to Louis Tillett, Esq., M.P., Catton, set up a grand display of vegetables in competition for Messrs. Daniels Bros., Lim., special prizes, and received the premier award. Messrs. Hobbies, Lim., Dereham, gave prizes for naturally-grown chrysanthemums, which brought out a keen contest, and the monthly classes of flowers, fruits, and vegetables were all sources of keen fights.

Banbury.

The twenty-third exhibition was held in the Town Hall, Banbury, when there was an excellent display. Entries were much as last year, for while cut blooms were not so numerous, other classes were better, notably fruit and vegetables. Banbury Town Hall, though a modern structure, is not large enough to display the products to advantage, and the fruit classes are disposed in an adjoining Council room, and the vegetables in the basement.

Chrysanthemum plants are not encouraged, but the cut-flower section contains liberal prizes, and there was a very keen contest in the "vase" class for not less than eight varieties, three blooms of each, the premier award going to Mr. J. M. Bush, gardener to F. J. Myers, Esq., Charlton Lodge, who had grand blooms, and thus secured the Town Challenge Cup and £3 cash prize; Mr. S. Brown, gardener to W. C. Cartwright, Esq., Aynho Park, was second; Mr. G. F. Hallett, gardener to Lady Hasketh, Eastor Newton Park, third. For eighteen Japanese, Mr. Bush was again to the front with sturdy blooms; Mr. G. H. Bonner, gardener to Z. Merten, Esq., Watlington Park, second; Mr. Hallett third; while for a dozen blooms the premier award went to Mr. F. Tapper, gardener to Sir S. Scott, M.P., Westbury Park, for a well-balanced set; Mr. A. Sadler, gardener to Rev. R. W. Bradford, Broughton Rectory, second; Mr. Hallett third. Six Japanese blooms made a good class, the awards being in favour of Messrs. Sadler, Bonner, and A. Busby, gardener to Colonel Murray, Deddington. In the next class for six white blooms, some noble flowers were staged by Messrs. Bush, Hallett, and Bonner, the half-dozen, not white, being best shown by Messers. Tapper, Sadler, and Bush, an extra prize going to Mr. Bonner.

Incurved blooms were none too numerous, the best dozens being staged by Messrs. Brown, Bush, and D. F. Power, gardener to Lord North, Wroxton Abbey; while for six Messrs. Sadler, W. J. Florey (schoolmaster, Chipping Warden), and Hallett, divided the honours. Single flowers, in bunches, set up in vases, were attractive, as staged by Mr. E. Cox, gardener to the Lady Kingsley, Fawdry Court.

The tables of decorative plants were rich in highly-coloured orchids, the challenge cup going to Mr. Hallett, who beat Mr. Bush, who has held the cup for two seasons. Winter-flowering begonias were attractive, as set up by Messrs. Bonner and Power; cyclamens from Messrs. Bonner and Sadler; and zonal pelargoniums, of which there was a charming display, secured positions for Messrs. Sadler and Power.

Trade exhibits of cut blooms and floral devices were numerous. The fruit was at once a large and attractive feature, the colouring being excellent, the tables of dessert fruits being beautifully arranged, Mr. F. G. Bull, Weston Flavell, securing the £10 cup, with Mr. Bush coming a close second. The prizes for vegetables were largely in the hands of Mr. A. V. Cross, who scored premiers for a collection—carrots, parsnips, beet, onions, and coloured kidney potatoes; and Mr. W. Dale, who led in the classes for three dishes of potatoes and a dish of white rounds.

Woolton.

This was an admirable show, although hardly so extensive as its predecessors. Trained plants were good, as also were the single cut chrysanthemums. Staging here is more for general effect than for the convenience of the judges, but it merits the approval of the visitors.

For twenty-four blooms, Japanese, not less than eighteen varieties, Mr. G. Eaton, gardener to W. Tod, Esq., secured the silver challenge vase with a good stand that included the premier bloom, Mrs. Chas. Penford; other prize winners in this class were Mr. J. Stoney, gardener to Lieut.-Colonel J. B. Gaskell, and Mr. J. Clarke, gardener to T. Clarke, Esq. For eighteen varieties, distinct, Mr. G. Haigh, gardener to Sir W. H. Tate, Bart., won with a creditable stand, and Mr. T. Keightley, gardener to P.W. Barr, Esq., had the best twelve blooms. For eighteen incurved, distinct, Mr. J. Stoney was the winner, and for twelve Mr. H. Howard, gardener to A. S. Mather, Esq., led, while for the best bloom Mr. J. Clarke scored with Buttercup.

The best collection of cut flowers arranged for effect came from Mr. J. Stoney. For nine vases of single varieties, distinct, nine blooms in each lot, Mr. H. Howard held the coveted position with a grand set of large, fresh, and well-coloured blooms; other prizemen were Messrs. G. Eaton, T. Keightley, and G. Haigh; the exhibits in this class were generally admitted to be the finest yet seen. For three vases Mr. W Wilson, gardener to W. Cunningham, Esq., led.

The three prizes for bouquets went to the Highfield Gardens, and for sprays, to Childwall Nursery and Highfield Gardens.

The section for chrysanthemums in pots fully sustained its high standard, Mr. W. Wilson upholding his high position by winning for three large-flowered, one incurved, one reflexed, and one pompone specimen, the whole giving evidence of high cultural skill and good training. Mr. T. Hitchman, gardener to A. Earle, Esq., won with a beautiful single variety, and Mr. T. Keightley for a fine anemone variety. In other plant classes Mr. T. Hitchman won for cyclamens, and for two Begonia Gloire de Lorraine, Mr. H. Howard for Roman hyacinths, Mr. J. McColl, gardener to J. W. Hughes, Esq., for a fern with a large Goniophlebium subauriculatum; Mr. G. Eaton for any other foliage plant, with a well-coloured croton; Mr. J. Stoney, for a cypripedium; and Mr. G. Haigh, for any other flowering plant, with Eucharis amazonica.

For two bunches of white grapes and two bunches of black grapes, Mr. A. A. Evans, gardener to Colonel R. Ireland-Blackburne, won with good bunches of Alicante and Muscat of Alexandria; Mr. Evans also had the best three dishes of dessert apples, three dishes of culinary varieties, and one dish of stewing pears, showing well in each class. Mr. G. Hammond scored for one dish of dessert and one dish of culinary apples; Mr. J. McColl for three dishes of dessert pears; and Mr. J. Rothwell for the single dish.

For vegetables the winners in the several sections for collections were Mr. T. Keightley (gardeners), Mr. J. Glover (farmers), and Mr. J. Worth (cottagers).

Bristol, NOVEMBER 18 and 19.

The Drill Hall was again devoted to the annual show, and although the display was a great success the entries were slightly fewer than in some former years. Orchids are here a distinct feature, creating much interest in the neighbourhood.

For a group of chrysanthemums, interspersed with foliage plants, there were but two exhibitors, the first prize arrangement coming from Mr. W. H. Bannister, gardener to Mrs. St. Vincent Ames, Bristol. Stove and greenhouse plants, with ferns, are here a strong feature. Mr. J. Binfield, gardener to John Baker, Esq., was the most successful, showing really fine examples of cultural skill. For a group of orchids arranged on a table space of 6ft. by 4ft., with ferns and foliage plants, Mr. W. Gostling, gardener to A. G. Groves, Esq., Bristol, was first with an exhibit of much interest; Mr. Cary Batten second. For three specimens Mr. J. F. Arntis, gardener to Sir Howell Davis, M.P., was first, with Cypripedium Harrisianum and Cattleya labiata. For two specimens Mr. Gostling was again first with Cypripedium insigne and C. punctatum violacea. In another class for two, distinct, Mr. Gostling again won with Odontoglossum Grande and Cypripedium insigne. Mr. Curtis, with Cypripedium Spicerianum, carrying twenty-one flowers, won premier place for a specimen.

In competition for the prizes for thirty-six Japanese Mr. Iggulden, Frome, had the best of four entries with medium-sized and deeply-coloured examples; Mr. T. Coote, gardener to D. E. Taylor, Esq., Bristol, second. For twelve distinct Japanese Mr. F. W. Lockwood was first with a well-arranged stand. For six Japanese, any variety, in two vases, Mr. Iggulden was first with Madame P. Radaelli in the pink of condition; Mr. Lockwood second. For any white variety Mr. Iggulden had the best six blooms with Katie Palgrave; Mr. Woodward second with Elsie Fulton. The best yellow variety was F. S. Vallis, staged by Mr. Iggulden. For six vases, distinct, three blooms in each, Mr. Iggulden added one more success with desirable specimens, F. S. Vallis, Madame G. Rivol, and J. H. Silsbury as the best; Mr. G. Sutton, gardener to W. A. Todd, Esq., second.

Incurved varieties were not numerous. For twelve, distinct, Mr. W. Strugnell, gardener to W. J. Long, Esq., Rood Ashton, was first with medium-sized, neatly-finished specimens of popular varieties; Mr. A. Saunders second. Single-flowered varieties are numerous here. For six varieties, five sprays in each vase, eight competed. Mr. G. Sutton was the winner with bright examples of popular varieties; Mr. F. J. Little, gardener to Lord

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Justice Farwell, second. Violets are here a strong feature. For six bunches, in not less than three varieties, Mr. Lambourne was first with a pleasing selection of good blooms.

Fruit and vegetables were good, and trade exhibits were interesting, and a gold medal was awarded to Mr. J. Cypher for orchids, in which the following were conspicuous. Cypripedium insigne Sanderæ, C. i. Harefield Hall, C. Colbiana, C. Ernesti, C. Madame Jules Hye, C. Fairrieanum, and a nice collection of cattleya hybrids; and to Messrs. Sutton and Sons, who had a fine exhibit of vegetables in which tomatoes were conspicuous. Messrs. Felton and Son, London, had a pleasing exhibit of floral arrangements of various kinds.

Pangbourne Gardeners' Association.

This society commenced a new session recently, when Mr. E. Trollope, The Gardens, Coombe Park, Whitchurch, Oxon, read a very practical paper on "Spring Bedding." A good discussion followed, in the course of which many interesting points were brought out. The meeting terminated with a hearty vote of thanks to Mr. Trollope for his paper.

On the evening of November 4, Mr. F. J. Bright, The Gardens, Whiteknights Park, Reading, read a paper on "Fuchsias," which was listened to with much interest by the members present. The paper was principally devoted to the growing of specimen plants, as practised so successfully at Whiteknights by Mr. F. Bright, sen., for many years. The discussion which took place after the reading of the paper proved very instructive. A vote of thanks to Mr. Bright brought a very pleasant evening to a close.

METEOROLOGICAL OBSERVATIONS.

TAKEN BY THE R.H.S. GARDENS AT WISLEY SURREY.

Height above Sea-level, 150 feet.

Date. 1908. November 15 to November 21.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 15—Sunday	—	45	44	49	43
„ 16 Monday	—	44	43	47	44
„ 17—Tuesday ...	1 25	44	43	51	42
„ 18 Wednesday.	—	45	43	51	39
„ 19 -Thursday ...	0 55	44	42	47	43
„ 20—Friday	5 25	42	40	49	36
„ 21—Saturday ...	2 50	43	40	56	39
Means	1 30	44	42	50	41

Date. 1908. November 15 November 21.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Nov. 15—Sunday	—	48	49	50	41
„ 16—Monday	0·02	48	49	50	43
„ 17—Tuesday ...	—	48	49	50	36
„ 18—Wednesday.	0·10	46	49	50	33
„ 19—Thursday ...	—	47	48	50	41
„ 20—Friday	—	44	48	50	28
„ 21—Saturday ...	0·28	44	47	50	31
Means ...	(total) 0·40	46	48	50	36

Rare Alpine and Rock Plants, especially those liable to die through excessive damp in winter, ought now to be propagated, early in the autumn small pots with several cuttings dibbed in round the sides, and stood in a close frame, will soon root, after which admit air, and grow them hardy. Surplus plants, after replenishing losses, can always be used for beautifying odd corners, and are also useful to exchange with friends.—Thomas Smith.

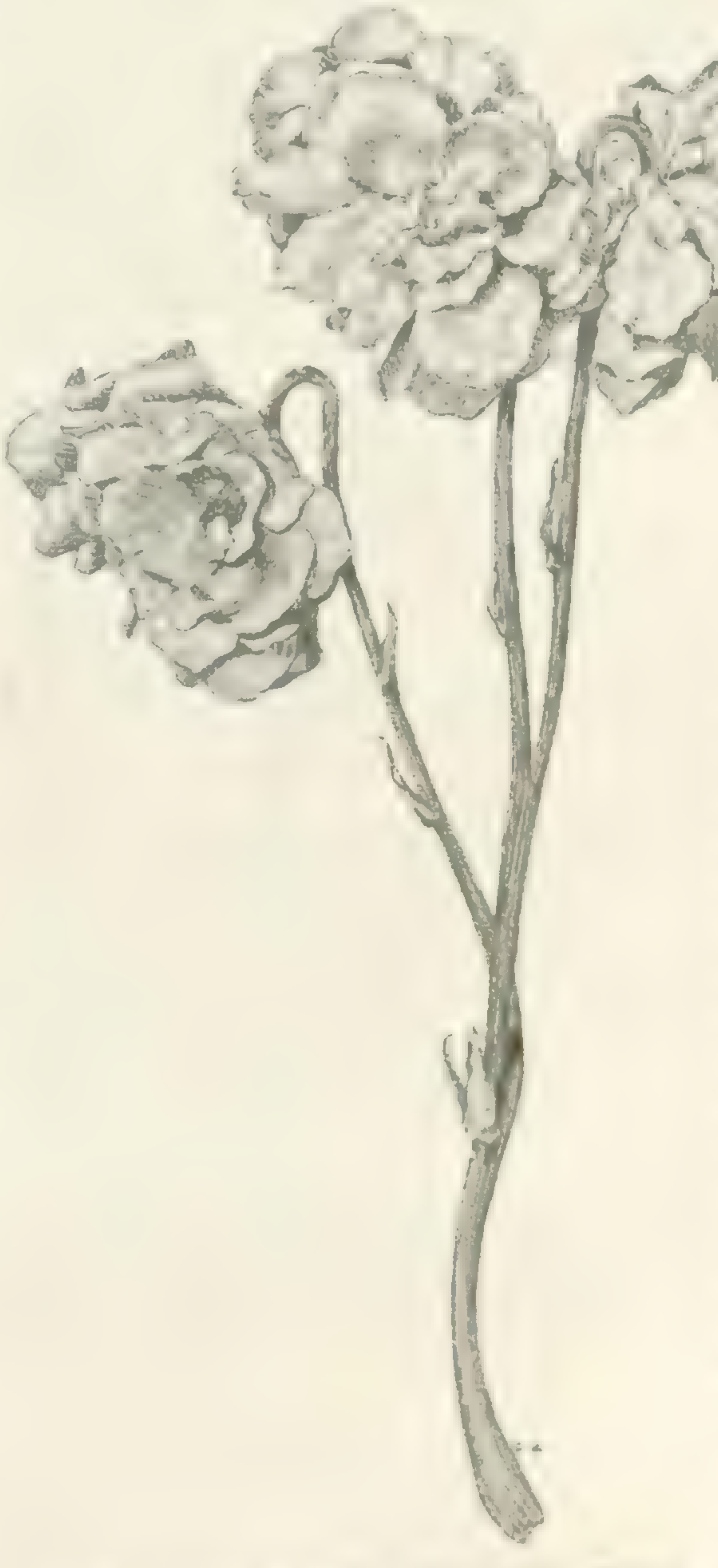
ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

BRANCHED VIOLET STEM.—S. W. H., Cardiff: The flower stem sent is not really a branched one, but is a fasciated one. It is an example of how three violets may become joined together from the base upwards for about half their length. In their earliest development the three buds were so close together that their stems became conjoined, although the flower heads remain free, and thus they grew up and produced the curious inflorescence depicted. Some kinds of flowers and plants seem more addicted to fasciation than others, for instance, every year we have specimens of fasciated asparagus stems and Lilium auratum spikes sent us.



A FASCIATED DOUBLE VIOLET STEM, WITH THREE BLOOMS.

DISEASED CHRYSANTHEMUMS. — J. R., Portmadoc: We have already received similar specimens from other sources, and the matter is being carefully investigated. There are evidences of a mite, similar to the mite that causes begonia rust, but there are also evidences of fungus attack. The mite infestation seems to have been fairly common this season, especially on outdoor-grown chrysanthemums. Spraying with tobacco liquor, to which soft soap has been added, is a good remedy, as also is dusting with tobacco powder.

DATE FOR INSERTING CHRYSANTHEMUMS.—G. H., Taunton: The best time at which to take cuttings of large-flowered chrysanthemums is from November onward, as soon as there are cuttings to take. Some few growers advocate late cuttings and propagate after Christmas, while others, again, believe that success can only be obtained when the cuttings are inserted in November. Locality and methods of culture have a considerable bearing upon the subject. Your letter is an interesting one, and we therefore publish it, and ask for any comments upon it that our numerous chrysanthemum-growing friends may care to make: I have been growing chrysanthemums for the production of big blooms for some years past, with fairly good results. But there is one important point of cultivation that I am not at all clear about, i.e., the best time to insert the cuttings. From my own observation I have not found that it makes much difference in the size of the blooms whether the cuttings are inserted in November, December, or January. I have been under the impression that the earlier the cuttings are inserted the better chance the plants have of building up a good constitution, and of becoming thoroughly matured (other details being satisfactory), than by later propagation. On the other hand, I believe there are growers who believe in late insertion, as the plants get away more quickly. Again, others appear to take them at any time during the months mentioned. Mr. Molyneux, in his book, says that plants are liable to show buds prematurely by early insertion, but I have not found it so. I might mention that I believe in cool treatment; I propagate in a frame out of doors, sheltered, and safe from frost, and the plants are grown as hardily as possible. Two points I notice about my plants are, that I can seldom retain the foliage down to the pots throughout the season, and that my plants are usually much more dwarf than those of my neighbours. But I scarcely think this can be attributed to the propagation, although it might be. Last year I commenced about December 10, but I find that some varieties do not vary much in size from the blooms produced in other seasons by being inserted the middle of November. I am well aware that cuttings are not always procurable just when required. Again, varieties differ in the time of flowering if grown naturally. Amongst the varieties I grow are F. S. Vallis, Mrs. F. W. Vallis, Mrs. W. Knox, Mrs. A. T. Miller, Mrs. J. Dunn, Mrs. J. E. Dunne, Duchess of Sutherland, H. Perkins, Madame P. Radaelli, General Hutton, Algernon Davis, Ben Wells, Marquis V. Venosta, Miss O. Miller, and most of these I have had fairly good. Others that I hope to grow are Reginald Vallis, J. H. Silsbury, Mrs. G. Mileham, Mrs. Coster, and Lady Talbot.

OLDEST SWEET PEA ILLUSTRATION. —W. S. S., Harrogate: So far as we are aware the oldest illustration of a sweet pea is Caspar Commelins' drawing in the "Horti Medici Amstelodamensis," of 1697-1701, second volume. Mr. S. B. Dicks, who is an authority on the history of the popular annual, regards this as the oldest illustration, and a reproduction of the drawing appeared in connection with some notes of his in the "Sweet Pea Annual" for [illegible].

VARIETIES OF RHUBARB.— N. A., Southend: Good varieties of rhubarb are Hobday's Giant, Daw's Matchless, Hawke's Champagne, and the old, finely flavoured, and free-growing Victoria.

WASTE PETROL FOR THE GARDEN.— We shall be glad of any information our readers are able to give us concerning the point raised by a correspondent who writes, from Dorset: "Will you kindly say whether petrol that has been taken from a gas-making machine as unfit for the purpose, can be utilised in the garden in any way. I thought it might be of service in soil that is badly infested with grubs, etc., as ours is. If so, please state the best way to apply it, and how long the plot should be left vacant between the application and seed-sowing or planting."

AMALGAMATION OF DAHLIA SOCIETIES.—E. G. C., Esher: The proposal that the London Dahlia Union shall amalgamate with the older National Dahlia Society has been under discussion by the committees of these bodies for some time, and we believe the first step was taken by the younger, and, we believe, more enthusiastic body. At the time of writing nothing has been definitely decided, but it is most probable that ere this reply appears in print, a decision will have been arrived at

WINTERING THUNIAS.—H. E. J., Warwick: As the leaves have faded and fallen the plants should be placed on a shelf in an intermediate house, where they will be fully exposed to light for the winter. Do not give water until there are signs of new growth at the base next spring.

NAMES OF FRUITS.

F. F., Leyton.—1, Newton Wonder; 2, Gascoigne's Scarlet.

B. E. J., Coventry.—1, Blenheim Pippin; 2, Fearn's Pippin; 3, not recognised.

R. D. N., Suffolk.—1, Alfriston; 2, Rymer; 3, Cox's Orange Pippin; 4, Beurre Diel.

C. R. T., Staines.—1, probably Reinette du Canada; 2, Hollandbury; 3, Lane's Prince Albert.

N. C. A., Keighley.—1, Minchull Crab; 2, Waltham Abbey Seedling; 3, Mère de Ménage; 4, not recognised; 5, Court Pendu Plat.

P. A., Rayleigh.—1, Sandringham; 2, King of the Pippins; 3, Gloria Mundi; 4, Dumelow's Seedling; 5, Braddick's Nonpariel; 6, Vicar of Winkfield.

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L. S. V., Slough.—1, Oncidium varicosum Rogersi; 2, Cattleya Bowringiana.

A. P., Wrexham.—1, Veronica Andersoni; 2, Eleagnus glabra; 3, Physalis Francheti.

W. E., Horsham.—1, Maranta zebrina; 2, Peristrophe speciosa; 3, Leonotus Leonurus; 4, Rivina humilis.

R. L. C., Northampton.—1, Adiantum formosum; 2, Nothoclæna sinuata; 3, Davallia polyantha; 4, Adiantum fissum; 5, Gmynogramma Wettenhalliana; 6, Davallia dissecta elegans.

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Bouvardias	per doz. bun.	6 0		8 0
Camellias	per doz.	1 6		2 6
Carnations	per doz. blms.	1 0		4 0
,,	per doz. bun.	8 0		12 0
Cattleyas	per doz.	8 0		10 6
Chrysanthemums	per doz. bun.	5 0		10 0
,,	per doz. blms.	2 0		3 0
Croton leaves	per bun.	1 0		1 6
Cypripediums	per doz. blms.	2 0		3 0
Eucharis	per doz.	2 0		3 6
French fern	per doz. bun.	1 0		3 0
Gardenias	per doz.	1 6		2 6
Gypsophila	per doz. bun.	2 0		3 0
Lapagerias	per doz.	1 6		2 0
Lilac (French)	per bun.	4 0		5 0
Lilium auratum	per bun.	2 0		3 0
,, candidum	per bun.	1 0		2 6
,, speciosum	per bun.	1 6		3 0
,, longiflorum	per bun.	2 0		4 0
Lily of the Valley	per doz.	8 0		15 0
Marguerites, white	per doz. bun.	2 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 0		4 0
Narcissus, Paper White	per doz. bun.	2 0		3 0
Odontoglossums	per doz. blms.	2 6		3 6
Pelargoniums	per doz. bun	5 0		6 0
Roses	per doz.	2 0		4 0
Tuberoses	per doz.	0 4		0 6
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Cranberries	per case	8 0		8 6
Figs	per box	0 10		1 6
Grapes, English	per lb.	1 0		3 6
,, Belgian	per lb.	0 10		1 0
,, Channel Islands	per lb.	0 6		1 3
,, Almeria	per bar.	10 0		17 0
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Melons, Guernsey	each	0 9		2 0
,, English	each	1 0		3 0
,, Valencia	per case	6 0		10 0
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Cabbage	per tally	2 0		4 0
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Cauliflowers	per doz.	2 0		3 0
Celery	per roll	0 9		1 0
Cucumbers	per doz.	2 0		3 0
Endive	per doz.	1 0		2 0
Horseradish	per doz. bun.	8 0		12 0
Leeks	per doz. bun.	1 0		1 6
Lettuce	per doz.	0 8		1 3
Mint	per doz. bun.	1 0		1 6
Mushrooms	per doz. lb.	5 0		12 0
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FORTHCOMING ENGAGEMENTS.

WEDNESDAY, December 2.—National Chrysanthemum Society, Winter Exhibition at Crystal Palace; two days.

Royal Society of Arts Meeting, 8 p.m.

TUESDAY, December 8.—Royal Horticultural Society, Meeting of Floral, Fruit, and Orchid Committees, noon; General Meeting and Lecture, 3 p.m.; Scientific Committee, 4 p.m.

WEDNESDAY, December 9.—Perpetual-flowering Carnation Society, Exhibition at the Royal Horticultural Hall.

Royal Society of Arts Meeting, 8 p.m.

CATALOGUES RECEIVED.

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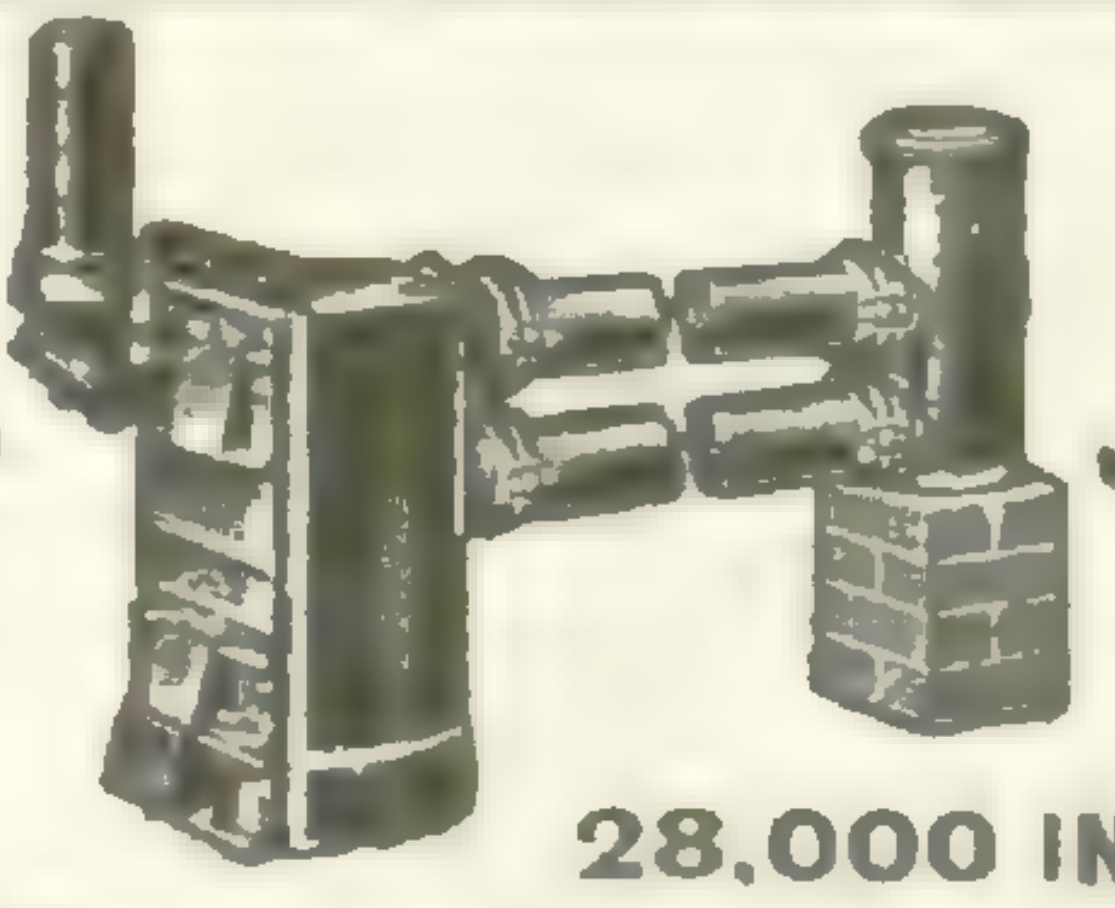

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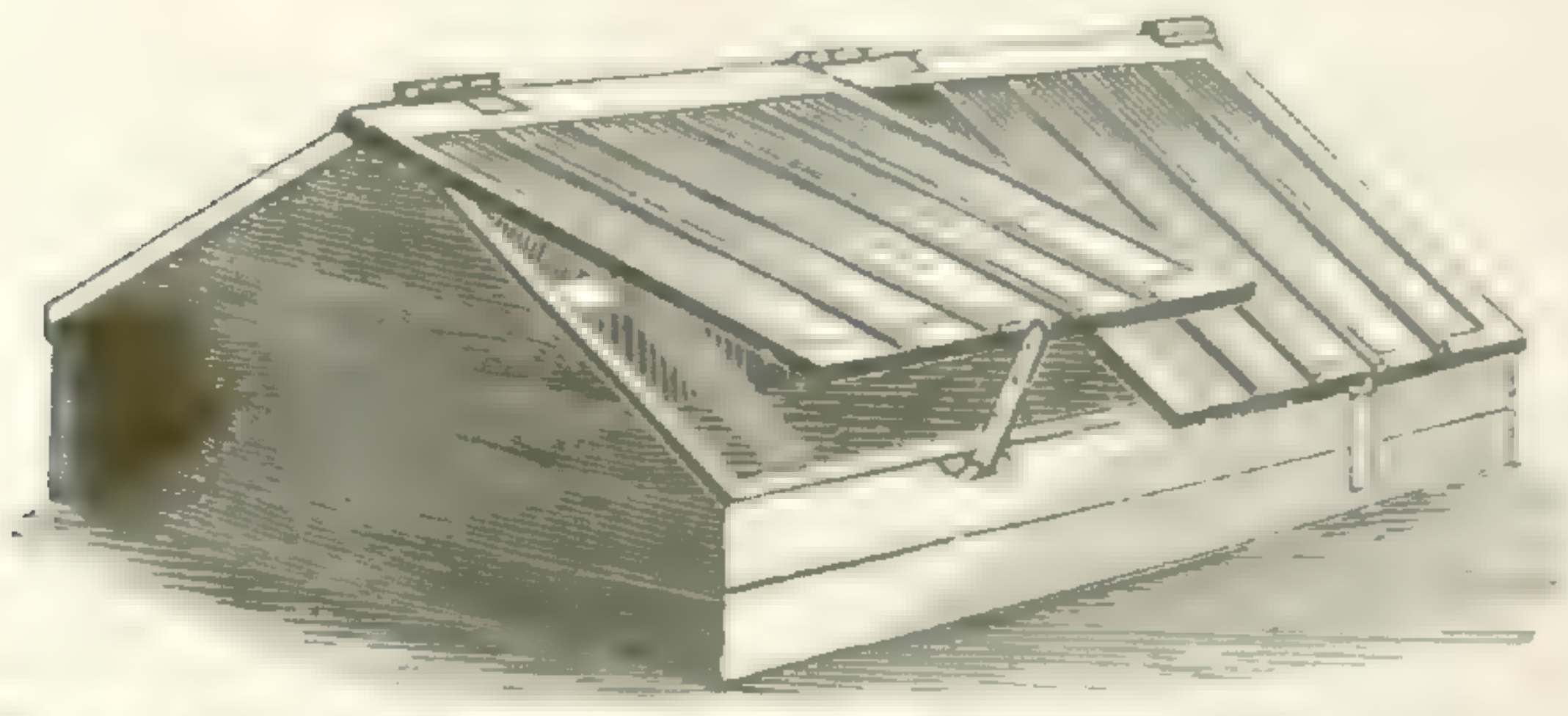

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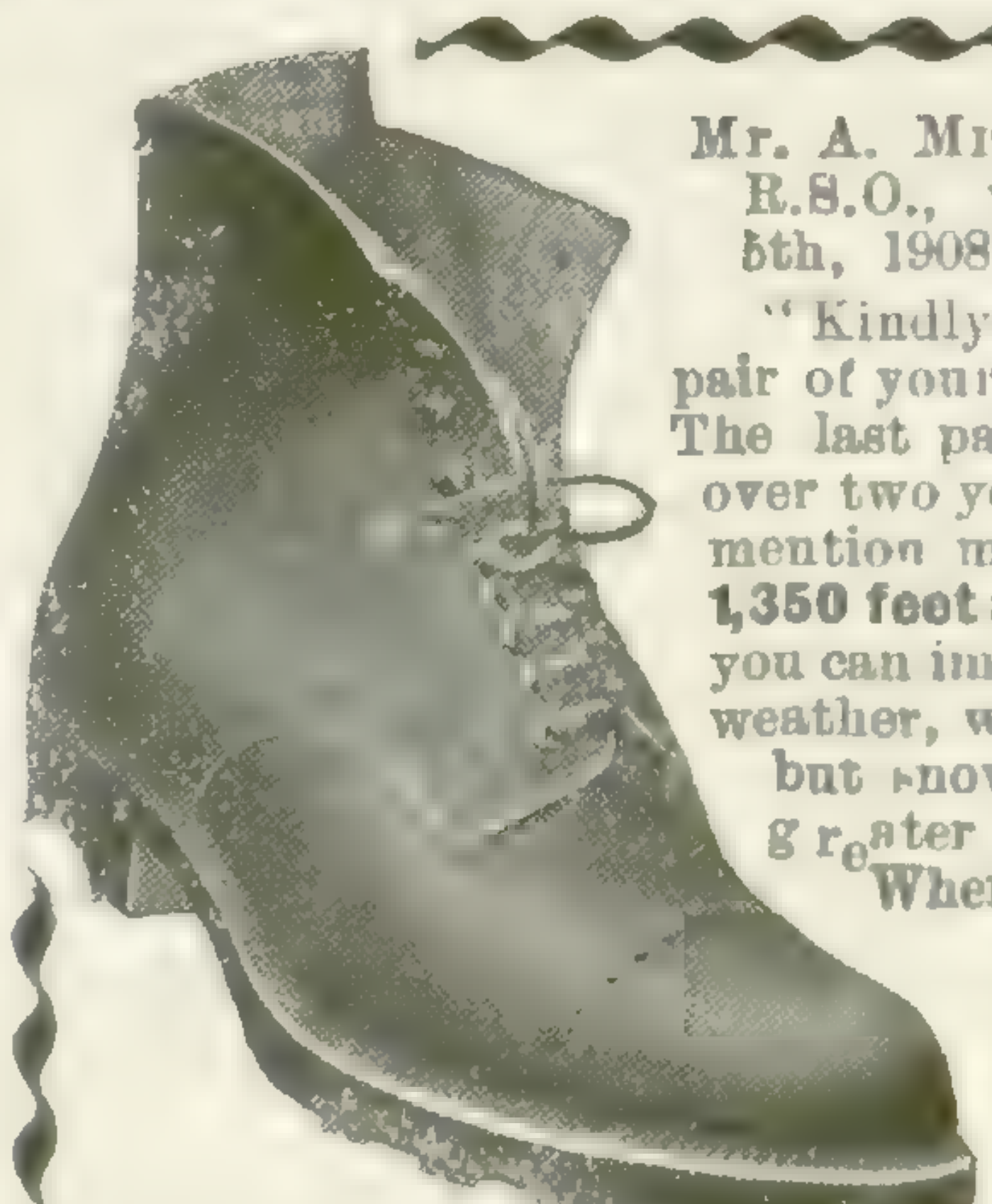

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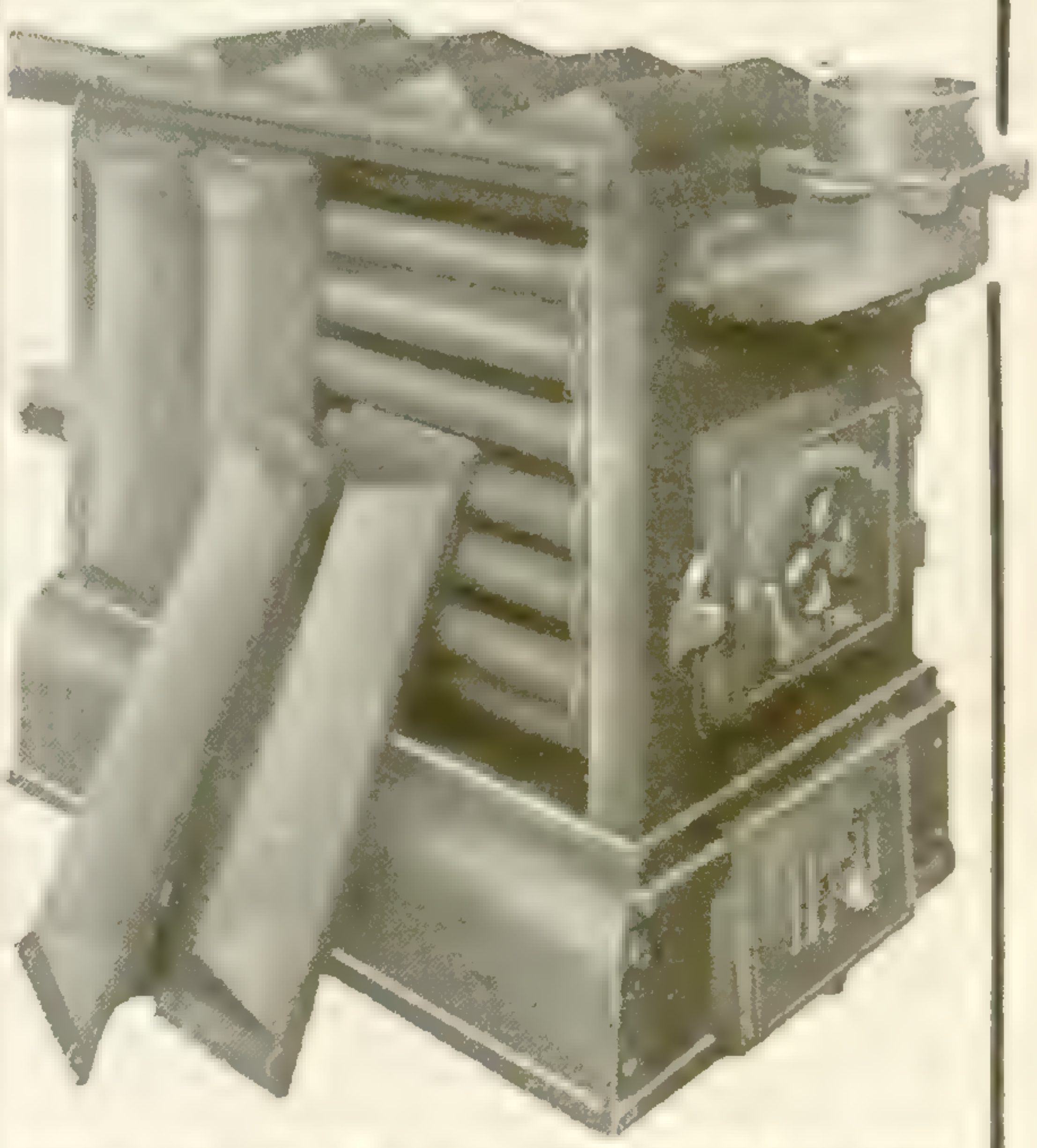

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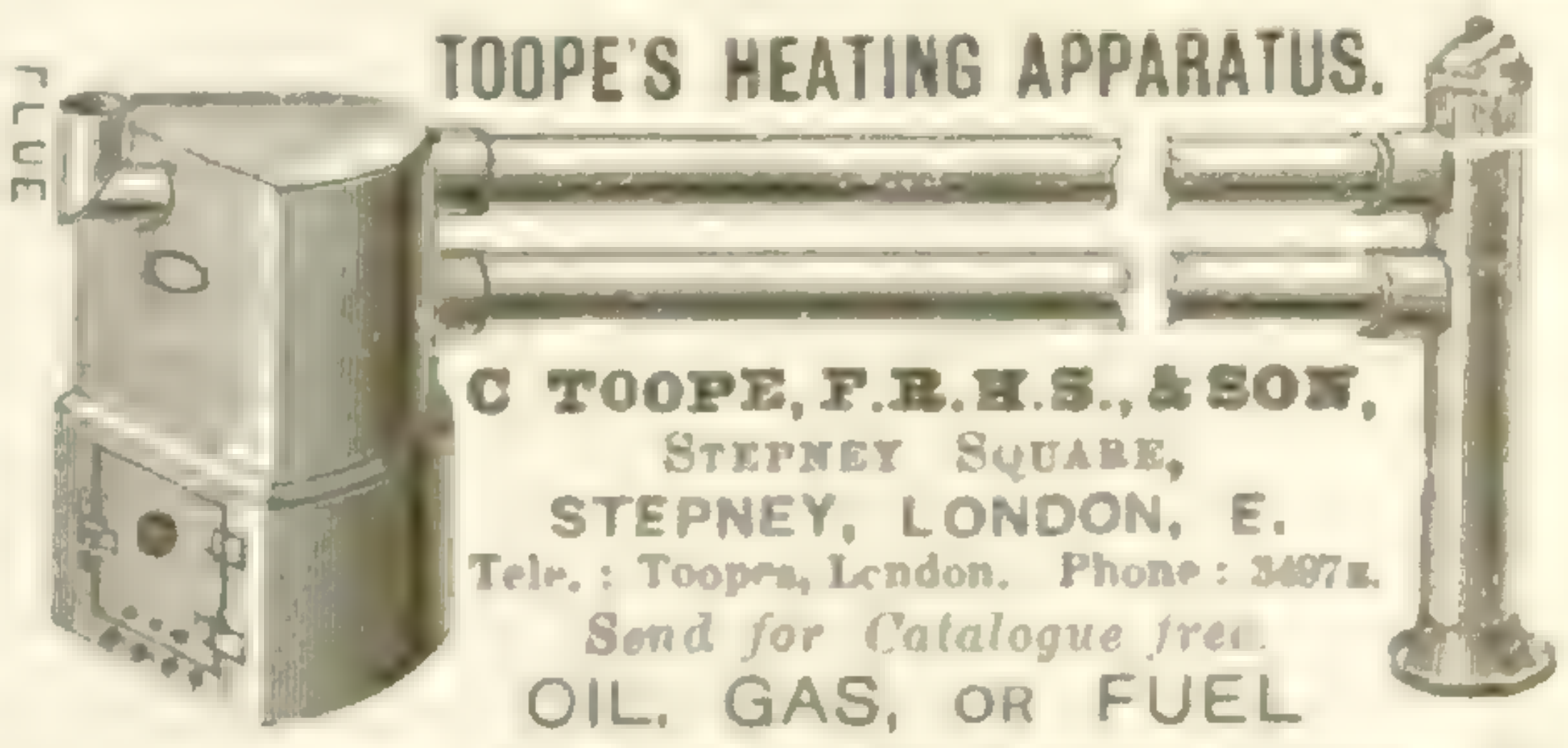

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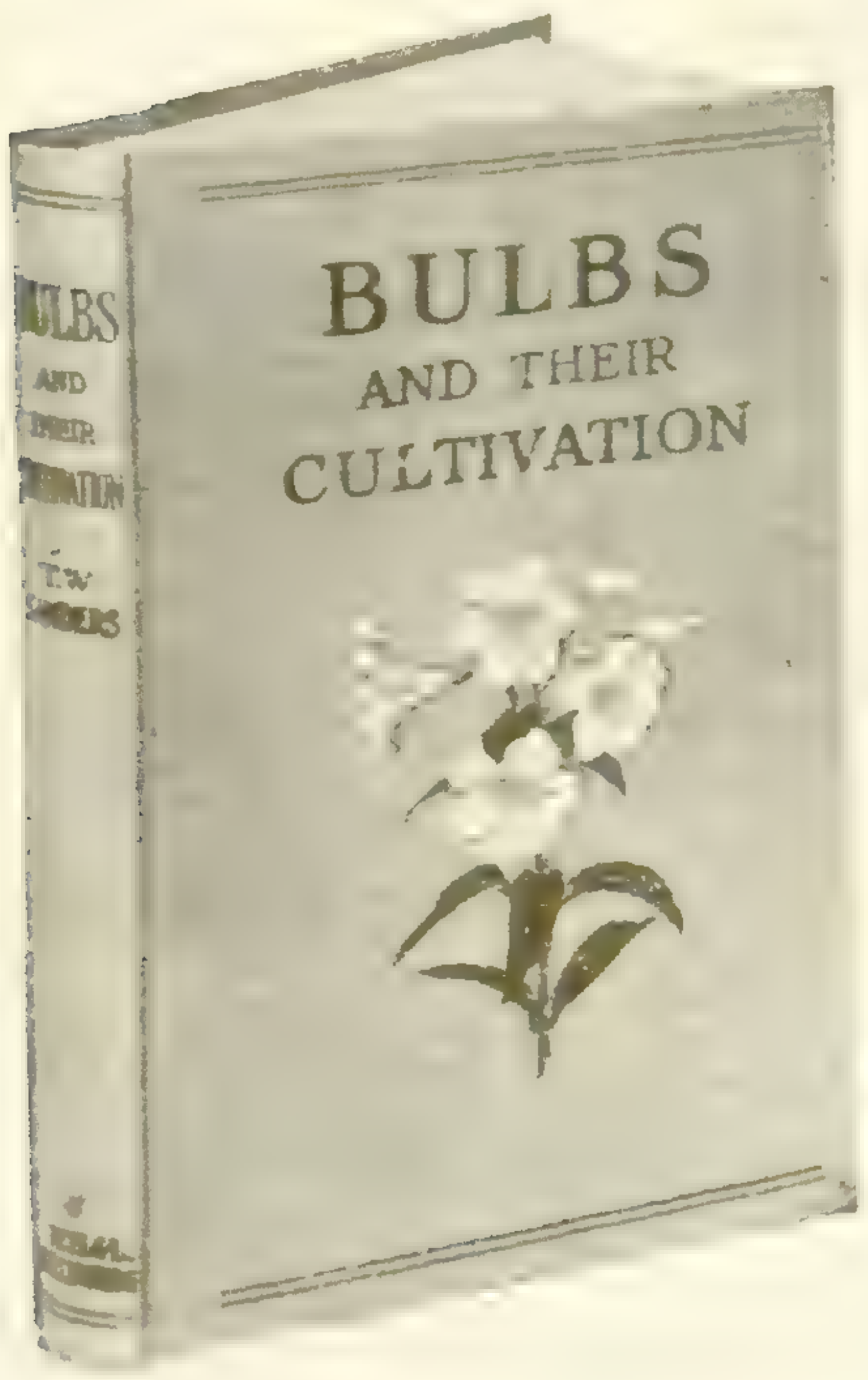

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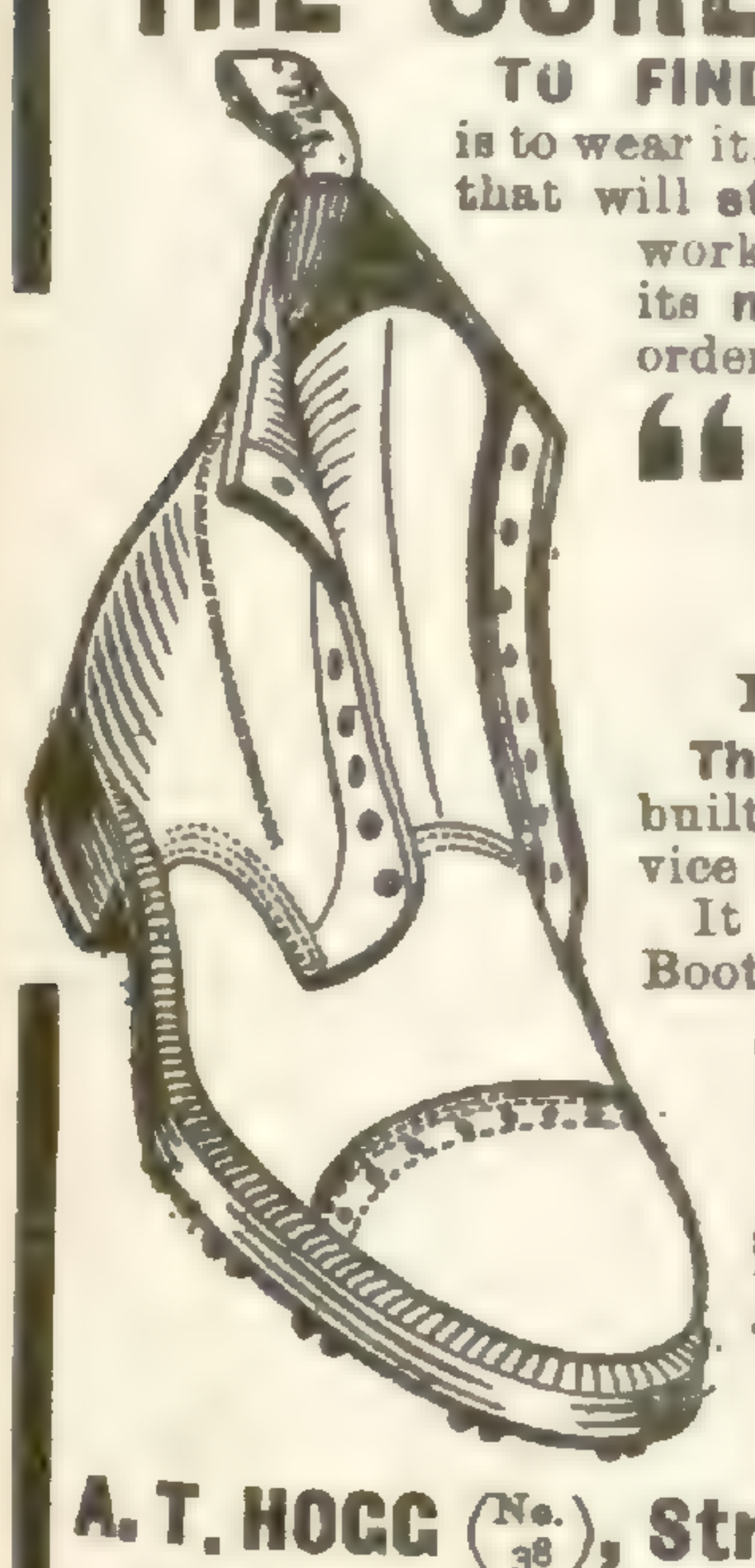

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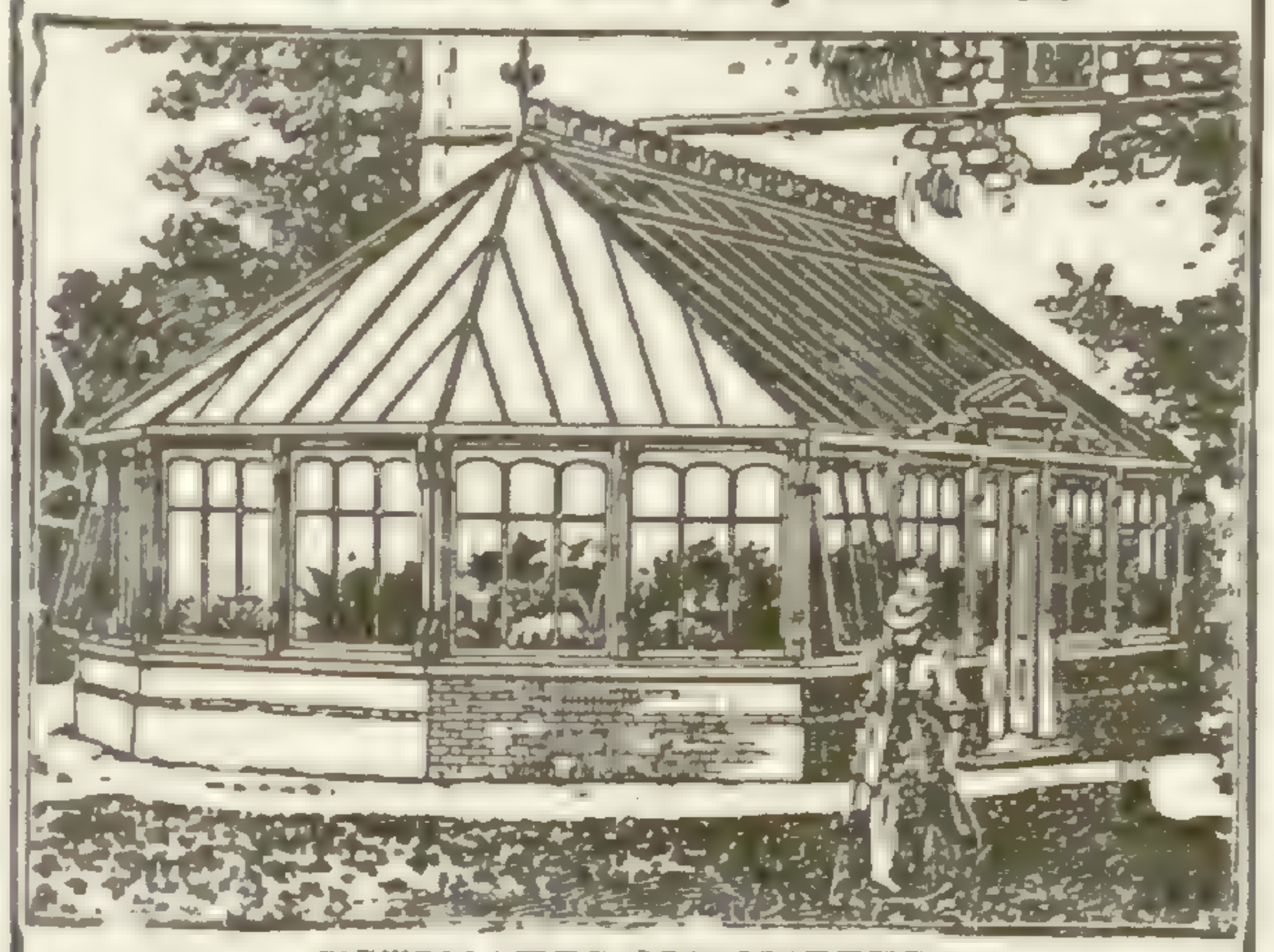

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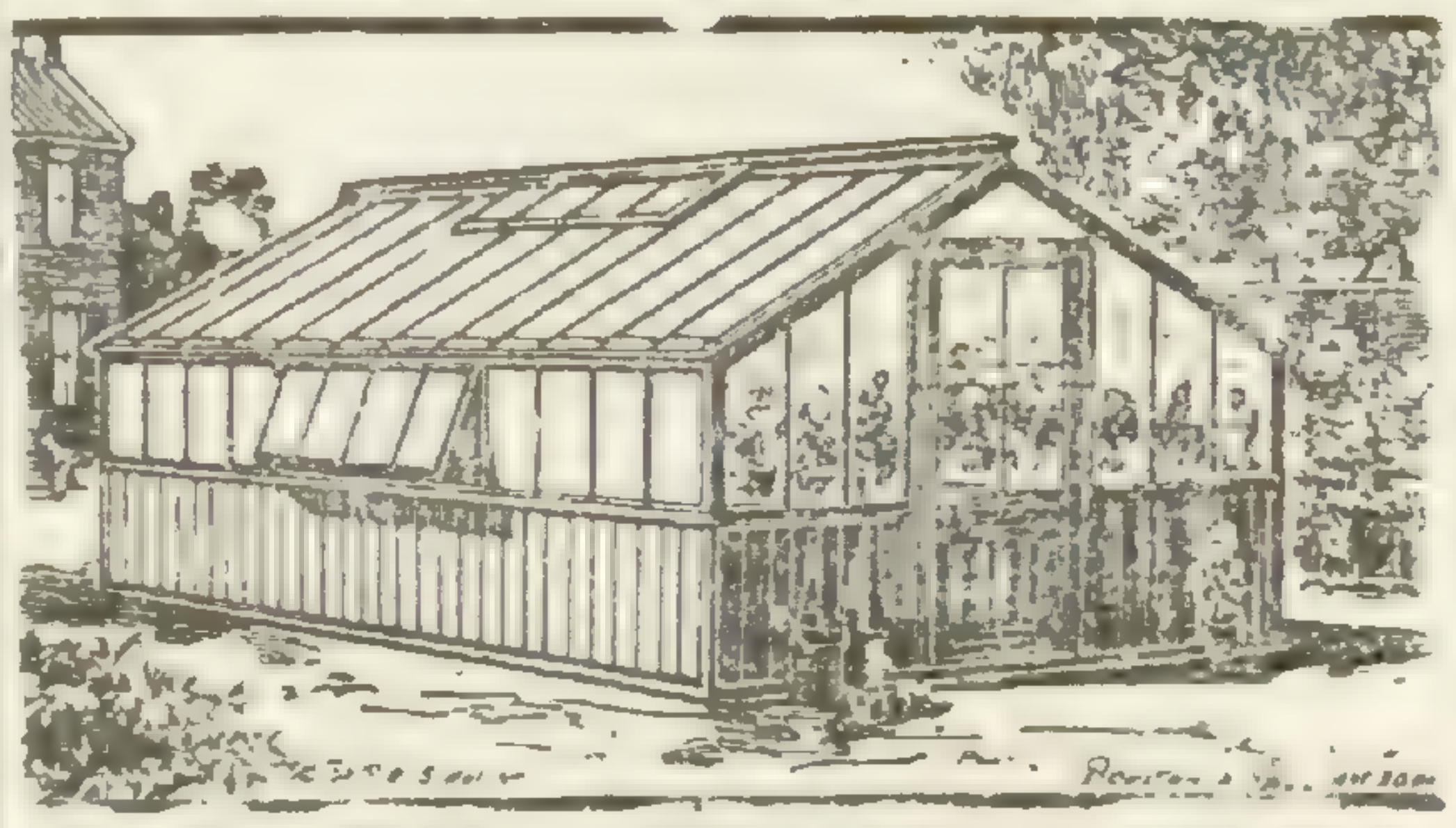

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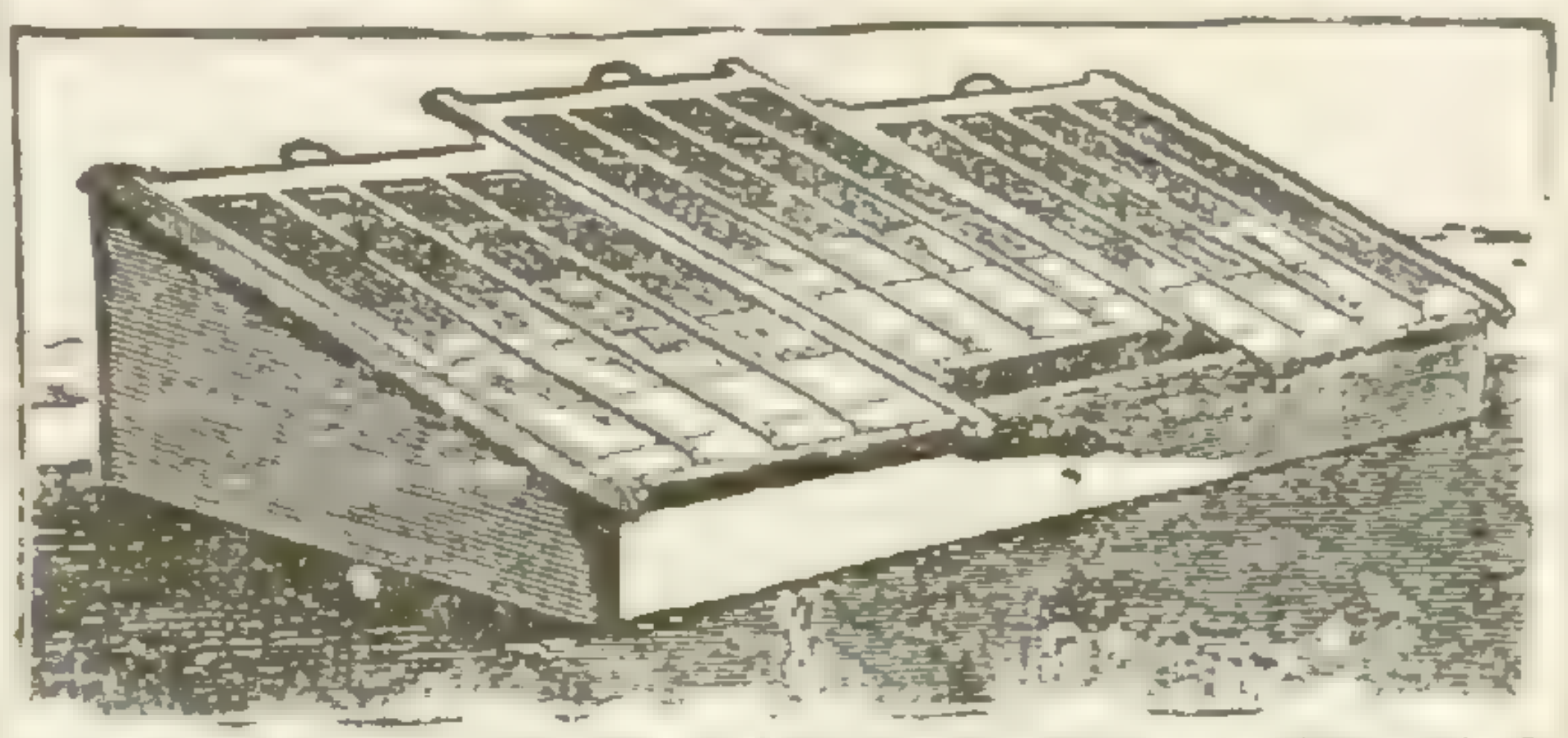

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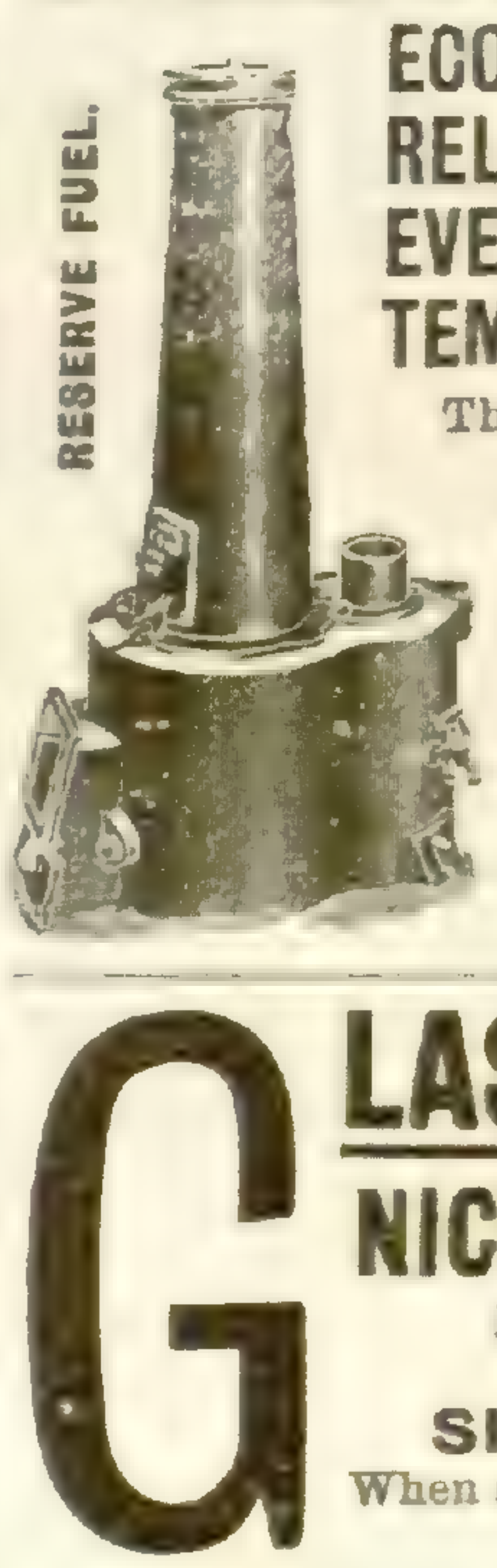

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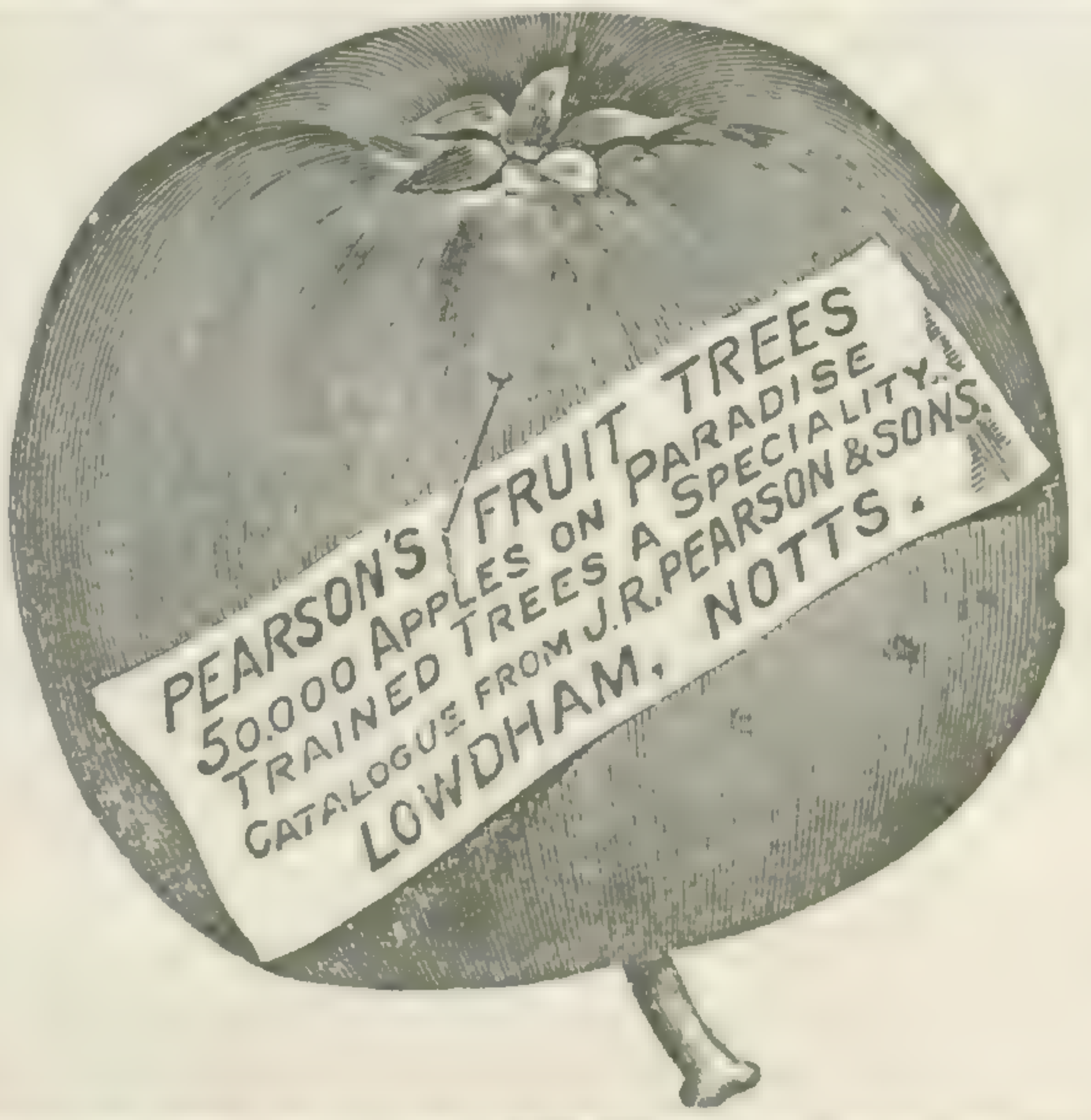

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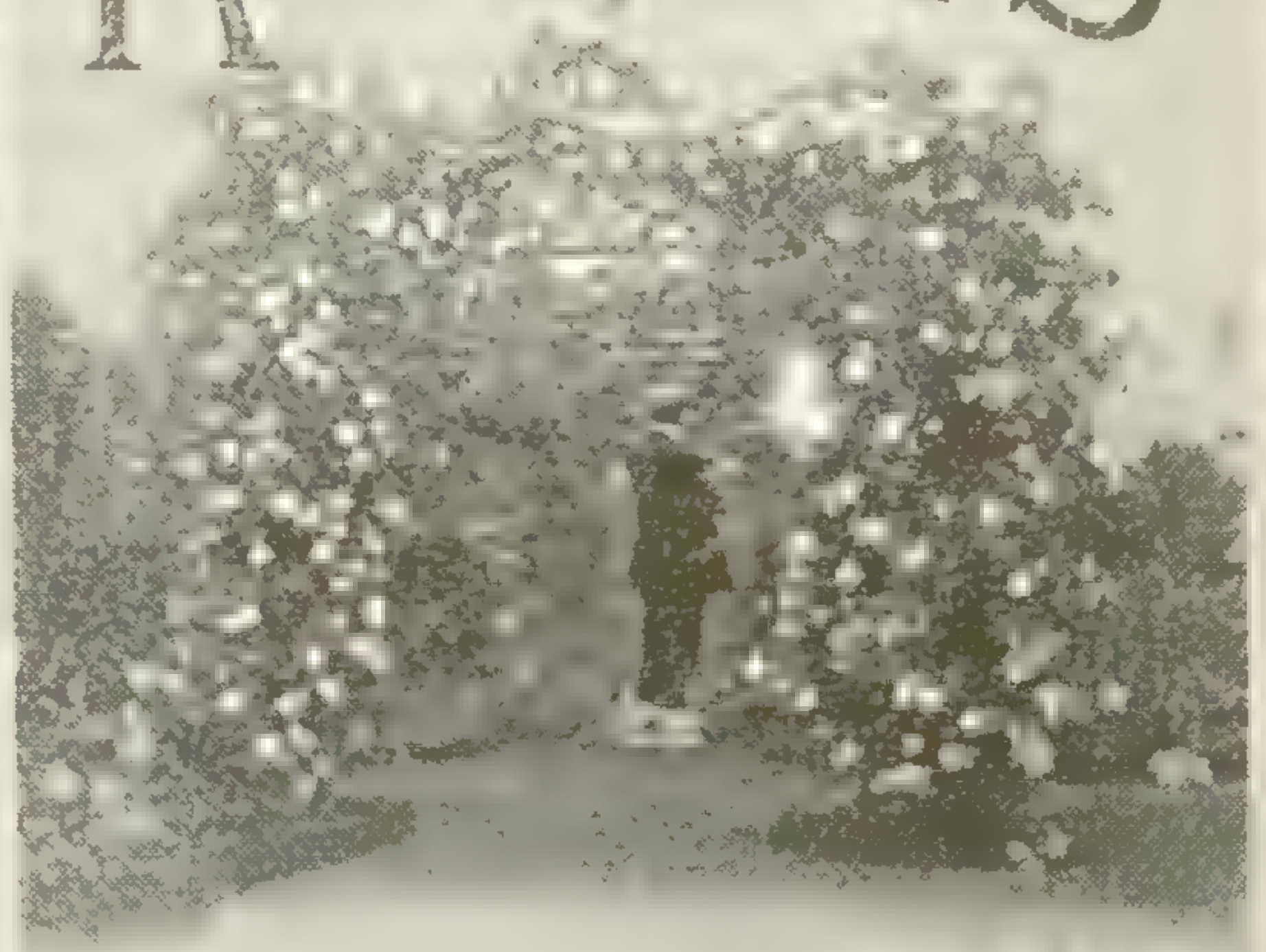

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VOL. LI.—No. 2,875. SATURDAY, DECEMBER 5, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The Past Chrysanthemum Season.

The season of chrysanthemums that has just passed has been a period of quiet demonstrations rather than of sensational surprises, and there has been but little of the enthusiasm that was associated with the competitive gatherings that were held from fifteen to twenty-five years ago. The experiences of societies have during the past season been somewhat variable, as for several years past. Some have suffered from the apathy of the residents in the districts over which their operations extend, while others have received ample support, and been placed in a position to bring the year's work to a close with a satisfactory balance in hand. On the whole, however, the season has been so far successful as to justify a feeling of satisfaction on the part of those specially interested in the cult of the chrysanthemum, and to show that the flower is still held in high estimation by the great flower-loving community. Financially the exhibitions that were the least successful have for the most part been those wanting in the diversity of attractions so essential to the success of horticultural exhibitions that appeal to the general public. One of the lessons that has been taught by the exhibitions held during the past season, as indeed by those held in recent years, is the importance of autumn shows being at once varied, interesting, and attractive. Or to state the case in another way, we have had brought into prominence the fact that a display of chrysanthemums is no longer sufficient to attract the public in sufficient numbers to ensure satisfactory financial results. Visitors now require something more than chrysanthemums to sustain their interest, and they look for other flowers belonging to the season, and also for fruits and vegetables, in which increased interest is now being taken. It has also been made abundantly evident that the single varieties are steadily increasing in popularity, and that when staged in a tasteful manner they invariably command much attention. In mentioning this we would suggest to societies who have as yet given but little encouragement to these elegant and attractive forms, the desirability of their increasing the number of classes for them; and we would strongly urge upon all concerned the importance of their being staged in such manner as will display their distinctive charms to the best advantage. They certainly ought not to be staged on the orthodox boards, as when crowded together on these the visitor cannot obtain otherwise than an imperfect idea of their beauty or of the way in which they can be the most successfully utilised in decorations. The pompons and the anemone pompons also deserve more liberal encouragement than is usually given them, and the prizes offered for these, and for the singles, should more closely approximate in value those given for Japanese blooms than has hitherto been thought necessary. It should be remembered that however attractive in form and colour the Japanese varieties may be, and their attractions are great, visitors tire of the sameness which obtains when they unduly predominate. But when the several sections are adequately represented, the interest of visitors is sustained throughout and they leave the exhibition fully satisfied with what they have seen. Not unnaturally chrysanthemum enthusiasts will regret that their favourite flower is no longer able of itself to attract the public in such large numbers as was the case some years ago; but it must not be forgotten there are other flowers of much value for beautifying the conservatory and the home during the autumn and winter months, and that the cultivators of fruits and vegetables should be encouraged to present the products of their skill to public notice. What appears to us necessary to maintain the interest in the shows held during the chrysanthemum season, is to make them where practicable sufficiently comprehensive to include all the leading classes of fruits, flowers, and vegetables that are then available and suitable for exhibition. Such gatherings are not only more attractive to the general public, but they interest a much larger number of those engaged in the practical work of the garden, and thus have a more potent influence upon the advancement of gardening. Thus far we have referred to societies in general terms; but we would express the pleasure we had in recording the superiority of the November exhibition of the National Chrysanthemum Society as compared with some of its more immediate predecessors. We have derived much gratification from this because the position of the society has for some time past been, and indeed is, such as to occasion considerable anxiety to those who are interested in its welfare. We would fain hope that it might be restored to the strength and vitality it possessed when it occupied a commanding position amongst the organisations specially associated with the chrysanthemum. We are not sanguine as to the realisation of our hopes, as we fear but little can be done in bringing about a material improvement in the affairs of the society without a thorough reorganisation of the executive. The reorganisation should, indeed, be such as would ensure the inclusion in the governing body of a larger number of those who possess sufficient breadth of view to appreciate the needs and the responsibilities of a society that claims to be national.

MR. JAMES O'BRIEN,
Secretary of R.H.S. Orchid Committee.

Mr. James O'Brien, V.M.H., whose portrait we have the pleasure of giving in this issue, has long been known as one of the leading horticulturists in the

United Kingdom. He has an unusually wide knowledge of plants, especially of exotics, and it is safe to say that no one knows orchids so well as he does, whether species, varieties, or hybrids. Mr. O'Brien has been hon. secretary of the Royal Horticultural Society's Orchid Committee ever since that body was instituted. It is probable that Mr. O'Brien has been called upon to give special evidence in connection with horticultural practice and usages, in law cases, more often than any other authority, while as a valuer of, and agent for the sale and purchase of orchids he is much in request. Mr. O'Brien has a very intimate knowledge of that class of plants known collectively as Cape bulbs, and he has done not a little to improve several kinds. He now lives at Harrow-on-the-Hill, but he has in no sense retired from participation in horticultural activities, and though it is many years ago since he was manager at the then famous Pine Apple Nurseries of Messrs. E. G. Henderson and Co., he is as stalwart and active as of yore. He is a staunch supporter of the Gardeners' Royal Benevolent Institution, and he has held the Victoria Medal of Honour in Horticulture ever since that honour was founded.

The New Seedling Polystichum.—When Mr. C. T. Druery placed the new seedling Polystichum angulare pulcherrimum gracillimum Drueryi before the R.H.S. Scientific Committee he stated it was a "seedling" from the variety of P. angulare (or aculeatum?) called pulcherrimum (which was originally found growing wild), named gracillimum. The parent plant had remained sterile for a very long period, but at last two sporangia had been found upon it (without an indusium). The spores from these had been sown, and about 75 per cent. of the resulting plants had come precisely like the parent, and the remainder consisted of about 5 per cent. reversions to the normal type of the species, and 20 per cent. rather varying forms somewhat similar to the plant shown, where the frond was cut up into a number of narrow divisions, and was of an exceedingly graceful form. The variation had shown itself only after some time, the younger leaves being of the normal form.

Scottish State Forest.—According to the report of H.M.'s Commissioners of Woods and Forests for 1907-8, during the past year the purchase was completed of the Inverliever Estate, containing about 12,530 acres lying at an elevation between about 120 and 1,400 feet above sea level on the north-west side of Loch Awe, in the county of Argyll. The land is occupied as sheep farms except about 290 acres, which is under timber. The purchase has been made for the purpose of carrying out a scheme of afforestation in Scotland on scientific and economic lines. The estate has been carefully selected with a view to its suitability for this purpose, and it is proposed gradually to plant it at the rate of 150 acres per annum. Arrangements are being made for a commencement of the work this year. A residential forester has been appointed, who will act under the general supervision of the Commissioners.

Mr. Arthur E. Thatcher, who has acted as foreman in the shrub and hardy plant department at Aldenham House, Elstree, has obtained an appointment in the Arnold Arboretum, Boston, U.S.A. Mr. Thatcher's knowledge of trees, shrubs, and hardy plants generally is very wide, and the further knowledge he is likely to gain should fit him for an important post later on. Previous to his sailing for America Mr. Thatcher was the recipient of many valuable presents, including a handsome one from the Hon. Vicary Gibbs, the Hon. Edith Gibbs, one from the employees at Aldenham House, and from the St. Dunstan's Lodge of Oddfellows, of which he was a very active member. To these presents were added the good wishes of all who have known him at Aldenham for the past twenty-four years.

York Florists' Chrysanthemum Show for 1909.—The committee of the Ancient Society of York Florists, at the meeting held on Tuesday evening last, arranged that the next show be held on November 17, 18, and 19, 1909.

National Rose Society.—The annual meeting of this society will be held at the Westminster Palace Hotel on Thursday next, at 3.30, when, we have reason to believe, the committee will be able to present a highly satisfactory report to the members. The Rev. F. Page-Roberts is nominated for election as president, in succession to Mr. E. B. Lindsell, who retires in accordance with the rules, after two years' service. Owing to the great increase in the work of management consequent on the enormous growth of the society, it is proposed to have financial, publication, and exhibition sub-committees in addition to the General Purposes Committee, and sundry alterations are proposed to admit of this being done. The annual dinner, at which the Rev. F. Page-Roberts will preside, will be held shortly after the close of the annual meeting at the same hotel. Sir Daniel Morris, Sir G. Watt, and Mr. H. J. Veitch will be the guests of the society.

Fruit Conference at Wye.—On the 27th ult. a conference of fruit growers was held at the South-Eastern Agricultural College, Wye. At the morning meeting Mr. E. S. Salmon gave an address on "Spraying and Spraying Machines," and specially referred to the recent discovery in this country of the existence of the American gooseberry mildew. A demonstration of various types of spraying machines was afterwards given in the grounds. At the luncheon Mr. G. L. Courthope, M.P., spoke on the subject of legislation and agriculture and horticulture, and strongly advised united action on the part of those interested, so as to compel Governments to pay attention to their demands. In the afternoon Mr. S. Pickering gave an address on some recent trials of insecticides, showing that the use of petrol was effective in destroying woolly aphis, and also that hot water had been used with good effect. This was followed by an address on fruit growing, etc., in British Columbia, by Mr. Scott, who explained how the Government there safeguarded the interests of the fruit growers and circulated information for their benefit. The colony had no codlin-moth, but its gooseberry culture had been ruined by mildew. He also gave a practical illustration of the methods adopted in grading and packing fruit for the markets.

Economic Mycology.—The Report on Economic Mycology, by Mr. Ernest Salmon, F.L.S., for the year ending July last, contains much to interest cultivators generally, for the diseases that have obtained prominence during the past few years are dealt with at some length, and several diseases that are quite new are described, and suggestions made for their prevention and cure. In the introduction Mr. Salmon mentions several diseases that have been sent to the mycological department of which he is the chief, at Wye College, refers to diseases that are being investigated by himself, and then proceeds to criticise the Board of Agriculture, more particularly with regard to the American gooseberry mildew and the black scab of potatoes, both of which are spreading so rapidly in the United Kingdom as to justify considerable anxiety on the part of cultivators. The volume contains special articles on the American gooseberry mildew, with a special map on the present distribution of the disease in England; the "warty disease," or "black scab," of potatoes, the "apple scab," the "leaf spot" disease of the apple, a "leaf spot" disease of the chrysanthemum, and the "rhizoctonia" disease of seakale, all of which are especially deserving of the attention of cultivators. The report is published by Messrs. Headley Brothers, Ashford and London, and the price is 2s. 6d.

The Gardens Around Bristol are numerous, interesting, and variedly beautiful, and our readers will remember we have published illustrated accounts of one group of these western gardens. We now propose to publish, on Dec. 12 and 19, descriptions of such well-known establishments as Tyntesfield, The Holmes, Clifton Zoological Gardens, Henbury Hill, Henbury Hill House, and Blaise Castle. Numerous illustrations representing beautiful scenes and distinctive features will accompany the text.

Diseases of the Potato formed the subject of an instructive lecture given by Professor M. C. Potter, of the Armstrong College, at a meeting of the Newcastle Farmers' Club. In the course of his lecture Professor Potter said the potato was particularly susceptible to disease, and the resultant loss was very great. Great Britain's yield was estimated at 3,203,000 tons, the value of which would be £13,653,000, representing a net profit to the growers of £8,007,000. But it was computed that the value of the crop was reduced by disease to the extent of at least one-third, and added to that there was the indirect loss caused through the heaviest croppers—the Up-to-Date class—not being so largely grown as they might be because of their liability to disease. There were diseases of the leaf, the stem, and the tuber. After describing the forms of these, he went on to speak of the means of checking them. It was a common practice to leave any hard potatoes on the soil, and any found in the pit were left exposed to the air. This was one of the most prolific means of spreading disease. A practice also to be condemned was that of throwing potatoes on the manure heap. Careful examination should be made of seed potatoes, as there was much danger of the spread of disease by the spores which remained adherent to the tubers, especially to the eyes. When possible, these spores must be killed by a germicide, such as formalin or Bordeaux mixture, before planting.

British Gardeners' Association.—On Thursday, the 10th inst., a public meeting of gardeners will be held at Collier's Restaurant, Commercial Street, Newport, Mon., when an address upon the B.G.A. will be given by Mr. J. Weathers, secretary. Mr. W. W. Pettigrew, superintendent of the Cardiff public parks, will occupy the chair, and the meeting will commence at 7 p.m. At the last meeting of the Executive Council the new members elected brought the total up to 1,365. A resolution was passed unanimously declaring that the association was not a trade union within the meaning of the term, and had no connection with any trade union organisation in the kingdom.

PRIMULA SIEBOLDI.

Although fairly familiar plants in the cool greenhouse and in extensive use as decorative plants in pots, there is a still greater use for the Japanese Primula Sieboldi in the hardy flower garden, and peculiarly favourable sites are often waiting for such a type of plant. The cool and shady border so frequently given to a fern collection, and which must be well tilled or even ferns would not thrive there, offers ideal conditions for Japanese P. Sieboldi, and if such a site is not available, the soil shaded by cerasus or kindred deep-rooting trees may serve.

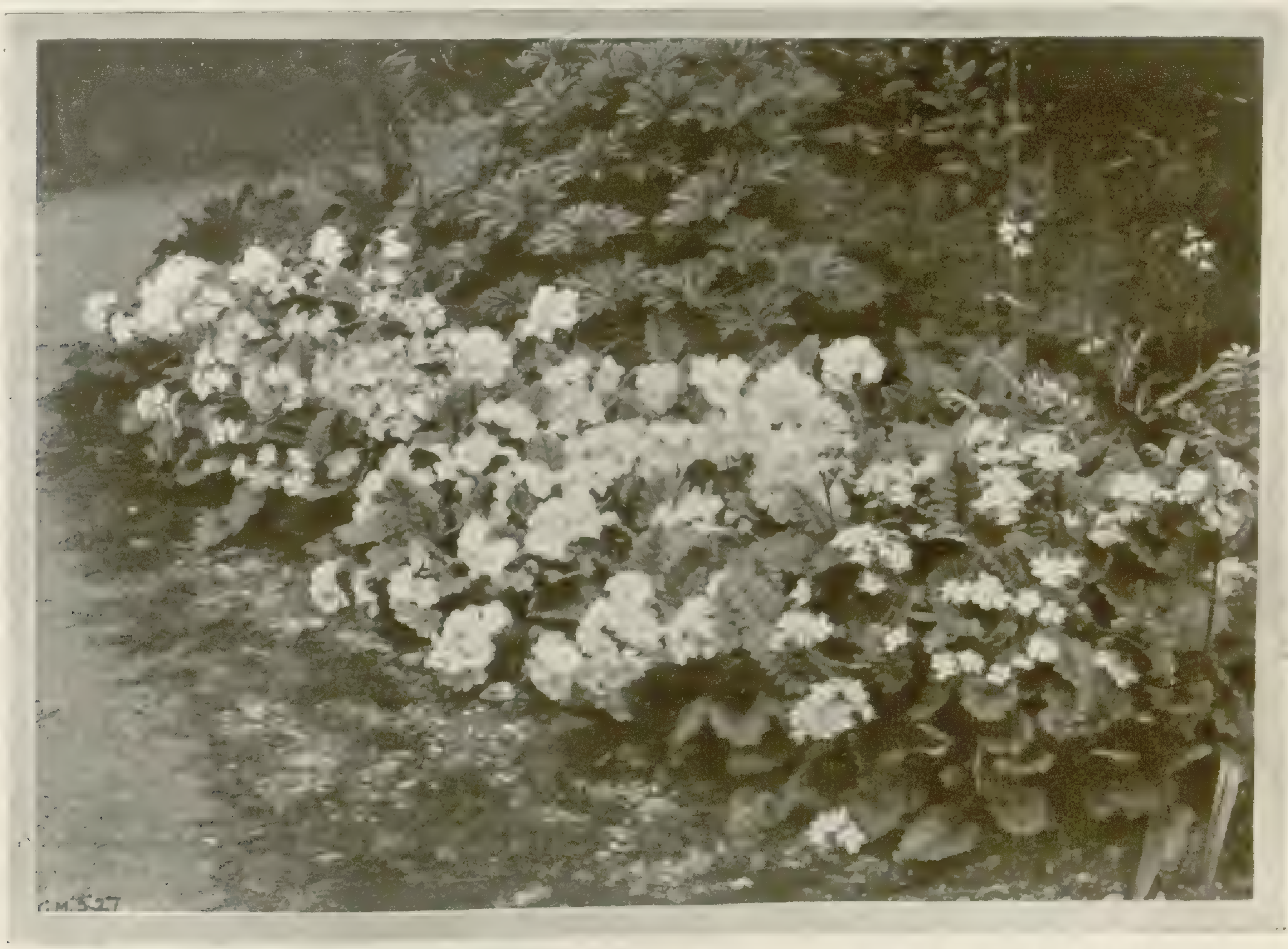
These primroses are less vigorous than P. japonica, and generally they enjoy a lighter soil, preferably well charged with grit and leaf soil, and the site must be tolerably free from slugs. This past winter has put their hardiness severely to the test, and whilst many plants of acknowledged hardiness have suffered, these primroses, being absolutely deciduous have survived, and are now in full display and likely to remain so for a long time. Nothing but a tangle of roots survives the winter, but there is abundant potentiality in this, and a fine leafy cluster a foot through, overtopped by a series of flower trusses of fine proportions, is remarkable when hardier things, such as tulips, show traces of recent wintry weather, and are spoilt for a season.

These primroses associate remarkably well with garden forms of British ferns, if both types of plants are given ample room to develop, and the root conditions of the one are helpful to the other.

There are forty or fifty named varieties in cultivation, and I believe they are mostly distinct, but their nomenclature is so hopelessly mixed that it is doubtful if it is of service—a similar condition prevailing among pæonies, irises, and other Japanese races of garden plants. Suffice it to say there is every tint from white through pink to rose and purple represented, some flowers are smooth-edged, others elegantly fringed, some are self-coloured, others distinctly "eyed" with white, and they are aggregated into umbels that equal the best of the Chinese primroses of the greenhouse in many respects.

I have met with thriving colonies in various parts of Britain, in Scotland, and in Cornwall, but rarely have I seen the plants grouped or disposed in the best possible way. The sight of a colony peeping through several inches of snow recently, and flowering none the worse a week later, is sufficient to satisfy anyone as to hardiness, but one needs to see them grouped in cool shrubbery recesses, in the cooler elevations of the rock garden, and in association, but not direct contact, with water, to realise the important part they can play in furnishing sites generally difficult to plant with satisfactory subjects. What Primula japonica can do for the woodland and wild garden, where water is abundant, Primula Sieboldi can do for the garden proper, and in a similar planting scheme.

G. B. Mallett.



A SUCCESSFUL EXAMPLE OF USING PRIMULA SIEBOLDI IN AN ENFIELD GARDEN.

Fallen Leaves should be collected as soon as possible, especially on grass that is at all weak or thin, or they will further weaken and damage it. If all leaves collected are not required for use, the best, such as beech, oak, and Spanish chestnut, should be retained for that purpose, and others either burned, carted away to some hole or refuse heap, or raked inside the rather close shrubberies, where wind cannot again blow them out. Leaves blown about after they have once fallen give an untidy, uncared for appearance. Sycamore, ash, horse chestnut, and leaves of similar texture are the least desirable for garden purposes.—E. F. Hazelton.

KEEPING QUALITY OF FRUIT

There is a general complaint among those I have met recently of the unsatisfactory way in which apples and pears are keeping this season. It is some years since I have found the fruits so quickly ripen after gathering. It would be interesting to know if other readers are having the same experience, and whether it is due to the weather during the past season, and also if it is only in certain localities this premature ripening and rapid decay have taken place.

I am inclined to think in our case it is due to a second growth of the fruits; second growth of trees or fruits, as a rule, is of little value, as such growth seldom matures. In this locality we suffered very much from drought during the summer, and, unfortunately, our supply of water at the time was deficient; this drought stopped the growth of the fruits, and when the welcome rains came in quantity it caused a second growth, in fact it was surprising how the apples and pears increased in size after the rains, so much so that the size was astonishing when we gathered them.

Very curious is the way in which decay shows itself. Two-thirds of the apples which are taken out of the fruit-room show decay first round the eye of the fruits, and unfortunately Cox's Orange Pippin is one of the most affected in this way. Even with this defect we have some fine large well-coloured fruits of this choice apple, and in quantity this variety has been very good. Generally speaking the colour has not been so good, and while I am digressing somewhat in touching on colour, I may say that whatever reason may be assigned for the intense colouring which apples and pears assume in some soils, moisture undoubtedly plays an important part in producing it.

One apple which has decayed rapidly this season is Norfolk Beauty. I was under the impression, and I think I have also seen it in print, that this was a variety which would keep into the New Year; three weeks after gathering our fruits of this variety were useless; fortunately the quantity we had was small. Warner's King has kept badly, and Blenheim Pippin must also be included amongst the unsatisfactory keepers this season.

Doyenne du Comice, Emile d'Heyst, and Marie Louise pears have kept no better than an August variety, while Charles Ernest in the middle of November is finished, for if not eaten they would have become useless. T. H. Slade.

Poltimore Gardens, Exeter.

Seeds of Sweet Peas are being eagerly inquired for, and as the stock of the best varieties is limited no time should be lost in placing orders. It is always annoying to receive varieties substituted for those ordered, but the good things among sweet peas invariably go to the earliest applicants. —Thomas Smith, Walmsgate Gardens.

CHRYSANTHEMUM ARCTURUS

A crimson-scarlet single variety, exhibited by Mr. Norman Davis, Framfield, Sussex.

NOTES ON SOME NEW ROSES
No. I.

Not for many years has the rose season promised so well as that of 1908, nevertheless, so far as is relative to the exhibition period, the fulfilment fell considerably below all expectation. All seemed at one time to be going well; a mild winter, a genial spring, not even a cold snap, the usual snap, at the end of May; everything looked most promising. It was perceived in early pruning time that the wood of 1906 and earlier, especially on old unpruned plants, such as the ramblers, and the strong-growing hybrid teas, Caroline Testout, Florence Pemberton, and Bessie Brown —which are generally found to give finer flowers from plants left almost unpruned—was severely crippled. But what of that when the young root shoots of 1907 were sound? And then with respect to the maidens. They broke well, very well, and developed into strong plants; they grew and grew, and carried plenty of foliage, but without correspondence in size and substance of flowers. At first one was led to imagine that the cause lay at the door of the cultivator; an overdose of manure or something, but when other growers were seen to be experiencing the same difficulty, one felt that it was due to climatic influences.

Rose growers congratulated themselves in June that there was comparatively no aphis, no mildew, some perhaps not realising that that which held these enemies of the rose in check held in check the flowers also. Aphides and mildew flourish in a humid atmosphere; so does the rose. These parasites dislike a harsh, dry air; so does the rose. Although there were slight frosts in June, it was, in the opinion of the writer, not so much the frost but the prevalence of a bright, but harsh atmosphere, plenty of sunshine, and plenty of north-easterly wind that did the mischief; roughness in outline, lack of substance, and shortness of petal were all due to climatic influence.

But if the early season was disappointing we were fully rewarded by the glorious blooms that appeared towards the end of July and beginning of August. And see the roses we have had at the end of September and right through October, and even well into November. Gustave Grunerwald, Rosette de la Legion d'Honneur, and Trier were in good condition, and one has hopes that, as last year, vases of Frau Karl Druschki will adorn the altar on Christmas Day.

And, turning our attention to roses of recent introduction, is one correct in affirming that never before have there been so many new roses distributed as in the year 1908? When one attempts to enumerate them, one is absolutely bewildered with the number. Take up the trade catalogues of British growers and note the glowing description of most of these many novelties; all have their good points, freedom of growth, and blooming qualities are their principle characteristics. But is there not a tendency to bring out novelties that, however excellent they may be for forcing purposes, are lacking in form and substance? A distinction, clear and decisive, should be drawn between roses whose beauty lies in the individual flower, a specimen rose, and those that are primarily useful for giving a blaze of colour on the beds regardless of form. Each has its proper place in the rose family, but a thin-petalled, undersized rose, unless it is a variety that gives masses of flowers, cannot be regarded as good for specimen blooms.

Let raisers ever bear in mind the definition of a good rose as laid down by the National Rose Society: "The highest type of bloom is one which has form, size, brightness, substance, and good foliage." It is evident this does not fit roses of a decorative character, and yet there have been several roses sent out in recent years as so-called exhibition roses which are lacking in form, size, and substance. Indeed, the majority of the new roses of 1908, especially the Continental varieties, come under this category.

Joseph H. Pemberton.

Havering-atte-Bower.

Epimediums are generally regarded from the standpoint of utility as if leaves were the only production of these inestimable hardy plants, but the flowers are as quaint and beautiful as those of any exotic orchid. Try them in spring in light glasses for the table, and to many their exquisite beauty will come as a revelation, and be much appreciated by those who like a change of flowers.—Thomas Smith, Walmsgate Gardens.

DEEP VINE BORDERS.

From experience, and a close observance of the results obtained by others, I am forced to the conclusion that many vine borders are too deeply made to give the best results. Vines that do not make vigorous growth, especially when young, but produce small, puny leaves, display a wrongdoing somewhere, because it is not natural for vines of the Muscat of Alexandria type, or a Black Hamburgh, for example, to do other than romp away under ordinarily agreeable circumstances. A close inspection too often reveals the cause of trouble to lie in the composition of the rooting medium, which should be rectified with as little delay as possible.

The loss of sunheat to the roots in early spring, consequent on the border being either too deep or too low, is a cause of shanking in many instances, and in others is the reason why weakly growth is the rule. A border, whether inside the vinery or outside, should be raised well above the level of the surrounding ground to admit of easy drainage, and of the roots obtaining the benefit of solar heat. A depth of two feet of soil is ample for any vine border.

A good time to set about reorganising any defective border is the autumn, while the vines are still clothed with foliage, as they then quickly get over the inevitable check that lifting gives, no matter how carefully the work is performed.

Years ago it was considered to be the correct thing to form an outside as well as an inside border, so that the roots could ramble away at will. Experience has taught that much greater success is obtained from vines where the roots are entirely confined to an inside border, where they are thoroughly under control, and receive whatever stimulative food is given them. The roots, too, is an inside border are maintained at a more regular degree of warmth, and are not subject to fluctuations, as in the case of an outside border, especially where the border is not limited by a retaining wall. Under the latter conditions the roots ramble away for a surprising distance, and instead of being numerous, and composed of fibre, they are too often fibreless. This is not what is needed to give the best results; we want the greatest number of feeding fibres, not a limited number of those that are fibreless.

Mr. Shingler, of Melton Constable, has all his vine borders inside, and restricted, so that he has them well under control.

When making a new border, or renovating an old one, it is better to make it piecemeal, adding a couple of feet each year until the whole space is occupied. When a border is made up its whole width at first the fibrous matter contained in the turf used decays before the vines have had the opportunity of receiving any benefit from its use, whereas by adding to its width annually each part of it is utilised properly by the roots for the benefit of the vines. For the first year's growth a width of three feet will be ample. It is a good plan to concrete the bottom of the border where there is any risk of the roots penetrating into the subsoil below, as the concrete effectually prevents deep rooting. The concrete should be so arranged that it has a natural fall towards a drain, to carry off surplus water, and thus ensure against stagnation of the roots.

The depth of the border should be so arranged that one foot of rubble or stones can be employed on the top of the concrete base, with two feet depth of soil, and if one foot of the latter is above the surface of the surrounding level so much the better, if the natural soil be of a heavy description, for this is always much colder during the winter and spring than where the soil is inclined to be of a sandy nature.

When making a new border care should be taken to preserve the drainage intact, as fine soil washed down quickly blocks the water passage.

E. Molyneux.

CHRYSANTHEMUM FRANK PAYNE.
Colour soft blush. F.C.C., N.C.S., November 16. Messrs. W. Wells and Co., Merstham.

PLANTING.

Although much useful advice has been given to planters from time to time in the Gardeners' Magazine and other journals, there is still a large amount of really bad work done in various parts of the country in connection with this branch of gardening and forestry. During the past summer several examples came under my notice of plants being killed by an application of strong farmyard manure to their roots, instead of covering the roots with soil, and using the manure as a mulch. By adopting the latter method the strong caustic, acid, or alkaline properties of the manure would have become neutralised, or weakened, before reaching the roots. Several instances of planting too deeply have also come under my notice. In some cases the stems of trees have been buried eighteen inches. The trees, of course, were dead. Another frequent malpractice I have met with is that of making the holes for the roots of the plants too small, and crowding the roots into them. With the knowledge that these evil methods are still in practice I should like to point out to those readers who intend undertaking work of this kind a better method, and a sure road to success.

Soil.

The first thing in connection with planting is to make the soil fit, by seeing that it contains an ample supply of the necessary constituents of plant food, and is also in a condition to yield them freely. By this it will be understood provision should be made for the escape of water from the rather heavy formations to prevent acidity, to foster oxidation, and to encourage a sweetness in the mass. There are few soils sufficiently rich in phosphates as to be able to support a healthy, vigorous growth in trees for any length of time, so that when preparations are being made for planting the opportunity to add a liberal quantity of finely ground bones, or other fairly readily soluble phosphatic manure, should not be lost. Many soils are rich in either potash or lime, or both, and it will be all the better for the well-being of the trees or shrubs if any constituent that is lacking be made good before the planting.

When a fruit tree is removed, and another is to be planted in its place, a different kind should be selected. Otherwise it will be advisable to remove a portion of the soil, and make good with fresh fibrous loam to which has been added the ingredients mentioned. Phosphates should be mixed with the soil, and potash salts and lime applied to the surface. When the planting operation is completed 4oz. of lime and 1½oz. of sulphate of potash to the square yard is an ample dressing. The soil should not be cultivated to a greater depth than 2ft. In fact, 18in., in most cases, will be preferable, as all the most valuable roots should be retained as near the surface as possible. In cultivating it the present surface soil should always be retained on the top.

Planting.

If the trees or shrubs require support a stake should be driven into the centre of the sites when they have been prepared. Broken or mutilated roots should be cut with a sharp knife from the underside of the root upwards. The roots should now be dipped in water, then evenly spread out in this position at a depth of from 2½ft. to 3ft. below the surface, and the more finely reduced soil worked in amongst them. The soil should be made fairly firm as the work proceeds, and the stems made fast to the stakes. For standard trees three ties are necessary to prevent the stems rubbing the stakes. If lime and potash are to be used they should then be applied to the surface, and a mulch of farmyard manure applied. Although it is not a general practice to stake small shrubs, yet I have sometimes found it advisable. Especially is this desirable when the position is exposed, or wind-swept; and a certain amount of protection, in some instances, almost imperative till the plants get a hold of the soil.

In preparing sites for trees and shrubs on land which has not been tilled for a considerable period, the sod should be put from nine to twelve inches below the surface. In this position it serves the purpose of manure, and does not draw the roots too far down. Whenever the plants are fit for moving in autumn it is undoubtedly the best time to plant, but they can be planted from the fall of the leaf to the bursting of the bud. When light sandy soils have to be dealt with every effort should be made to have them planted as early in autumn as possible.

In brief, the soil should be well prepared, and not worked too deeply, the most healthy and best-rooted plants should be selected, and their roots moistened before they are planted; no manure should come in immediate contact with the roots, nor should the stems of either trees or shrubs be buried, if healthy plants and vigorous growth is to follow planting.

Pedestrian.

PRIMULA MALACOIDES.
Flowers soft rosy-lilac. A.M., R.H.S., November 24. Messrs. Bees, Lim., Liverpool.

Hedges of Roses.—Sweet Briar was the typical rose of bygone days wherewith to form a hedge. The fragrance emitted from the leaves is its greatest merit, and we are still old-fashioned enough to enjoy this. At the same time, hedges of Penzance Briars, Conrad F. Meyer, Blanc Double de Coubert, or Cramoisie Superieure are not uncommon, and these are beautiful and welcome additions to any garden, requiring only the minimum of labour and material to retain them in vigour from year to year.—Thomas Smith, Walmsgate Gardens.

Broad Beans.—To obtain a few dishes of broad beans early in the season, make a sowing at once, choosing a south border for the crop. Sow the seeds in the usual way, in drills about two feet apart, and when they have germinated, keep a sharp look out for slugs, which do much damage where no check is imposed upon them. If a sowing is made in a couple of boxes at the same time, and placed in an unheated frame, nice plants will be obtained for planting outside in February. They will certainly give an early supply long in advance of those which are sown entirely outside. The best variety for sowing at this period is Improved Windsor.—T. W. Birkinshaw.

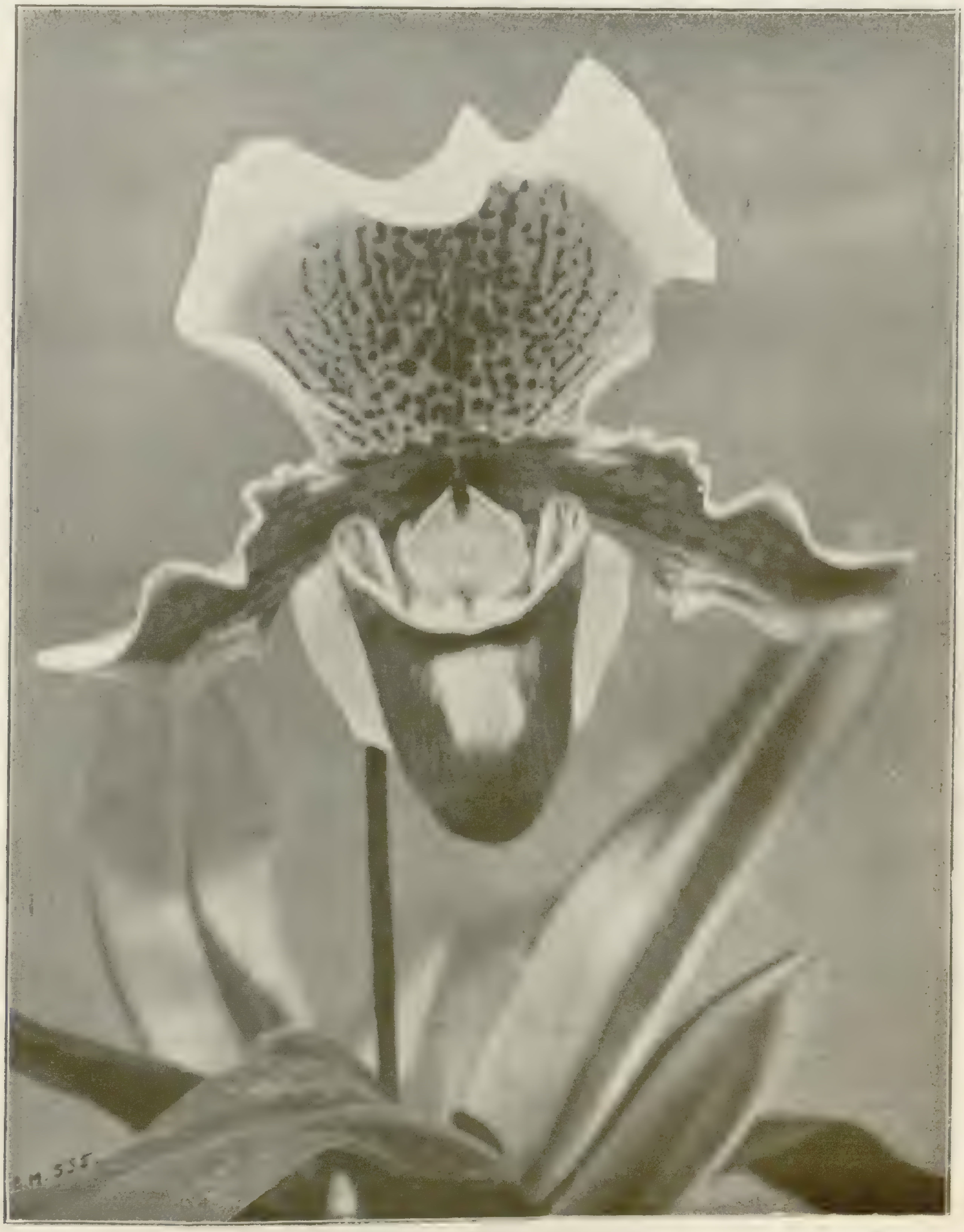
FRENCH GARDENING.

The much-advertised intensive system of vegetable culture, as practised by the French market gardeners, seems as though it will eventually have a far-reaching effect upon our English market growers.

There is nothing new in the system, for the Parisians have practised it for many years, and it has been referred to in past years by our own horticultural Press. Whether the main ideas were thought to be unsuitable for English soils and English climate I cannot say, but the fact remains that through the efforts of one or two pioneers, and the alluring description attending these efforts from the daily Press, the question of "intensive culture" on the approved French lines has become a very live one. In various places, as widely apart as Essex, Berkshire, Evesham, etc., small holdings have been opened up and started upon these methods.

The profits accruing to these ventures is said to be large, but before some of the golden accounts are taken and digested one would like to see a properly balanced statement, showing to the full the working expenses, including the wages bill and the many other incidental expenses, and then contrasting the outgoing expenses with the income derived from the sales of produce. I know full well that the French growers have made a good thing out of market gardening in the past. It has provided a good living for them, but it has also provided them with plenty of hard work, early and late. It is usual with them for both the proprietor and his wife to work, and to work hard, and in addition to this you have the fact that they are able to get labour cheaper than it would be possible for English growers to do, although with some of our own folks the rate of wages is none too high, when one considers the cost of rent and living in the vicinity of our large towns. The whole system of the French market growers was created probably by the sheer force of circumstances—by the necessity of growing vegetables upon small areas to meet the demands of a large population—hence the French gardener, with his one or two acres of land, was compelled to so utilise his space, that four crops grew where there was but one in the old way. To accomplish this the grower was compelled to resort to cloches, frames, and stable manure, and with the inherent industry and carefulness which is part and parcel of the Frenchman's character, the system has grown to great dimensions.

That there is a large opening for English growers in supplying early vegetables for the big markets no one can deny, and the pioneers will undoubtedly reap a very good harvest as a result of their foresight. But let not the beginner think that the method is all a "bed of roses"; on the contrary, one will find that as time goes on,



CYPRIPEDIUM DREADNOUGHT.

Colour, white, greenish yellow, and brown. F.C.C., R.H.S., November 24. Messrs. Sander and Sons, St. Albans.

and competition becomes keen, the present good prices will collapse, and the grower will have to be content with a much smaller margin of profit. Again, too, the price of manure will be forced above its present level, and the grower will find it very necessary that the long hours of the French growers must be his also. The cost of making an effective start may well cause many to hesitate ere they embark upon this sphere of garden work. The cost of cloches and frames necessary for starting on two acres of land was recently given by a primer on the subject as £140, but there are so many other incidental expenses that one might well suppose that this amount would be brought up to £200 without in any way acting recklessly in the matter of expenditure. Against this statement one can place the cost of thoroughly equipping a garden near Paris a few years back, which was about the same as the English garden in area. The cost of creating this garden, including the supply of water, pumps, hose, etc. (a very necessary item), implements, horse and market cart, storage sheds, etc., and the complement of lights, frames, and cloches, was given at £1,100! a very different figure indeed. As for the working expenses, it was found that they reached the sum of £550 per annum, clearly showing the need for good crops and good market prices for the grower to show really good profits from his two acres.

The great amount of labour needed for the culture, packing, and marketing of crops on the French system ought to give a fillip to the labour market, though one will readily perceive that the cost of the labour, together with the supply of water, manure, repairs, etc., must certainly represent a fairly heavy outlay even if one works on strictly economical lines.

Another point of extreme importance is the land itself. The questions as to the nature of the soil, its position, and the distance from market are of vital importance to the grower. A wet, heavy soil, or land that is not sheltered from cold winds, is of little value for early crops, in comparison to a naturally warm soil that occupies a sheltered position. Therefore the choice of land must be a first consideration.

The question of the provision of lights, frames, and bell glasses, or "cloches," will prove a subject for contract, and one will be able to secure quotations at lowest terms from firms interesting themselves in these specialities. One thing we may expect to see in the near future is a very keen competition for the supply of these articles, which will undoubtedly bring prices lower than they are at present. One may also expect that the principal seedsmen will give especial prominence to varieties of vegetables and salading suited for the purpose, and, naturally, improvements would follow which will supersede existing varieties.

The main crops grown under the French system are lettuces (cos and cabbage), cauliflowers, carrots, cucumbers, radishes, melons, turnips, and celery. Other crops which are utilised to keep the ground in constant use are kidney beans, tomatoes, endive, mustard and cress, asparagus, strawberries, mint, etc.

The question of manure must be settled by a contract. Either arrange with someone to "deliver in" given quantities at as low a rate as possible, or else, and the cheaper way, fetch it with one's own conveyance from large stables.

T. S. Hayward.

HARDY FLOWERS are always popular, as they make the garden bright and attractive, and require but little attention. All the information required for their successful culture is given in Easily Grown Hardy Perennials, by G. H. Vos. Price 5s. net, by post in box, 5s. 6d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NEW PLANTS, ETC.

VANDA CÆRULEA R. CHOLLET.

This is a superbly beautiful variety of the old V. Cærulea, and one in which fine form and size are accompanied by the most brilliant blue colouring, the lip and principal veins being of a deeper shade of violet blue than the rest of the flower. The varietal name is given in compliment to Mons. Chollet, Messrs. Sander and Sons' grower at Bruges. F.C.C., R.H.S., November 24. Messrs. Sander and Sons, St. Albans.

CYPRIPEDIUM DREADNOUGHT.

A particularly striking hybrid derived from C. Troilus and C. insigne Harefield Hall. It is of unusual size. The immense dorsal sepal has a width of over three inches, is pure white on the upper half, and soft greenish yellow over the basal half, and light purple spottings running up into the white area. The wavy petals are yellowish, spotted with brown towards their base, and tinted with purple towards the apex. The lip is brown and the staminode yellow. It is a noble cypripedium. F.C.C., R.H.S., November 24. Messrs. Sander and Sons, St. Albans.

CYPRIPEDIUM SAN-ACTÆUS ETONIENSE.

A very attractive new cypripedium, produced by crossing C. actæus Langleyense with C. insigne Harefield Hall. The big dorsal sepal is pure white with a bright greenish yellow base, and with soft rosy purple spots running from base almost to apex. The petals are greenish yellow shaded with brown, and the shapely lip is yellow with a brown shade on the front. A.M., R.H.S., November 24. Messrs. Jas. Veitch and Sons, Chelsea.

ODONTOGLOSSUM GROGANIÆ.

This is a strong-growing hybrid from O. Edwardi and O. Uro-Skinneri. The specimen shown carried a very long branching spike, and the ruddy purple flowers, together with the style of the inflorescence, showed most markedly the influence of O. Edwardi. This was incorrectly ascribed to Messrs. Armstrong and Brown in our issue of November 28. A.M., R.H.S., November 24. Mr. J. H. Grogan, Slaney Park, Baltinglass, Co. Wicklow.

CYPRIPEDIUM ARETHUSA.

Another useful addition, and one that was raised by crossing C. Milo with C. Sallieri aureum. The finely formed flower has a white dorsal sepal save for its green-yellow base, and on this colouring the bright purple spots stand out conspicuously. The other parts of the flower are a pleasing shade of greenish yellow. A.M., R.H.S., November 24. Mr. H. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester.

POLYSTICHUM ACULEATUM GRACILLIMUM DRUERYI.

An extremely beautiful and graceful variety, wherein the pinnæ have become attenuated and extended, some of them being two inches long. It is one of the most beautiful of hardy ferns, and marks distinct progress in connection with P. aculeatum. The plant was raised from spores obtained from P. a. pulcherrimum, by Mr. Green, of Acton, which is of interest because the pulcherrimum form has hitherto been regarded as sterile. F.C.C., R.H.S., November 24. Mr. C. T. Druery, Shaa Road, Acton.

PRIMULA MALACOIDES.

This is a charming and elegant species, very like P. Forbesi in general appearance, but with slightly larger flowers, stronger growth, and distinct leafage. One great difference is that, whereas P. Forbesi cannot be described as truly hardy, save in very sheltered places, P. malacoides is quite hardy. As a pot plant, P. malacoides promises to be a great success, and there is no doubt it will be in great demand for conservatory and table decoration in the course of two or three years. The flowers are rose-pink with a yellow eye, and freely borne on verticillate spikes. This newcomer hails from Yunnan, and was found at an elevation of 9,000ft. A.M., R.H.S., November 24. Messrs. Bees, Lim., Wapping, Liverpool.

CHRYSANTHEMUMS.

Merstham Jewel.—This very fine new single variety, with large bronzy-red flowers, has already been described in these columns. A.M., R.H.S., November 24. Messrs. W. Wells and Co., Merstham.

Caledonia.—An unusually large single variety, measuring well over six inches across. It is of good form, is rosy-pink in colour, and has a white ring round the disc. A.M., R.H.S., November 24. Messrs. G. Williams and Sons, Manor House Nursery, Cardiff.

Frank Payne.—We are now able to figure the beautiful blush Japanese variety that was described on p. 890. It gained a F.C.C., N.C.S., on November 16. Messrs. W. Wells and Co.

Arcturus.—This is a charming new single variety with bright crimson scarlet flowers, that are paler in colour near the disc. It is a flower of considerable beauty of form and colour, and it carries well. It was shown well by Mr. Norman Davis at the recent R.H.S. meeting, but was not placed before the Floral Committee.

PEAR DANA'S HOVEY.

A useful mid-winter pear, somewhat small, of good flavour. It has a russet skin. Dana's Hovey is by no means new, as it was raised in 1854 by Mr. Francis Dana, of Roxbury, Massachusetts, U.S.A. Mr. C. M. Hovey, whose name the pear keeps in memory, was a Boston nurseryman. A.M., R.H.S., November 24. Messrs. Jas. Veitch and Sons, Chelsea.

WHITE ROSES.

Surely the rose-growing friends of the writer of the article on "White Roses," that appeared in the issue of November 21 have overlooked that splendid white hybrid tea rose, Lady Quartus Ewart. In my opinion this is a variety far in advance of Madame (not Monsieur) Joseph Combet, and is undoubtedly the best white hybrid tea in commerce. For bedding and garden purposes generally it would be difficult to find a more satisfactory rose. It blooms very freely throughout the rose season, and as I write (November 21) my plants have large trusses of buds, which, with one or two more mild days, such as we are now experiencing, will yet give me a decent bloom or two.

Now Madame Joseph Combet is neither such a good white (creamy-white being its correct description) as the variety I am describing, and has the drawback of being quite late in opening its first flowers, it being about the most backward of all the H.T.'s in this respect; neither can the individual blooms compare in beauty of shape with those of Lady Quartus Ewart, being, I think, too full and without the depth of petal that the latter variety possesses. True, the blooms of Lady Q. Ewart are not very large, but they open well, and with the pointed centre and reflexed petals make an altogether charming and elegant flower, which sometimes is quite good enough for the exhibition box.

The variety is of vigorous growth, and its unusually deep green, glossy foliage forms a splendid contrast to the pure white flowers, which are borne in such profusion and over such a long period. As a white rose for garden effect, or for cutting for house decoration, Lady Quartus Ewart may be safely recommended, and for these purposes it will, in the opinion of many, be at least equal to that other splendid white rose, Frau Karl Druschki.

Edward A. Jefferies.

Cirencester.

MOTTOES FOR GARDEN USE.

A garden of mottoes is one that charms by its novelty and the poetic spirit that it breathes, but its success must be mainly due, of course, to the flowers and foliage therein cultivated and the excellence of the landscape effect produced; no pretty fancies, whether of brick, wood, wire, or word can atone for ill-kept, poorly-filled, or inartistic pleasure-grounds. It is certainly not desirable that mottoes should become very general in gardens, yet the judicious employment of a few add interest to various nooks, and the one garden of mottoes that I have seen had been carried out with such skill that the feature was absolutely unobtrusive.

The sun-dial, that usual preacher of a moral, had this couplet cut in its stone plinth:

> "Time is flying, time is fleet:
> Use it well, it proveth sweet."

while around the clock ran the counsel:

> "Be true as me, and you need fear no ill."

The rose garden, just beyond, was entered at various points by seven paths, each spanned by a quaintly carved oak arch of elaborate design, upon the summit of which, too high for the most rampant climber to cover, a motto was to be read against the sky, the letters being cut out clearly. These seven mottoes were the following:

> "Flores curat Deus—God cares for the flowers."
> "Aspera me juvant—Sharp prickles help me."
> "Firmum in vitâ nihil—Nothing in life is permanent."
> "Opes solis et umbræ—By the power of the sun and shadow."
> "Post nubila sol—After clouds, sunshine."
> "Sapienter uti bonis—Wisely to enjoy blessings."
> "Soli Deo honor et gloria—Honour and glory to God alone."

In the herbaceous border some mottoes appeared for those who liked to search for them, but the passer-by could ignore them, so unobtrusively were they written on the tops of the shield-shaped zinc labels that bore the Latin names of the plants. Against a group of purple honesty might be read:

> "My money maketh no miser, and 'tis for all,"

the helianthuses boasted proudly:

> "Solen ferre possum," or "I can endure the sun,"

the day lily suggested:

> "'Tis better to be brief than tedious,"

while a bush of Scotch roses offered the true reflection:

> "Roses have thorns and silver fountains mud."

The secret of the success of this garden was that the mottoes had all to be looked for; inscriptions in gay colours or bold lettering were nowhere visible, the mysterious having, indeed, been studied to such a degree that it required patience, or foreknowledge, to read in the iron scrolls of the gates:

> "Enter welcomed, and unwelcome will be your departure."

All along the painted iron scrollwork of the verandah sage statements had been rendered almost imperishable. The elegant pillar supports of the wire netting at the ends of the tennis lawn had these suggestions upon them:

> "Play that is fair deserves honour."
> "Recreation speeds labour."

and

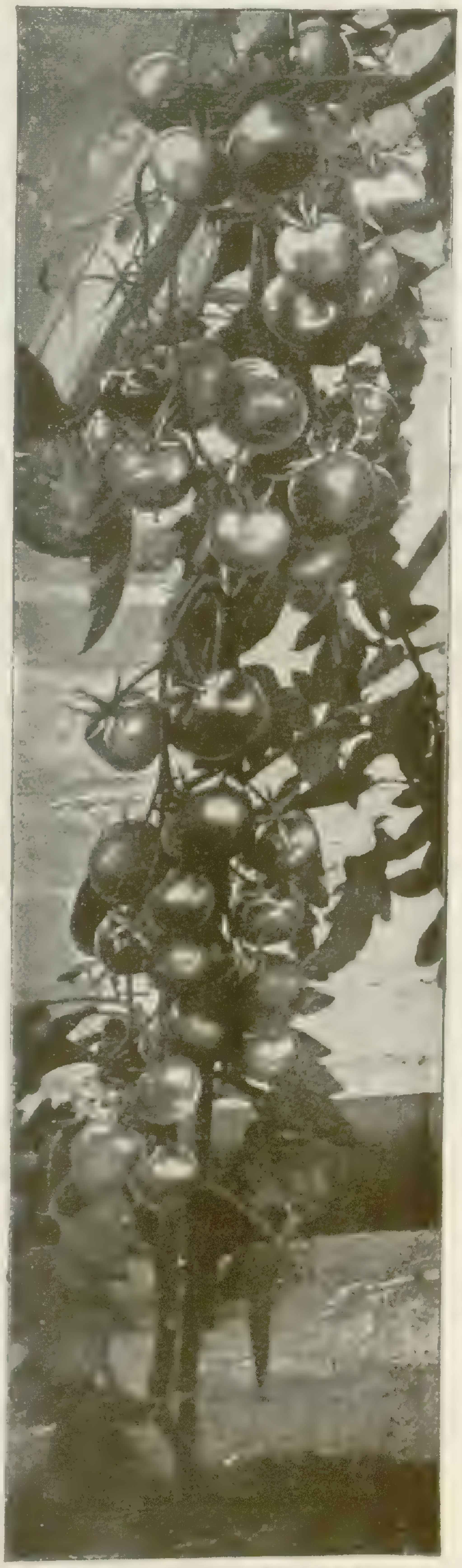
> "Smile at defeat and win to-morrow."

The summerhouses, three in number, were carved round inside, just where walls were joined to the roof, all with mottoes inviting to peace, rest, and confidences. The pergola, with a pillar for every day of the month, told of hope, contentment, and the merits of mere beauty, and the handrail of a bridge across a stream was cut deeply with the words:

> "Ut amnis vita labitur"—"Life glides away like a river."

A grotto in the ground of a Scottish mansion, perched high among rocks and surrounded by firs, bears above its entrance this statement:

> "Here may the student dream, or lover whisper, or hermit pray; but let no man pass by without gratitude to the man who set up this roof, aye, and yet deeper thankfulness to the God who made the canopy of sky."



TOMATO MONEYMAKER.

Friendship gardens need not be composed of plants given by friends, it is sufficient for sentiment if some existing flower is chosen as a representative by each "lover," and has his selected motto fastened upon it, or written on a heart-shaped label affixed to a slender green stake that is thrust into the earth near.

Exceedingly quaint have been mottoes or inscriptions used in gardens of ancient days; for example, the gateway warning:

> "Thistles and bad men avaunt,"

the invitation:

> "Come, but be brief as the flowers of summer";

or the proud boast:

> "All that grows here grows rarely."

Most stern of all, perhaps, was the statement, to be read as a threat to the bad, or an encouragement to the virtuous:

> "I cultivate no weed."

There certainly seems no reason why fair thoughts should not be written up here and there in our gardens, to lift the mind to heights of philosophy, suggest solace for sorrows, teach hopefulness, and preach the dignity of toil; all that is necessary is that the feature should not be over-accentuated and the aid of true art enlisted in this service.

M. H.

TOMATO MONEYMAKER.

A new tomato, if it is to attain a marked degree of popularity in these days, must possess exceptional merit in certain directions. Easily crossed, and easily raised, and so quickly raised, it is small wonder that almost every grower of tomatoes has produced a new variety. But, sooner or later, usually sooner, the said variety finds its level, because the tomato has long passed outside fanciful considerations, and questions of habit, fruitfulness, quality, size, shape, and constitution, are those alone that receive consideration, and according as a tomato has all these qualities in greater or less degree, so is the measure of its popularity.

Moneymaker is a variety we have met with on many occasions during the year, and it is without doubt a splendid cropper, of fine flavour, good size, and pleasing shape and colour. It is especially thin-skinned, and contains few seeds. We have seen trusses carrying as many as sixteen and eighteen good fruits, and, as the illustration shows, it fruits right from the base upwards. It is also of distinctly good habit, and will thus especially appeal to the private grower who has but limited space at command, for he will find a few plants of this prolific variety, introduced by Messrs. Dickson and Robinson, of Manchester, sufficient to meet the needs of a modest establishment, while the large growers will find the variety acts well up to that commercial standard suggested by its title of Moneymaker.

Dwarf Antirrhinums.—On paying a visit to the gardens of Barnwood House, near Gloucester, at the end of July, I had the pleasure of seeing one of the finest displays of dwarf antirrhinums that have yet come under my notice. The border, which is on one side of a broad, straight walk, is about eighty yards long by six feet wide, and contained over 7,000 plants. The dwarfs occupied four feet of the border, behind these were a row of the taller varieties, mixed colours; and behind these, a back row, a fine pure white, known as Sutton's White Queen, was growing. Mr. Walker, the able gardener, sows the seed the first week in February, and grows on the seedlings as hardily as possible. The practice at Barnwood House is to buy a collection of distinct colours, and then to mix the whole of the colours for forming the beds of mixtures.—John Aplin, Hasfield Court Gardens, Gloucester.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

GENERAL REMARKS.—Attention will be devoted to the winter-flowering cypripediums during the next few weeks. It is remarkable the hold this most useful class of orchids has acquired, not only on orchid specialists, but on amateur and professional gardeners throughout the country. I have been rather agreeably surprised, when visiting some of the local chrysanthemum shows during the past few weeks, to find so many, as well as so varied, an assortment of cypripediums included among the groups of flowering and foliage plants arranged for effect. It certainly appeared that the merits of this useful class of plants were at last being realised. It is many years ago since I first began to advocate the merits of these plants in this column of the Gardeners' Magazine, and I still hold the opinion then expressed, i.e., that these orchids are plants for everybody, and I do not consider any better illustration of this fact may be found than the extensive manner in which the cypripediums are shown at the fortnightly meetings in London and Manchester; and in the latter case it may also be claimed that cypripediums may be successfully cultivated under conditions of the atmosphere in which nearly all other plants fail. These facts cannot be overlooked, and should be brought more fully before others interested in gardening who have to battle against unkind conditions at this season of the year with such disheartening results. Many of the most beautiful of the winter-flowering hybrids and species of cypripedium are now procurable for a modest outlay, and they are deserving of every attention. It is scarcely desirable to give a selection, because tastes differ, and it is far more desirable to grow those that are appreciated than a general collection.

CALANTHES.—The summer and autumn have been particularly favourable to deciduous calanthes in this district, and there are no orchids more graceful in effect, or useful for decorative purposes than a general collection of the robust growing forms. I hope that within a few years hybridists will increase the number of varieties by the introduction of the fine colouring of the more delicate kinds into the robust forms. I have been rather struck by the remarkable difference found in the colour and substance of the flowers on plants that have become properly ripened, and those that are more or less sappy and are still carrying their leaves, when the flowers have commenced to expand. There can be no doubt but that it is desirable to procure thoroughly matured pseudo-bulbs. As the calanthes pass out of flower or have had their flowers removed they should at once be placed under resting conditions, and water be entirely withheld. If space is no object they may be permitted to remain in their pots during the dormant season, but they should be placed in a position where they may have the full benefit of all available light. Where accommodation is limited the plants may be turned out of their pots as soon as matured, have the roots trimmed to about an inch from the base of the pseudo-bulb, and placed in boxes on a layer of dry sphagnum moss and silver sand.—H. J. Chapman, Oakwood Gardens.

STOVE PLANTS.

BOUVARDIAS.—As soon as the earliest batch of these useful subjects has finished flowering the stems may be shortened back and the plants removed to a moist atmosphere, with a temperature of about 60 to 65 degrees. This treatment will encourage new growths, which will develop new flower buds for the early part of the new year. Alternate waterings of some approved chemical fertiliser should be applied as soon as the plants are growing freely.

DIPLADENIAS.—Although these succeed best throughout their flowering season when kept somewhat drier than most stove plants, it is, however, advisable not to allow them to suffer during the winter months from excessive dryness. They ought to be examined most carefully once or twice each week, and water applied immediately the wood shows signs of shrivelling. Young plants raised from cuttings during the summer and autumn may be kept steadily growing throughout the winter months, and shifted into larger pots, according to their requirements. I have noticed that dipladenias, when used as climbers for draping the roof of the stove, succeed best when kept in large pots or tubs, in which case their roots are restricted, and they flower the more profusely than when planted out in borders. The beautiful colour of their blooms is seen to the best advantage when the flowers hang loosely from the roof.

PLUMBAGO ROSEA.—This is most acceptable as a winter-flowering subject, and it is at this season one of the most attractive occupants of our stoves. When used as cut flowers they cannot fail to command appreciation for either house or table decoration, and when used for this purpose it gives a charming effect associated with lily of the valley or Roman hyacinths. I find the plants succeed best and produce the longest flowering season when subjected to the ordinary stove temperature, and, during the flowering period, given a little air on all favourable occasions.

CLEANING THE HOUSES.—This work must be taken in hand as time permits; it must also be done thoroughly, so as to eradicate mealy bug and other troublesome insect pests. If this operation is carried out thoroughly much time will be saved in the spring. Soluble paraffin, soap, and hot water are the most effective materials for this purpose. Should the stove require painting inside this work should be put in hand at once after cleaning down.—John Donoghue, Bardon Hill Gardens.

FRUITS UNDER GLASS.

TOMATOES.—These are now colouring up well, and a little artificial manure may be given about once a week. If the shoots are stopped at the required height the fruits swell quicker. Admit a little air at all times; damping down should be done carefully; maintain a night temperature of 60 degrees, with a rise of 5 degrees by day. Fumigate the house slightly once a week. As soon as the tops that were put in the other week have made roots put them near the glass on a shelf, and remove the flowers as they appear for a few weeks.

STRAWBERRIES.—In the pit or house made ready for these, plunge the pots in the leaves, providing they are not too hot; a bottom heat thermometer is the safest thing to use, and should not register more than from 45 to 50 degrees. If the top soil is disturbed when examining the drainage top-dress them afterwards. Select the plants that have plumped up their crown best, and those full of roots. A shelf may be placed in the early vinery that is started, and filled with strawberries, but as these are being forced early a few will be blind, and a few extra should be put in. Syringe when weather permits, and if red-spider is prevalent dip the plants in some insecticide.

EARLY FIG HOUSE.—The figs should be pruned, cleaned, and ready for starting by the end of the month. Wash the trees with a soft brush and a safe insecticide where there is white scale. Do not tie in the wood too thickly, but encourage young wood from the base of the tree to cover up the old wood. If the roots are restricted, which should be the case, and the trees are healthy, and generally carry good crops, the border should be liberally top-dressed. Remove the old surface soil, and renew with some good rich loam, charcoal, and bones. The house may be closed at once, but no fire heat should be applied for a month; syringe according to the weather.

BANANAS.—A few of the strongest will still continue to throw up fruit, but difficulty will occur in getting the bunch to run clear out from the stem. It is better to sacrifice a plant or two rather than to ruin the lot by using a very high temperature. Keep them steadily growing, if possible, and as the young roots appear on the top of the tub cover them up with a suitable compost. Syringing should not be done overhead; keep the house well damped down when much fire heat has to be used; 65 to 70 degrees at night will be sufficient heat.

ORCHARD HOUSE TREES. — These should be well covered or plunged in ashes to keep the frost from the pots. Peaches and nectarines may be placed in the house and syringed once or twice a day, according to the weather. The house should be well aired every day to assist the flowers to open strongly. If not too tall they should be stood on the top of the border, on a slate, as they are best in this position until they have set; they can be plunged afterwards.—A. B. Wadds, Paddockhurst Gardens.

THE KITCHEN GARDEN.

EARLY CARROTS.—Preparations should now be made for providing a hotbed, which should be made up of fresh leaves and long litter that have been thoroughly mixed. After the material has settled down, cover it with good soil to a depth of nine inches, making it nice and firm. Then sow the seeds broadcast, and cover with about a quarter of an inch of fine soil, and water them in. Admit a little air to the frame, so that excessive heat or moisture may escape. Choose a small-rooting variety, and make successional sowings according to the demand. Young carrots are always appreciated when they can be had.

SPRING CABBAGE.—These have come on rapidly of late, and they will be greatly benefited by having a little soil drawn up to the stems; this will afford them protection during hard frost, and also help to keep them in an upward position during strong gales. Select a dry day for the work if possible, as the soil will then be easily worked.

LETTUCE AND ENDIVE that are growing in frames should be attended to frequently, and have all decayed leaves removed and the soil stirred occasionally. Give abundance of air when the weather is fine by removing the lights altogether.

DIGGING.—As the ground is cleared of crops, such as celery, cauliflowers, etc., have it dug or trenched in readiness for the next crop. It is most important to have all vacant ground dug up, and especially strong clayey soils, to give the frost an opportunity of pulverising it. Plenty of wood ashes should be applied to such soils, and also leaf-mould.

LEEKS.—The latest batch should now have their final earthing up, and these will be most useful during the spring months, when other vegetables are comparatively scarce.

SALADS.—These are always in daily demand, and the lettuce and endive should be kept well blanched, in order that it may be nice and crisp. Mustard and cress seed should be sown in boxes weekly, and be placed in heat.

GENERAL WORK.—Now is a good time to attend to making new drains in the kitchen garden, or repairing any that are defective, so that the disturbed soil may settle down again before the spring. A depth of not less than three feet should be allowed for new drains, as generally deep cultivation is most necessary for nearly all kitchen garden crops. Strong clayey soils are always the more fertile when well drained; they are also drier and much warmer.

JERUSALEM ARTICHOKES should now have all the stems cut down, and the ground be cleaned from weeds. Dig up a quantity of tubers to have supplies in readiness should severe weather set in.

POTATOES that are in clamps should be examined occasionally, and at these examinations all diseased tubers be removed.—T. W. Birkinshaw, Hatley Park Gardens, Sandy, Beds.

A GRAND CARNATION SHOW,
under the auspices of
THE PERPETUAL FLOWERING CARNATION SOCIETY,
will be held in
THE ROYAL HORTICULTURAL HALL,
Vincent Square, Westminster,
On WEDNESDAY, Dec. 9th.
Admission: One p.m to Five p.m., ONE SHILLING.
Hon. Sec., HAYWARD MATHIAS.
Lucerne, Stubbington, Fareham, Hants.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

The exhibition of Colonial fruits, fresh, dried, and bottled, held by the Royal Horticultural Society from November 26 to November 30, was a magnificent one, the big hall being well filled with splendid produce that gave evidence of high culture, skilful packing, and fine grading.

It would serve no useful purpose were we to detail all the various exhibits on this occasion, therefore we shall deal more particularly with the countries or colonies represented rather than with individual exhibitors.

Nova Scotia was well represented, and several large tables were filled with excellent produce. Bottled fruits, very bright, and some magnificent examples of Blenheim Pippin apples, from Mr. Dalmain, of Wolfville, were notably good, and the bottled gooseberries were notably fine. From Tupperville, Middleton, Upper Dyke, Kentville, Cambridge, Berwick, Port Williams, Bridgetown, Lakeville, and Kingston, there came excellent fruits, and among these, the boxes from the Berwick district were specially attractive. The leading varieties from Nova Scotia were Baldwin, King of Tomkins County, Cox's Orange Pippin, Golden Russet, Fallawater, Mann, Northern Spy, Ribston Pippin, Blenheim Pippin, the heavily bloomed and deep red Mackintosh Red.

Exhibits from the province of Ontario filled three big tables, and not only were apples, pears, and grapes, but also vegetables in great variety and of considerable size and fair quality. These latter were interesting as indicating the soil and climate of the province, but their value as exports would probably be very small. The Department of Agriculture sent black and red grapes, but the varieties were not labelled. The apples were of fair quality, and there were good dishes of Keiffer, Duchesse, Louis Bonne of Jersey, Howell, Beurre Bosc, Beurre d'Anjou, Le Conte, Josephine de Malines, Sheldon, and Beurre Clairgeau pears. The vegetables submitted included short, thick heads of celery, big and rather coarse intermediate carrots, very coarse large-eyed potatoes, such as Crown Jewel, Ontario Beauty, and Gem of Aroostock, but Rural New Yorker, Beauty of Hebron, and American Wonder were of better character; big white cattle carrots, parsnips, good onions, immense marrows, pumpkins, and squashes, maize cobs, huge bringals (egg plants), and large Snowball cauliflowers and Drumhead cabbages. In a big glass case there were excellent samples of preserved fruits, and, curiously enough, of tinned beet and beans. The apples were very clean and bright, but not so fine, as a whole, as those from other sources, and the leading varieties were Spy, Grime's Golden, King of Tomkins County, Gano, Canada Rex, Blue Pearmain, Scarlet Pippin, Fameuse, Baldwin, and Ben Davis; but pears, such as Duchesse, Kieffer, Beurre Clairgeau, Winter Nelis, Beurre Anjou, and Beurre Bosc, were of good quality and well packed.

The British Columbian display that filled the end of the hall was the finest of the whole set, and there is no manner of doubt that this province can produce grand apples, grade them well, pack them splendidly, and place them on our markets in fine style. From the Kasto district some superb specimens of Baldwin, Wealthy (perfect), King of Tomkins County, Spitzanberg, Famuese, Ribston Pippin (large and bright), and Blenheim Pippin were sent in the usual boxes. The Hyslop crab apple, so fine for jelly making, was well shown by several exhibitors, and Emperor Alexander, Cox's Orange Pippin, and Blue Pearmain figured largely from various parts of the province. For colour, Spitzenberg shone out among all other apples. Flemish Beauty pears were finely shown. Splendid Northern Spy, Golden Russet, Ribston Pippin, Newtown Pippin, and Nonsuch apples came from the Salmon Arm, and Summerland districts, and Kamloops districts; and Blue Pearmain from the latter district was unusually fine in size and colour.

The Botanical Department of Trinidad made up an interesting exhibit of grape fruit, shaddocks, papaws, citrons, various kinds of bananas, and many varieties of oranges and lemons. The botanical section of the Imperial Department of Agriculture for the West Indies displayed a large and interesting collection of tropical fruits from Dominica, Leeward Islands, etc. Oranges in variety were a great feature, but the giant shaddocks, huge things about 14 inches through, were the great popular attraction. Cocoanuts, limes, bananas, lime juice, and various preserves completed the display.

The Government of New South Wales had a very attractive and neatly arranged exhibit of dried and candied fruits and nuts, the citron and lemon peel, currants, raisins, sultanas, apricots, and prunes attracting a very large share of attention. Miss Martin, Willowbrook, Auburn, New York, showed fruits preserved in brandy. Mr. Banks, Park Street, W.; Mrs. Plowman, Chapter Street, Westminster; the Horticultural College, Swanley; Messrs. Austin and Co., Kingston, all showed preserved fruits, jams, etc. New Zealand's contribution consisted largely of bottled fruits, tinned fruits, and honey; and Messrs. Clark Bros., Whangarei, and Messrs. Kirkpatrick and Co., of Nelson, were the leading exhibitors.

Messrs. B. Shearn and Son, Tottenham Court Road, famous for "Fruit Lunches," had a very interesting display of nuts that included walnuts, chestnuts, filberts, almonds, sepucaia nuts, peccans, pistachios, Brazils, hazels, shelled walnuts, pine kernels, cocoanuts, and cocoanut flour, pea nuts, etc., etc. Dominican limes were submitted by the Dominican Agency, 49, Lime Street, as well as lime and grape fruit marmalades The Army and Navy Auxiliary Co-operative Supply, Lim., Francis Street, Westminster, showed Claret and yellow bananas, big grape fruits, various Canadian apples, preserved fruits, etc.

Mesers. R. Jackson and Co., of 72, Piccadilly, displayed a large collection of food products from Cape Colony, Cape gooseberry jam figuring largely, together with green fig preserve, grape jam, and tinned grapes, apples, peaches, etc. The Messrs. Westmacott and Co., Leadenhall Street, submitted samples of Cape wines, liqueurs, etc. Lady Algernon Lennox, Broughton Castle, Banbury, showed fruit grown and bottled by the cottagers and allotment-holders in the Banbury district; the samples were very clear, and the stoppers of the bottles were metal protected.

The West Indian Produce Association, Lim., Fenchurch Street, had a varied assortment of Colonial produce, submitting Jamaican and Trinidad cigars, West Indian liqueurs, maple sugar, guava jelly, limes, oranges, grape fruits, preserves, sauces, sugar, tea, and nuts of various kinds. Messrs. Fowler, Lee, and Co., Queen's Road, Reading, showed fruit-bottling outfits, and preserved fruits in glass-stoppered bottles. Mr. W. Poupart, Twickenham, set up a selection of bottled fruits, the plums being notably fine and bright.

There was a fairly keen competition for the prizes offered for home-grown and bottled fruits and vegetables, and in these the leading awards fell to Lady Algernon Gordon-Lennox; Mr. W. Poupart, Miss C. Jones, Mrs. V. Banks, Mrs. W. H. Plowman, Mrs. E. Beckett, and Miss M. G. Thompson.

MEDALS.

Gold.—The Province of British Columbia for apples; Nova Scotia Government for collection of fruit; the Government of Ontario for collection of fruit, etc.

Silver-Gilt Hogg.—To Mr. F. A. Parker, Berwick, N.S., for apples.

Silver-Gilt Knightian.—Kamloops District, British Columbia, for apples; Kaslo District Horticultural Association, British Columbia, for apples; Mr. Thomas G. Earl, Lytton, British Columbia, for apples; Mr. W. H. Woodworth, Berwick, N.S., for apples; Mr. H. A. Blanchard, Upper Dyke, Nova Scotia, for apples; the Botanic Section, Imp. Dept. of Agriculture, Dominica, for collection of fruit; the Hon. H. A. A. Nicholls, C.M.G., St. Aroment, Dominica, for limes and lime products.

Silver-Gilt Banksian.—To the West Indian Produce Association, for collection of fruits, etc.

Silver Hogg. — To Mr. J. H. Cox, Cambridge, Nova Scotia, for apples.

Silver Knightian. — Summerland District, British Columbia, for apples; to Mrs. J. A. Smith, Spences Bridge, British Columbia, for apples; to Mr. H. Delmain, Wolfville, Nova Scotia, for apples; to Mr. E. E. Archibald, Wolfville, Nova Scotia, for apples; to Mr. R J. Messenger, Tupperville, Nova Scotia, for apples; to Mr. J. A. Kinsman, Lakeville, Nova Scotia, for apples; to Mr. F. H. Johnson, Bridgetown, Nova Scotia, for apples; to the Hon. J. Cox Fillan, Wall House, Dominica, for limes, etc.; to Mr. A. R. C. Lockhart, Castle Comfort, Dominica, for limes, etc.; to the Jamaica Agency, Holborn, for oranges and grape fruits; to Messrs. B. Shearn and Son, Tottenham Court Road, for nuts; West Indian Produce Association, Lim., 4, Fenchurch Buildings, E.C.; Norbrook Preserving Company, Jamaica; Messrs. R. Jackson and Co., 172, Piccadilly, W.

Silver Banksian.—Salmon Arm Farmers' Exchange, British Columbia, for apples; to Mr. A. L. Moore, Berwick, N.S., for apples; to Mr. E. T. Neilly, Middleton, Nova Scotia, for apples; to Mr. F. Foster, Kingston, Nova Scotia, for apples; to Agricultural School, Dominica, for oranges, etc.; to Elders and Fyffes, Jamaica, for oranges; to the New Zealand Government, for apples, preserved by cold storage; S. Kirkpatrick and Co., Nelson, N.Z., for Colonial Fruits made into jam, jelly, syrup, etc.; the Dominica Agency, 49, Lime Street, E.C.; Government of New South Wales; Mr. W. J. Ansell, I.S.O., Cyprus.

Bronze Banksian. — Victoria District, British Columbia, for apples; Salt Spring Island, British Columbia, for apples; Mr. James Johnstone, Nelson, British Columbia, for apples; Mr. James Gartrell, Summerland, British Columbia, for apples; Chilliwack District, British Columbia, for apples; Berwick Fruit Company, Berwick, N.S., for apples; Mrs. Wm. Sangster, Falmouth, Nova Scotia, for apples; Mr. Ralph Eaton, Kentville, Nova Scotia, for apples; Messrs. Clarke Bros, W. Langarei, N.Z.; the Hokianger Co-operative Preserving Company, Rawerne, N.Z.; the New Zealand Government (for honey); the Monserrat Preserving Company.

SCIENTIFIC COMMITTEE.

NOVEMBER 24.

Present: Mr. E. A. Bowles, M.A., F.L.S. (in the chair); Messrs. A. Worsley, G. S. Saunders, W. C. Worsdell, J. T. Bennett-Poe, G. Gordon, W. Hales, J. Fraser, W. Cuthbertson, W. Fawcett, C. T. Druery, and F. J. Chittenden (secretary).

GREASE BANDS.—Mr. Voss showed another grease band taken from the same tree as that shown a fortnight ago, which had been placed upon the tree in succession to that. A considerable number of female winter moths had been captured near the base of the band, and a larger number of males. All, with one exception, belonged to Cheimatobia brumata, the exception being a male Hibernia aurantiaria.

WEEVILS IN SEEDS.—Mr. Saunders reported that the seeds of Abrus pescatorius which Mr. Bowles had shown at the last meeting were attacked by a species of Bruchus allied to, though not identical with, B. pisi. The weevils were nearly as large as the seeds in which they occurred.

SILVER-LEAF IN PLUMS.—Mr. Worsley called attention to a portion of the trunk of a plum tree which had been attacked by "silver-leaf" disease caused by the fungus Stereum purpureum. The discoloration of the wood appeared to start from the graft. Mr. Worsley also showed a seedling form of Chrysanthemum indicum and Jatropha podagraria attacked by Botrytis cinerea.

MARKS UPON APPLE.—Mr. G. S. Saunders showed a drawing of an apple which had a curious looking brown mark stretching up one side of it about three-sixteenths of an inch in breadth. It was thought that this had probably been caused by the destruction of the epidermis as by a scratch at an early stage of the development of the fruit.

STAPELIA GRANDIFLORA.—Mr. Bennett-Poë showed a flower of this species measuring about 11in. in diameter.

ABERRATIONS IN LONICERA PERICLYMENUM.—Mr. J. Fraser contributed flowers of the common honeysuckle with the petals green. It was remarked that this condition in honeysuckle is very frequently associated with the presence of aphis upon the plant, especially near the inflorescence. Mr. Fraser also showed a specimen of the common honeysuckle with leaves shaped somewhat like those of the oak—this form he had found most frequently in plants growing in a shady wood. In Lonicera japonica the aberration is very common.

HOLLY RETAINING BERRIES.—Mr. Chittenden submitted a branch of a holly from Wisley which was still carrying the berries produced in 1907. Adjacent trees had been stripped by the birds, but this and two other trees in the garden had retained their berries until now. During the past few days some had fallen, but otherwise the tree was as thickly berried as during the autumn of 1907.

National Chrysanthemum Society.

The annual dinner of this society was held in the Throne Room at the Holborn Restaurant, on Thursday, November 26, under the chairmanship of Sir Albert Kaye Rollit, LL.D., D.C.L., the president of the society. The President was supported by C. E. Shea, Esq. (past president), who took the chair until the arrival of the president. Over one hundred members and visitors sat down to the excellent dinner provided; among those present we noticed Messrs. C. Harman Payne, J. H. Witty, Thos. Bevan, R. F. Felton, D. Ingamells, J. Harrison Dick, E. F. Hawes, W. Howe, G. Schnieder, G. Prickett, and many others well known in the chrysanthemum world.

The first toast, as is the usual custom, was that of "The King, the Queen, and other members of the Royal Family," which was proposed by the Chairman, and loyally responded to by those present. "The Donors of Special Prizes" was proposed by Mr. J. McKerchar, who pointed out to the company that it had previously been stated that it was "more blessed to give than to receive," and with a view of testing this proverb at the present day, he suggested that more special prizes should be given to the N.C.S. for the coming shows. Mr. C. E. Shea, in reply, stated that it always gave him great pleasure to do what he could for the National Chrysanthemum Society. He was very glad indeed that the society was in possession of such excellent officers, and also to see the wise policy that prevails, which, in his opinion, was an augury for the future success of the society.

The toast of the evening was next proposed by Sir Albert Rollit, namely, "The National Chrysanthemum Society." He stated, on rising, that he had received a telegram from the Mayor of Windsor who expressed his great regret at inability to attend the dinner, but hoped to have the pleasure of attending on some future occasion. The society, stated the Chairman, was formed to venerate a splendid flower, one that was in full beauty during the dull, cold days of autumn, and that was not only honoured in this country, but was also the national flower of our great ally, Japan. It formed the Japanese badge of chivalry, the greatest honour that could be bestowed in that country. He referred in warm tones to the splendid services rendered to the society by Mr. Shea and its present officers, and made an appeal to the ladies to assist in increasing the membership, as he desired floriculture for the mass and not only for the class. This toast was responded to by Mr. T. Bevan, who stated that he would support the idea of holding shows at the Crystal Palace as long as possible.

"The Exhibitors and Affiliated Societies" was proposed by Mr. E. F. Hawes in a few well chosen remarks, in which he alluded to the excellent support received at both the shows already held, and to the large number of new varieties staged before the Floral Committee. Mr. W. Wells, in responding, hoped that those who had been unsuccessful during the past would continue trying until they were able to become prize-winners. Several other toasts followed.

The presentation of the challenge trophy, Holmes' Memorial Cups, etc., took place during the evening. The decorations were excellently done by Messrs. R. F. Felton and Sons, to whom the thanks of the society was given, as well as to Mr. Richard A. Witty for the general arrangements connected with the dinner.

"The Chairman," proposed by Mr. J. T. Simpson, and rendered with musical honours, received a very hearty reception, and after a brief reply, the gathering was brought to a close.

WINTER SHOW.

The last chrysanthemum show of the season was held on December 2 and 3 at the Crystal Palace, Sydenham, and there was a very pretty exhibition arranged towards the clock end of the great building. Competition was fairly good, and there were numerous excellent non-competitive displays that did much to enhance the general effect.

GROUPS AND PLANTS.

First prize for a group of flowering, berried, and foliage plants was won by Mr. W. Howe, gardener to Lady Tate, Park Hill, Streatham, with a bright group of begonias, liliums, poinsettias, spiræas, cypripediums, and Callicarpa purpurea; Mr. J. Hedges, Kirkdale Nursery, Sydenham, came second.

Mr. W. Howe was also first for a large group, and here he had a bright lot of poinsettias, chrysanthemums in mounds, chiefly singles, cypripediums, cyclamens, and a good assortment of palms, ferns, etc.; Mr. Stevens, Laurie Park, Sydenham, second, with a rather formal display of chrysanthemums and arums.

Mr. W. Newton scored for six plants of Begonia Gloire de Lorraine, with good examples; Mr. Harrison second, and Mr. W. Whitehead, Sydenham Hill, third.

CUT BLOOMS.

Premier award for nine vases of Japanese blooms, three blooms in a vase, not fewer than six varieties, was won by Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashstead Park, Leatherhead, with good examples of J. Peed, Madame Oberthur, Mrs. A. G. Pirie, Algernon Davis, Mrs. C. Neill, T. Stevenson, and Madame R. Cadbury; Mr. H. C. Horton, gardener to T. P. Boyd, Esq., North Firth, Tonbridge, second.

Mr. G. Hunt scored for eighteen Japanese blooms in not fewer than twelve varieties, with medium sized, bright flowers of T. Stevenson, Algernon Davis, R. C. Pulling, J. Peed, Mrs. Neill, Madame R. Cadbury, etc.; Mr. H. Humphrey, gardener to Lord Ludlow, Langport, Northampton, second; and Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, third; six entries. Mr. Hunt led for twelve blooms, and he had J. Peed and Mrs. Neill very fine; Mr. Mease came second, and his best blooms were of Madame P. Radaelli, Mrs. Neill, Mrs. A. G. Pirie, F. S. Vallis, and Bessie Godfrey; Mr. J. Preece, gardener to Miss Willmott, V.M.H., Warley Place, Brentwood, third.

Mr. Hunt was again first in the class for a dozen incurved, leading with good flowers of W. Wainright, Mdlle. L. Faure, G. W. Matthews, Ialene, Marjory Shields, and Egyptian; Mr. J. Preece came second with well-finished flowers of moderate size; Mr. W. Mease third; four entries.

Mr. Newton, gardener to Mrs. Nathan, Little Heath Wood, Potters Bar, led for six vases of three blooms each, and showed Madame P. Radaelli and Algernon Davis well; Mr. M. Raymont, gardener to W. Beech, Esq., North Ockenden, Romford, second. Mr. W. Walters, Alexandra Road, Burton-on-Trent, scored for a dozen Japanese blooms in six varieties, with a very moderate set; Mr. G. Prudden Clarke, Hitchin, and Mr. T. W. Stevens, gardener to W. H. Stone, Esq., Donnington, Laurie Park, Sydenham, were second and third; five entries.

The class for a table of twelve vases of single varieties was a good one, and here there were four competitors. The chief award fell to Mr. G. Hurst for a beautiful set of Annie Farrant, Doreen, G. Rose, Edgar Forbes, Princess, Gerbera, Edith Pagram, Lady Windsor, G. W. Forbes, Cannell's White, Golden Star, and Mrs. Wm. Jordan; Mr. W. Newton second with a good, clean set; and Mr. F. Brazier, Caterham, third.

Mr. C. B. Gabriel, Eardale, Woking, led for six bunches of spidery chrysanthemums with Sam Casswell, Mrs. Filkins, Mrs. Carter, Cannell's Favourite, White Jitsujetsui; one exhibitor was disqualified. Mr. J. A. Humphries, gardener to J. L. Burgess, Esq., Maisey Hampton, Fairford, scored for six bunches of pompones, with Snowdrop and Primrose League; Mr. C. B. Gabriel second.

Mr. W. Rigby, gardener to Rev. A. Cooper Marsden, 60, Wickham Road, Beckenham, led in the amateur class for six Japanese, from six competitors. Mr. G. Prudden Clarke won the first prize for six vases of Japanese blooms, and Mr. Moorman, Hampton Court Palace, was second; but neither showed well.

FLORAL DECORATIONS.

There were nine competitors in the class for a table decoration of chrysanthemums, and here Mr. T. W. Stevens won first prize with a pretty and light arrangement of Mrs. Filkins, and a yellow and a red single variety, with asparagus plumes; Mrs. A. Robinson, Park Hill, Carshalton, was second with bronze flowers and croton leaves; Mr. A. W. Trossell, gardener to H. Attenborough, Esq., The Avenue, Beckenham, third, with bold yellow and orange flowers.

Miss C. B. Cole, Feltham, scored for a big vase of spidery and single varieties, with a beautiful arrangement; Mr. H. W. Hedges, Kirkdale Nursery, Sydenham, second; and Mr. R. B. Leech, gardener to C. J. Ean, Esq., Wood Hall, Dulwich, third, with a vase of large flowers, yellow and white varieties; seven entries. Miss C. B. Cole was also to the front for a vase of pompones, with a very pretty vase of Antonius, Snowdrop, Primrose League, and small Cullingfordi; Mr. J. W. Harrison, Sydenham, second; and Mr. W. Webb, gardener to J. Chapman, Esq., Melrose, Sydenham, third; four entries.

There were five entries in the basket class, and here Miss C. B. Cole again led, this time with a beautiful design in yellow and bronze flowers; Miss E. H. Ekins, Rushden, St. Albans, second; and Mr. F. Brazier, Caterham Valley, third.

NON-COMPETITIVE.

Mr. P. Ladds, Swanley Junction, put up a large circular group of chrysanthemums, pleasingly associated with ferns, palms, spiræas, ficuses, etc. It was a bold and bright exhibit, well put up. In addition, Mr. Ladds showed a table of cut blooms of late and useful market varieties, putting these up in goodly bunches. Messrs. J. Peed and Son, West Norwood, submitted a table of alpines. Messrs. W. Wells and Co., Merstham, were represented by a large table of cut flowers of late decorative varieties, and a feature of the display was the central group of the big white single named Dorothy Fortescue, surrounded by the new Merstham Jewel, with a bunch of Chrysanthemum indieum to show the type from whence our modern varieties have come.

Mr. Norman Davis, Framfield, Sussex, put up a very charming exhibit of single chrysanthemums, that showed in a striking manner the great variety of form and colour the late section possesses, and the great usefulness of such varieties. The blooms were arranged in tall stands, in baskets, and in vases of various sizes, all set over a groundwork of maidenhair fern; Perseus, Aurore Boreale, Juno, Pegasus, Arcturus, and Pollux were conspicuously good varieties. Messrs. H. Cannell and Sons, Swanley, contributed a collection of single, thread-petalled, and decorative chrysanthemums, and among these the big white semi-double Cannell's White was specially attractive. With these was shown a very bright collection of grandly grown zonal pelargoniums, the blooms of lovely colour, and fine size and substance.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, had one of the best December displays he has ever put up. It was a big effort, and consisted of large, bold stands of Mrs. Wakefield, True Gold, Mrs. J. Wynn, Snowdrift, Mdme. Oberthur, Lord Brooke, J. G. Day, Kitty Gulliver, Princess Victoria, Yellow Victoria, and Helena Williams, all fine late varieties, as well as Keston Gem, a new single. Palms, ferns, and crotons made a suitable groundwork and finish to the group.

From the Nova Scotia Government came a couple of large tables of bright, well-grown apples representing a large number of well-known varieties, such as Ribston Pippin, Cox's Orange Pippin, Blenheim Pippin, Wellington, Lane's Prince Albert, etc. The fruit exhibit put up by the British Columbian Government was a very attractive one, the apples being of wonderful colour and size, and particularly free from blemish.

New chrysanthemums gaining awards were Kathleen Pestifield (Pestifield), crimson, decorative anemone (F.C.C.); Perseus (Davis), yellow single (commendation); and Aurore Boreale (Davis), large orange and crimson single (F.C.C.).

MEDALS.

Gold.—Mr. Norman Davis, Framfield, Sussex; Mr. H. J. Jones, Ryecroft Nursery, Lewisham; Mr. P. Ladds, Swanley Junction.

Large Silver.—British Columbian Government; Messrs. H. Cannell and Sons, Swanley; Messrs. W. Wells and Co., Merstham.

Silver.—Mr. Riley, Herne Hill; Nova Scotian Government.

Bronze.—Mr. T. Williams, Ealing.

Aberdeen Chrysanthemum Show.

NOVEMBER 27 and 28.

The annual show under the auspices of this society was held in the Music Hall Buildings, Aberdeen, on the above dates. For twelve years now this society has held an exhibition of flowers, fruits, and vegetables, which has most deservedly held a high place among such displays in Aberdeen. The entries this year, though somewhat fewer than last year, numbered nearly 500. These came from all the counties in the North-east of Scotland, and even from as far south as Dumfries—from the Moray Firth to the Solway Firth. One pleasing feature in this year's exhibition was the greater attention given to naturally-grown chrysanthemums, where disbudding had not been allowed, and to the decorative smaller varieties. Experts tell us that the day of the big bloom is closing, but there was no sign of this prophecy being borne out for yet awhile. The quality of the exhibits was of a very high standard, and from the spectacular point of view, most attractive. Mr. M. H. Sinclair, the courteous secretary, was, as of yore, at his post, and, thanks to the practical and technical knowledge he brings to bear upon his duties, these were carried out without a hitch.

POT PLANTS.

Though the summer was, on the whole, good, the fogs and the rains during November considerably retarded the development of the blossoms; but, nevertheless, the show in this section was a very good one. The chief laurels here were carried off by Mr. John Tough, Great Western Road, Aberdeen, for four distinct chrysanthemums, three blooms to a plant. Mr. Tough's entry was a very meritorious one, and reflected great credit upon him. Mr. Alexander Duncan, gardener to Mr. Adam Maitland, Rubislaw Den House, Aberdeen, was one of the chief winners in this section, the chief characteristics of his entries being the size and freshness of the blooms. Mr. Duncan carried off no fewer than five first prizes here. Among other leading prize-winners were: Mr. Robert Begg, Garthdee House, Aberdeen; Mr. George Robertson, Langley House; Mr. A. Murray, Ashley House; Mr. John Petrie, Crathes Castle; Mr. C. McLennan, Viewfield House; Mr. Andrew Reid, Durris House; and Mr. P. Youngson, Aberdeen. Palms, ferns, and begonias were fairly well represented.

CUT FLOWERS.

This section was undoubtedly the feature of the show, the blossoms being large in size, of fine symmetry, and beautiful in colour. it was in this section where the chief honours of the show were to be won. For twelve vases Japanese chrysanthemums, in twelve varieties, three blooms of each variety, all named, chrysanthemum foliage only to be used, Mr. A. Morton, gardener to the Dowager-Countess of Seafield, Cullen House, had a splendid win, and worthily gained for himself the blue ribbon of the society. Mr. Morton's claims to the honour were unmistakable, there being no fewer than twenty points separating him from the second prize-winner. The entry was one of rare beauty, and a tribute to the skill and taste of the grower. It consisted of the following varieties: Ethel Fitzroy, Madame P. Radaelli, J. H. Silsbury, Mrs. Knox, Algernon Davies, Mrs. J. Mileham, Victoria and Albert, Madame J. Rivol, Reg. Vallis, F. S. Vallis, Lady Talbot, and Madame Cadbury. For the second place, Mr. W. Paterson, gardener to Captain H. F. Lumsden, of Balmedie, had a very good entry. There were a large number of classes in the cut flower section, the leading winners, apart from Mr. Morton and Mr. Paterson, including Mr. Oliphant, The Links, Montrose, who had a very fine entry for twelve best Japanese chrysanthemums, at least nine varieties. In this entry was found the best bloom in the show, a truly magnificent specimen of F. S. Vallis. Winners of premier places included Mr. John Tough, Aberdeen; Mr. George Jamieson, Loughborough; J. Jenkins, jun., Woodside; Mr. John Petrie, Crathes Castle; R. Begg, Garthdee House; Mr. William Milne, Corsindae House; Mr. Alexander Douglas, Kepplestone House; Mr. Andrew Reid, Durris House; Mr. James Joss, Montrose; Mr. James Strachan, Botanic Gardens, Aberdeen; and Mr. R. A. Grigor, Dalswinton, Dumfries.

In the section devoted to florists and nurserymen there was not much worthy of mention, the display this year being much under what has been usually seen at this show. What there were of baskets, bouquets, sprays, and such like were good; but, as already stated, the numbers were small. Mr. Strachan, of the Botanic Gardens, Aberdeen, was first for a basket, his entry being a very meritorious one. Mr. James Joss, Aberdeen, was first for bouquets, while Mr. John Petrie, Crathes Castle, won for lady's spray and buttonholes. Mr. R. A. Grigor, Dalswinton, Dumfries, had a most commendable entry for best decorative display of cut flowers on a centre table space, ten feet by five feet, floral design (bouquets, etc.), excluded, but foliage plants may be used in the arrangement, chrysanthemums to be the main feature. Mr. Grigor was awarded for his exhibit the silver cup presented by Mr. A. Kynoch, vice-chairman of the society.

FRUIT.

The display in this section was an exceedingly fine one, and reflected the greatest credit on all concerned. Apples, especially, made a splendid show. Mr. R. Singer, Forres, had some exceedingly fine apples forward; his collection of kitchen apples, four varieties, comprising Peasgood's Nonsuch, Bramley's Seedling, Alfriston, and Lane's Prince Albert, was deservedly admired. Pears were not a numerically strong section, and the best were shown by Mr. George Jamieson, Loughborough. Praise in this section must also be accorded Mr. A. McLeod, Cluny Castle, for his fine entry of grapes, and also to Mr. Andrew Reid, Durris House, for a similarly fine exhibit. Praise must also be accorded Mr. A. Paterson, Inverness; and Mr. C. Cumming, Pitgaveny House; for in their respective entries one could easily see those gardeners gave of their best.

VEGETABLES.

The show of vegetables was an education in itself; Mr. Edward Joss, Sunnyside House, Montrose (best collection, six varieties); Mr. W. Lawson, Oakbank School; J. and D. McKenzie, Lower Bucksburn; Mr. W. Milne, Corsindae House; Mr. W. Scorgie, Springhill; Mr. Andrew Reid, Durris House; Mr. George Jamieson, Loughborough; Mr. James Ferguson, Linton, Cluny; and Mr. W. Webster, Laithers House, Turriff, all carried off premier honours. Leeks, potatoes, and onions constituted the feature of this section; Messrs. William Smith and Son, seedsmen, Aberdeen, had on exhibition a new potato, "The Devanha Seedling," which in the autumn was awarded a certificate of merit by the Royal Horticultural Society. It is a round, white variety, fine and uniform in size and symmetry, and has very shallow eyes—properties that go far to enhance its value as an exhibition potato.

AMATEURS' DISPLAYS.

In the amateurs' displays of pot plants and cut flowers, there was some remarkably fine work shown. Mr. James Jenkins, jun., Woodside, Aberdeen, made a most commendable show, taking many first prizes. Mr. John Tough, Aberdeen, had also a good record, the other premier honoursmen including: Mr. John L. Milne, Mr. P. Youngson, Aberdeen; Mr. J. D. Smith, Aberdeen; Mr. James Jenkins, sen., Woodside; Mr. A. Cumming, Cairnfield Place, Aberdeen; Mr. John Thomson, Aberdeen; and Mr. J. C. Brown, Aberdeen.

MISCELLANEOUS.

Although not so numerous as we have seen them at this show, the entries for exhibition only were very good. Messrs. Ben Reid and Co., Pinewood Nurseries, Aberdeen, had a most interesting and seasonable exhibit.

The British-Columbian Government had forward a very fine collection of fruit, with the view of showing the resources of that country as one of the best centres for the cultivation of fruit in the world. Messrs. T. Rivers and Sons, Sawbridgeworth, Herts, had a magnificent collection of apples which, from their very fine quality, attracted considerable attention. Medals were awarded to these firms by the society.

Bristol Gardeners' Association.

"Some Principal Subjects of the Hardy Fruit Garden" was the topic at the usual fortnightly meeting held on Thursday, November 26, at St. John's Parish Rooms, when Dr. Shaw presided over a good attendance. The lecturer was Mr. Farmer, gardener to the Marquis of Bute, Cardiff Castle, and he gave a description of the various uses and qualities of apples, pears, plums, and cherries. He pointed out that by a careful selection of varieties the former may be had in season from July till the following July for both culinary and dessert purposes. Mr. Farmer also enumerated the respective merits of pears, plums, and cherries, and gave some useful hints as to soil, stocks, planting, and pruning. Planting operations may be carried out, the lecturer said, in October and November as the best time, but it could be done successfully so late as March. The roots ought not to be packed in anyhow, but carefully spread out in well prepared holes. To illustrate the value of pruning when planted, Mr. Farmer said he planted

280 trees last March, and pruned them the same day. All the trees so treated started away well, and made good growth; but eighteen trees left unpruned made very stunted growth. Dr. Shaw opened the discussion, and was followed by Messrs. Brook, Binfield, Lee, Holt, Curtis, Young, Garnish, Clark, Scott, Woodward, House, Attwell, and Shaddick. Mr. Farmer answered all inquiries in a satisfactory manner, and well earned the vote of thanks at the close. For two bunches of violets first prize was awarded to E. Watts, Esq. (gardener, H. Woodward).

Cardiff Gardeners' Association.

The fortnightly meeting of the above society was held at St. John's Schools on November 24, Mr. H. R. Farmer presiding over a large gathering of the members. A lecture on "Vegetables for Exhibition" was given by Mr. R. Milner, head gardener at Margam Abbey. In his opening remarks the lecturer alluded to the great strides which had been made in the cultivation of vegetables during the last decade, and which he attributed to the excellent work done by horticultural societies in general. With regard to the preparation of soils during autumn and spring, he said that deep culture was one of the secrets of producing good vegetables. Selecting and cleansing and staging for exhibition were explained, and particularly the packing for distant shows. Mr. Milner considered that more uniformity was required in judging, and that medium sized vegetables of good quality should be given the preference rather than those which are too coarse for the table.

The lecturer was heartily applauded at the close of his paper. Mr. F. G. Treseder, F.R.H.S., opened the debate. He first thanked Mr. Milner for coming forward and giving such practical and valuable information. He felt sure that all present would go away thoroughly pleased with the sound advice of one of the most able growers and adjudicators of vegetables. Many questions were asked, which added much enthusiasm to the meeting. A hearty vote of thanks was proposed by Mr. M. Toy, which was seconded by Mr. C. Cosson, and carried amidst acclamation. Mr. Milner very pleasantly acknowledged the vote, thanking everyone for their kind appreciation.

"Hobbies" Exhibition.—During the past week Messrs. Hobbies, Lim., held, in the Memorial Hall, Farringdon Street, London, an exhibition of examples of fretwork, wood-carving, repoussé work, modelling in plasticine, etc. There were also demonstrations of various arts and crafts, and of daylight and gaslight photography.

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ROSE CULTURE IN SMOKY DISTRICTS.

The other evening a very interesting meeting was held at the Institute, Saltaire, under the presidency of Mr. F. Jowell, when Mr. Arthur H. Rigg, chairman of the Saltaire Rose Society, gave an address on the cultivation of roses in a smoky district.

In his opening remarks Mr. Rigg pointed out that rose culture in a district which was only four miles from the centre of one of the largest manufacturing towns in Yorkshire was necessarily attended with difficulties. The soot and sulphur from a forest of chimneys to a great extent checked the growth of the trees, but this did not deter him from growing thousands of beautiful blooms every year. In the North of England they could not expect to succeed like their friends in the south, who were free from the adverse conditions that obtain in manufacturing districts; their roses would grow both better and stronger, besides being in bloom much earlier. They could also grow more delicate varieties. He wished to offer a few simple hints to the amateur who had a small garden, and who would like to grow a few roses, or who had tried to grow them, and failed to get a result that would encourage him to go further into the delightful culture of the queen of flowers. The love and culture of the rose was like a microbe—when once it got hold it stuck. Certainly it had been so in his own case. He started with a Marechal Niel in a small conservatory nearly twenty years ago; he had been planting a few trees every year since, until he had now over 2,000 trees, and was still planting more.

Rose Growing as a Hobby.

The culture of the rose gave one infinite pleasure, besides diverting the mind from business cares and worries. It was a charming and elevating hobby for ladies as well as gentlemen. When they had grown these emblems of purity imagine the pleasure derived from sending some to a sick friend, or a few to the hospital or sick poor. Referring to the success of the Saltaire Rose Society, Mr. Rigg said the members took roses to the meetings, where they were criticised as to their merits or otherwise, and thus they learnt from each other the best methods to treat each variety. They also visited each other's gardens, and for their mutual benefit discussed such problems as mildew, blight, etc. By means of a charity floral fete the Saltaire Rose Society had raised over £100 each year in order to send poor children to the country or seaside, so that growing roses and other flowers did some good in the world, in addition to the pleasure derived from their cultivation. He remembered three of them going home together from one of the society meetings at the beginning of July—about a fortnight before one of their shows. It was a most delightful evening; everything so peaceful that they could hear nothing but the noise of the trains as they steamed up the valley. One of the trio suggested to his companions that they should call and see his roses. It being then half-past ten, they made some slight protest against the proposal, but eventually they did call. The lady of the house said she thought it was rather late, and too dark to see roses, but their friend soon had a large lantern ready, and into the garden they went. The effect of the light from the lantern on the roses he should not soon forget; it was charming, and he advised his hearers to try it themselves. On the night he was referring to they were not satisfied with inspecting one garden; leaving there they went to the other friend's garden, and finally to his own. He should not like to say what time they finished, but he might inform them that the sun was shining brilliantly, and the birds singing, and that one of the party did not go to bed at all, but started working among his roses! It was one of the most delightful nights he had ever spent, and he might say that they had since made it an annual event.

The Best Site for Roses.

Whatever size the garden was it was important to select the best site for roses. As far as possible roses should be kept away from trees and strong-growing shrubs, as they would not grow under them, but must be in the open, where they could enjoy sunlight, and have a free circulation of air about them. If there were room roses should have a bed to themselves, as the other trees and shrubs took out of the ground the nourishment which the roses ought to have. The rose tree was a gross feeder, and liked plenty of attention. In his opinion that was the chief reason why the amateur with a small garden did not succeed in growing them successfully. Roses liked plenty of manure, and a little variety of it; farmyard manure was the best, as it was mixed already. Most amateurs did not give their roses enough manure. He had seen numbers of trees which had been planted without the beds being properly prepared; some people appeared to think that all that was necessary was to make a hole in the ground and put the tree in. But no rose tree would grow under these conditions. Another very important point was pruning, and in this connection the members of the audience were warned against employing men who had not been trained for the work to look after their gardens. There were many so-called jobbing gardeners who had spent the biggest part of their lives in the mill or workshop, and who had taken up gardening as a sort of last resource. If the grower did not himself understand the rose tree he should get someone who did, and thus avoid failures.

Size of Bloom.

The rose grower should not confine his attention to the production of the largest blooms possible, and it was suggested that they should not, in pruning, cut all the shoots back to two or three eyes unless they were going to try to beat their neighbours at the forthcoming show, but grow some of them in a semi-wild state. He trained many of his roses up stakes placed in different parts of the garden, in order to take the stiffness away from the beds. The garden should be made as artistic as possible both in form and colour. Colour is a thing which is seldom studied, and more attention should be given to it. A blue put near a yellow, or a purple next to an orange, would always look well. Hundreds of gardeners, both amateur and professional, planted their bedding-out and herbaceous plants without giving a thought as to either harmony or contrasts of colour. As rosarians they were short of a blue rose to make them complete from a colour point of view, although they could get some beautiful combinations with dark reds, yellows, pinks, and whites. When they wanted to introduce blue they could not do better than plant delphiniums, although there were, of course, various other flowers of the same order which would serve the purpose more or less effectively. For border purposes lobelias were most valuable in any garden.

Roses Suitable for a Smoky District.

Mr. Rigg's experience was that the following varieties of roses did very well in the Shipley district: Madame Abel Chatenay, Madame Ravary, Alister Stella Gray, The Garland, Jersey Beauty, Lady Gay, Blush Rambler, Hiawatha, Conrad F. Meyer, William Allen Richardson, Gustav Regis, and Liberty. Near manufacturing towns standards and half-standards did not grow so well as dwarfs; they could not stand the heavy rains and hard winters which are experienced in the North. Some of the stronger sorts would grow if well looked after, and the heads where they had been grafted, protected with straw or bracken. He believed that all rose trees gradually failed every year after the second year of planting. He obtained the best roses from the newest trees, and he thought the best plan was to plant a few fresh trees every year. Many of the new roses would not do well in the neighbourhood of large towns, and it was only by experience or taking advice that they could hope to make a selection which would give the best results according to the locality where the trees were to be planted. In the Shipley district it was a waste of time and money to plant such roses as Bessie Brown, Earl of Dufferin, Alice Graham, Mildred Grant, Duchess of Portland, and Kaiserin Augusta Victoria. It was impossible to tell what a rose was like if they only had one plant of a variety, because they might have a tree that was diseased and would not grow: it was, therefore, advisable to buy three or more of one kind, and plant them close together. Amateurs were advised to start with the following varieties: Caroline Testout, Frau Karl Druschki, Captain Hayward, Mrs. John Laing, Hugh Dickson, Mrs. R. G. Sharman Crawford, Ulrich Brunner, Victor Hugo, Dean Hole, Florence Pemberton, Joseph Hill, Killarney, Lady Ashtown, La France, Madame Abel Chatenay, Madame Ravary, Mrs. W. J. Grant, or Belle Siebrecht, Viscountess Folkestone, Madame Jules Graveraux, Mrs. Myles Kennedy, Clio, Duke of Wellington, Duke of Edinburgh, Jeannie Dickson, Margaret Dickson, Tom Wood, Countess of Derby, Pharisaer, Richmond, Mrs. Theo. Roosevelt, Prince de Bulgarie, La Tosca, and Earl of Warwick.

When to Plant Roses.

The best time to order roses was October, then they would probably be to hand in November, before the bad weather set in. By ordering in good time the grower should obtain the best and strongest plants, as the nurseryman generally supplied his orders in rotation. If any shoots or roots were broken when the plants were unpacked, these should be cut off; the plants must then be put into a trench, and at once covered with soil, water being also thrown over them. Unless the roots were kept covered they would become dry and would suffer in consequence. If the ground were frozen when the plants were received from the nurseryman they should not be unpacked, but put into a cellar or outbuilding until the thaw set in. Should the plants have become dry in the meantime it would refresh them if, before planting, they were covered with soil for two or three days. The beds having been prepared, a hole should be made about 14in. square, and after 3in. of fine soil had been placed over the roots, it was advisable to tread this firmly round the plant. The same rule applied to planting climbing roses, but in this case the hole should be a little deeper, because the roots were larger, and wanted more room to grow in. The soil in which rose trees thrived best was a rich loam that felt greasy when pressed between the hands. Where this was not to be had, and the soil was very light, a little clay should be added, in addition to cow manure. If the ground was heavy clay, leaf mould and sand, with a little burnt earth or road scrapings, and horse straw manure should be mixed with it. All beds should be well drained, as the roots must not stand in water. This was very important. The site selected for a rose bed should be sheltered from high winds, not too near or under other trees, but open to the south, south-east, or south-west. If the beds were made 3ft. to 4ft. wide the gardener could get to the plants without standing on the soil. The soil should be dug 24in. deep and plenty of manure should be mixed with it; if possible, it was also advisable to place some sods upside down, at a depth of about 16in. or 18in. This should be done two or three weeks before planting, so as to allow the soil to settle. Planting could be done any time between November and the end of March. The union of the stock should go two inches below the surface of the soil, and care should be taken to spread out the roots, and not to have them crossing each other, or be all on one side of the plant. The manure should not be put on to the bare roots, and it should not be too new, but partly decayed. A handful of bone-meal thrown over the roots would do good. The care and time spent in planting each tree would be amply repaid later on. With regard to pruning it was necessary that each tree should be studied, and the knife used accordingly. One tree might be left only four inches high, another nine inches, and in other cases eighteen inches, and so on. In the North of England pruning should be done in the last week in March or the first week in April. It was always advisable to cut away all dead, weak, and unripe wood, leaving only the strong and well-matured shoots.

A hearty vote of thanks was accorded Mr. Rigg at the close of his address.

OBITUARY.

MR. C. GREENWOOD.

It is with regret we learn of the death of Mr. C. Greenwood, on November 20. Mr. Greenwood was on the staff of "The Gardener," and was well known among sweet pea enthusiasts, as he had been a member of the Executive Committee of the National Sweet Pea Society from the foundation of this body.

Chrysanthemum Baronne de Vinols.—This charming and effective little decorative Japanese chrysanthemum, known in this country as Caprice du Printemps, and largely used at all the French shows for an edging, has given rise to quite a family of sports. We recently saw in Paris a group containing them all (except the yellow one recently obtained in England). They were Miss Kathleen Thompson, M. Le Docteur Georges Barré, Madame André Boeuf, Madame Emiliennè, Surprise, M. Charles Boeuf, Madame Courbron, Ami José Barre, and Madame George Barré. With the exception of Surprise and Ami José Barré, which are white, the others are either rosy-amaranth or golden-chestnut of varying shades, but none, in our opinion, are equal to the original.—C. H. P.

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CHRISTMAS NUMBER
OF
Amateur Gardening
FOR TOWN AND COUNTRY

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WEATHER FLOWERS.—The effect of sunshine and rain on flowers. (Illustrated.)
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THE WEATHER PLANT.—Abrus precatorius nobilis.
DO PLANTS FEEL.—A proof of sensory power. (Illustrated.)
ANCIENT SUNDIALS.—The precursors of clocks.
THE GLASTONBURY THORN.—Illustrated.
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CHRISTMAS DECORATIONS for the Home.
A GARDEN OF MEMORIES.
IN A SHADY BOWER.—A pretty feature in gardens.
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NOVEL PLANT CULTURE.—Gardening without soil. (Illustrated.)
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ANSWERS TO CORRESPONDENTS.

Editorial Communications should be addressed to the Editor of the GARDENERS' MAGAZINE, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the GARDENERS' MAGAZINE, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the GARDENERS' MAGAZINE. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

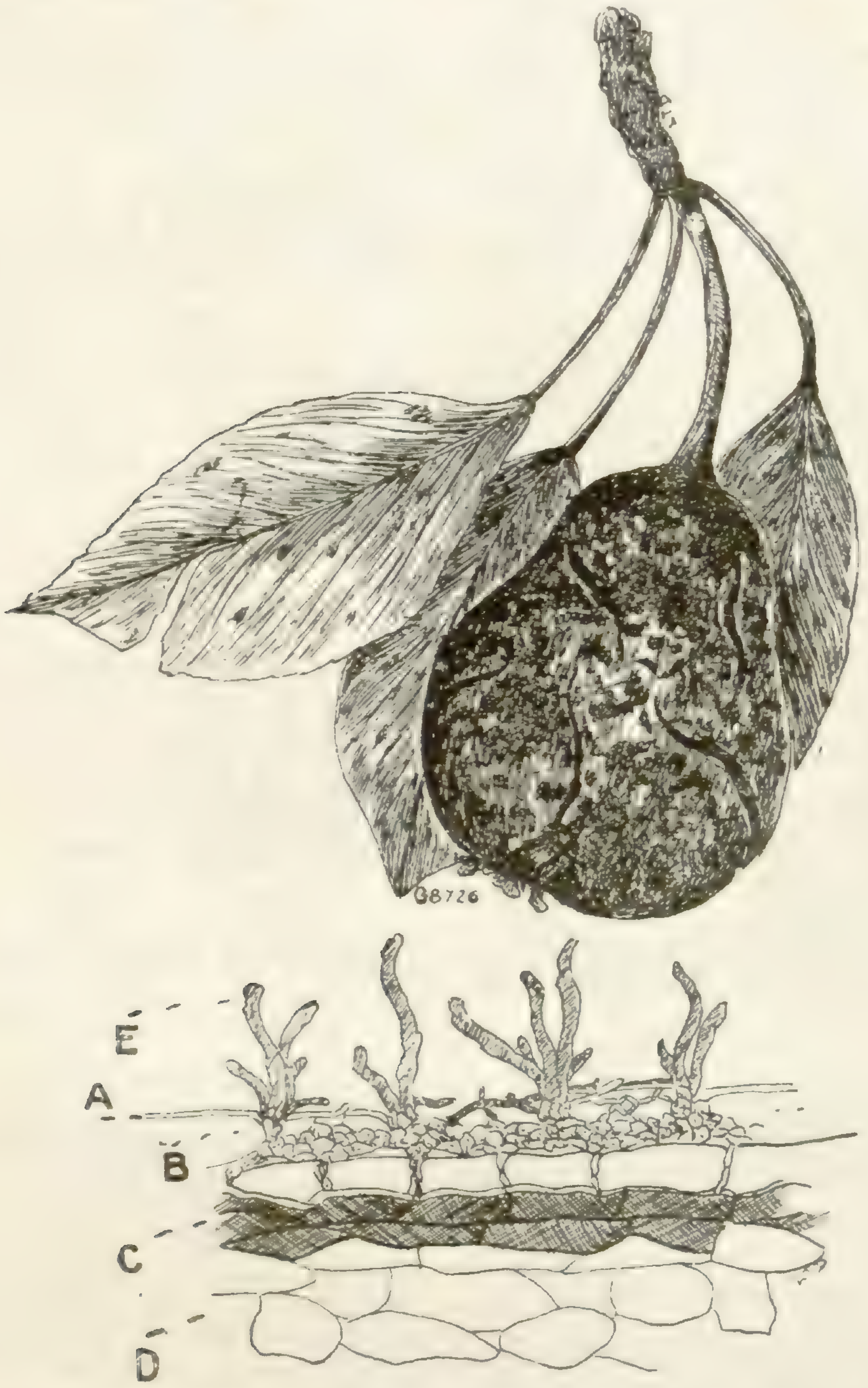
FRENCH HORTICULTURAL PAPER.—P. S., Norwood: An excellent gardening paper is "La Jardin," published at Rue de Grenelle, Paris. A good Belgian paper, in the French language, is "La Tribune Horticole," published at 43, Rue Vonck, Brussels. The address you desire is Old Market Place, Grimsby. In the matter of illustrations your best plan will be to apply to the leading photographers, or get a camera and take the views yourself. Your best method of procedure, in regard to your last question, is to advertise in these pages early in the New Year, stating experience and requirements.

MUSHROOMS. — E. R., Worcester: The mushrooms sent show a slight malformation. It would appear as though the general body of the mushroom had developed much faster than the reproductive parts or gills and almost overgrown them. At various points near the margin the gills have become free. It is extremely difficult, indeed, almost impossible, to account for these malformations, and a quick-growing, soft-tissued plant like the mushroom is specially susceptible to influence by changes of temperature, obstruction, etc. We do not think these mushrooms would prove different to the others when cooked, but as they spoil the genuine sample, it may be desirable to cut out the portion of the bed where they appear.

APPLES KEEPING BADLY.—E. R., Worcester: On almost every side one hears complaints respecting the manner in which apples are keeping this season. The weather has, we believe, had the most to do with the rapid ripening and decay of apples and pears. We had a beautiful autumn, following on a period of dry weather that was itself succeeded by abundance of rain. The rain, coupled with mild bright days, caused an increased flow of sap, a flow of unusual strength for so late a date; this caused fruits to swell up wonderfully, but the new soft tissue thus produced was not firm enough to keep well into or through the winter. The little spots are most likely but indications of a fungus that quite naturally puts in an appearance when vegetable matter begins to decay.

FUNGUS GROWTH ON SMALL BRANCH.—R. H. W., Holmwood: The specimen was rather badly damaged during transit, but we feel quite certain it represented the Stereum Wood-rot (Stereum hirsutum), a fungus that is very destructive to both live and dead wood. This fungus is most common on dead wood, but it was proved, many years ago, that all too frequently it attacks live wood, entering by means of wounds made in the tree, and developing its mycelium to the destruction of the branch, and probably of the entire tree. So freely does the mycelium develop that once the fungus has obtained a real hold, it is practically impossible to save the host plant. The only remedy is to cut back from the infected portion until sound, clean wood is found, and then, making a clean cut, wash the wound with paraffin, and afterwards paint it over with tar. The mycelium is perennial, hence if ever so small a piece remains in the tree it will develop, and presently produce the mushroom-like processes that represent its fruiting stage. As this fungus is almost certain to appear on dead wood, the latter should be cleared away. Further, wounds on trees, whether accidental or intentional, should be tarred over, and in the case of accidental wounds the damaged portion should be cut back to clean, sound wood before being dressed. "A Text Book of Plant Diseases," by Mr. G. Massee (Duckworth and Co.); and "Fungoid Pests of Cultivated Plants," by Dr. M. C. Cooke (Royal Horticultural Society), are both useful works. The last-mentioned has numerous illustrations in colours, while the former contains small engravings.

CRACKED AND SHRIVELLED PEARS.—H. W. G., Thorp Asch: The specimen fruits sent give ample evidence of a very bad attack of Pear Scab (Fusicladium pirinum), a disease that does an enormous amount of damage in some parts of the country, and, unfortunately, appears to be spreading. The accompanying illustration serves to show the working of the fungus, though the fruit displayed does not show such deep cracks as in the case of the specimens sent. If the fungus is to be eradicated one must be prepared to take a great deal of trouble, and unless this trouble is taken the trees had better be cut down at once and burned, so that others may not become infected. It is quite certain that unless strong measures are taken the fruit crops produced will be useless, and therefore the trees will be uselessly occupying valuable space. Fallen leaves should be removed and burned. We strongly believe in winter spraying with the caustic soda and potash wash, not because it will itself arrest the fungus, but because it will effectually cleanse the tree and thus enable the grower to detect diseased branches; these latter should be cut out and burned. During the winter, after pruning, and while the trees are quite dormant, they should be dressed with an iron-sulphate solution, made by pouring one pint of sulphuric acid on to 25lb. of iron sulphate, in a wooden vessel, and then, by degrees, adding 50 gallons of water; these proportions must be maintained whatever the quantities used. Stems and branches must be thoroughly wetted with this solution, but the application must be made before the buds commence to swell. The next proceeding is to watch the swelling flower buds, and just as these begin to open spray the trees with a dilute form of Bordeaux mixture; give another spraying directly the petals have fallen, and yet another when the fruits are about the size of small marbles.



PEAR SCAB—INFECTED FRUIT AND SECTION THROUGH SCAB SPOT.

A, Cuticle; B, Epidermis; C, Corky area formed by cells below diseased area; D, Pulp cells; E, Erect threads of fungus.

RENOVATING OLD ORCHARD.—A., Yorks: It appears to us that you are retaining a great deal too much new growth, and pruning this back too severely. If we judge aright, your method will only increase the evil of crowded branches, because hard pruning in such case will induce a quantity of growths to start, whereas you need comparatively few growths for the purpose of providing thinly-disposed branches. In the case of the big plums and damsons some amount of thinning may be practised, but any attempt to lop the trees for the purpose of reducing their height and inducing new branches to form lower down, will almost certainly be followed by gumming and canker. Your letter raises matters of the greatest importance to yourself, and we could not properly advise you unless we saw the orchard and the condition of the trees. As this is practically impossible, we suggest that you communicate with the County Council authorities, and ask them to send a horticultural instructor to advise you on the spot. It not seldom happens that the authorities are glad of such an opportunity as your orchard appears to afford, of holding a public demonstration to which fruit growers in the district would be invited.

NAMES OF PLANTS.

F. E. G., Aylesbury.—1, Osmanthus illicifolius; 2, Pyrus Aria.

S. G., Rochdale.—1, Odontoglossum crispum, a good form; 2, Saintpaulia ionantha; 3, Linum trigynum.

B. P., Carlisle. — 1, Euonymus radicans variegata; 2, Adiantum cuneatum grandiceps; 3, Luculia gratissima.

G. C. F., Richmond.—1, Pteris tremula; 2, Nothochlæna sinuata; 3, Selaginella apoda; 4, Adiantum Mariesi; 5, Gymnogramma Mathewsi; 6, Woodwardia radicans.

METEOROLOGICAL OBSERVATIONS.

TAKEN BY THE R.H.S. GARDENS AT WISLEY, SURREY.

Height above Sea-level, 150 feet.

Date. 1908. November 22 to November 28.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 22—Sunday	—	56	54	57	43
,, 23—Monday	5 0	49	44	51	46
,, 24—Tuesday ...	—	46	43	54	34
,, 25—Wednesday.	6 20	44	41	50	43
,, 26—Thursday ...	0 10	47	46	53	41
,, 27—Friday	5 35	48	47	52	43
,, 28—Saturday ...	0 25	49	47	53	44
Means	2 30	48	46	53	42

Date. 1908. November 22 to November 28.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Nov. 22—Sunday	—	46	47	50	38
,, 23—Monday	—	46	48	50	41
,, 24—Tuesday ...	0·01	44	47	50	28
,, 25—Wednesday.	—	46	47	49	37
,, 26—Thursday ..	—	45	47	49	36
,, 27—Friday	—	45	47	49	35
,, 28—Saturday ...	—	45	47	49	35
Means ...	(total) 0·01	45	47	49	36

TRADE NOTE.

A new company has been formed under the name of Max, Limited, to take over the sale of the hose couplings, water distributors, etc., the inventions of Mr. W. Claude Johnson. Mr. Louis Burn has been appointed managing director, and in consequence is discontinuing his business as consulting engineer. The offices and works of the company are at Westcombe Hill, S.E.

FORTHCOMING ENGAGEMENTS.

TUESDAY, December 8.—Royal Horticultural Society, Meeting of Floral, Fruit, and Orchid Committees, noon; General Meeting and Lecture, 3 p.m.; Scientific Committee, 4 p.m.

WEDNESDAY, December 9.—Perpetual-flowering Carnation Society, Exhibition at the Royal Horticultural Hall.

Royal Society of Arts Meeting, 8 p.m.

Books as Christmas Presents.—In the Christmas Catalogue issued by Messrs. W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London, will be found a wide choice of suitable books for presentation to friends whose interests lie in the garden and greenhouse, or among poultry, live stock, or other rural pursuits. A full description of the contents of each book is given in the catalogue, a copy of which will be sent by post to any reader on application.

CATALOGUES RECEIVED.

HENRY DREW, LONGWORTH, FARINGDON, BERKS.—A catalogue of roses, with the best of the newer varieties set out in large type.

DICKSONS, CHESTER.—A particularly useful and interesting catalogue of forest and ornamental trees, covert plants, and climbers.

JAS. COCKER AND SONS, ABERDEEN.—A substantial catalogue of Scottish-grown roses, herbaceous plants, fruit, and forest trees, etc.

WM. WISEMAN, FORRES, SCOTLAND.—A closely printed list of roses, forest trees, and hardy plants.

DOBIE AND MASON, OAK STREET, MANCHESTER.—A catalogue of bulbs and horticultural sundries.

JOHN JEFFERIES AND SON, CIRENCESTER.—This illustrated catalogue contains good lists of roses, fruits, carnations, and trees and shrubs.

JAS. MASON, CRAWSHAY ROAD, BRIXTON.—A concise list of bulbs and seeds.

P. BERNAIX AND SON, VILLEURBANNE, NEAR LYONS.—This is an extensive list of roses, well arranged, illustrated, and in English.

A. BERNAIX, VILLEURBANNE, NEAR LYONS.—A very full catalogue of roses, with illustrations.

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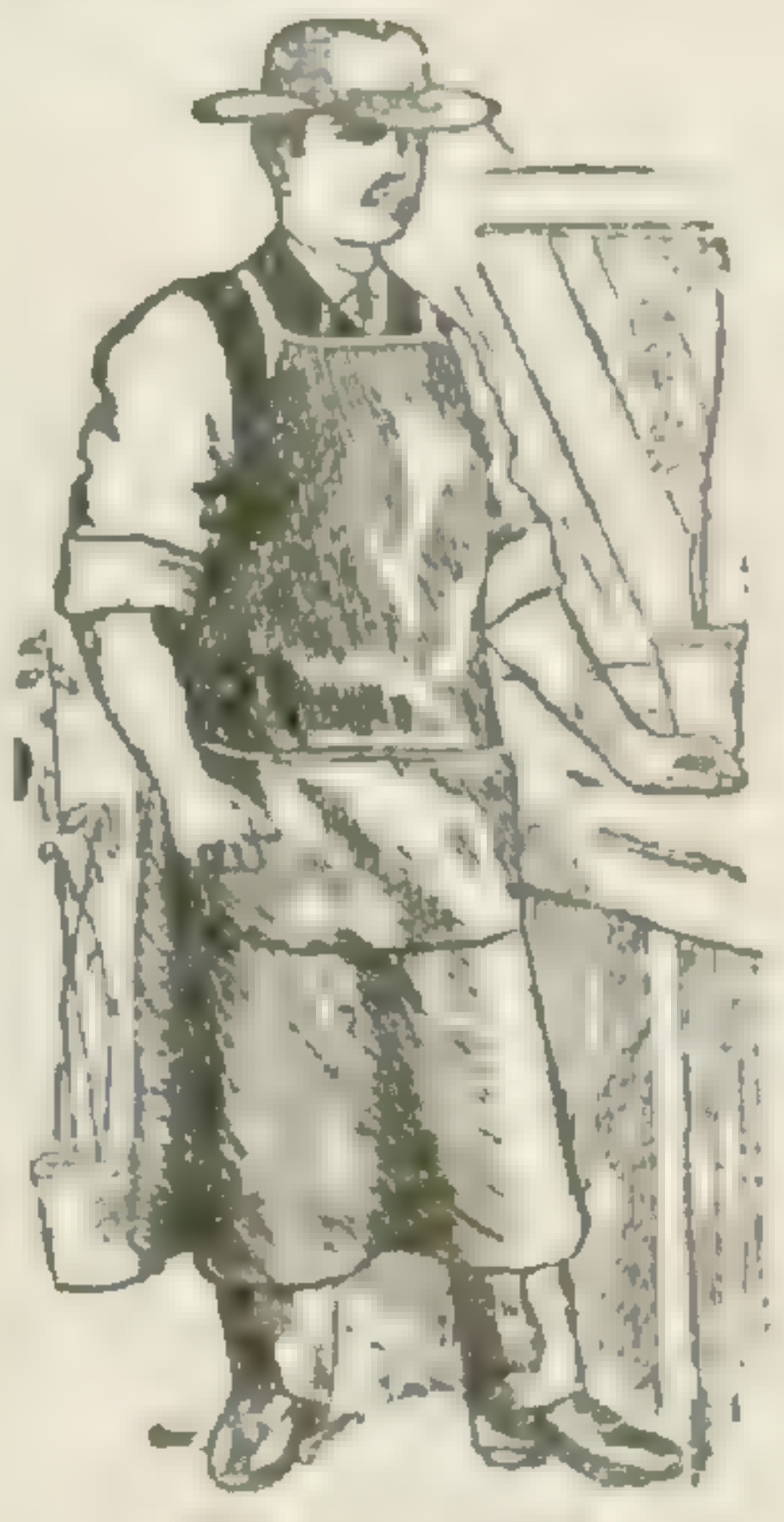

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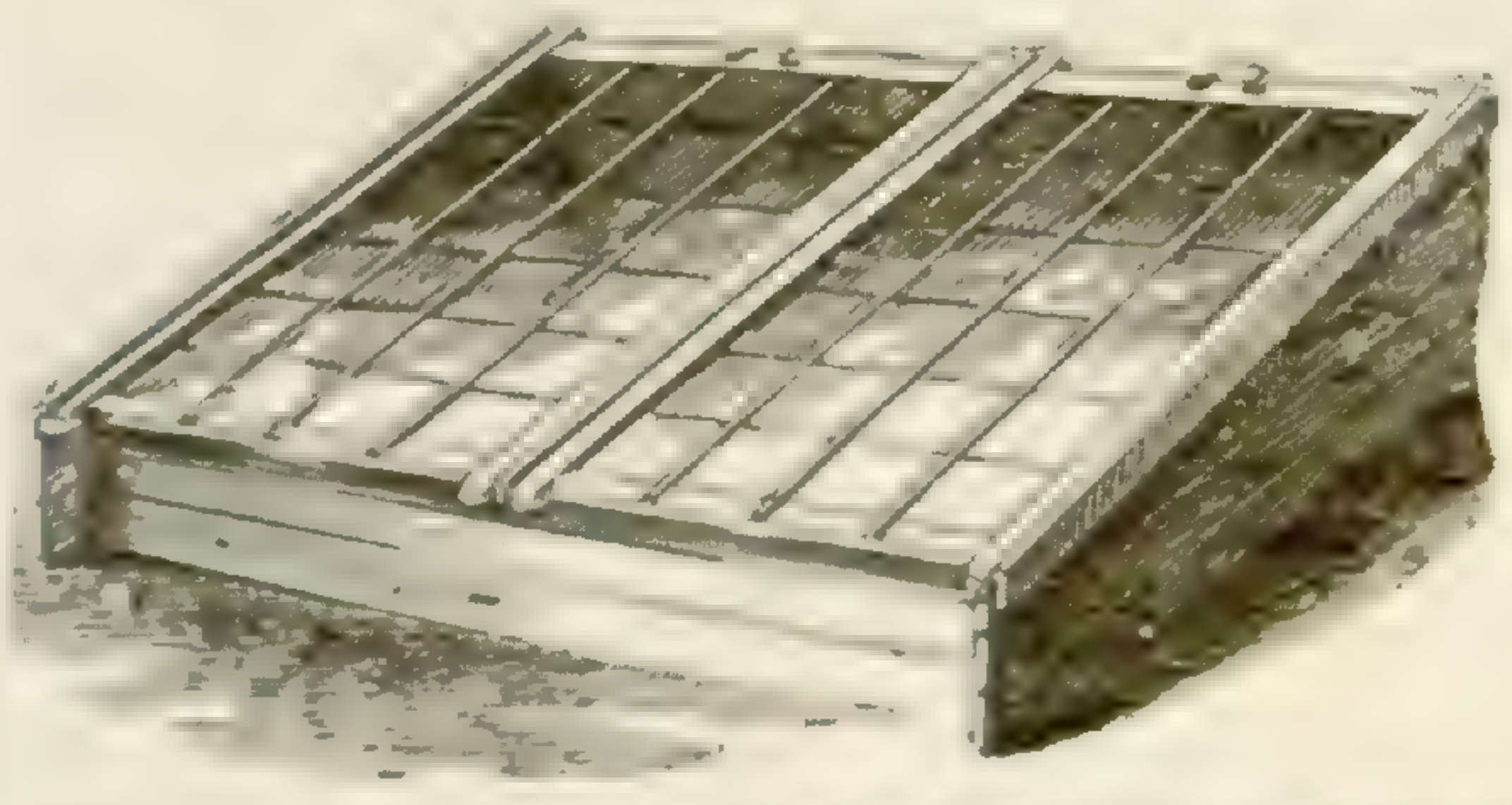

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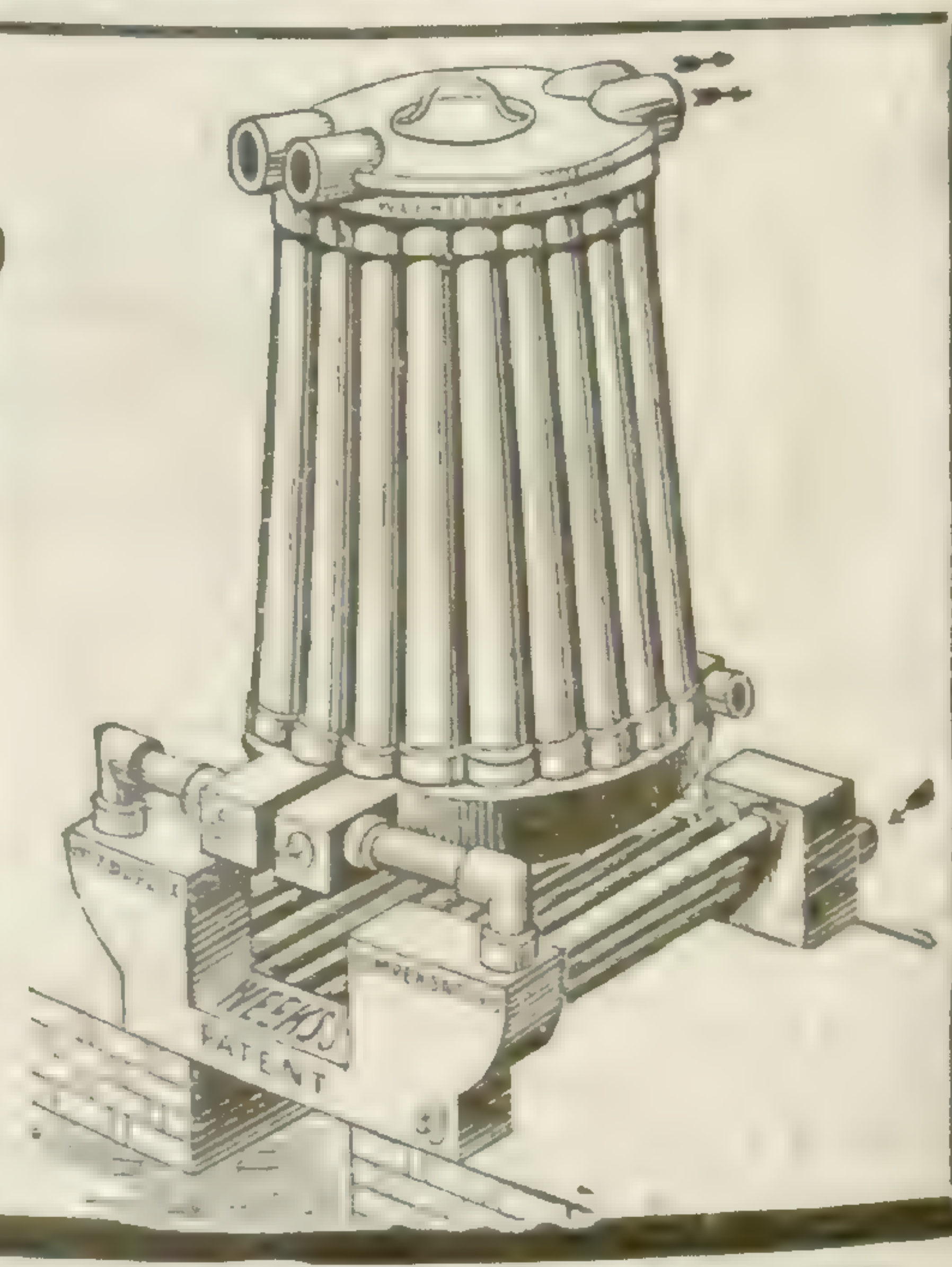

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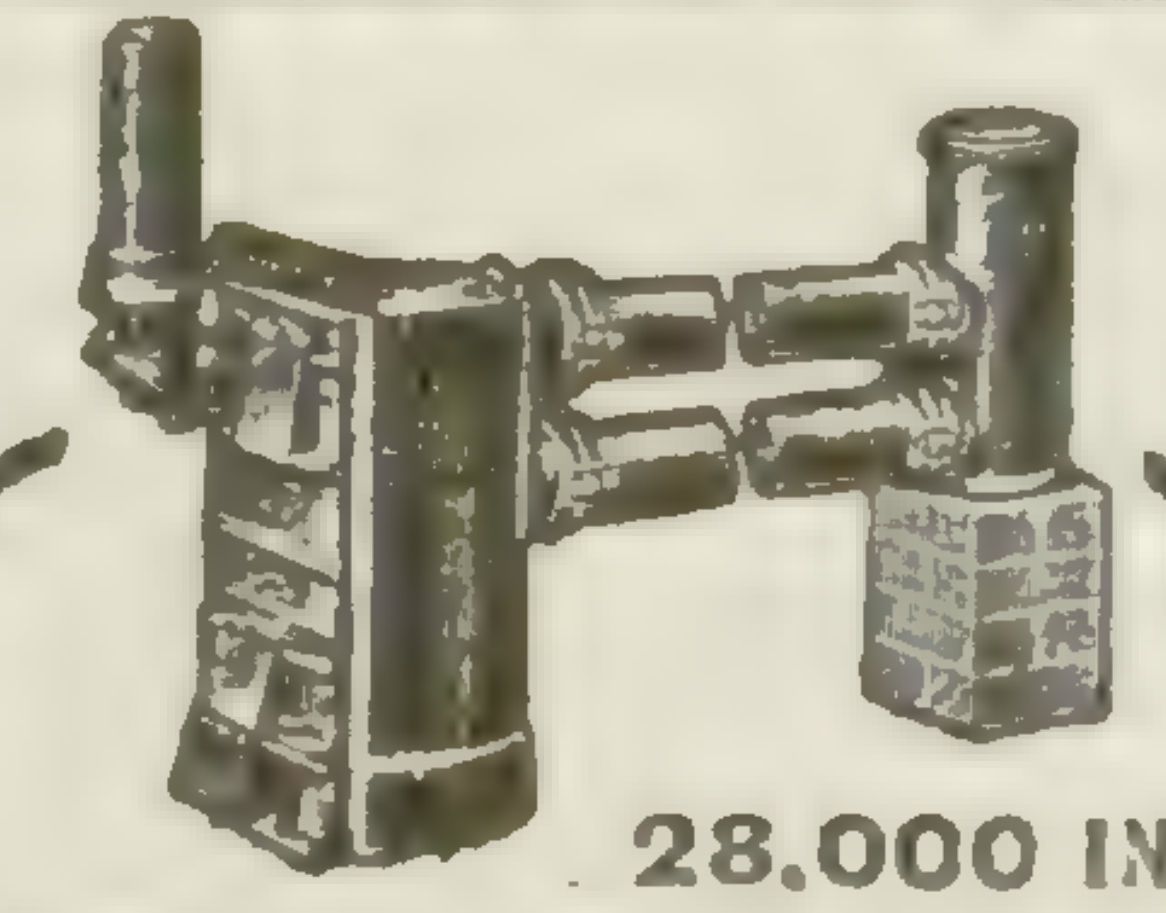

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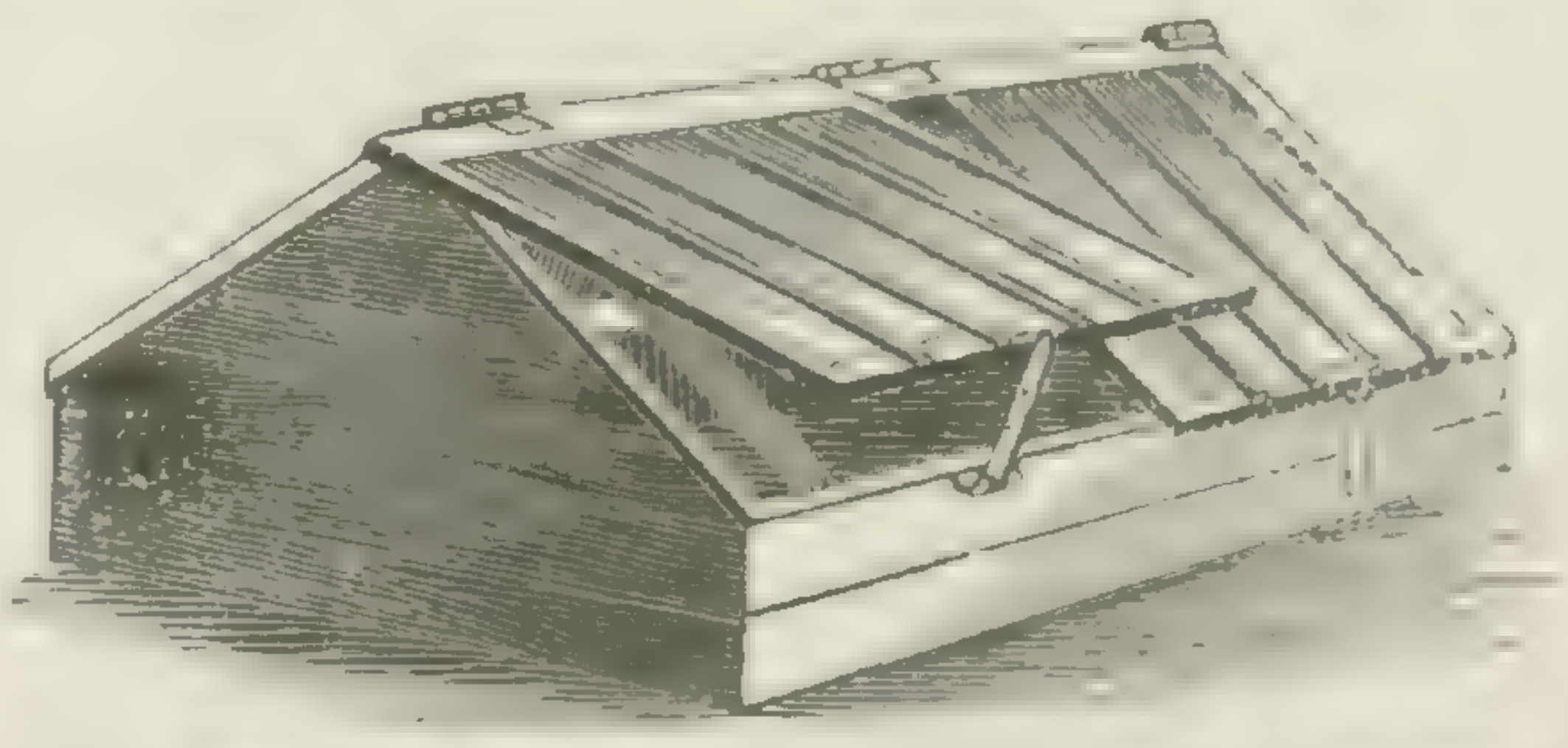

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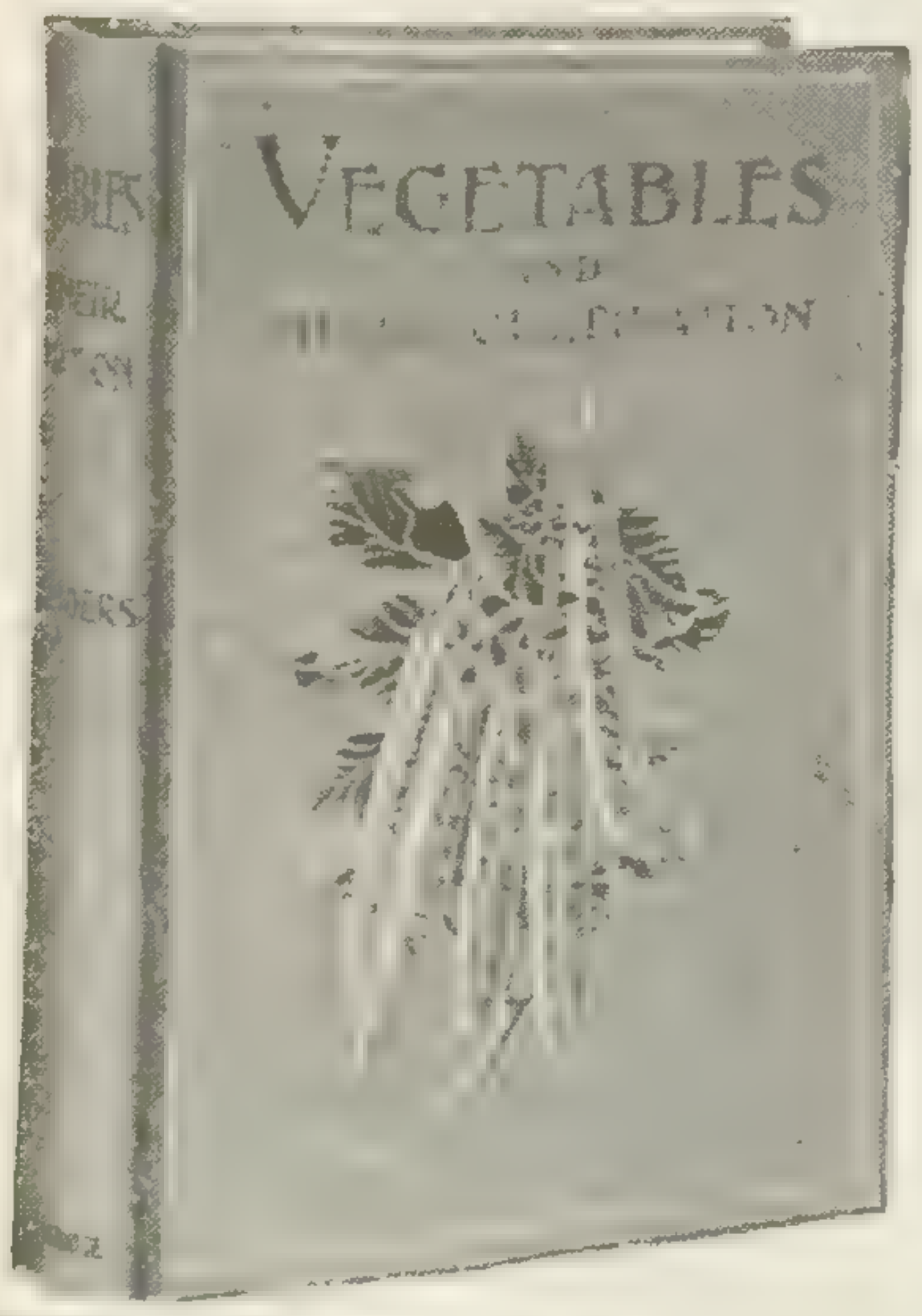

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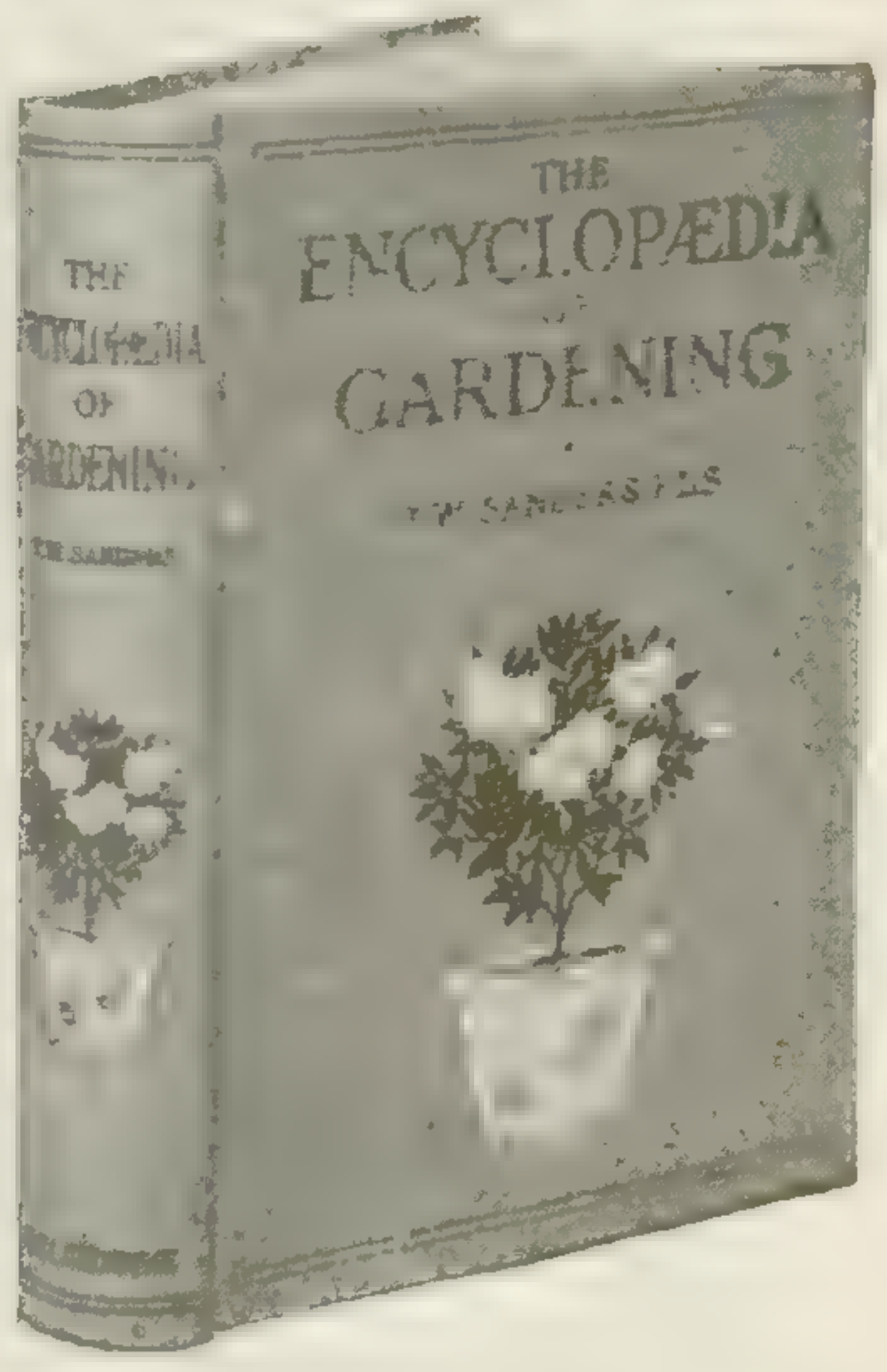

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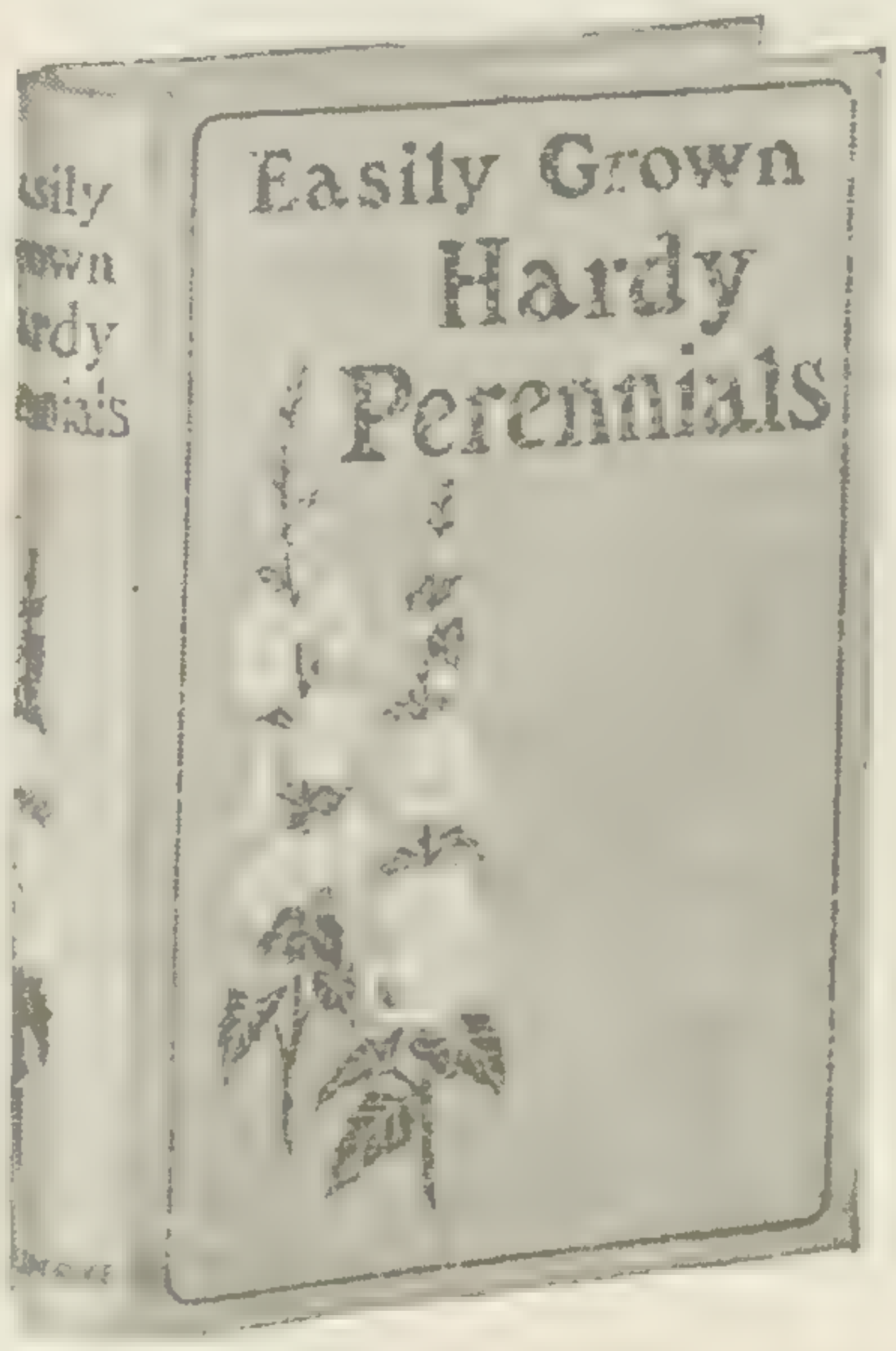

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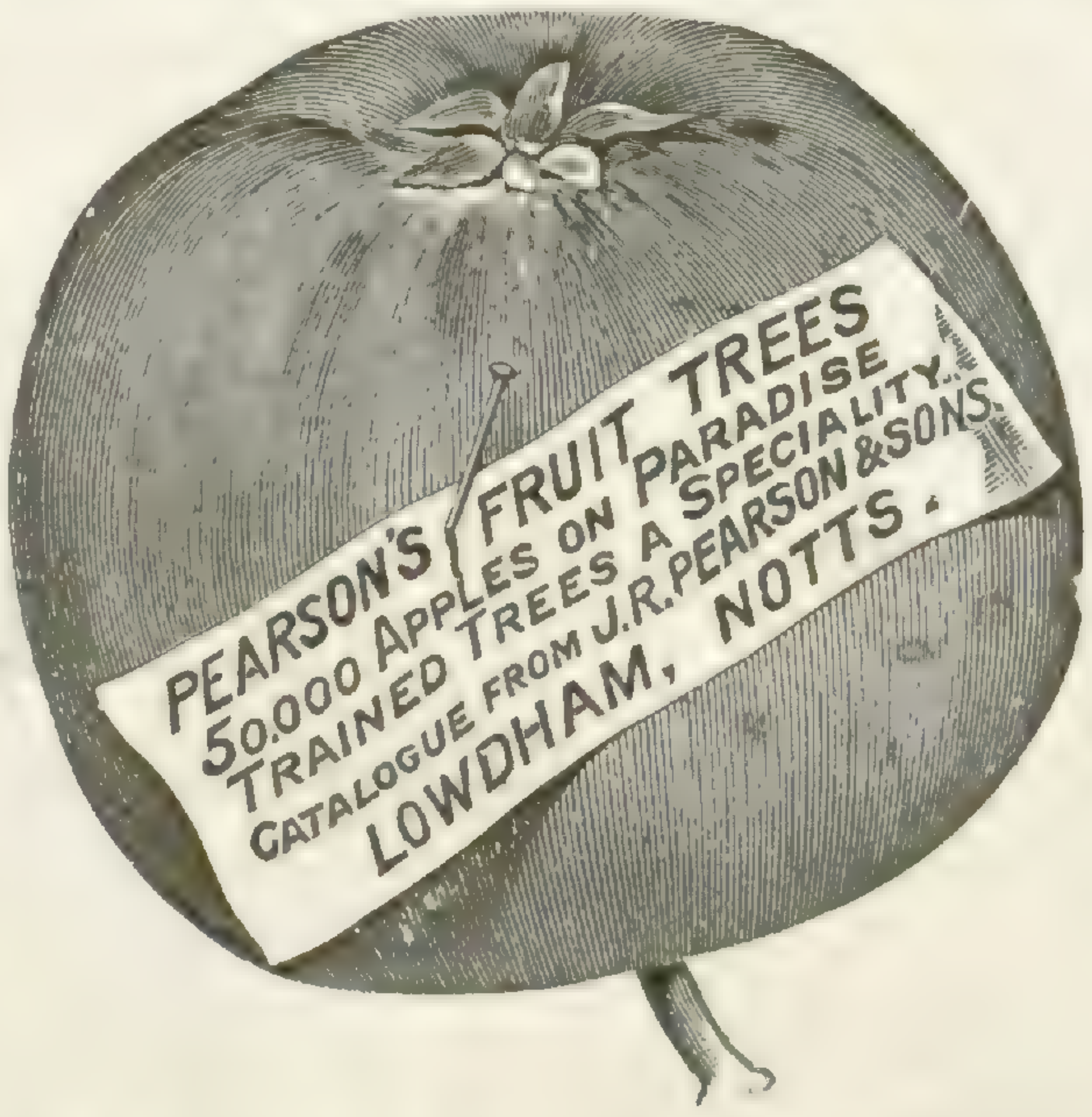
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VOL. LI.—No. 2,876. SATURDAY, DECEMBER 12, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Exotics.

The wonderful development of facilities for plant collection and transport which has taken place practically within the last half-century, has had for its results the introduction into Great Britain of an enormous number of species of exotic plants—that is, plants which do not occur naturally in these islands. These exotics consist of several classes, hardy, half-hardy, and tender, but it must not be assumed that the first two classes necessarily originate in cold and cool regions. So far, at any rate, as these are concerned, the plants may be natives of the torrid zone, and owe their resistance or partial resistance to cold to the simple reason that their native habitats are at such an elevation on tropical mountain ranges that their environment is as cool or as cold as in temperate or subarctic regions. The tender class of plants are, however, naturally inhabitants of warm regions alone since they could not exist elsewhere. In addition, too, to the factor of elevation, many hardy and half-hardy exotics are natives of warm and cold countries outside Great Britain, and owe their greater or less resistance to frost to the natural climatal conditions prevailing therein. In addition to temperature, the prevalence of drought or humidity also plays a material part in determining the distribution of plants, as does also the character of the seasons. Thus, while in this country the periods of rest and of active growth are mainly determined by temperature, in some countries long spells of absolute drought preclude the possibility of growth during their continuance, and the plants native to such regions adapt themselves accordingly, sleeping when the temperature is highest, and waking up when it falls and the rainy season sets in. It is thus seen that the term "exotic" is really no guide to the cultivator, and that for successful cultivation it is essential to know much more about the environmental conditions than is always at our command. A vast number of exotic plants take quite kindly to our climatal conditions in the open, these possibly not varying appreciably from those obtaining in their native haunts; others, equally immune from frost, are apt to perish from the very lack of those frosty conditions which mean a winter protection of snow, for which is too often substituted here an alternation of frost and thaw, of freezing and thawing, which saps their vitality and eventually kills them. This particularly applies to many alpine plants, and the remedy, as we may see at Kew, is simply placing a pane of glass over the susceptible plants as a substitute for the normal protection of the snow, and a shield from superabundant wet. One great need of many exotics is abundant sunshine, and as most of our garden bulbs are of exotic origin from lands lit by baking sunshine, the need for the fullest possible exposure is seen at once in order to enable the new bulb to mature and ripen properly. As regards hardy or half-hardy introductions from tropical countries, many have been lost by warm treatment, given on the assumption that plants from such and such a country must need it, ignoring the possible fact that there they grow high up on the mountain sides, many thousands of feet above the hot plains at the sea level, and are thus exposed to the same conditions as on the European Alps near the snow line. It has happened repeatedly that plants apparently killed by wrong treatment due to such ignorance have revived and flourished when accidentally thrown out into the open, and thus given a chance of resuscitation by restoration to their natural coolness. Many plants from regions of alternate hot, droughty and rainy periods, perish when impelled to continued growth by constant watering, they absolutely need a dry season, and the rest it involves, and thus, though tended with the utmost care, die from mistaken kindness bred of ignorance of their real needs. The earth's surface is so diversified, its soils are of such varied character, and the local climatal conditions differ so greatly, that plants evolved under such complex conditions are diverse in an equal degree, and the most successful cultivator is consequently he who best grasps their individual requirements and conforms to them accordingly.

MR. GEORGE W. COOK.
Hon. Treasurer of the National Rose Society.

Mr. George W. Cook, whose portrait we have much satisfaction in giving in this issue, has, during the past twenty years or so, occupied a prominent position among amateur rosarians, and his successes have been all the more remarkable from the fact that for a considerable part of the time he has grown his roses well within a radius of eight miles from Charing Cross. During the eleven or twelve years that Mr. Cook resided at Torrington Park, North Finchley, he was so successful in the production of exhibition roses that he might well have been regarded as a splendid example of what might be accomplished under conditions not specially favourable to rose growing, by well directed effort, perseverance, patience, and close attention to details. Of late years Mr. Cook has resided some distance farther from London, and his roses, favoured by a greater abundance of light and a purer atmosphere, have attained to a much higher state of development, and proved to demonstration that twenty years of rose growing has in no way abated his enthusiasm and love for his favourite flower. How many prizes for roses Mr. Cook has won we are not able to say, but we know that they may be reckoned by the hundred, and that by far the larger proportion of the awards have been firsts. Mr. Cook has not only given unremitting attention to his roses, and won a large number of prizes at the National and other exhibitions, but he has taken a share, and a substantial one, in the management of the National Rose Society. Long a member of the General Committee, Mr. Cook has for several years been one of the auditors, and has in consequence an intimate acquaintance with the society's finances. Owing to this fact, and the high estimation in which he is held by his colleagues, the members of the General Committee at once turned to Mr. Cook when the treasurership became vacant through the resignation of Mr. Herbert Molyneux. The committee unanimously invited him to allow his name to be placed on the house list of officers and members of committee, and after some pressure assent to this being done was obtained. That Mr. Cook should have hesitated is not surprising, for the growth of the society has enormously increased the duties of the treasurer, and as so well known to his many friends, he occupies a high position in the legal profession. Mr. Cook, we would add, shows his interest in gardening in other directions, as evidenced by the fact that he has for several years past been chairman of the committee of the National Amateur Gardeners' Association.

Prize Roses in the Bagatelle Gardens.—We have already acquainted our readers with the interesting trials of new roses held this season in the Bagatelle Gardens Paris, where varieties have been grown and judged from time to time. We have already stated that Rhea Reid, shown by the E. G. Hill Company, of Richmond, U.S.A., gained the grand gold medal offered by the City of Paris for the best rose; this is a tea rose, and a seedling from American Beauty. We now add that the premier prize, offered by the Minister of Agriculture, was won by Messrs. A. Dickson and Sons, Newtownards, with Dorothy Page Roberts. The premier prize offered by the National Horticultural Society of France, was won by Messrs. Soupert and Notting, with Madame Segond Weber, a tea-scented rose obtained by crossing Antoine Rivoire with Souvenir de Victor Hugo. A second prize medal, offered by the Rose Section of the National Horticultural Society of France, was won by Messrs. William Paul and Son, Waltham Cross, with Mrs. Dudley Cross, a variety somewhat like Marie Van Houtte. Another second prize, given by the French Rose Society, fell to M. Peter Lambert, Treves, for Frau Oberhofgærtner Singer, a H.T. derived from Jules Margottin crossed with Madame Eugenie Boullet.

Flowering Trees and Shrubs.—Mr. George Gordon, V.M.H., will give a lecture on "Flowering Trees and Shrubs" before the Royal Botanic Society on Thursday, December 17, at 4 p.m. The lecture. to be delivered in the club room at the society's gardens, Regent's Park, will be freely illustrated by lantern views.

Foreign Fruits shared to the full in the decline in the imports that was so marked in November. In no corresponding month of the past twenty years have the decreases been so general as in the month that is just passed. Indeed, the only fruits that were imported in increased quantities were lemons and pears. The imports of apples aggregated 616,210 cwt., of the value of £364,716, or a decrease in quantity of 174,687 cwt., and in value of £104,678. In November, 1907, the imports of apricots and peaches were 635 cwt., of the value of £1,368, but this year they were nil. Of bananas the imports were 414,432 bunches, of the value of £121,965, or a decrease in number of 81,831 bunches, and in value of £18,951. Grapes show a decrease of 128,299 cwt., of the value of £107,110, the total imports having been 93,188 cwt., of the value of £97,674. Pears, as already intimated, were imported in increased quantities, the total being 48,393 cwt., of the value of £40,927, as compared with 31,805 cwt., of the value of £28,756, in the corresponding month of last year. Unenumerated fruits dropped from 12,152 cwt., of the value of £18,408, in November, 1907, to 9,973 cwt., of the value of £15,666, last month. The total value of the fruit imports in November was £9,389,069, or a decrease of £360,138.

A Floral Christmas Number.—Truly there is no dearth of interest for lovers of things floral this season, and we can heartily welcome the Christmas Number of our popular contemporary, "Amateur Gardening," issued this week. Herein we find beautiful pictures of home, garden, and sylvan scenes in abundance. And not only are we provided with a wealth of charming pictures in this issue, but also find much food for thought and reflection in its literary contents. Many of the mysteries of Nature in the vegetable kingdom are unfolded in an interesting way, and a vast amount of readable information is imparted in the numerous essays. A double-page coloured plate is a beautifully executed picture of a maiden in an old-time garden, and adds materially to the attractiveness of the number. The price is sixpence, the cost inadequately representing the value of the issue.

Weather in November.—The past month was remarkable for its equable temperature and a large amount of sunshine, and may be regarded as one of the most pleasant Novembers within recent years. The mean maximum temperature was 53 degrees, or 3.4 degrees above the average, and the mean minima 42.2 degrees, or 3.8 degrees above the average. The highest temperature recorded in London was 59 degrees, and the lowest 30 degrees. The sunshine registered in London during the month was 46.2 hours, or 19 hours above the average.

Seakale Disease.—Mr. E. S. Salmon, F.L.S., states, in his report on economic mycology, that in the autumn of 1906 serious damage to various kitchen garden crops was noticed in the vegetable department of Wye College. This damage proved to be due to the attacks of the fungus, Rhizoctonia violacea, a root or stem parasite, capable of attacking a wide range of plants. The disease had not previously been noticed in the gardens, but on lifting the crops it was found that the fungus had attacked carrots and parsnips, had done considerable damage to salsify, and had so seriously injured the seakale as to render the crowns required for the next year's forcing useless to the extent of about one-half the crop. The fungus is seen as a felted mass of violet spawn or mycelium, adhering closely to the surface of the root, and forming purplish patches. Scattered about over the spawn are usually to be found numerous small violet bodies. These are called sclerotia, and are composed throughout of densely interwoven hyphæ, which pass into the tissue of the host plant. Decay of the tissues ultimately sets in over the affected areas, and in severe cases of attack a large area, if not the whole, rots away. So severe were the effects of the disease on the seakale that Mr. Salmon decided to try various remedial measures during the season of 1907. The seakale bed was divided into eleven parts, two being control plots, and solutions of copper sulphate, iron sulphate, mercuric chloride, phenol (carbolic acid), and formalin, in two strengths, and petroleum, and sulphur and quicklime applied in a dried state. The disease was prevalent in the control plots, and also in those that were treated, with the exception of the one treated with carbolic acid. The plot measured nineteen by nine feet, and was treated with forty gallons of solution, which consisted of equal parts of carbolic acid and water. The crop on this plot is described as having been "heavier and better in every way than on the other plots," and the roots quite free from disease.

Nitrogen-fixing Bacteria. In a lecture entitled "Plants and their Allies," delivered on Thursday last before the Royal Botanic Society, by Professor Bottomley, of King's College, the lecturer referred at length to the bacteria on the roots of leguminosæ, and also told how the alder and some other plants, few in number, had somewhat similar nodules, but of different form, on their roots. He claimed that certain crops had been improved by the inoculation of the soil with nitrogen-fixing bacteria, but urged that it was yet too early to advocate soil inoculation as a commercial advantage, and asked for the help of gardeners and farmers, who could experiment in a manner that would yield some definite results, and help to decide for or against the use of bacteria solutions on commercial lines.

Vegetable Imports in November last show a material falling off, as compared with the corresponding month of last year. The imports of onions aggregated 620,202 bushels, of the value of £101,731, and these figures are of interest as showing that while there was a decrease in quantity of 148,711 bushels, there was an increase in value of £18,173. Potato imports dropped from 1,422,471 cwt., of the value of £262,516, in November, 1907, to 127,086 cwt., of the value of £18,702, last month, or a decrease in quantity of 1,295,385 cwt., and in value of £243,814. Germany only sent 989 cwt., against 279,457 cwt.; France, 113,532 cwt., against 295,621 cwt.; and other countries, 12,366 cwt., against 847,387 cwt. in the corresponding month of last year. In the imports of tomatoes there was an increase in quantity of 7,670 cwt., and in value of £4,337, the total having been 74,292 cwt., of the value of £58,646. The aggregate value of unenumerated vegetables was £19,559, or an increase of £811

Peloria in Cattleya labiata.—In Mr. Gurney Wilson's collection at Hayward's Heath there recently flowered a very perfect specimen of a peloric Cattleya labiata in which the perianth was perfectly regular, as is not unusual, and in addition there were three properly developed stamens adnate to the column. Mr. Wilson also has a dimerous specimen of Cypripedium insigne, which is not only a very perfect specimen of this rather common aberration, but is interesting on account of the fact that this is the second successive year in which the aberration has occurred in the plant.

Bipalium Kewense at Wisley.—This curious worm-eating worm has been found at Wisley, and a specimen was exhibited by Mr. Chittenden at the recent meeting of the R.H.S. Scientific Committee, obtained from the propagating pits at Wisley. The worms are of a dark greyish colour, and measure up to about 15in. in length. They are found living among the crocks at the bottom of the pots. They feed voraciously upon earthworms, and are, no doubt, capable, by reason of their shape and size, of pursuing them into their burrows. The animal, first noticed at Kew, is said to occur in hothouses throughout the world.

TAKING CHRYSANTHEMUM CUTTINGS.

No sooner are the exhibitions over than operations for the next season commence. In fact, one successful cultivator of specimen plants—and they are becoming rare—inserts cuttings before the shows take place, because he sells his plants at the shows each year to save the trouble of taking them home again. He thus secures an early start for this particular method of culture. It is wise, too, to propagate early where the plants need to make extra quick growth, as is the case where each plant carries as many as from fifty to one hundred specimen blooms. Chrysanthemum cultivators of experience know that growth is best when not hurried by artificial warmth. The chrysanthemum is a hardy subject, and this should be remembered.

Occasionally we heard of some remarkable achievements in the production of fine blooms upon plants struck from cuttings in April. I need hardly say there is an exception to every rule, but, speaking broadly, early propagation has its advantages, especially in the fact that it allows the plants a long season of steady uninterrupted growth, thus laying the foundation for sturdy development of root, leaf, and stem.

A change of cuttings cannot be other than an advantage in the same way that it is in potatoes and cereals. Experience has taught present-day cultivators that cuttings exchanged between the southern counties (like Hampshire) and Scotland produce the best results, and this method is largely being acted upon.

Even for the sake of convenience in the utilisation of space early propagation is an advantage, as the retention of old stools in large pots for an extra six weeks means some inconvenience, and very often, too, if the precaution is not taken of thinning the weakly growths where they are numerous, many cuttings are spoiled by overcrowding. Experience has taught that vigorous cuttings most readily grow into robust plants. A good foundation must be secured, and thus early propagation with good, stiff, sturdy cuttings is an advantage that cannot be overrated.

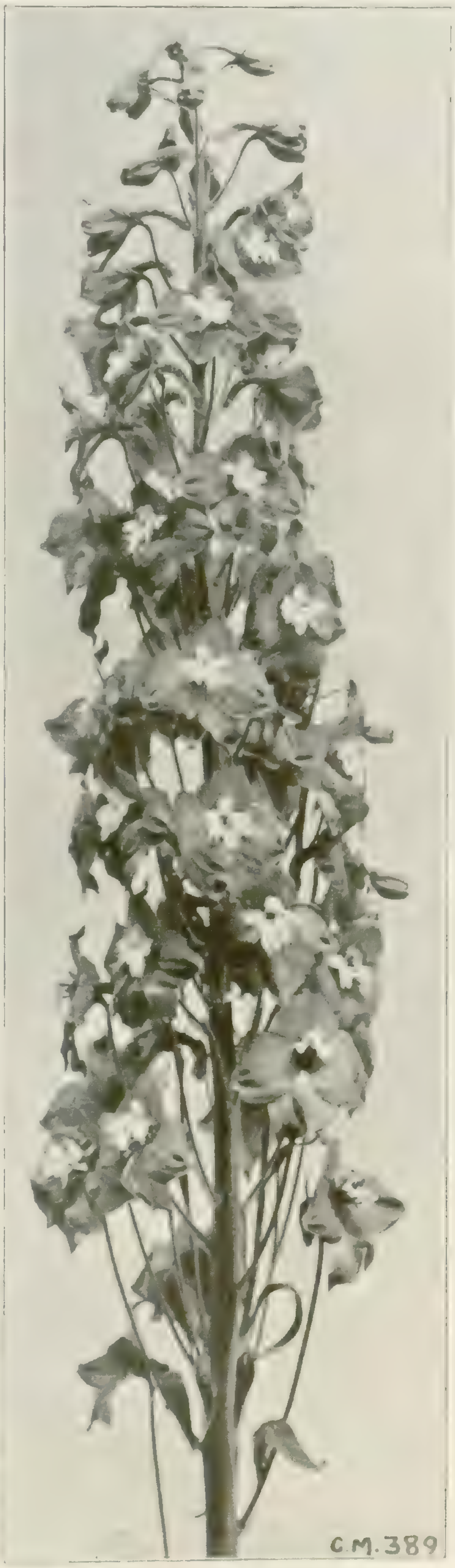
The "one cutting in a pot" method of propagation has much to recommend it, although roots are as quickly formed where cuttings are inserted several in one pot, or, indeed, not in a pot at all, but in boxes, or an open frame. When rooted singly in small pots there is no fear of a check to the growth by the removal of soil from its roots in the act of disentanglement, as is the case where they are growing several together. Clean pots, with a single crock in each, a small quantity of rough material at the bottom, and a sandy compost of loam and leaf-mould, are all that is necessary for the first stage. Firmly inserted in the pots, and kept pretty close for two or three weeks in a cool frame or under handlights in a cool house, the cuttings quickly make roots, and then should have abundance of air and a light position near the glass, still in a cool house, to be removed eventually to a cold frame or pit.

E. Molyneux.

"CHRYSANTHEMUMS AND HOW TO GROW THEM FOR EXHIBITION," by J. B. Wroe. Fifth Edition, revised to January, 1908, and including the new varieties.—Full details on timing and stopping for Northern, Southern, and Midland growers, selections of the best varieties, illustrated instructions on taking the buds, cuttings, staging, etc. Prices 1s. net, by post 1s. 2d.; cloth, 1s. 6d., by post 1s. 8d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

CATTLEYA DOWIANA AUREA

This is one of the floral gems of the autumn season. Originally introduced in 1864 as Cattleya Dowiana this orchid has now become established as a distinct species, at least it is now classed separately from C. Dowiana in all the leading trade catalogues. This autumn I have specially inquired from two or three well-known authorities what the difference is between C. aurea and C. Dowiana, and the replies have been rather vague, and to the effect that C. Dowiana has rather more yellow in the flower and is not so finely barred and striped as C. aurea.



DELPHINIUM CAMBYSES.
Flowers deep rich blue, white centre.

We find the period of flowering of C. aurea is from September to November. We have numerous specimens, and the first flowered in the former month, several in October, and on November 14 we cut the last flower. It is not a cheap orchid; there are no nice plants of it at 2s. 6d. No. at a sale of orchids a few days ago, at which orchids in variety were sold very cheap, a few specimens of C. aurea realised 27s. 6d. each. Small examples can be obtained from the leading orchid growers from 10s. 6d. to 15s. each. C. aurea is much used in hybridising, and is one of the parents of many grand hybrids. Some recommend that C. aurea should be suspended close to the glass to insure its blooming, but we find it succeeds well on the stages with Cattleya Mossiæ, and other cattleyas.

There are several varieties of this cattleya, and some seem more free flowering than others. We find some plants do not bloom at all regularly, but we had one plant that flowered for eleven consecutive years, and at last very obligingly flowered itself to death.

The ordinary compost that cattleyas succeed in suits Cattleya aurea, but it is not a very vigorous growing orchid, and does not require a very large pot or pan, indeed, sometimes the cause of failure is over potting, as then the compost becomes sour, and consequently the plant becomes unhealthy. A good time to repot is when growth is commencing, and if there are two eyes or breaks the plant can be divided, but this is seldom the case, and we have found back breaks are not produced at all freely, consequently its increase is slow, which fact no doubt accounts for the comparatively high price maintained.

Cheshire. W. M.

A FINE NEW DELPHINIUM.

Mr. Fred W. Smith, gardener to — Ferguson, Esq., The Hollies, Weybridge, has, so far as his opportunities permit, entered heartily into the work of plant improvement. He has produced several excellent single chrysanthemums, and some first-rate campanulas, including the hybrid C. Fergusoni. He has also worked hard to improve delphiniums, his aim being to secure free-branching, graceful spikes, rather than the solid-looking ones so many florists admire; large flowering white and yellow forms have also been worked for, as well as varieties in which the centre of the flower is of a colour contrasting strongly with the general colouring. That he has suceeded in a marked degree is evident to everyone who has seen the groups of delphinium spikes Mr. Smith has staged from time to time at the meetings of the Royal Horticultural Society. On June 23 last Mr. Smith had a most interesting group of seedlings, and one of these named Cambyses, figured herewith, was granted an Award of Merit. This is a very beautiful variety, and one that was greatly admired for its stately spike, fine habit, big double blooms, and wonderfully rich blue colouring. These handsome flowers were very distinct because each had a pure white centre that tended to increase the effectiveness of the deep rich blue colour around it.

Apple The Sandringham.—It seems a little strange when we realise that this apple succeeds better in the garden at Sandringham than in most other localities. Each year, when paying a visit to the Royal gardens, I have invariably found a full crop of fruit on the trees. As a rule this apple seldom misses a crop here in South Hants, and the fruit keeps well. The tree is of upright habit, vigorous, and clean in its bark. —E. Molyneux.

KITCHEN GARDEN WORK IN WINTER.

There is work to be done in this department at all seasons of the year, but by forethought and timely arrangement there is no need for a rush at any period. The work to be performed at the present time is as important in its way as that which has to be done in April or May, although of a different character. Gardens are so variously situated, and the soils therein so widely different, that it is impossible to lay down any hard and fast rules by which they may be all cultivated. In one, it may be, the soil is warm, light, and sandy resting on a subsoil of sand or gravel, where fruit trees will grow with but little attention, and bring their fruit to perfection. In others the soil is a stiff loam resting on a subsoil of clay, and is cold and retentive, and so close in texture that no water can pass through it, and in which vegetables grow rampantly in summer and autumn, only to be cut down by the first winter's blast. Again, some gardens are down in the valley, where the late spring and early autumn frosts play sad havoc with all tender vegetation. We have seen gardens in which it has been absolutely necessary to trench in all the old refuse that could be procured to keep the soil porous, and thus admit all the air possible, and where it has been actually necessary to lift the fruit trees periodically to keep them healthy. To state that a garden of a certain size should be worked with so many men is out of the question, for no one can know the requirements of an establishment unless he has had charge of it for a couple of seasons at least, therefore it is not well to be too wise in this respect.

Where a kitchen garden has good walls, with properly made borders, and the soil has been rendered porous by good cultivation, there will not be that necessity for fruit-tree lifting as is otherwise the case, therefore that particular portion of the autumn work in such places need not cause any anxiety; but there are other matters that will need special attention at this season. Many put off the nailing until severe weather sets in, but this in my opinion is a great mistake, as a man can do as much work of this kind in an hour when the weather is mild as he would in a day when biting east winds are blowing and the ground is frozen hard. With us it is a rule to nail the north walls first. Morello cherries occupy a space here of something like eight thousand superficial feet of wall, and although the trees are taken off periodically, we usually manage to have these pruned and nailed by the middle of December, so that if cold weather should set in, the border can be dug ready for a future crop.

Nailing the trees on the other walls is regulated somewhat by the crops on the borders. For instance, the south borders are usually occupied during the autumn with such tender plants as lettuce, endive, early broccoli, and the like; as soon as these are lifted, the surface is covered with manure, so as to exclude the frost, the trees being pruned and nailed as opportunity permits, the digging being done early in the morning when the weather is unfavourable for nailing. The other walls are taken in hand in like manner. Now a word or two as to pruning. In my opinion this operation received far more attention from our ancestors than it does at the present day. I notice that it is invariably the case when receiving fruit trees from a nursery that they have been pruned with a pair of secateurs, the cut being half an inch or more from a bud, no attention having been paid to how the bud was placed, hence the reason of many ill-shaped trees. When a lad I was taught to cut a shoot with a sharp knife, to place the blade within an eighth of an inch of, and below, the bud on the opposite side, and make a clean cut, so that the upper portion of the slant should just clear the top of the bud. By so cutting the wound made heals over the following season. Now we receive trees with dead scrags from half an inch to an inch in length, no regard whatever having been taken as to the position of the bud which was intended to form the leading shoot the following season.

When a boy I was instructed to cut all shoots on a fan-trained tree to a particular bud, that is, where a shoot was trained at any angle below 40 degs. it should be on the upper side, and above that angle on the lower side, so as to regulate the sap more evenly. We have lost the old form of apprenticeship, so that gardeners of the present day know nothing of the hardships that fell to the lot of youths a couple of generations back, and in a measure it is well that those times have passed into oblivion. Pruning and training at the present time is almost a lost art, for since the system of cordons and the craze for variety in the garden there is not the same care taken in training to please the eye as formerly was the case. Pruning and nailing are only two of the numerous operations to be performed in the kitchen garden during the winter.

When the ground is frozen trenching may be proceeded with provided the surface has been covered with manure so as to exclude the frost. Such work is far better performed when the soil is tolerably dry than when saturated, as is sometimes the case in the autumn. By trenching I do not mean just turning over a couple of spits of soil; this we do each time the ground is dug. Of course the depth to which the ground is broken up must in a measure be regulated by the quality of the soil; to bring up a spit of poor barren soil to the surface of that which has already been rendered fertile would not be sound practice, but to break up such subsoil and add manure would be another thing altogether. If one-tenth part of the money were expended on forming a kitchen garden, when laying out a place, as there is in shifting the thousands of tons of earth to form some of the unsightly formal gardens, a useful purpose would be served, and those who in after years are responsible for the care of such places would be relieved of much anxiety and trouble. There would also be a saving of the extra cost in bringing the fruit and vegetable crops to their proper size and quality.

There are many other kinds of work that require attention in this department during the winter if we would have the best results during the summer. It is not advisable to defer such work as preparing pea sticks until they are required for use, for when sharpened in winter before the wood becomes hardened more than double the amount of work can be done in a given time. It is also well where a large amount of forcing has to be done to have everything prepared well in advance of requirements. Seakale should be lifted in mild weather and be laid in under a north wall, where it can be protected in case severe weather sets in, and thus ensure the roots being available for forcing at any time. Asparagus beds intended for forcing should likewise be covered with litter to exclude the frost. Rhubarb should also be taken up in readiness for use, while such things as mint, tarragon, parsley, and the like, ought to be planted in boxes provided for that purpose.

Do not wait until such things as celery and endive are injured by frost before giving them due protection; have the material at hand in case it is required at short notice. Should the winter be severe there are many things to do, such as turning soil heaps, and wheeling material on to vacant ground, cutting hedges, gravelling walks, and making good any roads that need repair. H. C. Prinsep.

WYKEN PIPPIN APPLE.

This is one of the good old apples which seem to be slowly but surely going out of cultivation. It was a great favourite with our forefathers, and old standards of it, some of large size, are to be met with in old gardens and orchards all over Essex, where it is usually known as the Warwickshire Pippin. One seldom sees it on the exhibition table, even in the large collections of the leading nurserymen, and it is omitted from the list of the hundred best apples in Messrs. Bunyard and Thomas's "Fruit Garden." Yet in the report of the National Apple Congress held in Chiswick Gardens in 1883, this old variety stands well in the lists of dessert apples selected by experts for different counties of England. I doubt if one-half of the recent introductions are as good. I tried to get a tree of it from two different nurserymen recently, but without success. It is said to have originated at Wyken, near Coventry, from seed saved from an apple which Lord Craven ate on his travels through France and Holland. But few of us would have the good fortune to raise an apple equal to this if we saved a pip as a happy memento and planted it.

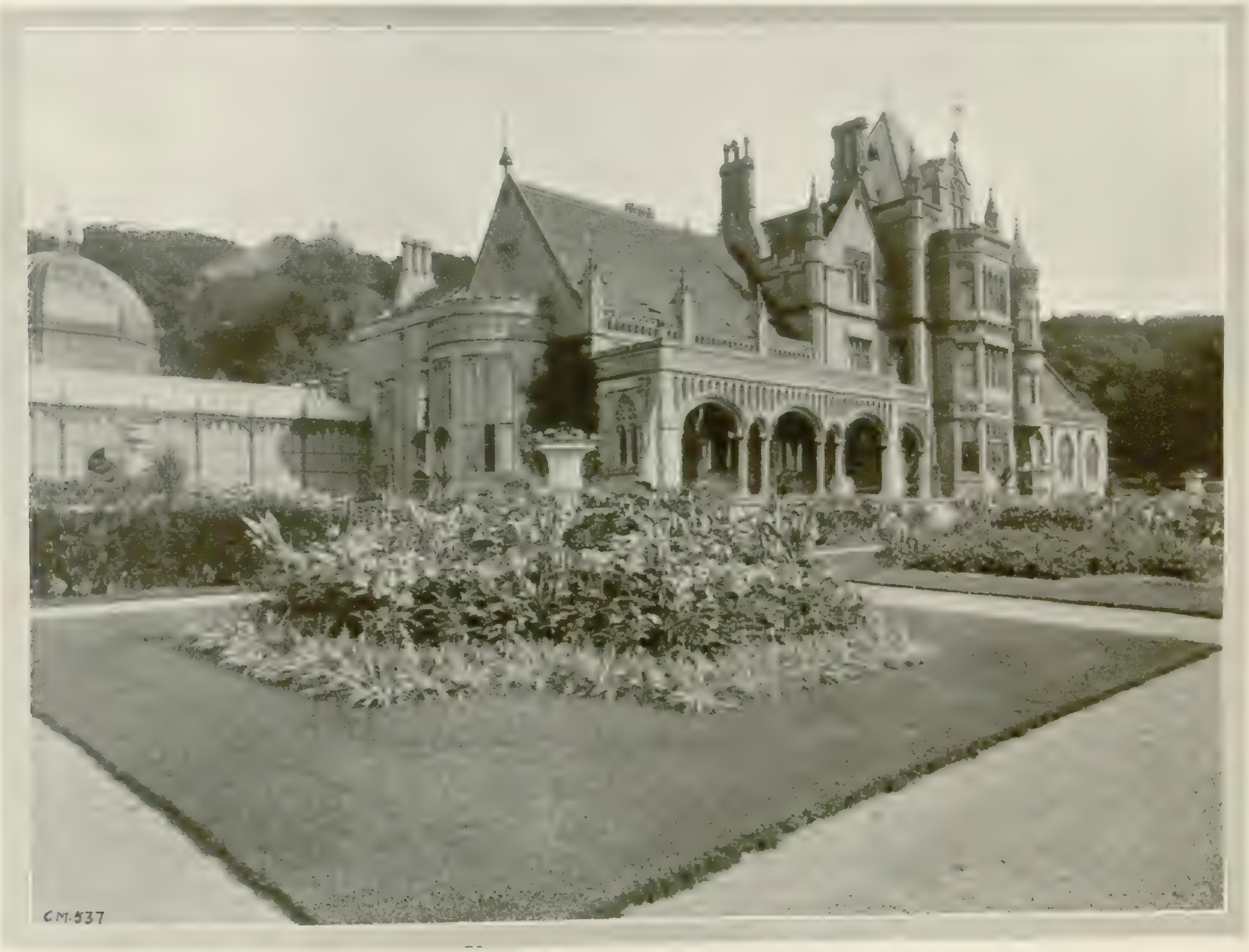
As one sees this variety growing in standard form, often completely covered with its golden fruit, it is a small flat apple, somewhat rough to the touch, running ten or twelve to the pound, but on the paradise, where it forms a compact and somewhat small pyramid, the fruit is much larger, running about six to the pound, with a clear yellow skin. It is at its best in December and January, and, if not gathered too early, as it often is from standards, it is of first-rate quality. The tree is a healthy grower and a good bearer, and the reason for its being supplanted by some of the modern varieties is hard to find, unless it is in the fact that they are for the most part better to look at and finer in colour and shape.

Alger Petts.

Vallota purpurea. — Just at this season of the year this handsome old bulbous plant may be often seen flowering in the windows of the cottager, who, in many instances, bestows but little care on it. Although an easily-grown plant, it does not follow that anyone can obtain anything approaching a good display of flowers by a system of indifference, and a more or less abundant supply of water at all seasons. By a little help in the way of some good sweet loam, and, above all, good drainage and firm potting, this old-fashioned flower may be made one of the most attractive of plants. The bulbs should be potted every second or third year, in August, at the same time sorting them into sizes. An amateur may soon possess a stock of bulbs that could not possibly all flower at the same time. Six large bulbs in an eight-inch pot would make a fine display, while the smaller bulbs may be planted six in a five-inch pot for future use. After a season's growth in this pot a shift may be given, and in this way clean flowering bulbs would result, instead of, as now, a crowded colony of undersized bulbs in a large pot, and only an occasional one producing a spike of bloom.—T. B.

SOME BRISTOL GARDENS—I.

When, earlier in the year, some accounts of several of the most important gardens situated in the Bristol district were given, accompanied by a number of illustrations, the hope was expressed that at an early date several other gardens within that essentially horticultural neighbourhood might be reviewed in these pages. The opportunity for fulfilling that hope has now arrived, but with it comes the conviction that even these two sets of notes by no means exhausts the garden attractions of the famous Western City, and one can but express a further hope that the fates will permit another visit, at no distant date, for the purpose of inspecting other beautiful gardens and interesting collections.



TYNTESFIELD, FLAX BOURTON, BRISTOL; THE MANSION AND WINTER GARDEN.

Tyntesfield.

Beautiful for situation is Tyntesfield, the very noble and handsome residence of George A. Gibbs, Esq., M.P. for West Bristol. It is situated a mile or two from Flax Bourton Station, and about double that distance from Barrow Court. The splendid garden front ends in a very large and highly ornamental conservatory or winter garden, while on the higher side a handsome church nestles right up to the mansion. A very broad terrace is carried along the lower side, and big beds of bold flowering and foliage plants are placed at suitable intervals along it.

There are really three terraces. The second one has a straight walk, running its whole length, with stately Irish yews alternating with great clumps of yuccas on either side from end to end. The yuccas (Y. gloriosa) are wonderfully fine, and they flower freely each year, and when they carry their tall and striking spikes of greenish-white flowers, the walk presents a very fine and uncommon picture. Broad flights of steps lead down from terrace to terrace, and tempt one to the lake in the spreading park below. Closely clipped and rounded heads of Portugal laurels are the feature of the lowest terrace, but the terrace walls themselves are of interest because of their architectural design and the choice shrubs they give shelter to.

It would appear that a great love for trees and shrubs is inborn in the members of the Gibbs family, and it finds expression in their gardens, whether these be at Aldenham or Tyntesfield. An idea of the extent and richness of the collection may be gathered from the observation that among the many occupants of these sheltering terrace walls and warm borders are to be found such plants as pomegranates, Choisya ternata, Solanum crispum, and the beautiful S. jasminoides, Edwardsia grandiflora, Zanthoxylum planispinum, Indigofera Gerardiana, and Myrtus Ugni, to name a few only.

The park is undulating and well wooded, and the lake will presently be a further attraction by reason of the moisture-loving plants that have recently been planted around its margin, under the direction of Mr. T. Wilkinson, who has charge of these gardens. Further evidence that the collection of trees and shrubs is no common one is to be found on the churchward side of the mansion, where the ground rises quickly to an elevated woodland, with its semi-wild garden, its spring flowers, and its beautiful views away to the Mendip Hills. Choice shrubs and trees abound, and full advantage has been taken of the wealth of flowering shrubs now, happily, obtainable. The display has not been confined to spring flowering subjects, lovely as these are, but care has been taken to provide for summer and autumn displays. Native plants are not ignored; indeed, the gorse and the heather on the steep banks where the drive curves round to the front entrance are in no way the least beautiful plants.

Beyond the winter garden and tennis ground, up through a goodly collection of alpine and herbaceous plants, is the rose garden, surrounded by a cupressus hedge that is quaintly cut at the entrance. The rose beds occupy the central portion of the garden, and around these, on the sloping banks, are more choice shrubs and strong growing herbaceous perennials, the whole providing a pleasant and fragrant retreat.

At a considerably lower level than the mansion and at some distance from it is another kind of garden altogether. This is enclosed by high walls and contains fine ranges of glass-houses. But, fortunately, outside the houses ample room has been allowed for the beautiful. A large and stately orangery occupies an almost central position, and contains big oranges, oleanders, camellias, etc., in large tubs. A broad path crosses the front of this house, but directly opposite the orangery doors is a straight flagged walk, broken in the centre by a circular lily pool, and festooned the whole of its length with arches of roses that are a fine sight in July and August. Borders, with an edging of box, are filled with carnations, pentstemons, antirrhinums, gladioli and the like, and these produce striking effects as they are planted in large quantities.

Many of the plant and fruit houses are of iron, and, while not a few gardeners have a strong dislike for iron houses, Mr. Wilkinson finds no fault with them. He points out, however, that as iron heats quickly, and cools as rapidly, the cultivator must begin to ventilate earlier than in a wood-built house, or scorching of tender foliage will inevitably follow. Some of the houses were built by Smith, of Ipswich, and others by Skinner, Board, and Co., of Bristol. The four big iron-built vineries are unusually spacious structures, and of their contents it is only necessary to state that in the fierce fights at Shrewsbury Fête Mr. Wilkinson gains honourable positions with grapes. Alicante, Muscat of Alexandria, and Black Hamburgh grapes are very fine in crop and bunch and finish. I was curious to know why a broad ring of stiff cardboard surrounded the lower portion of each vine rod, and learned that this simple device was a very necessary and effective one for keeping mice from climbing the rods and spoiling the grapes.

That Mr. Wilkinson is an able cultivator is obvious in flower garden and grounds, but nowhere is it more evident than in the houses. The peaches are as ably managed as the vines, and in the plant houses the really grand batches of flowering and foliage plants would do credit to a Baines or a Bause. Ivy-leaved pelargoniums, notably Souv. de Chas. Turner and Achievement, are splendidly grown in both pots and baskets. The elegant Lobelia tenuior and the graceful Francoa ramosa are not difficult to grow, perhaps, but spotless Malmaison carnations and beautiful and perfect specimens of Adiantum Farlyense are severer tests of skill. These, with such varied plants as coleuses, and calanthes, Begonias of the Gloire de Lorraine class, and poinsettias, justicias, and Begonia President Carnot, Cypripedium insigne, pancratiums, Cœlogyne cristata and eucharis, all demonstrate fully that Mr. Wilkinson is a plantsman of the first class. It must be remembered that these and other subjects are not grown in batches of a dozen or so, but there is usually a whole house or half a house full of each.

A point of no small interest to those who are frequent visitors to gardens, is the great affection different growers have for different varieties of fruits and flowers. Melons afford room for a wide difference of opinion, and Mr. Wilkinson's choice of these falls on the large-fruited Emerald Gem, and on Best of All and Royal Jubilee. The value of unheated houses is fully comprehended at Tyntesfield, and one very large and wide house of the peach-case order, unheated, has been planted with apricots, peaches, and nectarines. The slender pillars that assist in supporting the roof have each a strong T. or H.T. rose to support also, and along the front of the house tomatoes are grown. No room is wasted, and this house is one of the most productive of all, notwithstanding its lack of artificial heat.

Vegetables are cultivated on a scale and in a manner that is in keeping with the rest of the establishment. The kitchen garden is being extended, and new fruit trees planted, and one feels perfectly certain that the new portion, with its more utilitarian features, will presently come into line with the older portion and further enhance the reputation of Tyntesfield, its owner and its gardener.

AVENUE OF YUCCAS AND IRISH YEWS AT TYNTESFIELD.

The Holmes.

Although in no sense an extensive establishment, The Holmes is nevertheless a very interesting one. The gardens belong to H. M. Baker, Esq., and Mr. Cully, the hard-working and enthusiastic gardener makes the most of his opportunities. In a very few moments one finds that both Mr. Baker and Mr. Cully are keen gardeners, and that they are not satisfied with the mere commonplaces of gardening.

By the side of the front door of The Holmes is a very big loquat in splendid health, and close by is a splendid Magnolia grandiflora, reaching up to the eaves; this latter flowers freely, and when in blossom is very attractive. Cotoneasters flourish on the house front, C. horizontalis being particularly good. The whole of the walls of the house are covered with plants. Ceanothus azureus occupies a corner, and Escallonia macrantha, Clematis flammula, and honeysuckles occupy other positions. Turning along the side of the house towards the conservatory, one notices an iris border, and the beds along the terrace show that annual flowers are very popular. In a little field that skirts this terrace some twenty thousand daffodils are planted, and these must yield a fragrant and beautiful display each spring, to be followed in summer by an equally beautiful and fragrant display of roses on the terrace itself.

In a large corner, sheltered by the house and the conservatory, is a collection of very interesting plants, and one that is all the more notable because so entirely unexpected. Crinodendron Hookeri hugs the conservatory wall, and its companions are Berberidopsis corallina and Philesia buxifolia. In the semi-rock garden are colonies of Cypripedium spectabile, Saxifraga peltata, Rodgersia podophylla, and R. pinnata, while, higher up, are Ramondia pyrenaica and R. serbica—the pretty Pyrenean primroses, Haberlea rhodopensis, and a host of the finer mossy and encrusted saxifragas. The conservatory itself is almost given over to palms, ferns, and bamboos, and it serves as a pleasing extension of the drawing-room that opens into it.

A level, well-kept, and weedless lawn stretches away from this garden front, and it is terminated by a long and broad herbaceous border, in which, among other things, alstromerias, tritomas, and montbretias are especially good. Beyond this border is a little woodland, where the undergrowth has been either cleared or thinned out, and where Arundinaria Simoni, A. Veitchi, Phyllostachys aurea, Bambusa palmata, and other graceful bamboos have been largely planted; indeed, close behind the herbaceous border is a small bamboo grove. Foxgloves, bluebells, primroses, and daffodils abound in the woodland, and by the walk sides are to be found rambling roses, ribes, olearias, magnolias, and rhododendrons.

The woodland slopes sharply to the end of the garden, and here another surprise is found in a long, straight walk the whole width of the garden. On either side is a flower border, and at intervals over the pathway are arches of Lady Gay, Crimson Rambler, Dorothy Perkins, and other beautiful free-growing roses. Shrubs are not wholly excluded from these borders. Spiræas are a feature; Choisya ternata is very fine, and the Japanese Paulownia imperialis, and the beautiful Pear Bush (Exochorda Alberti) also flourish. There is nothing particularly rare among the herbaceous plants, but care has been taken to plant large irregular masses of good things, so that from early summer until late autumn there is a continuous floral display.

A giant oak ends the view along this flower-bordered path, and it is an enormous old fellow, with a huge trunk and big limbs. It is one of the many old giants in the West Country, and, like several of its fellows, finds mention in Domesday Book. All around this oak, in the grassy slopes, are thousands of anemones, crocuses, muscaris, and daffodils, so, it will be seen at once, that in addition to other claims to notice The Holmes must be a fairyland in springtime.

The Holmes garden is curiously divided. Entering the gates, the house and the gardens already described are all on the right hand, while the glasshouses and kitchen garden are on the left, hidden away behind old walls that give shelter to large numbers of pears, plums, nectarines, and peaches, the latter being particularly good examples. The shape of this garden compels Mr. Cully to exercise considerable ingenuity in the matter of cropping. He has made the best of things, and whether it be Ailsa Craig onions or the splendid rows of sweet peas, the bush apples or the beds of lily of the valley, the raspberries and gooseberries or the chrysanthemums that line the paths, the Brussels sprouts or the annuals for cutting, all respond well to his care and skill.

I am afraid I paid small attention to the inhabitants of the glass houses, but I remember that liliums and epacrises were well managed; that tuberous begonias from Sutton's seeds were providing a glorious blaze of colour; and that in one house was a splendid crop of tomatoes, the variety being Sutton's A1, which, as Mr. Cully puts it, "crops right from the bottom."

Those who frequently visit gardens must be struck with the fact that in some cases a comparatively small garden is made the most of, and is a source of great pleasure and enjoyment, while, in other cases, where there are finer opportunities, these are neglected, and one sighs over these waste places of the earth. The Holmes and its gardens occupy less than five acres, and it is the fault of the writer if it does not appear that these are brimful of horticultural interest.

ENTRANCE TO THE ROSE GARDEN, TYNTESFIELD.

The Zoo.

At the famous Clifton Zoological Gardens there are many attractions besides those of a purely zoological character. The gardens have a long frontage on Durdham Down, and the main entrance is not a very great way from the Clifton Suspension Bridge.

The grounds are well laid out, and also well planted. The extent is about twelve acres, and the position is a high one, a little to the north of Bristol proper. The original intention of the Bristol, Clifton, and West of England Zoological Society was to create a botanical as well as a zoological garden, and though this idea has not been carried out in its entirety, the gardens are, nevertheless, so attractive, and contain so many distinct features, that they merit a visit from every horticulturist who visits Bristol and Clifton, either for pleasure or business.

In addition to the elms, limes, chestnuts, etc., used to mark the boundaries of the garden and to provide effective groups around the various animal and bird houses there are a number of good specimens of coniferous and deciduous trees that were planted variously from thirty to eighty years ago, and are, therefore, in good condition. Among the conifers there are large examples of the Cedar of Lebanon and the Deodar, Pinus cembra, P. excelsa, P. laricio, P. nobilis, Sequoia gigantea, S. sempervirens, Cupressus Lawsonianus, C. torulosa, and also of Araucaria imbricata. Deciduous trees include a fine Tulip tree, the Lucombe oak, the Cork oak, the graceful fern-leaved beech, a shapely Pyrus baccata, a big scarlet sumach, and a spreading Pavia flava. These and many others stand out clearly, and show that they have received careful attention.

Hollies are conspicuous at the Clifton

Zoo, and the collection is one of the most extensive, probably the best, in the West of England. They grow very freely here, so much so that in some cases the finely variegated forms have become common shrubbery plants. In a few instances overcrowding has impaired the beauty of a specimen, but, on the whole, the hollies are in good condition, and the best of them are Ilex Dahoon, I. dipyrena, and such varieties of I. Aquifolium as angustifolia alba, argentea-regina, aureo-marginata, aurea medio-picta, balearica, ferox-argentea, fructo-lutea, Handsworthiensis, latifolia aureo-marginata, latispina, laurifolia, maderensis, ovata, and recurva. The finest examples are the specimens on the lawn, by the side of the broad Great Terrace, while others are most effectively grouped about the fine new Lion House and near the Reptile House, and at all seasons of the year the gold and silver variegation is very pleasing.

In the springtime the large beds along the terrace are gay with tulips, daffodils, hyacinths, polyanthuses, etc., and in summer they are filled with bright flowers and foliage. Between the large trees and the beds, during summer time, some noble agaves are stood, as well as several handsome palms, and these, with splendid specimen fuchsias, make the terrace a favourite promenade. The fuchsias are wonderfully well grown, many of them being 8ft. to 10ft. high, and completely clothed with foliage and graceful flowers from base to summit. Quite a number of the varieties grown are home-raised, for Mr. Harris has ever had an affection for fuchsias.

If choice hardy ferns were more popular then the Clifton Zoo would be a very Mecca for lovers of the cult. I very well remember the exhibits of hardy ferns arranged in the old Chiswick Gardens, in August, 1892, when, on the occasion of the Begonia Conference, prizes were offered for hardy ferns. Wonderful collections were then displayed by the late Mr. Lowe, of Shirenewton Hall, and by the Clifton Zoological authorities. Mr. Harris came up to Chiswick with the Clifton collection, and it was the remembrance of the ferns and Mr. Harris that induced me to trudge across Durdham Down to renew the acquaintance. It was pleasant to find oneself not forgotten even after fifteen years.

It would serve no useful purpose were I to give a list of the wonderful hardy ferns at Clifton Zoo, but it may be said at once that though familiar with the "West Country," I have never seen ferns doing so well, and certainly never such a fine collection of beautiful varieties. The frilled and crisped and tasselled Hartstongue ferns, and the exquisite beauty of the elegant Lady ferns, must all be seen to be duly appreciated. These two groups form the bulk of the collection that is arranged in low rockwork banks along the west side of the gardens. What a wondrous wealth of beauty these ferns yield, to be sure; and yet how slowly do they gain favour! The fuchsias and the hollies at the Zoo were often referred to by the horticulturists I met in and round Bristol, but of this especially fine collection of the finest varieties of hardy ferns, almost at their doors, never a word was said. Why is this thus?

Charles H. Curtis.

*** The second part of Bristol Gardens will appear in our next issue.

TYNTESFIELD: THE ORANGERY AND DIAL GARDEN.

MAXILLARIA PICTA.

There are many species of maxillaria, but a very small number of them find favour with orchid cultivators, because the majority are not showy and beautiful. M. picta is not strictly showy, neither is it very beautiful; and, moreover, it is not often seen nowadays. But for all that every visitor we have in the chrysanthemum season seems to appreciate it. It gives out a very powerful but pleasant perfume which everyone likes, and its orange and darkly spotted flowers make uncommonly neat buttonhole bouquets, and for that reason alone it is worthy of cultivation.

It is a very easy orchid to grow, the temperature of a vinery just suiting it. The treatment accorded Cypripedium insignis is just the treatment M. picta requires, and they are companion plants, in flower at the same time, though M. picta does not last so long as the cypripediums. But there is a succession of flowers which follow each other so rapidly that the flowering season extends over a fairly long period. Even in the summer time its intensely dark green foliage and healthy appearance make it a pleasant plant to look upon.

M. picta succeeds well in a mixture of peat, sphagnum moss, charcoal, and broken potsherds. The pots or pans should be filled with crocks to within a short distance of the surface, as it is a plant that does not require much compost to grow in. It is increased by dividing the plants when they commence growth in spring. During the growing season it requires a good supply of water, but during the winter a much less quantity will suffice.

M.

THE BERKHAMSTED NURSERIES.

A short time ago a very quaint pictorial advertisement appeared in the horticultural Press, depicting, in humorous fashion, the Berkhamsted Nurseries at the time of the Roman invasion. The queer mixture of old-time dress and modern glasshouses, and the irresistibly funny details of this quaint conception attracted a very great deal of attention, and reminded horticulturists that not only were the famous old nurseries still in existence, but that new life was stirring within them. After this attractive advertisement others followed depicting a heavily laden apple tree, from which depended a board carrying the legend:

H. LANE and SON.
FRUIT TREES, CONIFERS,
FOREST TREES, RHODODENDRONS,
VINES and FIG TREES.
ROSES OF ALL SORTS.
Gardens laid out and planted by competent workmen.
Estimates given.
THE NURSERIES, BERKHAMSTED, HERTS.

Many of our readers will remember the late Mr. F. Q. Lane, who for so many years carried on the Berkhamsted Nurseries that were instituted by his grandfather. He was a man of striking personality, with a patriarchal beard, and he for years was a regular attendant at the meetings of the Royal Horticultural Society. The present proprietor, Mr. B. H. Lane, is Mr. F. Q. Lane's son, and it is his keen interest in the business he has taken in hand that caused such a stir among advertisers and readers recently.

We paid a visit to the Berkhamsted Nurseries a week or two ago to see how matters were progressing. We were met by Mr. B. Lane, who drove us from the headquarters in the long High Street, up to the extensive Balshaw Nurseries, on the wide-spreading Berkhamsted Common. It was a glorious day, the sun shone brightly, touching the beeches and maples into deepest orange or brightest gold, the air was keen and bracing; it was a veritable "hunting morn," and soon we met the scarlet-coated huntsmen, the eager hounds, and a large following of riders on their way to find a fox in the not far distant coverts. Berkhamsted lies about two hundred feet above sea-level, but another three hundred feet must be climbed ere the Balshaw Nurseries are reached. Up here, with clear light, full sunshine, and fullest exposure to all the winds that blow, nursery stock is of the sturdiest and hardiest description: the wood is clean and good to look upon, the colouring of golden or glaucous leafage is wonderfully deep and bright, and the root system of every plant—and we saw hundreds lifted—is of a dense and vigorously fibrous-rooted character, that augurs well for their future welfare.

Messrs. H. Lane and Sons have several branch nurseries in Berkhamsted, but Mr. Lane is steadily concentrating his energies upon the big nursery on the common, gradually extending it as the smaller outlying branches are cleared and given up. This can be the more readily managed, because the larger nursery provides a considerable variety of soils, and its undulating character affords a variety of sites and positions for varied subjects. In a general sense, the Berkhamsted Nurseries have been most intimately associated with fruit tree production, and everyone knows that Lane's Prince Albert apple, raised here, and first exhibited before the British Pomological Society on October 26, 1857, is one of the finest of culinary varieties, a marvellous bearer, and a splendid keeper. Quite naturally this variety is largely grown, and there are fine breadths of all the leading apples, pears, plums, cherries, and other hardy fruits. Standard cherries are a very fine feature, and trained trees are also well done. We have nothing but praise for the fruit trees at Berkhamsted, for the small fruits, and particularly for the large numbers of splendid young vines so well grown here. Of the new Prince of Wales grape there is a grand stock, while of Muscat of Alexandria and Black Hamburgh, the numbers grown are as startling as the high quality of the rods.

But the two hundred and more acres directly under nursery stock contain many other things than fruit trees, and, good as are these latter, they are by no means the great distinctive feature of this extensive nursery. Flowering trees and shrubs in great variety fill large quarters, and nothing could be better than the standards of ornamental plums, cherries, almonds, and peaches, representing the best varieties, and all strong and healthy. Shrubby spiræas, deutzias, lilacs, philadelphuses, weigelas, and a whole host of charming deciduous flowering shrubs, are to be found in fine condition, and in the time of flowers they must present a fine sight. Magnolias do well here, and the firm has a very wide reputation for its young plants of M. grandiflora. Mollis and Ghent azaleas, too, are very fine, and grandly set with flower buds for next year's crop of bloom.

To us, however, good as the other plants are, the most striking feature of these nurseries lies in its magnificent collection of splendid evergreen trees and shrubs. Very rarely does one find these in such excellent condition, from the common privets, laurels, and aucubas, up to the choicest of choice conifers. In every case there are good blocks of plants, varying in size according to their age or habit, but all alike perfectly happy, shapely, clean, and bright. Rhododendrons occupy a large area, and all the best varieties are represented; while several big batches of seedlings have already given promise of excellent novelties. Hollies are also largely grown, and the colony of Golden Queen, Silver Queen, Golden Hedgehog, Milkmaid, and other variegated varieties was particularly striking. Cotoneasters succeed well here, and Azara microphylla is freely grown. Of berberises, notably B. Darwini, B. stenophylla, B. aquifolia, and B. Wallichiana, there are excellent breadths. Laurustinuses, especially the young bushy plants just opening their first flowers, were very pleasing. The firm has a fine stock of Portugal laurels, some of them being finely furnished specimens from 4ft. to 6ft. through.

THE DOMESDAY OAK IN THE HOLMES GARDENS, BRISTOL.

The "Blue" conifers have a very distinct blue shade running through their glaucous colouring, and this is especially bright in Cedrus atlantica glauca, C. Deodara glauca, and Abies Parryana glauca, and as each of these is represented by a quite considerable colony, the effect is very striking. The golden conifers are unusually brilliant, the golden yews being the finest we have seen for a long time. The Irish yews are splendid examples in various sizes. Among the cupressus, the several forms of C. Lawsoniana were the great attraction, and we were especially interested in the clean, vigorous stocks of such varieties as the glaucous Allumi, the erect growing erecta viridis, the graceful gracilis aurea and gracilis pendula, the silvery argenteo variegata, the elegant filifera, and such golden forms as aureo-variegata, lutea, and Stewarti, the latter a very brilliant and fine form of comparatively recent introduction.

We were interested to find Podocarpus andina doing well at this elevation, and to find such a quantity of beautiful plants of the retinospora section of cupressus, notably the coloured forms of obtusa, plumosa, and pisifera. Of the umbrella pine, Sciadopitys verticillata, there is a good stock of thrifty specimens, while among the larger-growing conifers we specially noted the Cedar of Lebanon, Abies grandis, A. concolor, A. Nordmanniana, A. Albertiana, hemlock and Norway spruces, and larches. The golden thuias, of both occidentalis, orientalis, and Lobbi types, were also very beautiful, and the coloured junipers appealed to us strongly.

The large stock of avenue trees is worthy of special notice, and no reference to the nurseries is complete without reference to the immense stock of standard, dwarf, and rambling roses they possess. Figs are well managed, and these, with the vines, are worthy of special attention, and they are grown in the home nursery. Here, too, are to be found several new plants, of which stocks are being propagated. Of the new rhododendrons we are not at liberty to write; but one attractive novelty the firm propose to distribute next year is a very sweetly fragrant variety of Clematis montana. The popularity of this climber is very great, but when delightful fragrance is added to its other good qualities, it becomes doubly useful.

Propagating Pelargoniums.—Northern growers have a lot of trouble in propagating bedding pelargoniums, sappy shoots being the rule rather than the exception. They invariably subject the cuttings when prepared to a hardening process, allowing them to lay for twenty-four hours spread out thinly; this allows all fresh wounds to dry over.—THOMAS SMITH.

WORK FOR THE WEEK.

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THE ORCHID HOUSES.

PHAIUS.—P. simulans, better known in gardens as P. tuberculosus, having now completed its growth, should be rested. I do not think it necessary to remove the plants to cooler conditions, but rather provide them with only sufficient moisture to keep the foliage and rhizome-like pseudobulbs in a normal condition. At this season the plants should receive the maximum amount of light available. I am certain a great deal depends on the proper maturing of the growths, both for the production of flowers and the future successful growth. This treatment can only be afforded between the periods of the completion of growth and when the flower scape makes its appearance. Many of the plants here have been in cultivation since the species was introduced, and they not only continue to grow satisfactorily, but many of them are far more robust than ever before. I have on previous occasions written as to the general methods of culture, so that I need not enlarge further on these particulars.

HYBRIDS AND SECONDARY HYBRIDS, such as P. Cooksoni, P. Norman, and P. Clive, are grown here with the winter-flowering cypripediums. These have completed their growth, and should also be treated as dormant plants. Only sufficient root moisture being necessary to keep the pseudobulbs and foliage plump, care at any rate should be observed to see that the potting compost becomes dry between the waterings. If excess of root moisture is given I find that instead of showing flower scapes the plants frequently produce growths. It is quite early enough to afford liberal treatment when the flower spike can be clearly discerned, in fact it is advisable not to encourage them, for there is a considerable advantage obtained in the quality of the flowers when these are able to expand under the more favourable conditions of the month of April. With drier conditions of the atmosphere it is advisable to keep the plants under close observation for insect pests. Red spider and scale are the most troublesome, and the plants should be carefully sponged whenever the pests make their appearance.

PHAIUS HUMBLOTI and its offspring always flower about two months later than the other section, and, consequently, they are in full growth for the greater portion of the winter, but as soon as growth is nearing completion it is advisable to keep the plants drier, as they are more apt to start into growth without flowering than the tuberculosus section. Atmospheric moisture should now be reduced to its minimum, and care should be observed to retain as little moisture as possible in the atmosphere during spells of cold weather or the prevalence of strong winds. There is nothing more liable to produce the disfiguring spot on Phaius than excessive moisture during the winter months. Stagnation in the atmosphere must be avoided by a discreet use of the ventilators whenever the outside conditions permit.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

BASKET FERNS.—This is not an ideal time for the disturbance of plants, but where a little extra warmth can be given there is no better time for filling baskets which are to be suspended from the roof, as they will have the full benefit of the light, and there is no danger of the sun being too powerful. There will also be sufficient time for the plants to become well established and hardened before the sun is too strong. The nephrolepises, davallias, etc., are the most suitable for baskets, but there are many others which may be used with advantage. In filling the baskets young, free-growing plants should be selected, and only a thin layer of moss should be used, for if too much space is taken up with it it will decay, and leave a space, and the soil will be loose. For covering the under-surface of the baskets there is no better material than Ficus repens, and if a few plants are put round the edge and pegged down they will soon form a good covering, and will help to keep the soil together without taking much nourishment from the ferns.

CAMELLIAS.—These will now derive great benefit from frequent doses of liquid manure and soot water, for the strain from the heavy crop of flowers which the plants carry will be great. More bud dropping and ill-health arises from underwatering than from any other cause. Other plants which will need feeding are early cinerarias and primulas, and as these will not dry quickly now it is better to give weak liquid at each watering than to give it stronger in doses alternately with clean water.

PALMS.—At this season of the year too much water at the roots is most injurious to palms, and every care should be taken to give sufficient only. The necessary moisture in the atmosphere should be provided by damping the floors and stages. The plants should be thoroughly overhauled and the foliage sponged.

DAFFODILS FOR FORCING.—Among flowers that may be forced into bloom quite early in the new year there are the single and double daffodils. These are without doubt among the most popular at this early season, and, unlike some other forced flowers, these daffodils, when properly managed, lose none of that exceeding beauty that graces their natural flowering in the open ground in the early spring months. On the contrary, the protection they receive when grown under glass rather adds to their beauty in at least two ways, first by the purity of the flowers, and, secondly, by a considerable addition to the length of the flower stems. To force daffodils successfully a moist atmosphere and a temperature of 40 or 45 degrees at night is ample, and this should only be very gradually increased as the growth becomes apparent under the early treatment. On no account should the pots be placed on open stages with hot-water pipes below. The syringe may be daily used to maintain a moist atmosphere, and as growth advances water may be freely given at the roots.

ROSES IN POTS.—A successional batch should be removed indoors, and but little fire-heat given at first. They should be syringed until the shoots are about an inch long; they must not be crowded in the early stages of growth, and should be kept rather dry, but as growth progresses the supply of water should be increased. A careful watch should be kept for insect pests, and prompt measures taken to eradicate them.—T. B. Field, Ashwellthorpe Gardens.

THE FLOWER CARDEN.

SNOW.—We are now liable to heavy falls of snow, and should such occur steps must be taken accordingly. First of all relieve all conifers and evergreens that are likely to be damaged by the weight of snow upon them; as many hands as possible should be provided with poles, preferably with forked ends; with these give all boughs a gentle lift upwards, shaking them so as to dislodge the snow, commencing at the bottom and working upwards. Having relieved all shrubs and trees, the carriage drives and walks must be next attended to, doing the most important first; where snow ploughs are used these should make the first round, sweepers and shovellers following. See that heaps are not made where vehicles of any sort might come in contact with them, for when snow is frozen serious damage might result. Always clear as wide a space as possible, and be specially careful to see that all drain grids are kept clear and open so that when snow is melting there is free access to the drains. Where there are ponds containing fish the ice must be broken at least once a day, and if frost is severe twice a day, to admit air for the fish.

GENERAL WORK.—While the weather remains open lawns and walks should be kept well swept and rolled, maintaining as neat an appearance as possible; all catchpits along sides of walks should be well cleaned out lest the drains become choked and useless. If the weather becomes too bad for outside work many things may be done under cover; all sheds should be cleaned out and limewashed where practicable; stakes may be sorted over, pointed, and tied up in suitable bundles ready for use another season. Proceed with any alterations on hand, and if autumn transplanting is not yet finished bring this to a close as soon as possible, though anxiety for an early finish never justifies careless planting. The mild weather has been specially favourable to the earlier planted things, enabling them to recover from the check of removal. Opportunity may also be taken to examine all plants and shrubs that are not on their own roots, for the removal of suckers, as these can now be more easily seen.

ROCK GARDEN.—Continue to pay close attention here, as the strong autumn gales generally blow a number of leaves into the nooks and recesses, which, if allowed to remain, may damage the plants underneath them, or perhaps destroy them altogether. Note where improvements may be made by spring planting; in some cases it can now be seen where an evergreen would greatly improve the appearance, but only the most suitable plants should be used. In the hardy fernery fallen leaves will be more beneficial than otherwise, unless their appearance is objected to, or wind could blow them elsewhere. They form a good protection from severe frosts, but they must be removed before growth commences in spring.

BEDDING PLANTS.—Examine and pay close attention to all summer bedding plants, both in cold and heated frames and houses; remove the lights from calceolarias, violas, pentstemons, antirrhinums, and other comparatively hardy things, as often as possible, keeping all weeds pulled out and the surface of soil pricked over. Should any have made much growth their tops may be pinched out. Avoid coddling. If there is likely to be a shortage of anything steps must be taken accordingly, and, where possible, arrange to commence propagating early in the new year. Hardy plants outside, in pots, should be plunged well below the rim of the pot in ashes, leaves, or soil, or frost may burst the pots and damage the roots.—E. F. Hazelton, Knowsley Gardens.

HARDY FRUITS.

BUSH APPLES.—In gardens where standard trees are not desirable the bush form is both interesting and profitable. Young healthy trees on the paradise stock, planted at a reasonable distance, and well managed, quickly come into good bearing, and the fruits are usually clean and well flavoured. When planting young bush trees by the side of walks in the vegetable garden they should be given ample room, although at the time of planting they may appear a long distance apart, as they soon fill up a good amount of space. On the other hand, if planted rather closely they become crowded, and to dig out every other tree would leave those remaining too far apart. The borders should be thoroughly trenched, and if the soil is in need of manure this should be thoroughly incorporated with the soil as the work proceeds, adding good fibrous loam, if obtainable. Select healthy, two or three-year-old trees, and set them out at twelve to fifteen feet apart, and about four feet from the side of the walks. Between the trees may be planted gooseberry or currant bushes to fill up space. Good varieties only should be grown, and that will maintain a long supply, such as Duke of Devonshire, Dumelow's Seedling, Bramley's Seedling, and Newton Wonder. When pruning the trees the aim should be to keep the heads nicely open, pruning to an outside bud those leading shoots required to form the future tree, the inner growth being spurred back to a couple of buds. Given careful attention the main branches should rope themselves with fruit buds and fruit. In the case of over-strong growth lift and prune the roots. Pruning of older trees should be pushed forward during fine weather, and when completed top-dress the ground; if required grafts should be selected at the time of pruning, and tied up in bundles, correctly labelled, and heeled in on a north border until they are required for use.

PLANTING.—Push forward with this work as fast as possible, while the weather keeps mild and open, for although planting may be successfully done up to the middle of March, it is better to bring the work to a finish now. Watch for ground game, and put strips of wire round trees in the open, otherwise in one or two nights some of the best young trees may be destroyed. When placing strips of wire netting round standards allow ample room for the growth of the stems for some years to come.

ESPALIER TREES. — When pruning these, if the branches have become very much crowded with long spurs a few ought to be cut away at each pruning, so that fruitful buds may be formed closer to the old wood. Cut them back or saw them off to within one inch of the old wood, and fresh buds, in most instances, will eventually form, and not only will the tree soon have a better appearance, but the fruits produced will be finer. Young trees that have not reached their limit need to be carefully pruned; the leader should be shortened just above where the next pair of branches is wanted, and at the next season's growth one shoot of the leader should be trained carefully upright, and those from the side branches be neatly preserved. See that all the labels are made good, and any suspended from the branches by wire must be examined and loosened if likely to cut the bark.—H. MARKHAM, Wrotham Park Gardens.

Apple Sales.—I think "H." (see p. 793) has but a superficial knowledge of the causes why apples sell badly, or, at least, he does not tell us all the causes if he thoroughly understands the business. I agree that the bad manner in which the fruit is sent to the market has much to do with the poor returns obtained by many growers. That, however, is not the only reason. When we hear one of the best of Kent cultivators of apples say, that in September he could not realise more than 3s. 6d. for Worcester Pearmain in first-class order, I wonder what "H." would say or do? This constantly bewailing bad packing, grading, and so forth is but a peg to hang an argument upon. The real cause of low prices at certain seasons—end of September especially—is overstocked markets. It is all very well to say that varieties like Bramley's Seedling, Wellingtons, and Blenheims should not be sold thus early, but many growers have little or no store space; and very often, too, the Michaelmas rent is a pressing argument for the early disposal of such sorts as those named. To make the best use of late varieties in their season recourse must be had to storage, and even then it is an open question if they can be advantageously placed. Where a grower has a private trade at hand he may then make the most of the late sorts of apples, but where no such favourable opportunity exists it is extremely difficult to obtain a moderately high figure in the open market after the American fruit enters into competition. Even then it is not the fault of the grower, but more that of the consumer, who sees the highly coloured fruits of the American apples and is infatuated with their appearance, to the detriment of home-grown fruit. The ordinary person, who purchases American examples of rich colouring, as a rule, does not trouble about flavour. All apples are alike to him.—E. M.

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EXHIBITIONS AND MEETINGS.

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Royal Horticultural Society.

The meeting held on December 8 was chiefly notable for the displays of carnations brought up in view of the carnation show of the succeeding day. The hall was by no means full, but orchids were well shown, cypripediums figuring largely.

FLORAL COMMITTEE.

Phœnix Roebelini, a beautiful palm, was well shown by Messrs. W. Cutbush and Son, Highgate, who had a long bank of it, associated with crotons, azaleas, Otaheite oranges, ardisias, and daphnes. The Messrs. Cutbush put up a very tasteful display of carnations, showing large vases of Mrs. Lawson, Mrs. Patten, Winsor, Governor Roosevelt, Beacon, White Perfection, etc. Very bright were the poinsettias and Gloire de Lorraine begonias, set up by Messrs. H. B. May and Sons, Edmonton, and no less attractive were the handsome crotons and the useful solanums and veronicas.

Messrs. J. and F. Chatfield, Southwick, Sussex, showed a few bunches of finely-grown market chrysanthemums, notably Embleme Poitevine, Dr. Enguehart, Mrs. J. Thompson, Francois Pilon, Tuxedo, Mrs. J. Chatfield, and Winter Cheer. Messrs. W. Wells and Co., Merstham, showed a charming lot of single and market varieties of chrysanthemums that included the fine single Merstham Jewel and the splendid golden decorative R. F. Felton, and the large white single Dorothy Fortescue. Messrs. H. Cannell and Sons, Swanley, showed a very bright lot of cut zonal pelargoniums, setting these useful flowers up in their usual fine style. Mr. E. Potten, Cranbrook, Kent, showed a double-flowered variety of the renowned Paul Crampel pelargonium, a variety that ought to be very useful; it is bright scarlet.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, put up a bold and effective exhibit in the centre of the hall, thus taking a leaf out of the National Sweet Pea Society's book. This circular exhibit was wholly filled with carnations: carnations in stands, in vases of various sizes, and in suspended bowls and baskets. Ferns, asparagus, and smilax were used as greenery, and the whole display was an excellent one. A few of the leading varieties on view were Mrs. T. W. Lawson, Lady Bountiful, Winsor, Winona, Enchantress, Mikado, Britannia, Beacon, and other fine kinds. The Messrs. Low also contributed a group of cyclamens.

A very fine exhibit of winter-flowering carnations was made by Mr. Jennings, gardener to Leopold de Rothschild, Esq., Ascott, Leighton Buzzard. This consisted of batches of finely-grown and free-flowering plants of Mrs. T. W. Lawson, Winsor, Enchantress, My Maryland (very fine), Lady Bountiful, Cardinal, Robt. Craig, Flamingo, Victory, Mrs. M. A. Patten, Jessica, and Governor Roosevelt. Messrs. Bell and Sheldon, Castel Nursery, Guernsey, set up a charming lot of well-grown carnations, showing splendid bunches of fine flowers of Enchantress, Winsor, Beacon, The President, Mrs. Burnett, White Enchantress, etc., and the group was edged with small vases of winter-flowering sweet peas. Mr. A. F. Dutton, Iver, Bucks, exhibited winter-flowering carnations in good style, and Messrs. J. Peed and Son, Norwood, submitted a group of these flowers.

Winter-flowering carnations were largely and well shown by Mr. G. Lange, Hampton, and his set included fine bunches of Fair Maid, Beacon, Winsor, White Perfection, etc. Messrs. Blackmore and Langdon, Bath, showed a very rich carmine carnation named Mary Wilson. Messrs. R. H. Bath, Lim., Wisbech, showed chrysanthemum Ball of Gold (A.M.), a fine golden sport from the incurving Snowdrift.

The Misses Hopkins, Shepperton, sent a few alpines and hardy flowers. Messrs. T. S. Ware, Lim., Feltham, submitted a collection of alpines and hardy flowers, and a small group of carnations. Messrs. Jas. Veitch and Sons, Chelsea, contributed a splendid bank of winter-flowering begonias, the varieties Ensign and Winter Cheer being very fine, free, and brilliant. This firm also showed the sweet-scented Luculia gratissima, and a small display of carnations in pots, showing the habit and free-flowering properties of the popular sorts.

From the Garden City, Letchworth, Mr. Cole brought up a large number of plans of gardens, sent in for the competition instituted by the City Company; these were wonderfully varied, showing how widely diverse are the ideas concerning the way in which any given garden may be laid out. Madame Albert, Acton, sent a group of flower studies in oils and water colours. Paintings of flowers, chiefly tulips, and garden scenes were submitted by Mr. Frank Galsworthy, Chertsey. The tulips were, on the whole, particularly good.

ORCHID COMMITTEE.

Messrs. Sander and Sons, St. Albans, exhibited numerous cypripediums and several spikes of a very fine form of Oncidium varicosum Rogersi. Among the former we noticed C. Prospero majus, C. Swinburnei magnificum, C. Actæus nivalis, C. Leeanum Clinkaberryanum, C. Niobe pulcherrimum, C. Corneyanum the Duchess, C. Charlesworthi Temeraire, with a huge dorsal sepal, and C. Troilus Lord Nelson (A.M.). A fine feature of the group was the brilliant Odontoglossum crispum Diana. Messrs. Moore, Lim., Rawdon, Leeds, sent up a small contribution of cypripediums of various kinds, with a small central group of choice odontoglossums, such as O. Harryano-crispum, O. Vuylstekæ, and O. Loochristiense; there was also a fine form of Cypripedium Chamberlainianum in this group.

Mr. Hopkins, gardener to Francis Wellesley, Esq., Westfield, Woking, showed Cypripedium The Premier, a very richly-coloured, burnished flower of large size and great beauty. It is the result of crossing C. Mons de Curte and C. Mrs. Mostyn. Mr. Hopkins also showed the yellow C. Actæus Golden Gem. Mr. Black, gardener to R. Thwaites, Esq., Chessington, Streatham, sent a pretty form of Cattleya Maggie Raphael. A fine spike of Odontoglossum G. P. Walker was sent by Mr. Macgregor, gardener to G. P. Walker, Esq., Heatherwood, Putney Heath. Mr. J. H. Hill, Burgess Hill, Sussex, sent up Lycaste Skinneri alba, Odontoglossum constrictum, O. crispum, and numerous good cypripediums.

Messrs. Jas. Cypher and Sons, Cheltenham, staged a very attractive group of cypripediums; varieties of the insigne and Leeanum groups predominated, and there were goodly plants of C. insigne Sanderæ, C. i. Harefield Hall, C. Leeanum, C. Fairrieanum, etc., together with a few sprays of Dendrobium Phalænopsis Schroderianum, and some flowers of the Butterfly orchid, Oncidium Krameri. H. J. Bromilow, Esq., Rann Lea, Rainhill, put up a small group of choice cypripediums that included C. bellatulum album, C. Fairrieanum Fascinator, C. Germaine Opoix, C. Maudæ magnificum, C. Thalia Mrs. F. Wellesley, C. Fulshawense, C. Lord Ossulston, C. insigne Harefield Hall, etc.

Messrs. J. and A. McBean, Cooksbridge, Sussex, showed fine blooms of Cypripedium insigne Sanderæ, some charming spikes of Odontoglossum crispum in variety, and Vanda cærulea. Mr. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Gloucester, brought up some cypripediums and a pretty Lælio-cattleya. Messrs. Hugh Low and Co., Bush Hill Park, Enfield, showed a small group of cypripediums, with Cycnoches chlorochilon, C. maculata, Dendrobium Cœlogyne (A.M.), and Oncidium varicosum Bush Hill var., with a bright red-brown base to the flowers. Messrs. Armstrong and Brown, Tunbridge Wells, contributed a large group of well-grown cypripediums, and C. Leeanum grandis, C. insigne Chantini, C. Minos Youngi, C. i. Sanderæ, C. Armstrongi (A.M.), and C. Leeanum superbum were particularly good.

Messrs. Charlesworth and Co., Haywards Heath, showed several beautiful orchids, including Phaio-calanthe Colmani, Odontoglossum Lambeauianum, O. crispo-Harryanum, O. ardentissimum, Lælia albida, L. anceps Waddonensis, Trichopilia suavis, Lælio-cattleya Golden Oriole, and the brilliant crimson Odontioda Bohnhofiæ, Brasso-cattleya Cliftoni (F.C.C.), a pretty hybrid from B.-c. Digbyano-Mossiæ and C. Trianæ Upland's var. Messrs. Heath and Son, Cheltenham, showed a small group of orchids and a few winter-flowering carnations.

MESSRS. HUGH LOW AND CO.'S GOLD MEDAL EXHIBIT OF CARNATIONS AT THE PERPETUAL-FLOWERING CARNATION SOCIETY'S SHOW ON DECEMBER 9.

FRUIT AND VEGETABLE COMMITTEE

A collection of well-grown onions, chiefly Excelsior, Cocoanut, Ailsa Craig, A1, etc., was shown by Mr. B. W. Bedford, gardener to R. H. Ling, Esq., The Braes, Berkhamsted.

MEDALS.

Silver-Gilt Flora.—Messrs. Hugh Low and Co., Enfield; Mr. Jennings, gardener to Leopold de Rothschild, Esq., Ascott, Leighton Buzzard.

Silver-Gilt Banksian. — Mr. H. Burnett, Guernsey; Messrs. H. Cannell and Sons, Swanley.

Silver Flora.—Messrs. Bell and Sheldon, Guernsey; Mr. Lange, Hampton; Messrs. Jas. Veitch and Sons, Chelsea; Messrs. W. Cutbush and Son, Highgate; Messrs. H. B. May and Sons, Edmonton; Mdme. Albert, Acton; Mr. F. Galsworthy, Chertsey; Messrs. Cypher and Sons, Cheltenham; Messrs. Sander and Sons, St. Albans; Messrs. Charlesworth and Co., Haywards Heath; Messrs. Armstrong and Brown, Tunbridge Wells; Messrs. J. and A. McBean, Cooksbridge; Mr. Bromilow, Rann Lea, Rainhill.

Silver Banksian.—Messrs. J. Peed and Son, Norwood; Messrs. T. S. Ware, Lim., Feltham; Messrs. Moore, Lim., Leeds; Messrs. Hugh Low and Co., Enfield (orchids); Mr. R. H. Ling, Berkhamsted.

CERTIFICATES AND AWARDS.

First-Class Certificate. — To Brasso-Cattleya Cliftoni, from Messrs. Charlesworth and Co., Hayward's Heath.

Award of Merit.—To Chrysanthemum Ball of Gold, from Messrs. R. H. Bath, Wisbech; Dendrobium Cœlogyne, from Messrs. Hugh Low and Co., Enfield; Cypripedium Armstrongi, from Messrs. Armstrong and Brown, Tunbridge Wells.

Winter-flowering Carnation Show.

A beautiful exhibition of perpetual-flowering carnations was held at the Royal Horticultural Hall, Westminster, on Wednesday, December 9, under the auspices of the Perpetual-flowering Carnation Society. The flowers were beautiful, reminding one by their colour and fragrance of summertime. Considerably less than ten years ago such a lovely display in December would have been impossible, and every lover of flowers must pay a tribute of thanks to those who have worked so hard to bring the flowers prominently before the public. We have but one word of criticism, and it refers to the large number of vases, in competition and otherwise, with unlabelled flowers. Naming should be enforced.

OPEN CLASSES.

There were four competitors in the leading class for a collection of cut blooms, arranged on a table space of 10ft. by 3ft., and here the premier award, a gold medal, was won by Mr. W. E. Wallace, Eaton Bray, Dunstable, with a bold and beautiful exhibit of fine flowers. The varieties, set up in large glass vases, included Mrs. T. W. Lawson, Lady Bountiful, White Perfection, Britannia, Enchantress, etc. Mr. C. F. Waters, Deanland Nursery, Balcombe, came second with a charmingly arranged display of good blooms associated with asparagus sprays; Victory, Lady Bountiful, Harlowarden, Afterglow, Enchantress, and Mrs. Burnett were very good in this exhibit. Mr. W. H. Page, Tangley Nurseries, Hampton, came third.

Mr. W. E. Wallace, Eaton Bray, had the finest vase of thirty-six blooms of a white variety, leading with White Perfection; Mr. Lange, Hanworth Road, Hampton, second; and the Newport Carnation Nursery Company, Newport, Essex, third, with the same variety. Enchantress was the best blush variety, and it was best shown by the Newport Carnation Nursery Company; Mr. W. H. Lancashire, Victoria Vineries, Guernsey, second; and Messrs. Bell and Sheldon, Castel Nurseries, Guernsey, third, in this class for a blush variety, each showing Enchantress.

Mr. Lancashire scored for a salmon or light pink variety with beautiful flowers of Mrs. Burnett; Messrs. Bell and Sheldon second with Winsor; and Mr. H. Burnett, St. Margaret's Nurseries, Guernsey, third, with Mrs. Burnett. Mr. Lancashire was first in the class for a deep pink variety, and he had a fine set of three dozen blooms of Mrs. T. W. Lawson, of fine size and colour; there was no other competitor.

In the crimson class Mr. W. H. Lancashire led with President, very rich; Messrs. Bell and Sheldon coming second with the same variety. Mr. Lancashire was a good first in the scarlet class with beautiful blooms of Robert Craig; Messrs. Bell and Sheldon second with Britannia. For a fancy variety Mr. C. Engelmann, Horneybrook Nursery, Saffron Walden, led with Imperial, a rose-pink variety with red flaking; Mr. Lancashire second with Empress, a new white seedling, very lightly splashed with rose.

SECOND DIVISION.

One section was arranged for vases of eighteen blooms, and from this section Channel Islands growers were barred. In the white class Mr. W. H. Page led with Lady Bountiful; Mr. D. M. Collins, Heathfield Nursery, Swanley, second, with White Perfection. Mr. Page led in the blush class with solid flowers of Enchantress; Mr. J. A. Witney, Cholsey, Berks, second. In the light pink or salmon class Mr. A. F. Dutton, Iver, Bucks, scored with Winsor; Mr. C. Engelmann second with the new pink Rex; and Mr. Page third with Winsor. For a deep pink or rose variety the Newport Carnation Nursery Company won first place; Mr. Page was second, and Mr. D. M. Collins, third. In the crimson class Mr. W. H. Page led with Harry Fenn; Messrs. B. and V. Haig, Castle Hill, Maidenhead, second.

Mr. Dutton led for eighteen blooms of a scarlet variety with beautiful flowers of Victory; Newport Carnation Nursery Company, second; and Mr. G. West, gardener to F. Ricardo, Esq., The Friary Gardens, Old Windsor, third. Mr. Dutton was also first in the "any other colour," or fancy class with Imperial.

GARDENERS AND AMATEURS.

In the gardeners' and amateurs' class for a collection of cut blooms, arranged on a space 6ft. by 3ft., Mr. A. E. Usher, gardener to Sir Randolf Baker, Bart., Ranston House, Blandford, Dorset, was a splendid first prizewinner, with large vases of fine flowers of Oriflamme, Britannia, Winsor, Lady Bountiful, White Perfection, Harlowarden, Enchantress, Mrs. T. W. Lawson, and Robert Craig; Mr. A. Grubb, second. Two pretty groups of carnations, in pots, were arranged, and the premier award fell to Mr. A. Grubb, gardener to C. F. Raphael, Esq., Shenley, Herts, who had a charming exhibit of well-grown plants, neatly edged with ferns; Mr. J. Vert, second. Mr. J. Vert, who is gardener to Lord Howard de Walden, Audley End, Saffron Walden, was the only exhibitor of a dozen plants in flower, and he was awarded the first prize for well-grown examples of Winsor, Mrs. Burnett, Beacon, Welcome, Salmon Lawson, and Britannia.

Mr. J. G. Weston, gardener to H. J. King, Esq., Eastwell Park, Ashford, Kent, had the best three blooms of a white variety, White Perfection, and with these he gained the special prize for the best vase in the three-bloom classes; Mr. J. Vert second, and Mr. Usher third. For three blush blooms, Mr. Usher led with Enchantress; Mr. Weston second, and Mr. Vert third. For three flowers of a light pink or salmon variety, Mr. Weston scored with Mrs. Burnett; Mr. Usher second, and Mr. Vert third. Mr. Vert led for three deep pink or rose flowers with Mr. Usher second, and Mr. West third with Mrs. T. W. Lawson. Mr. Vert led for three crimson blooms with Crimson Glow; Mr. Weston second, and Mr. West third. For a scarlet variety Mr. Weston scored with Britannia; Mr. Grubb second with the same variety, and Mr. West third with Robert Craig. Mr. Usher led in the fancy class, followed by Mr. Weston and Mr. Vert

The best vase of twelve blooms in not less than six varieties, was shown by Mr. A. E. Usher, and he had some beautiful flowers; Mr. Weston second, and Mr. Vert third; five entries.

SPECIAL AND DECORATIVE CLASSES.

Mr. E. G. Hill's special prize for Afterglow was won by Messrs. Bell and Sheldon with a pretty vase of blooms, and the same exhibitors won Mr. F. Dorner's prize for the best vase of Winona, and the F. R. Pierson Company's prize for Winsor. For a vase of carnations shown for decorative effect, Mr. D M. Collins led with Fair Maid, and Mr. A. E. Usher was second with Mrs. Burnett.

The best table decoration was adjudged to be the one set out by Mrs. Robinson, Norhyrst, Park Hill, Carshalton, who had a light design in Enchantress flowers; Messrs. R. F. Felton and Son, Hanover Square, second with a beautiful low arrangement of lovely blush and heliotrope blooms; Mr. Usher third with a design composed of Mrs. Burnett. Mr. Usher had the best three ladies' sprays, and in this class Messrs. B. and V. Haig came second, and Mr. A. Grubb third. For gentlemen's buttonhole bouquets Mr. Grubb led with some fine blooms; Mrs. C. Robinson, Norhyrst, Park Hill, Carshalton, second, and Mr. A. E. Usher third.

NON-COMPETITIVE.

A considerable number of exhibitors held over their displays from the previous day, and these are commented upon in our R.H.S. report. The exhibitors were: Mr. Jennings, gardener to Leopold de Rothschild, Esq., Leighton Buzzard; Messrs. J. Veitch and Sons, Chelsea; Messrs. T. S. Ware, Lim., Feltham; Messrs. J. Peed and Son, Norwood; Messrs. W. Cutbush and Son, Highgate; Messrs. Bell and Sheldon, Guernsey; Mr. H. Burnett, Guernsey; Messrs. H. B. May and Sons, Edmonton; and Messrs. Hugh Low and Co., Enfield.

From the American Carnation Nursery (Mr. W. Kiner, manager), Sawbridgeworth, came a charming exhibit of carnations, facing the hall door. The flowers were well grown, and the dainty disposition of the blooms over white paper, and with asparagus and smilax, was delightful; Enchantress, Mrs. Burnett, Afterglow, Mrs. Lawson, Winsor, Beacon, and Imperial were well shown, among many others. Mr. C. Engelmann, Saffron Walden, showed a fine lot of blooms, and had some interesting yellow seedlings on view. Mr. Lange, Hampton, put up a nice group of good blooms of the leading varieties. Mr. W. H. Lancashire, Guernsey, had a whole group of his new, soft rosy-red variety, named Rose Dorée, and this fine carnation was the only one that passed muster with the Floral Committee; it was granted a First-Class Certificate. Mr. Jas. Green, Reliance Works, March, showed good carnations, and wires for flower and plant supports.

MEDALS.

Gold.—Messrs. Hugh Low and Co., Enfield; Messrs. Bell and Sheldon, Guernsey; Mr. Jennings, gardener to Leopold de Rothschild, Esq., Leighton Buzzard.

Large Silver. — Messrs. W. Cutbush and Son, Highgate; Mr. H. Burnett, Guernsey; Mr. Lange, Hampton; Mr. C. Engelmann, Saffron Walden.

Silver.—Mr. James Green, March; Mr. W. H. Lancashire, Guernsey; Messrs. J. Peed and Son, Norwood.

Smithfield Club Show.

Fat cattle was, as usual, the main feature of this show, but there was, nevertheless, much of interest to the gardener to be seen in the gallery, which runs round the four sides of the spacious Agricultural Hall. The exhibits represented the utilitarian rather than the decorative side of horticulture, but from an educational standpoint, there can be no doubt as to the value of the display of vegetables and roots. We were gratified to see that gardeners as well as farmers attended in goodly numbers to inspect the exhibits in this section. Messrs. Sutton and Sons, Reading, made a most imposing display of turnips, potatoes, swedes, mangels, and popular garden vegetables. To mention in detail the many good things to be seen on this stand would occupy much space, and it must suffice to say that everything shown was of a high degree of excellence. A distinct note was struck by the introduction of several groups of finely-grown cyclamen, which afforded a welcome break from the prevailing vegetables.

Messrs. J. Carter and Co., High Holborn, maintained their reputation by staging a remarkable array of farm and garden roots and vegetables. The mangels exhibited were quite exceptional in regard to their size and form, and colour, demonstrating high cultivation in conjunction with purity of stocks. Among the vegetables Carter's Record onion was conspicuous, and Carter's Orange Giant carrot was represented by excellent roots.

Messrs. Harrison and Sons, Leicester, occupied a large space with their fine exhibit of vegetables, roots, and cereals. Of greater interest to our readers were the excellent examples of Harrison's Intermediate, Early Market, and Exhibition carrots, three quite distinct varieties. The onions were of great merit, and included Ailsa Craig, Excelsior, and Improved White Spanish.

Messrs. John K. King and Sons, Coggeshall, put up a capital collection of vegetables. Potatoes were represented by Mighty Atom, a good, heavy cropper, King John, a large oval; and Senator, a variety of handsome appearance, and well recommended for flavour. Among onions Nulli Secundus and Exhibition Globe were conspicuous.

Messrs. Webb and Sons, Wordsley, Stourbridge, occupied their usual position, and on their elaborate stand was a great display of roots, vegetables, and seeds of high quality. The potato New Empire was shown in capital form, and has great promise. Messrs. C. Fidler and Sons, Reading, showed a fine collection of potatoes, comprising over sixty varieties, prominent among them being Fidler's Invincible.

Messrs. Wm. Davie and Co., Haddington, N.B., brought down a number of the newer potatoes.

Messrs. E. W. King and Co., Coggeshall, contributed farm and garden produce of high quality.

A good collection of fruit was staged by Messrs. W. and J. Brown, Stamford. Messrs. W. Horne and Sons, Cliffe, Rochester, staged apples in about twenty varieties, all excellent fruits. Messrs. Dicksons, Lim., Chester, had a number of good varieties of apples, also potatoes and samples of grass seeds.

Potato Show, Bingley Hall, Birmingham.

NOVEMBER 30—DECEMBER 3.

The potato competitions, held in connection with the 60th annual Fat Cattle Show, on the above dates, resulted in a good average display, the season having been generally conducive to a fine development of the noble tuber. Among the 2,600 specimens submitted there were but few of those forms which were boomed some seasons back, but there were many very attractive collections, several of the awards in the higher classes going to a well-known amateur cultivator in Bucks.

Ten classes were provided for, and eight collections were entered for twelve dishes, distinct, twelve tubers each, the champion award, £5, falling to Mr. W. Coleman, 13, Hunters Street, Buckingham, whose collection comprised handsome and bright tubers of Lord Roberts (W.K.), Eightyfold (C.R.), Sir John Llewelyn (W.K.), Duchess of Cornwall (W.K.), Purple Perfection (P.R.), Ninetyfold (W.K.), Snowball (W.R.), Superlative (W.K.), Factor (W.K.), King Edward VII. (C.K.), Windsor Castle (W.R.), and Million Maker (W.K.); the second prize of £3 went to Mr. Benjamin Parker, Scotforth, Lancaster, whose best varieties were Crimson Beauty (C.K.), Epicure (C.R.), The Dean (P.R.), Midlothian Early (W.K.), Early Rose (C.K.), British Queen (W.K.), Red Ashleaf (C.R.), Nobleman (W.K.), Satisfaction (W.K.), Lowser (C.R.), King Edward VII., and Duchess of Cornwall. Mr. T. Bannister, Malthouse Farm, Marston Green, Birmingham, was third with samples of most useful table size and shapely, those claiming notice being Lord Tennyson (C.R.), Lymm Gray (W.R.), Factor, Windsor Castle, Up-to-Date, Scottish Triumph (W.K.), and Beautiful (W.K.), excellent. For six sorts Mr. Coleman again headed the list, Factor, Dalmeny Beauty, and Peckover (W.R.) being very attractive dozens; Mr. Bannister second, with fine tubers of Factor, Table Talk, and Duchess of Cornwall; Mr. B. Parker third, having remarkable dishes of Midlothian Early and Talisman (W.K.) For four varieties Mr. Coleman headed the list with Queen of the Veldt (P.K.), Factor, Duchess of Cornwall, and Mr. Bresee (C.K.); Mr. J. W. Needham, Wildsworth, Gainsborough, Lincoln, second, his dozen of King Edward VII. being shapely and very highly coloured; His Grace the Duke of Portland, Welbeck Abbey, Notts, third, having, among others, a grand dozen of Mr. Bresee. For four varieties suitable for farm or field culture Mr. Coleman once again scored a premier, putting up noble specimens of Factor, Scottish Triumph, Duchess of Cornwall, and Up-to-Date. Mr. Bannister followed closely, substituting Table Talk for Scottish Triumph, otherwise the varieties were the same. Mr. Parker third, his best dish being Satisfaction. For two dishes, long or kidney shape, Mr. Needham led with large examples of King Edward VII. (eyes somewhat deep), and Empress Queen (W.K.); Messrs. Coleman and Bannister taking the lower awards, each submitting Factor and Up-to-Date. For two dishes of round varieties, Mr. Bannister led with perfect specimens, Table Talk being specially good. Mr. John Neaverson, Eye, Peterborough, second, with Gold Mine and Reading Russet, Mr. Needham third, for Marsland Queen and Monarch. For a single dish, long or kidney shape, Mr. Coleman put up Factor, and Mr. Bannister staged Up-to-Date, and for one dish of rounds the awards fell to Messrs. Bannister and Neaverson, who submitted Table Talk and Satisfaction, while for the handsomest dish of tubers Mr. Bannister secured the first and second places with Table Talk and Duchess of Cornwall.

Varieties not yet in commerce were limited, the first prize going to Mr. Parker for Royal Albert, an early white round, somewhat pebble-shaped, with a beautiful netted skin, the second award going to the Duke of Portland's Welbeck Abbey, a broad flattish white tuber with squarish ends and smooth skin.

Non-competitive displays were scarcely as numerous as usual, but Messrs. Webb and Sons had a grand collection, artistically arranged, of grass seeds, specimen mangolds, swedes, turnips, wheat, barley, and oats, choice potatoes, including several seedlings, and very fine examples of onions, carrots, parsnips, beet, and leeks. Messrs. Dicksons, Lim., Chester, made a remarkably fine show of apples, potatoes, grasses, and farm seeds; and Messrs. Dickson and Robinson, Manchester, had fluted columns of swedes and mangolds, in addition to their tastefully posed grasses. Messrs. Harrison and Sons, Leicester, had a choice assortment of mangolds, swedes, peas, and other vegetables. Messrs. Little and Ballantyne, Carlisle, had seeds and potatoes. Messrs. W. R. Green and Son, Wisbech, contributed potatoes; and Mr. Scarlett, Edinburgh, staged Scotch-grown seed potatoes, etc.

Reading and District Gardeners' Association.

At the fortnightly meeting held in the Abbey Hall on November 30, Mr. Tunbridge (chairman) presided over the largest assembly of members during the present session.

The subject of the evening was "Cyclamen," by Mr. Goatley, head gardener to Lord Northcliffe, and representative of the Guildford and District Gardeners' Association.

In calling upon the lecturer, the Chairman remarked that Mr. Goatley needed no introduction to the Reading Gardeners' Association, and that he remembered the time, now some years since, when, as a young man, Mr. Goatley first volunteered to read a paper before this society, and he congratulated him on the high position he now held in the profession. The lecturer, who has earned a reputation for cyclamen growing, dealt fully with each phase of the subject.

Referring first to the composition of the soil required for raising cyclamen from seed, then to the care and treatment of the young plants until the formation of a number of leaves, he afterwards specially emphasised the necessity of frequently syringing the plants while in active growth, this operation not only keeping them moist and cool, but also proving a great preventive from such pests as thrips and greenfly. In his opinion, it was not desirable to keep plants longer than three years, and he could safely say that the best blooms were always obtained from seedlings, which in his houses flowered continually for eight months of the year. He did not, however, recommend that the plants should be allowed to bloom so long if flowers were required the second year. Mr. Goatley not only treated fully the culture of the plants, but also endeavoured to trace the history of the now popular Cyclamen persicum. As the name implies, a native of Persia, it was interesting to note the many countries that have contributed to the advance of this favourite flower. It was introduced into England from the Island of Cyprus in 1731.

A prolonged and animated debate followed the lecture, among those taking part being the Chairman (Mr. Tunbridge), Messrs. Wilson, Hinton, Exler, Neve, Harris, Loader, F. Townsend, Judd, Fry, Wynn, Durbidge, Wicks, etc.

The exhibits were appropriate to the evening, Mr. D. Harris (gardener to the Hon. A. Mills, Mapledurham House), was awarded a certificate for an exceedingly beautiful display of well-grown cyclamen. The non-competitors, who were accorded a vote of thanks, were Mr. F. Townsend, gardener to the vice-president, L. G. Sutton, Esq., group of very fine cyclamen, and a lovely basket of Begonia Gloire de Lorraine; Mr. Exler, gardener to Rufus Isaacs, Esq., K.C., M.P., large collection of berried solanums, from seed sown in February; and Mr. H. C. Loader, gardener to Mrs. Anderdon Weston, Holme Grange, Wokingham, vase of Iris stylosa.

Hearty votes of thanks to the lecturer and chairman concluded the meeting. Two new members were elected.

National Chrysanthemum Society.

A meeting of the General Committee was held at Carr's Restaurant on Monday, December 7, Mr. T. Bevan in the chair. Ordinary routine business occupied most of the time. It was interesting to learn that all the available space on the Holme's Memorial Cups has been used for engraving winners' names upon, so that a silver band on the plinth will be needed to record future winners. Provisional arrangements were made for the society's summer outing and a water trip will probably be part of the programme.

After this meeting the annual dinner of the members of the Floral Committee was held, under the chairmanship of Mr. D. B. Crane. There were about two dozen present, and a very bright and pleasant evening was spent. The speeches were short, and the stiffer style of a more formal meeting gave place to a good deal of pleasant humour. The various toasts were "The King," "The National Chrysanthemum Society," "The Floral Committee," "The Trade Growers," "The Market Men," "The Horticultural Press," "The Chairman," and "The Secretary." The speakers were Messrs. D. B. Crane, T. Bevan, T. W. Sanders, McKerchar, Witty, Curtis, Ballantine, Wells, Ingamells, and Prickett. Songs and humorous stories were sandwiched between the short speeches, and Messrs. Crane, Howe, Tyler, H. Sanders, Curtis, Harman Payne, and two friends of Mr. Wells gave help in this part of the programme.

Many wise things were said, and many useful suggestions were made in the various speeches, and it will probably happen that this pleasant little function, with its easy freedom from the cast-iron restrictions that prevail at so many meetings, will prove of considerable value to the future well-being of the society.

OBITUARY.

MONS. CHARLES BALTET.

France has lost a great horticulturist by the recent death of M. Chas. Baltet. Born at Troyes in January, 1830, M. Baltet came of a long line of horticulturists, and he early showed a keen interest in the progress of his chosen profession. When only 26 years of age he presided at the first congress held by the French Pomological Society, and he has been intimately associated with every great horticultural movement in France ever since. As a writer, M. Baltet has been widely read and appreciated, and his best-known work, in this country, is "The Art of Grafting." As a raiser of new fruits, M. Baltet will long be remembered for his peaches Baltet and Prècoce de Croncels, for his pears Charlet Ernest and Virginie Baltet, and his apple Transparent de Croncels. The foundation of the Versailles School of Horticulture was due chiefly to M. Baltet in conjunction with his friend M. Pierre Joigneaux. He also founded a very interesting prize in connection with the Société Horticole de l'Aube, to be given, biennially, to the father of a family who had trained his children in the practice of horticulture. A fine man in every sense of the word was M. Baltet, for, in addition to his general horticultural activities, and his work as a nurseryman, he did not neglect his duties as a citizen, and he was for a long time the doyen of the Municipal Council of Troyes. The funeral took place at Troyes on November 28. It was of a public character, and it was attended by a very large number of the leading horticulturists of France.

FORTHCOMING ENGAGEMENTS.

WEDNESDAY, December 16.—Royal Society of Arts, Meeting at 8 p.m.

TUESDAY, December 22.—Royal Horticultural Society: Committees meet at 12 o'clock; General Meeting at 3 p.m.; Scientific Committee at 4 o'clock.

FRIDAY, December 25.—Christmas Day.

SATURDAY, December 26.—Bank Holiday.

NEW BOOKS.

HOLLY, YEW, AND BOX.

By W. Dallimore. (John Lane, The Bodley Head, London). Price, 7s. 6d.

The holly, yew, and box occupy such prominent positions in garden scenery, and have so much that is of interest associated with them, that the work now before us is especially welcome. A few other classes of evergreens, such as the laurels, heaths, ivies, are included, but these are dealt with more briefly than the shrubs which form the title of the work.

The chief value of the book consists in the information it gives on the holly, yew, and box, and this is very great; so great, in fact, that the book should have a place in all garden libraries. As an indication of its scope we would mention that the section devoted to hollies extends over 144 pages, and contains all the information, clearly and pleasantly stated, the planter or garden lover could wish to know, relating to these shrubs. There is, for example, a general description of the holly family, and chapters on propagation and general cultivation, the uses of hollies, hollies as specimens, and as town trees, the making of hedges, and on Ilex aquifolium and its varieties, and other species. There are also chapters on the history and poetry of the holly which are admirably done, and form highly interesting reading. The species mentioned and its numerous forms occupy seven chapters, and the descriptions, which are mostly based on those prepared by the late Thomas Moore, are so full and accurate that they cannot fail to render valuable assistance in the identification of doubtful forms, and in determining the suitability of any particular variety for a certain position. In addition to the letterpress description, illustrations are given of the leaves of the majority of the varieties. There are also illustrations of specimens, and of groups of hollies from photographs taken in the Royal Gardens. The sections devoted to the yew and box are not less remarkable for their usefulness and interest, and the planter can turn to them with the assurance that he will obtain the information necessary to clear up any point about which he may be in doubt.

Except that the design on the cover does not appeal to one, the book is admirably produced, and the publisher may be congratulated on the results.

THE FLORIST'S BIBLIOGRAPHY.

By C. Harman Payne, F.R.H.S. (William Wesley and Son, 28, Essex Street, Strand, W.C.)

We have no information as to the price of this admirable work, but were we to make a guess, we should not hesitate to say that the charge made for it inadequately represents the care, thought, and time that has been devoted to its preparation. But few readers of books have a full appreciation of the judgment required, and the time involved in the compilation of a bibliography of a subject having so wide an area as that of florists' flowers. Still fewer are those who have the ability and the courage to engage in work so difficult and so little likely to bring a full measure of praise or profit, however well it may be done. Happily for themselves and for students bibliographists regard their work as a labour of love, and filled with a desire to afford all the assistance they can to those who in their course of reading may desire to consult those of an early period, as well as those of modern date, they are amply satisfied if they accomplish their object. It was, we doubt not, in such spirit as this that Mr. Payne entered upon the preparation of the work now before us, and laboured with such assiduity to make it as perfect as is possible for a book of this class to be. The author speaks of his "Florists' Bibliography" as "this little book," and were we to judge it with the aid of a tape measure, we should probably express our agreement with him; but when we open the book and carefully examine the thousand or more entries of books relating to floriculture, we are disposed to think that a wholly different term might be applied to it. It certainly represents a great effort satisfactorily accomplished, containing as it does practically all the books on floriculture, except those relating to roses, that have been published during the past three centuries, and carefully classified with the name of the author, date of publication, etc. The omission of the rose from the work because a bibliography of the flower in the Spanish language was published some years ago, is, in our opinion, a mistake on the part of the author, and we shall hope to see in the second edition of "The Florist's Bibliography" the rose occupying its proper place within the covers.

HANDBOOK OF HARDY TREES AND SHRUBS.

By George Bunyard, V.M.H. (George Bunyard and Co., Lim., Maidstone.) Price 3s. 6d.

This practical work on the selection and planting of trees for the garden and park makes its appearance at an opportune moment, and can hardly fail to receive a hearty welcome from those engaged in planting operations. In a series of well-arranged chapters, the author passes under review park and paddock trees, specimen trees for lawns and gardens, coniferous trees, evergreen shrubs, deciduous and other shrubs and trees remarkable for the beauty of their flowers, and bamboos and ornamental grasses. In the course of the review the kinds of special excellence are indicated, and the positions pointed out for which they are best adapted. There are also selections of trees and shrubs specially suited for the seaside, for chalk soils, for rockeries, for positions where rabbits abound, and for hedges and shelter. The book is an excellent guide on all that relates to the selection and planting of trees and shrubs, and its value is materially enhanced by the illustrations, which are reproductions of drawings from Nature by Miss Frances L. B. Bunyard. It would have been an advantage had the inscriptions to the illustrations been in ordinary type, for the written inscriptions in a large hand somewhat detracts from their appearance.

BEAUTIFUL FLOWERS.

By Horace J. Wright and Walter P. Wright. (T. C. Jack and E. C. Jack, 16, Henrietta Street, W.C.) Price, 1s. per part.

As there is some difficulty in forming a correct estimate of a serial publication, whether relating to gardening or any other subject, from the first part, we have thought it advisable to wait until we had sufficient material on which to base an opinion before referring to "Beautiful Flowers." We are, of course, well acquainted with the high position of the publishers, and the ability of the authors, and were, therefore, not apprehensive as to any material falling off. But we know from experience that the first part of a series is not always the best of the issues, and that when the opinion is wholly based upon it, there is a risk of an injustice being done to the work. We have now the first four parts before us, and can speak in unqualified terms with regard to the work, and say that it is deserving of the warmest commendation, both as regard its plan and execution.

The aim of the book we are told in the introduction to the first part is essentially practical. It does not attempt to teach systems of gardening, but the endeavour of its authors is to place its readers in possession of the information necessary to enable them to cultivate a considerable number of the most beautiful of the flowers available for adorning the garden, the greenhouse, and the window. The plan adopted has been to select one hundred of the most beautiful of the more popular plants, and then to give all the particulars relating to their cultural requirements that are essential to success in growing them. Advice is also given, in the case of hardy flowers, on their arrangement in the garden with a view to the production of tasteful effects. While the treatment of the several subjects is in no way wanting in scientific accuracy, the letterpress is in a popular style and provides interesting as well as useful reading.

A great feature of the book is formed by the full-page illustrations in colours of the flowers included in the plan, and these for the most part show the plants as growing in the garden, and are useful as suggestions for the effective grouping of the several subjects. Five page illustrations in colours are given in each part.

LIFE HISTORIES OF FAMILIAR PLANTS.

By John J. Ward. (Cassell and Co., Lim., London, E.C.)

The object of this book is to assist the large and growing class of non-professional Nature investigators, who derive pleasure from seeking the why and the wherefore of details in plant structures, and the relationship of these details to animal life, and Mr. Ward has performed his task in so successful a manner that there can be no question as to this object being accomplished. In a series of eighteen chapters the author gives the details of the life histories of a large number of plants that are familiar to those who take an interest in the flowers of the garden, the meadow, and the wayside, and he does so in so interesting a manner as to at once obtain the attention of the reader. We know of no book relating to Nature study to equal Mr. Ward's work, and we heartily commend it to all who are interested in plant life, and desire to obtain accurate information relating to the many and varied forms in a manner that renders the study a pleasant one.

METEOROLOGICAL OBSERVATIONS.

TAKEN BY THE R.H.S. GARDENS AT WISLEY SURREY.

Height above Sea-level, 150 feet.

Date. 1908. November 29 to December 5.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	Temperature of the Air. At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Nov. 29 Sunday	—	53	51	54	48
„ 30 - Monday	—	49	49	50	48
Dec. 1—Tuesday ...	—	41	41	42	41
„ 2 - Wednesday.	—	38	37	43	38
„ 3—Thursday ...	—	37	36	38	36
„ 4—Friday	—	35	35	45	34
„ 5—Saturday ...	0 35	45	45	49	35
Means	0 5	43	42	46	40

Date. 1908. November 29 to December 5.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Nov. 29—Sunday	0·02	46	47	49	43
„ 30—Monday	0·01	48	48	49	44
Dec. 1—Tuesday ...	—	47	48	49	41
2—Wednesday.	—	46	48	49	38
„ 3—Thursday ...	—	45	48	49	37
„ 4—Friday	0·10	44	47	49	35
„ 5—Saturday ...	0 08	45	47	49	36
Means ...	(total) 0·16	46	48	49	39

CATALOGUES RECEIVED.

F. C. HEINEMANN, ERFURT, GERMANY.—An interesting catalogue of seed novelties for 1909, and one specially got up for retail seedsmen. It contains vegetable and annual flower novelties chiefly, but perennial greenhouse and other plants are included, notably the scarlet cineraria.

Books as Christmas Presents.—In the Christmas Catalogue issued by Messrs. W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London, will be found a wide choice of suitable books for presentation to friends whose interests lie in the garden, greenhouse, poultry, live stock, or other rural pursuits. A full description of the contents of each book is given in the catalogue, a copy of which will be sent by post on application to any reader.

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ANSWERS TO CORRESPONDENTS.

CHRYSANTHEMUM CUTTINGS.—G. N., Taunton: An article on this subject appears in the present issue.

GREEN ON FLOWER POTS.—F. E. S., Leicester: We have not tried the following recipe for the prevention of the formation of the green, mossy coating that so frequently comes upon flower pots in use in greenhouses, but we are assured it is a good one. Having washed the pots perfectly clean and allowed them to dry, soak them in a solution of ammoniacal carbonate of copper, made by putting one ounce of copper carbonate in sufficient ammonia water to dissolve it, and then adding eight gallons of water. It is necessary to soak the pots about once a year to keep them from becoming green.

THE LARGEST GOOSEBERRY. — M. E. M., Keighley: So far as we are able to gather, the largest-berried gooseberry is London, a variety raised by Banks. According to the late Dr. Hogg (Fruit Manual, 1884), this variety grows in various forms, in consequence of its being tender when in bloom, often suffering from the early spring frosts, which cause it to be deficient of seed, consequently the berries will be short and deformed; but when perfect it is a fine long-formed berry. The two-veined ones are rather flat-sided, with broad raised shoulders, the seed-veins a little sunk towards the stalk, with plump, nicely-rounded nose; the three-veined ones are very long, and rounder than the two-veined, and are generally pretty near the same diameter throughout. Skin, smooth, deep purplish red. Flavour, good, but not first-rate. In 1852 it weighed 37dwt. 7gr.; in 1864, 36dwt. 4gr.; in 1865, 33dwt. 12gr. It ripens quickly, and does not hang long, it being an especial favourite with wasps and birds; nor does it succeed well until the plants are strong; it will then grow and bear freely, making long, vigorous shoots (a little pendulous), with but few thorns, and forms a large spreading bush. This is the largest gooseberry at present proved, having held its own for nearly half a century against all former varieties, and hundreds of others sent out since its introduction.

DISEASED CHRYSANTHEMUMS. — We shall be glad if those correspondents who recently sent us examples of diseased chrysanthemums, i.e., specimens with badly shrivelled and blackened leaves, will send us further specimens, including the roots of diseased plants. We can obtain plenty of mycelium, evidence of fungus attack, but not the fruiting stage, and hence the pest cannot yet be identified.

WASTE PETROL IN THE GARDEN. — "Hibernia" writes: "The query regarding waste petrol, on p. 907, of your issue of November 28, recalls to mind some experiments I carried out fifteen years ago with petroleum in order to prove its value as an aid to plant growth. Perhaps by giving the reason which led me to make those experiments, and the results I obtained, may interest, if not instruct, your Dorset correspondent regarding the use of his waste petrol in the garden. About the period referred to a friend was much troubled with earwigs destroying his chrysanthemum blooms, and in order to destroy the former he poured petroleum into the bamboo stakes used in supporting the chrysanthemum growths. This not only cleared out all the earwigs, but also acted as a manure to the plants. On learning this, and knowing that petroleum was a compound of hydrogen and carbon, essential elements in the food of plants, I determined to test its value as a food for vines. The garden I then had charge of was on the top of a hill, and in this position I had considerable difficulty in colouring my grapes, and getting anything like the same results I met with in a valley. The density of the atmosphere at this considerable altitude was less than in the lower-lying district, from which I had just come, and, consequently, the amount of carbonic acid gas in a given volume of air was smaller than at a lower level. I concluded that the difficulty in colouring grapes was partly due to an insufficiency of this gas in the atmosphere, and this induced me to employ petroleum in the vineries from sunrise to sunset. I certainly obtained finer foliage, and better-coloured berries the year I used the petroleum, than any other year, and, rightly or wrongly, I attributed the improvement to the presence of that volatile liquid. The same year I sprinkled my carrot ground with petroleum and water, and forked it in just before sowing the seed, and the leaves of the plants were of a much darker green that year than I had ever had them. Judging from these results, I think your Dorset correspondent need not be afraid to employ his waste petrol in the garden. As it is very volatile I would advise putting it nine inches below the surface of the ground. In this position the gas will have to pass through the particles of soil, and is likely to be decomposed by coming into contact with substances which have a strong chemical affinity for one or other of its elements. I should not think petrol gas will have any effect on insect life in the soil, but as your correspondent has more of this compound than he requires, and evidently a garden at his disposal, let him conduct experiments with it, and give the readers of the GARDENERS' MAGAZINE the benefit of any of them that prove to be valuable aids to the growth of plants or destruction of insect pests."

SPOTTED CŒLOGYNE LEAVES.—J. W., Chesterfield: So far as we can gather from your letter, the method of cultivation followed is a good one, and the fact that flower spikes are being freely produced is also evidence of good culture. We incline, however, to the belief that a little too much water has been used at the roots and in the atmosphere, but a good deal may depend upon the position of the home, for evaporation is much slower in some places than others. Cut off the damaged ends; maintain a buoyant atmosphere; only water sufficiently to keep leaves and flowers fresh; and sponge the leaves with weak sulphide of potassium solution.

CARNATION MAGGOT.—W. G., Weston: This pest is the larva of Hylemia nigrescens, which deposits its eggs in summer and autumn on the leaves of carnations. Spraying as a preventive appears to be of little or no use. The only way of dealing with the pest is to keep a sharp look-out for its appearance, and pick out the maggots with the aid of a sharp pointed knife as soon as seen. If the maggots are caught and killed the plants may live, but if not, the plants are sure to be killed. Patience and keen eyesight are the best means of combating carnation maggot.

NAMES OF PLANTS.

E. B., Effingham.—1, Lantana hybrida; 2, Luculia gratissima; 3, Ardisia mammilaria.

T. B., Knowsley.—If you send us flowering specimens we will do our best to identify them.

G. M. R., Northampton.—1 Linum trigynum; 2, Eupatorium ianthinum; 3, Panax Victoriæ.

D. C. L., Taunton.—1, Citrus trifoliata; 2, Calceolaria Burbidgei; 3, Primula floribunda; 4, Lonicera sempervirens.

T. T. G., Worksop.—1, Skimmia japonica; 2, Cotoneaster Simonsi; 3, Cupressus Lawsoniana Allumi; 4, Berberis Wallichiana.

NAMES OF FRUITS.

E. M. C., Belfont.—1, Newton Wonder; 2, Bramley's Seedling; 3, Mabbott's Pearmain.

L. F. H., Canterbury. — 1, Reinette du Canada; 2, Norfolk Beefing; 3, Hormead Pearmain.

F. E. C., Winchelsea.—1, Nancy Jackson; 2, Lane's Prince Albert; 3, Bess Pool; 4, Cox's Pomona.

D. N., Hertford.—1, Lady Henniker; 2, Gravenstein; 3, Court of Wick; 4, small specimen, probably Calville Blanche d'Hiver.

H. H. G., Tewkesbury.—1, Hollandbury; 2, Emperor Alexander; 3, Betty Geeson; 4, Blenheim Pippin; 5, not recognised; 6, Beurre d'Aremberg.

MARKETS.

◆

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Asparagus	per doz. bun.	1	6		6	0
Azaleas	per doz. bun.	4	0		6	0
Bouvardias	per doz. bun.	6	0		8	0
Camellias	per doz.	1	6		2	6
Carnations	per doz. blms.	1	0		3	6
,,	per doz. bun.	8	0		12	0
Cattleyas	per doz.	8	0		10	6
Chrysanthemums	per doz. bun.	5	0		10	0
,,	per doz. blms.	2	0		3	6
Croton leaves	per bun.	1	0		1	6
Cypripediums	per doz. blms.	2	0		3	0
Eucharis	per doz.	2	0		3	6
French fern	per doz. bun.	1	0		3	0
Gardenias	per doz.	1	6		2	6
Gypsophila	per doz. bun.	2	0		3	0
Lapagerias	per doz.	1	6		2	0
Lilac (French)	per bun.	4	6		6	0
Lilium auratum	per bun.	2	0		3	0
,, candidum	per bun.	1	0		2	6
,, speciosum	per bun.	1	6		3	0
,, longiflorum	per bun.	2	0		4	0
Lily of the Valley	per doz.	7	0		15	0
Marguerites, white	per doz. bun.	2	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	0		4	0
Narcissus, Paper White	per doz. bun.	2	0		3	0
,, Soleil d'Or	per doz. bun.	2	0		3	0

Fruits.

Apples are plentiful and good samples of dessert varieties sell well. Pears and grapes meet a good demand.

		s.	d.		s.	d.
Apples, cooking	per bush.	2	6	to	4	6
,, dessert	per ½-sieve	2	0		6	0
,, Cox's Orange Pippin per box of 2 doz.		2	0		3	0
,, Nova Scotian	per barrel	10	0		20	0
,, Californian	per case	8	0		10	6
Bananas	per bun.	5	0		12	0
Cranberries	per case	8	0		8	6
Figs	per box	0	10		1	6
Grapes, English	per lb.	1	0		3	6
,, Belgian	per lb.	0	10		1	0
,, Channel Islands	per lb.	0	6		1	3
,, Almeria	per bar.	10	0		17	0
Lemons	per case	9	0		16	0
Melons, Guernsey	each	0	9		2	0
,, English	each	1	0		3	0
,, Valencia	per case	6	0		10	0
Nuts, Cob	per 12lb.	12	0		15	0
Oranges	per case	6	0		15	0
Pears, English Catillac	per bush.	5	0		7	0
,, Pitmaston Duchess (foreign)	per tray	2	4		4	6

Vegetables.

There is an abundant supply of vegetables and a brisk demand for most kinds.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	3	0	to	4	6
Asparagus	per bundle	3	6		4	6
,, Sprue	per bun.	0	7		0	8
Beet	per bush.	1	3		2	0
Beans (Guernsey)	per lb.	0	8		1	0
Brussels sprouts	per bush.	3	0		3	6
Cabbage	per tally	2	0		4	0
Carrots	per doz. bun.	0	9		1	4
Cauliflowers	per doz.	2	0		3	0
Celery	per roll	0	10		1	0
Celeraic	per doz.	1	6		1	9
Cucumbers	per doz.	2	0		3	0
Endive	per doz.	1	6		2	0
Horseradish	per doz. bun.	8	0		12	0
Leeks	per doz. bun.	0	9		1	0
Lettuce	per doz.	0	8		1	3
Mint	per doz. bun.	1	0		1	6
Mushrooms	per doz. lb.	8	0		12	0
Onions, Pickling	per bush.	3	0		4	0
,, Valencia	per case	7	0		9	0
Parsley	per doz. bun.	1	0		2	0
Parsnips	per bag	2	0		3	0
Spinach	per basket	2	0		2	6
Tomatoes	per doz. lbs.	5	0		6	6
Turnips	per doz. bun.	1	0		1	3

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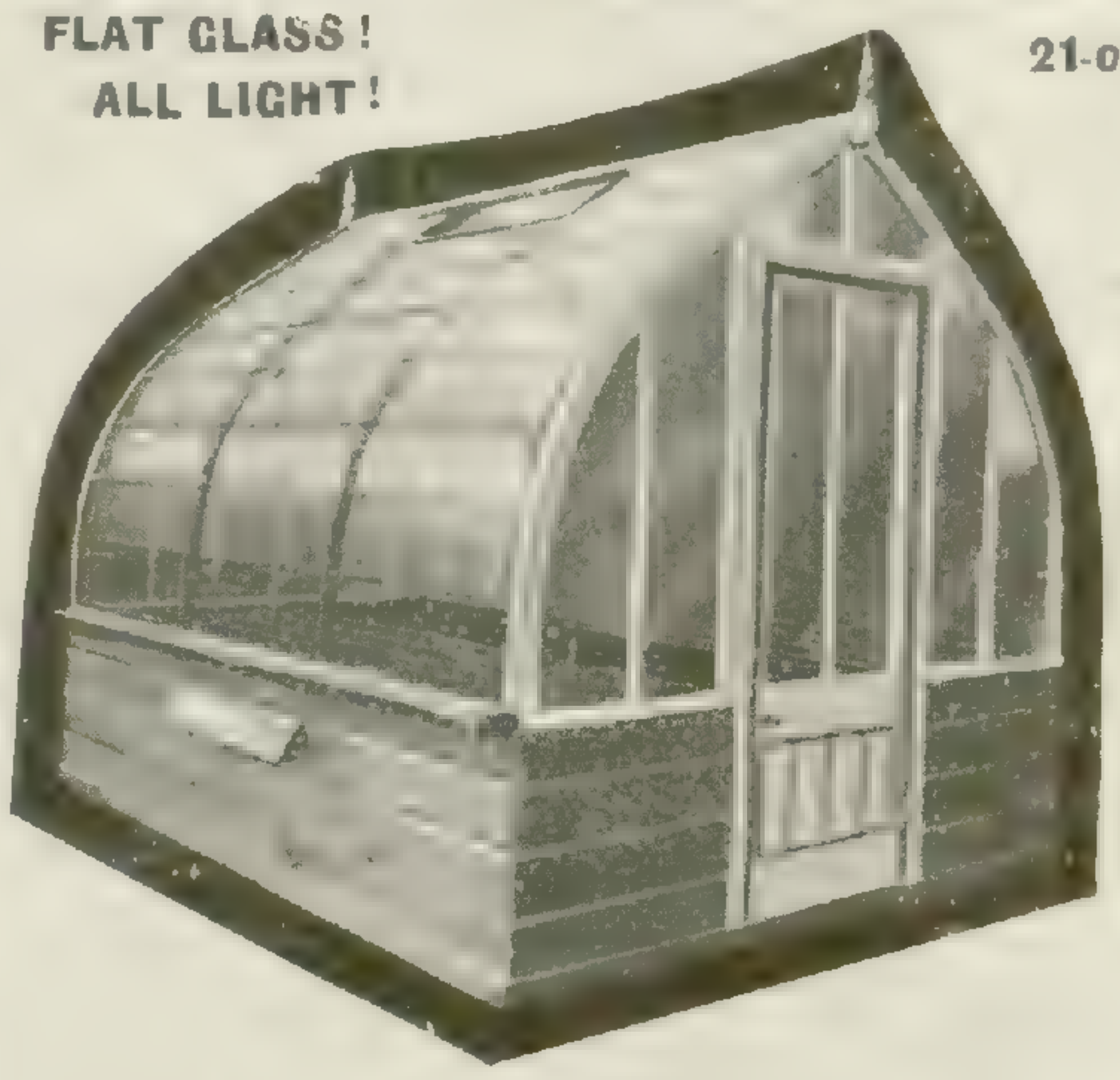

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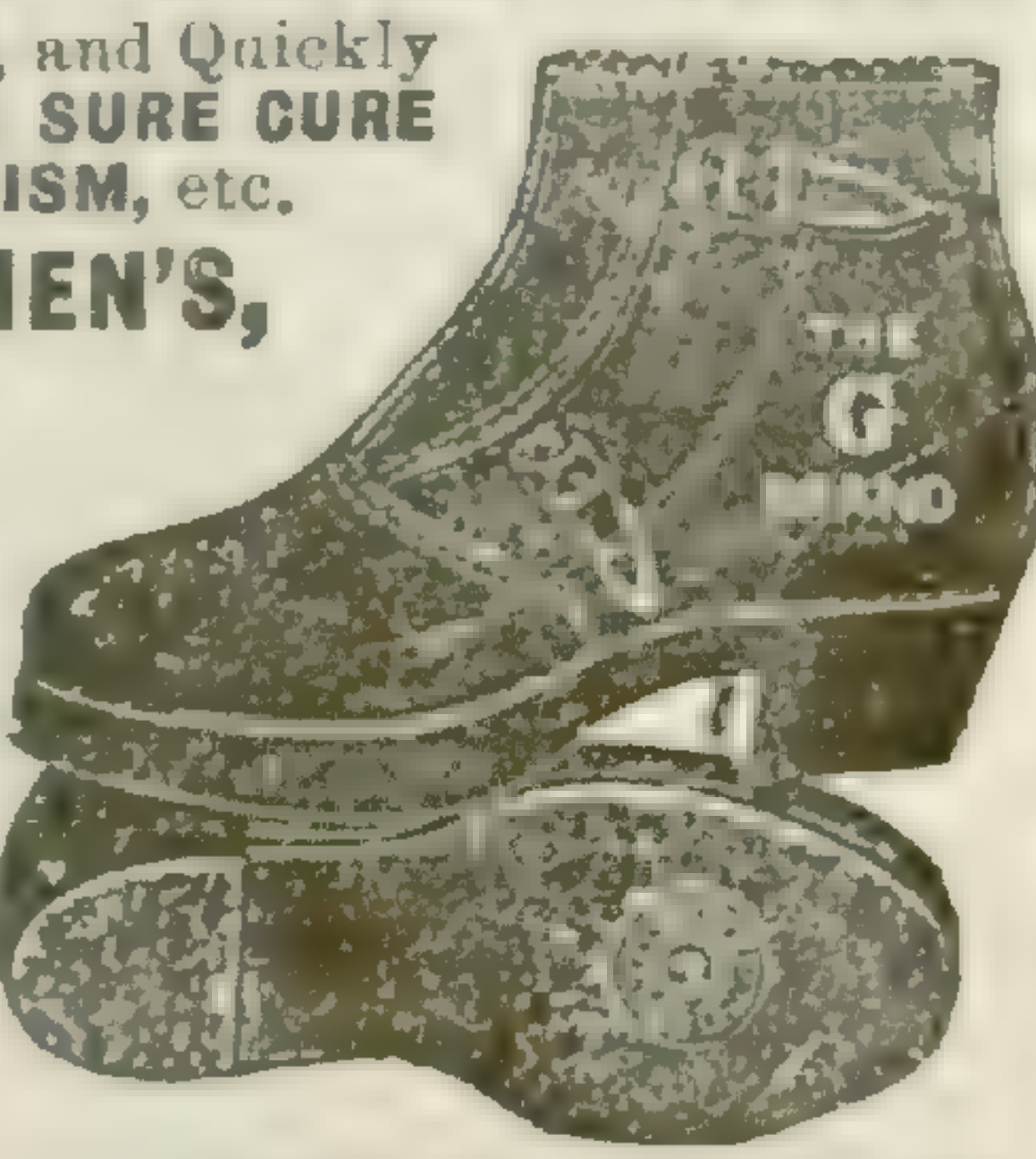

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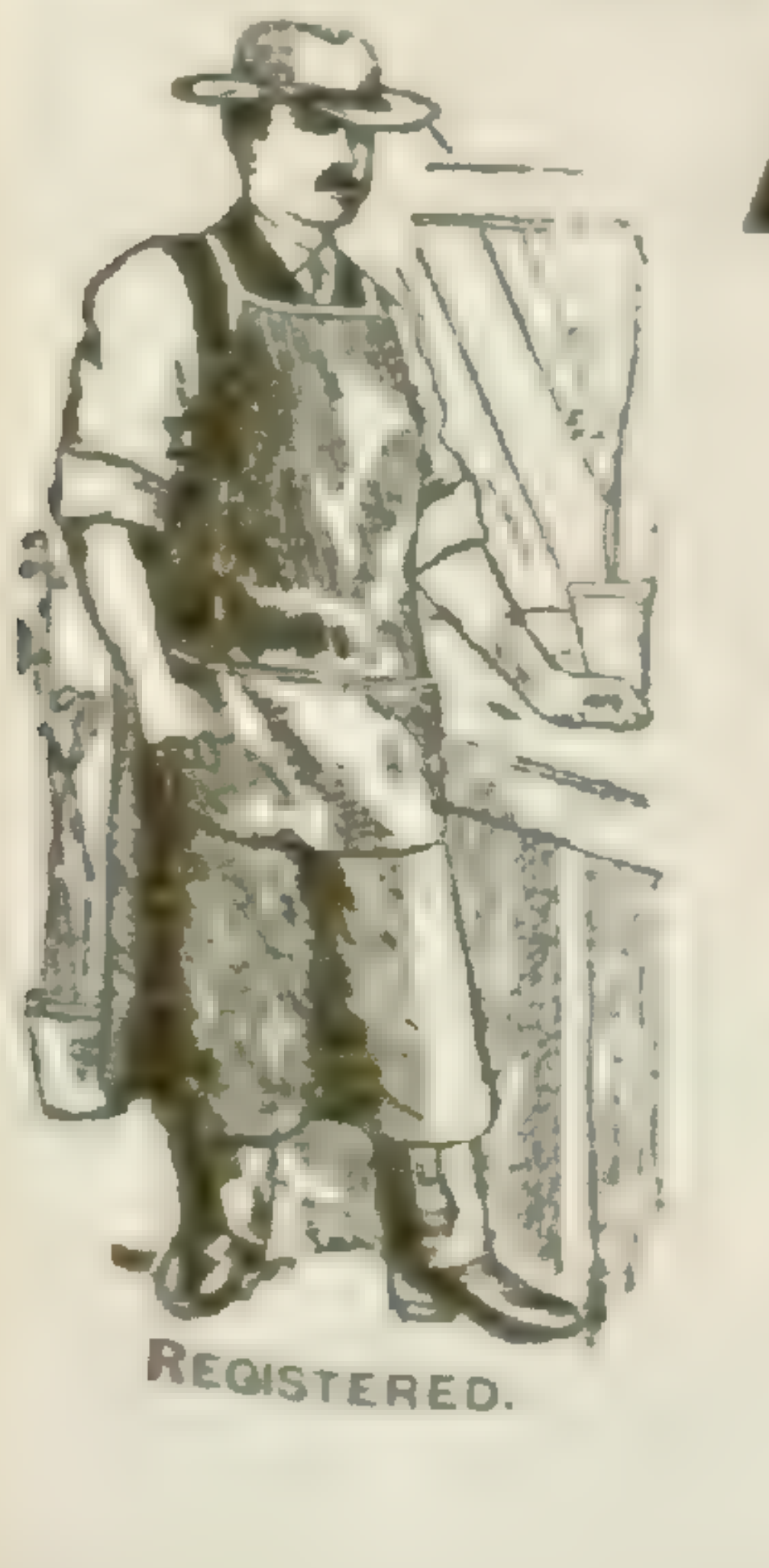

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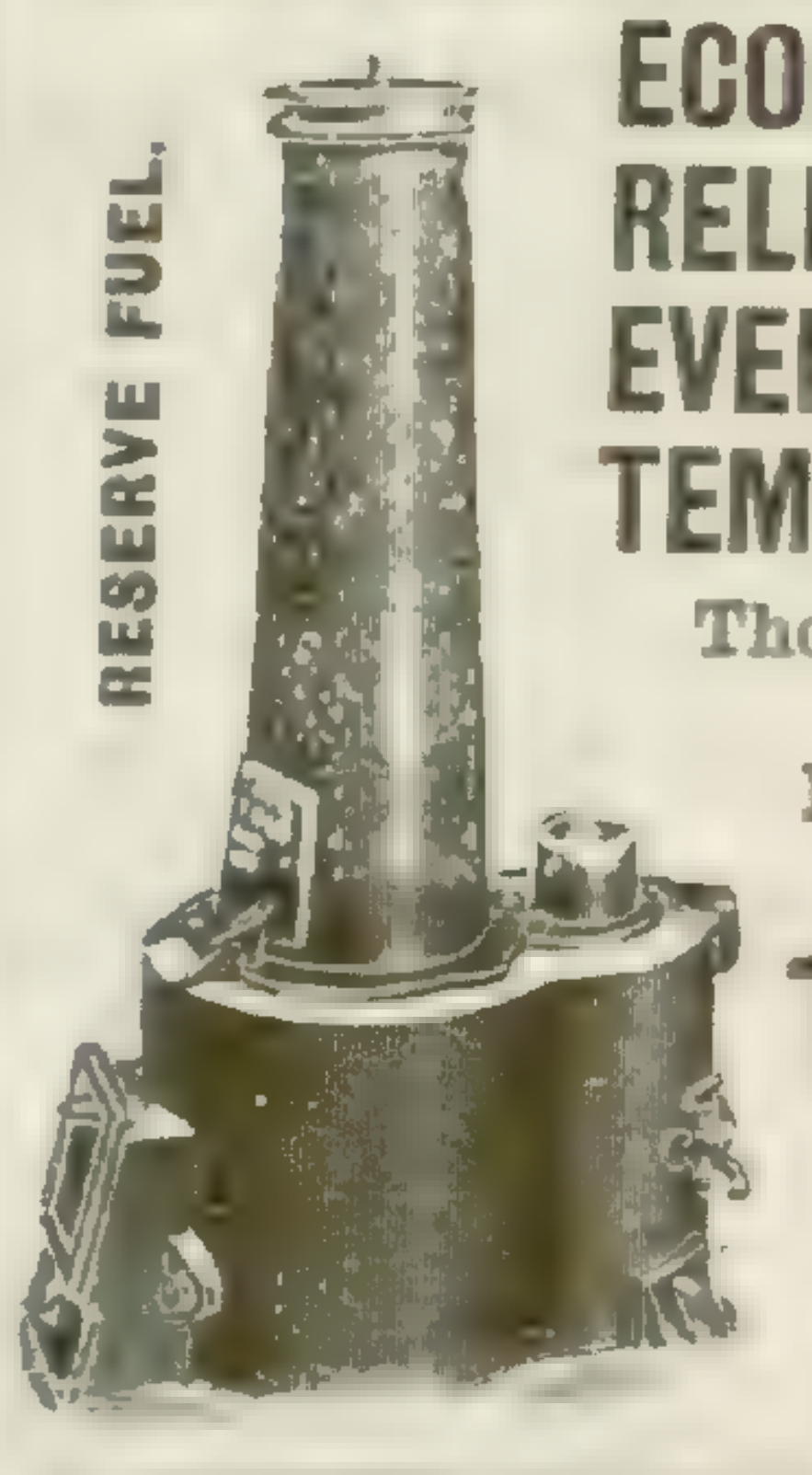
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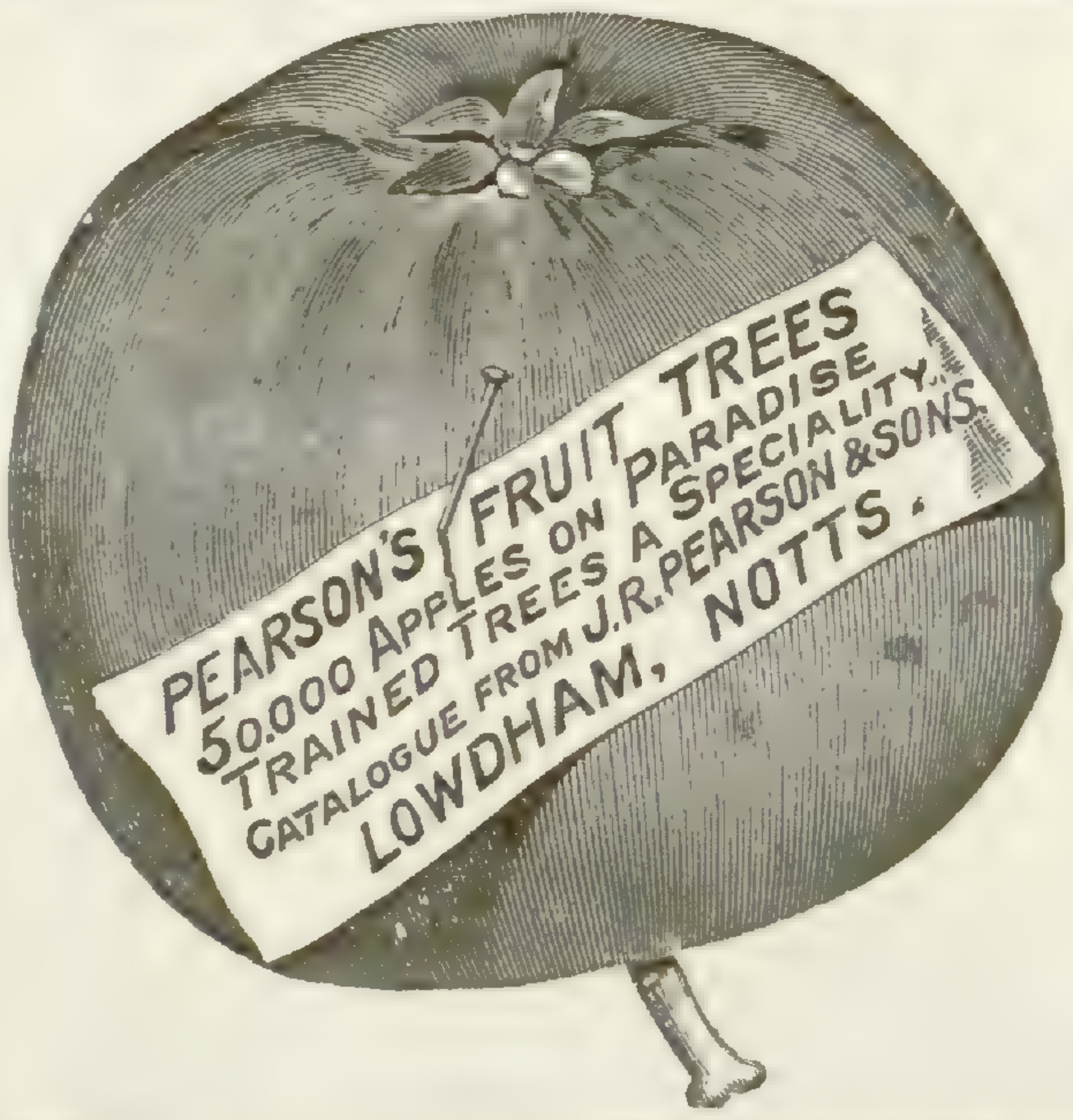
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All Advertisements for this issue must be received not later than the first post on TUESDAY, DECEMBER 22.

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TUESDAY next, Dec. 22nd, at Eleven o'clock.—Consignments of DUTCH FLOWER ROOTS in variety, received direct, 200 lots of Herbaceous Plants, a quantity of Hardy Bulbs and Border Plants, Liliums, Ferns, etc.

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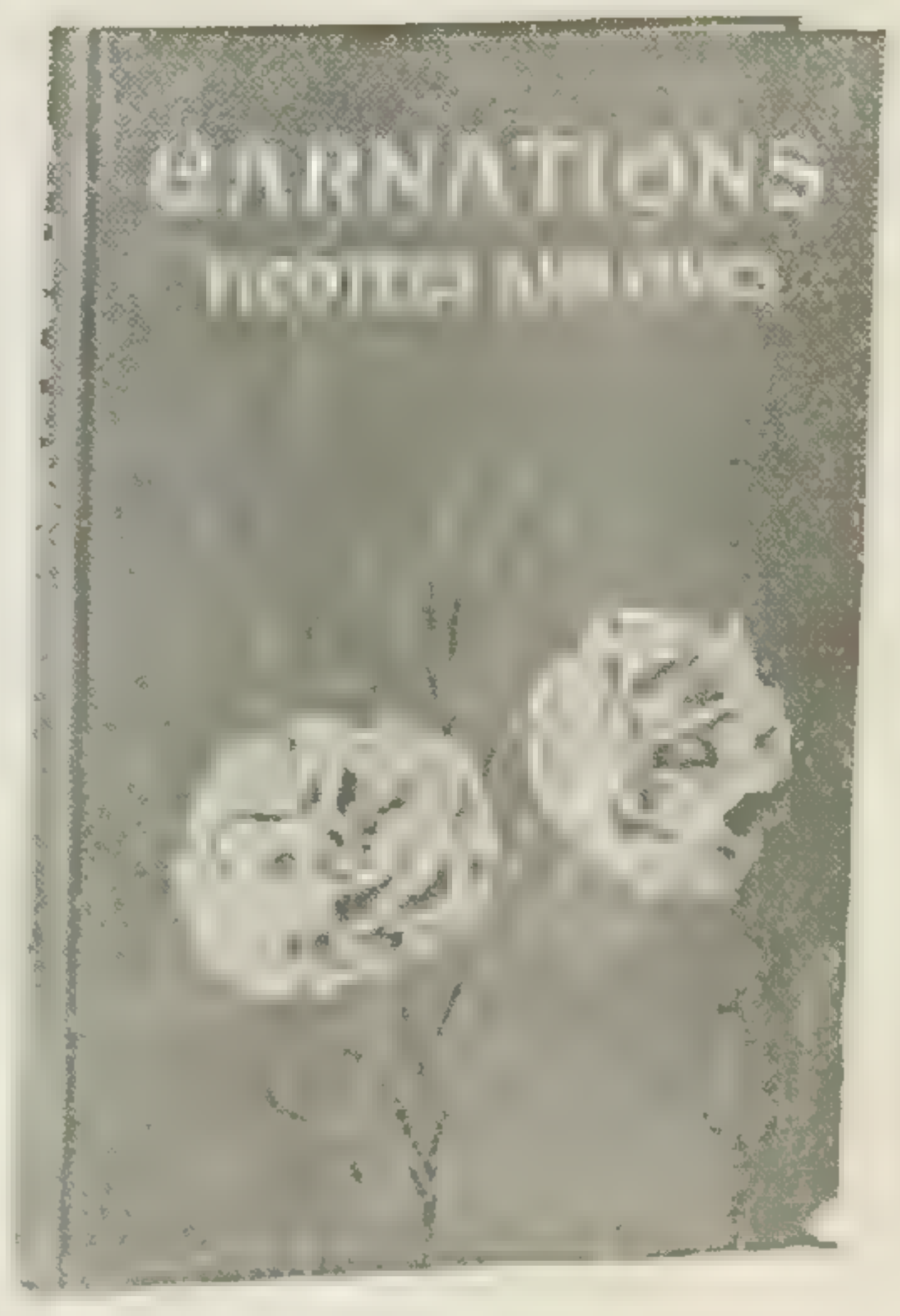

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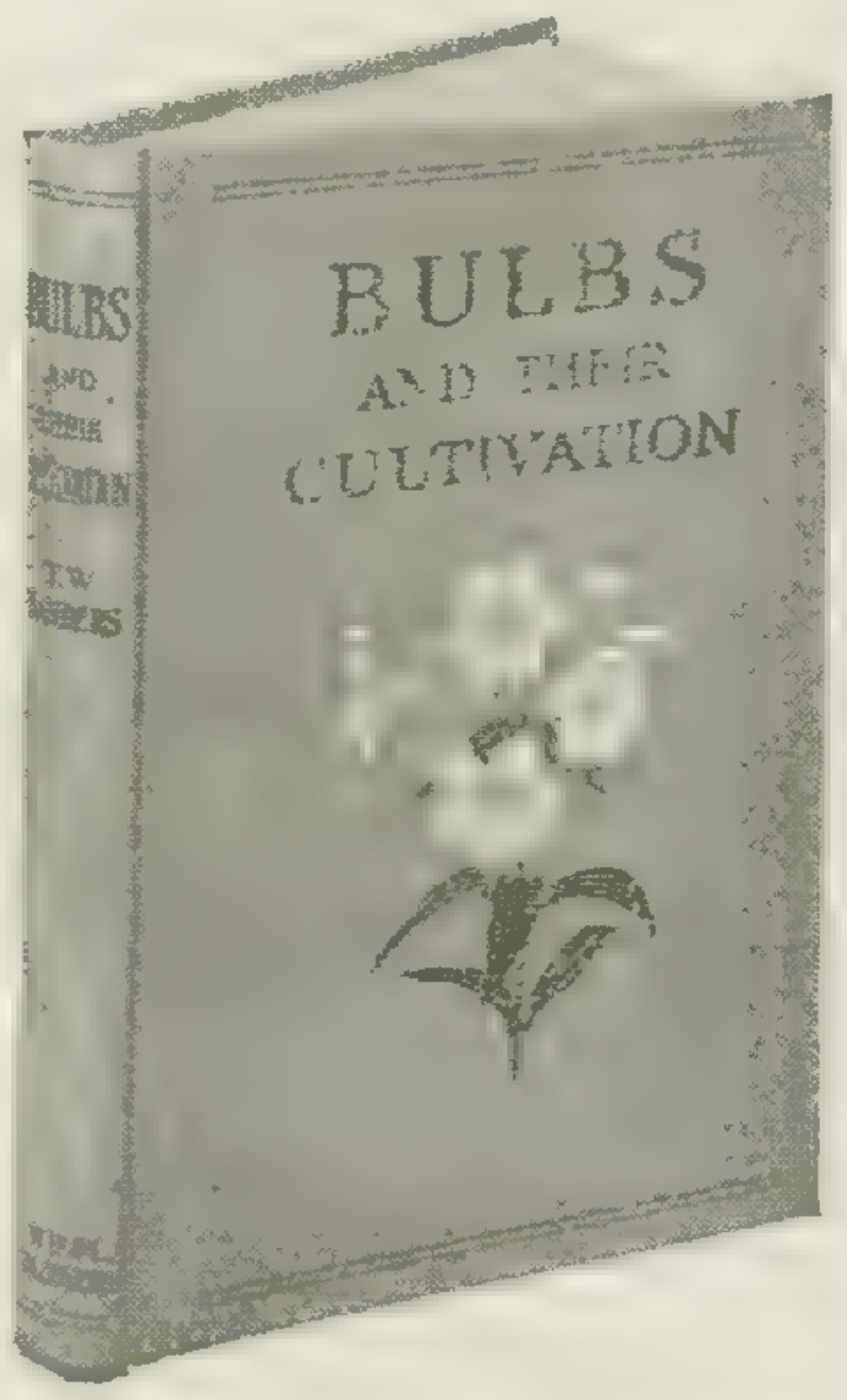

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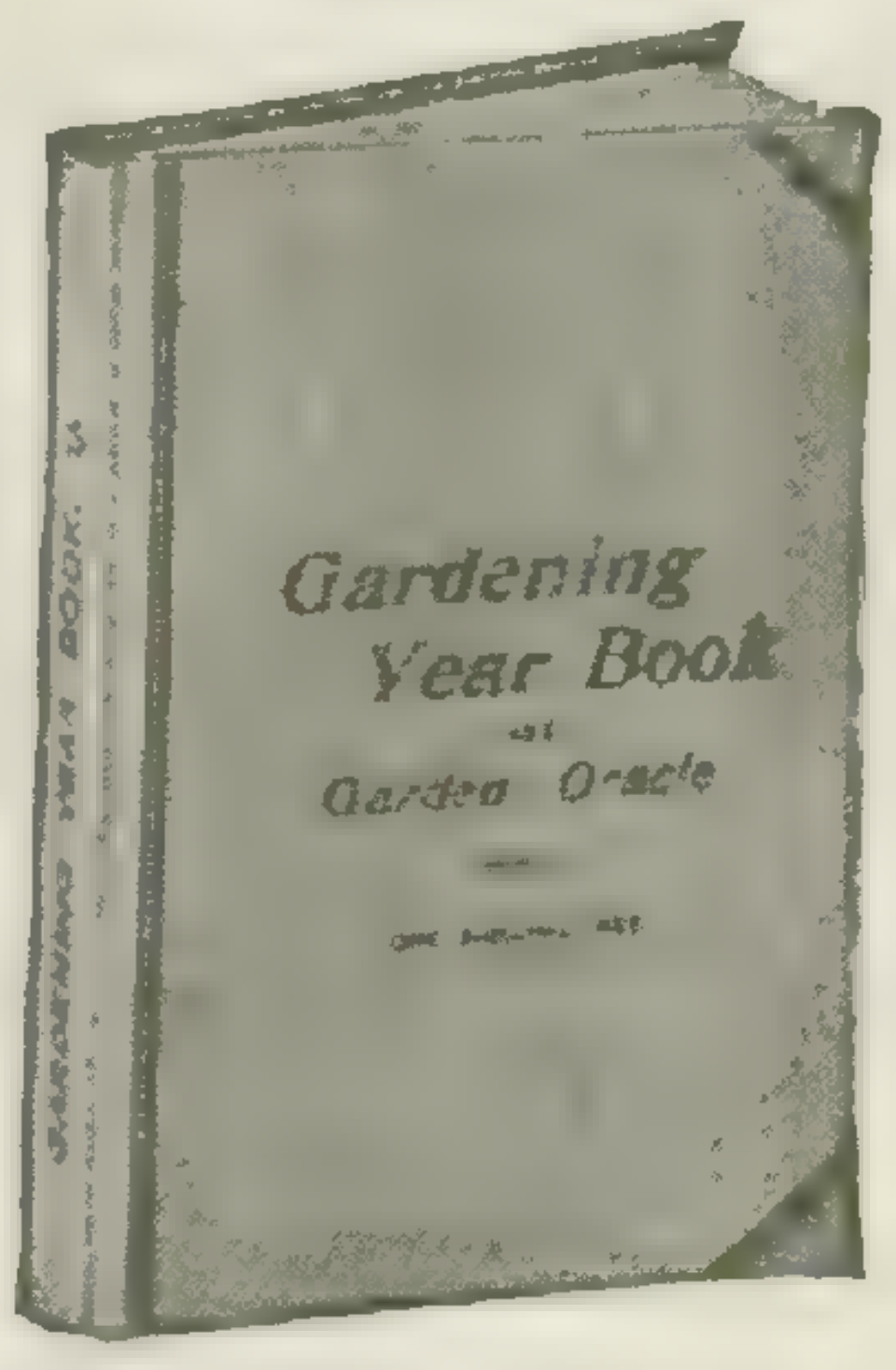

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VOL. LI.—No. 2,877. SATURDAY, DECEMBER 19, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

The Cult of the Rose.

MR. G. B. DAVISON.

As will be gathered from the report which appears in another part of this issue, the Committee of the National Rose Society was able to present to the members assembled in annual meeting an eminently satisfactory account of the work accomplished during the year, and inferentially to show that the cult of the rose enjoys a higher degree of popularity than at any previous period in the history of the flower. The society had held three exhibitions during the year, and these, the report states, were attended with a full measure of success as great demonstrations of roses and rose culture. The first of the three exhibitions, which was held in the gardens of the Royal Botanic Society, established a record, inasmuch as it was the largest of the Metropolitan shows held by the society. The temperature was, unfortunately for the roses, exceptionally high, but the fine weather was favourable to a large attendance, and as the rose-loving public were careful to take advantage of their opportunities, the receipts for admission were larger than on any previous occasion. The other two shows possess points of interest, as will be seen from the report, but not of such outstanding importance as to necessitate special reference being made to them. Suffice to say the whole of the exhibitions, both in their inception and the carrying out of the details, were beyond praise, and we mention this all the more readily because the society did not by any means concentrate its efforts wholly upon the competitive gatherings. It accomplished much other work, and this of so useful a character as to justify our pointing to the society as setting an example that might, as far as practicable, be followed by some other of the special societies. Among other of its operations outside the exhibition tents it conducted an election of garden roses, with a view to determine the finest of the varieties in the several classes and colours. In carrying out this work the society derived immense assistance from the generosity of Mr. Nickerson, who bore the cost of twelve silver cups and double that number of diplomas for presentation to the raisers of the thirty-six roses that obtained the highest position in the ballot. Credit, however, is not less due to the committee, for its members at once accepted Mr. Nickerson's generous offer, and proceeded to devise the best means of carrying out his wishes. There was not, as there might have been, any suggestion that the series of handsome cups should be diverted to the purposes of the schedule, and in carrying out Mr. Nickerson's wishes the committee rendered a service of much value to lovers of roses who grow them simply for beautifying the garden and home. Another accomplishment in which the society may be heartily congratulated, is the publication of the book dealing with the fungoid and insect enemies of the roses. Some such book was much wanted, and as its relative cost would be too heavy to admit of its preparation and publication in the ordinary way, the members have had a good service rendered them. It would have been well had the cost of this work and the "Rose Annual" been set out in the balance-sheet, as the members would then have been in a better position to more fully appreciate the value of what they have in return for their subscriptions than is now possible. That the members appreciate what they receive annually in addition to the tickets of admission to the exhibitions is proved to demonstration by the large increase in membership, yet such important matters as this cannot be made too clear. The increase in membership from 1,004 to 3,150 in five years may well be regarded as evidence that the members do appreciate the endeavours that are being made to assist them in points of practice; but it would hardly be wise to attribute too large a share of the success to its literature. The generous encouragement that is given to garden roses has contributed in no small degree to the great numerical progress that is being made, for as the result thereof the exhibitions are made more attractive and rendered of greater educational value by giving visitors opportunities for becoming acquainted with the charms of varieties that are the best suited for the production of continuous displays throughout the summer and autumn. The balance-sheet is of special interest, as indicating the growth of the society, the cost of a vigorous policy, and the proof it gives of the desire of the committee to form an adequate reserve fund. We hope, and we have no apprehensions with regard to its realisation, that the importance of a substantial reserve fund will be constantly kept in view. The responsibilities of a society of the proportions which the National Rose Society has assumed are great, and there should be no relaxation of endeavour until the reserve fund exceeds £1,000. Double that amount would be more in accordance with our ideas; but there is no occasion to labour this point in view of what the committee has already accomplished in this direction.

Mr. G. B. Davison, head gardener to Colonel B. J. Petre, Westwick, Norwich, is one of the most able gardeners of the present time, and one whose fame is great throughout East Anglia. But Mr. Davison is also well known far beyond the Eastern Counties, for he has raised an entirely new race of montbretias that has given varieties of the greatest beauty, fine size, and vigorous habit, far surpassing anything of the kind hitherto seen. For this reason alone Mr. Davison would be fully entitled to recognition in the front rank of florists, but he has other claims upon our notice. He is a very great lover of all hardy flowers, and in few other gardens in the kingdom can these be seen so finely grown as at Westwick; Mr. Davison also raises many of the kinds from seed, and has, as a consequence, several unusually find forms of erigerons, etc. Mr. Davison grows Orchis foliosa as no other person we know is able to do. Besides his love for hardy flowers and his ability when dealing with the ornamental side of gardening, Mr. Davison is also an adept at fruit culture. Black and red currants are grown extensively and well on the Westwick estate, and most of our readers know that with apples and pears, notably pears, Mr. Davison is always to the fore at the London and other competitive displays. It is a matter of interest to note that Mr. Davison commenced his career at Westwick under his father, he then went to Messrs. J. Veitch and Sons' Chelsea nursery, and presently came back to Westwick for a time; his next move was to Castle Ashby, where he became foreman, and from whence he again returned to Westwick, where he has been head gardener for eighteen years. Mr. Davison's family has had the position of head gardener to the Petre family for three generations, and Colonel B. J. Petre, the present owner, is the fourth generation to hold the estate since the first of the Davison family became head gardener early in the nineteenth century. We sincerely hope that for many generations to come the Davisons may continue to serve the Petres as ably as they have done in the past.

Tunbridge Wells Gardens.—In the issues of the Gardeners' Magazine for January 2 and 9 next, we shall give profusely illustrated accounts of the most noteworthy gardens round Tunbridge Wells, which has long been famous as a gardening centre. The gardens that will be described and illustrated comprise those of Eridge Castle, Buckhurst Park, Ely Grange, Leyswood, Broom Hill, Penshurst Place, Swaylands House, and Glen Andred.

Home-made Raisins.—Mr. Bennett-Poë recently exhibited a portion of a bunch of excellent raisins. Last year (1907) two bunches of black Muscat Mrs. Pince had been placed in bottles in a dark cupboard. They had been forgotten, but were found in November of this year, when it was seen that each of the stems had sent out roots, which had died owing to the subsequent drying up of the water. The grapes had dried up, and become converted into raisins of excellent appearance and flavour.

Horticultural Congress in Paris, 1909.—Marked progress is being made with the preparations for the Horticultural Congress to be held next year in Paris, under the auspices of the National Horticultural Society of France. The subjects to be discussed are, briefly: The Influence of Magnesia upon Plants, especially Roses; Culture of Carnations under Glass; Study of Plant Diseases Caused by Nematodes; Researches into the Question of Heredity, on Mendelian Lines; Action of Sulphate of Iron, When Used as an Injection, for the Cure of Chlorosis in Trees; Means of Hastening Fruitfulness of Seedling Fruit Trees; Cold Storage and Retardation of Plants; Edible Fungi, other than the Common Mushroom; and School and Workmen's Gardens. All the papers on these subjects to be read at the congress must be sent to M. Georges Truffaut, at the society's office, Paris, before February 15, 1909.

Japanese Fruit Scale in Argentina.—The Board of Agriculture intimate that they have received, through the Foreign Office, a copy of an Argentine law, dated August 31, 1908, authorising the payment of a reward of 50,000 dollars paper currency (£4,327) to the person who shall discover the most economical and efficacious procedure for destroying the Japanese fruit scale insect, Diaspis pentagona. It is believed that this pest was introduced into the Republic some four or five years ago from Europe, and it has spread with astonishing rapidity. An account of this insect scale will be found in Newstead's Monograph of the British Coccidae, Vol. I., p. 173.

"The Gardening Year Book," 1909.—The issue of this highly popular annual for 1909, will be published on Monday next, and as many alterations and additions have been made, with a view to still further increase its usefulness, we suggest that orders should be given without delay. The section devoted to "The Year's Work in the Garden" has been enlarged, and those devoted to garden pests, fungoid diseases, and garden recipes have been extended. The chapters devoted to hardy border flowers, beautiful bulbs, conservatory, and greenhouse plants, choice fruits, and useful vegetables have been thoroughly revised, and the reader placed in possession of the most up-to-date information on points of practice and the best kinds and varieties to grow. The directory of horticultural societies has been subjected to the most thorough revision; and an important directory of public parks and gardens in the United Kingdom has been added. As the whole of the entries are based upon recently obtained information, the directory will be found thoroughly reliable.

Leaf-cutting of Anthurium.—Mr. F. J. Chittenden recently showed to the members of the R.H.S. Scientific Committee a specimen illustrating a method of reproduction in Anthurium Duchardi. Mr. Blakey, at the Wisley Gardens, had inserted a leaf taken off the plant with its base intact, but without any part of the stem, in a propagating pit. Four buds had been produced on the inner surface of the basal part of the leaf, and numerous roots had developed. Two of the shoots had grown out into rhizomes 10in. to 12in. in length, bearing at their tips well-developed plants, and the other two shoots had grown out for a short distance.

Banana Culture in Queensland.—The recent exhibition of Colonial fruits at the Royal Horticultural Hall reminds us of the many countries in which the banana is grown for commercial purposes. In this country we are most familiar with the bananas grown in the West Indies and the Canaries, but in the tropical parts of Australia they are largely and most successfully grown. The production of bananas forms an important industry in North Queensland, and we are informed by a correspondent that virgin jungle land of the most fertile character is considered essential. Such land is obtained on lease for five years on terms which vary in different districts. The clearing of the land costs not less than £10 per acre, for all the smaller stumps are grubbed, while the surface must be kept free from strong-growing and other weeds. Two hundred strong suckers are planted, and these plants take root forthwith, and under favourable conditions evince tropical haste in development. Before the plant flowers and bears its fruit suckers start from its base, two or three of which are permitted to grow in succession. Each, as its bunch matures, is decapitated, and for five, and even six and seven years, there is a series of suckers, and, of course, bunches. The establishment of a banana plantation will costs £20 per acre before a bunch is ready for cutting, and at the end of five years ordinary land is considered to be exhausted for banana growing. But some jungle soils have grown bananas continuously for thirteen years without the stimulus of manure. The grower's profit begins in eighteen months from date of planting, and at the termination of his lease he will have cut 2,200 bunches per acre. Calculating the wholesale market value at the rate of 1s. per bunch, his land has earned £110 per acre; but he will have worked hard in carrying out the various details.

A New Species of Butea.—In the current issue of the "Kew Bulletin" Lieut.-Colonel Prain briefly revises the Genus Butea, which was proposed by Koenig to accommodate the "Palas," or "Dhak," a well-known Indian tree, and to commemorate the services rendered to botany by the third Lord Bute, and describes a hitherto unknown species. This, we learn, was sent from Patwa Dangarh, near Naini Tal, in the Kamaon Himalaya, by Captain C. A. Sprawson, I.M.S., to Sir J. D. Hooker, who named it B. pellita, and presented the material to Kew. Captain Sprawson states that the plant is known locally as "Patwa," a name that in the plains of India is applied to the Rozelle (Hibiscus Sabdariffa); that it gives its name to the place—Dangarh denotes a small plain among the hills—in which it grows; that the natives say the plant is limited to this particular hill-top and cannot be found elsewhere. Captain Sprawson is satisfied that whether it occurs in places more remote or not, it is certainly restricted in the neighbourhood of Naini Tal to the particular area, less than a mile square, whence his specimens come. Lieut.-Colonel Prain observes that probably the plant is at least local in its occurrence, and this may partly explain the absence of so striking a species from previous collections.

"The Florist's Bibliography."—Referring to our notice of this useful little handbook we are informed that the price is 3s. 6d. nett. It can be obtained of the publishers, Messrs. W. Wesley and Son, 28, Essex Street, Strand, W.C., or through any bookseller.

Gardeners' Magazine Almanack, 1909.—With our issue for January 2 next will be presented an almanack for 1909. This will give the dates of all the more important exhibitions and horticultural functions during the year, and will be embellished with an illustration in colours of a beautiful gold medal rose. The issue will contain the first of two illustrated articles on the gardens in the Tunbridge Wells district and other features of special interest.

NOTES FROM KEW.

◆

Senecio canalipes.

Trained up a rafter of the Succulent House this climbing member of the Groundsel family is, and has been for some time, in full flower. Judging also by the number of unexpanded buds, it is likely to continue in bloom for a long time yet. The genus Senecio is a very extensive one, and a section thereof consists of climbing plants of which the so-called German ivy (Senecio macroglossus) is the best-known example. To this same section S. canalipes belongs. It is a fairly vigorous climber clothed with lobed heart-shaped leaves of a thick and partially succulent character. The flowers, which are disposed in large branching, loosely disposed terminal corymbs, are individually about three-quarters of an inch in diameter. The guard petals are of a rich yellow colour, while the comparatively small disc is of a deeper and somewhat dull tint. As a rafter plant for a sunny greenhouse, under which conditions it thrives at Kew, this senecio is seen to very great advantage, and is a valuable addition to winter-flowering climbers. I am not aware that it is as yet in the hands of the trade, and a search through the "Dictionary of Gardening" and the "Kew Hand List" failed to find the name. It, however, appears to be of ready propagation and comparatively easy culture, so that we shall doubtless see it more generally distributed before long.

Plectranthus crassus.

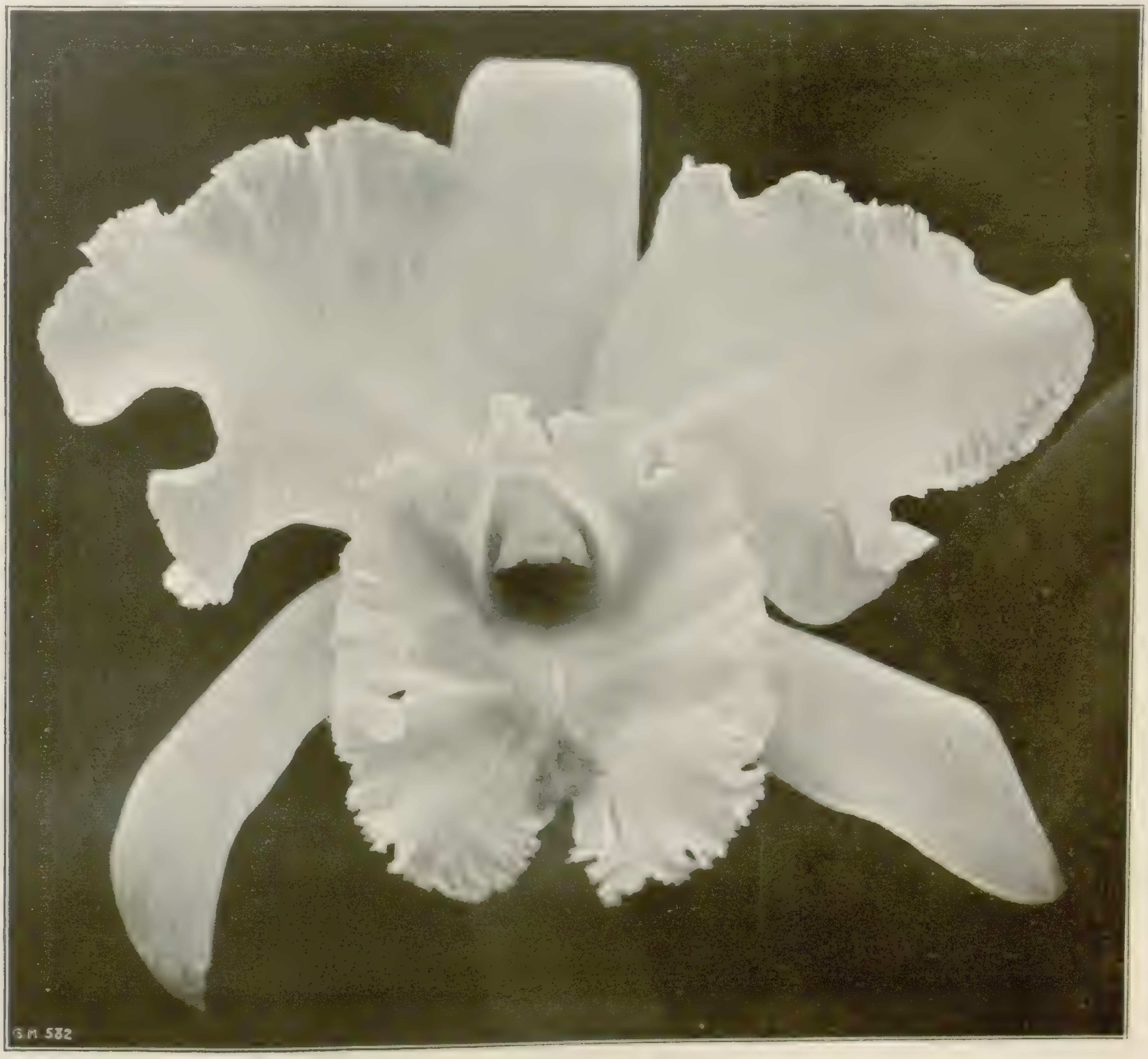
This is one of the several ornamental labiates that we have received from Central Africa within recent years. The best known of them all is Coleus thyrsoideus, which is now a general favourite in many gardens. The plectranthus is certainly not so showy as the coleus, but at the same time it is very pretty, and blooming as it does at this season the flowers are additionally welcome. It forms a stout-growing plant which reaches a height of eighteen inches to two feet, the stems being clothed with ovate leaves about four inches long and half as much in width. In colour they are pale green. The flowers are arranged in long narrow terminal spikes, and a succession is kept up from each one for a considerable time. The colour of the blossoms is a kind of lavender blue. A group of this plant is just now in full bloom and very effective.

Hippeastrum procerum.

This has been before now referred to as the Blue-flowered Amaryllis, but, though the colour is difficult to describe, it is, I should say, of a purplish lilac hue. In general appearance this species in no way suggests the ordinary garden varieties of hippeastrum, forming as it does a long-necked bulb without any pronounced swelling at the base, the whole suggesting a much nearer relationship to the genus crinum than to that of hippeastrum. The strap-shaped leaves are disposed in two opposite rows at the upper part of the stem, while the flower scape, which well overtops the foliage, is terminated by an umbel of blossoms. A specimen is now in flower in the Succulent House, and, though decidedly less showy than many other hippeastrums, it is both interesting and ornamental.

Jasminum Maingayi.

Although this species does not occur in the "Dictionary of Gardening" or in the "Kew Hand List," a specimen trained to the roof of the intermediate portion of the T range is flowering freely. It is in this stage highly ornamental, and can be recommended for a situation like that it now occupies. This species is a native of Penang, and was named in honour of its discoverer, Dr. Maingay, who first found it many years ago. It is a plant of slender scandent habit, furnished with ovate acuminate leaves of a particularly firm texture. The flowers, borne in terminal clusters produced on short branches, are individually about one inch across, and composed of a varying number of narrow-pointed segments. Though it cannot in a general way be obtained from nurseries, the winter-flowering qualities of this jas-



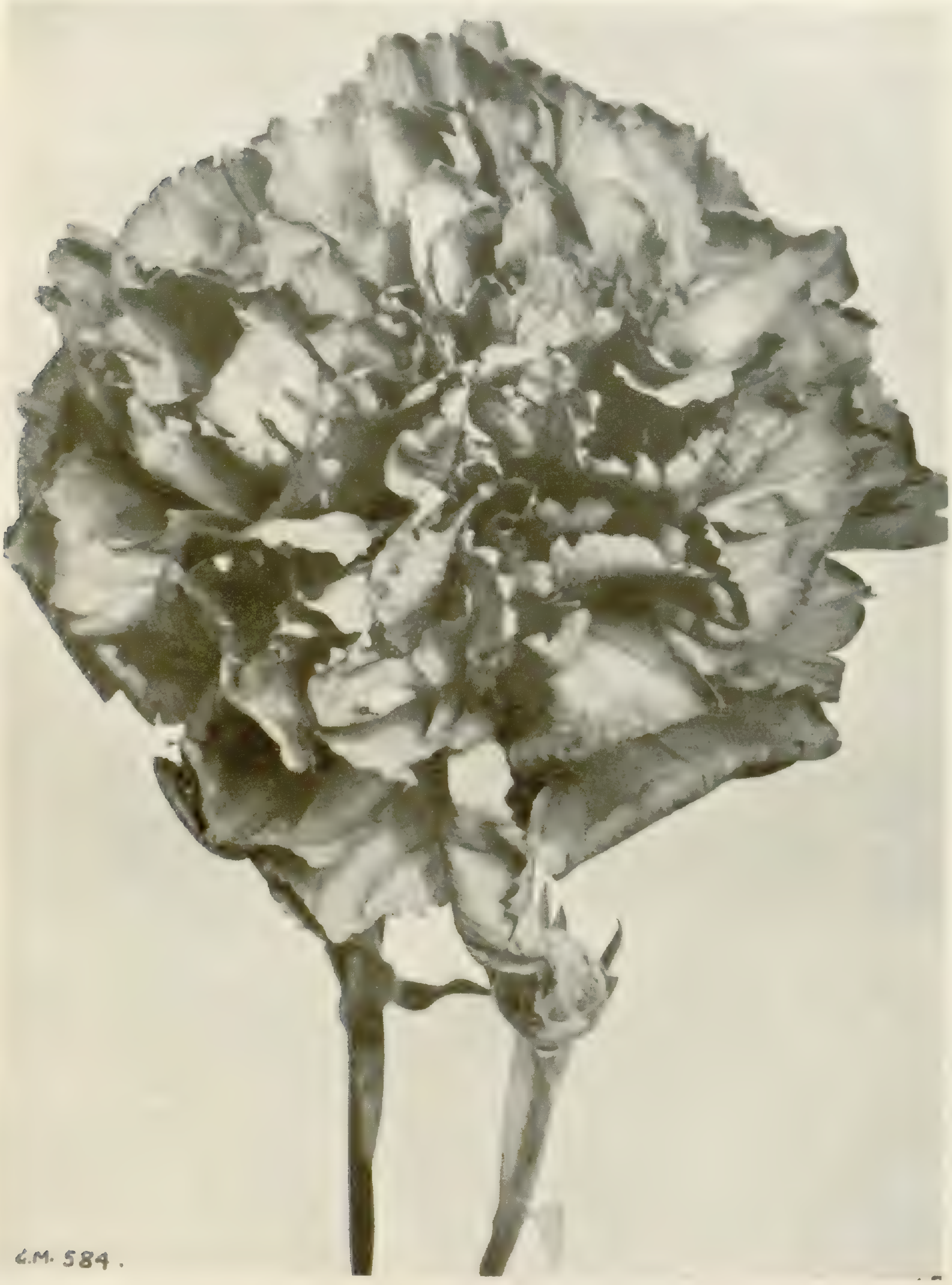
BRASSO-CATTLEYA CLIFTONI.

Exhibited by Messrs. Charlesworth and Co. at R.H.S. Meeting on the 8th inst., when it received a first-class certificate. Colour, blush, white, and yellow.

mine should lead to its more general distribution.

Caraguata cardinalis.

For some reason or other bromeliaceous plants are not at all popular in this country. The cause of this neglect is difficult to account for, as many of them are decidedly ornamental from a foliage point of view, and particularly showy when in bloom. To this latter section belongs Caraguata cardinalis, for, though the flowers, borne in a compact head, are not at all showy, they are surrounded by a whorl of large leaf-like bracts of a bright scarlet colour. In the tropical portion of the T range it forms just now a bright and effective feature. It is a native of Colombia; indeed, the greater number of the species occur in South America.



NEW PERPETUAL-FLOWERING CARNATION ROSE DORÉE.
Exhibited by Mr. W. H. Lancashire at the Perpetual-Flowering Carnation Society's Show, December 9, when it received a first-class certificate. Colour, rose cerise.

Ruellia macrantha.

Few, if any others, of the extensive order Acanthaceæ bear such large flowers as this, and certainly none of the genus to which it belongs. Like most of its allies it forms a somewhat upright habited plant, of a sub-shrubby character, while the solitary flowers are produced from the axils of nearly every leaf towards the upper part of the stem. They are trumpet-shaped, slightly curved, from four to five inches long, and nearly three inches across the expanded mouth. The colour is a kind of rosy purple, veined with a deeper tint. Though often treated as a warm house plant, this ruellia is in very good condition in the cool portion of the T range; indeed, so situated, the flowers are richer in colour than they are in a warmer structure.

Exacum macranthum.

The rich blue-purple flowers of this exacum, with their conspicuous bright yellow anthers, have few, if any, rivals in colour at this season of the year. Associated as it is at Kew with the white-flowered form of Begonia Gloire de Lorraine, this exacum is particularly noticeable. It has sometimes been referred to as an annual, but cuttings can be readily struck, and effective plants can be grown therefrom. A native of the mountainous districts of Ceylon, Exacum macranthum does not need for its successful culture as high a temperature as one might suppose. During the summer it requires only the temperature of the greenhouse.

Azalea obtusa.

At one time this pretty little azalea was regarded as a distinct species under the above name, but it is now considered to be a variety of Rhododendron (azalea) indicum. At all events, it is a well-marked form, which naturally assumes the character of a low-growing dense bush, and when absolutely covered as is its wont with its small bright red flowers, this azalea is very telling. In the greenhouse both the ordinary kind and its white variety are just now at their best. K.

NEW PLANTS, ETC.

BRASSO-CATTLEYA CLIFTONI.

This is a bold and beautiful hybrid raised by crossing Brasso-cattleya Digbyano-Mossiæ and C. Trianæ Upland's var. It is a very fine orchid, shapely, and large. The sepals and petals are silvery-blush, while the lightly-fringed and rounded lip is white, tinted blush, and with a yellow throat. F.C.C., R.H.S., December 8. Messrs. Charlesworth and Co., Hayward's Heath.

CYPRIPEDIUM TROILUS LORD NELSON.

A bold cypripedium derived from C. insigne Harefield Hall and C. nitens Sander's var. The flower is large, and the broad dorsal sepal has a pure white apex with a yellow-green base, the latter portion being handsomely spotted with purple. The petals and lip are yellow-green with brownish shading. A.M., R.H.S., December 8. Messrs. Sander and Sons, St. Albans.

CYPRIPEDIUM ARMSTRONGI.

This is probably a natural hybrid, and one in which the influence of the second, and unknown parent, is very small indeed. The plant indicated in its flowers a very close likeness to C. Spicerianum, but the leaves differed from those of the latter species. It was first labelled as a variety of Spicerianum, but the title was subsequently altered to that of C. Armstrongi. It is a glorified C. Spicerianum with a green base and a purple median band on the white dorsal sepal. A.M., R.H.S., December 8. Messrs. Armstrong and Brown, Tunbridge Wells.

DENDROBIUM CŒLOGYNE STRIATUM.

This differs from the type in having dark brown-purple stripes on the tawny sepals and petals. The lip is, as usual, deep blackish-brown. A.M., R.H.S., December 8. Mr. H. A Tracey, Twickenham.

CHRYSANTHEMUMS.

Ball of Gold.—A very fine and useful late-flowering incurving variety that promises to be of great value for market or for the conservatory. It is a bright yellow sport from the popular and serviceable Snowdrift, and is its counterpart in all but colour. A.M., R.H.S., December 8. Messrs. R. H. Bath, Lim., Wisbech.

Kathleen May. — A magnificently-coloured decorative variety of the most brilliant crimson hue. This variety has several rows of fairly long florets, and it has a partially-developed anemone-centre, though the latter is not cushion-like. It is wonderfully attractive, and though difficult to classify, it bids fair to be very popular as a late decorative sort. F.C.C., N.C.S., December 2. Mr. Pestifield, Crockenhill.

Aurore Boreale. — A very pretty large-flowering single variety, of golden-orange colour, beautifully shaded with crimson. A.M., R.H.S., December 2. Mr. Norman Davis, Framfield, Sussex.

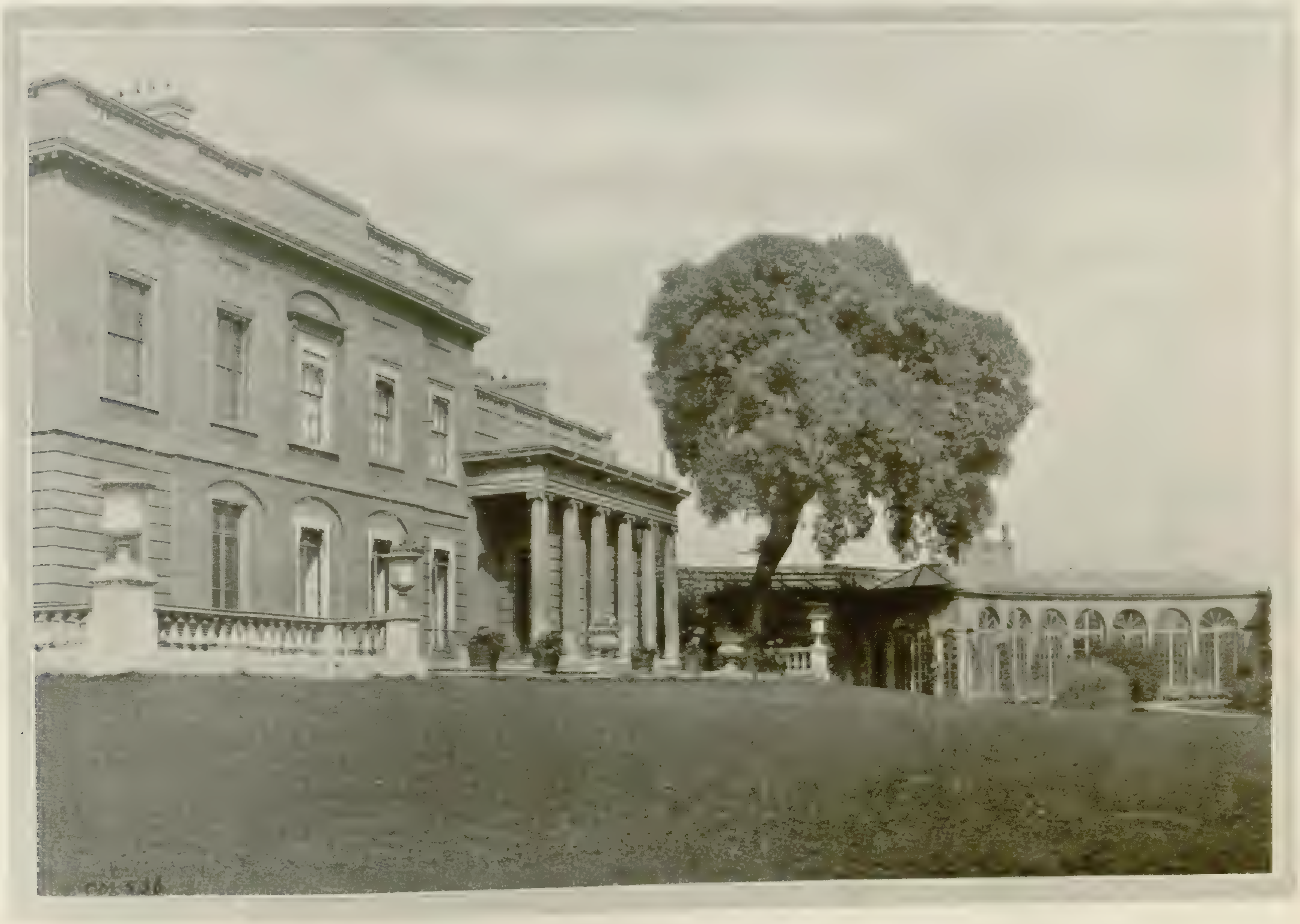
CARNATION ROSE DORÉE.

This is a fine new winter-flowering variety with bright rosy cerise coloured, or rosy-salmon blooms, of good size and form. The flowers are very full; in fact, almost too full, if we may venture a slight criticism. The blooms are on fine long stems, and the calyx in every case does not burst. F.C.C., P.F.C.S., December 9. Mr. W. H. Lancashire, Guernsey.

SOME BRISTOL GARDENS—II.

Blaise Castle.

Among the many delightful estates round about Bristol few can vie with Mrs. Harford's park and grounds at Blaise Castle for natural beauty. There are spreading fields, a wide park, grand old trees, wooded heights, and bold limestone escarpments, and deep valleys with the water running through, and with the sides all glistening with the enormous quantities of hartstongue and other hardy ferns. Within the house are many well-nigh priceless works of art, especially among them being paintings by Salvator Rosa, Raphael, Vandyck, Carle Guido, and artists of the time of Michael Angelo. Mrs. Harford's husband, the late J. S. Harford, Esq., was an enthusiast in the world of art, the biographer of Michael Angelo, and friend of Wilberforce; hence the array of choice pictures in the gallery that opens into the conservatory.



BLAISE CASTLE, BRISTOL; MANSION AND CONSERVATORY.

Blaise Castle is about four and a-half miles northward of Bristol, in the parish of Henbury, and a little to the west of Westbury-on-Trym. The substantial house stands on rising ground overlooking the park, and commanding fine views of the wooded hills beyond. At a short distance from the front of the house there is a large group of giant elm trees that are a great feature of the park. Around the house, on the steps, and at points of vantage along the terrace, big agaves, agapanthuses, and hydrangeas in tubs stand all the summer through. Curiously placed at one corner of the house, close to where the long, ridge-roofed, old-time conservatory joins it, is a large evergreen oak with a big mop head; standing all alone in this position, one wonders how it came there, and why it was allowed to remain. Doubtless it owes its life to sentimental considerations on the part of the members of Mrs. Harford's family.

Not very much is attempted in the way of flower gardening. The border in front of the conservatory is kept gay in summer by means of begonias. Groups of rhododendrons, and azaleas, and pampas grass adorn the sloping lawns, and roses find a place here as everywhere.

A very pretty picture is formed by the heavily thatched dairy, set amid a little garden of its own not far from the end of the conservatory, but quite screened from it by evergreen trees and shrubs. There is here a little pool for water lilies, surrounded by a small, simple, but very charming low rock garden, wherein herbaceous plants, flowering shrubs, and ferns all find a suitable home. All around are roses, lilacs, philadelphuses, rhododendrons, and many another kind of flowering shrub, and cut out of the lawn itself are a few small flower beds, where cannas, herbaceous lobelias, Koniga maritima, pelargoniums, marguerites, and begonias provide a summer display.

But pretty as this spot is it has a further attraction, and this is the tree that occupies the centre of the accompanying illustration. The Maidenhair Tree (Ginkgo biloba), is a very graceful and effective deciduous conifer, and one that is by no means so freely planted as it deserves to be. Here, at Blaise Castle, is one of the finest specimens of this splendid species, perhaps it is the finest in the country. It is certainly the largest I have ever seen, and it is in perfect health, and furnished with its graceful branches from quite near the ground upwards. This handsome example is charming when its new leaves expand in spring, it is noble when in full leafage, and it is brilliantly coloured in late autumn. Lovers of trees should endeavour to see this ginkgo, and inspect the beautiful woods at Blaise Castle; permission to do so can be obtained on application.

The glass department is small, but Mr. James Barrett, the head gardener, grows good grapes, has a large collection of ferns, including a wall covered with nephrolepis, and maintains ample supplies of melons and tomatoes. The kitchen and fruit gardens are in several portions, and are surrounded by high, strong walls, that afford plenty of opportunity for the cultivation of peaches, pears, cherries, nectarines, and plums, and some of the wall trees are of great age and size. Bush fruit trees, notably apples, are largely grown, and I was especially struck by the shapeliness and beauty of several heavily-cropped trees of Worcester Pearmain, a well-known early variety that does well all down the West Country. One part of the kitchen garden is divided from the rest by the high road that leads to Shirehampton, and the connection is by means of a wide tunnel passing under the road.

Just beyond this isolated portion is the very interesting little "village" designed by Nash. There are ten cottages, all of different design, built in 1810, and placed around a sloping lawn, with a fountain in the centre, and tall trees around. This little group of cottages has been described as the beau-ideal of a village, consisting of "a group of houses of different forms, styles, and materials, stone, brick, wood, etc., roofed with thatch, tile, or slate, each surrounded with different trees, and enwreathed with clematis, rose, honeysuckle, or vine. The inhabitants are all poor families, settled here by the bounty of the proprietor." For a very long number of years this little "village" has been a great local attraction, and its fame has spread far and wide, chiefly because the houses and their disposition are so utterly unlike anything else of the kind.

DAIRY GARDEN AND FINE GINKGO BILOBA AT BLAISE CASTLE.

Leaving the gardens proper, and plunging into the woodlands at the foot of the pleasure grounds, one quickly comes to the exquisitely beautiful Gorge of the Trym, a wooded ravine, with the limestone rocks rising on either side, and, in some places, reaching a great height. The winding roadway, cut along the face of the slope, well above the chattering little river, is a very long one, and it provides scores of delightful views, forward or backward, as it twists about in conjunction with the turn of the stream. Birches, alder, chestnut, lime, and oaks are abundant all along the way. Hardy ferns, chiefly hartstongues, lady ferns and the common lastrea, flourish amazingly, the former growing in enormous quantities, and making huge masses of long translucent frondage. Presently, turning off from the roadway, we come suddenly upon a broad, silent pool nestling amid trees and shrubs at the foot of a towering mass of limestone rock. Wild plants fill every nook and cranny of the soft stone, and small shrubs and trees have obtained a precarious footing wherever possible, so that the whole scene on a summer day is a fine one. This is known as the Lover's Leap.

Further ahead, and winding away upward, a path leads to the summit of Blaise Hill, where once existed the hermitage of St. Blaise. In 1768 Mr. Thomas Farr, then the owner of the estate, built the triangular castellated building that now crowns this high point. A magnificent view is obtained from this little ivy-clothed castle, and one can well believe it forms a pleasant retreat for the members of the Harford family. It should be mentioned that the woods are thrown open to the public one day a week, and the Bristolians, taking advantage of Mrs. Harford's kindness, make this castle or prospect house their objective when rambling through the estate.

Almost opposite Blaise Hill, across the other side of the gorge, and only arrived at after a good deal of healthy climbing, is another fine mass of rocks standing clear out from among the beech and Scotch firs around. The peculiar formation of the upper part of this rocky eminence has caused it to be called the Giant's Chair, or Giant Goram's Chair. The legend goes that Giant Goram and his rival, St. Vincent, could not agree as to the course the river Avon should take, but one day the saint found the giant fast asleep in his great rock chair, and taking advantage of this opportunity to fulfil his own wishes without opposition, he settled the long-disputed question by clearing the ravine through which the river now flows.

A further climb and the soil increases in depth, and here rhododendrons abound, and hazels, arbutus, Portugal and common laurels provide an abundant undergrowth for game. We caught sight of one very beautiful bird, a fine Reeve's pheasant, in our passage through these upper woods. Soon we strike the roadway, and this gradually descends, passing two of the lodges, and finally emerging on Henbury Hill, a good mile and more away from the entrance to the gardens. When we left the pleasure grounds Mr. Barrett asked me, "Can you climb?" As this question was practically a challenge, I assented, but that long morning's climb and ramble left me with little superfluous energy, as I found when a good sprint became necessary to catch the motor 'bus at Westbury, on the return journey into Bristol. But I was very glad to have seen Blaise Castle and the wonderful combination of rock and water and sylvan beauty that Mrs. Harford's estate possesses.

Henbury Hill House.

Northward of Bristol, a mile or so beyond the limit of Durdham Down, is the village of Henbury. Henbury Hill, with its long, tedious climb, is well known in the district, as also are the several interesting gardens that skirt it. Henbury Hill House, the residence of A. Baker, Esq., stands on the crest of the hill, and its gardens slope westward. They are well wooded, and full advantage has been taken of these wooded portions by providing spring flowers in abundance beneath the trees, and hardy ferns along the margins.

A feature is made of plants in tubs, and during the summer a large number of palms, ferns, eucalyptus, hydrangeas, and dracænas are arranged around the summerhouse at the bottom of the lawn, where, backed by tall trees, and sheltered from wind, they produce a distinct, pleasing and sub-tropical effect. Another feature of the gardens, and a more permanent one, are the hillside herbaceous borders. Here on either side of a rather steep walk, all the best of the hardy herbaceous plants are cultivated in goodly masses. Delphiniums are largely cultivated, and their varied shades and stately spikes give character to the general display. The new Astilbe Davidi and the older A. grandis flourish finely, and the veronicas, big and little, seem very much at home. Campanulas, too, are good, and Artemisia lactiflora has done very well indeed since its recent introduction.

Flowers are grown in very large quantities at Henbury Hill House. Every member of Mr. Baker's family is fond of flowers, and so flowers are used in almost every room in the house. Besides the flowers in beds and borders, Mr. Orchard, the head gardener, provides great batches of annuals and perennials in the lower part of the kitchen garden, and here the ladies of the house may cut and come again all the summer long. A few of the subjects so largely grown are poppies, Grindelia cunifolia, sweet peas, candytufts, lavateras, godetias, Nigella Miss Jekyll, delphiniums, heucheras—very fine, lily of the valley, statices, clarkias, seedling carnations—particularly good, Moon daisies, and early chrysanthemums.

Mr. Orchard is a keen vegetable and fruit cultivator, and the peach trees on the old walls give evidence of his skill. He is a strong believer in the method of treating strawberries as annuals—a plan first advocated in the Gardeners' Magazine—and he produces large supplies of first-class dessert fruit by this method. Royal Sovereign is the favourite variety. Espalier-trained apples and espalier and cordon gooseberries, and cordon currants are other excellent features, and the small fruits are unusually prolific. La Constant red currant is found to be very useful because of its lateness. In front of the espaliers, in the borders between them and the paths, are more flowers, notably montbretias, gladioli, asters, gypsophila, salpiglossis, stocks, campanulas and pentstemons. Considering its extent, there can be few gardens that yield so many flowers as this.

Roses have their place, and they are especially evident in the centre of the kitchen garden, where the four paths meet under long arches of rambling roses in great variety.

A large span-roofed greenhouse is used as a conservatory, and at the time of my visit it was very gay with a splendid batch of tuberous begonias, representing Messrs. Blackmore and Langdon's well-known strain. To every rafter a fuchsia was trained, and the pendant clusters of flowers were very pretty. Campanulas, Kalanchoe flammea, Lobelia tenuior, Trachelium cæruleum, and coleuses were other conspicuous subjects associated with a variety of foliage plants. Several low houses or pits serve admirably for the production of table plants, for melon culture, and for gloxinias. The latter are very popular, and special pains are taken with them. Peed's strain is the one used, as it is especially rich in large-flowered and beautifully netted and spotted varieties.

One other attraction of these gardens must be mentioned, and that is its collection of tree pæonies. These are planted in beds on the lawn, and against the background formed by a fine old Cedar of Lebanon, they look very well.

[I much regret to have to state that Mr. W. J. Orchard has died since my visit to Henbury Hill House, and the penning of these notes. Mr. Orchard has been succeeded by Mr. Charles M. Holt, who had already made a reputation in the Henbury district.—C. H. C.]

LOVER'S LEAP AND POOL, BLAISE CASTLE.

Tramore, Henbury.

Only an enthusiastic amateur can fill a modest garden brimful of interest. A professional gardener would never think of putting so much in so little. There is always a danger that the amateur, led on by his successes and gathering enthusiasm, will override his hobby. Mr. Budgett, who has a small garden at the foot of Henbury Hill, is in constant danger of overplanting his garden, but he avoids the danger by ruthlessly excluding the less interesting plants and the never-do-wells as fast as he introduces new and finer plants.

The old-fashioned house is smothered in climbing roses, which are allowed more freedom than they usually receive, and amongst these ramble many interesting climbers, such as Akebia quinata, Ampelopsis sempervirens, several varieties of hardy smilax, and Tropæolum speciosum, the last flowering well in an east aspect. In the warm border on the south side of the house, and sheltered by large bushes of Choisya ternata, which here proves one of the hardiest of evergreens, are specimen plants of Abelia sinensis, Cæsalpinia japonica, Carpentaria californica, Perowskia atriplicifolia, a myrtle, and the hardy citron, Citrus trifoliata. Around the little lawn, on tall rough wooden pillars, are single climbing roses, many kinds of honeysuckle, and clematis, as well as ornamental vines. Vitis Coignetiæ being especially beautiful.

A considerable portion of the lawn is occupied by a rock garden and small pool of water. The rock garden is Mr. Budgett's special hobby. He has been careful to avoid piling up great rock masses, and the rockwork has a stratified and quite natural appearance, providing ample nooks and crannies, and pockets and ledges, for the alpine plants he so greatly loves. Hardy heaths, such as Erica codonodes, E. Veitchi, E. arborea, E. stricta, and E. australis grow out of a carpet of Erica carnea which is carefully clipped over every year directly after flowering. Ramondias, primulas, the rarer sorts of dianthus, androsaces, sedums, cobweb house leeks, statices, gentians, cyclamen, and the pretty Ourisia coccinea are other favourites, and all are cared for with an amateur's love and pains.

In the lower parts of the rock garden, planted in peaty beds, are Gaultheria Shallon, now getting too large for the space allotted it, three or four other gaultherias and Iris Kæmpferi. On the more prominent points are phormiums in variety, Japanese maples, beautiful alike in their summer and gorgeous autumn foliage, and shrubby veronicas curiously mimicking many a genus to which they have not the slightest relationship. Here, too, the rare Edwardsia Macnabiana seems quite at home, as well as a number of New Zealand shrubs, which have proved themselves well adapted for such a situation.

PROSPECT HOUSE ON THE SUMMIT OF BLAISE HILL.

In the little pond are red, yellow, and white hybrid water lilies, and Aponogeton distachyon, which yields its white flowers over the greater part of the year. Beyond the pool and the higher part of the rock garden Mr. Budgett has long irregular borders full of herbaceous plants and flowering trees and shrubs, where cytisus, berberis, and spiræas in great variety add their brightness in the spring. On the south side of the garden there are grassy hillocks, where many kinds of bamboo always look very graceful and green, and especially good is a huge mass of B. palmata, which is here a rampant grower. Hardy fuchsias, the blue Solanum crispum, and Pyrus japonica in many colours, are especially attractive.

Mr. Budgett also finds time to grow a few orchids, and he has two or three quite tiny houses filled to overflowing with well-grown cypripediums and odontoglossums, both of which provide a large amount of pleasure and interest, and cost no more to manage than many less beautiful and useful plants.

Charles H. Curtis.

Single-flowered Chrysanthemums.—I cannot but deplore the too rapid increase that has of late been made in this section of the chrysanthemum. The aim of raisers seems to be to obtain as many sorts as possible, irrespective of quality. Many now shown are not single at all, but really semi-double, having as many as three or more rows of florets. There seems such a wish to increase the number of varieties that very soon this section will be as confused as are the incurving varieties. A wholesale disqualification at some leading show of objectionable varieties would do much to check the present evil.—E. M.

NEW HERBACEOUS CLEMATIS.

The little group of herbaceous clematis, which of late years has met with some appreciation for the decoration of hardy flower borders, should receive additional marks of public favour once the newer hybrids come into general cultivation.

Two of the best known of the older forms are C. recta, which forms an upright, bushy growth about three feet in height, clad with a wealth of small white blossoms during June and July, and the violet-blue C. integrifolia, with its sturdy growth and bell-shaped flowers. The double form, C. recta flore plena, is somewhat rare, but its pleasing double white flowers, in dense heads, its freedom, and general appearance should ensure it a place in every garden. C. Durandi, an earlier and more continuous flowering form of D. integrifolia, is also deserving of notice, and may be regarded as superior to that species.

Of the quaint C. heraclesæfolia, a Chinese species, with handsome foliage and purplish hyacinth-like blossoms, it is unnecessary to enter into detail, but its variety, C. h. Davidiana, with its sweetly-scented pale blue blossoms, is a very useful border plant. It is this same C. Davidiana which, in conjunction with C. Stans, has been the means of producing an entirely new series of hybrid forms, which should be of value for garden purposes. When it is borne in mind that there is a series of floriferous late-flowering forms of varying shades of blue and lilac, it will be seen that they will help to extend the reign of the herbaceous plants in late summer. Groups of well-foliaged, flower-clad plants will certainly be of service in most gardens, especially as the display of herbaceous flowers tends to weaken in late August and September, when these new clematis are at their best.

The new group constitutes one of the best sets of novelties introduced by the well-known raiser M. V. Lemoine, of Nancy, and the varieties in question are worthy of an extended trial by hardy plant growers. One of the best is Azur, a pretty floriferous variety, with large panicles of hyacinth-shaped blossoms, rising in blue pyramids among the dark foliage; the blossoms are clear blue, but the centres and stamens are white. Columbine is a pleasing gem, possessing a shapely habit, with panicles of large blossoms surmounting the wealth of foliage; the colouring is soft violet. Somewhat taller than either of these is Crepuscle; this produces a multitude of long-tubed flowers, arranged in panicles well above the foliage; it is pale blue in colour, darkening at the centre. Cypris is a large-flowered variety, producing large bunches of long-tubed reflexed blossoms, of a clear turquoise blue colour, and is rather tall in growth. Fraicheur has a dwarf, bushy habit, but the flowers are large, with the inflorescences rising clear from the foliage, and the colouring is pale lilac, shading to whitish-blue.

Other interesting varieties, which follow in their main features more closely to C. Davidiana, are Iris, a brilliant blue, producing its blossoms in a series of whorls and forming a shapely medium-height plant. Phare is hyacinth blue, with the blossoms produced in close bunches near to the stems. Hybrida is very compact in growth, the blossoms pale blue, very small, and freely produced. Gerbe Fleurie is very like C. Davidiana; the flowers are large, of a pretty shade of porcelain lilac, while in Profusion we note a floriferous blue, with a pale creamy centre.

P. S. Hayward.

NOTES ON SOME NEW ROSES
No. II.

In treating of the new roses of 1908 one approaches the subject with a certain amount of diffidence. We cannot make positive statements, their acquaintance has been but brief; we can only give first impressions. Until these roses have been grown under personal observation, or have been seen in cultivation in their respective homes and climates, nothing definite can be said. For descriptive purposes a new rose will come under two heads: (1) Those which have been grown by the writer, or seen on the plants in the garden elsewhere, and (2) those that have come before us at the exhibitions either as cut flowers or in pots. And kindly bear in mind there are other varieties perhaps equally as good as those tabulated in the following list; the writer does not attempt to give more than a selection. These will be treated in alphabetical order, taking those first that come under the first head, those which the writer has seen growing.

Dr. O. Donel Browne, H.T. (A. Dickson and Sons).—Colour carmine-rose, growth sturdy, flowers erect, well-formed, full, large, late-flowering. Although classed as a hybrid tea, it is evidently closely bordering on the hybrid perpetuals. In its general outline, both of plant and flower, it reminds one of that old rose Star of Waltham. It appears to be a most promising variety, and, from an exhibitor's point of view, one of the best of 1908.

Earl of Gosford, H.T. (S. McGredy and Son).—Bright rose-red, flowers carried on long foot-stalks, deep petalled, but lacking substance. Awarded a Card of Commendation, N.R.S., Manchester.

Florence Edith Coulthwaite, H.T. (A. Dickson and Sons).—Colour, deep cream shaded to centre with orange-rose. Very free flowering, of good constitution, useful for the garden, but unlikely to surpass Earl of Warwick, a variety which it closely resembles.

George C. Waud, H.T. (A. Dickson and Sons).—Colour difficult to describe, bright light crimson suffused with orange. A new shade altogether amongst roses. Flowers medium size, well formed, high centred, and full. Very fragrant. Its popularity is assured on account of its colour. A row of it amongst other roses, when seen at Newtownards in August, was very striking. Award of Merit, R.H.S.; Gold Medal, N.R.S., Manchester.

Grace Molyneux, H.T. (A. Dickson and Sons).—Colour deep cream-pink, flowers semi-double, produced on long upright stems; fragrant. Suitable for the garden on account of its freedom in flowering. Card of Commendation, N.R.S.

John Cuff, H.T. (A. Dickson and Sons). —Colour carmine-pink. Very free both in growth and flowering. Blooms finely formed, full. A good rose for exhibition and garden.

Lyon Rose, R. Pernetiana (Pernet Ducher).—Colour coral-red, fairly full, erect, vigorous, and free. The raiser describes it as being "a cross between Madame Melanie Soupert, H.T., and an unnamed variety, itself the direct offspring of Soleil d'Or." It has all the characteristics of a hybrid tea. It is useful for the garden. As seen at the Franco-British Exhibition, closely massed, it was attractive.

Lady Ursula, H.T. (A. Dickson and Sons). Colour flesh pink. Flowers of good substance, high centre. Vigorous.

Mrs. David Jardine, H.T. (A. Dickson and Sons). Colour clear soft rose-pink. Flowers of perfect shaps. Highly spoken of in the United States, and by the raisers as destined to supersede Catherine Mermet for forcing purposes. Its perfume is delicate, a real tea-scented rose. Award of Merit, R.H.S.

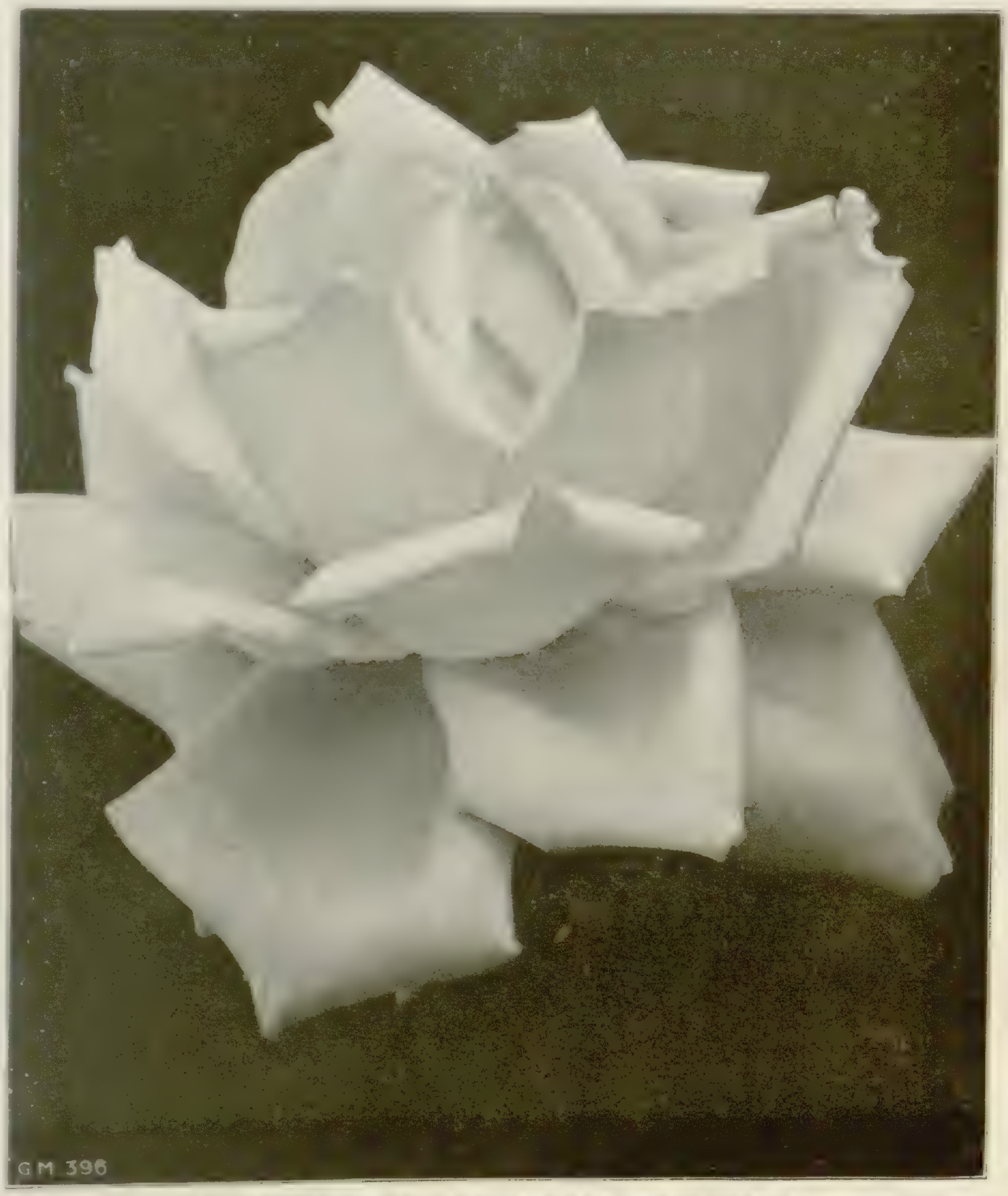
Molly Sharman-Crawford, Tea (A. Dickson and Sons).—Colour pale creamy-white. Flowers full, with high centres, and beautifully formed. Very fragrant. Growth vigorous. Destined to occupy a prominent position among the exhibition teas, and at the same time an acquisition to the garden. One of the best of the year. Award of Merit, R.H.S.

Simplicity, H.T. (Hugh Dickson).—Colour pure white. Flowers, which are almost single, and as large as Frau Karl Druschki, with golden stamens, are produced after the manner of Kaiserin A. Victoria, of which it is a seedling. The petals are thick and leathery. A most striking variety as staged at Manchester, and as seen growing in masses at the home of the raiser. Gold Medal, N.R.S., Manchester.

W. R. Smith, Tea (Smith).—Introduced by Mr. Hugh Dickson.—Colour creamy-white suffused with pink, tips of petals outlined with rose after the style of Madame de Watteville. Said to be a seedling from Maman Cochet, which, in form of flower, wood, habit, and foliage it closely resembles. A very attractive stand of this rose was staged in the class for twelve of one variety at Wolverhampton Show on July 7 last, and after inspecting it in the rose grounds of the introducer in August, when a bunch of finely developed flowers were gathered, I have every cause to think that it will prove to be one of the best sent out during the last three or four years. Card of Commendation, N.R.S., Regent's Park.

Havering. JOSEPH H. PEMBERTON.

Phlox canadense Laphami (Perry's Variety).—The rich lavender flowers of Plumbago capensis are always admired, indeed among plants suitable for summer gardening the colour is unique. Yet though frequently employed in this way, it flowers so late that it is but rarely a success when planted out. As a gain in this colour I think the above-named phlox a sterling success; the plant is absolutely hardy, grows freely, flowers lavishly, and continues so for several months, being at its best during June and July. Many readers of the GARDENERS' MAGAZINE are already familiar with its good qualities, as it has frequently been exhibited at the Temple Shows; to those who have not yet seen it, I recommend it as one of the best recent additions to hardy plants. Cuttings should be obtained now, and inserted in rich, light soil in a cold frame; every tiny scrap will root, and if planted out nine inches apart in spring a rare and novel colour effect will result. The flowering stems are light, supporting trusses of bloom often a foot across, the height when in flower averaging twelve to fifteen inches.—THOMAS SMITH, Walmsgate Gardens.



NEW HYBRID TEA ROSE GRACE MOLYNEUX.
Raised by Messrs. Alex. Dickson and Sons. Colour deep cream suffused with pink.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

WINTER - FLOWERING CYPRIPEDIUMS. — The species and hybrids that have recently passed out of flower may now be examined to see what repotting requirements may be necessary. It is advisable, however, where convenient to defer the repotting of this section until the month of February. There is generally so much needing attention just at that time in a general garden that one has to study and push forward all the work that can possibly be done at this season. I certainly think that, where it is intended to make divisions of any of the plants, the sooner it is done after the plants have passed out of bloom the better, as the roots are more or less active, and soon push into the new compost. The potting compost for the plain-leaved section of cypripediums must be varied, according to the conditions under which the plants have to be grown. In a pure atmosphere, where there is no obstruction to light, the potting compost may consist of about one-half turfy loam and the remaining portion of fibrous peat; polypodium or osmunda fibre, may, however, be substituted for the peat if considered desirable. Chopped sphagnum moss, with sufficient coarse sand and broken crocks, should be added to render the compost porous.

IN THE NEIGHBOURHOOD OF LONDON and other large towns, where the light is so poor that the drying of the compost during the winter takes a considerable time, I would suggest that the compost should be of such a nature that it may become dry within a reasonable period; and therefore it is the discarding of the loam that will best facilitate this desirable end. Some may claim to have produced more robust constitution in their plants from the use of loam in the potting compost, but even that is only a matter of opinion; but in unfavourable districts I certainly think it is best to leave it out of the potting composts. The pots should be clean, and filled to about one-third their depth with clean crocks. The compost should be made firm about the roots and base of the plants. Where the roots have become adhered to the sides of the pots there is often a difficulty in removing the plants from them. It is a very good plan to give the plants a thoroughly good watering a few hours before they are wanted for repotting; this is a considerable advantage, and induces the roots to part more readily from the sides. I have on previous occasions pointed out the advisability of treating this section of cypripediums liberally, as I am quite certain no advantage can be claimed by annual repotting of such varieties as C. insigne, C. Leeanum, etc. For large specimens of these kinds I consider once in three years quite often enough to disturb them, and, by judicious top-dressing and proper attention to watering - requirements, they will even remain in the same pot for a longer period than that mentioned. When potting large plants, all the very old growths should be carefully removed. If it is desirable to increase the stock, the growths thus removed may be potted up in the usual way, and, if placed in a warm, moist position, they will soon produce new growths.—H. J. Chapman, Oakwood Gardens, Wylam-on-Tyne.

STOVE PLANTS.

EUCHARIS AMAZONICA. — Specimens that have been cultivated expressly for autumn and winter flowering usually commence growth again almost immediately they have bloomed, and it is therefore necessary to divide the large plants before the roots become active, if one desires to increase the stock. At this season the operation must be carried out most carefully, and as much soil as possible retained on the roots. The bulbs may be potted up into various-sized pots, according to their size and strength. Use a compost of strong fibrous loam, with a few rough lumps of peat, and as much charcoal, sand, and mortar rubbish as will keep the compost thoroughly porous; these should be well mixed together and placed in the same temperature as that in which the plants are growing previous to potting. Use clean and well-drained pots and pot firmly, but carefully avoid injury to the roots. If convenient, plunge the pots up to their rims in tan, bark, or leaves, over a bottom heat of 70 to 75 deg., but do not give overmuch water until the roots become active and the plants are growing freely again. A gentle dewing over by means of the syringe will generally suffice throughout the winter months.

FICUS ELASTICA.—These plants form useful subjects for conservatory and house decoration, and they will thrive well in a temperature ranging from that of a warm greenhouse to the intermediate stove. In the latter position they are well worth growing, and will develop into useful sized specimens as quickly as any foliage plant with which I am acquainted. The bold, glossy leaves and vigorous constitution thoroughly recommend it as the best room plant in cultivation. Spring is the most suitable time for propagation, as then it will readily root from cuttings made from the young growth, if confined in a moist, close atmosphere, and given bottom heat. Plants may also be raised from eyes, which should be cut from lengths of the stem, placed flat in shallow pots or boxes, and treated as advised for cuttings. Pot the plants singly as soon as they require more space.

GENERAL REMARKS.—Throughout the winter months care of temperature and watering are most essential, because now is the resting period of most of the occupants of the stove. If great fluctuations of temperature are allowed there may be premature and stunted growth, and the plants do not start freely into growth when the proper season arrives.—John Donoghue, Bardon Hill Gardens.

HARDY FRUITS.

GREEN GAGES.—These, although rather shy in bearing until the trees have attained reasonable size, require very carefully pruning, and if the wood inclines to coarseness root lifting must be practised. It is an excellent plan when pruning green gage trees to preserve at intervals medium-sized shoots, and secure them to the walls or wires. These young growths frequently produce excellent fruit when spurs fail. All fore-right growths need pruning back to within a couple of eyes of the older wood. Two years' old growths which may have borne fruits, should, if not wanted for filling up, be shortened, so that the whole of the trees may be clothed with both spurs and young suitable shoots. When planting young trees see that there is ample drainage provided, and the soil composed of good rough loam with plenty of old brick mortar, wood ashes, etc., thoroughly mixed, and made nicely firm before spreading out the roots. When planting wall trees allow ample room between the walls and the stems, so that the latter can thicken without being injured by pressure against the brickwork. Other plums need pruning in the same way as the green gage. All our trees are fan-shaped, a method of training I have practised for many years, and have every reason to be well satisfied with the results. Watch for bullfinches and other birds destructive to the buds.

PEACHES AND NECTARINES. — The pruning and nailing of these we usually leave until the month of February. No removal of the shoots from the walls is ever practised, but as soon as the flower buds begin to expand protection is afforded, and I have no reason to alter this course, which I have adopted for many years in succession. When planting peach trees, if the soil is thought to be deficient in lime a little should be added. A strong rich soil should be avoided; use a sweet fibrous loam, not too fine, with burnt earth and wood ashes, old plaster, and a sprinkling of bonemeal. If the soil is short of fibre, and is likely to run together very closely, add a little half-decayed manure, charcoal, mortar rubble, etc., so as to keep it open.

CORDONS. — In unfavourable districts, where the climate and condition are far from satisfactory for dessert kinds, and if there is wall space available, cordon apples might be profitably planted. Such varieties as Cox's Orange Pippin, Allington Pippin, May Queen, Scarlet Nonpariel, Worcester Pearmain, Egremont Pippin, Claygate Pearmain, and Duke of Devonshire, if worked on the paradise stock, and planted on a well-drained border, should give good fruits. When planting cordons it is always advisable to grow enough of one kind in preference to many varieties.

STAKES AND FRAMEWORK for raspberry canes should be put into good order, and the canes carefully tied according to the different methods of growing and training them. Do not allow too many canes to remain. They need not be topped at the present time, but simply tied in, shortening the canes being best left till spring. Those planted this season should be mulched. In fact, all raspberries require a liberal dressing of manure, as they are gross feeders, and suffer quickly from drought. Do not at any time dig deeply between the rows, being content with pricking over the surface about three inches deep; digging deep amongst raspberries frequently ends in the loss of canes and crop. — H. Markham, Wrotham Park Gardens.

THE KITCHEN GARDEN.

FRENCH BEANS.—Continue to make sowings at intervals to keep up a succession. If the amount of space is limited, the pots containing the seeds may be placed under the stages or on the sides of the paths—in fact, any corner will suit them where there is sufficient heat to induce the seeds to germinate. But as soon as they appear through the soil they must be given a light position well up to the glass. A little ventilation should be admitted in favourable weather to maintain a sweet atmosphere. Cold air should not, of course, be allowed to pass directly over the plants.

TOMATOES.—Some growers prefer to raise the plants from cuttings that are required to provide an early supply. Should they be rooted, pot them off, using three or four-inch pots, and place them on a shelf in a warm house close to the glass. Admit a little air when the weather is mild, and keep the atmosphere of the house a little drier. Sow a few seeds to form a succession, and keep the growth as sturdy as possible.

PEAS IN POTS.—Some early dishes may be obtained by sowing a good batch in eight or nine-inch pots. In preparing the pots place one large crock over the hole, and upon this put a two-inch layer of decayed manure. Then fill up to within one-inch of the rim with a light mixture of loam and old mushroom-bed manure. Put nine or ten peas in each pot, and cover them with about two inches of soil. Stand them close together on the border in a vinery or peach house that has just been started. When the seeds have germinated, and the young plants have made two inches of growth, they must have a light and cool position near to the glass, to prevent them becoming weak and drawn. They will not require much water for some time, but as the haulm increases in height more liberal supplies of water will become necessary. They will also be benefited by occasional watering with weak liquid manure.

EARLY POTATOES.—The first batch of tubers should now be planted, and if frame room is limited a goodly number of eight-inch pots should be used in raising the indoor crop. Place one good set in each pot, on three or four inches of soil, and then add enough soil to fill the pots to about half their depth. The remaining space can be filled when the growth is advanced. These can be put in any fruit house that has a temperature of 50 to 55 deg. Sharpe's Express, Sharpe's Victor, and Ninetyfold are good forcing and useful varieties.

CUCUMBERS.—In establishments where cucumbers are required throughout the year it taxes the grower to the utmost to maintain a regular supply at the present time, and for the next three months. Plants that have been in bearing for some time should now have placed over their roots a top-dressing composed of light turfy loam, leaf-soil, and mushroom manure, with a sprinkling of old soot. Great care should be exercised in watering and ventilation during these dull, short days.

WORK IN GENERAL.—The fine, open weather that we have had, and are still having, has been favourable to the pushing on of such work as trenching, manuring, and dressing. Prepare each plot according to the kind of crop with which it is to be occupied. If new asparagus beds are to be prepared on heavy soil for planting next spring no better time is more favourable than the present for putting the work in hand. The frosts will then have full play upon it, and make the soil in good condition for planting the crowns when the time arrives.—T. W. Birkinshaw, Hatley Park Gardens.

NOTES OF OBSERVATION.

Chrysanthemum J. Wynn. — This is a new seedling incurved variety of great promise. It was raised by Mr. Wynn, of Sedgeford Hall Gardens, King's Lynn, and exhibited at the late Cambridge Chrysanthemum Show, where it received a first-class certificate. It is a very strong grower, of medium height, white, beautifully-tinted with mauve; it is a deeply built flower, truly incurved, and with very fine petals. It will unquestionably take a conspicuous position among the leading incurved varieties in the future. It is the result of a cross between J. Agate and Mrs. F. Judson, the latter being the seed-bearing parent.—E. Beckett.

Aster amellus Seedlings.—At Aldenham this year quite 500 seedlings have been on trial, raised from the Amellus type by careful crossing of selected seedlings during the last two or three years. The collection is of interest, and although there is nothing to cause a sensation in the way of colour, size, or habit of growth, the collection abounds in variety of form and colour. Mr. Beckett is working for a pure white form, and has strong hopes of success in the near future. In colour there is much variety, pale and dark blue, mauve, and pink, with cup-shaped, reflexed, stellate, and circular blossoms.—E. M.

Rose Lady Quartus Ewart.—I must thank Mr. Jefferies for his note in your issue of December 5, but he must remember it was not my own selection entirely that I gave. Doubtless the fact that Lady Quartus Ewart was so new, introduced in 1904, and ten years younger than Madame Joseph Combet, was the reason the majority did not select it. I can endorse all Mr. Jefferies says of this grand rose, and it has been indeed fine with us during the past summer and autumn. It is certainly on the small side, but this is a good point in the estimation of many, especially when, as in this instance, the flowers are produced so freely.—A. Piper.

Artemisia lactiflora is a vigorous and effective perennial, which, in flower, and seen from some distance, has a spiræa-like appearance. The flowers are creamy-white, borne upon erect, branching spikes, which frequently attain a height of seven feet in moist, rich soil. The whole beauty of this plant lies in planting it in a good deep mass, and being really one of the latest perennials to flower, it forms a conspicuous object in the border, and is, therefore, a decided gain in the autumn border. The artemisia is a perennial, growing quickly at the root, and can readily be increased by division.—Thomas Smith, Walmsgate Gardens.

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EXHIBITIONS AND MEETINGS.

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National Sweet Pea Society.

The members of this young and vigorous society gathered in considerable numbers on Friday, December 11, at the Hotel Windsor, on the occasion of the annual meeting, which was presided over by Mr. Wm. Cuthbertson, J.P., the president for 1908. After the usual preliminaries, the hon. secretary, Mr. C. H. Curtis, read the report and balance-sheet for the year 1908. The following is an abridged account:

COMMITTEE'S REPORT FOR THE YEAR 1908.

The presentation of this report by the committee will serve to show that the activities of the National Sweet Pea Society have increased during the year under review. It is a pleasing feature of the work of the society that growers and raisers have every confidence in the conduct of the Reading Trials, in the absolutely impartial judgment of new varieties of sweet peas, and in the go-ahead policy of the officers and committee.

The London Exhibition, on July 24, was the prettiest yet held by the society. The flowers were of good quality, the competition was keen, especially in the small growers' section, and, owing to the reduction of the number of classes, there was comfortable room for the disposal of the flowers. The attendance was good, and £30 was taken at the doors. The Dublin Show was a great success, so far as the flowers and competition were concerned, and Mr. F. W. Moore, Mr. Knowldin, Mr. Digges, and other friends did all in their power to make the function a financial success, but the committee regrets to learn that the Royal Horticultural Society of Ireland experienced a considerable loss on the undertaking, notwithstanding the double attraction of their own and the sweet pea classes. The president, with Mr. H. J. Wright, and the hon. secretary, attended the Dublin Show, and, together with leading growers present, acted as judges.

The work of the Floral Committee, and the trials at Reading, continue to provide the great and most important part of the society's proceedings. From all parts of the world sweet pea lovers are now looking to us to solve questions of nomenclature and priority, the bracketing of too-much-alike varieties, the deletion of old and useless sweet peas, and the careful distribution of awards to the finest varieties. Under the chairmanship of Mr. Walter P. Wright, the Floral Committee inspected the three hundred trials at Reading University College. Remembering the distances they have to travel, and how readily the members give their time and expert knowledge to the society, it is only right that an expression of deepest gratitude to them for their splendid work should here be recorded. The trials of sweet peas ably conducted by Mr. Charles Foster in the gardens of the University College, Reading, proved very interesting and instructive. They were largely visited by members and non-members, many Continental and American friends finding them of immense value for purposes of comparison. The trials were well grown, and continued attractive and useful right through the summer. In future the committee proposes to receive new varieties only from the raiser or introducer for the purpose of these trials, but it is arranged that a further set of trials will be held at Reading next year, under the committee's direction, for the sole purpose of testing the correctness and purity of stocks of sweet peas that may be sent by seedsmen. For the special trials of new sweet peas the committee proposes to make a charge of 2s. 6d. per variety, while for testing stocks of older varieties a charge of 5s. per stock will be made.

An unusually large number of members attended the "Outing" to Reading on July 10, to inspect the society's trials, and see the varieties that had secured the recognition of the Floral Committee. More or less wet weather prevailed all day, but this did not materially decrease the pleasure or profit of the visit. The thoughtful generosity of Mr. Leonard Sutton in providing luncheon, and of Mr. Owen Ridley, chairman of the College Council, in providing tea, merit and receive the sincerest thanks of the members. On July 11 a large party visited Kelvedon, and, after being photographed in front of Mr. N. N. Sherwood's house, proceeded to inspect Messrs. Hurst and Sons' very extensive trials of sweet and culinary peas, etc. Mr. Sherwood generously entertained the party at luncheon. A pleasant drive from Kelvedon brought the party to Marks Tey, where the splendid sweet peas grown by Messrs. Dobbie and Co. were inspected, under the guidance of the president, Mr. William Cuthbertson, and where a brilliant "outing" was brought to a pleasant conclusion by a "strawberry tea," presided over by Mrs. and Miss Cuthbertson.

The committee has been especially fortunate in its officers during the year. The president, Mr. Wm. Cuthbertson, has worked hard and enthusiastically for the society, and his reward is found in the increase of membership and the great progress made. Mr. E. T. Edwards, chairman of committee, has proved a generous supporter of the society, and his gift of the Provincial Cup will long keep in mind his year of office. The return of health to the hon. treasurer, Mr. N. N. Sherwood, has given great pleasure to the committee and members. Mr. Edward Sherwood has continued as acting treasurer, and his services are gratefully acknowledged. The hon. secretary has had a strenuous year's work, but his chief anxiety is for more members and more work.

One of the most pleasing events of the year was the presentation of some substantial tokens of recognition of their valued services to our worthy hon. secretary and his wife, at the dinner following the great summer show. The President (Mr. Cuthbertson), on behalf of the society, handed to Mr. C. H. Curtis a cheque for £60, which amount had been voluntarily subscribed by sweet pea lovers in different parts of the world, and which was intended to express their warmest appreciation of his untiring energy and devotion to the interests of the society, and their heartiest thanks for the good work already accomplished. A handsome gold bracelet was presented to Mrs. Curtis by Mr. Edward Sherwood, on behalf of the society, as a token of high personal regard and grateful thanks for the great help she had rendered to her husband in the arduous duties devolving upon the office he so ably fills.

At the annual meeting of 1907 there were six hundred and two members. Since then no fewer than two hundred and seventy-nine new members have joined the society, twenty-two of these joining for 1909. There have been numerous losses through death, etc., and at present there are seven hundred and seventy-nine members, and fifty-one societies in affiliation.

The financial position of the society was never better than now. Liabilities, with the exception of those connected with prepaid subscriptions, are nil. The present modest balance on the right side is a solid one, and in addition to this the society possesses considerable assets in its store of tiered staging and vases.

Although the return from the sale of "Annuals" was rather less in 1908 than in 1907, it must be remembered that new members and new societies in affiliation took well over three hundred copies, and in scores of instances the "Annual" has been the direct means of securing new members. The "Annual" for 1909 is being prepared by the society's editors, Mr. Chas. H. Curtis and Mr. Horace J. Wright, and it promises to be as interesting and useful as any of its predecessors.

Considerable progress has been made already in the work for 1909. The London Exhibition has been fixed for Friday, July 23, and the Provincial Show will be held at Saltaire, Yorks, on July 13.

Those who have given special prizes and donations to the prize fund, contributed to the trials' expenses, sent articles and photographs for the "Annual," or acted as judges at the London and Dublin Shows, all merit sincerest thanks. To the Horticultural Press for valuable assistance, and to the Horticultural Club for the use of its rooms for committee meetings, and to the officers of the Royal Horticultural Society, and the Royal Horticultural Society of Ireland, for many kindnesses, the committee tenders its best thanks. In conclusion, the committee would press the need of personal endeavour to obtain new members, because it is only as membership increases that the society's usefulness can be advanced.

BALANCE-SHEET FOR 1908.

RECEIPTS.

	£	s.	d.
Balance brought forward, 1907	£23	5	4
Subscriptions, 1907	1	10	0
Subscriptions, 1908	263	0	7
Subscriptions, 1909	9	13	9
Fees from Affiliated Societies, 1908	26	5	0
Fees from Affiliated Societies, 1909	1	1	0
Special Prize Money, London Show	71	12	0
Special Prize Money, Dublin Show	26	5	6
Special Prize Money, Contribution from R.H.S. of Ireland	25	0	0
Special Prize Money for 1909	0	15	0
Donations to Trials Expenses	19	11	6
Charges for Trials Expenses, 1909	1	2	6
Hire of Space, London Show	4	3	0
Extra Entries, London Show	0	3	0
Tickets for London Show	3	18	0
Gate Money, London Show	30	0	0
Hire of Vases, London Show	9	12	3
Hire of Vases, Dublin Show	3	16	7
Sale of Annual	26	5	6
Sale of Reading Trials Lists	1	13	0
Advertisements in Annual and Schedule	25	1	0
	£573	14	6

EXPENDITURE.

	£	s.	d.	£	s.	d.
Advertisements in Horticultural Press				£4	2	0
Commission on Advertisements				3	10	8
Purchase of Vases and Bowls				8	13	9
Purchase of Staging				1	7	6
Purchase of Medals				40	16	9
Engraving Medals				1	17	10
Burpee Cup				15	15	0
Preparation of Audit, London Show				3	3	0
Financial Audit				1	1	0
Trials Expenses, University College, Reading				15	15	0
Trials Expenses, Floral Committee, Hotel				7	15	3
Trials Expenses, Floral Committee, Fares				3	3	0
Printing and Stationery	£94	10	0			
Annual and Schedule	98	12	10			
				193	2	10
Honorarium to Secretary				25	0	0
London Show—Labour, Police, Doorkeeper, etc.				6	4	6
,, ,, Carriage of Plants				0	10	0
,, ,, Clerical Assistance				1	11	6
,, ,, R.H.S. Hall Charges				0	17	6
,, ,, Dinner to Committee, Judges, etc.				10	15	6
,, ,, Judges' Fees				8	8	0
,, ,, Prizes				84	15	0
Dublin ,, Prizes				49	16	0
,, ,, Expenses				8	8	0
,, ,, Carriage of Vases				3	15	8
Expenses of Outings				1	12	0
Expenses of Outings Photographs				1	1	0
Postages and Carriage				37	13	10
Bank Charges				0	13	6
Balance in Hand—Cash at Bank	£44	0	1			
Less Outstanding Cheques	11	11	2			
				32	8	11
				£573	14	6

The President moved the adoption of the report, and, in so doing, briefly touched upon the chief features of the year's work. Referring to the presentation to Mr. and Mrs. Curtis, he said he now had great pleasure in handing a further £10 5s. 6d. to the hon. secretary, the balance of the presentation fund. Mr. Cuthbertson spoke highly of the trials and Floral Committee work, and urged everyone to help the society in its endeavour to prevent multiplication of names, etc., and to secure new members. He was proud of the advances made during his year of office. Mr. Alex. Dean, V.M.H., seconded the adoption of the report, and added his tribute of praise to the work done. The motion was carried unanimously.

A great deal of formal business had to be transacted, but it was all done in an exceedingly pleasant manner. Mr. Cuthbertson (president), and Mr. C. T. Edwards (chairman for 1908) were heartily thanked for services rendered, as also were Mr. N. N. Sherwood and Mr. Edward Sherwood, the treasurers, and these two latter were unanimously re-elected. Sir Randolf Baker, Bart., of Blandford, Dorset, was elected president for 1909, and Mr. Horace J. Wright, chairman of committee. Mr. Wright returned thanks for the honour, and said he would present a twenty-one guinea challenge cup to the society for the small growers' section. Mr. R. Gluyas was reappointed auditor, and Mr. C. H. Curtis was re-elected hon. secretary, and voted an honorarium of 25 guineas. Mr. C. Foster was heartily thanked for his services as trials superintendent.

It was agreed that the date of subscriptions due be altered from February 1 to January 1, but the suggestion that Rule 6 be altered so as to prevent the re-election of non-attending members of committee was not adopted, because it was thought all members should be notified of such proposed alteration previous to the next annual meeting. The election of the General Committee followed. A few old members retired, and there were other losses notified, but those remaining were re-elected, and Messrs. H. Shave, H. Tigwell, E. H. Christy, W. Deal, W. Lumley, H. Till, S. Cole, R. F. Felton, and Wm. Cuthbertson were added to the committee.

Several interesting points were raised by various members, and those who took part in the proceedings included, in addition to those mentioned, Messrs. J. Collingridge, H. J. Wright, H. K. Judd, J. Clayton, S. B. Dicks, A. Clarke, W. Lumley, E. F. Hawes, W. Nutting, H. Perkin, W. Deal, A. Ireland, H. Tigwell, J. Brunton, R. Sydenham, C. W. Breadmore, C. Foster, T. Stevenson, A. Watkins, A. Davis, and Commander Humphrey.

The meeting concluded with a vote of thanks to the President.

At the subsequent committee meeting the Executive Committee was elected, with very little alteration from the composition of 1908, and the Floral Committee was re-elected with Mr. W. P. Wright as chairman, and one amateur—Mr. E. H. Christy—added.

National Rose Society.

There was a large attendance at the Westminster Palace Hotel on Thursday, December 10, when Mr. E. B. Lindsell, the president of the society, presided over the annual meeting of the flourishing National Rose Society. There were several ladies present, and most of the leading trade and amateur rosarians from all over the country.

On opening the business, Mr. Lindsell asked that the circular calling the meeting and the minutes of the previous annual general meeting be taken as read, and to this the meeting promptly agreed. Messrs. H. Darlington and John Green were then elected scrutineers of the ballot for officers and committee. The hon. secretary, Mr. E. Mawley, V.M.H., then read the annual report, as follows:

REPORT OF THE COMMITTEE FOR THE YEAR 1908.

The report which the committee have now the pleasure of presenting is the most favourable that has yet been placed before the members, and more particularly as regards the increase in membership. In 1903 the number of members for the first time reached one thousand; in 1906, three years later, two thousand; and now, two years later, they have to record a membership of over three thousand.

Three exhibitions were, as usual, held. The Metropolitan Show again took place, by the kind permission of the president and council of the Royal Botanic Society, in their beautiful gardens in the Regent's Park, on July 3rd. It was noteworthy as being the largest which the society has yet held, 8,500 blooms of "exhibition" roses being staged, in addition to the numerous stands of decorative roses and other interesting exhibits. As in the three previous years, Her Majesty the Queen, who is the society's Royal Patroness, visited the show, and, as the Royal visit was made shortly after the hour for opening, this honour was especially appreciated by the members and visitors present.

The committee, in carrying out the arrangements for the Metropolitan Exhibition, were, as on previous occasions, ably supported by the secretary, assistant secretary, the superintendent of the gardens, and other members of the staff of the Royal Botanic Society.

The provincial show was held at the White City, Manchester, on the site of the gardens of the Royal Botanical and Horticultural Society at Old Trafford. This exhibition was of less than average extent, but the quality of the blooms was good, and they retained their freshness very much better than at the Metropolitan show, which, unfortunately, was held on what proved to be the hottest day of the whole year. The thanks of the committee are greatly due to Mr. James Brown, one of the society's vice-presidents, for the active part he took in furthering the success of the Manchester exhibition.

The fifth autumn show of the society took place in the Royal Horticultural Hall, Vincent Square, Westminster. This exhibition was not quite so large as that of the previous year, but the general quality of the blooms was surprisingly good, considering the trying character of the season. Now that this exhibition is becoming generally known it is attended by the members in largely increasing numbers.

The twelve five guinea silver cups, so generously presented last year to the society by Mr. W. E. Nickerson, of Cambridge, Massachusetts, U.S.A., for the raisers of respectively the best white, the best pink, the best crimson, and the best yellow dwarf and climbing roses for general cultivation—those which came out first in the ballot instituted by the committee—have been duly awarded. Also, as far as possible, the twenty-four handsome diplomas, likewise the gift of Mr. Nickerson, for the raisers of the roses which obtained the second and third positions in the ballot. The official report of the ballot will appear in the Society's "Arrangements for 1909." An article on the thirty-six roses, to the raisers of which awards were made, will be contributed to the "Rose Annual for 1909," which will be sent to the members in February next.

The society's new and important handbook, entitled "The Enemies of the Rose," which is of interest as being the first publication issued by this society with coloured illustrations, and also the "Rose Annual for 1908," were forwarded to the members in April last.

It is with much regret the Committee have to announce that Mr. H. E. Molyneux has found himself reluctantly compelled to resign the treasurership, a position which he has so ably filled for the last four years. During the past year seven rose and other horticultural societies have become affiliated, bringing up the total number of societies in affiliation with the National Rose Society to 52.

The amount received in gate-money from the general public at the society's exhibition in the Royal Botanic Gardens was somewhat larger than in any year since the exhibition has been held in those gardens. The receipts from all sources during the past year, including a balance from the previous year of £291 9s. 4d., amounted to £2,666 9s. 9d., and the expenditure to £2,239 1s. 7d., leaving a balance at the banker's and in the treasurer's hands of £427 8s. 2d. Considering the great expense incurred in bringing out "The Enemies of the Rose," the cost of the enlargement of the "Rose Annual," and the placing of a further sum of £150 to the reserve fund, this balance must be regarded as eminently satisfactory. The reserve fund now stands at £450.

During the past year 785 new members joined the society, or 200 more than in any previous year. Allowing for the losses by death and resignation, the total number of members is now 3,150. Taking the year as a whole, two new members a day have, on an average, been added to the list of membership.

The Metropolitan Exhibition will again be held in the Royal Botanic Gardens, Regent's Park, the date fixed for the exhibition being Friday, July 2. The Provincial Show will take place at Luton, in conjunction with the Luton Sweet Pea and Rose Society, on Wednesday, July 14 or 21. Arrangements have again been made with the Royal Horticultural Society to hold the autumn show in the Royal Horticultural Hall, Vincent Square, Westminster, on Thursday, September 16.

In February next year members will receive a new and enlarged edition of the "Handbook on Pruning Roses." This has been thoroughly revised and will contain several new features and also directions for pruning about 200 more varieties than were included in the previous edition. At the same time will be issued the society's "Rose Annual for 1909," containing many articles and illustrations of interest to all classes of rosarians.

To the donors of special prizes, the committee offer their grateful acknowledgments and also to the hon. local secretaries for their zeal and activity in promoting the interests of the society. They especially desire to mention Mr. E. A. Earl (Bromley), Mr. O. G. Orpen (Colchester), Mr. Colin Romaine (Windsor), Mr. R. E. West (Reigate), and Dr. A. H. Williams (Harrow), as having been most successful during the past year. The society is also greatly indebted to Miss Willmott, V.M.H., one of its vice-patronesses, for the continued kind and valuable assistance rendered by her.

RECEIPTS AND PAYMENTS

for the year ending November 30, 1908.

To Balance at Bank		£291 9 4
Subscriptions	£1,597 9 1	
Subscription, Life Member	15 15 0	
		1,613 4 1
Proceeds of Royal Botanic and Autumn Shows	248 10 6	
Contribution, White City, Lim., Manchester Show	100 0 0	
		348 10 6
Affiliated Society's Fees and Medals		76 11 0
Advertisements in Society's Journals		82 5 9
Sale of Society's Publications		84 14 2
Special Prize Donations, exclusive of plate		154 19 0
Interest on Investment and Monies on Deposit		14 15 11
		£2,666 9 9
By Printing, Publications, etc., Stationery, and Advertising		£494 16 6
Postages, Telegrams, and Sundry Expenses		201 17 9
Expenses Royal Botanic and Autumn Rose Shows		433 9 10
Prize Monies Royal Botanic, Manchester and Autumn Shows		622 12 0
Pinches for Medals		90 18 6
Purchase of Plate, Cups for Special Prizes		120 7 0
Assistant Secretary, £75; Assistant Treasurer, £50		125 0 0
Purchase of Consols, added to Reserve Fund		150 0 0
Balance, cash at bank		427 8 2
		£2,666 9 9
To Balance brought down, being cash at Bank		£427 8 2

Reserve fund, invested in £513 19s. 10d. Consols, cost £450, worth about £433.

The President congratulated the members upon the great increase of membership, and the fine balance at the bank that Mr. Molyneux leaves on his retirement from the office of hon. treasurer. He then moved the adoption of the report and balance-sheet. Mr. Chas. E. Shea seconded the motion, and urged that, though the society was progressing famously, it was necessary to go forward on the present basis, in fact, to walk by sight rather than by faith. He referred to the proposed formation of several sub-committees to relieve the work of treasurer and secretary, and said that in future he hoped a much more detailed balance-sheet would be submitted.

The Rev. J. H. Pemberton brought up the subject of the society's meetings, and regretted that the meetings were not now held, as formerly, at the Hotel Windsor. He thought that as the Hotel Windsor, with its Horticultural Club, was the centre of horticultural life in town, the meetings should be held there, and he hoped the society would see its way to go back again, as he understood that ample accommodation would be supplied. He, therefore, proposed that the annual meeting, dinner, and other meetings be held at the Hotel Windsor. Mr. Cecil Cant seconded the motion. Mr. Holland, Mr. F. Cant, Mr. G. Gordon, and Mr. Mawley all spoke on this matter, and the general opinion seemed to be that the present arrangements were the most convenient.

Mr. G. W. Cook proposed that the accounts be audited by a chartered accountant selected by the General Committee, and suitably remunerated, and that words to that effect be added to the report; the mover and seconder of the adoption agreed to this, and Mr. Lindsell said the committee was agreed on this point.

One member, Mr. Butler, spoke rather strongly concerning the catering at the London Show, and hoped that a considerable improvement would be made next year. Several spoke on this point, but no real solution of the difficulty was brought forward. It was stated that the society was bound by the R.B.S. contract. A great deal of disapproval was expressed, and the President said that he was sure the committee would do all in its power to improve matters in future. The report and balance-sheet were then unanimously adopted.

The President then referred to the great work of Mr. Mawley as hon. secretary of the society, and, in accordance with a resolution passed by the General Committee, moved that £100 be presented to Mr. Mawley as an honorarium; this was seconded by Mr. G. Paul, V.M.H., and carried unanimously. Mr. Mawley, who had left the room, had a very hearty reception on his return, and when the President asked him to accept the honorarium, Mr. Mawley feelingly acknowledged the presentation.

Mr. George Gordon, V.M.H., proposed, on behalf of the committee, a resolution to the effect that the vice-presidents should be ex-officio members of the General Committee, but for the purpose of keeping the sub-committees within reasonable limits, only the president, treasurer, and secretary should be ex-officio members of such bodies. Mr. Prince seconded the motion, and it was carried unanimously. An alteration of Rule 10, proposed by Mr. E. J. Holland, was to the effect that general purposes, publication, finance, and exhibition sub-committees be appointed by the General Committee. The motion was seconded by Mr. H. Mount, and carried unanimously. The motion to hold the principal metropolitan show not earlier than July 1, and not later than July 9, was moved by Mr. Orpen, and having been duly seconded, was carried. Mr. Holland explained that this motion was really one to permit the show being held on July 2, and thus avoid clashing with the Holland House Show.

Dr. Williams proposed the thanks of the members to the officers and committee for their services during the past year. This was seconded, and carried unanimously. Mr. Mawley acknowledged the vote of thanks, and spoke highly of Mr. Molyneux's services as treasurer. Mr. Molyneux also said a few graceful words of acknowledgment, and stated how deeply he regretted the necessity for resigning his office of treasurer, and how much he rejoiced that Mr. G. W. Cook had consented to act in his place.

The scrutineers having declared the house list adopted, Mr. Lindsell called upon the Rev. F. Page Roberts to fill the chair as the newly-elected president. Mr. Page Roberts was heartily welcomed, and he acknowledged the honour conferred.

Mr. C. E. Shea very ably moved a vote of thanks to the retiring president, Mr. E. B. Lindsell, and this was seconded by Mr. Cecil Cant, and heartily accorded. Mr. Lindsell acknowledged the vote, and the proceedings then closed.

ANNUAL DINNER.

The annual dinner was well attended, and presided over by the Rev. F. Page Roberts, the newly-elected president, who was supported by influential rosarians, and had on either hand Sir Daniel Morris and Sir George Watt, the guests of the evening.

After the usual loyal toasts, Mr. Felton was very heartily thanked for decorating the tables so beautifully with roses, carnations, and violets. In proposing "The National Rose Society," the Rev. Page Roberts was at his best, and his witty sallies and humorous anecdotes proved a fine corrective to the serious business of the annual meeting. He was very sincere in his thanks for the honour conferred upon him. Mr. E. Mawley responded, and briefly reviewed the work of the year. Mr. G. W. Cook proposed "The Ladies," and mentioned that the society had about 1,000 lady members. Mr. George Paul proposed "Our Guests," and Sir Daniel Morris and Sir George Watt both responded, and each told of the fine growth of some roses in the West Indies or India. Sir George Watt referred to Rose gigantea, and said he hoped it would be tried again in this country, as he felt sure it would be useful to hybridists. Mr. E. J. Holland proposed "The Chairman." Vocal and instrumental music added to the pleasure of the function.

National Dahlia Society.

Under the presidency of Mr. E. Mawley, V.M.H., the members of the National Dahlia Society gathered at the Hotel Windsor for the purposes of the annual general meeting, resolved themselves into a special meeting for the purpose of amalgamating with themselves the London Dahlia Union. There were twenty-three present. Consequently, Mr. John Green proposed that the London Dahlia Union become amalgamated with the National Dahlia Society on the lines already laid down by the Joint Committee of both bodies. This was seconded by Mr. S. Mortimer, and, after Mr. H. H. Thomas had read the particulars of amalgamation, the motion was carried.

The annual general meeting was then declared open, and the minutes of the previous annual general meeting were read and confirmed.

Mr. Brousson at once proposed, and Mr. Stredwick seconded, that the amalgamation of the London Dahlia Union and the National Dahlia Society, as already agreed at the special meeting, be confirmed.

The hon. secretary, Mr. H. H. Thomas, then read the report of the committee for 1908.

REPORT OF THE COMMITTEE FOR THE YEAR 1908.

The past season was favourable to the cultivation of dahlias and an unusually fine display was expected at the annual exhibition, which this year, for the first time, was held in the new hall of the Royal Horticultural Society. Unfortunately a severe storm was experienced a few days before the show, and much damage was done in gardens. Owing to this a few exhibitors who had entered were unable to compete, and some who had entered in several classes were not able to show in all of them. Amateur exhibitors were again numerous, and the classes in the amateur section were generally well contested. The four classes open to amateurs who have never won a prize at any previous exhibition of the society, again brought numerous entries. In 1906, in these four classes, there were 28 entries; in 1907, 35; and in 1908, 32. The total number of entries for the show in 1908 was 303, as against 255 in 1907, but the bad weather just before the show prevented some of those who had entered from competing.

Some seventy new varieties were submitted to the inspection of the judges, who awarded certificates to eleven of them. On September 29 a Joint Committee of the National Dahlia Society and the Royal Horticultural Society met for the purpose of making awards to new dahlias. Certificates were awarded to nine varieties. The total number of certificates awarded in 1906 was 15; in 1907, 15; and in 1908, 20.

The Silver Challenge Cup, value fifteen guineas, in Class 6, for eighteen bunches of cactus dahlias, was won outright by Messrs. Stredwick and Son, and the silver challenge cup, value five guineas, in Class 15, for twenty-four blooms of show or fancy dahlias, was won outright by Mr. Thomas Jones. Subscriptions are invited to replace these, and should be sent to the hon. treasurer, by whom they will be gladly acknowledged.

The committee desire to convey their best thanks to the donors of special prizes, viz., The President, Messrs. J. Burrell and Co., Messrs. J. Cheal and Sons, Messrs. Dobbie and Co., Mr. T. Hobbs, Mr. J. F. Hudson, Mr. S. Mortimer, Messrs. J. Stredwick and Son, and Mr. John Walker.

The number of new members joining the society in 1908 was 28; in 1907 there were 28; in 1906, 38; and in 1905, 32 new members. Thirty-nine members have resigned during the past year. The committee regret that their appeal to obtain new members has not met with the support they anticipated. They would impress upon members the necessity of individual efforts being made in this direction.

The trial of garden cactus dahlias was again held at Wisley. Two visits were made by a Joint Committee and certificates were awarded to twenty varieties. The trial of dahlias will be continued in 1909, by the courtesy of the Royal Horticultural Society, but cactus dahlias of any kind, either garden or exhibition, will be excluded.

CASH ACCOUNT, 1908.

Dr.		
To Balance		£5 15 0
Subscriptions, 1907	£2 15 6	
Subscriptions, 1908	74 13 6	
Subscriptions, 1909	0 10 0	
		77 19 0
Donations and Special Prizes ...		17 2 6
Grant—Crystal Palace, 1907 ...		25 0 0
Advertisements, Supplement, 1908	1 7 0	
Advertisements, Schedule, 1907	1 0 0	
Advertisements, Schedule, 1908	21 7 6	
		23 14 6
Purchase of Medals		5 19 0
Sale of Catalogues		0 8 0
Affiliation Fee		0 10 6
Cash Admission to Show		5 14 0
Donations to Reserve Fund		1 7 6
		£163 10 0
Cr.		
By Prizes, 1907	£34 15 0	
Prizes, 1908	72 0 0	
		£106 15 0
Printing, Schedule	15 2 1	
Printing, Supplement	3 0 0	
Printing, Notices	0 19 6	
		19 1 7
Show Expenses, Printing	2 8 0	
Show Expenses, Gratuities ...	2 9 0	
Show Expenses, Advertising ...	0 12 0	
		5 9 0
Medals and Engraving		12 14 11
Hire of Room for Meetings ...		2 5 0
Postage and Stationery—Sec. and Treas.		8 16 2
Bankers' Charges		0 2 8
Return of Special Prizes not awarded, 1907	0 6 0	
Return of Special Prizes not awarded, 1908	0 6 0	
		0 12 0
Reserve Fund		1 7 6
Balance		6 6 2
		£163 10 0

BALANCE-SHEET.

LIABILITIES.

By Subscriptions, 1909	£0 10 0
Balance	19 9 8
	£19 19 8

ASSETS.

To Balance	£6 6 2
Outstanding Advertisements	1 0 0
Outstanding Subscriptions, say	3 3 0
Reserve Fund	9 10 6
	£19 19 8

Mr. E. Mawley moved the adoption of the report, and expressed regret at the non-success attending the holding of the 1908 show in London. He felt that the amalgamation of the two societies was a fine move in the right direction, and should prove a concentration of effort for the advantage of the dahlia and all dahlia lovers. Mr. George Gordon seconded the motion, and expressed his pleasure at the amalgamation, the more so that the business of each society was of the same kind, and carried on by practically the same people. He hoped that in future the old lines followed would be altered, and that new life and novelty might be introduced. He urged greater interest in dahlias for beautifying the garden, without losing sight of the exhibition blooms, and he pointed out that florists' societies which had followed on the rigid lines of exhibition blooms alone had soon passed out of existence. He also urged that literature should be published for the benefit of those members who were not competitors. He also urged that the amalgamated society should conduct trials of dahlias, over which it had full control, and for the purpose of bringing into prominence the varieties specially adapted for garden decoration.

Mr. Brousson observed that the N.D.S. had already issued lists of good varieties and notes on cultivation, but acknowledged that it was necessary the "Culture Guide" should be brought up to date. Mr. Stredwick also referred to the "Culture Guide." Mr. W. Cuthbertson said that he thought there were not many better garden dahlias now than in the days of his youth. The trouble was that visitors to shows selected varieties there seen and were intensely disappointed with the result, because while the variety might be excellent on a show board, it would often be useless for the garden. He found in his trial grounds that 95 per cent. of cactus dahlias had flowers that looked downwards.

The report was then adopted.

Several alterations of by-laws and certain additions necessary as following on the amalgamation were put to the meeting, and adopted. These are not in any sense revolutionary.

Mr. E. Mawley was re-elected president unanimously, and he acknowledged the honour. Messrs. J. T. Bennett-Poë, J. F. Hudson, W. Marshall, Rev. O. Bridge, F. Hobbs, J. Green, W. Cuthbertson, H. L. Brousson, F. W. Fellowes, and George Gordon, were elected vice-presidents.

Mr. Mawley proposed that Messrs. H. H. Thomas and E. F. Hawes be joint hon. secretaries of the society; this was adopted unanimously. Mr. J. Green proposed, and Mr. J. T. West seconded, that Mr. Wilkins be re-elected hon. treasurer; this was carried unanimously. Mr. W. Stephens was elected auditor of the society's accounts.

The General Committee was then elected, and to the existing body the following were added: Messrs. J. Emberson, J. B. Riding, G. Caselton, F. Curry, C. H. Curtis, and Lockyer.

A vote of thanks to the officers for their services during the year, concluded the proceedings.

At a subsequent meeting Mr. G. Gordon, V.M.H., was elected chairman of the Executive Committee.

Royal Horticultural Society.

SCIENTIFIC COMMITTEE, December 8.

Present: E. A. Bowles, M.A., F.L.S. (in the chair), Messrs. G. S. Saunders, W. C. Worsdell, W. Fawcett, J. T. Bennett-Poë, A. Worsley, J. Douglas, W. Hales, J. Odell, G. Massee, J. Fraser, and F. J. Chittenden (secretary).

EGGS OF EARTHWORM. — Mr. G. S. Saunders showed some of the egg capsules of the earthworm—small, roundish, or ovoid sacs of a yellowish-white colour, each containing a few fertile eggs.

GREASE BANDS.—Mr. Voss again showed a grease band taken from the same tree as that shown at the last meeting. A few male and female specimens of Cheimatobia brumata had been captured during the past fortnight.

PROLIFERATION IN PEAR.—Mr. W. C. Worsdell showed a pear having a second pear developed from the apex just within the calyx.

RHIZOPHORES OF SELAGINELLA. — Mr. Worsdell also showed specimens of Selaginella inæqualifolia having rhizophores developed into leafy shoots. In this species the rhizophores are dark brown, and are borne normally at the fork of the stem, one on the upper and one on the under surface. In several instances in the specimens shown the rhizophores had become changed into leaf shoots, sometimes partially, sometimes entirely. Mr. Worsdell said this could be induced if the two branches of the forked stem are cut off just above their place of origin in their young state. In some plants of S. Mackeni at Kew growing in a pan, those parts which were moist bore rhizophores in the normal manner, while in the upper part where the atmosphere was drier, instead of rhizophores, leafy shoots had developed.

STAMENS OF ORCHIDS VARIABLE IN NUMBER.—Mr. W. Fawcett showed drawings of the orchid Epidendrum Ottonis made from plants occurring wild in Jamaica. The flowers always there have three stamens, while in Trinidad five stamens are developed in the same species, and in Venezuela the structure (according to Reichenbach) is normal.

NERINE HYBRIDS.—Mr. Worsley showed inflorescences of two nerines to illustrate the fact that the plant sent out as Nerine tardiflora is a hybrid, having N. flexuosa var. pulchella as one of its parents. He also showed part of the scape of a marica, on which numerous small plants had developed, and stated that plants raised from these buds took longer to arrive at a flowering stage than those of the same species raised from seed. In some species of Marica, however, there is no retardation of flowering following vegetative reproduction.

INTERESTING ORCHIDS. — Mr. F. Moore, of Glasnevin, sent two very interesting orchids, Arachnanthe Lowi and Angræcum caudatum. In the former the first three or four flowers of the very long inflorescence are somewhat smaller and of a quite different colour from those of the rest, from which they are separated by a considerable length of stem. No satisfactory suggestion as to the cause of this difference was given. The flowers of Angræcum caudatum are remarkable for the extraordinary length of their spurs—quite 12in. in one of the flowers, and nearly as much in the others on the same inflorescence.

POINCIANA REGIA.—Mr. E. H. Jenkins sent a specimen of this rarely seen plant. It was raised from seeds received from the Gold Coast, where it is known as the Pride of Barbadoes (it is also called Barbadoes Fence Flower and Peacock Flower). The seed was sown in March, 1907, and was raised by Mr. Edward Barber, The Gardens, Brentor, Surbiton. The yellow-flowered P. Gillesi, raised from seeds by the late Rev. H. Ewbank, Ryde, took twelve years to reach the flowering stage. It is also interesting to note the sensitiveness of the plant, the leaves folding in a downward direction when exposed to cold, and so remained when placed in warmth till the stem was split at the base. When this was done the plant showed signs of reviving within an hour or so.

Birmingham Chrysanthemum Society.

The annual dinner was held at the Exchange Restaurant, and was well patronised by the committee, exhibitors, and friends. Mr. Walter Jones (the chairman of the society), presided. Mr. W. H. Dyer (one of the oldest members and exhibitors of the past), in toasting "The Society and Officers," descanted upon the progress of the chrysanthemum, and said the society, which started in a very humble way, had now become probably the largest in the kingdom. He also briefly adverted to the financial status of the society, and regretted that it was not so good as desirable, and that the receipts this year were considerably below par, thus placing the committee in a somewhat perilous position. He deplored the lack of assistance from the wealthy in and around Birmingham, but they had no reason to complain of the assistance of the working classes who attended the show. Mr. Thos. Humphreys, the treasurer of the society, in responding, remarked that the society was inaugurated forty-eight years ago, and that the efforts of its promoters had culminated in a successful issue so far as the cultivation and exhibition of the chrysanthemum was concerned. The society had experienced both fat and lean years; the present, however, appeared to be somewhat of a hybrid, but they hoped for the best. Out of Birmingham's vast population they had fewer than 350 subscribers, and their total subscriptions amounted to about £112. That amount paid only for the lighting and use of Bingley Hall, whilst the exhibitions cost the society from £750 to £900. This year only £387 was taken at the gates, which was £52 less than last year. In conclusion, Mr. Humphreys advocated the formation of a reserve fund, and expressed a hope that the exhibitors and other supporters of the society would endeavour to make concessions in their favour.

Mr. John Pope proposed "The Exhibitors," and the toast was responded to by Mr. A. Cryer and Mr. J. H. Goodacre. "The Non-competitive Exhibitors and Special Prize Donors" was submitted by Mr. A. D. Christie; Mr. C. B. Bick and Mr. Pressley (representing Mr. Robert Sydenham) responded. The other toasts were: "Our Visitors" and "The Chairman."

During the evening the first prize and large silver trophy, won for the group of chrysanthemums, was presented by the chairman to Mr. Alfred Cryer (gardener to F. A. Kenrick, Esq., Berrow Court, Edgbaston), and remarked that those who were well qualified to form an opinion expressed the view that the group was the finest ever seen at the Birmingham shows, and that was saying a great deal. Acting upon the suggestion that a reserve fund should be formed, several of the leaders and well-wishers present guaranteed £5 each.

Woolton Gardeners' Society.

A meeting was held on the 12th inst. at the Mechanics' Institute, when Neil Gossage, Esq., presided over a good attendance, and Mr. Ben Ashton, of Lathom Gardens, read an excellent paper on "Vegetables for Exhibition, and Their Culture." The selections of the best varieties were submitted under each head, with full cultural notes, as followed by this successful exhibitor, together with directions as to gathering and staging. The various kinds, with the number of points allowed under the Royal Horticultural Society's "Code of Judging," were stated, and in reply to a question by the Chairman, the best six kinds were enumerated for summer and autumn shows.

The excellence of the paper proved a bar to discussion, but many points of interest were added by the questions which were asked, especially one as to the value of the new French system. The lecturer gave his opinion that it could not be successfully carried out in the North, or, at least, only to a limited extent.

A cordial vote of thanks was tendered to Mr. Ashton for his valuable paper, and to the chairman for presiding.

East Anglian Horticultural Club.

The annual meeting and election of officers of this club was held at the Boar's Head Hotel, Norwich, on December 9. The report, as presented by Mr. W. L. Wallis, secretary, stated that the club was to be congratulated upon its continued success. The membership now stands at 343, as compared with 331 in 1907, and the balance in hand has increased to £139 16s. 6½d. The monthly exhibitions show continued signs of activity. The honour of championship in this section falls to Mr. W. Shoesmith, gardener to F. W. Harmer, Esq., Cringleford, and he is to be congratulated upon the excellence of his exhibits. Lectures, essays, and debates have done much educational good to the members. The large library has proved most useful to those members seeking information. The auditors—Messrs. J. F. Betts and H. Perry—gave their report, which was as favourable as one could wish.

The election of officers resulted in Mr. J. Powley being president; Mr. T. B. Field, acting-vice-president. The vice-presidents elected were Messrs. F. Atkinson, H. Batchelor, John Green, J. W. Church, G. Daniels, H. Perry, E. Peake, Robt. Holmes, F. Piper, G. Davison, and J. Ruymp; hon. treasurer, Mr. Chas. Daniels. Mr. W. L. Wallis, during whose term of office the club has had such continued success, and who is untiring in doing everything in his power to make it popular, was unanimously re-elected secretary; his address is 11, Royal Arcade, Norwich. The vacancies on the committee were filled by Messrs. H. Goude, C. Hines, W. Rush, H. J. Cowell, E. Goldspink, and R. Abel. The auditors, Messrs. J. F. Betts and H. Perry, were also re-elected.

The meeting next proceeded to adopt various alterations to rules and exhibition schedule, of which notification had been given. It was announced that Mrs. Dawson Paul, Eaton, had kindly presented a silver challenge cup to replace the one that Mr. W. Shoesmith had won outright after a keen fight. There was a good display of flowers, fruits, and vegetables upon the tables, special mention being due to the fine blooms of Cypripedium insigne, brought up by Mr. T. B. Field, gardener to the Baroness Berners, Ashwellthorpe Hall.

Chester Paxton Society.

The annual general meeting was held in the Grosvenor Museum on Saturday, and presided over by Mr. A. W. Armstrong. The Hon. Secretary and Treasurer (Mr. G. P. Miln), presented the annual report and financial statement, which indicated that the exhibition held in November was the largest and most successful held in connection with the society. The finances were also in a satisfactory condition. Officers and committee for the ensuing year were elected as follows: President, T. Gibbons Frost, Esq., C.C.; vice-presidents, Major MacGillycuddy, J.P., and James G. Frost, Esq., J.P.; chairman of committees, Mr. A. W. Armstrong; hon. members, Messrs. J. D. Siddall, J. Jackson, and A. Ellams; Executive Committee, Messrs. N. F. Barnes, J. Clack, O. Edwards, W. Evans, T. Gilbert, H. Lawson, H. G. Little, G. Lyon, S. May, W. Pringle, W. Reeves, Jos. Ryder, W. Seddon, E. Stubbs, R. Wakefield, J. Weaver, and J. Wynne; consulting naturalist, Mr. R. Newstead, M.Sc., A.L.S., etc.; hon. secretary and treasurer, Mr. G. P. Miln.

It was decided to hold the next exhibition of fruits, chrysanthemums, etc., on Wednesday and Thursday, November 17 and 18, 1909. A course of winter lectures was also arranged for.

Oxfordshire Horticultural Society.

On Friday, December 4, the seventy-ninth annual general meeting of subscribers was held in the Committee Room, Municipal Buildings, Oxford, when there was a good attendance. James H. Morrell, Esq., Headington Hill Hall, presided. The annual report referred to the serious losses sustained during the past two seasons, traceable to a diminution of subscriptions and other causes. The statement of accounts showed that the income had been £336 17s. 8d., and the payments £379 7s.; the reserve fund standing at £74. In moving the adoption of the report, the Chairman said it was deplorable that circumstances had been so adverse again this year; in 1907 they lost £90, and this season £12, and this at a time when special efforts had been made to make the exhibitions more instructive and attractive to visitors.

Montague Wootten, Esq., White Lodge, Headington, moved a resolution to the effect "That the meeting stand adjourned with the view of the new committee investigating the affairs of the society, and reporting as to whether any, and, if so, what alterations in the rules are desirable, and also the best methods of combating the losses which are gradually depleting the society's accumulated funds." The report and accounts were passed, and the following officers for 1909 were elected, viz.: President, J. H. Morrell, Esq.; treasurer, Herbert Parsons, Esq.; hon. secretaries, Messrs. M. Wootten and John Thomson; auditor, Mr. W. S. Carver, F.S.A.A.; acting secretary, Mr. W. Greenaway (29th year); Messrs. A. Adams, W. F. Cross (chairman), J. Fortescue, F. Harris, J. E. Jefferies (vice-chairman), J. Johnson, W. T. Mattock, S. Mold, W. R. H. Powell, H. Smart, J. C. Tayler, and R. Wadham, to form the committee of management. June 22 and August 26 were fixed for the shows of 1909.

ON JANUARY 2 will be Published
THE
NEW YEAR NUMBER
OF THE
GARDENERS' MAGAZINE.

The special features will include:—
GARDENS AROUND TUNBRIDGE WELLS,
Illustrated and Described
A RARE OLD FLORIST'S FLOWER.
GREENHOUSE ANNUALS
STEWING AND BAKING PEARS
GOLDEN-LEAVED TREES.
A FAMOUS GARDENING VILLAGE
LATE SINGLE CHRYSANTHEMUMS
GARDEN ROOT CROPS.
POPULARITY OF FIGS.
Also a Double-page
ALMANACK FOR 1909,
WITH AN ILLUSTRATION IN COLOURS OF A GOLD MEDAL ROSE.

¶ This Number, which will be a very attractive one, will have a large additional circulation, and will therefore be of great importance to Advertisers.

Announcements for this issue should reach the Publishers by Tuesday, December 29.

Offices: 148 and 149, Aldersgate Street, London.

OBITUARY.

◆

EARL OF ANNESLEY.

We learn, just as we go to press, of the death on December 15, of the Earl of Annesley at Castlewellan, Ireland. The Earl was devotedly attached to his famous Irish garden, wherein he brought together and grew finely one of the most extensive collections of choice trees and shrubs to be found in the United Kingdom. Many of the less hardy trees and shrubs flourished at Castlewellan, so that in many respects the collection was an unique one.

MR. JOHN CARDER.

A famous collector of orchids, especially of odontoglossums, Mr. J. Carder was for many years with the late Mr. Wm. Bull, and with Mr. Shuttleworth, another old collector. he subsequently set up in business. Eventually this business arrangement was dissolved, and Mr. Carder took up the work of introducing a very fine strain of Odontoglossum crispum. He was well known and thoroughly well liked by all who knew him. He was at the R.H.S. meeting on Tuesday, November 24, and at the Sale Rooms on December 4, apparently in good health, but died suddenly on December 7.

Vine Propagation.—This should now have consideration, as the eyes should be selected from the vines when pruned, and those well ripened, labelled and tied up, and placed in ashes in a cool place. The Mill Hill Hamburgh is not one that will readily force, but it is a good variety for the second house; the berries are large, come of good colour, and have the appearance of being hammered at the ends, and it is a splendid grape for exhibition. The old Black Hamburgh is the best for forcing, and should be labelled as such. If grafting is to be done, growths of good length should be selected. Muscat of Alexandria should be selected from medium-sized, well-ripened wood.—A. B. WADDS.

Books as Christmas Presents.—In the Christmas Catalogue issued by Messrs. W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London, will be found a wide choice of suitable books for presentation to friends whose interests lie in the garden, greenhouse, poultry, live stock, or other rural pursuits. A full description of the contents of each book is given in the catalogue, a copy of which will be sent by post on application to any reader.

ANSWERS TO CORRESPONDENTS.

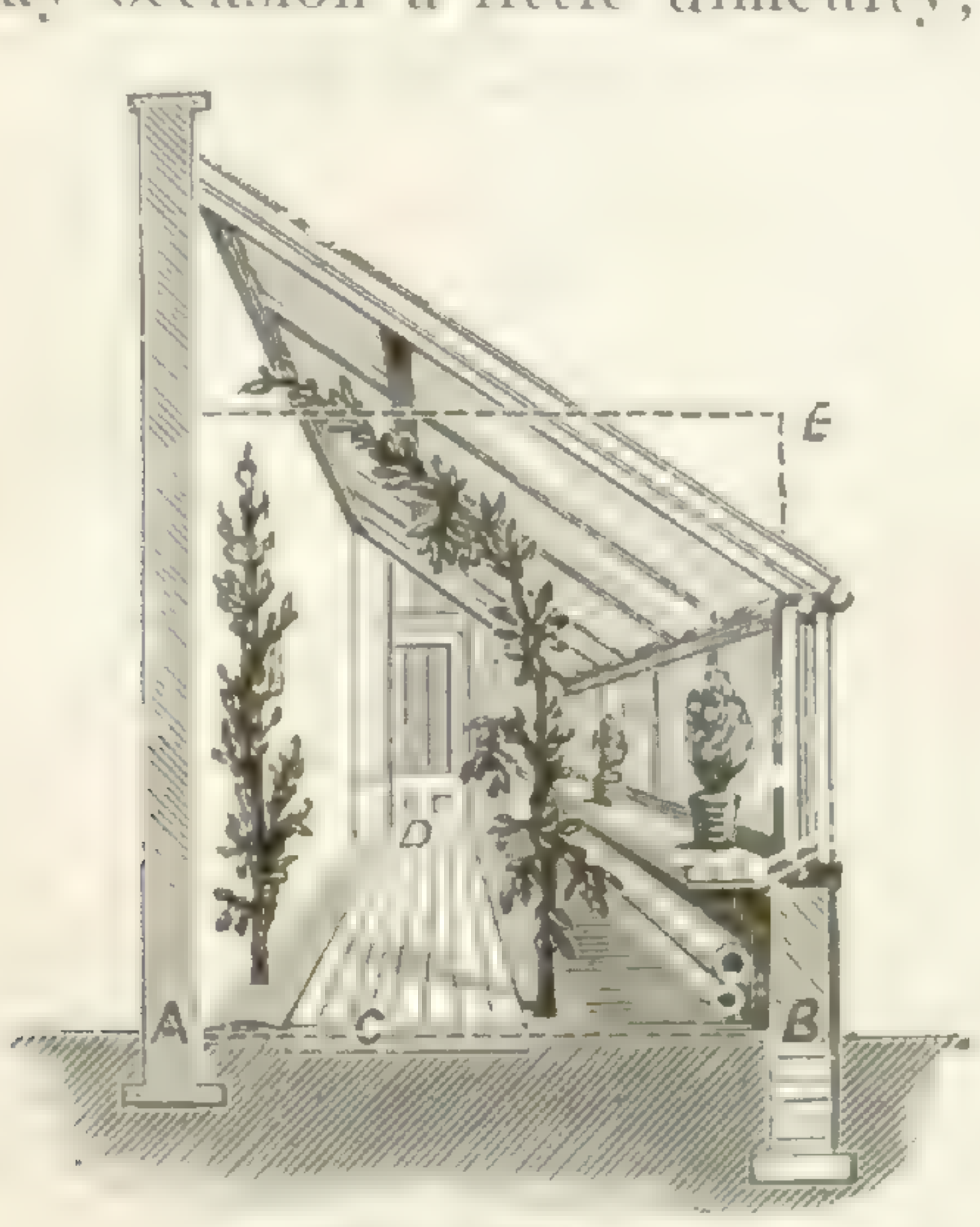
Editorial Communications should be addressed to the Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

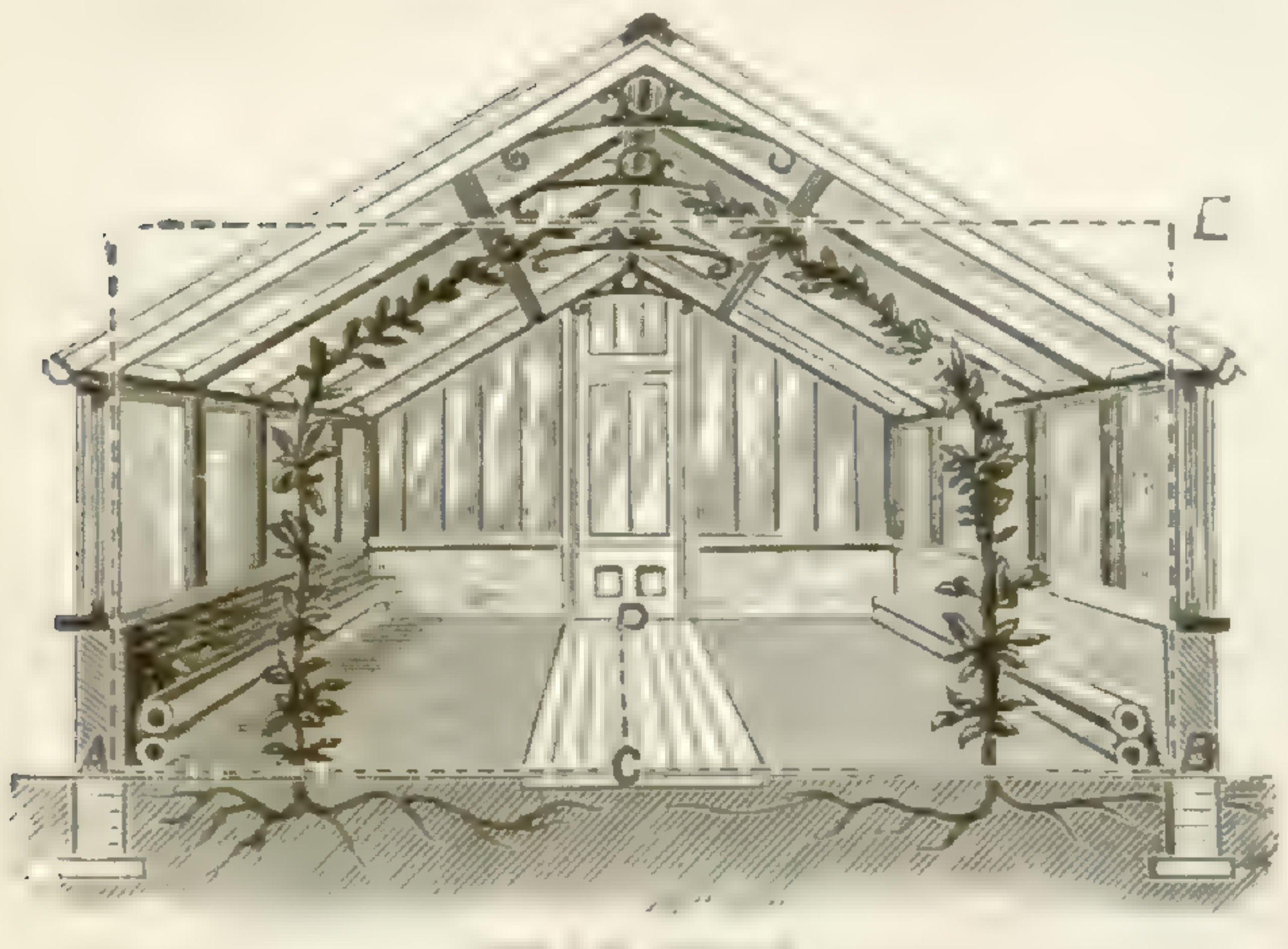
Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. All parcels must be sufficiently prepaid.

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the paragraph.

CUBIC CONTENTS OF GREENHOUSE.—J. N., Monmouth: It is some time since we had to answer a similar question, hence we reproduce the accompanying diagrams again, as they will help to elucidate what, after all, is a very simple matter. To find the cubic contents of a greenhouse, you multiply the length of the house by its breadth, and then the result by the average height. The latter point may occasion a little difficulty, but it is solved by adding the extreme height of a lean-to, or span house, to the height to the eaves, and then halving the total. Thus, supposing the span-roofed house is 20ft long and 10ft. broad, these figures, multiplied together, give us 200ft.; then the height to the ridge is, say, 12ft., and height at eaves 6ft., making a total of 18ft., which, halved, gives an average height of 9ft., therefore we multiply the 200ft. by 9, and obtain 1,800—the cubic contents, in feet, of the house. In the case of the lean-to house, precisely the same method of calculation is followed, thus: length, 30ft.; breadth, 12ft.; extreme height, 15ft.; height at eaves, 5ft.; 30ft. × 12ft., gives 360ft.; 15ft. + 5ft. gives 20ft.: which, halved, leaves 10ft.; then 360ft. × 10ft. gives 3,600ft.—the cubic contents of the house.



LEAN-TO.



SPAN-ROOF.

DIAGRAMS SHOWING HOW TO MEASURE THE CUBIC CONTENTS OF GREENHOUSE.

RICHARDIA MRS. ROOSEVELT.—E. P., Warwick: This richardia is a hybrid between R. Elliottiana and R. albo-maculata. It was raised in America, and was figured and described in our issue of January 9, 1904. This hybrid has been exhibited on many occasions during the last two or three years. We have not seen it flourishing so well as we had hoped, and it certainly is not hardy except in very favourable districts. Even an unheated greenhouse is scarcely sufficient protection for it during winter, if we are to judge from two specimens we had a couple of years ago.

JERUSALEM ARTICHOKES.—J. A. D., Derby: If for the purpose of crop rotation you find it desirable to lift and store the crop of Jerusalem artichokes, you may save a good deal of time and trouble by at once planting the bed for next year's crop. Select medium sized tubers for planting, and plant them in good soil, because, though often sadly neglected, few crops pay better for good culture.

AN EASILY-GROWN GENTIAN.—A. C. S., Carnarvon: There is little doubt that the easiest of gentians to grow is Gentian asclepiadea, a native of Eastern Europe, and a more or less popular plant since 1629. It will grow from six inches to two feet high, but it is at its best when not too strongly grown. The flowers are deep blue, and borne in clusters during July and August. Any good soil, where hardy flowers do well, will suit this gentian, but it must not be allowed to suffer from lack of moisture during the summer months.

NAMES OF PLANTS.

J. N. M., Ingatestone.—Acalypha Macafeeana.

C. L., Gloucester.—1, Viburnum Tinus; 2, Eleagnus longipes.

T. B., Salisbury.—1, Cypripedium Leeanum; 2, C. callosum; 3, C. insigne, a good variety.

E. V. J., Warminster.—1, Peristrophe speciosa; 2, Cupressus Lawsoniana filifera; 3, Adiantum capillus veneris imbricatum.

B. T. G., Ilkley.—1, Dendrobium phalænopsis Schroderiana; 2, Lycaste Skinneri; 3, Lantana hybrida; 4, Pinus cembra; 5, Libonia floribunda.

NAMES OF FRUITS

G. T., Alford.—1, Keddleston Pippin; 2, Alfriston; 3, Winter Nelis.

H. C. C., Horsham.—1, Beurre Diel; 2, Passe Crasanne; 3, not recognised.

J. G., Marlow.—1, Hollandbury; 2, Sturmer Pippin; 3, Lord Derby; 4, Dutch Mignonne; 5, Catillac.

M. S. P., St. Ives.—1, Cornish Aromatic; 2, Ribston Pippin; 3, Beauty of Kent; 4, Bramley's Seedling; 5, a small Blenheim Pippin.

CATALOGUES RECEIVED.

SUTTON AND SONS, READING.—A large, finely printed, and beautifully illustrated catalogue of flower and vegetable seeds.

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Acacia	per doz. bun.	10	0	to	12	0
Adiantum cuneatum	per doz. bun.	5	0		9	0
Arums	per doz.	3	0		5	0
Asparagus	per doz. bun.	1	6		6	0
Azaleas	per doz. bun.	4	0		6	0
Bouvardias	per doz. bun.	6	0		8	0
Camellias	per doz.	1	6		2	6
Carnations	per doz. blms.	1	0		3	6
,,	per doz. bun.	8	0		12	0
Cattleyas	per doz.	8	0		10	6
Chrysanthemums	per doz. bun.	5	0		12	0
,,	per doz. blms.	2	0		3	6
Croton leaves	per bun.	1	0		1	6
Cypripediums	per doz. blms.	2	0		3	0
Eucharis	per doz.	2	0		3	6
French fern	per doz. bun.	1	0		3	0
Gardenias	per doz.	2	0		5	0
Gypsophila	per doz. bun.	2	0		3	0
Hyacinths, Roman	per doz. bun.	6	0		9	0
Lapagerias	per doz.	1	6		2	0
Lilac French)	per bun.	4	6		6	0
Lilium auratum	per bun.	2	0		3	0
,, candidum	per bun.	1	0		2	6
,, speciosum	per bun.	1	6		3	0
,, longiflorum	per bun.	2	0		4	0
Lily of the Valley	per doz.	8	0		15	0
Marguerites, white	per doz. bun.	2	0		4	0
,, yellow	per doz. bun.	2	0		3	0
Mignonette	per doz. bun.	2	0		4	0
Narcissus, Paper White	per doz. bun.	2	0		3	6
,, Soleil d'Or	per doz. bun.	3	0		4	0
Odontoglossums	per doz. blms.	2	6		3	6
Pelargoniums	per doz. bun	5	0		6	0
Roses	per doz.	2	0		5	0
Tuberoses	per doz.	0	4		0	6
Violets	per doz. bun.	1	6		3	0

Fruits.

A brisk demand has commenced, and will no doubt continue well into next week. Prices are moderate and supplies good.

		s.	d.		s.	d.
Apples, cooking	per bush.	3	6	to	6	6
,, dessert	per ½-sieve	2	0		6	0
,, Cox's Orange Pippin	per box of 2 doz.	2	0		3	0
,, Nova Scotian	per barrel	10	0		18	0
,, Californian	per case	8	0		10	6
Bananas	per bun.	4	0		12	0
Cranberries	per case	9	0		14	0
Figs	per box	0	10		1	6
Grapes, English	per lb.	1	0		4	6
,, Belgian	per lb.	0	10		1	0
,, Channel Islands	per lb.	0	6		1	3
,, Almeria	per bar.	10	0		17	0
Lemons	per case	12	0		18	0
Medlars	per case	7	0		9	0
Nuts, Cob	per 12lb.	12	0		15	0
Oranges	per case	6	0		15	0
Pears, English Catillac	per bush.	5	0		7	0
,, Californian	per case	6	0		20	0

Vegetables.

A steady demand continues, and supplies are excellent.

		s.	d.		s.	d.
Artichokes, Globe	per doz.	3	0	to	4	6
Asparagus	per bundle	3	6		4	6
,, Sprue	per bun.	0	7		0	8
Beet	per bush.	1	3		2	0
Beans (Guernsey)	per lb.	0	8		1	0
Brussels Sprouts	per bush.	3	0		3	6
Cabbage	per tally	2	0		4	0
Carrots	per doz. bun.	0	9		1	4
Cauliflowers	per doz.	1	6		3	0
Celery	per roll	0	10		1	0
Celeraic	per doz.	1	6		1	9
Cucumbers	per doz.	4	0		8	0
Endive	per doz.	1	6		2	0
Horseradish	per doz. bun.	8	0		12	0
Leeks	per doz. bun.	0	9		1	0
Lettuce	per doz.	0	8		1	3
Mint	per doz. bun.	3	0		6	0
Mushrooms	per doz. lb.	8	0		12	0
Onions, Pickling	per bush.	3	0		4	0
,, Valencia	per case	7	0		9	0
Parsley	per doz. bun.	1	0		2	0
Parsnips	per bag	2	0		3	0
Spinach	per basket	2	0		2	6
Tomatoes	per doz. lbs.	4	0		6	0
Turnips	per doz. bun.	1	0		1	3

LONDON POTATO MARKETS.

The demand is rather slack, and supplies large.

		s.	d.		s.	d.
British Queen	per ton	55	0	to	60	0
Dunbars	per ton	65	0		80	0
Epicure	per ton	50	0		55	0
Evergood	per ton	45	0		55	0
Sharpe's Express	per ton	70	0		75	0
Maincrop	per ton	65	0		70	0
Puritan	per ton	60	0		65	0
Up-to-Date	per ton	60	0		65	0
,, Blacklands	per ton	45	0		50	0

FORTHCOMING ENGAGEMENTS.

TUESDAY, December 22.—Royal Horticultural Society: Committees meet at 12 o'clock; General Meeting at 3 p.m.; Scientific Committee at 4 o'clock.

FRIDAY, December 25.—Christmas Day.

SATURDAY, December 26.—Bank Holiday.

METEOROLOGICAL OBSERVATIONS.

TAKEN BY THE R.H.S. GARDENS AT WISLEY SURREY.

Height above Sea-level, 150 feet

Date. 1908 December 6 to December 12.	Sunshine.	Temperature of the Air. At 9 a.m. Dry Bulb.	At 9 a.m. Wet Bulb.	Day Highest.	Night Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 6—Sunday	—	47	46	46	43
„ 7—Monday	—	41	40	45	39
„ 8—Tuesday ...	1 0	45	43	49	32
„ 9—Wednesday.	1 40	37	37	48	37
„ 10—Thursday ...	1 40	45	45	53	37
„ 11—Friday	4 50	39	38	44	39
„ 12—Saturday ...	5 25	42	37	49	3[illegible]
Means	2 5	42	41	48	3[illegible]

Date. 1908. December 6 to December 12.	Rain.	Temperature of the Soil. At 9 a.m. At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	Lowest Temperature on Grass.
	ins.	deg.	deg.	deg.	deg.
Dec. 6—Sunday	0·24	46	47	49	3[illegible]
„ 7—Monday	—	45	47	49	33
„ 8—Tuesday ...	0·15	44	47	49	26
„ 9—Wednesday.	0.24	44	46	48	32
„ 10—Thursday ...	0·14	43	46	48	34
„ 11—Friday	—	43	46	48	33
„ 12—Saturday ...	0·11	42	45	48	34
Means ...	(total) 0·87	44	46	48	33

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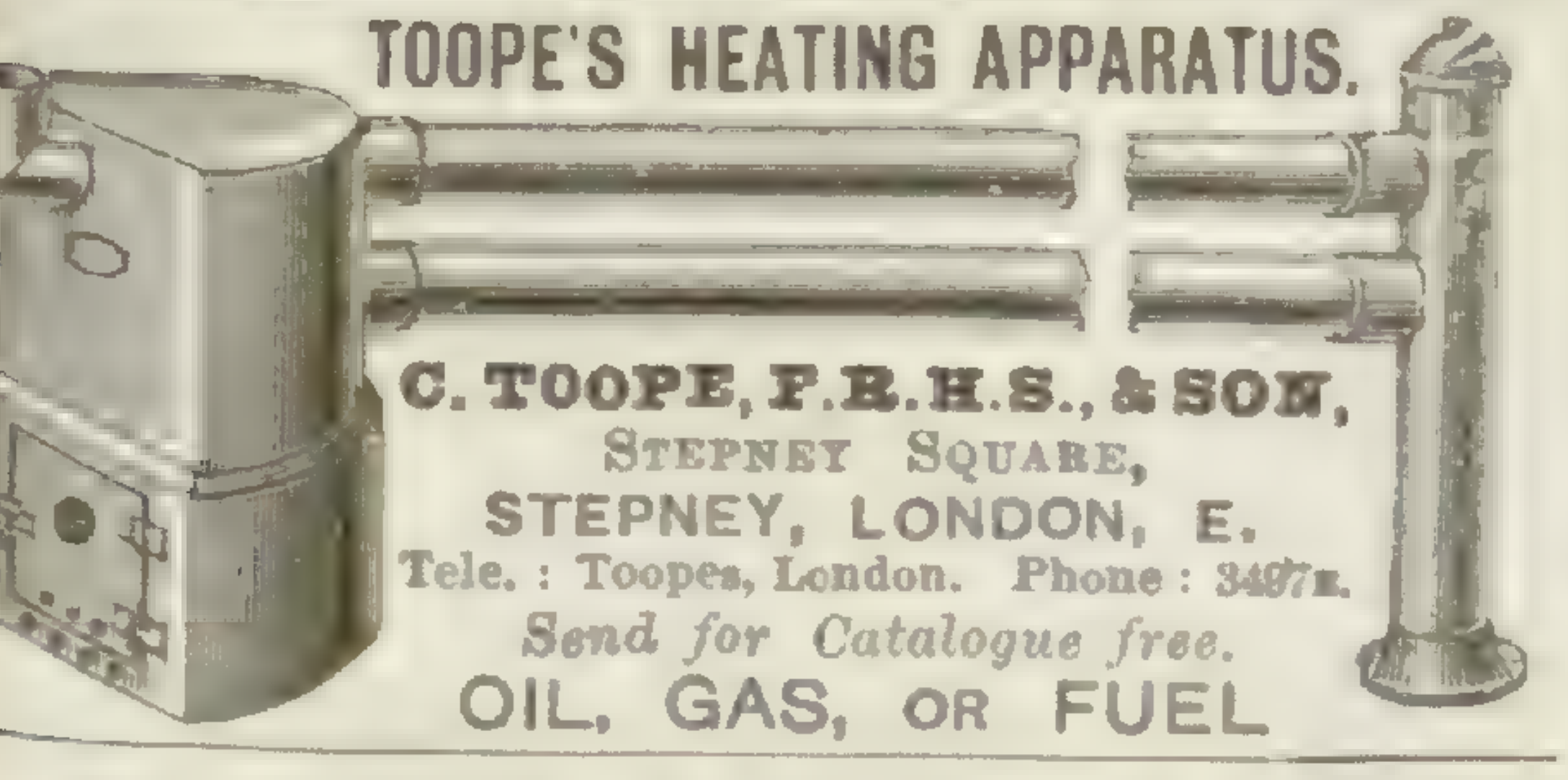

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The Tenders, endorsed "Tender for Trees," to be delivered at the offices of the Council not later than 4 p.m. on TUESDAY, January 5th, 1909.

A £10 note is to be deposited with each Tender which will be returned to all unsuccessful Contractors immediately tenders are accepted, and to successful Contractor after execution of Contract and Bond.

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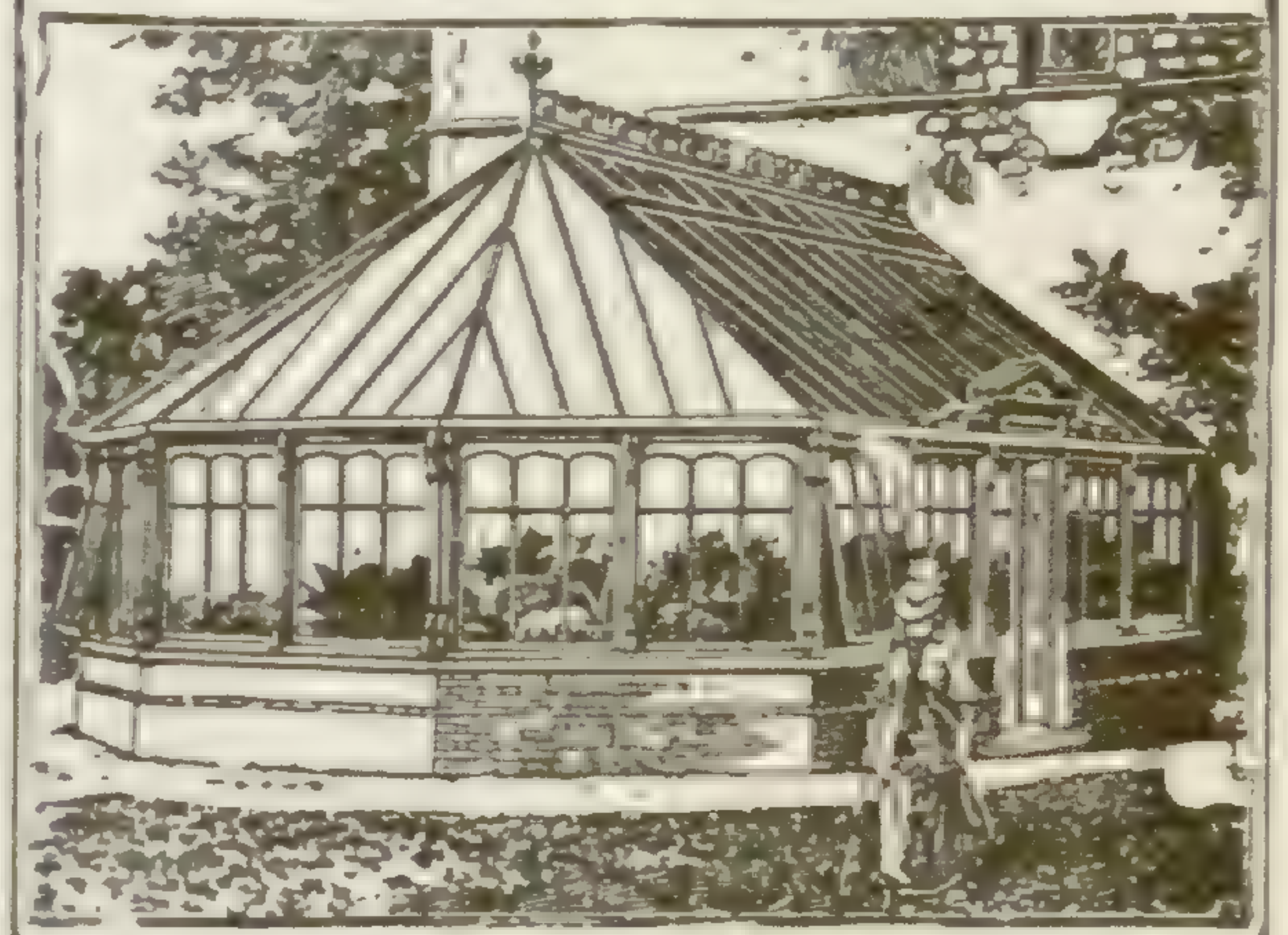
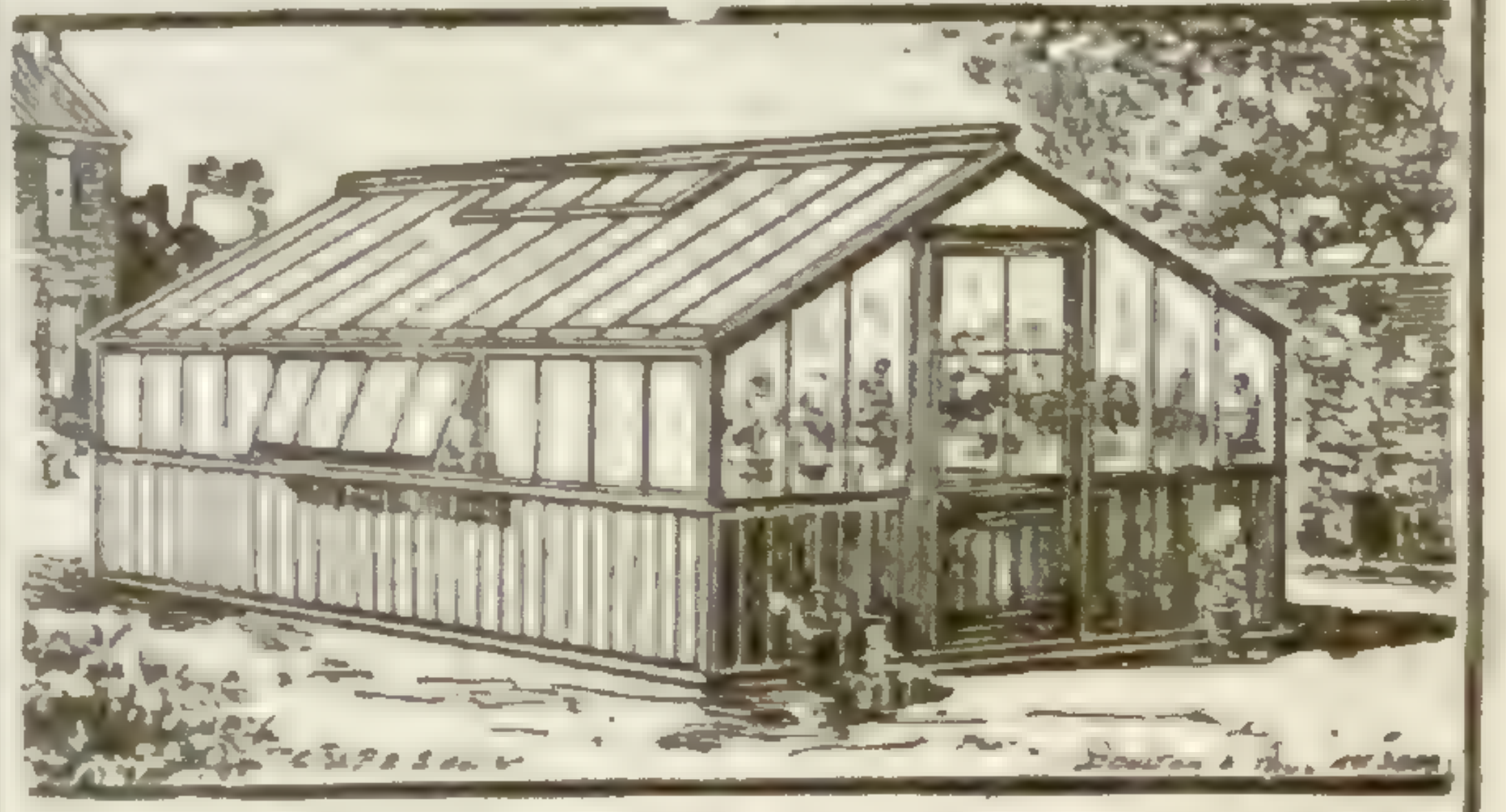


ESTIMATES SUBMITTED.

No. 49A.—SPAN-ROOF GREENHOUSE.



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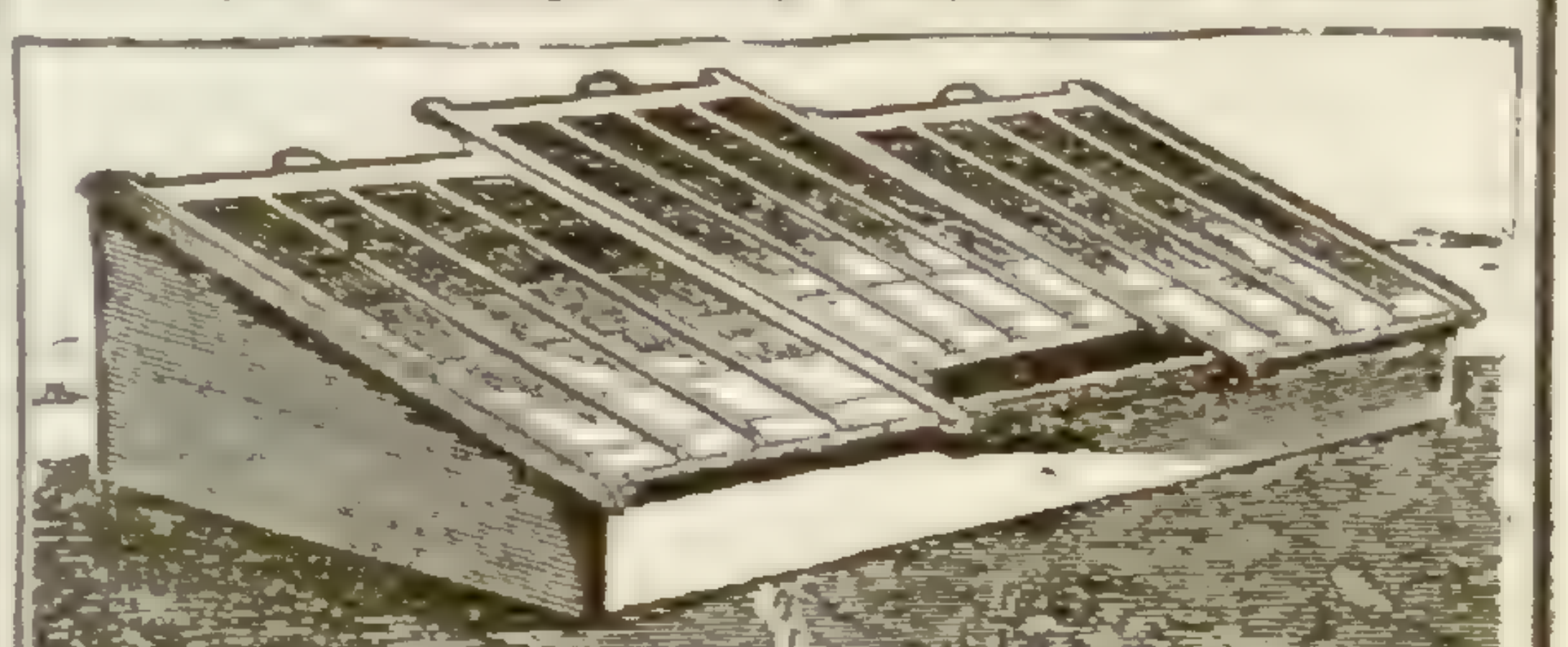

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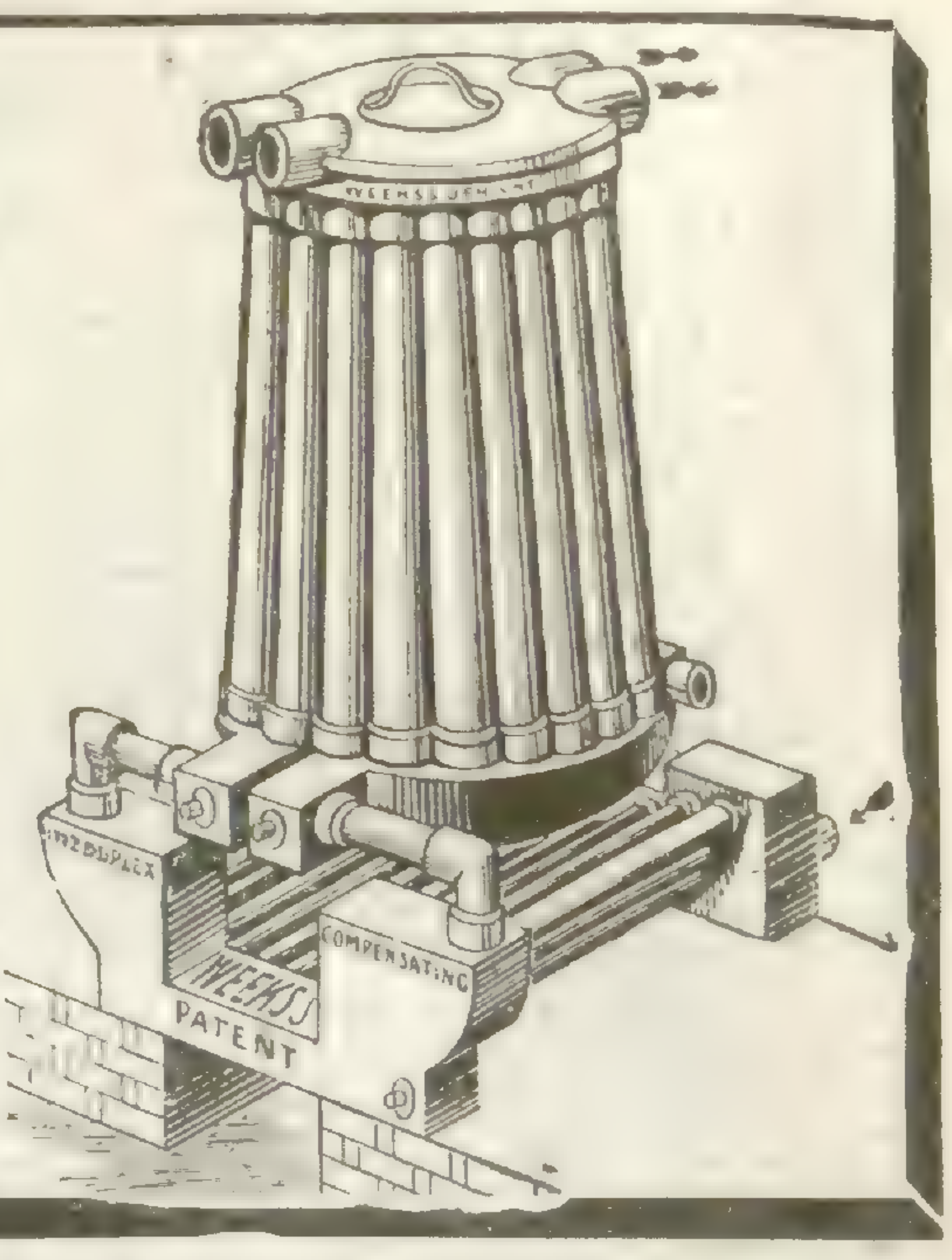

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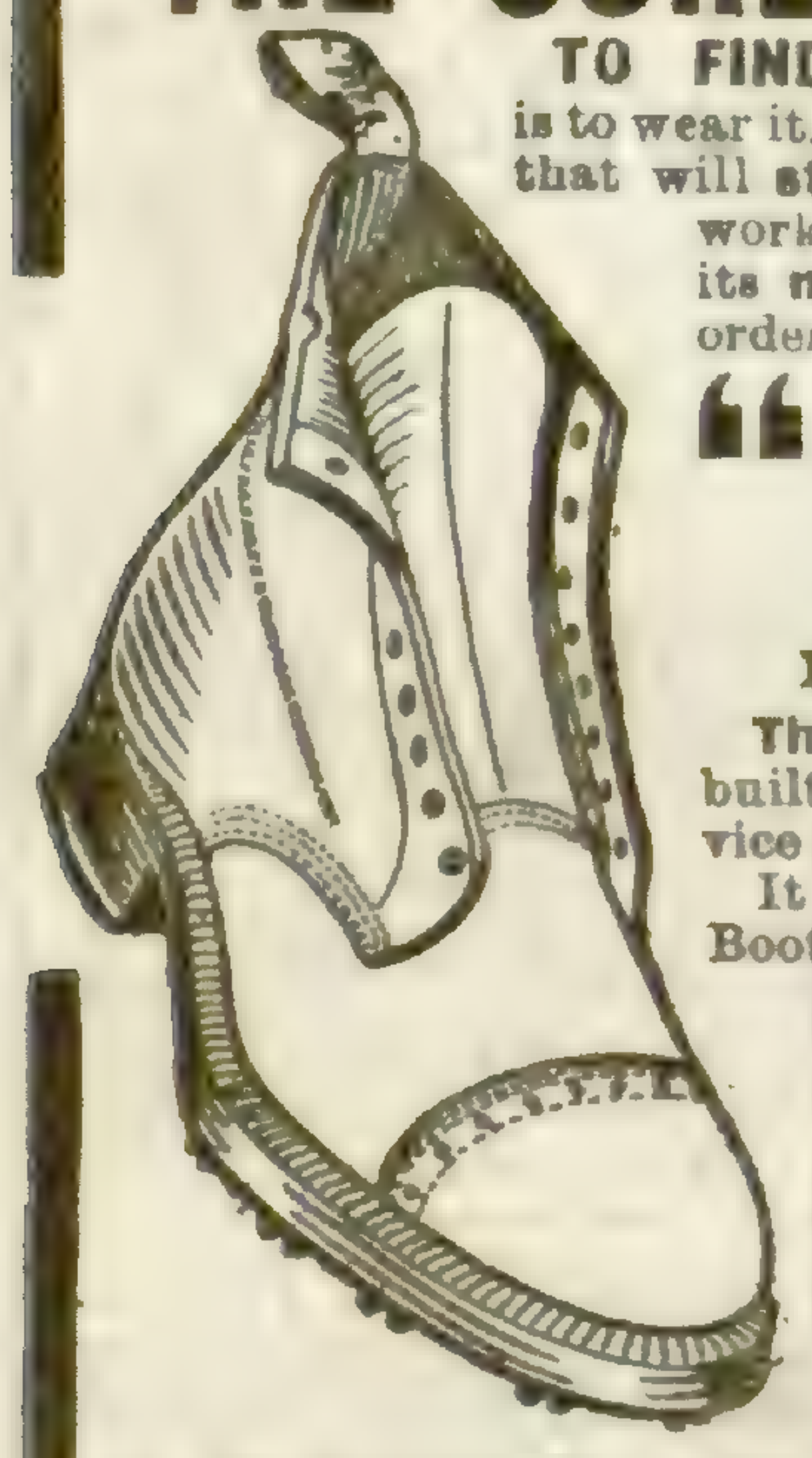

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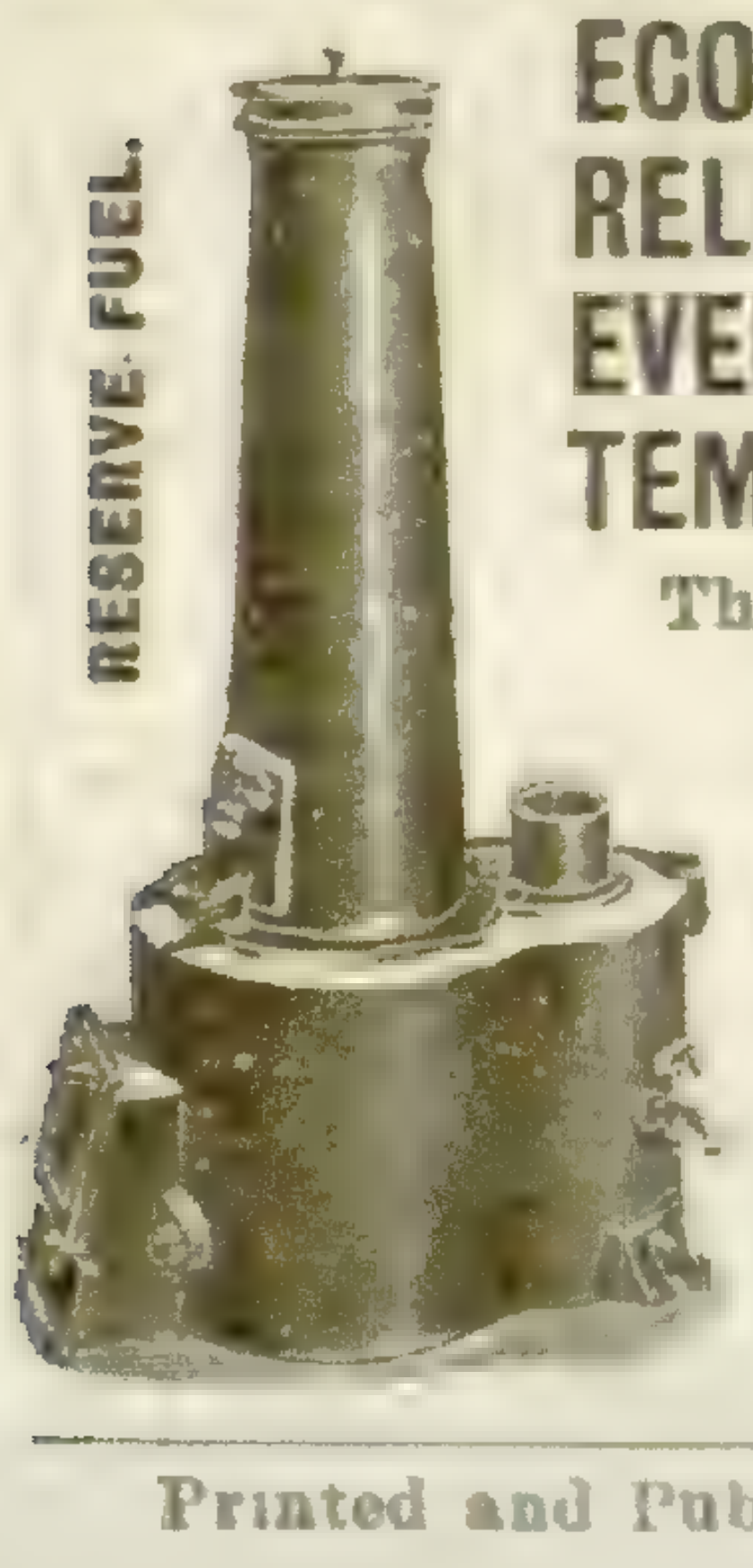
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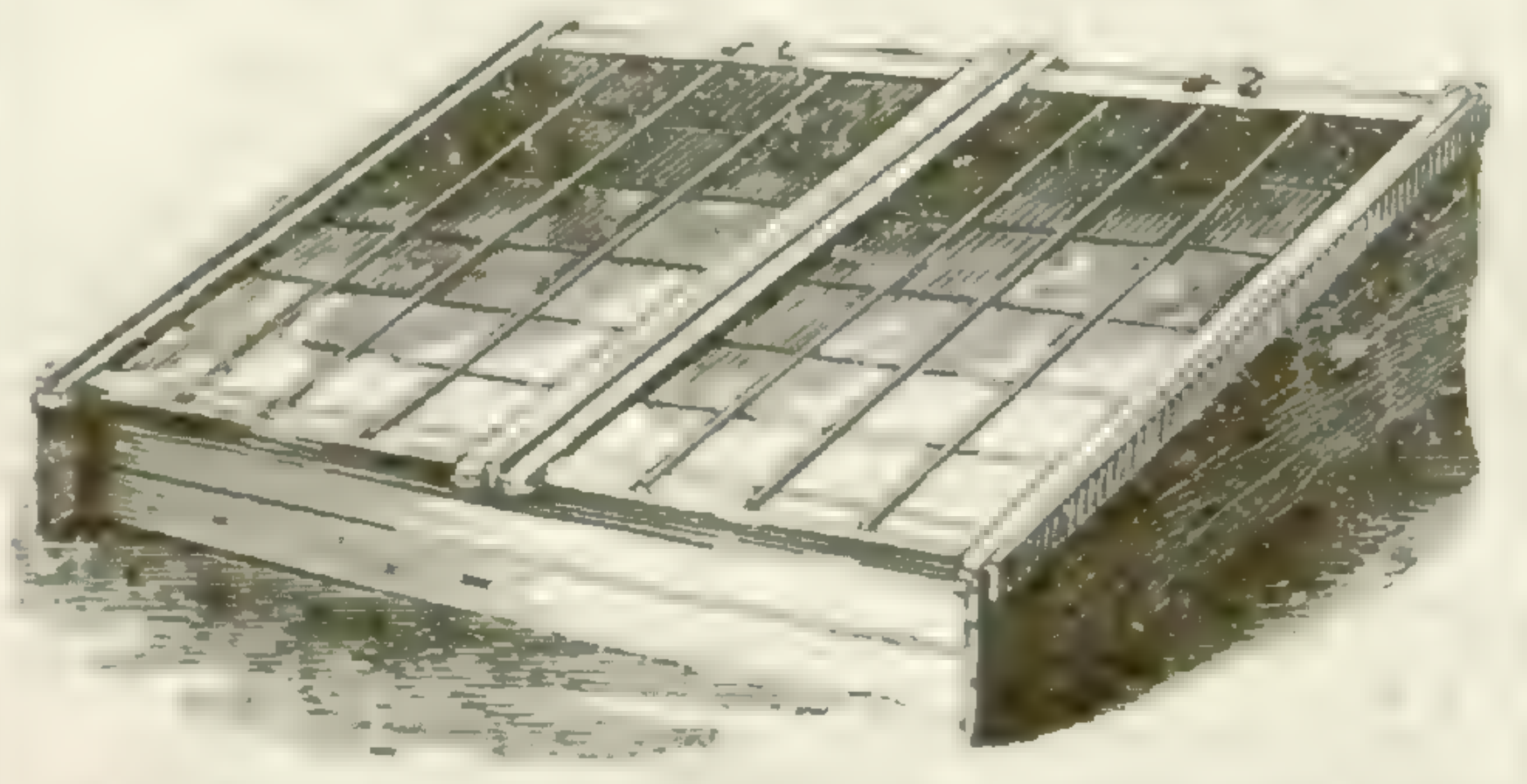

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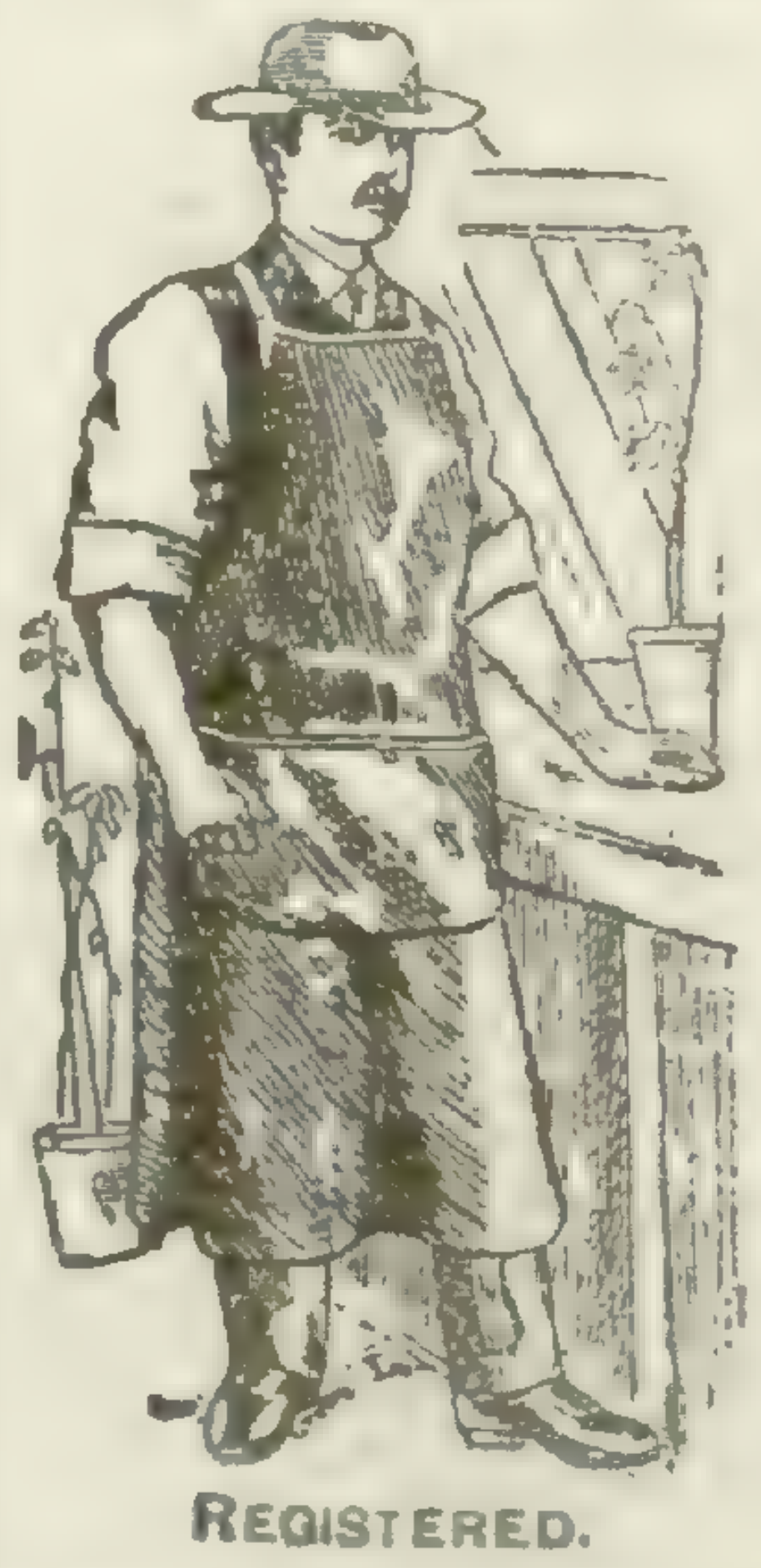

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THE GARDENERS' MAGAZINE.

No. 2,878. Vol. LI.
Reg. at the G.P.O. as a Newspaper.

SATURDAY, DECEMBER 26, 1908.

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A £10 note to be enclosed with each Tender, which will be returned to all unsuccessful Contractors immediately tenders are accepted, and to successful Contractor after execution of Contract and Bond.

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Clerk to the Council.

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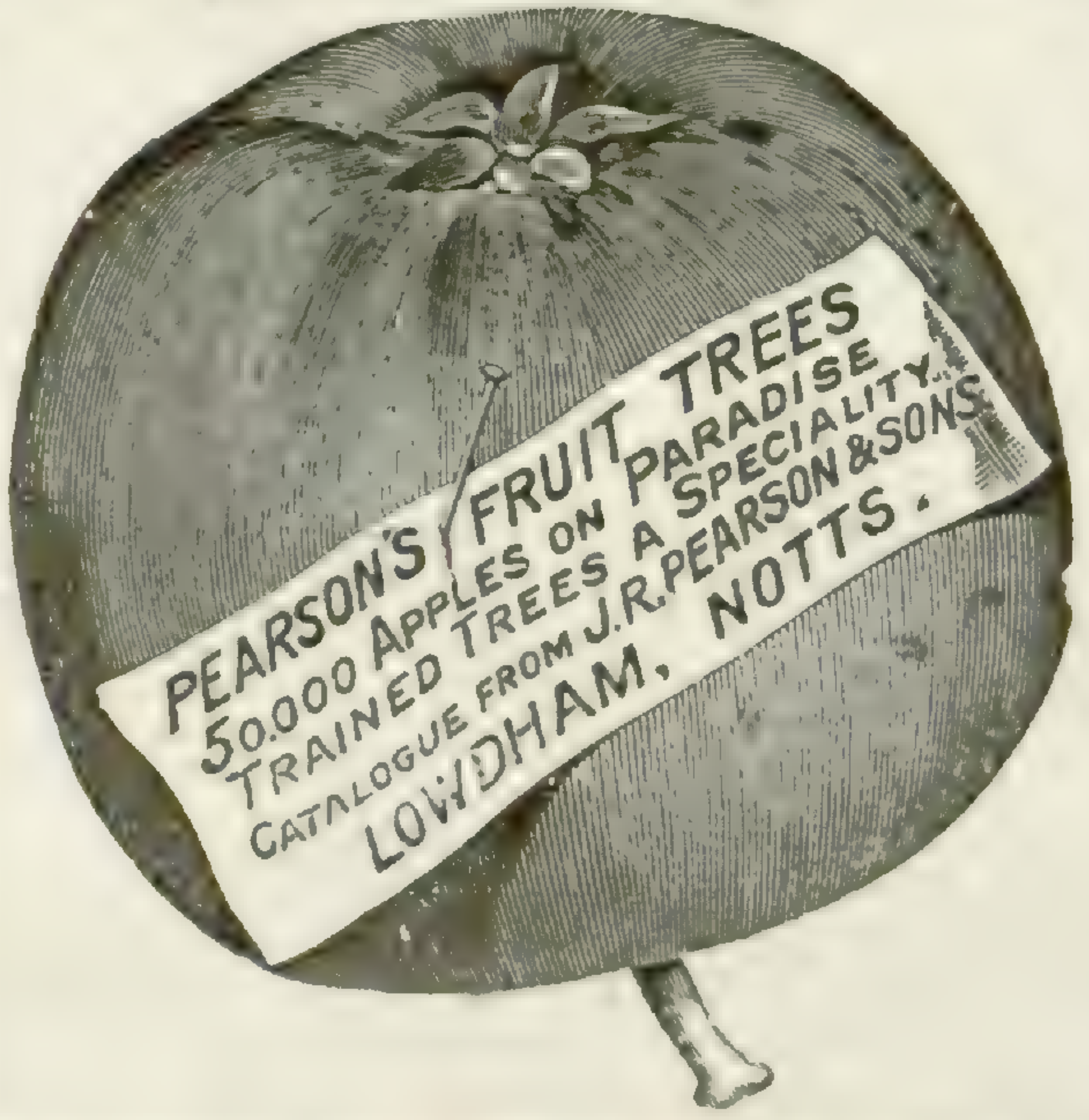
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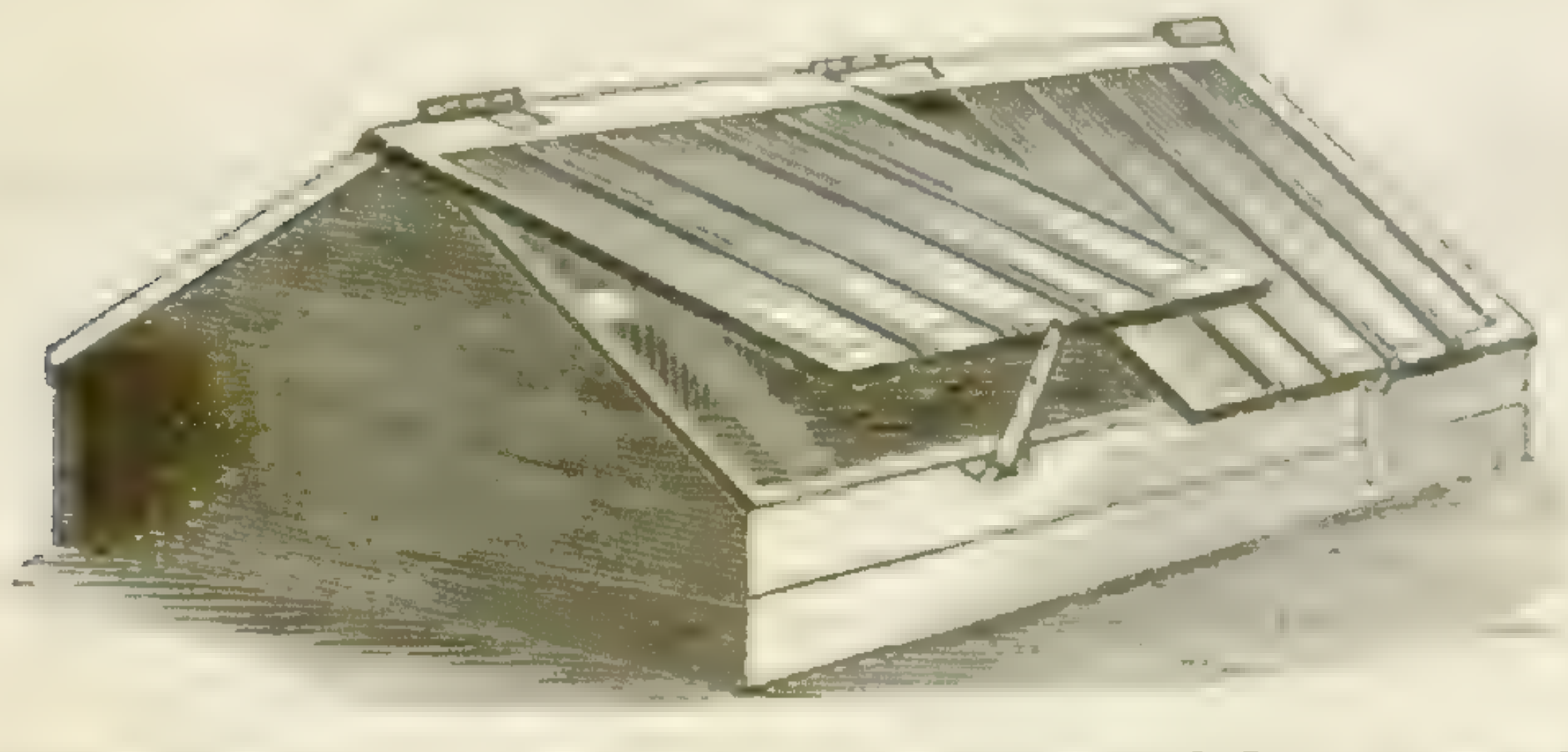

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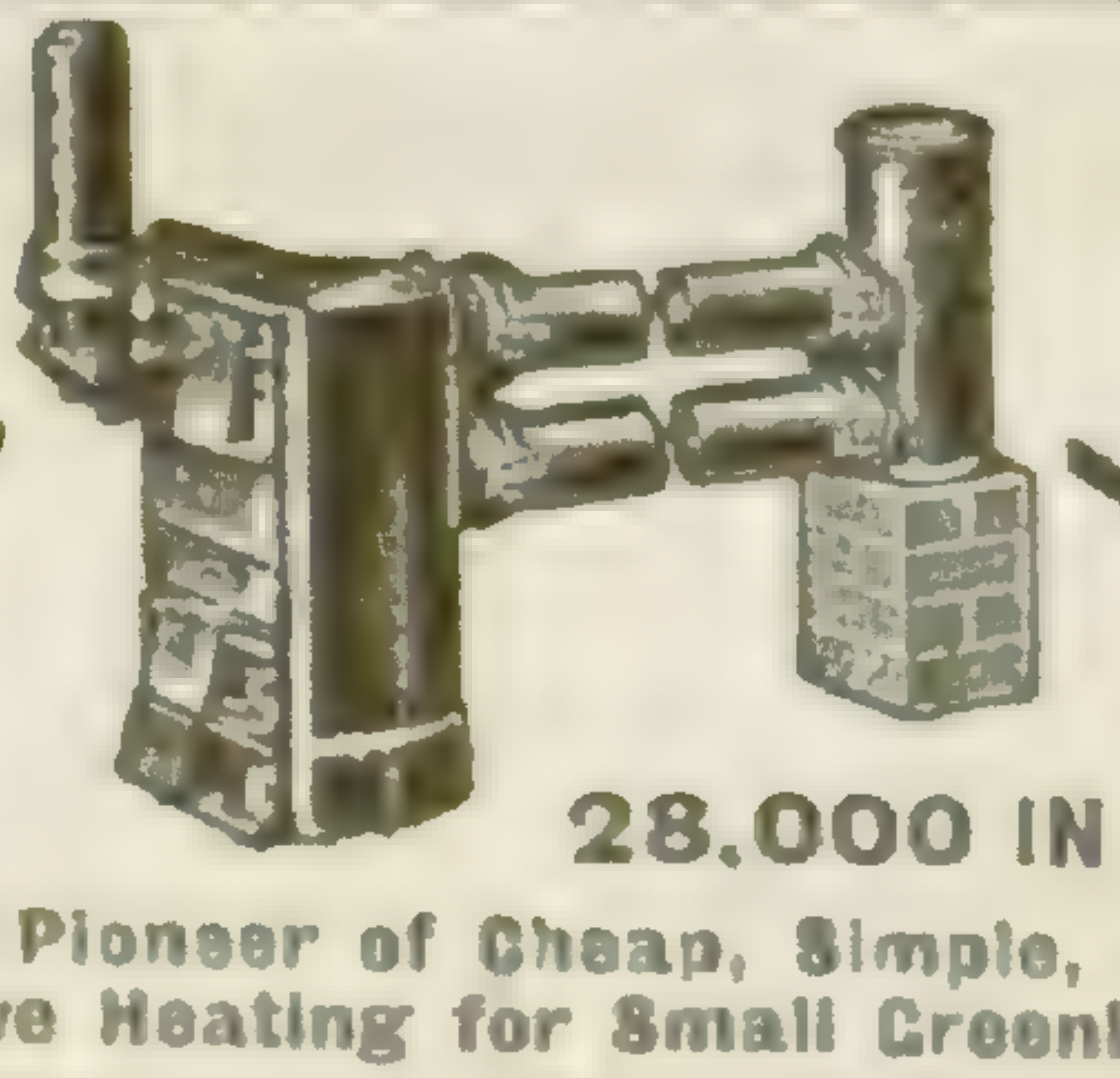

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VOL. LI.—No. 2,878. SATURDAY, DECEMBER 26, 1908.

THE GARDENERS' MAGAZINE.

NOTES OF THE WEEK.

Roots and Leaves.

Undoubtedly one of the most wonderful features in plant development is that curious differentiation of the formative cells in the seed which determines that one set shall plunge downward into the soil while the other shall rise upwards to seek the light, the former shaping the root system, and the latter that of the foliage. This difference is determined almost immediately after the embryo seed is fertilised, and as it perfects finds expression in the formation of one or two primary leaves or cotyledons, and a root point, which is the first thing to emerge when the seed is sown, penetrating the soil as speedily as possible, in order to commence its work of supplying the infant plant with moisture and nutrition. The function of the root is entirely different from that of the foliage, as different indeed as its structure. Ordinarily, it ramifies into a great number of branches, consisting of innumerable growing points, formed of delicate multiplying cells which are enabled to push themselves through the soil undamaged by means of a sort of protecting sheath, and having penetrated between the tiny soil fissures, the rootlets thicken, and thus, wedge fashion, facilitate further progress. In process of time, as we see in trees, this thickening process results in forming a great expanse of woody roots, constituting with their minor ramifications terminating in millions of minute feeding points, a rough parallel with the leaf system above, with its branches, twigs, and twiglets. In both cases we see an approximation to the water or gas systems of supply to a city—main pipes leading into secondary mains, and these branching off into the smaller supply pipes of house or factory. There must, however, be a fundamental difference between these artificial systems and the root and foliar systems of a tree, for while in the former the entire flow is one way, in both the latter there is a flow and return. In the root system every tiny feeder absorbs water and soluble salts, which are sent up to the foliar system for consumption by the growing cells in conjunction with the gaseous material absorbed by the leaves. The bulk of the water supply is evaporated through the leaf pores, and the earthy salts are used up by the cells for structural purposes. This process represents in the roots an inverse circulation to that seen in our water or gas systems, it being a collecting system, but on entering the trunk it becomes a similar one, i.e., a distributing system. Since, however, all the fabric of a tree, roots included, is built up of material prepared in the leaves by the action of light upon the chlorophyll or green colouring matter, it is obvious that there must be a return flow of elaborated sap through all the channels of supply of what we may term raw sap, in order not merely that the aerial branches and twigs, and the trunk itself, may be strengthened, but also that the underground root system may be likewise extended, and fortified to withstand the strain of wind and weather undergone by the tree as we see it. This interchange or counter current must be of a very subtle character. We should search in vain through either the root or the foliar circulatory systems for anything clearly analogous to main pipes or minor ones. All this work, and in a large tree it is an enormous work, is effected by transmission from cell to cell, the active building ones beneath the bark or elsewhere taking up what they need, and passing on the balance, it may be, through their walls or by capillary attraction through minute spiral vessels, which form the nearest approach to tubes which can be detected. It is in the leaves themselves that we see most in evidence a circulatory system. Their veins forming a network, usually of great complexity and beauty, clearly indicate how the sap supply is distributed, first through the stalk, then into the central main rib, and from that laterally on smaller and smaller lines, until the cell walls themselves complete the network. It is seen from this that there is also a fundamental difference between the vein systems of the animal and vegetable kingdom, since in the former there are distinct flow and return pipes, so to speak, while in the latter a similar operation is effected on less definite lines, minus anything analogous to that great animal force pump, the heart.

MR. JOSEPH CHEAL.

Mr. Joseph Cheal, head of the firm of Messrs. J. Cheal and Sons, of Crawley, whose portrait we have much pleasure in presenting to our readers, is famous in many ways. He occupies a high and very honourable position in the nursery and seed trades, and unusually good feelings exist between the members of his firm and their employees. Mr. Joseph Cheal has all along been very closely associated with the British Fruit Growing Movement, and his book on "Fruit Culture" is an excellent contribution to our knowledge of this subject. Among dahlia lovers Mr. J. Cheal is also well known, and while he does not neglect other sections he has taken particular interest in the single and pompon sections, and has raised and distributed a number of very fine varieties. But it is, perhaps, as a landscape gardener that Mr. Joseph Cheal is best known, for to this ever-extending department of the firm's work he has given special attention, and he has now the assistance of his eldest son in this work. As time permits Mr. Joseph Cheal makes trips to other lands, and as he is a clever photographer he invariably brings back a host of views, many of which are useful to him in his landscape work. He has visited Canada, United States, Italy, France, Algiers, and the Canary Islands, and his several visits have formed the basis of several welcome lectures, illustrated by his own lantern slides, before the Royal Horticultural Society and the Horticultural Club. We may add that Mr. J. Cheal is a vice-chairman of the R.H.S. Fruit and Vegetable Committee.

Our New Year's Number.—As will have been gathered from the announcement made in our issue of the 19th inst., the Gardeners' Magazine for January 2 will be of quite exceptional interest to all who are interested in the various aspects of horticulture. The contents will include the first of two profusely illustrated articles on the more noteworthy of the many fine gardens in the district of which Tunbridge Wells is the centre, and a considerable number of contributions from the leading experts on matters of special interest at the present season of the year. With the issue will be presented an almanack for 1909, which will give the dates of all the more important exhibitions and horticultural functions during 1909, and be embellished with an illustration printed in colours of a beautiful gold medal rose. As there is invariably a very large demand for the issue containing the almanack, we strongly advise those of our readers requiring additional copies to send their orders as soon as possible.

French Gardening at Tiptree.

M. Aquatias, the well-known French gardener, has accepted an engagement to forthwith undertake the development of French gardens at Tiptree, Essex. Tiptree is a place noted for small holdings, there being no fewer than two hundred and fifty small holders there, operating areas varying in extent from one to fifty acres, and growing chiefly fruit, seeds, and flowers. The laying out of three French gardens has already been begun at Tiptree, and in a few days M. Aquatias will personally superintend the creation of a fourth. The introduction of this system into Tiptree by Mr. F. Mynott, of Brook Hall, has provided employment for wnat is usually a slack season of the year, more than fifty men having been engaged laying water mains, building houses on small holdings, and preparing the soil for French gardens during the last three months.

Christmas Fruits.—The Christmas fruit trade always makes an interesting study. Our supplies come from many colonies and many countries not attached to our Empire, and all quarters of the Globe are laid under tribute to provide our Christmas dessert. Of apples there are larger numbers than usual of home growth, and a slight shortage of imported material, but ample supplies for all who can buy. A great and pleasing feature has been the small boxes of choice dessert home-grown apples, notably Cox's Orange Pippins; 24 fruits in a box have easily sold for 2s. to 3s. per dozen, and in some cases for 4s. per dozen. It is estimated that a quarter of a million bushels of American and Canadian apples have been disposed of during the week, and about 10,000 boxes of home-grown dessert apples. Jamaica bananas are very fine, and oranges have seldom been so good as this season, Mandarins and Cape Naartjees selling at capital prices, showing that the public will pay well for anything novel or of extra quality. The best grapes are a trifle dear, but Almerias are cheap and excellent. Pears are especially good, whether home grown, French, or Californian, and the principal varieties are Glou Morceau, Doyenne du Comice, Winter Nelis, and Beurre Diel. Nuts are plentiful and fairly cheap, though Kentish cobnuts are rather dearer. Beyond those staple kinds of Christmas fruits there have been good consignments of mangoes, grenadillas, Avocada pears, persimmons, medlars, and pineapples, indeed we may say that the variety and quality of the Christmas fruits of 1908 have never been excelled.

R.H.S. Fortnightly Meetings of 1909.—The following are the dates for the Royal Horticultural Society's meetings in 1909: January 12 and 26; February 9 (annual meeting) and 23; March 9 (spring bulb show) and 23; April 6 and 20 (auriculas); May 4, 18 (tulips), 25-27 (spring show); June 8 and 22 (the first Masters Memorial Lecture, by Professor Hugo de Vries); July 6, 7 (Holland House show), 20 21 (carnations), and 23 (sweet peas); August 3, 17, and 31; September 14, 16 (rose show), and 28 (the second Masters Lecture, by Professor Hugo de Vries); October 12 and 26; November 9, 23, and 25-26 (Colonial fruit show) (or possibly 30 and 31); December 7, 8 (carnations), and 21.

Sweet Pea Trials for 1909.—The committee of the National Sweet Pea Society will continue its series of trials at the gardens of the University College, Reading, in 1909, and will test novelties, and grant awards and certificates according to merit. No awards or certificates will be granted to sweet peas unless they are sent for trial at Reading. For these trials the varieties will be accepted only from the raiser or introducer; a charge of 2s. 6d. for each variety will be made. At the request of numerous seedsmen the committee will conduct a further and distinct trial solely for the purpose of testing correctness and purity of stocks of sweet peas. A charge of 5s. per variety or stock sent for trial will be made. Sweet Peas for these trials should be sent to Mr. C. Foster, University College Gardens, Reading, not later than January 25, 1909. For the novelty trials not less than fifteen seeds should be sent, and for the purity trials, not less than two dozen seeds of each variety or stock. At the same time a list of the varieties, together with the amount due for trial charges, should be sent to the hon. sec., Mr. C. H. Curtis, Adelaide Road, Brentford, Middlesex. The proceedings of the Floral Committee will be printed in the autumn of 1909, and a copy will be sent to every person or firm sending seeds to either or both of the sets of trials. A special and detailed report of any variety will be supplied to the sender of such variety at a charge of 2s. 6d.

December Flowers at Leonardslee.—Mr. W. A. Cook, gardener to Sir Edmund Loder, Bart., Leonardslee, Horsham, has sent us a small box of flowers culled from the open in the famous garden of which he has charge. They included primroses and polyanthus, Rhododendron dahuricum, Azalea amœna, periwinkle, several roses, including Leuchtstern, Azalea mollis, myrtle, Colletia cruciata, and Erica lusitanica. Mr. Cook writes: Colletia cruciata is finely in flower during the second and third weeks of December, and our specimen measures about 6ft. 6in. by 8ft.; the rambling rose Leuchtstern, on its own roots, a three-year-old plant, is quite full of bloom; a plant of Azalea amœna is blooming in the rock garden, and Rhododendron dahuricum is very pretty now though it does not usually bloom until February. I also enclose a Mdme. Abel Chatenay rose to show that this variety is still giving good blooms. Iris stylosa has given us numbers of beautiful blooms for several weeks and will doubtless continue to flower for awhile. Vinca alba is particularly floriferous, while polyanthuses and primroses are quite plentiful. A few veronicas continue to bloom, the Spanish Heath is charming, and we have a Bottle Brush (Metrosideros) in flower. Altogether this is evidence of an unusually mild season; moreover, I could easily find many more subjects in flower though those mentioned are the most notable.

Perpetual-flowering Carnations.—Mr. W. H. Page, Tangley Nurseries, Hampton, was remarkably successful at the recent exhibition of perpetual-flowering carnations at the Horticultural Hall. In the class for eighteen blooms of a white variety Mr. Page was first with Sarah Hill, a new flower of much merit, and in the class for the same number of a crimson variety he obtained premier honours with Governor Roosevelt. The names were not attached to the vases when they were seen by our representative.

The "Masters" Lectures.—Our readers will remember the intimate connection with the Royal Horticultural Society of the late Dr. Masters, F.R.S., who did much for horticulture by drawing constant attention to the various ways in which scientific discovery and research might be made serviceable to gardening; and it will also be remembered that a fund was established by subscriptions to perpetuate his memory in connection with the society and to carry on in some degree his work of science in relation to gardening. "The Masters Lectures" have accordingly been founded, and the first two are to be given during 1909 by the well-known Professor Hugo de Vries, of Amsterdam, on (a) "Masters' 'Vegetable Teratology'" (June 22), and (b) "The Production of Horticultural Varieties" (September 28).

The French Horticultural Society of London will hold its twentieth anniversary dinner, under the presidency of Sir Albert K. Rollit, D.C.L., LL.D., at the Café Royal, 68, Regent Street, on Saturday, January 23, 1909. This annual function is invariably an interesting and well-attended one.

Flowers from Scilly.—The continuance of mild weather has favoured the daffodil growers in the Scilly Isles, and already large quantities of Scilly White and Soleil d'Or daffodils, of the polyanthus or Tazetta type, have arrived, and the prospects of an early and good flower season for the islanders are excellent.

National Chrysanthemum Society Fixtures for 1909.—Mr. R. A. Witty kindly sends us the following arrangements for 1909: Exhibitions, October 6 and 7, November 3, 4, and 5, and December 1 and 2. Executive Committee: September 20, October 25, November 15, December 13, and January 17, 1910. Floral Committee: September 20, Essex Hall; October 6, Crystal Palace; October 25, Essex Hall; November 3, Crystal Palace; November 15, Essex Hall; December 1, Crystal Palace; and December 13, Essex Hall.

THE DANDELION-LEAVED EVENING PRIMROSE.

Dowdy though they look in early morning and in the forenoons, the true evening primroses (by which I differentiate those which bloom in the evening from the day flowerers) are charming things in late afternoon, early evening, and during the twilight hours, when they are fully open and reveal their distinctive beauties. There are a few of this class in cultivation, and some are a little troublesome to establish, while others are too tender for the average garden in this climate of ours.

One of my favourites, both on account of its beauty and because of the ease with which it can be raised from seeds should it fail one during a hard winter, is Œnothera taraxacifolia, whose popular specific name is a literal translation of the botanical one. It may not be the finest of the white-flowered œnotheras, but it is certainly one of the best; while it is so distinct in its style that it may well find a place even where Œ. cæspitosa or eximia is cultivated.

Its foliage shows how apt is the specific name of taraxacifolia, as in form it resembles that too familiar enemy of the garden, the dandelion. Indeed, this resemblance is so great that I have more than once caught a weeder in my own garden, whose zeal was greater than his knowledge, rooting out this œnothera for a dandelion, much to his own satisfaction, until convinced of the enormity of his deeds. Yet one cannot be too censorious in a case of this kind, for, to tell the truth, one has nearly committed the same offence, when forgetting the position occupied by a young plant, on its first showing growth in spring. The foliage is greyer than that of the dandelion, but otherwise the resemblance is most marked.

As for the flowers, they are lovely things, which open up a pure white, and gradually assume a pale rosy tint as they age. By the morning they are quite a rose-colour, and are shrivelled up in decay. The plant itself grows only about six inches high, but is of trailing habit, so that it is quite a good subject for trailing over a bank or rockwork.

The cultural requirements of Œ. taraxacifolia are not too exacting, and could we only be assured that it would stand every winter we would have an ideal plant of its kind. But the fact that we cannot be confident that this evening primrose will not vanish during a severe season is the fly in the pot of ointment to the cultivator in British gardens. Time after time has one plumed oneself on having established this lovely flower; and then a hard winter came, and all our self-satisfaction vanished under the stern influence of the fact that this evening primrose was no more.

Yet, after all, the loss is not irreparable, for no plant is more easily raised from seeds, and the seedlings, if put early enough under weigh, will even bloom late in the same year. A suggestion made a number of years ago in "Alpine Flowers" is still worth considering for those who have no rockwork. This is, to raise seedlings of Œ. taraxacifolia in early spring, and to prick out the seedlings on rose beds between the roses, when they will flower the same autumn.

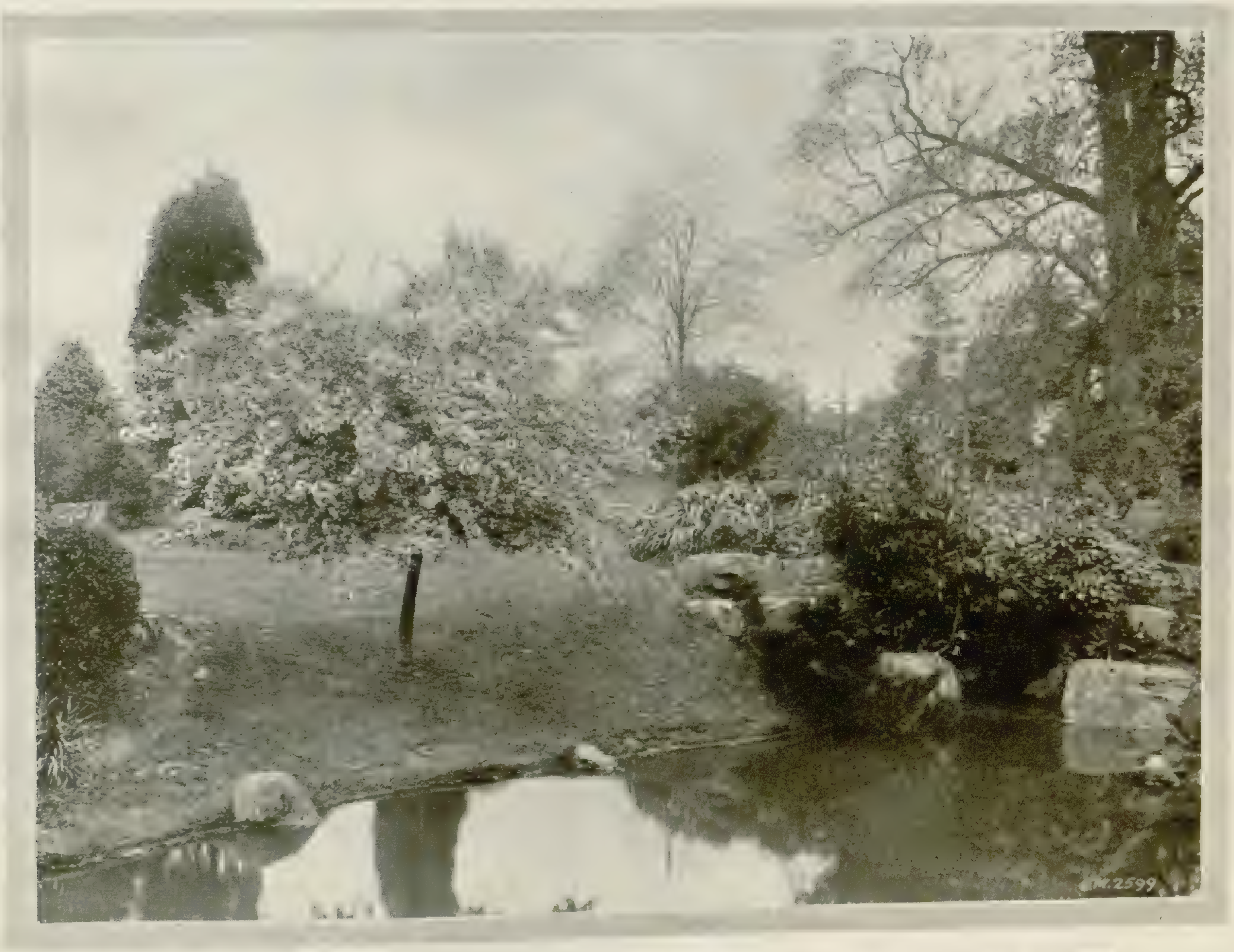
I prefer to sow the seeds under glass, and to prick the young plants out early in the season.

If required to stand the winter, plants ought to be set in a rather dry position; and in severe winters have an inch or two of ashes or litter put over them.

S. Arnott.

PYRUS MALUS FLORIBUNDA.

Among the many beautiful early flowering trees, few can surpass Pyrus Malus floribunda when in full bloom. It is suitable for planting in all parts of the pleasure grounds, but in no place does it present a more pleasing and natural appearance than when planted on the banks of a stream, lake, or any form of ornamental water. The accompanying illustration depicts a tree which was planted in its present position about fourteen years since, and has never failed to produce a wealth of blossom each year.



PYRUS MALUS FLORIBUNDA GROWN AS A STANDARD TREE AT ALDENHAM HOUSE.

The charm of this tree is that long before the flowers fully open it is most conspicuous, and the flowers themselves last for a considerable time. The tree, even when not in flower, owing to its pretty pendulous habit, is always an object of beauty, and later on in the year when covered with its tiny, crab-like fruits, it is very beautiful again. Far too often one sees this pyrus crowded in amongst other trees and shrubs where it has no chance whatever of assuming its natural habit, and then, except when in flower, it is hardly noticed or recognised.

Pyrus Malus floribunda atrosanguinea is a very deeply coloured form of the above, and is equally valuable.

E. Beckett.

Aldenham House Gardens.

IN A CHRISTMAS GARDEN.

A scent in the air of newly-turned earth, enriched by decaying leaves, so unlike the crisp rustling carpets that clothe the land elsewhere in ruddy brown; a corn-coloured glory where bracken fern appears among evergreens in the many-berried shrubbery; a background of maroon where the sunset glow rests on the wall cloaked with Hedera helix purpurea; hope shown by the swelling green tips of the lilacs, the white among the spears of the snowdrops, and sung by the hymn of the robin. Christmastide is beautiful in a garden to all who are true country-lovers.

In the orchard the gardener's skilled eye can prophecy which trees will be best decked with the blossoms that bitter spring may perchance scatter like snowflakes, and here it is, too, that the apple trees support their white-berried sycophant, who feigns to cling gladly to arms less strong than those of forest giants. Is it not recorded in verse:

> "But the Mistletoe—Oh! it was perhaps but
> a joke—
> Thought himself once a king, so he crept up
> an oak;
> But he found it so lonely that soon he stole
> out,
> And now every Christmas goes prowling
> about."

There are lessons for floriculturists written large in this garden, which boasts a collection, lovingly gathered together, of most of the trees, shrubs, and plants that look fair at this season; not only are they present, but so well arranged that southern suns and winds can alone reach the more delicate species. Note how a hedge of plain laurel, and aucubas with shining fruits, intercepts both north and east gales before they can breathe ever so lightly upon the clumps of laurustinus, between which the Christmas roses spread elegant leaves and raise up silver blossoms. Violets nestle right under the branches of the flowering shrubs, kept company by hartstongue ferns, which, in these nooks, are never out of foliage; a foreground carpet of variegated vinca has been trained and pegged with a precision that has no stiffness, but serves to show off each graceful trail, and already there are sword-like growths rising from the pale gold expanse, proving that the early native daffodil will soon be budding.

There are walls around a border of late herbaceous plants, on three sides of it at least, and the aspect is due south, so no wonder there are Michaelmas daisies and chrysanthemums still lingering, with a scattering of the yellow viola Ardwell Gem, that seems most constant and hardy of any. Asters Novæ-Angliæ roseus and ruber, valued little in October, when they commence, now offer precious trusses of dull pink and red-crimson florets. Aster polyphyllus has a greater charm even than these latter, since its pure blooms are gifted with clear gold centres. The finest white aster of any stands by itself in a mass tied back to fill a wall corner, opening buds still at the summit of its five-foot stems, although it began to unfurl large lower flowers in September. Truly there should be no garden without Aster Novæ-Belgæ White Spray.

It is a holly hedge that flanks the path by this border, and careful planting has located crimson chrysanthemums furthest away from it, lest the scarlet of Saturn's berries should clash with their harmony. Who remembers now that in days of old Christians were accustomed to decorate their homes with this evergreen, not as now to please all, but in order to escape imprisonment, torture, and death?. The Romans kept their gods' festival at the time of our Christmas, so the holly that seemed to be set up for Saturn was, in countless instances, homage to the King who came in the humble manger of the Bethlehem stable.

One of the best of the late crimson outdoor chrysanthemums is William Holmes, but Julia Lagravière is brighter. White Quintus stands here against the red wall, Source d'Or gives dull orange, and there are yet blush blossoms upon Madame A. Nonin. All around may be noted a carpet of winter aconite, snowdrop sprinkled, and at the border ends Tussilago fragrans spreads and thrives, calling attention by its heliotrope fragrance to lilac spikes that would be, no doubt, despised at other seasons.

Surely no praise can be too great for the clear yellow stars of winter jasmine? It is difficult to believe that any garden can be without them. Train it out on a south wall, cluster it to the verandah pillars on north and west, bind it to arches in the open, stretch its luxuriant growth across an east trellis, so you shall have it, as visible this December, flourishing in all stages of floral development. The summerhouse, designed more for use in frost time, is just a bower of Jasminum nudiflorum and silver-variegated ivy, clustered round by large-fruited rugosa roses, the lavish Snowberry (Symphoricarpus), and the bold Berberis aquifolium. One more colour show remains to be greeted; it is formed by an unfamiliar climber on the southern house front, the drooping purple Lardizabala biternata; beneath it golden privets have succeeded in retaining leaves bright as flowers.

Indeed, where gardens are well planted and assiduously tended they can charm in winter even town worshippers, to whom pavement and chimney generally represent comfort. The swept and constantly rolled turf may keep some moisture throughout both day and night, but the gravel that is devoid of weed or rotting leaf lies a smooth and inviting track, flecked over by shadows and sunshine that play as jubilantly now as when the roses of July are present.

Is there a nipping blast? If so, it serves to brace the nerves and tonic every system. So let us welcome "chill December," who, when he came, as Spenser tells us,

> . . . "Through merry feasting which he
> made,
> And great bonfires, did not the cold remember,
> His Saviour's birth his mind so much did
> glad."

M. H.

ROSES GATHERED IN A YORKSHIRE GARDEN IN OCTOBER.

LATE ROSE BLOOMS.

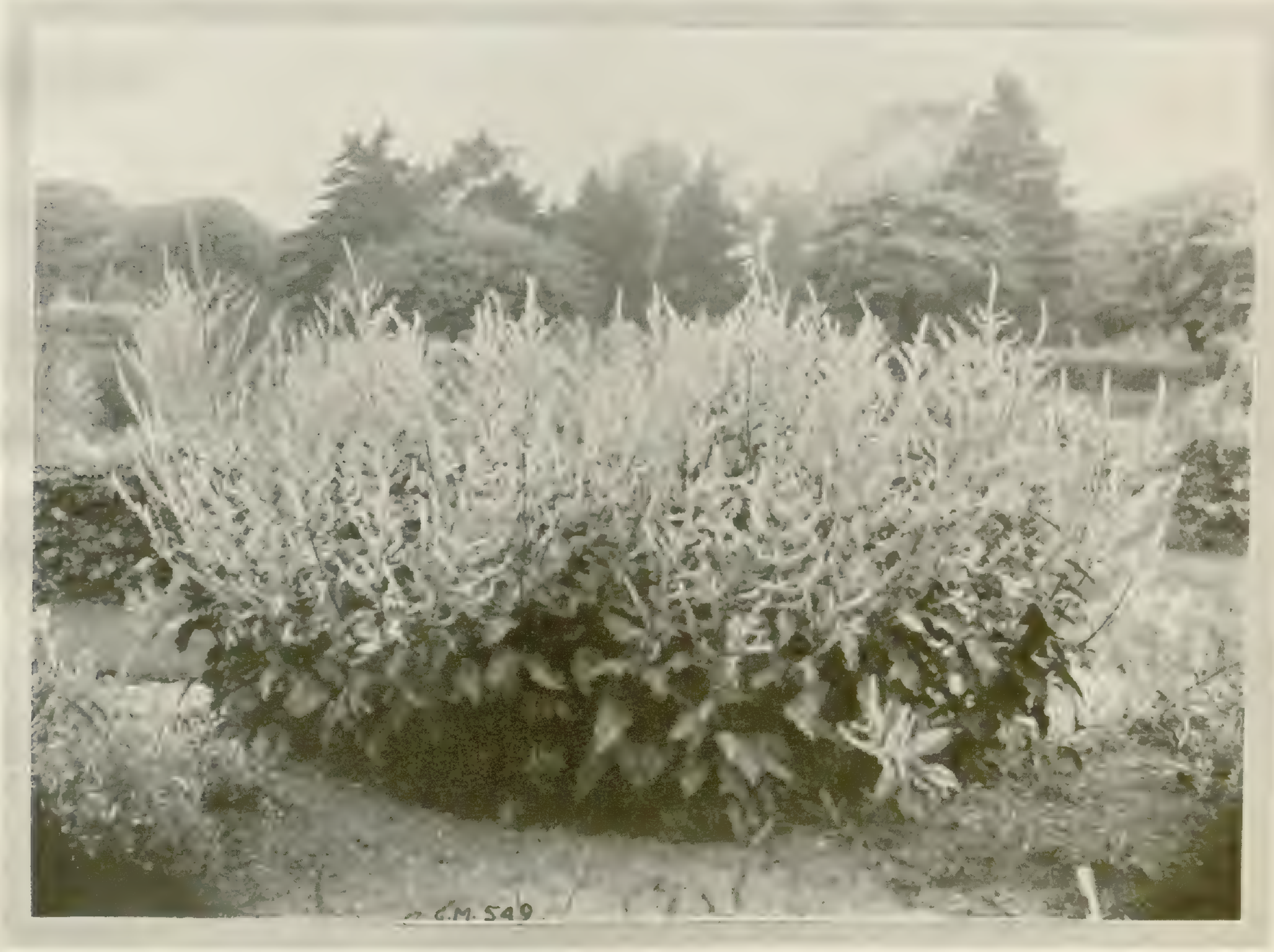
Most of our readers have heard of the roses that Mr. Mawley, Mr. Orpen, and the Rev. J. H. Pemberton are sometimes able to gather out of doors at Christmas time, but we do not expect roses to remain very late in bloom in Yorkshire. It is therefore the more interesting to learn from Mr. W. Taylor, of Ferniehurst Gardens, Baildon, Yorks, that he was able to gather fine roses during mid-October, as evidenced by the photograph of a vase of blooms herewith reproduced. Mr. Taylor states that it is rarely such good blooms are to be obtained at so late a date; the gardens are only three miles from Bradford and near to several other big manufacturing towns, so that the conditions are not the most favourable.

Roses may be grown to perfection by following the instructions given in Roses and Their Cultivation, by T. W. Sanders. A selection is given, with description of all the best varieties, and full details for culture outdoor and under glass. Price 2s. 6d. net, by post, in box, 2s. 10d., from W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London.

NOTES FROM KEW.

Impatiens Holsti and its Varieties.

When the vermilion coloured Impatiens Holsti was first introduced from East Africa anticipations were indulged in that apart from its own intrinsic merit it might prove of considerable value to the hybridist, and perhaps lay the foundation of a new race of balsams. These anticipations have, at least to a great extent, been realised, and in the greenhouse there is a group of distinct forms with the habit of I. Holsti, but whose flowers vary from white through several shades of pink, red, and violet. They are certainly a decided acquisition for the embellishment of the greenhouse at this season, for they are of easy culture, quick growth, and very floriferous. They may be readily increased from seeds or cuttings.



GROUP OF THE HUNGARIAN BEET (BETA TRIGYNA) IN THE CAMBRIDGE BOTANIC GARDENS.

Platytheca galioides.

This is one of the most graceful and continuous flowering of the so-called New Holland or hard-wooded plants. It is at the present time very conspicuous among the varied occupants of the greenhouse. Known also as Tetratheca verticillata, and Tremandra verticillata, it forms a slender growing plant, whose long, wiry stems are clothed with very narrow leaves, arranged in whorls of eight or ten. The saucer-shaped blossoms, which are of a beautiful shade of blue, are drooping, and hang suspended by long slender stalks. As the lowermost flowers pass out of bloom the shoots continue to lengthen, and produce flowers for a long time.

Pinguicula caudata.

Referring to my previous note regarding this pinguicula, which appeared in the Gardeners' Magazine for November 14, page 855, I may mention that the specific name of cordata, which was in use at Kew, has now been altered to caudata, so that the old name remains undisturbed. Reference to the "Botanical Magazine" convinced me that the specific name of caudata was the correct one, unless our botanical friends had been indulging in another of their favourite pastimes of changing old and well recognised names.

Hippophæ rhamnoides.

This, popularly known as the Sea Buckthorn, forms one of the brightest outdoor features at the present season of the year. It is a willow-like shrub, clothed with peculiar greyish-green leaves. Just now the slender wand-like shoots are furnished for some distance with a closely-packed mass of bright orange-coloured berries, and when a quantity of plants are grown together as on the bank of the lake near the Palm House, the effect as viewed under the influence of the winter's sunshine is a really delightful one. In planting the Sea Buckthorn, it is very essential to note that the male and female flowers are borne on different plants, so that it is necessary to plant about one male to half a dozen females, in order to ensure fertilisation.

Celastrus articulatus.

This vigorous climbing shrub, which is a native of China and Japan, is not adapted for training to a wall or any position where it has to be kept within certain bounds. Given a place, however, where it can be allowed to run wild over other trees or shrubs, which may be either dead or alive, it is seen to very great advantage. Just now it is at its best, the long thong-like shoots being clothed for a considerable distance with brightly coloured fruits. These fruits, which are borne on short stalked clusters, are yellow when ripe, after which they split open and expose the bright red seeds, after the manner of the euonymus, to which, indeed, the celastrus is nearly allied. In the "Forest Flora of Japan," Dr. Sargent refers to this celastrus as one of the commonest plants on the mountains of Japan, and states that the leafless branches covered with fruit are sold in the autumn in great quantities in all Japanese towns, where they are used in house decoration, for which purpose they are admirably suited, as the brightly coloured fruit remains on them for many weeks.

Cotoneaster rotundifolia.

Perhaps the finest of all the shrubby cotoneasters, this has up to now retained nearly, if not quite, the whole of its leaves, and the bright scarlet berries nestling among them form a charming feature. This cotoneaster should be more often planted than it is, but the fact that the less showy C. buxifolia sometimes does duty for it has probably led to it being less appreciated than would otherwise be the case.

K.

THE HUNGARIAN BEET.

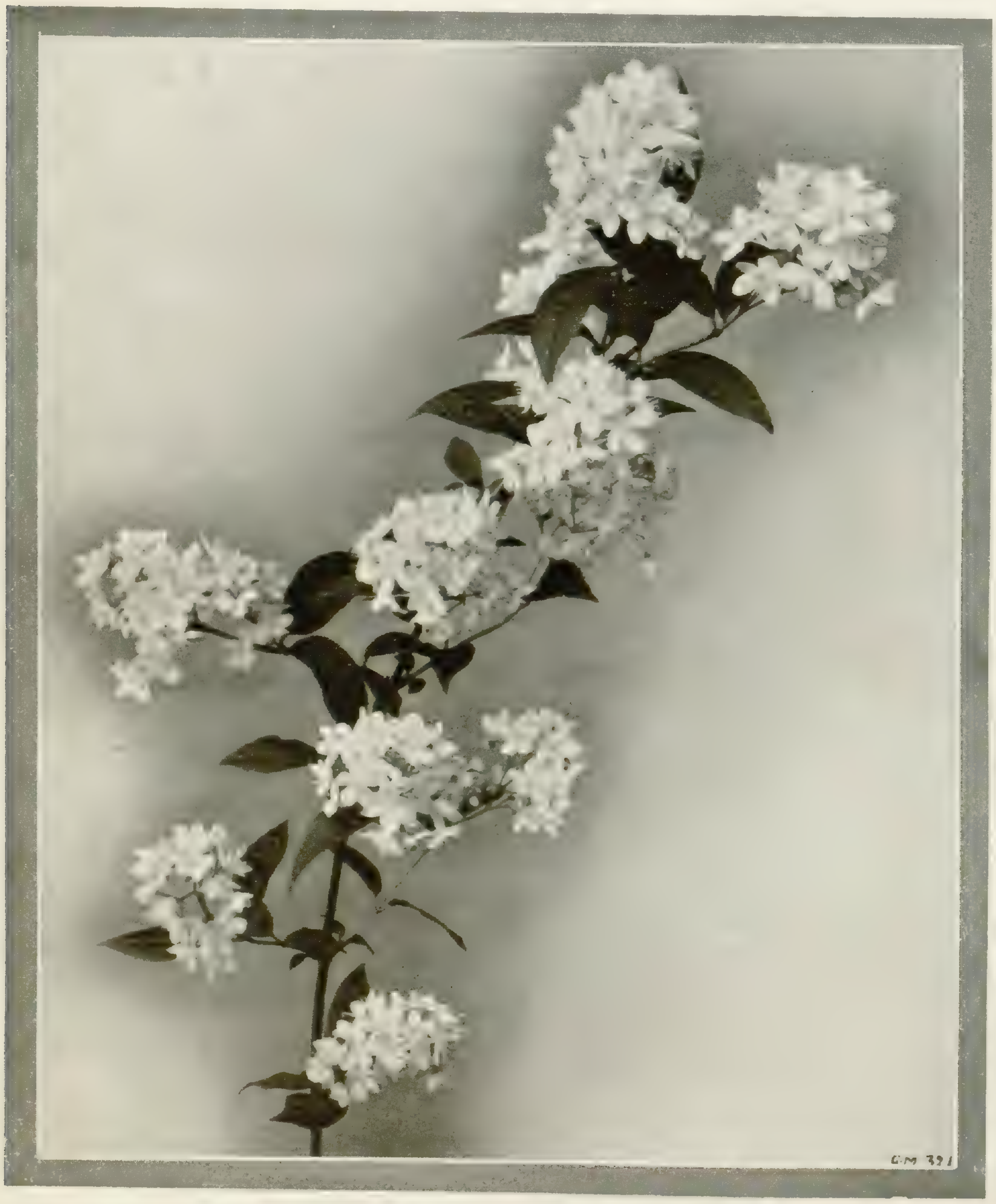
Unlike the forms of Beta maritima and B. Cicla, which are grown for their roots or foliage, the subject of this note—Beta trigyna, is valuable as a flowering plant in the herbaceous border. It is a perennial, growing four feet high, and producing large panicles of greenish-white flowers during July and August. The accompanying photograph represents a most effective clump in the Cambridge Botanic Garden, which measured six feet through, and over four feet in height. The stems are stout and strong, and seldom require the support of stakes. Neither does the plant require any special treatment, being quite happy if undisturbed for some years.

E. J. Allard.

Cambridge Botanic Gardens.

THE MISTLETOE.

The festivities which attend the anniversary of Christmas are not considered complete except a bunch of mistletoe be included amongst the various evergreens which are introduced into the house for decorative purposes. How or when the custom originated of decorating houses with evergreens is opén to conjecture, but it appears to have been in vogue at the time when the Roman Empire was supreme, for the Romans are stated to have used evergreens freely in the decorations attending their various festivals. Some historians affirm that the custom of using evergreens for Christmas decorations is the outcome of the custom of the early Christians who used them when celebrating the Christmas festival, so that they should not be conspicuous amongst others who were at the same time celebrating the feast of the Saturnalia.



SPRAY OF DEUTZIA LEMOINEI.
Flowers pure white.

However it occurred, these decorations appear to still exercise the same hold on people, and it is probable that more cut evergreens are used at the present time for decorative purposes than ever before. So much discrimination does not, however, appear to be made now in the selection of evergreens as was the case in the past, for some kinds were considered of far greater importance than others, probably on account of their mystic and legendary associations. For instance, the holly occupied a more important place than the ivy, the former being used in the festal hall whilst the latter was consigned to passages and places of little account. The yew was not supposed to be used for Christmas at all, its proper time being from Palm Sunday to Easter. Other evergreens also were apportioned their correct seasons, but a few appear to have always been accorded a prominent place at Christmas, and of these the mistletoe is one.

Various legendary associations are attached to the mistletoe, some of which are worth recording. The following one bearing reference to the mistletoe's parasitic nature is recorded in several old books, and may also be seen in "Folkhard's Plant Lore": "According to Scandinavian mythology Baldr (the Apollo of the north) was rendered by his mother Frîgg proof against all injury by the four elements, fire, air, earth, and water; Loki, the evil spirit, however, being at enmity with him, fashioned an arrow out of mistletoe (which proceeded from neither of the elements), and placed it in the hands of Hödr, the blind deity, who launched the fatal dart at Baldr, and struck him to the earth. The gods decided to restore Baldr to life, and as a reparation for his injury the mistletoe was dedicated to his mother Frîgg; whilst, to prevent its being again used adversely to her, the plant was placed under her sole control, so long as it did not touch the earth, the empire of Loki. On this account it has always been customary to suspend mistletoe from ceilings; and so, whenever persons of the opposite sexes pass under it they give one another the kiss of peace and love, in the full assurance that the plant is no longer an instrument of mischief."

According to an old legend current in some of the western counties of England the mistletoe at one time grew in the ground, and formed a tree of considerable size, but, on account of the wood being used to form the cross for the Saviour's crucifixion, the tree was henceforth condemned to grow as a mere parasite.

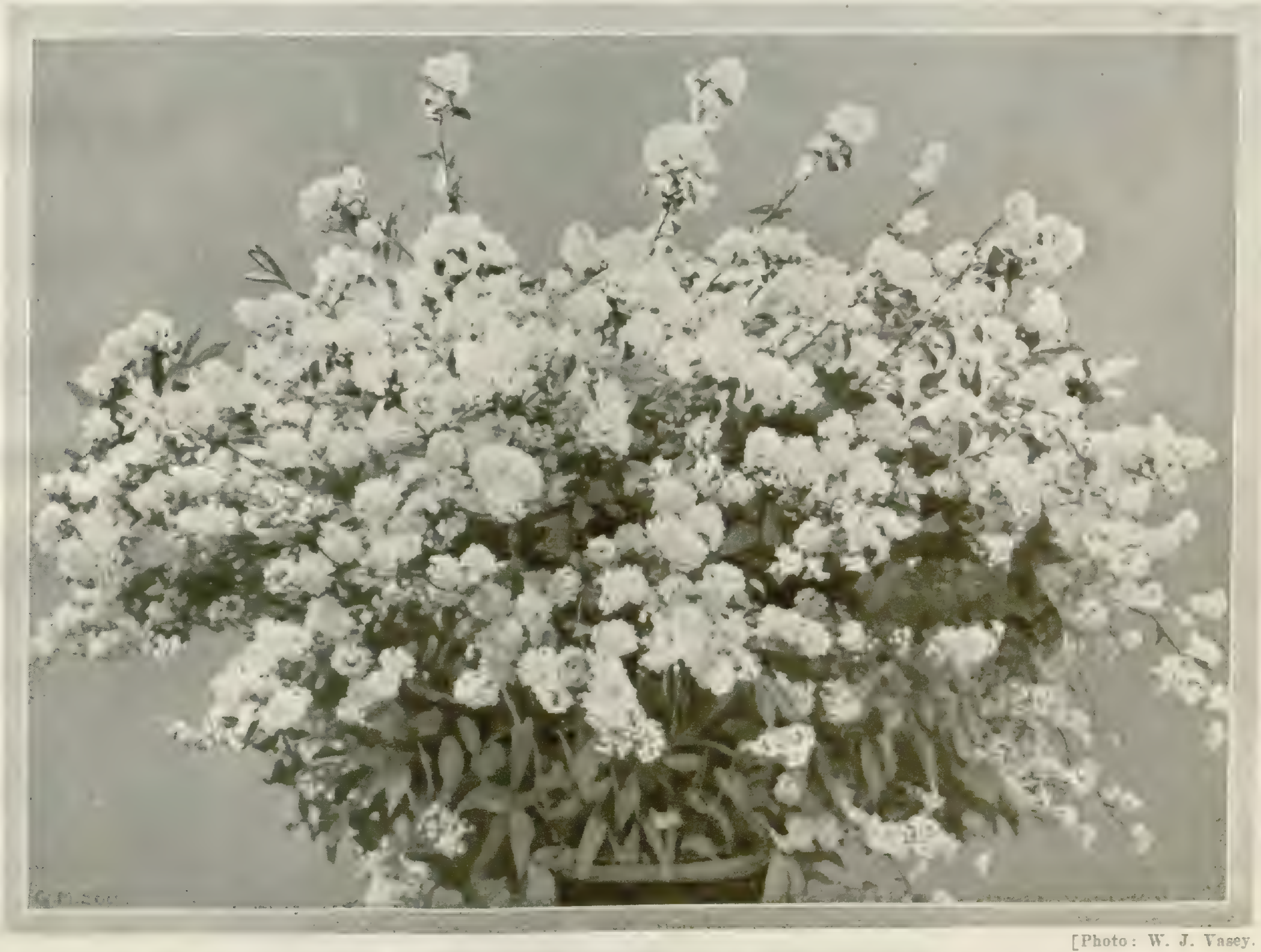
The mistletoe was also considered to be endowed with magical properties in the days of witchcraft, and was used by witches in their spells and incantations. In the event of young ladies wishing to know something about their prospective sweethearts, these went in batches of three to a witch. She formed a chain of holly, mistletoe, and juniper berries, with an acorn forming the end of each link. This chain was wound round a log of wood, and then burnt, with certain magical rites and incantations. As the last acorn was burnt each of the three maidens would see her future husband walk across the room, or if she were doomed to live an old maid's life, a coffin or misshapen form would appear.

Mistletoe was also considered useful, if treated in a proper manner, for engendering dreams of a person's future destiny. This charm was to be worked in the following manner: On Christmas Eve, or the first and third evenings of a new moon, nine fresh mistletoe berries must be gathered. These must be steeped in a liquid composed of equal parts of wine, beer, vinegar, and honey, and then be taken as pills. Providing the person went to bed before midnight, and the pills were taken on an empty stomach, his future destiny would be revealed to him in dreams. The mistletoe was at one time also credited with possessing miraculous medicinal properties; it was said to possess the power of opening all locks, and the carrying of a sprig protected the wearer against the machinations of witches. Culpeper prescribed the powdered leaves and berries taken on forty successive days as a sure cure for apoplexy, palsy, and falling sickness.

As a rule, the mistletoe is found in the greatest profusion on the branches of apple trees in the western counties, being very abundant in the cider districts. It, however, grows on many kinds of common deciduous trees, such as poplar, lime, pear, birch, willow, and mountain ash. It is occasionally met with on oak, and on this account it was held in high esteem by the Druids. The oak was endowed with an air of sanctity by the Druids, and when they found an example with mistletoe growing on its branches they are recorded as having at once stamped it as a holy tree, and considered the mistletoe as a divine gift of peculiar holiness, only to be gathered with befitting ceremonies on the sixth day, or at the latest on the sixth night, of the sixth moon after the winter solstice, when the year commenced. Pliny refers to the Druids selecting oaks with mistletoe on as a place for the performance of their sacred rites, thinking "that the mistletoe on the oak is sent from heaven, and that it is á sign that God has chosen the tree."

The ceremonies performed by the Druids in gathering the mistletoe were peculiar. A feast was prepared, and two white bulls were obtained for sacrificial purposes. The high priest ascended the tree, and, with a golden pruning hook cut off the branch, which was allowed to fall into a white sheet below. The bulls were then sacrificed, the priests and people meanwhile praying that God would bless his own gift to those on whom he had bestowed it. The branches were then steeped in water, and the liquid was afterwards distributed to persons who deserved it, and its retention by those persons was considered a safeguard against the spells of witches. It was imperative that when being gathered the branches should not come into contact with the earth, for the moment a branch touched the ground its magic virtues departed.

Although the mistletoe (Viscum album) grows so abundantly in some parts of the country, it has been found to be difficult to establish in others. The best way to propagate it is to rub the seeds into crevices on the rough bark of apple trees, and leave Nature to do the rest. In some Continental countries other kinds of mistletoe exist, notably Loranthus europaeus, which grows on the oak in Southern Europe, and bears bright yellow berries; and Viscum cruciatum, with red berries, which appropriates the olive for a host plant. W.



[Photo: W. J. Vasey.

DEUTZIA LEMOINEI GROWN AS A POT SPECIMEN.

This splendidly flowered specimen was shown at the Ghent Centennial Exhibition, in April last, and had a diameter of over six feet.

Herbaceous borders may still be dug and attended to, but where there are bulbs in the borders great care must be taken not to damage these, as they are now in quite active growth, the tops of many of them already showing well above ground. In favoured districts the earliest snowdrops will soon be in bloom, hellebores are already giving of their beauty, while in the wild garden periwinkle, Tussilago fragrans, aconites, etc., will soon commence the glories of another season.—E. F. HAZELTON.

DEUTZIAS.

Within the last fifteen years a number of very pretty hybrid deutzias have been raised and distributed by Mons. Lemoine, the eminent French hybridist, of Nancy, and these, together with several varieties of well-known species, constitute a group of shrubs of some considerable importance in gardens. The deutzias are closely related to the Mock Oranges, or philadelphuses, but are less useful for general outdoor decoration on account of starting into growth early; and although the flowers do not usually expand before May or June, the buds are sufficiently advanced in early April to make them the prey of late spring frosts, and it is only about one year in four that a full crop of flowers is matured in the neighbourhood of London. When, however, they are seen at their best their beauty is surpassed by no other flowering shrub, and for this reason their value is sometimes a little overrated.

Apart from outdoor use, however, these hybrid deutzias have found for themselves a place in the garden for which they are eminently suited, and for which there are no better plants. This purpose is forcing for indoor decoration. Perfectly hardy, so far as winter cold is concerned, young plants may be left out of doors all the winter, be cut back in March, and allowed a long growing season. They then form shapely bushes of strong, well-budded shoots, which may be depended on to produce good blooms throughout the greater part of their length. These plants, lifted carefully in October, and potted, may be forced into flower by Christmas, or soon afterwards, and a succession of the most lovely flowering shrubs imaginable can be had from that time onwards for three months.

For house decoration the long, slender, flower-laden, wand-like shoots are peculiarly appropriate, whether used alone or intermingled with other flowers. After the flowers are over the forced plants should be gradually hardened off, the flowering growths meanwhile being cut back to within a few buds of the base. The plants should eventually, say, about the end of April, be planted out in a border of rich loamy soil, and allowed to form fresh shoots. Some plants will grow well enough to warrant them being forced the following spring, whilst others may have to remain for another year. As a rule it is inadvisable to retain the same plants very long, those three to six years of age being the most serviceable. Cuttings of young shoots root readily indoors, so there is no reason why a succession of young plants should not be arranged for. Specimens growing in the open ground require rich soil, and are benefited by being given a generous top-dressing of well-decayed manure every spring. For districts where spring frosts are not prevalent all the deutzias may be introduced into the garden with advantage, the only drawback to their culture in other districts being occasional cold nights and biting winds.

The species that have been used most successfully in the production of hybrids are D. gracilis, D. discolor, and its variety purpurascens, and D. parviflora.

D. gracilis is a well-known Japanese species of slender habit, which grows about two feet in height. It was first brought to notice in 1835, and is recorded as having been introduced by M. J. Baumann, a Ghent nurseryman. It has small, ovate, acuminate, serrated leaves, and bears a dense, short raceme of pure white flowers from almost every bud on the preceding year's shoots. For many years it has been held in esteem for forcing, and was popular before many of the subjects used for the purpose in the present day were tried. Several well-marked varieties are known; some of the best being foliis aureis, marmorata, and variegata, all of which are distinguished by their variegated leaves.

D. discolor is usually represented in gardens by the variety purpurascens. It is a stronger growing shrub than the last-named, attaining a height of three or three and a-half feet. The leaves are more or less ovate, and finely serrated. The flowers are borne somewhat similarly to those of D. gracilis, in axillary racemes, and are very similar in size, but deeply flushed with rosy-purple. It is a Chinese plant, and is found in company with many other interesting shrubs in Yunnan. A later variety is known as grandiflora. This has larger flowers and inflorescences, and more vigorous growths. It promises to be a valuable shrub.

D. parviflora is likewise a Chinese shrub. It was discovered in Northern China, in the Amoor country, and was first introduced to the St. Petersburg Botanic Garden. From there it was sent to the Arnold Arboretum, and from there it was distributed to various American and European gardens. It is a strong-growing shrub, four to five feet high, with elliptical or lanceolate leaves with serrated margins. The flowers are white, and borne in axillary and terminal corymbs.

Hybrids.

The happy idea occurred to M. Lemoine in 1891 of crossing the last-mentioned species with D. gracilis, D. parviflora being the female plant. From this cross plants were obtained which flowered in 1894. On April 12 of that year these were exhibited under the name of D. Lemoinei at one of the meetings of the Société Nationale d'Horticulture de France, where they caused a great sensation. D. Lemoinei had by 1895 attained a height of three feet, and each plant was estimated to carry from 1,000 to 1,500 blossoms. Mature plants attain a height of five feet, with elliptical or lanceolate leaves, and a profusion of inflorescences of pure white flowers, intermediate in form between those of the two parents, the individual flowers being large. When at its best the branches are literally covered with flowers. A variety called compacta, of dwarfer habit, but equally floriferous, was subsequently introduced.

On the introduction of D. discolor purpurascens M. Lemoine quickly recognised its qualifications as a probable parent, and succeeded in obtaining a race of beautiful hybrids between it and D. gracilis. These are all very floriferous, and are distinguishable by reason of their purple-flushed flowers, and, in some instances, campanulate or evenly-shaped corollas. Of this set two of the best are D. campanulata and D. kalmiæflora. The undersides, especially of the petals, in both cases, are flushed with rosy-purple. If forced in much heat a great deal of the colour is undeveloped; if, however, the plants are allowed to come on in a moderate temperature a richness of colouring almost equal to that produced by plants out of doors is obtained.

From the accompanying illustrations of a plant and spray of D. Lemoinei a good idea can be gained of the floriferous character of this plant. W. Dallimore.

Royal Gardens, Kew.

WARNER'S KING APPLE.

This apple seems to be fast on the wane, not only in popularity, but in its constitution also—presuming that there is such a possibility in an apple. This is not a fanciful idea of my own, but in conversation with several fruit experts, including Mr. Woodward, at the late show of the R.H.S., they all agreed the results from this variety in crop and quality of the fruit at the present time are indeed poor as compared with what they were fifteen years ago. My experience of this apple, with several hundred trees, is that we obtain quite fifty per cent. less of satisfactory fruits than formerly. Scarcely ever do we have a season when there is a full crop set, and when we do have one three parts of the fruits drop instead of taking on their first swelling. Seldom, indeed, do we find a tree free from apple scab, in spite of careful spraying. The leaves, quite early in the season, become infested with dark brown fungus-like growths, which eat into the leaf tissues, rendering them useless as an aid to the tree in swelling its fruit. Quite frequently, too, when the trees are in full bloom we experience a spell of cold, depressing, sunless weather, and this they do not appear able to withstand.

It is not so with other varieties like Lord Grosvenor, Bramley's Seedling, and Lane's Prince Albert. I find, too, that some other apples grafted on to Warner's King do not flourish as they do upon other varieties. The branches have a knack of dying off in various parts of the stock, which is a loss to the newly worked varieties. Some suggest a new strain of seedlings from this variety to give a fillip to its constitution. At the shows one notices an absence of that quantity of fine fruit so common fifteen years since.

What is the experience of readers? According to the late Dr. Hogg, Warner's King is fully a hundred years old. I am quite aware I am advancing a new theory, which may not meet with even general support; but the fact remains. Encouraged by the results from trees planted here thirty years ago, I, in 1890 planted two hundred trees of Warner's King, and for a few years these were a success, the fruits large, quite clean in the skin, and of a good colour for the variety. Although this variety is liable to canker seriously in some soils, I do not complain of that evil.

Swanmore Park. E. Molyneux.

Kirengeshoma palmata.—One of the probable results from the rise of Japan will doubtless be the larger introduction of plants from that country bearing Japanese names, but it is devoutly to be wished that few will carry such troublesome ones as this one, which is as yet but little known, although it has been cultivated at Kew for at least six or seven years. Such names as this are great obstacles to the popularity of even a good flower with the many, who like to have a name for any plant they grow, but who either will not, or cannot, negotiate these designations of such length and formidable appearance. This by way of protest, and now for a short note upon this flower, which belongs to the great natural order of Saxifragaceæ, and has pretty creamy-yellow flowers and ornamental palmate foliage. It has not been much grown in this country, but so far as I have met with it the plant reaches from a foot to a foot and a-half in height. It flourishes in common soil in a border, but I have seen it doing particularly well in a low corner of a good rock garden, and in a position where the soil would be kept moist by the surplus water draining down from above. It is a hardy plant, and is being offered by one or two nurserymen in this country.—S. Arnott.

HEPATICAS.

Several flowers that were favourites in English gardens for untold years have quite gone out of fashion in recent years, and of these the hepatica is one, rarely being seen now in any but old-fashioned country gardens. Apart from the unaccountable changes of fashion, the reason of this neglect of such a beautiful flower is doubtless to be found partly in the early season of its flowering—sometimes as early as February—when we make but little use of our gardens—and partly in the fact that it is not showy enough to make any display, unless in very large masses, and these, by reason of the slowness of its increase, it is not easy to secure. We cannot have it in our summer beds and borders within view of our windows, as it does not like annual transplanting, and thus the field for its use is limited. Add to this the fact that it is a plant which will not thrive everywhere, and one may well ask—why say anything about it?

The answer must be that some varieties of it are among our very few sky-blue flowers, and, in the sunshine of early spring, one of the most beautiful. Without going so far as to say that it is one of those flowers which should be in every garden, at least one may say that where the conditions are just suited to it so that it not only increases at a moderate rate but seeds itself, advantage should be taken of this fact to grow it.

The hepatica is generally considered to like a deep, rich, loamy soil, one that is porous, or inclined to lightness, and yet I have known gardens in heavy clay districts where it has formed very large clumps, though I cannot say how many years have been necessary for this. It is best left for years undisturbed, as it is a very deep rooter, and it is doubtless owing to this that it is generally such a failure on retentive soils. I used to know a garden where it seeded itself about the garden paths, and yet one never sees its seeds mentioned in any nurseryman's catalogue. The situation in which it is most likely to do well is on made banks, where it will sometimes hold its own with the primrose and the violet, all three preferring somewhat shaded and sheltered positions. Hence, conditions of soil being favourable, it is well adapted for growing under deciduous trees, where it will get the early spring sun to open it and show it up—as it is like the crocus in this respect—and at the same time will have shade in summer.

Another good place for it is on the rockery, but it must not be overrun by other things in the summer or it will disappear altogether. Like some bulbs, it seems to like the company of the roots of other and stronger plants and shrubs, probably because they help to keep the soil open and free from excess of wet in the winter. Though it likes a porous soil, and is a deep rooter, it will not stand excessive drought, and the difference between success and failure may sometimes be brought about by placing small stones round the plants to retard evaporation and keep the surface soil moist. The best time, or, rather, the safest time, to plant is in February, when it is already getting ready to flower. As one scarcely knows until one tries it whether it will succeed or not, it would be best to begin with a few plants and see how the conditions suit it.

As to varieties, I still consider the best, taking all things into consideration, is the old single blue. This, and the double red are the two best known, but there are also a double blue, a single red, and a white. There is also the H. angulosa, known as the great hepatica, a large-flowered single blue form, and very beautiful, but in my own experience not so free-flowering as the older and smaller single blue.

Alger Petts.

THINK AND THANK.

We stand at the close of another year. The gate is shutting behind us, and in thought we look back through the bars and see our successes and failures. If work has been well and faithfully done then the measure of our success has been large, and there comes a feeling of devout thankfulness for the health, strength, and opportunity that have been ours. Of course, there was something we might have managed better, but of this we say as little as possible, though in brain and book there are notes very boldly made, and, all being well, we shall avoid that mistake in the year that is dawning. Successful gardening consists largely of doing the right thing at the right time; a large measure of that success is also obtained by the avoidance of previous mistakes. Failure to profit by past experience makes many a garden dull and uninteresting, and it is very regrettable that not seldom "knowledge comes but wisdom lingers." It is a fine thing to start the New Year with high resolves and new resolutions, to start with the proverbial clean sheet. In our younger days we blotted the exercise book badly, but the experienced teacher taught us how to hold the pen properly, and there was punishment for the untidy writer. The garden year that is closing, shows, let us hope, fewer mistakes than the previous one. A good teacher, our own experience, and a fountain pen, have reduced blots to a minimum; so, in the garden, with Nature's book ever open, the memory of difficulties overcome, and proper tools to work with, the prospects are distinctly good.

Here we stand then, at Think and Thank Gate. We think of the past because we want to think for the future. We are thankful for the fine long summer, and warm autumn, for the beautiful flowers and abundance of fruits, for ample supplies of vegetables, for the new introductions from far-off lands, and for the new plants and flowers given us by the combination of keen mind and skilful hand of the hybridiser. It is good to be alive. We have no use for the "good old days." The more we think the more shall we thank Him who first "planted a garden eastward in Eden," even though the lines may not have fallen unto us all in pleasant places. We all hope for better things, but as "seed time and harvest, summer and winter" have never failed us, and never will, we think of the old year without any trace of bitterness, and of the new one without any suggestion of despair. We will do our duty to our employers, our duty to those we employ, better in 1909 than in 1908. We will not forget the orphan and the widow, or those who have fallen in some wayside garden, or those who are struggling in the waste places, so that when again we come to "Think and Thank," we shall see more of beauty and of sunshine in the garden of our own heart.

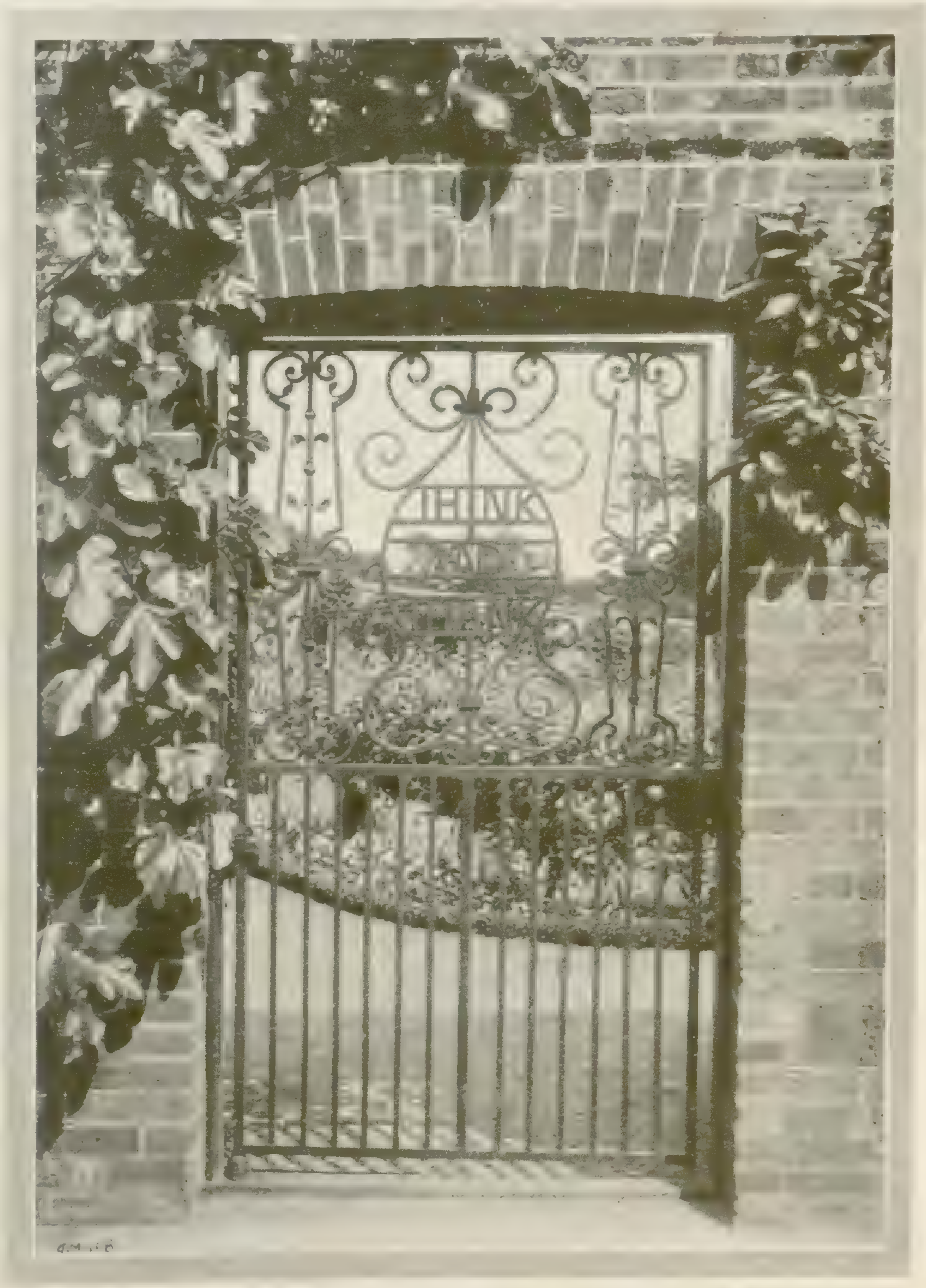
A little homily is this. Perchance it may find a place in the Gardeners' Magazine, and touch responsive chords in the hearts of some readers. It has been suggested by one of the many fine gates, all of distinct character and suggestiveness, at Lord Burnham's home at Hall Barn. This is the "Think and Thank Gate," opening into the kitchen garden.

C. B.

WORK FOR THE WEEK.

THE ORCHID HOUSES.

WINTER - FLOWERING CYPRIPEDIUMS.—This section may now be characterised as the most popular of all orchids, not so much perhaps because of their being among the most tractable of orchids to cultivate, and for their great utility and the lasting qualities of the flowers. What a boon these plants are where there is a great demand for flowers during the months of November and December, and they are becoming equally as valued in private establishments for this purpose as are the more choice and rare varieties in prominent orchid collections. In the neighbourhood of Manchester and other large towns, where the atmospheric conditions are so unfavourable to plant life in general, we find these cypripediums most extensively cultivated, and thriving under the adverse conditions. The numerous varieties and hybrids that have been introduced lately will prove a great acquisition, and as the plants are easily propagated from divisions, they should, in the near future, become generally distributed.



[Photo: H. N. King.

"THINK AND THANK" GATE AT HALL BARN.

AFTER FLOWERING any repotting necessary may be attended to. It is not necessary to annually repot such species as C. insigne, C. Charlesworthi, and C. Spicerianum, or the hybrids, such as C. Leeanum, C. nitens, C. Actæus, etc. I consider they give a far better return of flowers, and blooms of a better quality, when not disturbed too frequently. The pots used should be well and cleanly drained, for the plants especially require an abundance of water during the growing season. The potting compost we use is about equal portions of fibrous peat and turfy loam, with a little chopped sphagnum moss added, and sufficient sand and broken crocks to render the compost porous.

INCREASING THE STOCK.—This is best done by dividing the rhizomes between the growths, and then carefully disentangling the roots, and potting up the portions separately. All back growtns, i.e., those without young leading growths, should be placed in small pots, with plenty of drainage; a stick should be placed in each so as to support the leaves of the old growths, and, to some extent, prevent injury, as soon as the new growth makes an appearance roots usually start from their base, and they may then be again repotted into pots that will afford them ample root room. When dividing plants of this kind I find it a good plan to place all back growths that have been potted up in a warm, moist position, and when the conditions are favourable they may be sprayed overhead. Where placed in a warm house care must be observed to keep them free from insect pests. Thrips especially will be almost sure to find any young growths of this kind, and they prove most difficult to dislodge.—H. J. Chapman, Oakwood Gardens.

CONSERVATORY AND GREENHOUSE.

POINSETTIAS.—These are among the brightest subjects we have for decoration at the present time. The only drawback is, they will not stand exposure to the cold, more especially when used as pot plants. This fault may be remedied to some extent by gradually reducing the temperature; they will then stand well if the thermometer does not fall much below 40 degrees. When cut I find they last much better if the ends are dipped in hot water as soon as cut, this preventing bleeding, and sending the sap up to the bracts. I have had them last in good condition under this treatment for several weeks, while, on the other hand, I have seen them droop the same day as cut when the sap has been allowed to run down and sufficient care has not been taken in regard to preparing them for the change.

EPIPHYLLUMS.—I often wonder why these beautiful plants are not more grown. The amount of bloom produced by a healthy plant is remarkable, and the plants are very elegant, though quaint looking when out of flower. It is usual to graft the epiphyllum on the pereskia at various heights, but I consider they are far prettier when grown entirely on their own roots, and allowed to droop naturally about the pots in which they are grown. The idea that all the cactus family live and thrive best on the poorest and most sterile of soils, and with hardly any water, is a mistake, for if healthy plants and healthy roots are there they will stand a fairly liberal supply of moisture, and a compost consisting of good fibrous loam and peat, with plenty of broken charcoal or sandstone to keep it well open. During the period of rest, of course, much less moisture is necessary, and only sufficient should be given to prevent shrivelling.

SOLOMON'S SEAL.—Of all hardy plants this is, I consider, the easiest to force into flower. It responds very quickly indeed if forced in a brisk heat, which, however, has certain drawbacks, inasmuch as the stems then become unduly long. If grown simply for cutting this is not of any great moment, but if wanted for arranging with other plants they should be forced more slowly. The plants will then not only be more dwarf and sturdy, but the flowers will open more slowly, last longer, and give off a very delicate perfume. The latter, which much resembles that of the hawthorn, is much appreciated by many people.

ADIANTUMS IN WINTER.—Those required to give cut fronds, and those to be used for decoration will now need careful management to keep up a regular supply. It is easy enough to keep up a good supply until Christmas, but it is during the first two months of the year that the supply often falls short. To provide against this, some plants should be kept in cool frames during the summer, and then taken into warmth early in the autumn. The plants will then make a fresh start, and make good fronds, which will mature and keep fresh until those that make their spring growth are ready for use. Many of the adiantums will continue, under favourable conditions, to make growth throughout the winter, but most of the cuneatum type are better for a rest. Plants that are likely to be wanted late in spring should be kept cool and moderately dry just now, they will then start away freely if given a little more warmth early in the year. Where the pots are well filled with roots a little liquid manure, or a slight sprinkling of any of the artificial fertilisers, will be beneficial to them at this period.

CHRYSANTHEMUM CUTTINGS.—Rooting cuttings for another year will soon be in full swing. I very much question the mode of procedure pretty generally adopted, I mean putting the cuttings singly into small pots, and afterwards placing them in frames within the greenhouse. This plan has been the cause of a number of failures, especially among amateurs, inasmuch as the little attentions, such as removing damp from the glass regularly, have been neglected, and decay of the cuttings has resulted. At best it is a coddling practice, and often the little plants receive a check when taken from a closed box to inure them to air. A good plan is to prepare a shallow bed of light sandy soil, in a frame or heated pit, where warmth may be obtained if necessary, and dibble the cuttings in about three inches apart. Failures are rare with this treatment, and air may be given to produce short sturdy growth. Sorts late in giving cuttings, or slow rooting ones, may be placed in a warm house, and if removed before the leaves become drawn, will make satisfactory progress afterwards.—T. B. Field, Ashwellthorpe Gardens.

THE FLOWER GARDEN.

GENERAL REMARKS.—The exceptionally open season we have had up to the time of writing has somewhat negatived what would generally be suitable calendarial instructions, once more proving it unwise to strictly adhere to set dates for certain work, and showing the necessity for close observation and a readiness to act according to seasons and circumstances. The exceptional conditions have, however, enabled outside work to be pushed on in a more than usually satisfactory way. Where ground alterations are being done, the temptation may be to complete them too hurriedly lest the weather should change; this must be guarded against or future disappointment will more than outweigh any immediate gain. If flower beds are prepared, then endeavour to obtain two feet or more of good soil; study the texture or formation of the subsoil, and if it be in the least heavy or retentive of water, insure a sufficient number of land drains being put in; these may be from six to nine yards apart, at from two to three feet deep. Drain pipes should be covered with a few inches of furnace clinkers, or other rough porous material, and lightly rammed down before soil is placed on. The herring-bone system of draining is better than drains laid straight longitudinally, the former being more likely to intercept the water. See that proper levels are taken, and adhered to, in all operations, whether for drains or surface levels.

EDGINGS to walks and beds may still be attended to, filling in any vacancies or regulating them where too big or thick; these may consist of box, hypericums, veronicas, euonymous, saxifragas, thrift, scrub oak, beech, etc. Straggling or untidy edging greatly detracts from the good appearance of the grounds. Any leaf raking not yet completed should be finished as soon as possible.

PERGOLAS must be attended to; carefully inspect them, and where timber has been used for construction any that is decaying and unsafe for another season should be removed. Peeled oak is much better than larch. Repairs can be done better now, while the climbers are dormant, than when growth is starting. Where at all possible the supports, below ground at least, should be non-perishable, either of stone or brick; indeed, the whole pier is best of these materials; the initial outlay is more, but the future saving more than compensates for it, and there is not the frequent damage to climbers through repairs or decaying supports. If wooden supports are used they should be dowelled into stone or brick above the ground level, and if a piece of sheet lead is used between the wood and stone it will prevent moisture getting into the stone, which, in frosty weather, might cause cracks. It is pitiable to see the number of pergolas recently built of timber that at the longest can only last a few years, when the whole structure will have to be rebuilt, and probably a large number of its occupants killed, or at the least very badly damaged. The autumn seeding of some of the clematis has been very pleasing, and the autumn tints of foliage were good in favourable localities, though it is one of the pleasures denied us here, as most of the vitis are rather too vigorous and rampant growers for pergolas (except the largest-built ones), and are best given a space to themselves on some building or trellis work with plenty of room to spread. If viewed across a sheet of water when in their autumn glory the effect is specially pleasing.

CARNATION BEDS.—Watch these to see whether slugs or birds are injuring the plants. Guard against trampling on the beds more than necessary, but see that none of the plants are loose in the ground. Where carnations are in pots in frames, preparatory for planting in spring, keep them as cool as possible, admitting an abundance of air whenever the weather is at all suitable, and guard against a too liberal application of water.—E. F. Hazelton, Knowsley Gardens, Prescot.

FRUITS UNDER GLASS.

LATE VINERIES.—Any vines that look sickly, and have not given good returns, should be well examined at the roots, where generally the cause of trouble may be found. It is difficult to overhaul the roots of a particular vine in the centre of a house, and if very unsatisfactory it should be removed altogether, and a young rod run up from the nearest vine to fill the place. Late Muscats do not require much root room, and should have their roots inside; neither should the border be too deep. The bottom should be concrete, and then good drainage, with a depth of from two to three feet of soil, consisting of good turfy loam and plenty of lime or mortar rubble, horn shavings, and half-inch bones; manures can always be added when the vines need it.

MADRESFIELD COURT should also have its roots inside. The house should command plenty of fire heat and ample ventilation. This grape is best trained on the extension system, as it generally grows strongly, and the extra wood allowed keeps the berries, in some degree, from cracking; stopping should be carefully done, and a few laterals be left to grow on the growth on which the bunch is formed, as these keep the sap flowing. Watering is another important matter; when the berries start to colour, water, as a rule, is withheld; certainly the vines do not require so much after this stage, but they should not be allowed to get too dry, as when the next watering is given a rush of sap takes place, and crack go the berries. A little artificial manure given at intervals is better than a lot of farmyard liquid manure for this variety, as it tends to make a lot of gross wood. Plants are best removed from the house when colouring commences, as they continue to throw off a certain amount of damp during the day. Air should be left on always to get the skins as tough as possible, and on a bright morning, if the berries are liable to crack, the house should not be damped down.

GROS COLMAR very often fails to colour. This generally gets planted in an out-of-the-way corner, and is not given a proper chance, and yet it is one of the best grapes at Christmas, and after. When the berries start to colour the leaves should be tied back to allow all the sun and light possible to reach the bunch. Lady Hutt does well on the extension system, being a gross grower; this variety likes plenty of fire heat, and free ventilation without draughts, or else it becomes spotted. The berries require plenty of room to develop, and should be thinned freely. Appley Towers is a good late grape, and, being a strong grower, requires plenty of room; it colours and keeps well.

CUCUMBERS.—A few seeds may be sown in small pots for early plants. In a brisk heat they will soon germinate, and should be then placed up to the light, but away from draughts.

LATE PEACH HOUSES.—By the end of the month these trees should all be pruned, cleaned, and tied, and the borders top-dressed ready for starting. If left until later the work is often unsatisfactorily done, especially the cleaning part. Any fresh planting to be done should be taken in hand and finished at once, as the buds soon commence to swell in the new year; the newly-planted trees should be allowed to settle before they are tied in.—A. B. Wadds, Paddockhurst Gardens.

NEW JAPANESE CHRYSANTHEMUMS.

Continuing my list published in the Gardeners' Magazine of November 14, the following are noteworthy additions in the Japanese section:

Helena Williams (Williams), is a true sport from Madame Oberthur, and therefore identical in form. The colour is most pleasing, pure yellow, with a central suffusion of chrome, which passes away with age and development; quite a charming variety.

Miss Maud Jefferies, although not quite new, is worthy of attention, as we have not too many varieties of this type and colour. It has incurving florets, white with a flush of pink; an Australian variety.

Melchet Beauty has been seen several times in good condition during the present season. The flower is well built up in the centre, and the broad florets are semi-drooping. Colour, yellow, richly overlaid with crimson.

Rose Pockett has narrow, slightly twisted florets, cream coloured at the base, with a suffusion of rose and amber. As might be expected from its name, it is an Australian variety.

Lady E. Letchworth, yellow, with drooping florets that curl slightly at the tip.

Splendour was one of Mr. Silsbury's last year's novelties, and is quite one of the best of incurving Japanese varieties we have, especially for those who approve of the type, yet do not desire them too tightly incurved. The florets are broad, with an amber-bronze reverse. The inside colour is dull red, but little of this is seen in good blooms.

Mary Donellan, although not quite new, is deserving of mention for the information of those who prefer the incurving type of flower. The broad florets are rich orange-yellow.

W. Mease was raised by Mr. Pockett in Australia; in the form of its petal it reminds one of Etoile de Lyon, but it is more refined than that variety. It is a fully-built flower of much substance. Colour, rose-lilac. I do not think it is really worthy of the name it bears.

C. H. Totty is red-chestnut in colour, very effective as a decorative variety, but not large enough for present-day exhibitors.

John Peed has taken a long time to come to the front, but this season many really good blooms have been seen. In colour it is attractive, white, lined and edged with purple. The florets are perhaps a trifle short, but they are numerous, making up a full bloom.

Mdlle. J. de la Crouee is a pretty shade of salmon-pink, and for those who prefer narrow florets it is desirable.

Mary Mason is distinct, terra-cotta, with a shading of rose; some may describe it as rosy-red. The petals fall as in J. H. Silsbury, with the tip curling upwards.

Mrs. A. S. Bott has loosely incurving, broad, amber-coloured florets.

Swanmore Park. E. Molyneux.

Prohibition of Importation of Gooseberry Bushes.—The Board of Agriculture and Fisheries have made an Order entitled the American Gooseberry Mildew (Prohibition of Importation of Bushes) Amendment Order of 1908, which provides that the provisions of the American Gooseberry Mildew (Prohibition of Importation of Bushes) Order of 1907 shall not extend or apply to bushes brought to Great Britain from the Channel Islands. The Order came into operation on November 16, 1908.

NEW BOOKS.

◆

THE HEREDITY OF ACQUIRED CHARACTERS IN PLANTS.

By Rev. G. Henslow, M.A., F.L.S. (John Murray, Albemarle Street, W.) Price 6s.

The object, we are told, of this book is to prove that evolution, so far as plants are concerned, depends upon the inheritance of acquired characters. This was Darwin's contention; but Dr. Weismann and his followers assert that no such characters can ever be hereditary unless the influence of the environment can reach and affect the reproductive organs or his hypothetical substance germ-plasm. Mr. Henslow contends, on the other hand, that, as all the characters of the vegetative system which are regarded as specific are acquired long before any vegetative cell has begun to assume a reproductive character, Dr. Weismann's proviso is inapplicable to plants. Ecologists of the present day, who study plants growing under natural conditions, agree in accepting the fact that evolution in plants is the result, not only of a natural response to the direct action of changed conditions of life by means of which they evolve new structures in adaptation to their new environments, but that the acquired characters can become hereditary.

It does not seem to be generally known, as the author points out, that Darwin supplemented his theory of the "Origin of Species by means of Natural Selection" by another interpretation of the methods of evolution. The first indication of the alternative is found in the preface to the first edition of the last-named work. Therein he expresses the opinion that "Natural selection is the main, but not exclusive, means of modification," and in an early part of the same book he observes "Some slight amount of change may be attributed to the direct action of the conditions of life." Subsequently, Darwin wrote, "The direct action of changed conditions leads to definite or indefinite results," and he proceeds, "by the term definite action I mean an action of such a nature that when many individuals of the same variety are exposed during several generations to any change in their physical conditions of life, all, or nearly all, the individuals are modified in the same manner. A new sub-variety would then be produced without the aid of selection."

In the first chapter of the book now before us, the author discloses the singular fact that present day Darwinians contradict Darwin in several ways. They assert that varieties are spontaneous and congenital, appearing in the seedlings of plants and young of animals, then by means of natural selection the "unfit" are supposed to be eliminated, and the "fittest" to survive. That, in fact, the influence of the environment may affect the vegetative organs of plants, but that anything so acquired cannot affect the reproductive germ cells, and therefore cannot be hereditary. "Darwin himself," states the author, "maintained that such variations, on the contrary, are hereditary"; and proceeding, he submits that, although no germ or sperm cells are in existence in plants when the environment acts upon their stems, roots, or leaves, the effects are hereditary. Mr. Henslow has long been engaged in studying plants with a view to determine how far observation would support Darwinism, but he states that he has not succeeded in finding a case in Nature in support of it. Individual differences or variations were found everywhere, but he soon saw that these were not the materials of evolution. On the other hand, proofs accumulated on every side of Darwin's definite variations, now called adaptations. These proofs have been freely used by Mr. Henslow in support of his views on the "true" as opposed to the "new" Darwinism, and his views, it may be added, are now held by the leading plant ecologists, or botanists, who study plants growing wild under various physical conditions, throughout Europe.

Appreciating the importance of it being very clearly understood what Darwin's views really were with regard to the heredity of acquired characters in plants, and how far they are supported by investigations, carefully conducted on well-defined lines, we strongly recommend this book to those who are interested in this important question. It is well known that Mr. Henslow has but few equals in his powers of observation, his interpretation of facts, and in recording the results of his observations, and we need not refer to them. But it is necessary we should say that, in the preparation of this important work, he has surpassed himself, and presented so clear a view of the "True Darwinism" as to render the book essential to all who are interested in the subject with which it deals.

IN MY LADY'S GARDEN.

By Mrs. Richmond. (T. Fisher Unwin, Adelphi Terrace, London, W.C.) Price, 12s. 6d. net.

For some years Mrs. Richmond occupied the position of garden editor of the "Queen," and during that period contributed a large number of highly interesting essays on gardens and garden management. From these she has made a selection of forty-eight of the most important, and has so arranged them as to form a connected history of the garden and its work for the year. Arranged in proper sequence, they serve as reminders as the procession of weeks pass, and while giving much information relating to the flowering of the various plants, to their distinctive characteristics, and the several places in the garden for which they are best suited, are of much value as a guide to the details requiring attention during the twelve months. Mrs. Richmond gives in her book, as, indeed, she had done in the pages of the "Queen," unquestionable evidence of a thorough acquaintance with a wide range of plants, and with the conditions under which they can be grown to the highest degree of perfection. She also again reminds us of the faculty she possesses in so marked a degree of presenting technicalities to her readers in a pleasant and interesting manner. The book will consequently be most acceptable to those who prefer in their search for information on gardening matters, brightly written essays to technical treatises, provided, of course, they are, as in this case, based on practical knowledge.

The book is admirably produced, and contains two charming illustrations in colour from drawings by Miss Beatrice Parsons, and forty-eight page illustrations in black and white.

COLOUR IN THE FLOWER GARDEN.

By Gertrude Jekyll. ("Country Life," Lim., 20, Tavistock Street, Covent Garden, W.C.) Price, 12s. 6d.

Miss Jekyll has written many good books on gardening and other matters, and if, in expressing our appreciation of the merits of the work now before us, we refrain from saying that it is the best of the series, we shall be compelled to say that it should have a high position among the best of her literary efforts. The scope and object of the book are admirably stated in the introduction, and in the opening thereto Miss Jekyll submits the proposition that, to plant and maintain a flower border with a good scheme for colour is by no means the easy thing that is commonly supposed; and then expresses her belief that the only way in which it can be made successful is to devote certain borders to certain times of the year; each border or garden region to be bright from one to three months. Nothing, the authoress states, seems to her more unsatisfactory than the border that in spring shows a few patches of flowering bulbs in ground otherwise looking empty, or with tufts of herbaceous plants coming through. Then, she observes, the bulbs die down, and the space they have occupied is wanted for something that comes into bloom later. Either the border will then show bare patches, or the positions of the bulbs will be forgotten, and the bulbs be probably injured by trowel or fork when the spaces are planted.

For some years Miss Jekyll has been working at these problems, and, having arrived at certain conclusions, she states them at some length, and in her usual and pleasant manner. She tells us that she is strongly of the opinion that the possession of a quantity of plants, however good they may be in themselves, and however ample their number, does not make a garden. Having obtained the plants, they should be arranged with care, and on well-defined lines. The object should be to so use the plants that they will form beautiful pictures, and that, while charming the eye, they stimulate those responsible for the garden to still further endeavour. With reference to the manner in which the plants should be arranged to produce a series of tasteful effects, Miss Jekyll says, "It is just the way in which it is done that makes the whole of the difference between commonplace gardening and gardening that may rightly claim to rank as a fine art. Given the same space of ground and the same material, they may either be fashioned into a dream of beauty, a place of perfect rest and refreshment of mind and body—a series of soul-satisfying pictures—a treasure of well-set jewels; or they may be so misused that everything is jarring and displeasing. To learn how to perceive the difference and how to do right is to apprehend gardening as a fine art. In practice it is to place every plant or group of plants with such thoughtful care and definite intention that they shall form a harmonious whole, and that successive portions, or in some cases even single details, shall show a series of pictures." With these views, all who have devoted much attention to flower arrangements in the garden will readily agree.

Having read and enjoyed the introduction, it would be of much interest to pass under review the seventeen chapters into which the work is divided, and make reference to the strong and the weak points in each. The space available will not admit of this being done, and we must, perforce, be content in stating that in them Miss Jekyll shows how colour effects of the most delightful character may be had in succession from quite early in the spring until the autumn is well advanced, and that much may be done by judicious planting in imparting a glow of colour to the garden during the winter months. The book is illustrated by considerably over 100 photographic illustrations, and they are of so high an order of merit as to add materially to its value.

LITTLE GARDENS.

By H. H. Thomas. (Cassell and Co., Lim., London, E.C.) Price, 1s. 6d.

"Little Gardens" is at once concise, clear, and instructive, and those amateurs, for whom, by the way, it is specially written, who take it for their guide in forming and managing their gardens, and act upon the advice given in its pages, will have good cause for satisfaction. The making of the garden has two chapters devoted to it, and the selection and cultivation of the plants, fruits, and vegetables adapted to gardens of limited dimensions are described with sufficient fullness to enable one to readily understand the admirable advice given.

ELEMENTARY BOTANY.

By M. A. Liversidge. (Blackie and Son, Lim., 50, Old Bailey, E.C.) Price, 1s. 6d.

This book has been written with special reference to the requirements of the middle and lower forms of secondary schools, and it possesses the advantage of being inexpensive and having its subject matter presented in as simple a manner as possible. The book is divided into four parts, and in the first the seed and its germination and the general morphology of the plant are dealt with; the simple structure of the plant occupies the second; the physiology of the plant taken experimentally the third, and the fourth part is devoted to the classification, and a brief description of some of the more important natural orders. Miss Liversidge has done her work remarkably well, and the text is elucidated with excellent illustrations.

TWO LEGS AND OTHER STORIES.

By Carl Ewald. (Methuen and Co., 36, Essex Street, W.C.)

A series of charming stories translated from the Danish that will strongly appeal to young people, and especially to those who take an interest in the various aspects of natural history. Not a few of those who are of mature years will find much to interest and amuse them in this delightful book, and be glad to turn to its pages now that the garden does not make such strong claims upon them.

APPLE SALES.

I can assure our worthy friend "E. M." that I never set out, on page 793, to enumerate all the causes why apples sell badly, because I do not profess to be acquainted with them all, and even if I had so much knowledge a whole issue of the GARDENERS' MAGAZINE would be needed to set them forth. I simply mentioned a few of the causes why apples sell badly, and I do not see anything in "E. M.'s" criticism on page 935 which proves me to be in the wrong. Your correspondent states that the real cause of low prices at the end of September is due to overstocked markets, and in the next sentence he goes on to make excuses for the people who sell late-keeping apples, like Bramley's Seedling, at the above season. Could anything be more inconsistent? If markets are really overstocked at the end of September surely the selling of late varieties at that period contributes to the overstocking, and the whole thing proves that when a man plants late apples for market it is part of the business to provide some means of storage.

I have been talking to a man to-day, December 16, who informed me that within the last week he has sold his Bramleys at 18s. a cwt. Would he have done anything like so well if he had rushed them into the market at the end of September? I may say that the apples referred to were sold by auction in a fruit market. Does "E. M." contend that there are more apples produced in this country at the end of September than can be consumed, and markets are consequently overstocked? If so, then planting had better stop, but I am disposed to think that it is the system, or perhaps want of system, in distribution that is at fault, because at the time when the Kentish grower referred to by "E. M." was selling his Worcester Pearmains in first-class order at 3s. 6d. the man in the street who was attracted by the appearance of this bright-looking apple, and was tempted to invest in a few pounds of them, paid a price for the fruit that would have recompensed the grower, and allowed a good profit for the middleman, had a fair proportion of the money gone into the pocket of the producer. H.

Home-grown Perennials for Forcing.—A cheap floral display can easily be secured in the greenhouse during spring by potting up home-grown roots and clumps of herbaceous, and, in some instances, shrubby perennials. Dielytra spectabilis, Solomon's seal, herbaceous spiræas and astilbes, and, among shrubs, azaleas, spiræas, deutzias, philadelphus, prunus, etc., may be cited as examples. Unlike plants which have been grown for a season in pots, and consequently well established, these will only stand a low temperature; to attempt "forcing," as generally understood, is simply to court failure. Given a gentle bottom heat to stimulate activity in the roots first, and then every hope may be entertained of the flower buds or flowering growths following in due course.—THOMAS SMITH, Walmsgate Gardens.

HORTICULTURAL SHOW ADVERTISEMENTS are inserted in this column at Sixpence per line, the minimum charge being Two Shillings and Sixpence. Offices, 148 and 149, Aldersgate Street, London, E.C.

EXHIBITIONS AND MEETINGS.

Royal Horticultural Society.

There was a comparatively small show on Tuesday, December 22, but orchids, fruits, and shrubs were all well shown. The attendance was moderate.

FLORAL COMMITTEE.

Messrs. Jas. Veitch and Sons, Chelsea, showed largely and well on this occasion, putting up a large bank of their brilliant and useful winter-flowering begonias, together with batches of Crowea latifolia major, the yellow Calliopsis Granti, the curious marbled-leaved Acanthus montanus (F.C.C.), and Javanico-jasminiflorum rhododendron hybrids, but the begonias were the great feature of this exhibit. All along the side of the hall the Chelsea firm arranged a wonderfully fine display of evergreen hardy trees and shrubs, putting up euonymus, oleas, yuccas, laurels, hollies in great variety, ivies in variety, privets, euryas, laurestinus, ligustrums, aucubas, Berberis Knighti, arbutus, magnolias, Skimmia japonica rosea, Cotoneaster humifera, veronicas, cratægus, viburnums, etc., etc., the whole making up a vastly interesting collection, and one of great educational value. A hardy evergreen named Sarcococca ruscifolia gained an A.M.

A very brilliant display was made by Messrs. H. Cannell and Sons, Swanley, with zonal pelargoniums, shown as only this firm can show them, and a grand lot of well-grown Begonia Gloire de Lorraine, B. Mrs. Leopold de Rothschild, B. The King, B. Agatha compacta, and B. Turnford Hall. Messrs. Hugh Low and Co. brought up a display of perpetual-flowering carnations, the flowers being large and bright; and a collection of acacias, heaths, epacrises, and daphnes.

Messrs. H. B. May and Sons, Edmonton, showed a group of the newer ferns, the various plumose nephrolepises figuring largely; there were also examples of an excellent strain of Primula obconica. Messrs. W. Cutbush and Son, Highgate, set up a handsome lot of the beautiful perpetual-flowering carnations, the flowers being very bright and attractive, and giving quite a summer-like appearance to the show; Lady Miller, a pink cross between a Malmaison and a perpetual variety, appears to be a good new thing. The Highgate firm also sent a very big lot of Otaheite oranges, full of fruits, and very effective, as well as batches of daphnes, skimmias, pernettyas, etc. Messrs. Paul and Son, Cheshunt, exhibited a few plants of the white starry-flowered Montanoa bipinnatifida, and some standards of Calceolaria Burbidgei.

Mr. W. Pingo Horton, Cravenhurst Lodge, Seaford, Sussex, exhibited a miscellaneous collection of begonias, cypripediums, primulas, etc., but the quality of the plants was distinctly poor.

ORCHID COMMITTEE.

Messrs. Hugh Low and Co., Bush Hill Park, Enfield, submitted a small group of cypripediums, the best being C. Minos Youngi and C. Helen II. Messrs. Jas. Veitch and Sons, Chelsea, showed Cypripedium Thalia splendens, and the fine C. Elatior (A.M.), the latter a striking and beautiful hybrid from C. Leeanum and C. Baron Schroder. Mr. H. T. Pitt, Rosslyn, Stamford Hill, showed the large-bloomed C. Felicity. The very beautiful white Cœlogyne Mooreana, with two spikes and fifteen charming flowers, was shown by Mr. H. G. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt, Tetbury, Gloucester, who also brought up Cypripedium Antinous (F.C.C.), a handsome cross between C. J. Howes and C. Actæus; and Oncidium Forbesi Westonbirt var. Messrs. Armstrong and Brown, Tunbridge Wells, showed a fine Cypripedium Minos Youngi and C. Helen II. Armstrongæ.

Some beautiful calanthes, notably C. Bryan with three beautiful spikes, C. Angela (F.C.C.) with vivid ruby crimson flowers (C. Burfordiense x C. Chapmani), C. Gildeni with rose blooms, and C. Norman (A.M.), a bright, large flowered rosy crimson variety of great beauty; and a grand plant of Cypripedium Leeanum Clinkaberryanum, with fifteen splendid blooms. Messrs. J. Cypher and Sons, Cheltenham, exhibited a group of cypripediums that included Leeanum and insigne varieties of great beauty, and half a dozen plants of the beautiful Cattleya Maggie Raphael alba. Messrs. Sander and Sons, St. Albans, contributed a bright group of orchids, and among the many good things in it we made note of Cypripedium Leeanum Clinkaberryanum, C. Olga Bagshawe, C. Eurvades, Lælia autumnalis alba, L. anceps Schroderæ, and an exquisitely beautiful odontoglossum of fine form and rich red brown markings, named O. Magali Sander (F.C.C.).

Messrs. Charlesworth and Co., Haywards Heath, Sussex, contributed a delightful group of orchids, giving evidence of the variety available at this season of the year. They had Lælio-cattleya Charlesworthi, L.-c. Charlesworthi princeps, Vanda Watsoni, V. lamellata Boxalli, Lælia autumnalis, and L. anceps, Phaio-calanthe Colmani, Miltonia Bleuana, the rare Phaius amboinense, Trichopilea suavis, Gongora quinquinervis, Odontoglossum Phœbe magnificum, O. crispum xanthotes Snow Queen, O. Harryano-crispum, and O. Harryano-triumphans, etc. Messrs. J. and A. McBean, Cooksbridge, Sussex, had a beautiful lot of varieties of Odontoglossum crispum, Lælia anceps, and L. autumnalis, and a great variety of cypripediums of the Leeanum and insigne varieties. Mr. T. Menteith Ogilvie, The Shrubbery, Oxford, showed a large number of varieties of the useful Lycaste Skinneri, and a plant of L. Balliæ, together with several forms of Cypripedium insigne. Mr. Mertens, Mont St. Amand, Ghent, showed a few very beautiful hybrid odontoglossums.

FRUIT AND VEGETABLE COMMITTEE.

Messrs. Jas. Veitch and Sons, Chelsea, contributed a hundred and fifty distinct varieties of apples, all in a fine state of preservation, and showing how, with reasonable facilities, fruit can be kept to Christmas time. A few of the finer varieties were White Calville, Cox's Orange Pippin, Barnack Beauty, The Queen, Belle de Pontoise, Bismarck, Lane's Prince Albert, Blenheim Pippin, Newton Wonder, Bramley's Seedling, Bow Hill Pippin, Reinette du Canada, Sandringham, Alfriston, Lord Derby, King of Tomkins County, Beauty of Kent, and Twenty Ounce.

Messrs. H. Cannell and Sons, Swanley, exhibited a collection of one hundred and fifty varieties of apples, grown at their Eynsford Nursery; there were excellent dishes of New Hawthornden, Beauty of Kent, Emperor Alexander, Cox's Orange Pippin, Sanspareil, Norfolk Beauty, Gloria Mundi, and Smart's Prince Arthur. Messrs. Hugh Low and Co. staged a small collection of well-preserved apples. Mr. Chas. Ross, Welford Park Gardens, showed his fine new apple named Encore.

CERTIFICATES AND AWARDS.

First-class Certificate.—To Acanthus montanus, from Messrs. Jas. Veitch and Sons, Chelsea; Cypripedium Antinous, from Mr. H. G. Alexander, orchid grower to Lieut.-Colonel Holford, Westonbirt; Odontoglossum Majali Sander, from Messrs. Sander and Sons, St. Albans; Calanthe Angela, from Mr. H. J. Chapman, gardener to Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne.

Award of Merit.—To Sarcococca ruscifolia, from Messrs. Jas. Veitch and Sons, Chelsea; Calanthe Norman, from N. C. Cookson, Esq.; Cypripedium Elatior, from Messrs. Jas. Veitch and Sons, Chelsea.

MEDALS.

Gold.—Messrs. Jas. Veitch and Sons, Chelsea, one for fruit and one for shrubs.

Silver-gilt Flora.—Messrs. W. Cutbush and Son, Highgate.

Silver-gilt Banksian. Messrs. H. Cannell and Sons, Swanley.

Silver Flora.—Mr. F. M. Ogilvie, Oxford; Messrs. Charlesworth and Co., Haywards Heath; Messrs. J. and A. McBean, Cooksbridge; Messrs. Sander and Sons, St. Albans.

Silver Knightian.—Messrs. H. Cannell and Sons.

Silver Banksian.—Messrs. J. Cypher and Sons, Cheltenham; Messrs. H. B. May and Sons, Edmonton; Messrs. H. Low and Co., for fruits.

Bronze Banksian.—Messrs. Hugh Low and Co., Bush Hill Park, Enfield.

Birmingham Gardeners' Association.

The ever-welcome "Question Night" was held on December 10, with Mr. A. D. Christie, Rockingham House Gardens, Edgbaston, presiding, and the members present were kept interested by the variety of questions found in the question box by the chairman. The artificial fertilisation of the flowers of the grape vine gave rise to an animated discussion, as also did the degree of temperature necessary for that of Muscat of Alexandria, especially during the night-time. One expert recommended from 60 to 65 degrees, while another had proved 55 degrees sufficient, and hence economising fuel, also had secured a most successful setting of the Black Hamburgh and other black varieties without any artificial heat whatever. The perfect development of the foliage and fruit was also obtained under the same cool treatment for several years in succession; neither red spider, thrips, mealy bug, or mildew had ever infested the vines, consequently there had been no need to resort to the annual doctoring so generally recognised by growers.

Among the other numerous questions asked was that regarding the paving of inside vine borders with bricks or large stones, to lessen evaporation of moisture, and to induce the production of root action towards the surface of the border. The culture of Trachelium cæruleum, Calanthe vestita, Begonia Gloire de Lorraine, the comparative merits of polypodium and osmunda rhizomatous fibre for the drainage of orchids. The comparatively new and elegant Polygonum Baldschuanicum was pronounced to be one of the most beautiful hardy climbers extant, and the osmunda fibre was described as favourable to the production of fungoid growth. Several other minor questions were put, and discussed, and the meeting concluded with a nomination of officers and members of committee for 1909.

Reading and District Gardeners' Association.

The regular fortnightly meeting of the above association took place in the Abbey Hall on Monday, December 14, when, although the weather was most unfavourable, the chairman (Mr. T. Tunbridge) presided over a good attendance of members.

The lecturer for the evening was Mr. G. Stanton, Park Place, Henley-on-Thames, and he opened his subject, "Winter Reminders of Summer Beauty," by mentioning that it had for many years past been his hobby to reserve as much as possible from the beauty of summer for enjoyment in winter, when scarcity of flowers rendered dried specimens valuable, and brought back happy memories of sunshine and floral splendour.

He had experimented widely with flowers which were not usually thought to be everlasting, such as London pride and solidago, and was satisfied with the results. The best time to cut blooms for drying was before they were fully opened, choosing a warm, dry day. All foliage should be removed, and the flowers hung upside down, where they could remain until quite dry. Grasses, however, are best dried in an upright position, as they then retain their natural grace.

Mr. Stanton, to illustrate his lecture, exhibited about sixty vases containing specimen bunches of dried flowers, grasses, etc., and in the course of his remarks, when dealing with the different subjects, he showed that Statice Suworowi, ammobium, and catananche were special favourites with him. Grasses, flowers, etc., wild and cultivated, were all requisitioned, the most prominent being teasel, winter cherry, spindle berries, honesty, Silene inflata, gypsophila, and globe thistle, while among the smaller subjects the beautiful blue Eryngium planum and rhodanthe were mentioned as worthy of special note. Grasses having a softening effect were freely interspersed among the other vases, and they represented all the most graceful varieties, including feather grass, hair grass, love grass, squirrel's-tail, harestail, wood melic, cloud grass, yellow oat, and bulrush.

A good discussion followed the lecture, those taking part including Messrs. Tunbridge (chairman), Hinton, Foster, L. Castle (hon. secretary), W. Townsend, Lees, Alexander, Bailey, Burfitt, Wilson, Wynn, Pope, Carter, E. J. Dore, Herridge, Woolford, and D. Dore.

A very beautiful group of primulas, in variety, with a fine specimen of Nephrolepis exaltata, was exhibited by Mr. F. Townsend, gardener to the vice-president, L. G. Sutton, Esq., and Mr. E. S. Pigg staged a number of lettuces, Sutton's Champion Brown Cos, grown without protection, taken from a plantation from which he had lately been cutting about sixty per week.

Hearty votes of thanks to the lecturer and to the exhibitors concluded the meeting.

Royal Botanic Society.

DECEMBER 17.

Mr. Pembroke Stephens, K.C., presided over a meeting of the society held on the 17th inst., when Mr. George Gordon, V.M.H., gave a lecture on trees and shrubs remarkable for the beauty of their flowers, and specially adapted for the creation of distinct and attractive features in the gardens. The lecture was illustrated with about seventy lantern slides, chiefly from photographs taken by himself in various parts of the United Kingdom, and of special interest as representing finely developed specimens of the respective kinds, and the positions in gardens where they appear to the best advantage. A vote of thanks was accorded Mr. Gordon at the close of the lecture.

Pangbourne Gardeners' Association.

At the last fortnightly meeting there was an excellent attendance, when Mr. J. A. Hall, The Gardens, Shiplake Court, Henley-on-Thames, read a paper on "Violas and Pansies." Mr. W. Clark occupied the chair. At the commencement Mr. Hall said there was no doubt that these flowers did better under the cooler conditions prevailing in Scotland and the North of England than in the southern parts of the country; but yet he thought, by a little attention to shading and watering, they might be grown better than they sometimes are. After tracing the history of both kinds of flowers, the lecturer enumerated the best varieties of each, the various uses to which they could be put, best positions for growing them successfully, methods of propagation, etc.

A good discussion followed, in which many of the members present joined, after which a hearty vote of thanks was accorded Mr. Hall for his interesting paper. During the evening the library in connection with the association was opened.

Beckenham Horticultural Society.

The subject before the above society on Friday, the 11th inst., was a written lecture on "Gregor Johann Mendel," by the Rev. W. Wilks, M.A., secretary of the R.H.S. The Rev. G. O. F. Griffiths, vice-president, very kindly undertook the reading of the paper, and a very instructive evening resulted, and a hearty vote of thanks was accorded Mr. Griffiths.

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Royal Horticultural Hall, Vincent Square, Westminster, on Monday evening, December 14, Mr. Charles H. Curtis in the chair. Four new members were elected, making a total of seventy-five for the year. The death of a member who joined the society only four years ago was reported. He had paid £5 to the benefit fund, and he received £31 sick pay, and the balance due to his nominee was £2 6s. 1d. The committee is doing its best to secure the election of two children of deceased members to the benefits of the Royal Gardeners' Orphan Fund. Any votes sent to Mr. W. Collins, 9, Martindale Road, Balham, would be thankfully received and acknowledged, and used for this purpose.

Hellebores (Christmas roses).—Where these are allowed to flower outside in their permanent quarters, protection should be afforded them to prevent the flowers being soiled or damaged; if the bed is large enough a cold frame may be placed over them, and ventilation carefully attended to; if they are in single clumps handlights or cloches may be used; and, failing these, if any old disused lights are procurable, a number of stakes may be driven in the ground with a narrow rail nailed on top, on which the lights may be laid. A few dry leaves around the plants will then be beneficial. If plants are to be lifted for forcing, but very very slight warmth must be given, a temperature of about 45 degrees being sufficient. — E. F. Hazelton.

Gerbera Notes.—Referring to the article by Mr. P. S. Hayward, on p. 891, it may be interesting to record that, at the recent Paris Autumn Show there was a very dainty group of Gerberas Jamesoni staged by M. Adnet, of Cap d'Antibes. This gentleman has raised a large number of hybrids, and of these, six were awarded certificates by the Floral Committee. They were M. Irwin Lynch, violet-rose; Pres. Gravereau, straw-yellow; M. S. Mottet, orange-yellow; Mlle. Ruan, pure white; Mme. Ph. de Vilmorin, salmon-rose; Mme. Bosch, orange-rose. The group occupied a corner in one of the large greenhouses, and excited no little interest on the part of several of our Parisian friends.—C. H. P.

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Offices: 148 and 149, Aldersgate Street, London.

ANSWERS TO CORRESPONDENTS.

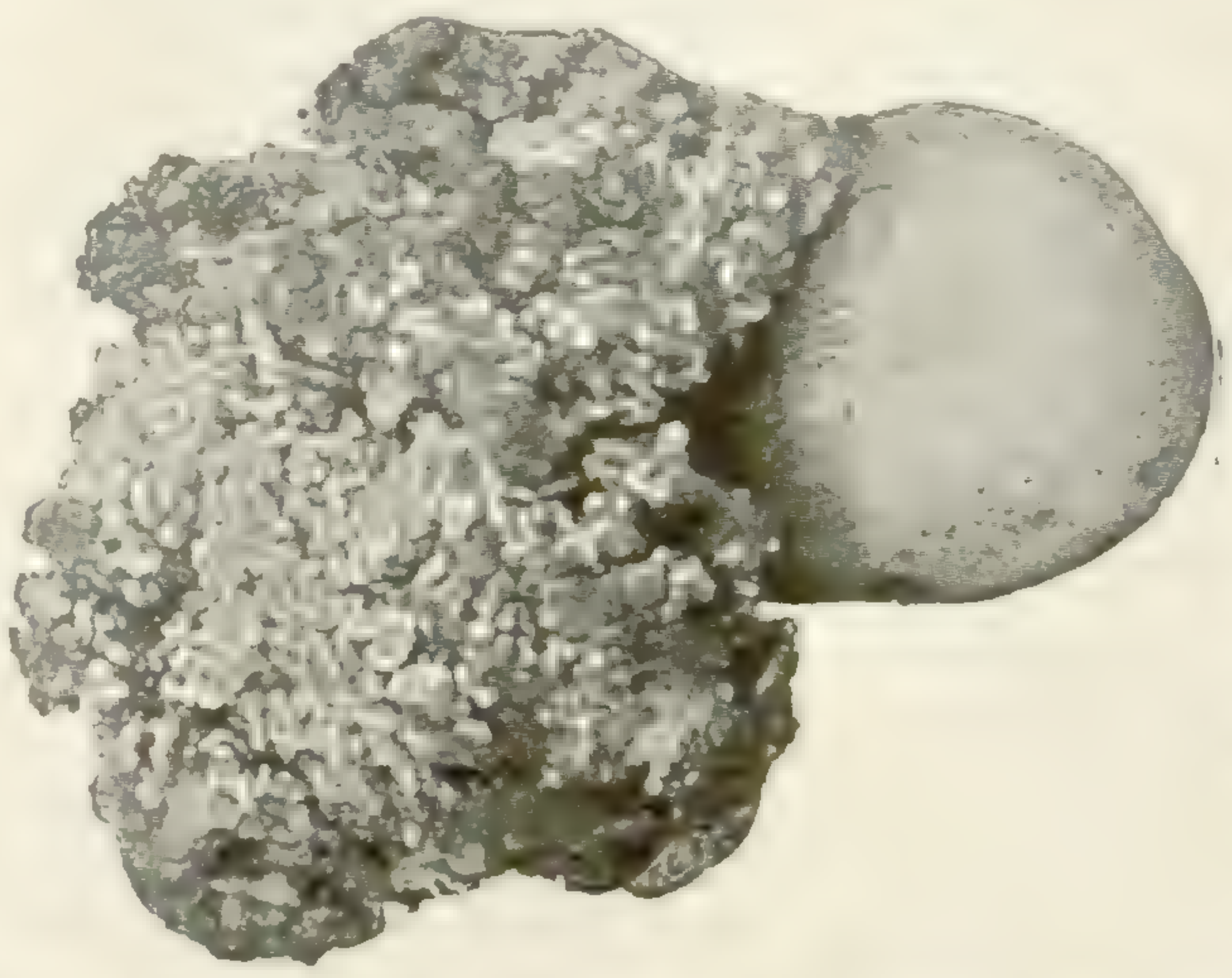
Editorial Communications should be addressed to the **Editor of the Gardeners' Magazine, 148 and 149, Aldersgate Street, E.C.**

Secretaries of horticultural societies are invited to send early notification of forthcoming exhibitions and meetings, and are requested to advise us concerning changes of dates.

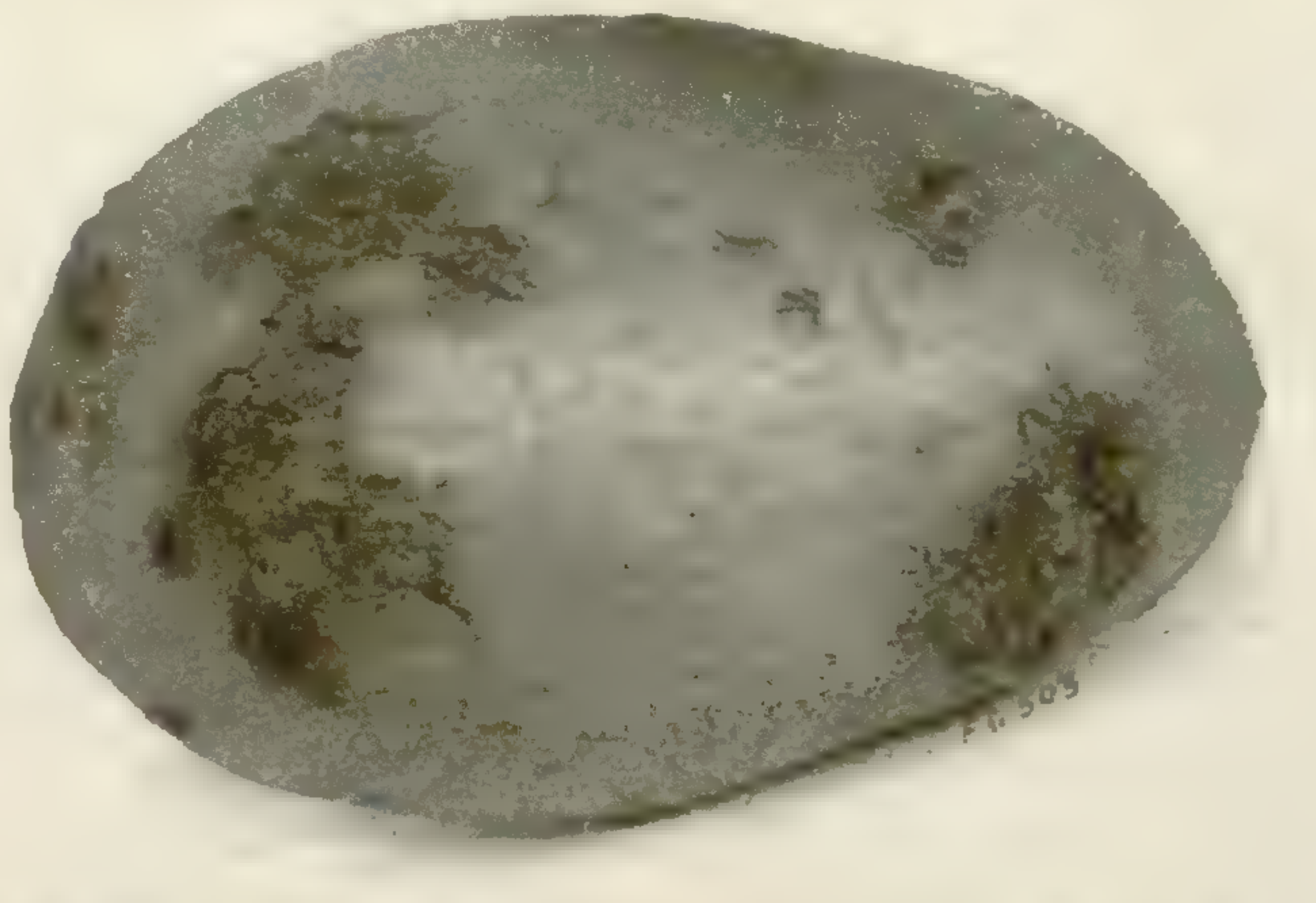
Specimens of plants, flowers, and fruits for naming or opinion should be sent to the Editor of the Gardeners' Magazine, "Endsleigh," Priory Park, Kew, Surrey, and as early in the week as possible. **All parcels must be sufficiently prepaid.**

The Editor will be glad to receive photographs of gardens, plants, flowers, trees, fruits, etc., for reproduction in the Gardeners' Magazine. He will also be greatly obliged by correspondents sending early intimation of interesting local events relating to horticulture. In sending newspapers containing matter to which they wish to draw attention, correspondents are requested to distinctly mark the **paragraph.**

SCAB AND BLACK SCAB ON POTATOES.—W. C. H., Lincoln: We gladly accede to your request to give illustrations of these two diseases so as to show the marked difference there is in the effects produced. We take it you do not need advice concerning the methods to adopt for the prevention and cure of these diseases. We have given these particulars on several occasions, but will gladly do so again if you wish, because we are anxious to assist in the eradication of such destructive diseases. Potato Scab (Sorosporium scabies) is the commoner disease, and it has proved very troublesome in America. Black Scab (Chrysophlyctis endobiotica), first brought to public notice in these columns, is a terrible pest, and no pains should be spared to eradicate it.



POTATO TUBER AFFECTED WITH BLACK SCAB (CHRYSOPHLYCTIS ENDOBIOTICA).



POTATO INFECTED WITH SCAB (SOROSPORIUM SCABIES).

PLUMS.—H. C., Nantwich: Under garden culture you should have no difficulty in securing fine fruits of Yellow Imperatrice, Denniston's Superb, Bryanston Gage, McLaughlin's Gage, and Oullin's Golden plums towards the end of August. These are dessert varieties. Large-fruited culinary varieties useful by that date would include Goliath, Prince of Wales, Pond's Seedling, Czar (ripe about mid-August), and Belle de Louvain. We are not acquainted with a plum named Thornley's Seedling.

PASTE-BOARD AND FLUTED PAPER.—We shall be very glad if any of our readers who are acquainted with the names and addresses of wholesale makers of pasteboard flower boxes and fluted packing paper will be good enough to send us a postcard giving this information for the benefit of one of our Northern readers.

ROSES.—C. P., Brentford: It is practically impossible to say which is the best rose for a south wall at Brentford. We have seen W. A. Richardson, Gloire de Dijon, Allister Stella Gray, Dundee Rambler, and Felicité-et-Perpétue doing well in the town and neighbourhood. If you have no special liking for any particular kind of rose, we suggest you obtain Dundee Rambler. Felicité-et-Perpĕtue has the merit of being practically evergreen. A red climbing rose of great beauty and usefulness, especially in towns, is Longworth Rambler.

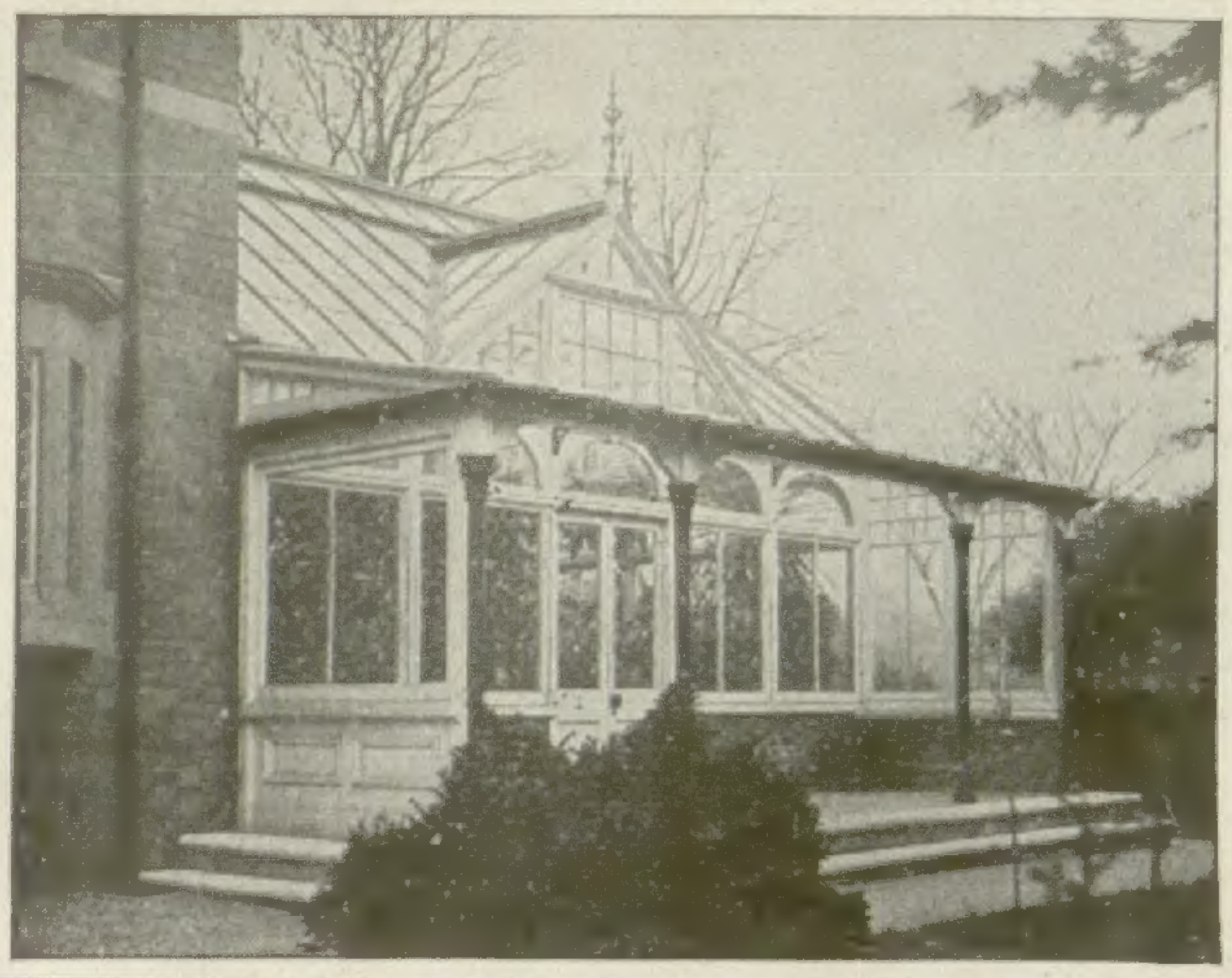
CHRYSANTHEMUMS.—Y. B.: We have already dealt with the subject of chrysanthemum propagation, and as the season advances we propose to deal with the various phases of chrysanthemum culture, keeping in view both the production of big blooms and the provision of flowers for cutting, etc.

BLACK TARTARIAN CHERRY.—S.E.C., Aylesbury: The Black Tartarian Cherry is one of the finest varieties, and you can make no mistake in planting it against a wall. It is very hardy and prolific, and ripens its large, black, richly-flavoured fruits about the beginning of July, sometimes earlier. It is on record that this cherry was introduced to cultivation in this country by Mr. Hugh Ronalds, who at one time was a well-known and successful pomologist resident in Brentford, Middlesex. He advertised the variety at 5s. per plant as far back as 1794. A Mr. John Fraser also introduced it, from Russia, where he found it grown by a German in St. Petersburg, but Fraser was two years behind Ronalds.

DEPTH AT WHICH TO PLANT.—A Beckenham correspondent writes: For thirty years I have been a constant reader of the Gardeners' Magazine, and I have not the slightest wish or reason to alter my adherence to it, but there have been times when I felt almost courageous enough to ask a contributor how he reconciled certain points raised in his article. These times have not been numerous, but one has now come, and I would like to ask "Pedestrian" (p. 914) how one is to reconcile his advice, in the one case, that "the ground must not be cultivated more than two feet deep, 1ft. 6in. for preference, in most soils," with the advice that "the roots should be spread out at a depth below the surface of 2ft. 6in. or 3ft." In conclusion he writes: "No stems must be buried," and with this I agree, but what about the 2½ft. or 3ft. deep?

[Just previous to the receipt of this letter we received a note from "Pedestrian" pointing out that "2½ft. to 3ft." should have read "2½ to 3in." The error was a clerical one on the part of our contributor, but we regret it escaped us in the proof.—Ed., "G.M."]

WEAKLY - CONSTITUTIONED CHRYSANTHEMUMS.—"G. N., Taunton," writes a very pleasant letter of thanks for the trouble and interest we have taken in questions concerning chrysanthemum cuttings. He confesses to some little surprise that Mr. Molyneux fixes no special dates for the insertion of cuttings in his article on p. 927, and adds, "I have obtained Mr. J. B. Wroe's book on chrysanthemums, and find he gives dates, such as 10th, 15th, and 20th of the present month, and this seems to put the matter on a systematic basis. But a further matter of importance is that of varieties liable to mildew, rust, and other diseases, in short, weakly-constitutioned varieties. I am quite sure, from my own observations, that some varieties are far more liable to attacks than others, and it would be a great boon if someone with large experience would enumerate a few of the strongest constitutioned varieties, suitable for amateurs and small growers, and at the same time point out varieties to avoid. I may illustrate my point by saying that F. S. Vallis, Mrs. Val-



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lis, General Hutton, Mrs. W. Knox, and Mrs. A. T. Miller are all excellent growers, while Henry Perkins, and Chrys. Montigny need very skilful culture, and even then appear to be uncertain."

NAMES OF PLANTS.

Under this heading we can only undertake to name species and well marked varieties of plants, and not florists' flowers. Specimens should be packed in stout boxes with damp (not wet) moss, or some leaves, as packing material, to ensure their reaching us in a fresh state. It is essential that flowers must accompany specimens of flowering plants, that fern fronds be fertile, and that numbers be firmly attached to the specimens so that they can be seen without any untying. We cannot promise to name more than six specimens at one time from any one correspondent.

G. C. G., Trowbridge.—Iris stylosa.

J. H., Huddersfield.—Probably Xanthosoma Lindeni.

S. H. M., Llandudno.—1, Opuntia microdasys; 2, Daphne indica rubra; 3, Exacum affine.

J. C. B., Gourock.—Not recognised from the specimen sent; kindly send another when more fully developed.

F. G. W., Godalming.—1, Leonotus Leonurus; 2, Calceolaria Burbidgei; 3, Euphorbia splendens; 4, Calanthe Veitchi; 5, Exacum affine; 6, Acrostichum crinitum.

NAMES OF FRUITS.

M. W. B., Warwick.—1, Blenheim Pippin; 2, Bramley's Seedling; 3, Beauty of Waltham.

T. H. C., Barnstaple.—1, Lane's Prince Albert; 2, probably Cellini, very much shrivelled.

L. L., Cambridge.—1, Ribston Pippin; 2, Golden Russet; 3, Mère de Ménage; 4, Court Pendu Plat.

A. S., Guildford.—We do not know an apple named Beauty of Wilts, and the name does not appear in Dr. Hogg's "Fruit Manual." We will endeavour to identify the variety.

The Time to Plant.—Success cannot reasonably be expected when operations are neglected in their proper season. Perennials to flower in the early spring months should be completed before the end of the year, and examples—doronicum, aquilegia, anchusa, German iris. Perennials that take two years to establish should be planted in well-prepared and deeply-worked soil, notably ligularia, pæonies, Anemone japonica, and delphiniums. Perennials that succeed in sun-baked positions can be planted at almost any time, such as hieraciums, euphorbias and Iris stylosa. Perennials that only succeed in wet ground are best planted early in autumn or late in spring, and examples are primulas, cypripediums, Iris aurea and gigantea, liliums, trollius, etc.—Thomas Smith, Walmsgate Gardens.

MARKETS.

COVENT GARDEN.

Flowers.

Lack of sunshine has had some effect upon production, but there were ample fine flowers to meet the generous demand. The ready disposal of high-grade material was again most marked.

		s. d.		s. d.
Acacia	per doz. bun.	10 0	to	12 0
Adiantum cuneatum	per doz. bun.	5 0		9 0
Arums	per doz.	3 0		5 0
Asparagus	per doz. bun.	1 6		6 0
Azaleas	per doz. bun.	4 0		6 0
Bouvardias	per doz. bun.	6 0		8 0
Camellias	per doz.	1 6		2 6
Carnations	per doz. blms.	1 0		3 6
,,	per doz. bun.	8 0		12 0
Cattleyas	per doz.	8 0		10 6
Chrysanthemums	per doz. bun.	5 0		12 0
,,	per doz. blms.	2 0		3 6
Cypripediums	per doz. blms.	2 0		3 0
Gardenias	per doz.	2 0		5 0
Hyacinths, Roman	per doz. bun.	6 0		9 0
Lapagerias	per doz.	1 6		2 0
Lilac (French)	per bun.	4 6		6 0
Lilium auratum	per bun.	2 0		4 0
,, speciosum	per bun.	1 6		4 0
,, longiflorum	per bun.	2 0		5 0
Lily of the Valley	per doz.	8 0		15 0
Marguerites, white	per doz. bun.	2 0		4 0
,, yellow	per doz. bun.	2 0		3 0
Mignonette	per doz. bun.	2 0		4 0
Narcissus, Paper White	per doz. bun.	2 0		3 6
,, Soleil d'Or	per doz. bun.	3 0		4 0
Odontoglossums	per doz. blms.	2 6		3 6
Pelargoniums	per doz. bun	5 0		6 0
Roses	per doz.	2 0		6 0
Tuberoses	per doz.	0 4		0 6
Violets	per doz. bun.	1 6		4 0

Fruits.

Although the Christmas trade did not reach that of a record season, there has, nevertheless, been a good demand at fair rates.

		s. d.		s. d.
Apples, cooking	per bush.	3 6	to	7 6
,, dessert	per ½-sieve	2 0		6 0
,, Cox's Orange Pippin	per box of 2 doz.	2 0		3 0
,, American	per barrel	12 0		17 0
,, Nova Scotian	per barrel	10 0		20 0
,, Canadian	per barrel	12 0		22 6
,, Californian	per case	6 0		10 6
Bananas	per bun.	3 0		12 0
Chestnuts	per bag	7 0		18 0
Figs	per box	0 10		1 6
Grapes, English	per lb.	1 0		5 0
,, Belgian	per lb.	0 10		1 2
,, Channel Islands	per lb.	0 6		1 3
,, Almeria	per bar.	12 0		18 0
Lemons	per case	7 0		25 0
Medlars	per case	7 0		9 6
Nuts, Cob	per 12lb.	12 0		15 0
Oranges, Jamaica	per case	6 0		9 0
,, Jaffa	per case	8 0		10 6
,, Murcia	per case	5 0		18 0
,, Tangerines	per box	0 9		1 6
Pears, English Catillac	per bush.	5 0		7 0
,, Californian	per case	7 0		21 0
Pineapples	each	2 6		5 0

Vegetables.

The demand for all the choicer vegetables is very brisk, and a large business has been done during the week.

		s. d.		s. d.
Artichokes, Globe	per doz.	3 0	to	4 6
Asparagus	per bundle	4 6		5 6
,, Sprue	per bun.	0 7		0 8
Beet	per bush.	1 3		2 0
Beans (Guernsey)	per lb.	0 8		1 0
Brussels Sprouts	per bush.	3 0		3 6
Cabbage	per tally	4 0		5 0
Carrots	per doz. bun.	0 9		1 4
Cauliflowers	per doz.	2 0		3 6
Celery	per doz. rolls	4 0	to	9 0
Celeraic	per doz.	1 6		1 9
Cucumbers	per doz.	5 0		10 0
Endive	per doz.	1 3		2 0
Horseradish	per doz. bun.	8 0		12 0
Leeks	per doz. bun.	0 9		1 0
Lettuce	per doz.	0 10		1 3
Mint	per doz. bun.	3 0		6 0
Mushrooms	per doz. lb.	8 0		12 0
Onions, Pickling	per bush.	3 0		4 0
,, Valencia	per case	7 0		9 0
Parsley	per doz. bun.	1 0		2 0
Parsnips	per bag	2 0		3 0
Spinach	per basket	2 0		2 6
Tomatoes	per doz. lbs.	4 0		6 0
,, Canary	per pack.	7 0		10 6
Turnips	per doz. bun.	1 0		1 3

LONDON POTATO MARKETS.

With large supplies on hand, and mild weather continuing, business has been disappointing.

		s. d.		s. d.
British Queen	per ton	55 0	to	60 0
Dunbars	per ton	65 0		80 0
Epicure	per ton	50 0		55 0
Evergood	per ton	45 0		55 0
Sharpe's Express	per ton	70 0		75 0
Maincrop	per ton	65 0		70 0
Puritan	per ton	60 0		65 0
Royal Kidney	per ton	50 0		55 0
Up-to-Date	per ton	60 0		65 0
,, Blacklands	per ton	45 0		50 0

METEOROLOGICAL OBSERVATIONS.

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Height above Sea-level, 150 feet.

Date.	Sunshine.	Temperature of the Air.			
1908. December 13 to December 19.		At 9 a.m.		Day	Night
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.
	hr. m.	deg.	deg.	deg.	deg.
Dec. 13—Sunday	1 5	49	49	54	35
,, 14—Monday	—	48	47	50	47
,, 15—Tuesday	2 25	46	44	50	44
,, 16—Wednesday	—	45	45	50	42
,, 17—Thursday	—	48	47	50	45
,, 18—Friday	4 30	36	36	46	36
,, 19—Saturday	—	41	41	48	36
Means	1 10	45	44	50	41

Date.	Rain.	Temperature of the Soil. At 9 a.m.			Lowest Temperature on Grass.
1908. December 13 to December 19.		At 1 ft. deep.	At 2 ft. deep.	At 4 ft. deep.	
	ins.	deg.	deg.	deg.	deg.
Dec. 13—Sunday	0·05	42	44	48	29
,, 14—Monday	0·36	44	45	47	39
,, 15—Tuesday	—	44	46	47	39
,, 16—Wednesday	0·03	44	46	47	33
,, 17—Thursday	0·10	45	46	47	41
,, 18—Friday	0·01	43	46	47	29
,, 19—Saturday	0·10	42	45	47	30
Means	(total) 0·65	43	45	47	34

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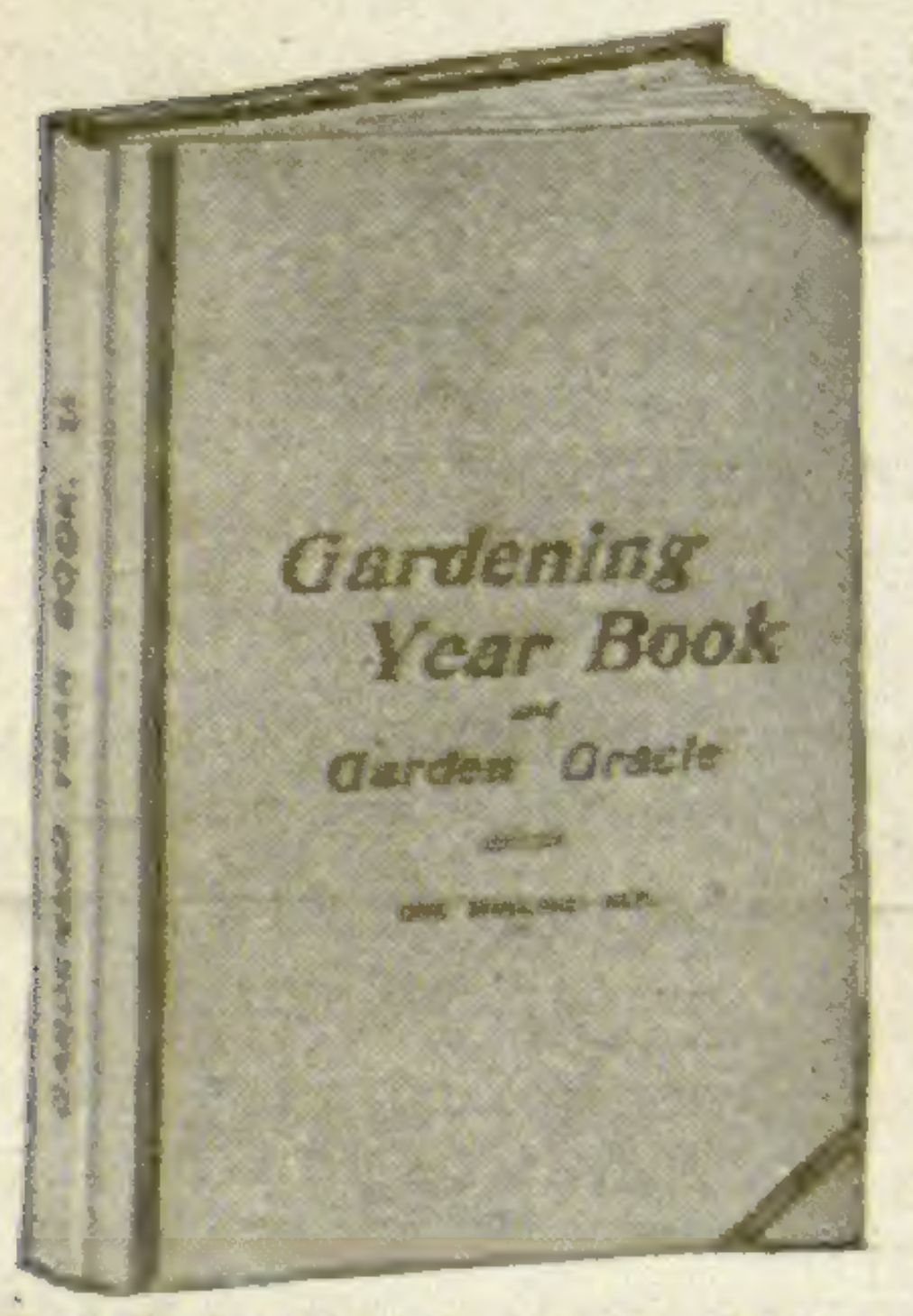
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W. BARRON AND SON, ELVASTON NURSERIES, BORROWASH.—A very useful and handy catalogue of hardy trees and shrubs.

BAKERS, WOLVERHAMPTON.—An early list of the best sweet peas, including the leading varieties.

H. W. MACKERETH, ULVERSTON.—A sweet pea catalogue, and the most comprehensive list of the season's novelties we have yet seen.

NORWELL'S, PERTH, N.B.—An interesting catalogue of gamekeepers', gardeners', foresters', and ladies' boots, shoes, and leggings, as well as of lighter footwear for special use.

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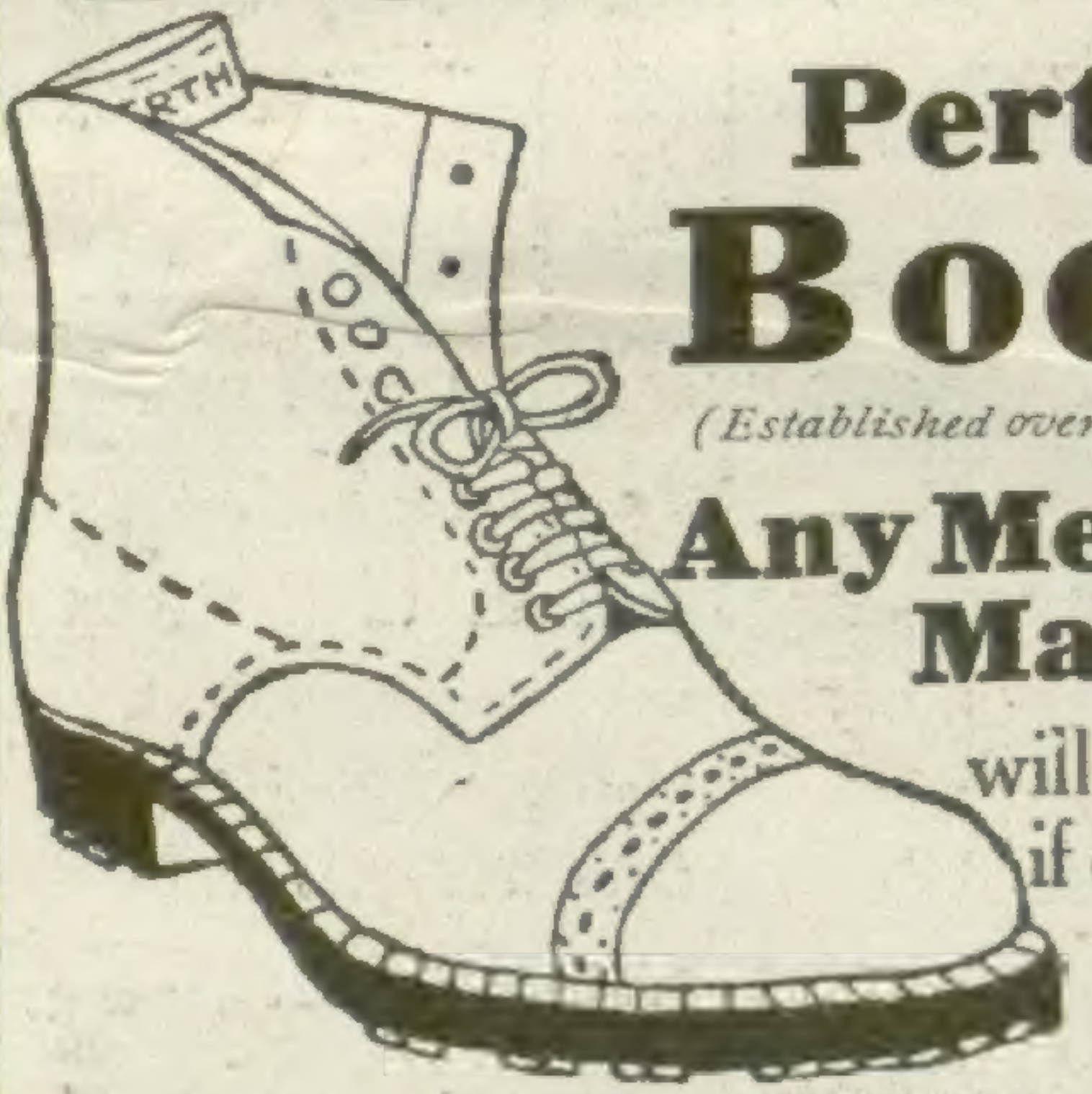

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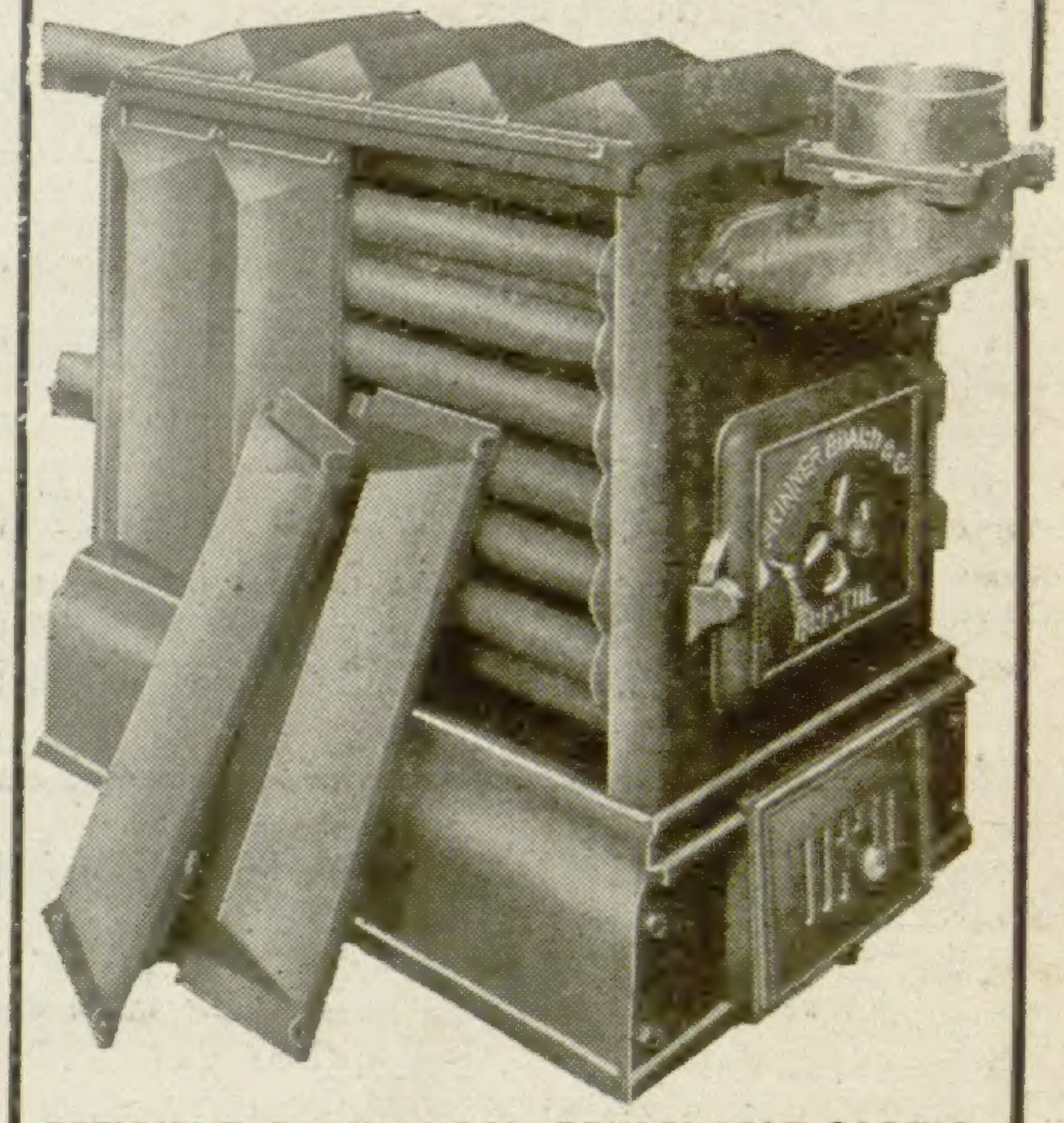

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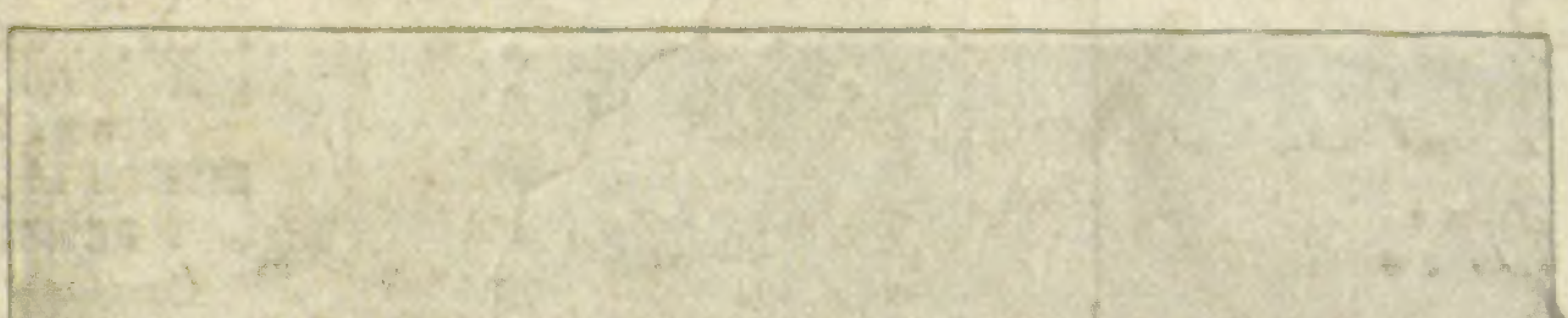
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